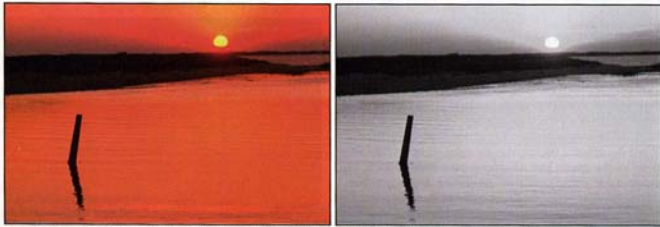


HOW TO Convert Color Images To Black & White [3 Methods]



A black-and-white image isn't merely about tones but about the varying shades that lay between the darkest and brightest elements of a scene.

BY PETER SHOLENS

SHADES OF BLACK AND WHITE

Black-and-white photography is coming back in style. Today's photographers are rediscovering the time-tested beauty of monochrome images. While the idea of black-and-white images might be old fashioned, the creation process is certainly up-to-date. Instead of creating the black-and-white image using the traditional film and darkroom method, many photographers have found a better way by using a computer and digital image-editing software.

Black-and-white images have always held a special place in photography. Even though the majority of the images are created in color, a monochromatic image produces a much different reaction than the same scene in color. Something magical happens when you see an image in full color and convert it to different shades of light and dark.

In this article, the author will show you how to take a digital image in color and convert it to black and white. During the conversion, you can enhance and alter to improve the digital image. There are many ways to perform this task. Each has benefits and drawbacks. In the end, you'll know which to use when and what results you can achieve.

One of the reasons photographers shoot black-and-white photography is its apparent ability to render a scene to its basic elements. The stark elements, without the distraction of color, means the viewer must judge the image on composition and range of tones. While compositional rules apply equally to color and black-and-white, the emphasis on the tone of the image creates the special aspect that can only be found in a monochromatic image.

A black-and-white image isn't merely about the tones, however, but the varying shades that lay between the darkest and brightest elements of a scene. The challenge, then, becomes how those elements are portrayed when shooting a scene. Because the color element is eliminated, the photographer must understand how individual colors translate to monochrome—put simply, how blues, reds and yellows will become different shades of gray.

One of the biggest challenges the photographer faces when photographing in black and white is how to separate colors. When photographing for black and white in camera, there are varying degrees by which

individual colors reflect light. For example, the colors red and green, which look markedly different in a color image, appear to be the same shade of gray, because they reflect virtually the same amount of light. Learning how to evaluate a scene for various tones, rather than color, comes with time and practice. Digital cameras, with their liquid crystal display (LCD) screen, offer an easy way to hone this skill.

**EASY DOES IT: IN-CAMERA
BLACK-AND-WHITE IMAGES**

One of the easiest ways to create a monochromatic image is the in-camera method. Set your digital camera to its Black-and-White mode (check your camera's instruction manual on how to change the settings). The camera then captures a monochromatic image that you can evaluate on the camera's LCD. This is an indispensable learning tool that helps you make the transition from color photography simple.

When the digital camera takes a black-and-white image, it still utilizes the red, green and blue pixels on its charge-coupled device (CCD) sensor, creating an image that has three identical grayscale channels. By shooting with your digital camera in Black-and-White mode, you quickly get a sense of how individual colors translate to black and white. You'll also learn how contrasting tones, not merely the extremes of black and white, can become the key element in a photograph. Try it. Seeing an image in black and white will help you to understand colors in an image.

One drawback of using the in-camera method is the same problem photographers faced back in the old black-and-white film days. Colors that are very different in real life show up as similar shades of gray in a monochrome version of the image. That was why old-time photographers used to carry a number of filters in their camera bags. The filters were used to separate colors.

**CONVERTING ON COMPUTER:
CHOOSE YOUR METHOD**

As you become comfortable with evaluating a scene, you'll begin to understand why most of today's photographers prefer shooting images in color and then convert to black-and-white images using an image-processing program. This gives you the option of creating the image in both color and in black and white. Converting on the computer allows you to determine which images translate better to monochrome. While the following processes can be used with any photo-editing software, specific instructions apply to **Adobe Photoshop**.

Depending on the image, you may be able to use one of the simple commands. Other techniques allow you to provide greater control over converting your color images to black and white. Each of the following methods has its advantages and drawbacks.

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Adobe Photoshop's Channel Mixer gives you the best control when converting color digital shots to black-and-white images. It lets you emphasize specific color channels to vary the tone and contrast of an image.



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METHOD 1: CONVERT TO GRAYSCALE

One of the quickest ways to convert the RGB image file to Grayscale. Select Image > Mode > Grayscale to convert the picture into a monochromatic image. What the Grayscale command does is discard all the color information. The resulting file is based primarily from the Green channel, with less information from the Blue and Red channels.

