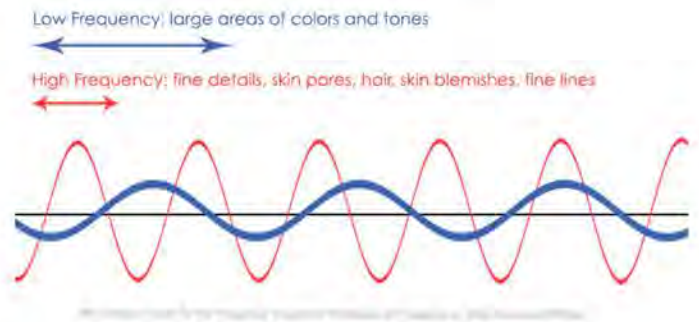


## Frequency Separation and the Paint Mixer Brush - *Pure Magic!*

I'm a late-comer to the world of frequency separation. Every program and demo I watched seemed to make it a long and complicated process, and although the results were beautiful, I couldn't see how I could make it a practical application in my day-to-day retouching workflow. However, anyone who has ever tried to retouch bad acne on a teen with facial hair knows it requires more than the usual retouching techniques. I finally made myself learn this, and I found it doesn't have to be so technical after all. In fact, it's quite simple and can be fast. Once I learned to use the paint mixer brush in the process, it really got exciting!

What is frequency separation? (If technical info overwhelms you and you just want to know how...jump to the next part!)

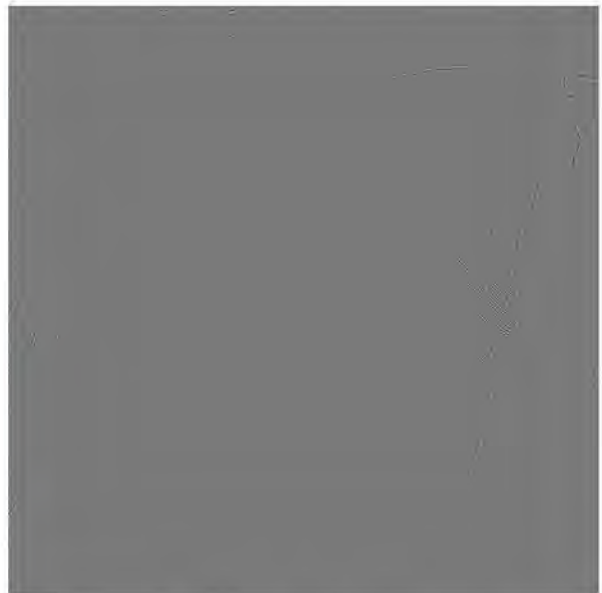
Simply put, it is separating your image into two layers, one layer is all of the texture in your image, and the other is color, tone, light and shadow. Why is the word frequency used? If you were to look at the information contained in your image as if they were audio waves, the texture and detail information would look like high rapidly repeating waves, and the color/tone information would look like low smoother waves. That's as technical as I'm going to make this. (Illustration is from *The Ultimate Guide To The Frequency Separation Technique* @ Fstoppers by Julia Kuzmenko McKim...great article!)



Here is an image separated; the color layer will look soft and the texture layer is grayscale with fine detail.



Color (low frequency)

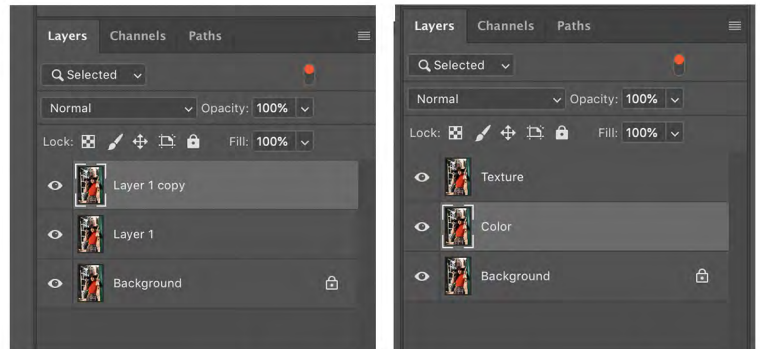


Texture (high frequency)

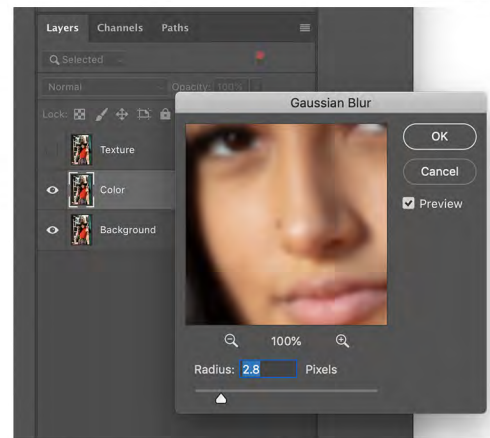
Editing these layers independently from one another has a lot of benefits. Anyone who's ever tried to patch or clone skin and gotten blotchy results (who hasn't) will love this method.

