Converting to Black and White Using Camera Raw

**Step One:**
We’ll start by opening a color image in Camera Raw (as seen here). Converting from color to black and white is simple—just click on the HSL/Grayscale icon (it’s the fourth icon from the left) and then turn on the Convert to Grayscale checkbox at the top of the panel (as seen here). That’s all you want to do here (trust me).

**Step Two:**
Once you click on that Convert to Grayscale checkbox, it gives you an incredibly flat conversion (like the one you see here), and you might be tempted to drag those color sliders around, until you realize that since the photo is already converted to black and white, you’re kind of just dragging around in the dark. So, the best advice I can give you is to get out of this panel just as fast as you can. It’s the only hope for making this flat-looking grayscale image blossom into a beautiful butterfly of a B&W image (come on, I at least get five points for the butterfly metaphor thingy).

Although Photoshop has its own Black & White conversion adjustment layer, I never, ever use it, but that’s only because it totally stinks (I don’t know any pros who use it). I think you can create a much better black-and-white conversion using Camera Raw, and it’s much faster and looks infinitely better. Well, that is as long as you don’t get sucked into using the HSL/Grayscale panel in Camera Raw, which is nothing more than the Black & White adjustment layer hiding in Camera Raw, trying to sucker in some poor unsuspecting soul.
Step Three:
When you talk to photographers about great B&Ws, you’ll always hear them talk about high-contrast B&Ws, so you already know what you need to do—you need to create a high-contrast B&W. That basically means making the whites whiter and the blacks blacker. Start by going to the Basic panel and dragging the Exposure slider as far over to the right as you can without clipping the highlights (I dragged to +2.35 here; see page 32 for more on clipping highlights). If you clip them just a little, drag the Recovery slider over until the white clipping triangle (up in the histogram) turns black again. If you have to drag it pretty far, you’re better off just lowering the Exposure amount instead, or your conversion may look a little flat in the highlights.

Step Four:
Now, drag the Blacks slider to the right until it really starts to look contrasty (as shown here, where I dragged to 6). If part of it gets too dark, drag the Fill Light slider a little to the right to open up those areas. So far, I’ve increased the Exposure and the Blacks.
Step Five:
The last two things I do are to increase the contrast (you can go to the Tone Curve panel and choose Strong Contrast from the pop-up menu at the top of the Point tab, or in this one instance, it’s okay to just drag the Contrast slider to the right until the image looks real contrasty). Then, I increase the Clarity amount (which adds midtone contrast), and I usually push this one to around 75 for black-and-white images (unless it’s a portrait, then I’ll usually set it to around 25, unless it’s a baby, then I leave it set at 0). A before/after of the conversion is shown below (the Auto conversion from the HSL/Grayscale panel is shown at left, with the simple Camera Raw tweaks you just learned at right). Pretty striking difference, eh?
COLOR INTO BLACK AND WHITE

Color channels can be blended together in image-editing software. Aperture's Monochrome Mixer and Lightroom's Grayscale Mix give you sliders like those you can call up in Photoshop by choosing Black & White, an adjustment under the Image menu. In each of the programs you can control the proportion of each primary color channel that will be incorporated into your black-and-white image while you watch the on-screen preview change.

You can set many digital cameras to capture in black and white. The camera will produce a grayscale JPEG or TIFF image, and the camera's monitor will show a black-and-white preview. If your camera is set to capture a Camera Raw file, however, a black-and-white image will show on the camera's monitor but all the color information will still be present in the saved file. You can then convert it to grayscale, as described above, with image-editing software.

Infrared Black and White

Digital camera sensors are covered with a filter that blocks infrared radiation but it is still possible to make black-and-white photographs using that invisible energy just beyond the spectrum of visible light.

