



Sheffield Softworks

Zombie Makeup Artist

As I was working on Make Up Artist, it occurred to me, "if I can beautify... why not horrify?", and thus was born Zombie Makeup Artist. I don't pretend that this is anything but simple fun - I doubt you'll be replacing your prosthetics and grease paint anytime soon, but maybe you'll just have a good time watching your interview subjects saying normal things, but looking as though they'd just crawled out of the grave... Because it's a pet project that is mostly for fun, I've decided to release it without a watermark for free as part of the Makeup Artist II plugin package.



Because ZMA's controls can be complicated and decidedly non-linear, I've included a number of presets to get you started.

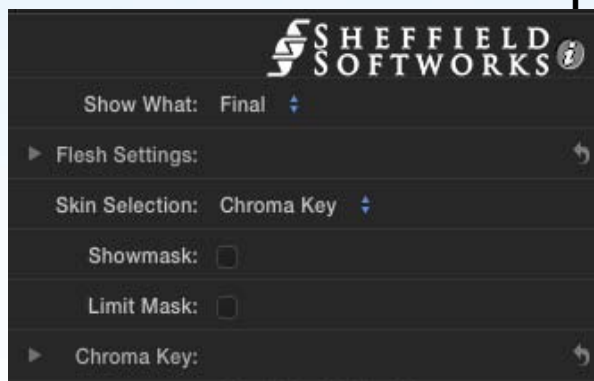
Zombie Makeup Artist is based on FxFactory's plugin engine which makes use of the power of your GFX card to do its rendering, thus does not load down your CPU. It is compatible with the hosts that FxFactory supports, currently FCP 7 through Final Cut X, Motion 4 and Motion 5, Adobe Premier, and After Effects. It requires at least 10.8 (Mountain Lion) of the OSX operating system (please note, the advancing age of Final Cut Pro 7 and Motion 4, may make them unable to take full advantage of the abilities of **Zombie Makeup Artist**).

How to use the Zombie Makeup Artist plugin

I'll be the first to admit - Zombie Makeup Artist does not have a straightforward control system. For that reason, I'll explain the working theory of how ZMA works, how to use the keyer, and some tips and leave it up to you to learn by playing - that's how I got the presets I have in there.

First ZMA creates a "detail map" based on edge detection routines. This is adjusted by the **Flesh Detail** and **Detail Contrast** sliders. Its color is set to **Flesh Color 1**. ZMA then uses a chroma keyer to build a mask based on the skin tone selected. This mask is used as the new "skin" and is set to **Flesh Color 2**. The detail map and the skintone mask are then composited using the **Flesh Blend 1** to the level of **Flesh Intensity 1**. This is blended back to the skin using **Flesh Blend 2** and **Flesh Intensity 2**. ZMA generates a texture based on skin details and blends this using **Texture Blend** and **Texture Intensity**. You may then **Distort** the image (based on luminance), and adjust **Saturation**, **Brightness**, and **Contrast** before being composited over the original skin using the with a **Final Blend** mode and **Strength** slider.

Zombie Makeup Artist plugin Control layout



Show What can be set to **Final**, **Flesh**, or **Original**.

Flesh Settings control your final look.

Skin Selection controls where the look is applied.

In use, you would decide how to make the Skin Selection, make adjustments to suit, then select one of the presets for Flesh Settings and tweak to get what you want.