Setting up Frequency Separation: (*Speed up your workflow by recording this as an action*)

1. Duplicate your background layer twice, then rename the top layer Texture and the bottom layer Color.

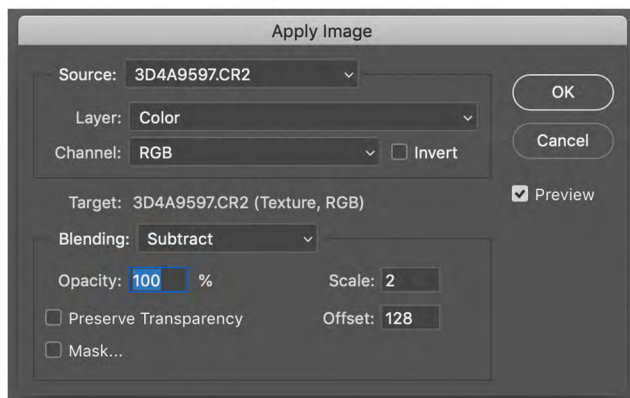


2. Turn off the visibility of the Texture layer and select the Color layer. Go to Filter>Blur>Guassain Blur and blur your image until detail goes soft. This setting can vary depending on the resolution of your image and the size of the face. For my camera (Canon Mark III) and a 3/4 image like this, 2.5 works. For a more close up image or if my camera were a higher megapixel I might need more blur. *If building an action, you'll want to put in a stop here to adjust settings.*

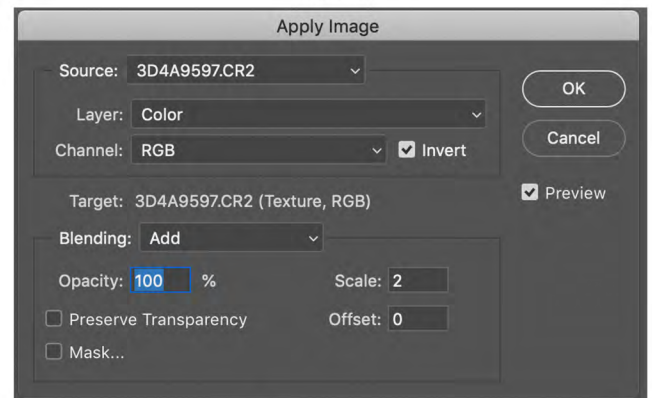


3. Turn on and select the Texture layer. Now, go to Image>Apply Image and use the following settings depending on if your image is 8-bit or 16-bit. I work almost always in 8-bit. (*If building an action, you'll want to build a separate action for 8-bit and 16-bit*).

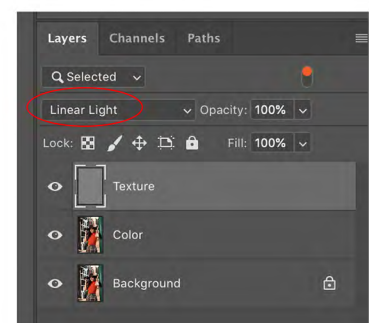
*8-bit*



*16-bit*



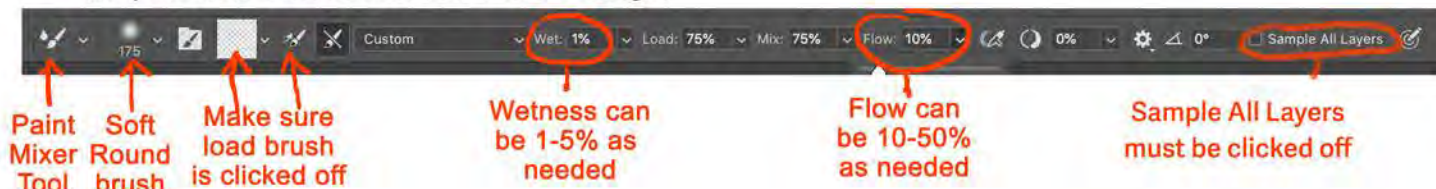
4. Now turn your layer mode to "linear light" and you're ready to go. Changing the texture layer to linear light will allow you to see the color and texture layers combined.





Retouching the layers:

1. Color Layer. Here is where the magic happens. Leaving all layers visible, select the Color layer. Most of your retouching will happen here. If you've worked with frequency separation before, you probably have used the patch tool or gaussian blur at this point, but instead, choose the paint mixer brush and use these settings:



It's worth noting that in recent updates to PS, when you place the mixer brush on the color layer for the first time, it puts a color on the image. Undo the last stroke and start again and it will work fine.

Keeping a soft large brush, blend the skin area to smooth. Skin texture and hair will be preserved in the texture layer. If you notice any unwanted blurring occur, try making the brush smaller and try again. Dark circles can be lightened by dragging the lighter skin color area into the darker. (You may also try the patch tool for lightening circles). Blending with the mixer brush can also be used to soften wrinkles in solid color clothing and smoothing imperfections in the background. At this point in your retouching you can also choose to whiten teeth and lighten eyes without disturbing textures.



2 Texture Layer. Select the Texture layer, and use the patch tool, healing brush, or clone tool to eliminate any blemishes left after smoothing the color layer. Wrinkles in skin or clothing can be softened by using the patch tool and then fading back the results to keep it real (Command-Shift-F, or Control-Alt-F).

Like any other retouching technique, this one gets better with practice. Get accustomed to using the mixer brush tool if it's unfamiliar to you. You'll find other uses for frequency separation the more familiar you become with it (I find it useful for stray hairs as well). Happy retouching!

