

STEVE'S GUIDE TO A FEW PHOTOSHOP TECHNIQUES

CONVERTING TO BLACK & WHITE

1. Convert to grayscale

The absolute quickest way to convert a color photo to black and white, yet also the worst way to go about it as far as image quality is concerned, is by converting your photo from an RGB image into a Grayscale image. With this method, Photoshop essentially throws the color in your photo out the window.

2. Desaturate

Averages out the three colour channels. Similar effect to greyscale, but leaves image in RGB mode for colourising/tinting later.

3. Hue/Saturation

Exactly the same as desaturating (if taken to 100%), but desaturation can be limited if some colour is still required

4. Hue/saturation adjustment layer

Same as previous technique, except that as we're using an adjustment layer, the image itself is not touched.

5. Hue/saturation adjustment layer with Blend mode=color

Layer Blend Modes affect how the layer you've selected blends in with the layers below it in the Layers palette. By default, it's set to "Normal", which simply means that nothing special is happening with the way the layer is blending in with the layers below it.

By choosing the "Color" Blend Mode for our adjustment layer, we're making sure that we're only affecting the colors in the image, not the luminosity (lightness) values.

6. Luminosity mode

Create new empty layer **underneath** our image layer. (To do that, change the name of the background layer to anything else, I've used 'layer 0'. Ctrl-click on the 'create new layer' button in the layers palette to create an empty layer underneath what was the background layer).

Fill new layer with white (D, ctrl-backspace).

Change blend mode of image layer to luminosity.

The Luminosity blend mode is going to give us the effect of removing all of the color from the photo and leaving behind only the luminosity values, meaning the lights, darks, and everything in between. I said it gives us the "effect" of removing all the color because blend modes don't physically change an image in any way. It's an effect that can be changed at any time simply by changing the blend mode to something else. The actual pixels in your image are not being permanently changed in any way.

If it looks a bit too light, try this – create a 'merge visible' layer at the top of the layer stack – alt-shift-ctrl-E. Change blend mode of that layer to multiply. Now it will look too dark, so change the opacity of the top layer to about 30%.

Exactly the same effect can be achieved, perhaps a little easier, by creating an empty layer above the image. Fill that layer with black, and set the blend mode to 'color'.

7. Lab mode, lightness channel

Whereas 'RGB' mode has three colour channels: Red, Green and Blue, Lab color mode separates the lightness values in an image from the colors. The "L" in "Lab" stands for "Lightness". The letters "a" and "b" actually represent all the colors the human eye can see, with "a" covering all the colors between magenta and green, and "b" representing every color between yellow and blue. The only letter we're interested in here is the "L", since we want access to our photo's lightness values, not the colors.

Convert to Lab Color by going to Image>Mode>Lab Color. In the channels window, choose the lightness channel by clicking on it. Select the entire image (ctrl-A) and copy it (ctrl-C). Convert the image back to RGB mode (Image>Mode>RGB).

Go back to the channel window and choose the red channel by clicking on it. The entire image should still be selected (if not, press ctrl-A again). Then overwrite the red channel by pasting the lightness channel into it (ctrl-V).

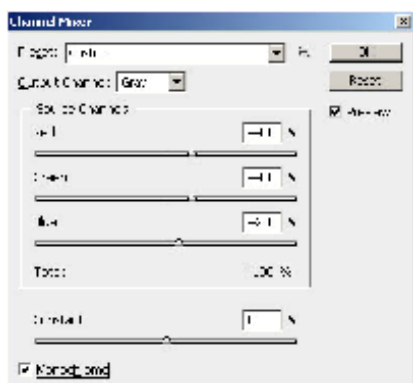
Now choose the green channel, and paste into that (ctrl-V). Now choose the blue channel and paste into that (ctrl-V).

Finally, choose the top channel (RGB) to make all the colour channels visible again and the conversion is complete – the LAB mode lightness channel has been written into each of the three RGB channels.

