

Black and White Photography and Processing Notes

By

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1 Introduction

This document cover processing notes relating to Black & White images. Processing steps for both Lightroom and Photoshop are included.

1.1 Filters for Black & White Photography

With traditional photography, B&W film tends to be more sensitive to blue than to other colors. When making landscape image, color filters were often used to change the tonal balance of the image at time of capture. Common filters used to darken skies are yellow, orange and red.

In digital photography, this can be achieved by altering the color balance of the image. With Lightroom, this is achieved with the Black & White Mix sliders. Similar functionality exists in Adobe Camera Raw (ACR), when opening the Raw image with Bridge.

1.2 Raw Image Adjustment

A good Black & White image will always require a good exposure at the time of capture. The initial processing of the RAW image, whether done with Lightroom or Bridge, should always include the following steps.

1. Adjust the white balance.
2. Adjust the basic tone of the image. This include the exposure, recovery, blacks and brightness.
3. Adjust the contrast, using the sliders and tone curves.
4. Adjust the vibrance and saturation sliders.

Ok, we are dealing with Black & White, but a change to the white balance will definitely affect how the color temperature maps to appropriate tones.

2 Black and White Conversions

This is the first step in the process. This can be done with Lightroom or Bridge. When I started working with black and white conversions, Lightroom did not exist. Also, Photoshop (CS2) did not have a black and white adjustment. Back then, I used Bridge as an image browser and file management tool. Lightroom has made this much easier. Photoshop CS3 and later have a Black & White adjustment layer.

Prior to this version, one good method of performing this is with the Channel Mixer adjustment layer. This technique is still valid. I will cover that method as well.

2.1 Lightroom

1. Locate the RAW file for the image that you wish to work with.
2. Create a virtual copy (cmd/'') of the image. That way, you will have the original RAW that you can go back to without having to undo edit operations.
3. Press D to access the develop module.
4. Perform the Raw Image Adjustment steps.
5. Press V to convert to black and white. Alternatively, for you mouse clickers, click on Treatment: Black & White.
6. The image will be converted to black and white.
7. Most B&W images will require more adjustment of global tone. Use the Blacks and Contrast sliders. You may find it necessary the make some minor changes to settings of the Raw Image Adjustment steps.
8. Adjust local contrast with the Clarity slider.

2.2 Bridge/ACR/Photoshop #1

1. Locate the RAW image in Bridge.
2. Access the HSL/Grayscale tab (with the spring/wavy icon).
3. Perform the Raw Image Adjustment steps.
4. Check the Convert to Grayscale.
5. The Grayscale Mix tab is displayed. The sliders can be used in a similar manner as described for Lightroom.
6. Press the Open Image button to open with Photoshop.
7. The image will open as a B&W image.

2.3 Bridge/ACR/Photoshop #2

1. Locate the RAW image in Bridge.
2. Open the file. This will open in ACR in the Basic tab.
3. Perform the Raw Image Adjustment steps.
4. Press the Open Image button to open with Photoshop.
5. The image will open as a color image.
6. Add a B&W adjustment layer in Photoshop.
7. This will display a dialog box with the Back & White adjustment sliders that function in a similar manner to those in Lightroom and ACR.

2.4 Photoshop Channel Mixer Conversion Method

The Channel Mixer is another popular method that can be used to perform Black & White conversion. Select the image in Bridge. Adjust the White Balance, Exposure, Shadows and Brightness sliders to optimize the image. Then open the image in Photoshop.

1. Layer | New Adjustment Layer | Channel Mixer
2. Check the Monochrome box. By default this gives 100% to the Red channel.
3. Check the Preview box so that you can preview the image.
4. Adjust each of sliders to suit.
5. Click the OK button.

The amounts to set for the sliders will affect colors in the image differently. To darken greens, you would reduce green and increase red. Also, note that the blue channel probably has a lot more noise than the other channels.

There is a common misconception that the sum of the sliders for each channel should equal 100%. Do what works for the image.

2.5 Photoshop Lab Color Conversion Method

Greg Gorman is a portrait photographer based in Southern California. He is renowned for his black & white work. You can visit his site (<http://www.gormanphotography.com>) to view some of his work. I discovered this conversion method at the Epson Print Academy back in 2004. There are several references to similar methods.