Basic Controls



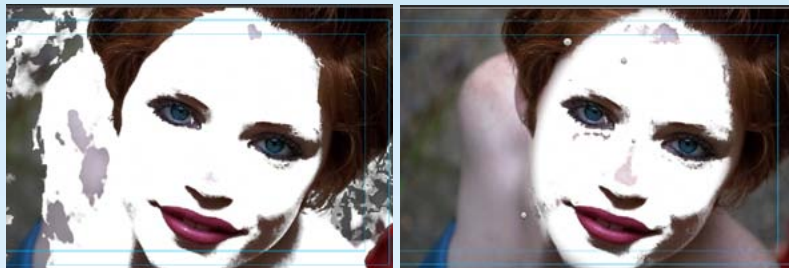
Before

None w/Limit Mask



Skin Tones

Chroma Key



Limit Type: **Corner** ⌵

Corner 1: X: -238.45 px Y: 491.36 px

Corner 2: X: 612.82 px Y: -530.24 px

Roundness: 176.0

Softness: 166.0

Limit Type: **Ellipse** ⌵

Origin: X: 176.92 px Y: -33.36 px

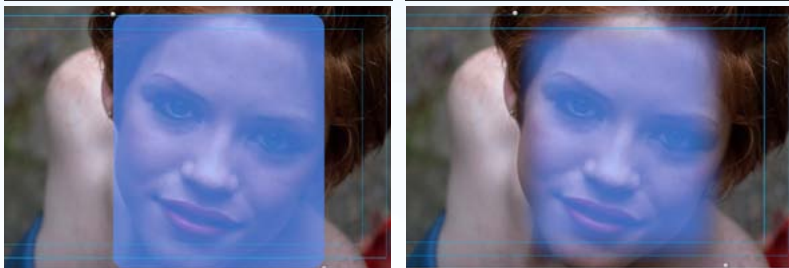
Radius: 0.75

Softness: 0.2

Size: 1.21

Aspect: 1.25

Angle: -18.0 °



None
Skintones
✓ Chroma Key

Skin Selection

Skin Selection is used to limit processing to specific areas. This limit may be:

None - most often used to either process the entire frame or in combination with the **Limit Mask** to isolate a specific area.

Skintones - the skin tones are mathematically calculated. You may control the strength of the mask, and a lower threshold value. Skintones has a lower processing impact, but it is less precise than the third option -

Chroma Key - may be adjusted by OnScreen controls or by selecting a skin color with the eyedropper and adjusting a range of acceptable values for Hue, Saturation, and Luminance. More on Chroma Key below.

Show Mask:

Show Mask turns the selected region white as a visual aid when adjusting the **Skin Selection**.

Limit Mask:

Limit Mask limits the processing to a specified region in the image. It opens up a secondary set of controls for specifying the region.

▼ Limit Settings:

Show Limit:

Show Limit tints the limit region of the screen a blue color as a visual aid for placing the limit. You can also use the Show Mask to see where the limit is being applied. Show Limit turns off all other processing to improve interactivity, so even though you can see through the blue tint, you will not see any smoothing taking place until your turn off Show Limit..

Corner
Limit Type: Ellipse

Limit Type may be set to either **Corner** (rectangular) or **Ellipse**. The controls will change as appropriate to each setting.

Roundness: 176.0

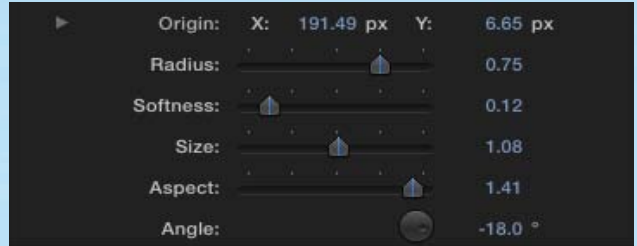
Softness: 166.0

For **Corner**, the easiest way is to drag the two corners into place using the OnScreen handles, then adjust the **Roundness** and **Softness** as required. These settings are linked in that with Roundness at 0, Softness has no effect.



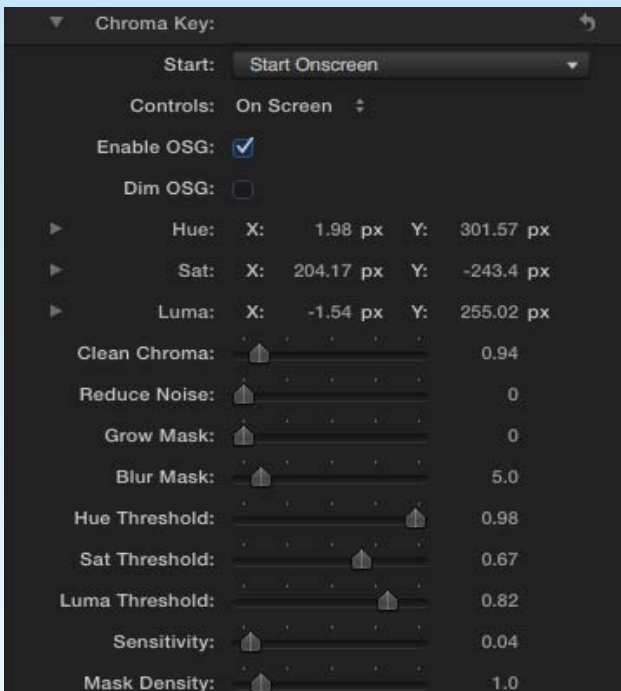
Limit Type: Ellipse

For Ellipse, the settings are more complex, but this allows greater flexibility and with a single origin point, is easier to use a host's built in tracking to maintain placement of the limit mask.