8. Channel mixer

We're going to use all three of these channels (red, green and blue) to create a custom black and white version of the photo, using the Channel Mixer, which, as the name implies, allows us to mix the three channels together until we're satisfied with the results.

Create a channel mixer adjustment layer (Layer>New adjustment layer>Channel mixer)



In the channel mixer dialog box, click the 'monochrome' checkbox in the bottom left corner. The image will immediately convert to monochrome.

The flexibility of this approach now becomes apparent: we can customise the look of our monochrome image by how much each of the separate red, green and blue channels contribute to the overall image.

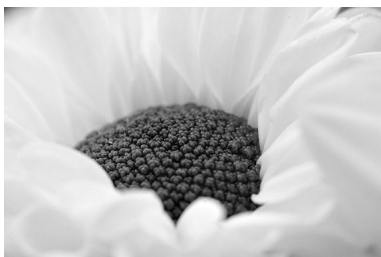
The starting values vary, depending on the version of Photoshop you have (the dialog box shown is from CS3).

The 100% 'Rule'

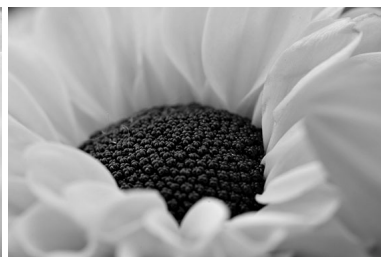
The general rule when converting an image to black and white using the red, green and blue channel slider bars in the Channel Mixer is to try and keep the total value of all three channels adding up to 100%. This will give you the greatest amount of contrast in your image without "blowing out" any of the highlights and losing image detail. However, don't blindly limit yourself to the 100% rule. If your image looks better to you even though you've gone beyond 100%, so be it. Let your eyes be the judge, not the numbers.

Using the channel mixer, the results are almost infinitely variable, and there's no one 'right' answer.

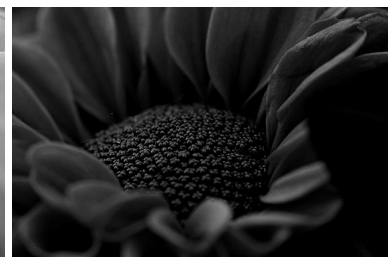
Here's a tip: before adding the channel mixer adjustment layer, i.e. while the image is still in colour, take a moment to look through the red, green and blue individual channels in the channel window. As you click on each one in turn, you'll get a monochrome image that represents all of the red colour (or green or blue colours). Look at the various parts of the image that you feel are important as you click through the three channels. Hopefully you'll get a feel for how important each channel is rendering your image the way you want it. For example, look at this image of a sunflower:



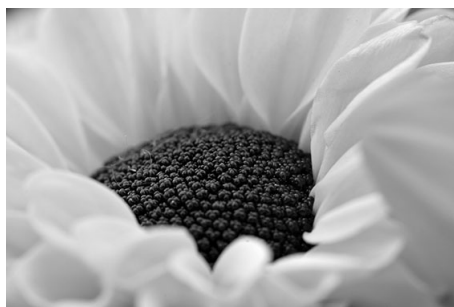
red



green



blue



Channel mixer (20% red, 80% green, 10% blue)

9. Gradient map

First, hit 'D' for default foreground/background colours. Add gradient map adjustment layer (layer>new adjustment layer>gradient map). Click on the gradient shown, and then click on the foreground to background gradient in the gradient selection dialog that appears (should be the top left).

You can then drag the small diamond-shaped colour midpoint control to vary the midpoint of the gradient, i.e. how the mid-tones of the image are mapped to values between black and white.

10. Other techniques

There are at least two other techniques that I'm not covering here: **calculations** and the **black-and-white adjustment** that was introduced with Photoshop CS3.