A color image is made up of three black-and-white channels—Red, Green and Blue—and each channel renders the scene differently. Think how the resulting image would appear if you took a photograph in black and white through a red, green, or blue filter. The red filter would produce an image that is sharper in contrast than when using a green filter. Shooting the same scene with a blue filter turns the elements that are dominantly blue, such as water and skies, to white. The blue filter also may reveal electronic noise produced by the CCD.

METHOD 2: DESATURATE

Another popular command method for converting color to black and white is using the Desaturate command. Located under the Image > Adjustments menu, this command will also remove all color from the selected image.

These are simple methods, but are they the best? It depends on the image. Both commands use basic Photoshop algorithms to determine how much information is to be removed from the image. One of the biggest drawbacks to using both of these commands is that you are removing pixel information from the layer, which cannot be brought back.

ADVANCE METHODS

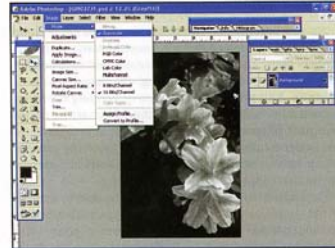
In some cases, relying on Photoshop is perfectly acceptable. Still there are other methods that you can use that provide you with greater control over how your image will appear in the end.

METHOD 1: SATURATION TOOL

One popular method to remove color and get a black-and-white image is with the Saturation tool. Go to Image > Adjustments > Hue/Saturation, and move the Saturation slider all the way to the left, eliminating all color data. The result is a black-and-white image in which the Red, Green and Blue channels are identical. You can then use the Lightness slider to brighten or darken your image. While easy, it may not provide the best image possible.



Converting to Grayscale is one of the quickest ways to convert a color image to black and white. Here, the monochromatic image is achieved by discarding all color information, limiting control over tone and contrast.



METHOD 2: CHANNEL MIXER

In many cases, you might want to emphasize certain tones, so the best conversion tool that gives you the ability to emphasize specific color channels for more control is the Channel Mixer. The Channel Mixer (Image > Adjustments > Channel Mixer) allows you the best control when converting color digital images to black-and-white images. After opening the Channel Mixer dialog box, click on the Monochrome option at the bottom of the window. This sets the Red channel to 100 percent. Using the Channel Mixer, you can adjust the Red, Green and Blue channels to vary the tone and contrast of the image. Depending on your image, when you increase the percentage to the Green or Blue channels, you can emphasize certain tones that are important to your image.

For example, if your scene has a red element, and you want to render it as a dark tone, add some more to the Green channel. This is important when you want to increase the contrast between two colors that appear close in tone. Just like when you added a red filter in front of your camera lens when shooting black-and-white film, a red rose against some green leaves will have a more dramatic contrast if the Red channel is emphasized over the Green. The red flower will be lightened, while the green will darken, thus increasing the contrast.

While that seems counterintuitive, remember that if you emphasize the Red channel, the red lightens the scene. The same goes for green colors, if you emphasize the Green channel and blue for the Blue channel. In the end, as a general rule, when you're finished playing around with the different sliders, to get something similar to the original exposure, the sum of the three channels should be about 100 percent. Go higher and the results will be a brighter image. A lower number will darken the image.

FINE-TUNING IMAGES

Initial conversion of a color image into black and white still may result in an image that's flat and lacks punch. It's important to check black-and-white points in Levels and Curves to make adjustments to contrast. Such enhancements are needed to produce the look you've come to expect from striking monochromatic prints.

LEVELS TOOL

Begin with Levels, which includes a histogram that reflects the entire tonal range of your image. By adjusting the black-and-white point indicators, you can establish the darkest and brightest points of the image. A strong black-and-white image requires establishing a solid black and solid white point (unless, of course, your image consists of only gray tones). Adjust both the black-and-white point indicators to the extreme edges of



The Saturation tool is another popular and fast way to convert your image to black and white. Once the color data is eliminated, you will only be able to control the brightness of your image.



the histogram. If you want a natural-looking image, don't bring them in too far; if you do, the image will suffer from clipping, which results in the loss of the highlight and shadow details. Even with a slight adjustment, you'll likely see an improvement in the overall contrast of the image.

CURVES TOOL

If you want to increase the contrast even further, use the Curves tool. The Curves control has a line that runs diagonally through the graph. By creating a slight S-curve adjustment and bringing the lower portion down and the higher part up, you'll increase the contrast with minimal loss of detail in the highlights and shadows. The more dramatic the S-curve, the stronger the contrast will appear.

With the many different controls available to you for converting a color image to black and white, you will have to experiment to see which method provides you with the best image. In your digital darkroom, using these choices allows you to become a master of the lost art of black-and-white photography. ■

LINK

• Adobe — 800-833-6687; www.adobe.com