Select the image file you wish to work on in Photoshop. Perform the black & white conversion, as follows.

1. Command menu: Image | Mode | Lab Color
2. Select Lightness tab in Channels palette
3. Image | Mode | Grayscale. Reply OK in discard other channels dialog.
4. Cmd+click on thumb nail to load selection
5. Select | Inverse
6. With selection still active: Image | Mode | RGB Color
7. With selection still active: Layer | New Fill Layer | Solid Color
8. In Color Picker dialog, pick a dark gray color. For example, 76/76/76.
9. Set blending mode to multiply.
10. Adjust opacity to suit. For example, 80%.

This method also one to create toned prints using this process. In the color picker dialog, you can select a nice red-brown color to give a copper toning.

3 Black & White Manipulation

The traditional Black & White chemical darkroom uses film development to control global image contrast. Local image manipulation is done with dodging and burning under the enlarger.

Burning-in is done to perform localized darkening of the image. This is done under an enlarger to allow more light to reach the photographic paper. More light causes darkening of the image. Dodging is done to perform localized lightening of the image. This holds back the light, reducing the amount of light reaching the paper.

With digital Black & White photography, we use Curves or Levels to control contrast. We can use a couple of methods to perform local image enhancement.

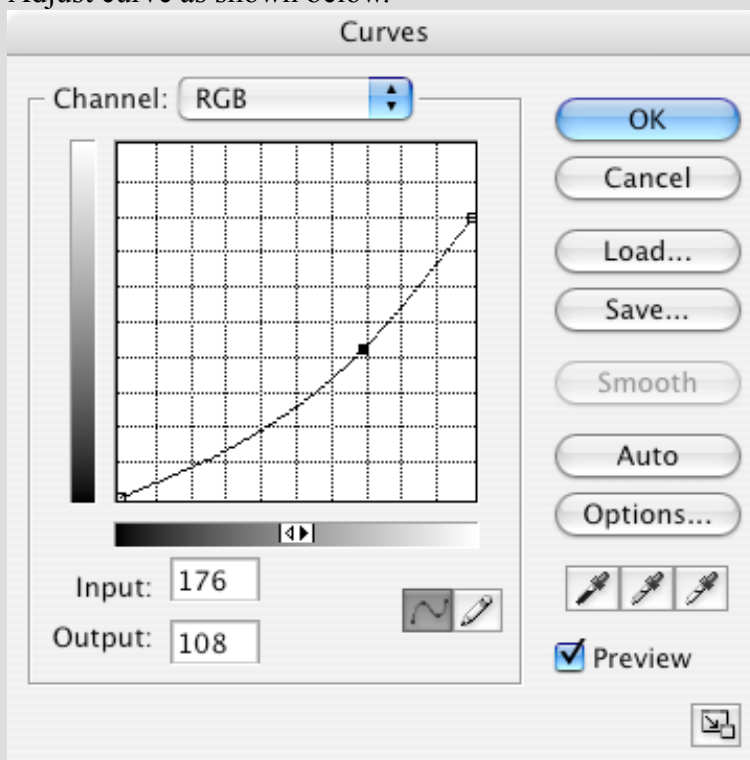
1. Burning and Dodging with Curves and Mask
2. Burning and Dodging with Gray Layer

3.1 Burning and Dodging with Curves and Mask

3.1.1 Burning In

First we add a "Multiply" curves adjustment layer with mask, as follows:

1. Command menu: Layer | New Adjustment Layer | Curves
2. In New Layer dialog, name the layer "Burn".
3. Adjust curve as shown below.



4. Click OK to accept.
5. Change blending mode to **Multiply**.
6. Set blending mode opacity to 100%.
7. Click on layer mask thumbnail.

8. Press D key to set default foreground and background colors.
9. Press X key to set foreground color to black.
10. Command menu: Edit | Fill | OK.
11. Alternatively press Option/Alt and the Delete/Backspace key.
12. The image will now look like it did before we started.

