

What to do when an original does not have a well defined highlight or shadow area

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ADJUSTING IMAGES WITH NO WELL DEFINED HIGHLIGHTS IN PHOTOSHOP

When there is no well defined highlight or shadow area in an original image, it is often difficult to set the correct target values for a highlight or shadow area. Typical CMY highlight shadow values are 5%c, 3%m, 3%y. These target values will not work in this case. In these situations experience is beneficial. Experience allows you to begin to make educated guesses that are based on the connection to the image values in the lightest areas of the reproduction to the visual results you get on your proof. If you have very little experience then it takes more trial and error to gain that experience. Even with experience skilled color professionals find it is necessary to use a controlled experimentation approach where you make incremental adjustments to the highlight or shadow areas and then verify the results by making proofs until the image appears to have the correct highlight contrast. In this process, a calibrated monitor is beneficial to reduce the cycle of hard copy proofs.

To provide a sense of how this process works, in situations where an image does not have a well defined highlight or shadow an experienced operator would take an educated guess and might need to make two or more intermediate proofs to verify they have made the correct adjustments for an image without a highlight or a shadow. In an imaging system that is un-calibrated when scanning and making adjustments to images without highlights or shadows is time-consuming and costly.

This points out the benefit of using profiles. One purpose of a profile is to help define the white to black range of the imaging system so if you have an image without a highlight or shadow there is a reasonably good chance the image will reproduce satisfactory very little or even no image-processing adjustment and intermediate proofs.

The example below shows the results of adjusting an image without a well defined highlight area.



THE ORIGINAL IMAGE Highlight area



THE FINAL CORRECTED IMAGE



AN OVER CORRECTED IMAGE

In this example, the highlight area we chose is on the chin of a statue of the image. That area measures of 22% cyan, 2% magenta, 22% yellow.

The final highlight adjustment in this example was based on neutral gray but we used alternative target values that were derived after some experimentation, they are 10% cyan, 5% magenta, 10% yellow. The highlight area we chose is between the two zeros on the left center of the image.

To achieve the target values for this image here is what was done.

- In the Curves dialog box the white point of the cyan was reduced from 22% to 10%.
- The magenta was unchanged.
- The yellow was reduced from 22% to 10%.

In this example, we applied our commonly suggested target values (of 5% cyan, 3% magenta, 3% yellow) the above image becomes too light, too contrasty and too neutral to match the original image. In this situation (with this image) it becomes clear that alternative target values should be used.

NOTE: The example images on this page do not have well defined highlight area (such as a diffuse highlight that is near-neutral gray).

In this situation the advice is to:

- Start using Curves to reduce the highlight in 5% increments (by dragging the Curve).
- Adjust the image until it has good contrast on the monitor (that is if you trust the appearance of the image on your monitor).
- Then measure the highlight (or lightest image area to keep track of the values).
- Then make a proof to verify the adjustment.

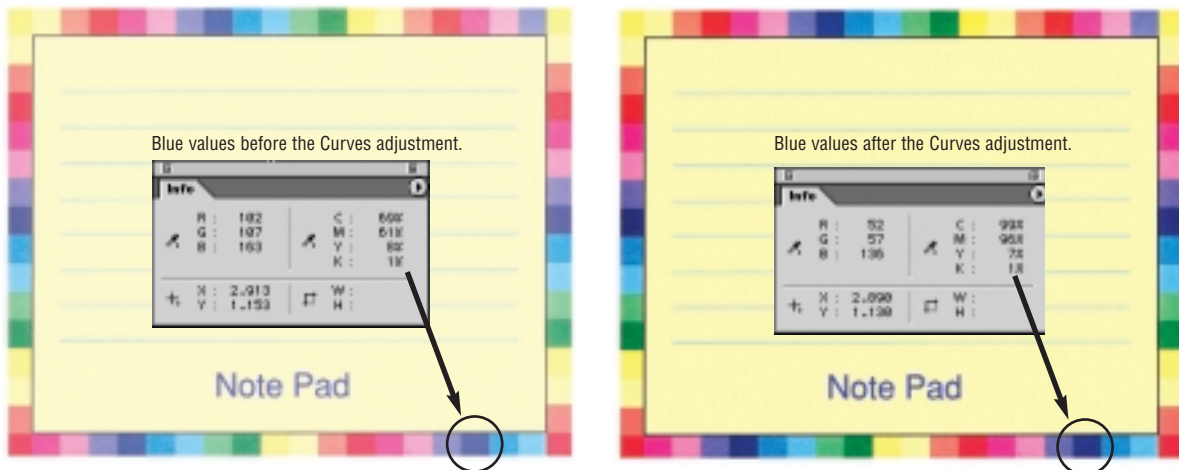
Of course if the image does not show a large enough change with small increments then try larger increments such as 10% or even 20%. In some situations the highlight and shadow adjustments might be subjective just to make the image look good. In others cases it might be necessary to match the reproduction to the original. The latter option is harder and costlier to achieve because more proofs are required to verify a visual match.

ADJUSTING IMAGES WITH NO WELL DEFINED SHADOWS

In this example, this image does not have well defined neutral shadow area such as the well defined neutral shadow areas we have used in other examples. If our commonly used target values are applied the image becomes too dark and the color areas become too saturated depending on where you choose the shadow point.

In this situation (this image) it becomes apparent that the shadow adjustment will need to be increased. Start using Curves to increase the shadow in 5% increments (by dragging the Curve) until the image has better contrast on your monitor, measure the shadow point, then make a proof to verify your correction.

Of course if the image does not show a large enough change then try larger increments such as 10%.



THE ORIGINAL IMAGE

This circle represents the blue color area that was measured.

THE FINAL CORRECTED IMAGE

This circle represents the blue color area that was measured.

The final adjustment to this image was to increase the shadow point by 30% overall using the Master channel in the RGB mode. Then the image was converted to CMYK using the Photoshop Default settings. Our decision to make this correction was based on examining and measuring solid color areas within the image. See the sidebar about the Shadow Point Tip. In this example, the darkest blue color was used as a guide.

Here is how it worked:

- The blue colors measured 69% cyan and 60% magenta, 0% yellow, and 1% black.
- As the Master channel increased the values in all colors we monitored the cyan values in the blue color. When the cyan value in the blue color increased to the value of 99% we then applied the Curves correction that was a 30% increase in the shadow point.
- This gave the blue color balance 99% cyan, 96% magenta, 7% yellow 1% black.
- If we wanted to change the other colors we would then use tools such as Hue & Saturation, Selective Color or a combination of Selections and image-processing tools to create specific color balances in each color.

Note: If this example image was a critical color match to the original it would have taken us at least two hard copy proofs to match the colors. Since this was not a critical color reproduction and pleasing color, the reproduction was oked by using the monitor.

NOTE: The example images on this page do not have well defined shadow areas (such as a dark black area that is near-neutral gray).

In this situation our advice is to:

- Start using Curves to reduce or increase the shadow in 5% increments (by dragging the Curve).
- Adjust the image until it has good contrast on the monitor (that is if you trust the appearance of the image on your monitor)
- Then measure the shadow (or darkest image area to keep track of the values)
- Then make a proof to verify the adjustment.

SHADOW POINT TIP

While this suggested method to adjust the shadow is not absolute, one way to judge or verify if you have a good shadow point is to examine and measure color areas within the image (that is if they are available). Once you gain some experience about how certain colors should look and how certain color values measure to create a certain color you can begin to make educated guesses if your shadow point is set correctly.