Curve color corrections

Precise color corrections using Curves

Basic Levels/Curves adjustment techniques can be quite effective at correcting color. It therefore follows from this that you can utilize the versatility of Curves to adjust the individual channels with even greater precision. As a general rule, once you have corrected for a cast in the highlights and shadows, all the other colors should more or less fall into place and a further tweak to the midtones may be all you need. However, there are still plenty of situations where you may wish to exploit the full potential of a Curves adjustment to improve the color appearance. In the steps shown over the page I found that I needed to make two carefully targeted midpoint curves adjustments to the red and blue channels in order to correct for the blue/cyan cast.

Let's first look at how to make Curves adjustments based on pixel color measurements. If you click on the target adjustment tool button in the Curves dialog (🖑) and then click anywhere on the image you can add a new control point on the corresponding portion of the curve. This is useful when making basic tone edits, as you can determine where to add curve control points by simply clicking on the image. Also, remember that in Photoshop there is an 'Auto-Select Targeted Adjustment Tool' panel option that automatically selects the target adjustment tool whenever an adjustment layer is made active. If instead you hold down the ⌘ Shift ctrl Shift keys and click in the document window (with the target adjustment tool 🖑 selected in the Curves panel) you can add control points to all three color channels at once (but not to the main composite curve). So, when adding control points to color correct the white dress image example that follows on pages 4–5, I ⌘ Shift ctrl Shift-clicked on top of each of the color sampler points to add these as control points in all three color channels in the Curves dialog. I was then able to use the Info panel feedback (Figure 1) to determine whether the gray/white colors were neutral or not.

Note that when you are editing the points in the Curves dialog, you can Shift-click additional points on the curve to select multiple points. Then, as you adjust one control point the others move in unison. When a single point is selected you can select the next point using the + key and you can select the previous point by using the − key (see sidebar on working in the direct Curves dialog).
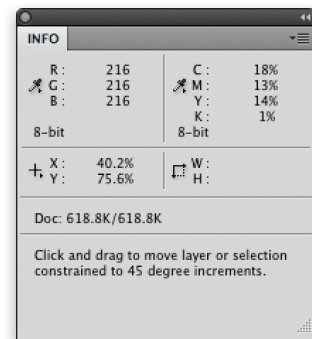
Figure 1 Providing the image you are editing is in RGB mode and using one of the standard RGB color spaces such as Adobe RGB, sRGB, ColorMatch RGB or ProPhoto RGB, the Info panel can be used in conjunction with the eyedropper or color sampler tools to read color values in an image and help determine whether the colors are neutrally balanced. Equal Red, Green and Blue values will always mean a color is neutral.

1 This photograph had a cold blue cast that was particularly noticeable in the backdrop, which should have been a neutral gray. I went to the Adjustments panel and chose Curves… (note that in Photoshop CS6 or later, the Adjustments panel is now the Properties panel in adjustments controls mode).