You may use the onscreen handle to place the **Origin** (or center) of the ellipse. The **Radius** controls the distance from the origin that the ellipse is drawn. **Softness** adjusts the falloff at the edge of the ellipse. **Size** and **Aspect** allow you to control the shape of the ellipse, and **Angle** rotates it around the origin. All are keyframeable to allow you to track a moving target.

Chroma Keying

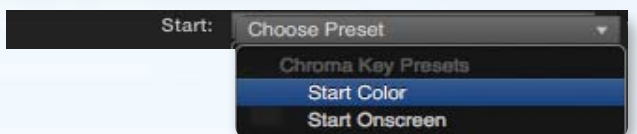
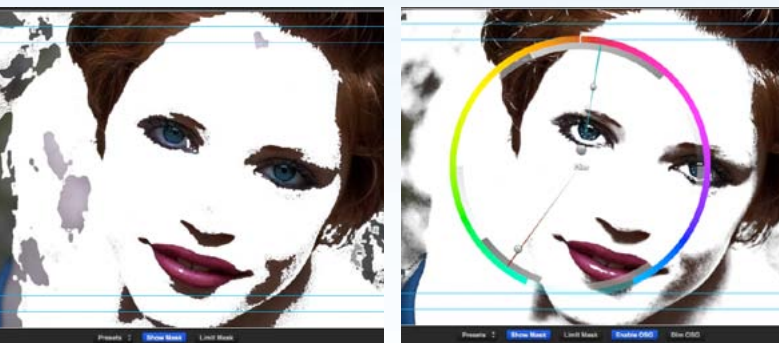


The **Chroma Key** for **Skin Selection** has quite a number of controls, so I thought I'd indulge in some basic keyer theory first to lay the groundwork. Whether using **OnScreen** controls or the eyedropper, you provide the keyer with a center Hue, Saturation, and Luminance and a range. Every pixel's Hue, Sat, Luma is compared and if it falls within that range, it is full strength (white) in the mask.

You also specify what to do with the colors that fall outside the range with the tolerance sliders. These are sort of a "margin" and tell the keyer how far outside the range a color is allowed to fall. For all colors that fall outside the range plus the "margin", the mask becomes transparent. The further outside the range, the greater the transparency. How fast the mask "falls off" is controlled by the **Sensitivity** slider.

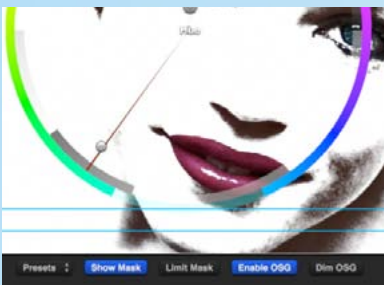
As well as keyer controls that are used to generate the mask, you also have additional pre-processing (**Clean Chroma**) and post-processing you can do (such as **Reduce Noise** - removes single pixels, **Grow Mask**, **Blur Mask**, etc.)

Chroma Key Controls

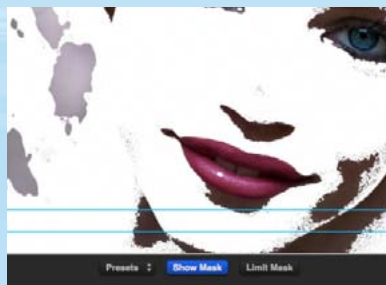


To make it easier, two starting presets are included in the Chroma Key section - Color and OnScreen. They set the controls to a general skintone that you will then refine. There is no save/load included as that can be done by the main Preset loader at the top of the controls.

Chroma Key Controls (OnScreen.)