Further reading:

<http://www.photoshopessentials.com/photo-effects/color-black-and-white.php>
<http://www.zuberphotographics.com/content/blackwhite/color2bw-intro.htm>
<http://www.northlight-images.co.uk/bwfromcol.html>

QUICK MASKS

Masks allow you to isolate areas of an image from changes applied to the rest of the image. Technically a mask is an 8-bit greyscale channel, and they can be edited using the usual array of painting and editing tools.

Masks work in the opposite way to selections – they exclude pixels from an applied effect, whereas a selection includes the pixels to which an effect is applied.

Quick Mask gives direct control when creating a mask and allows you to see any transitional zones.

Hit 'Q' to enter quick mask mode. The foreground and background colours change to black and white. Now select the brush tool and start painting over the area you want to mask, using the foreground colour (black). The areas you paint will actually show up on the image as red. This is the masked area.

You can alter the opacity of the brush if you want to change the density of the mask. If you make a mistake and want to remove part of the mask you're creating, just hit 'X' to switch the foreground and background colours around, and paint with white. The red area will disappear as it becomes 'unmasked'.

Finally, when you've finished, hit 'Q' again to exit quick mask mode. The mask now becomes an inverted selection, i.e. everything is selected apart from the area you masked.

Further reading:

<http://www.homephotog.com/tutorials/PS-mask.shtml>

RESTORING OLD PHOTOGRAPHS

It's very time-consuming an exacting work. Use the clone-stamp tool. You might also want to try the patch and healing tools as well. To get the tonality and colour right, you'll need the curves tool. Don't be afraid to use the automatic colour and levels adjustments.

Further reading:

<http://www.scantips.com/restore.html>

<http://colinrobinson.com/restore.html>

Professional service:

<http://www.benthamimaging.co.uk/> (bottom of page)

Mention Steve and you'll get these discounted prices!

Three levels of service:

- 1) Simple: £10 (which you could probably do yourself)
- 2) Medium: £40 (£5 discount)
- 3) Complex: £50 (£10 discount) (for badly damaged images and/or colouring mono images)

The latter two options give you a high resolution image on CD.

BLEND MODES

DISSOLVE: Randomly replaces pixels with either the blend color or the base color, depending on the opacity of each pixel. The top layer appears to dissolve into the underlying layers.

DARKEN: Replaces pixels in the base color with those in the blend color wherever the pixels in the blend color are darker. The resulting color is always darker than the original.

LIGHTEN: Replaces pixels in the base color with those in the blend color wherever the pixels in the blend color are lighter. The resulting color is always lighter than the original.

MULTIPLY: Multiplies the base color by the blend color. The resulting color is always darker than the original.

SCREEN: Multiplies the inverse of the base and blend colors. The resulting color is always lighter than the original.

COLOR BURN: Darkens the base color to reflect the blend color by increasing the contrast.

COLOR DODGE: Brightens the base color to reflect the blend color by decreasing the contrast.

SOFT LIGHT: Darkens or lightens the colors, using the blend color as if it were a diffused spotlight shining on the image.

HARD LIGHT: Multiplies or screens the colors, using the blend color as if it were a harsh spotlight shining on the image.

PIN LIGHT: If the blend color is lighter than 50 percent gray, pixels darker than the blend color are replaced. If the blend color is darker than 50 percent gray, pixels lighter than the blend color are replaced.

DIFFERENCE: Subtracts the blend or base color from the other, depending on which one is brighter.

HUE: Replaces only the hue with that of the blend color, but retains the luminance and saturation values of the base color.

SATURATION: Replaces only the saturation of the base color with that of the blend color.

COLOR: Replaces both the hue and saturation of the base color with those of the blend color.

LUMINOSITY: Replaces only the luminance of the base color with that of the blend color.

USEFUL TUTORIALS

There are many, many websites with good tutorials, just Google for them!

Here's a site with a lot of tutorials:

<http://www.photoshopessentials.com/>