



## **Color Correction/Image Editing Tutorial by Fred**

### **Introduction**

**This tutorial will explore some color correction/image editing techniques but will not get into color management. Color management is, to me at least, a complex subject with so many variables as to be beyond the scope of a tutorial. I am using V5.02 of Photoshop on a PC. Some tools and techniques may not work with earlier versions of Photoshop and may work differently on a Mac. If problems are encountered in this area let me know and we can try to find a workaround. This tutorial will be done in RGB mode which can be used for web images and desktop publishing with an inkjet printer but is not appropriate for prepress work .**

**As you go through this tutorial, please remember that color correction/image editing is, in my opinion, a very subjective thing. My interpretation of a scene will probably be different than yours; my reaction to a color, shade, hue, saturation, etc. will probably be different than yours. Something I perceive as a first class piece of work could be perceived by you as ghastly. The purpose of this tutorial is not to present a "correct" way to perform color correction or image editing, but rather to introduce some techniques which will enable you to exercise a degree of artistic control over your images. Also, please be aware that some of the adjustments we will make in this tutorial are more dramatic than I would normally suggest and are made to illustrate a point.**

**This tutorial is geared to the beginning + level as I get the sense that most members of the list are not overly familiar with this area of Photoshop. I am by no means an expert or even an advanced user in this area so I hope the more advanced members of the list will feel free to jump in with corrections, clarifications, alternative methods of working, etc.**

**While I do not think color correction/image editing is an exact science, there are several common goals to keep in mind with most images i.e.**

- A. Try to produce a better image than the original**
- B. Create as much contrast as possible while still keeping a realistic look to your image.**
- C. Make your highlights as bright as possible without "blowing out" all detail.**
- D. Concentrate contrast adjustments in the most important area of your image (i.e. your subject)**
- E. Eliminate color casts that make your image look artificial, dull flat, etc.**
- F. Make sure your "memory colors" are correct. Blue skies, red apples, green grass, etc. are examples of colors we see often and remember. If these "memory colors" don't look right, your whole image will look wrong.**

Now to the mouse clicking and keyboard thumping.....

. I have uploaded an image (color 1) to the shared files area in jpeg format. Download this image for use during the tutorial.

1. Open the image in PS and convert to PSD format-choose file/save as and choose Photoshop (Psd).Choose file/save a copy and save a copy. Remember to save your work often.

2. Now we will go through the process of setting the highlight,neutral and shadow values.Choose the color sampler tool from the toolbox. In the color palette options palette choose 3 by 3 Average from the dropdown menu.Place the cursor in the image window and note the RGB values in the info palette.We are trying to find the lightest and darkest spot in the image.(In RGB mode 255/255/255= white and 0/0/0 = black).Instead of hunting all over the image trying to find the lightest and darkest pixel values a little trick is available using levels adjustment.(a different procedure is available for the Mac using video LUT but I think this will also work for a Mac).Choose image/adjust/levels.In the dialog box make sure Channel reads RGB and that the preview box is checked.Drag the black input slider(the one on the left under the histogram)all the way to the right.You should now have a completely black( or almost a completely black) image.Slowly drag the slider back to the left until pixels start to appear in the image.These are the lightest pixel values in the image.Note the location of the pixels and click cancel in the levels dialog box.With the color sampler tool still selected move the cursor to the area you found above and find the brightest pixel values.On my monitor these were in the bright white area on the bow of the boat just to the right of the red cloth. Your info palette should show RGB values of approx. 249/249/240 at x/y coordinates of 3.500 / 5.764 (your x/y coordinates are also on the info palette) Click at this position and you should have a cursor symbol with the numeral 1 next to it.

Reverse the above with levels adjustment to find the darkest areas in the image.I came up with RGB values of 1/1/7 at x/y coordinates of 0.778/ 3.556 on the dark part of the dock. Click at this position and you should have a cursor symbol with the numeral 2 next to it. Next find an area that is neutral or close to it.(In RGB 128/128/128 is medium gray-a neutral.) I settled on a RGB value of 168/164/169/at x/y coordinated of 0.500 / 3.986 Click at this position and you should have a cursor symbol with the numeral 3 next to it. Note the info palette-you should have RGB values for the three points in the image that you sampled.

We having fun yet? You may be confused at this point but stick with it.If there is something you are having trouble with let me know and I'll try to help.

3. Next we will work with a very powerful Photoshop tool-adjustment layers.Get to know adjustment layers-feed them-pet them-buy them beer or some of the more expensive stuff.Adjustment layers are your friend.Click the layers palette tab to make it active.Press the ctrl key and mouseclick on the new layer icon(it's at the bottom of the layers palette next to the trash bin icon)The new adjustment layer dialog box should come up.For name type levels if it is not in the box and for type choose levels from the dropdown menu.Opacity should be at 100% and mode should be normal.Click OK.You have just created an adjustment layer.The levels dialog box should be open and channel should read RGB.Note the RGB values in the info palette.The values to the left of the / are your values before any adjustment and the values to the right of the / are after any adjustment. Click on the white eyedropper and place the cursor exactly on top of numeral one in the image window.When

the RGB values in the top left-hand corner of the info palette match those of #1 in the info palette, click. You have set your highlights. Repeat this procedure with the black eyedropper for position #2. You have set your shadow values. Finally click the gray eyedropper and repeat the procedure for position #3. Click OK in the dialog box. To see a before and after comparison click the eye icon next to levels in the layer palette on and off. You should see a noticeable difference in your image. With the color sampler tool selected place the cursor in the image window next to any of your sample points. The cursor should turn to an arrowhead -click and drag the sample point out of the image window. Repeat for the other sample points.