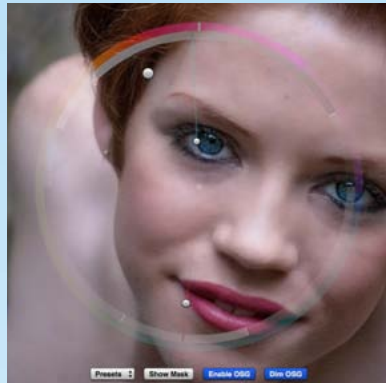
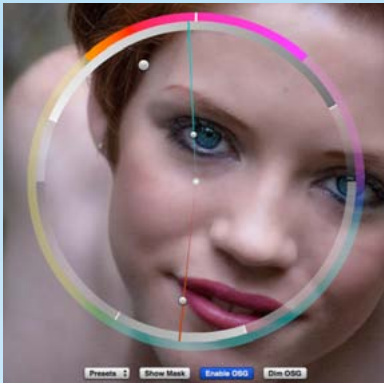
On Screen



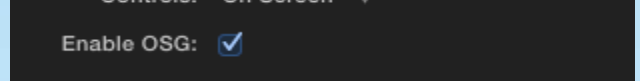
Color



The Controls for Chroma key may be either Color or On Screen. What you use is strictly a matter of your preference. Both provide the same information to the chroma keyer. The user interface varies depending on your choice. First we'll go over the On Screen controls, then the Color ones.

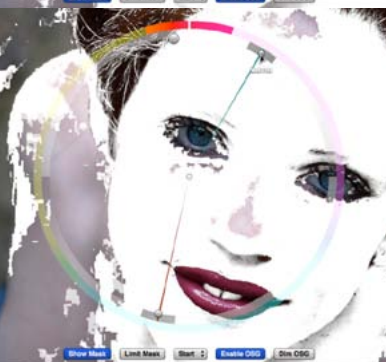
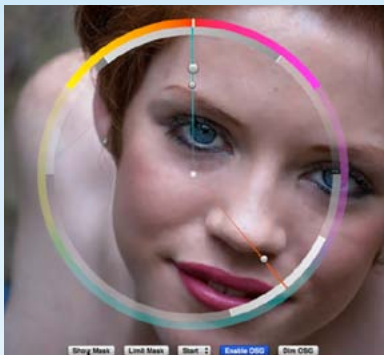


Note: The OnScreen Guides are rendered within the image buffer, so **Enable OSG** should be unchecked before rendering.



Enable OSG turns on the OnScreen Guides. These consist of an outer Hue Ring, and a semi-circle above for Luminance, and one below for Saturation. Dim OSG makes these transparent to allow you to see through them. They are graphic representations of the HSL and ranges being selected and are not necessary to adjust the OnScreen control handles. Experienced users may end up dispensing with their use.

| | | | | |
|-------|----|-----------|----|-----------|
| Hue: | X: | 1.98 px | Y: | 301.57 px |
| Sat: | X: | 204.17 px | Y: | -243.4 px |
| Luma: | X: | -1.54 px | Y: | 255.02 px |

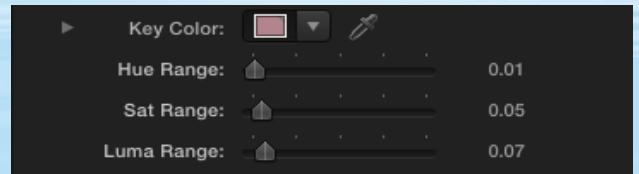
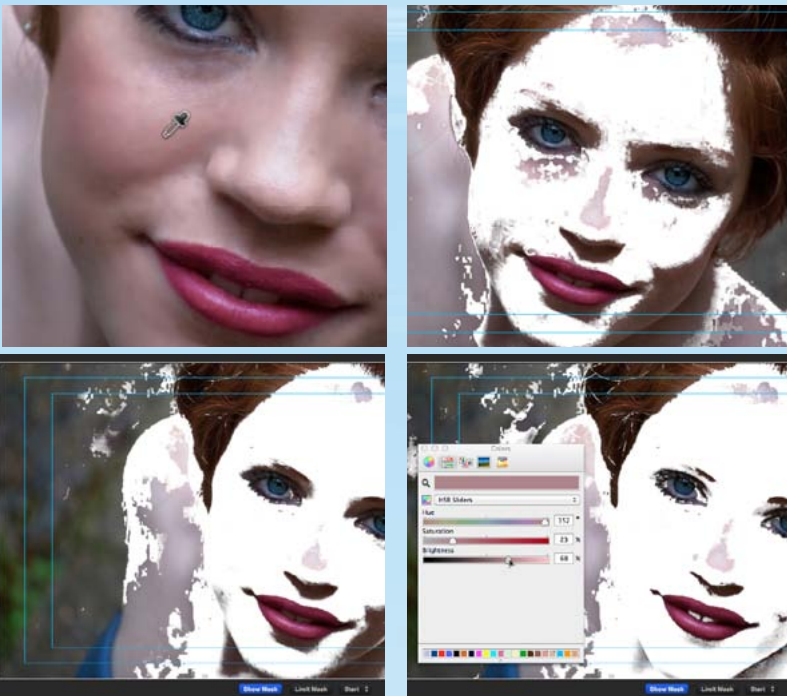