The effectiveness of infrared blocking filters varies from one camera model to another, but fortunately none blocks infrared completely. Cover your lens with a filter that blocks visible light and passes infrared, like a Wratten No. 87, Hoya R72, or Heliopan RG715. With visible light removed, whatever the sensor receives will be infrared. But it will be very little radiation, and you will need a long exposure—usually more than a second in daylight even at your widest aperture. Trial and error should lead to satisfactory results.

If you are very serious about shooting infrared black and white, you can devote a camera to that purpose by removing the IR-blocking filter from its sensor. A little online searching will turn up (somewhat complex) instructions for those who are technically inclined. Some camera-repair shops will also modify your camera.

A digital color image is made up of several black-and-white ones. A photograph on traditional color film or a color print in a darkroom is recorded on three superimposed layers; each is actually a black-and-white photograph rendered in one primary color by a dye. A digital image in color is the same; every pixel has a separate luminance (lightness) for each of three primary colors. The luminance values of a single primary color in a photograph can be viewed as a monochromatic image (right). Image-editing software lets you see and edit each primary separately.

Digital cameras and scanners capture in red, blue, and green additive primaries. Unless specified otherwise, this book only discusses images in the RGB mode. Software can convert those to CMYK (the cyan, magenta, and yellow subtractive primaries with black) in preparation for printing in ink.

Your RGB photograph has three channels; each comprised of the values of a single primary color. A single channel can be displayed as a monochromatic photograph, usually in black and white (called grayscale). Photoshop uses a channels palette (see right, top), which gives you the option of seeing the red channel, for example, in shades of red instead of grayscale as shown. In addition to seeing each channel separately, you can perform most of Photoshop’s image adjustments on any one channel independently. Lightroom and Aperture divide an image into channels only in a histogram and allow only limited single-channel adjustments.

Channels can be masks. When you want to apply an adjustment to one part of an image and not another (for example making someone’s face lighter but not the background), Photoshop needs a map that tells it which areas you want adjusted. A new channel is created that is white where you want the image adjusted and black where you don’t (it can also be gray where you want only a partial adjustment). The channel, called a mask, is saved as part of the image file but is ordinarily not visible.
Here are two of the best, most-useable, and easiest black-and-white conversion techniques for creating stunning black-and-white photos with loads of depth and contrast. OK, after years of tweaking different black-and-white conversion techniques, I think I've finally found the easiest and fastest way yet to create great black-and-white conversions.

**B&W Conversions using Channel Calculations**

You've probably seen about 1,200 or so color to black-and-white conversions using Channel Mixer, and I have a Channel Mixer method I like myself, but when your Channel Mixer method doesn't give you the results you like, where do you turn next? That's right — calculations to the rescue! By the way, we'll be talking about this in class, but don't let the huge scary dialog box fool you — it does a very simple thing (combining two channels to make a new channel) in a very easy way and that's how we're going to make our conversion — combining the two best channels using a blend mode.

**step one:** Open a color image you want to convert to Black & White.

**step two:** Take a quick look through the Channels palette (press Command-1, Command-2, etc.) to see each channel and see if there's one or more that, by themselves, would make a good black and white image. If you can find one where you like some areas, and one where you like others (like maybe the highlights), you can combine them to create an uber channel.

**step three:** Go under the Image menu and choose Calculations. As scary as it all looks, you only have to make two decisions here: (1) which two channels do you want to blend together, and (2) which blend mode do you want to use. Luckily, the whole thing is made so easy by the fact that there's a live preview, so as you choose one channel or another, you get instant feedback onscreen to see if your image looks better or worse. Same thing with the blend mode. If the two channels together look too dark in Multiply mode, try Overlay or Soft Light. Again, just look onscreen and you'll see if you've got a winner or not. When you do, at the bottom of the Calculations dialog, for Destination choose New Document, and when you click OK, your new channel becomes an entirely new document.

**step four:** When the new document is created, go under the Image menu, under Mode and choose RGB, in case you want to add a duotone effect. Also, don't forget to sharpen the image as well.