2 This shows the Curves corrected version, where I was able to get rid of the cast in stages by adjusting the shape of the curve in the individual color channels. I first selected the Red color channel from the Channel menu and added a couple of control points to the curve to adjust the color balance for the midtones and highlights. I then went to the Blue channel and added two points to the curve, this time to correct the color for the shadows and highlights in the Blue channel. I simply applied these corrections based on the appearance and what made the image look right.
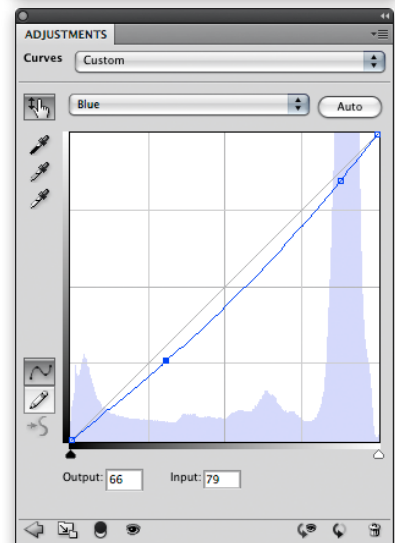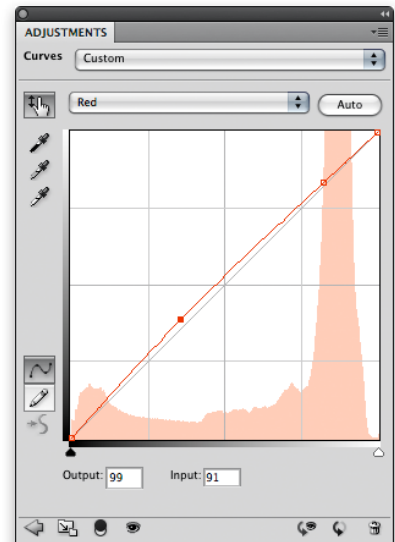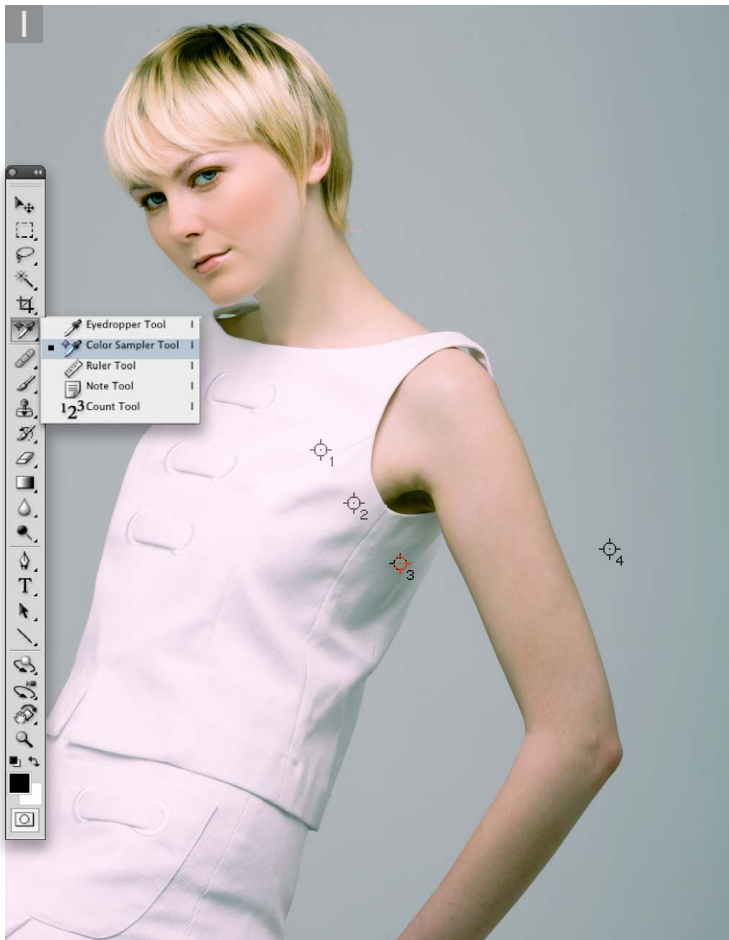
1 Whenever you have a subject that is white or gray, or shot against a neutral background, any color cast will be extremely noticeable. Here, I selected the color sampler tool and clicked on the image in three different places on the white dress, plus once on the backdrop. Each click placed a persistent color sampler readout and the readout values were displayed in the Info panel. The intention here was to measure the color at different points of lightness so that these could be used to calculate a precise Curves adjustment.
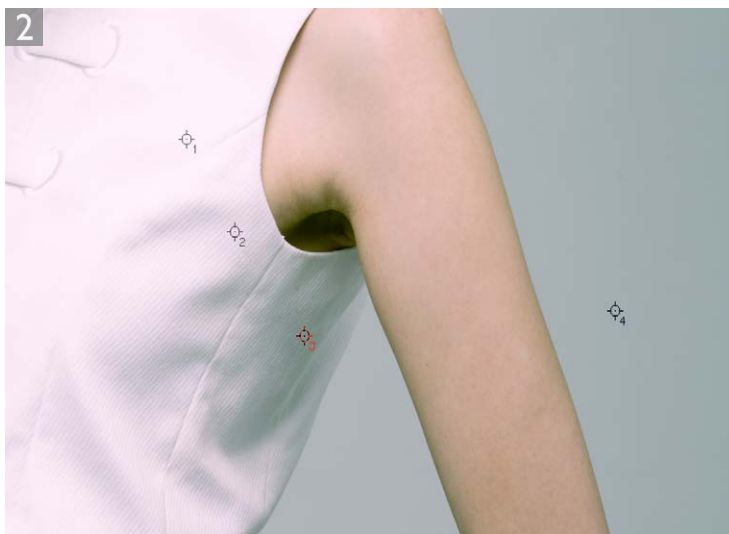
2 The color sample points could be repositioned as necessary by dragging on them with the color sampler (while in an image adjustment dialog, you can access the tool by holding down the *Shift* key). Once the color sampler readouts were in place, I added a Curves adjustment layer. With the Properties panel in adjustments controls mode open), I zoomed in to get a close-up view of the model's white top where the points had just been placed. I clicked to select the 🔲 tool and then ⌘ *Shift* (Mac), *ctrl* *Shift* (PC)-clicked on top of each of the sampler points. This added a corresponding curve control point to the individual RGB channel curves. When I inspected the red, green and blue channels in the Curves I could see three points had been added in each channel.

3 Here is an example of the Curves adjustment that was made to the three channels based on the Info panel information. The first RGB readout figure indicates the original input value. At each point I looked at the three numbers to see which of these represented the median value. I then adjusted the points in the other two channels so that these other two output values matched the median value (you can manually drag the point or use the keyboard arrows to balance the output value to match those of the other two channels). Note that *Shift* +arrow key moves the control points in multiples of 10.

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