While the control points could be adjusted in the inspector, it is best to use the onscreen handles to control the adjustment.

Essentially there is a control point for Hue, Saturation, and Luminance. They select a central value and a range to be used by the chroma keyer. The further you pull them away from the center, the smaller the range. Drag around the circle to select the central value.

Click **Show Mask** to highlight the selected area. Drag the **Hue** control upward to begin limiting the range and you should see mask begin shrinking. Drag around the circle to select the desired hue until you have the best portion of the skin selected. Now do the same with the **Sat** control, dragging it downward and around the ring to reduce the mask further. Then the Luma control upward and around until you've isolated the skintones to process.

Chroma Key Controls (Color)



If you selected Color controls, take the eyedropper and choose a color that seems about midrange for Hue, Sat and Luma. Turn on the Show mask, then adjust the HSL Range sliders to include as much of your image as you need. The higher the value, the more colors you will be including.

You can always tweak your color by using the HSL sliders in the System Color picker.

Whether you chose Color or On Screen Controls, you can adjust your mask using the controls described under the Chroma Keying overview above.

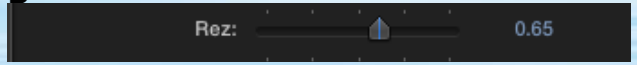
Flesh Settings



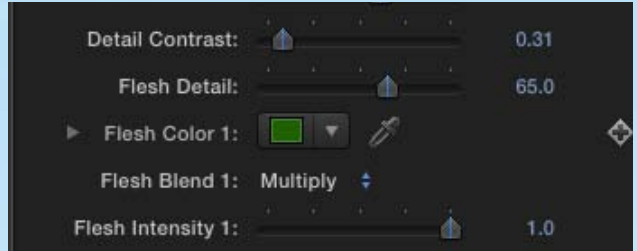
Rez setting high



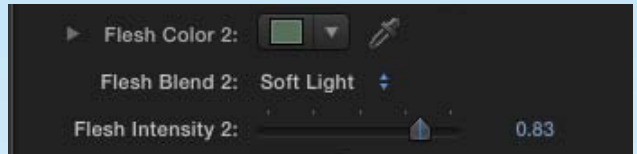
Rez setting Low



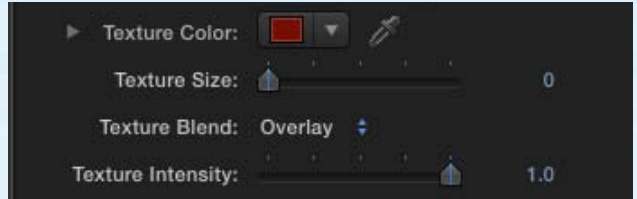
Rez dynamically reduces the resolution prior to processing. This can be used to shorten render times, or for effect (distortions are greater and textures are larger at lower Rez settings).



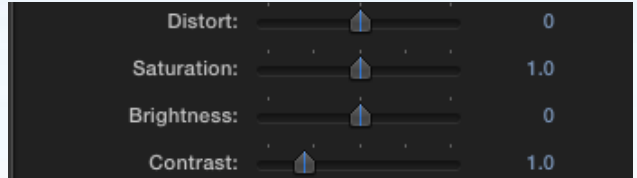
Flesh Detail, Detail Contrast, Flesh Color 1, Flesh Blend 1, and Flesh Intensity 1 all control the detail map.



Flesh Color 2, Flesh Blend 2, and Flesh Intensity 2 all control the skintone mask.



Texture Color, Texture Size, Texture Blend and Texture Intensity all control the Texture map's influence on your image.



Distort, Saturation, Brightness, Contrast are all performed post processing prior to compositing with Final Blend and Strength.