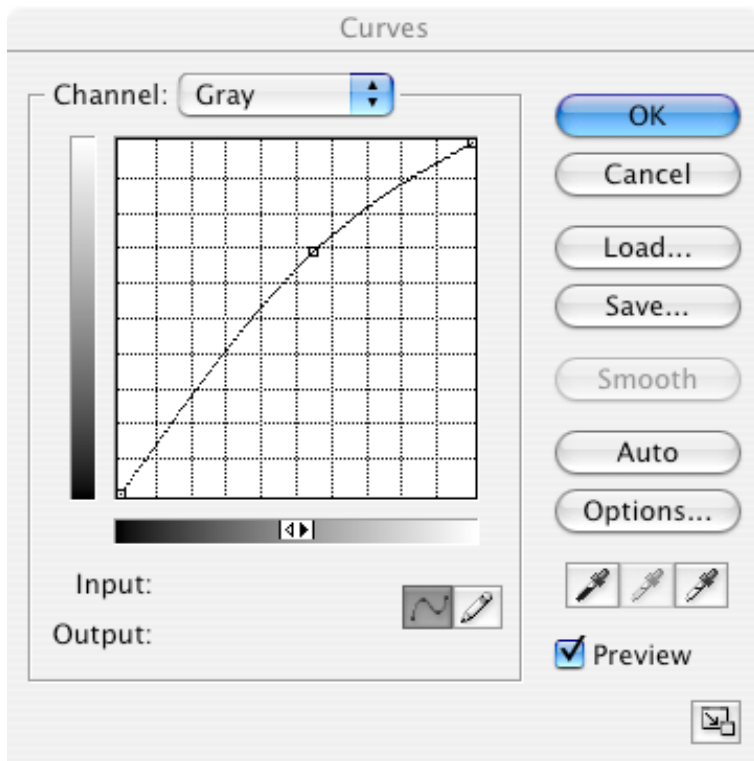
Now we are ready to start burning-in.

1. Press X key to set foreground color to white.
2. Select the brush tool.
3. Set brush opacity to 5 or 10%.
4. Set the brush hardness to a soft edge.
 5. Use the left and right [] bracket keys to reduce and increase brush size.
6. Click on the layer mask.
7. With the mouse (or tablet, if you have one), press the left mouse button to paint.
8. You will be painting white onto the black layer mask. This will cause the curves layer to be applied where we paint.
9. Adjust the brush size as you work the image.
10. Increase and decrease the opacity to increase and reduce the density.

Note that you can always tweak the layer opacity if the effect of burning in is too strong.

3.2 Dodging

First we add a "Screen" curves adjustment layer with mask. The process is very similar to the burning-in layer, except the Curve should look like this:



Set the blending mode to **Screen** and name the layer "Dodge".

We perform dodging using the brush to paint in the lightening from the curves layer.

3.3 Burning and Dodging with Gray Layer

3.3.1 Burning In

First we add a "Multiply" curves adjustment layer with mask, as follows:

1. Command menu: Layer | New | Layer.
2. In New Layer dialog, name the layer "Burn".
3. Select "Overlay" in the "Mode" list.
4. Check the "Fill with Overlay-neutral color (50%) gray" box.
5. Click OK to accept.

Now we are ready to start burning-in.

1. Press D key to set default foreground and background colors.
2. Press X key to set foreground color to black.
3. Select the brush tool.
4. Set brush opacity to 5 or 10%.
5. Set the brush hardness to a soft edge.
6. Use the left and right [] bracket keys to reduce and increase brush size.

7. Click on the layer we just created.
8. With the mouse (or tablet, if you have one), press the left mouse button to paint.
9. You will be painting black on the layer mask. This will paint black darkening the image where we paint.
10. Adjust the brush size as you work the image.
11. Increase and decrease the opacity to increase and reduce the density.

Note that you can always tweak the layer opacity if the effect of burning in is too strong.

3.3.2 Dodging

First we add a new layer exactly as described for Burning-in. Name the layer "Dodge". We perform dodging using a white brush to paint in the lightening on the new layer.

Note that you can use the same layer for both burning and dodging. However it is best to keep the two layers separate.