Save your image

Next we will work with curves. Hold down the ctrl key and click on the new layer icon. The new adjustment layer dialog box should open. For name type curves, choose curves from the type dropdown menu, set opacity to 100% and mode to normal. Click OK. You have created another adjustment layer named curves. The mechanics of working with curves can be somewhat confusing so if you are having trouble let me know and we will see if we can work it out. Make sure channel reads RGB. If you get into trouble setting your curves press the alt key and the cancel button in the dialog box will change to reset-click and you will go back to the beginning. Note the large island (mountain?) in the upper right hand corner of the image. It looks solid black with no detail. We will try to change that. While it is preferable to determine adjustment points on the curve by reading pixel values in the image, for the purposes of brevity and simplicity I will suggest where to set points on the curve. If you want to use different input/output values for your curve adjustments, please feel free to do so. Place the cursor at the midpoint of the line and click. The input / output boxes should each read 128. If they don't, highlight the boxes and type in these values. Next place your cursor on the line in the lower left-hand quadrant and click. Highlight the input / output boxes and type 26 / 42. Click on the line slightly above this point and type input / output values of 53 / 66. Click on the line about halfway between the midpoint and the upper right hand corner and highlight/type input output values of 166 / 187. Click on the line a couple of squares above this point and highlight/type input output values of 207 / 230. We are now done with the RGB channel.

In the channel drop down menu choose green. Click the line in the lower left hand quadrant and highlight/type input output values of 77 / 83. Click on the line at approximately the midpoint and highlight/type input output values of 140 / 131.

In the channel drop down menu choose blue. Click the line in the lower left hand quadrant and highlight/type input output values of 77 / 78. Click on the line just below the midpoint and highlight/type input output values of 101 / 95. Click OK in the curves dialog box.

We are done with curves. Save your image. Again click the eye icon next to the curves layer in the layers palette on and off. You should see quite a bit of difference in the before/after.

Hold down the control key and click the new layer icon. Yeah.....here we go again with an adjustment layer. In the type box choose hue/saturation from the dropdown menu, set opacity to 100% and mode to normal. Click OK in the dialog box. Again for purpose of brevity and simplicity I will give suggested values to type in the HSL boxes. Make sure the preview box is checked. We will make no adjustments to the Master. From the edit dropdown choose reds. Highlight/type in the HSL boxes 0 / 54 / -19 (minus 19). From the edit

dropdown menu choose greens and highlight/ type in the HSL boxes -(minus)60 / 53 / -(minus)6.In the edit dropdown menu choose blues and highlight/type in the HSL boxes 25 / 45 / 38. Click OK in the dialog box. Save your image.Again click the eye icon next to the hue/saturation adjustment layer in the layers palette on and off to see the before/after effect of your adjustments.

Ok-we are almost done.The last adjustments will be a few 'localized' adjustments to do some fine tuning .In the layers palette click on the background layer to make it active.Choose file/preferences/display & cursors and choose brush size for painting cursors and choose precise for other cursors.Click OK. Note the red area on the engine next to the boatman-it looks a little oversaturated so let's knock the saturation down a bit.Doubleclick on the sponge tool in the toolbox.From the sponge tools options choose desaturate and set pressure to 80%.Click the brushes palette tab and choose the third brush from the left in the top row.Move the cursor over the red area on the engine until you have reduced the saturation to your liking.Next select the magnetic lasso tool from the toolbox.In the magnetic lasso options palette set feather to 3,check anti-aliased,set lasso width to four,set frequency to 57,set edge contrast to 20% and uncheck pressure.We will now select the dock in the left hand side of the picture.(Just select the wooden planks) If you get into trouble while making your selection just press the esc key and start over.After you have made your selection choose image/adjust/levels.Any adjustments we make now will affect only our selection. The planks look a little bright to me and tend to draw my eye away from the subject-i.e.the boat. So we will darken the planks a bit and blend them in with the water a little.In the levels dialog box set channel to RGB and make sure the preview button is checked.Drag the black input slider (the one on the left under the histogram ) to the right until you have a value of 35.Drag the gray input slider (the one in the middle) to the right until you have a value of 0.91.Click OK.Press ctrl D to deselect.Save your image.

You may want to save a reference copy of your image as we will flatten the image and lose the adjustment layers. Choose file/save a copy and name it something you will remember.

Choose layer/ flatten image.Note your layers palette-The adjustment layers are gone and you have a finished image.All of your adjustments have been "placed" on one layer. We could continue to tweak this image but let's say WE ARE DONE.

I have uploaded my finished image (col cor end) and you may want to compare results.If your image doesn't look exactly like mine that's fine.The point of this tutorial was not to make everybody's image look the same but rather to introduce you to some ways in which you can take control of your image.This was by no means an exhaustive study of this area of photoshop but I hope it gave you some ideas and tweaked your curiosity.It will probably take further study on your part to really understand what is happening and why when these adjustments were made. Remember,when YOU are working with YOUR image YOU can CONTROL it. I'll bet your final image looks a lot different from the one you started with.

If you pursue this area of photoshop remember that nothing is cast in concrete.Develop your own techniques,your own workflow,your own preferences,use keyboard shortcuts or point and click.It's up to you.