

F-stop corrections

Bruce Fraser Adapted from Real World Photoshop, by David Blatner and Bruce Fraser. Bruce Fraser is coauthor of the award-winning Real World Photoshop series, and of Real World Color Management, all from Peachpit Press.

Here is a simple way to adjust exposure in the f-stop increments that is second nature to photographers. The key to this technique is that the Screen and Multiply layer blending modes, at an opacity of 38%, produce an effect very similar to lightening or darkening by one full f-stop. (For half-stop adjustments, use 19% opacity, for one-third stop use 13%, and so on.) In this example, we'll darken the image by one stop.

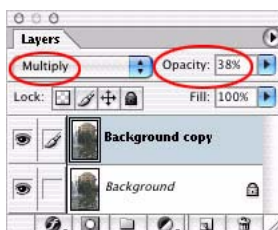


1. Create an f-stop correction layer.

If you're working on a flat file, duplicate the Background layer by choosing Duplicate Layer from the Layer menu. If you're working on a layered file, create a new layer by choosing New > Layer from the Layer menu, then press Command-Option-Shift-E (Mac) or Control-Alt-Shift-E (Windows) to merge the contents of all visible layers into the new layer while leaving the underlying ones intact.

2. Apply a global f-stop correction.

Select the newly-created layer in the Layers palette, then set the blending mode to Multiply and the opacity to 38%. This darkens the image globally by one stop.



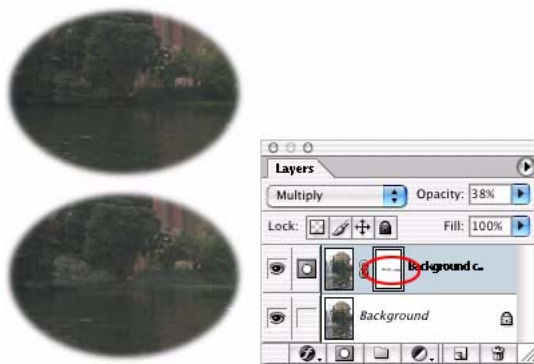
3. Add a Layer Mask.

The global correction makes some of the vegetation along the waterline too dark. To back off the correction locally, you first need to add a Layer Mask by choosing Add Layer Mask from the Layer menu. In this case we used the Reveal All option, but choose the option that requires the least amount of painting—if you want to correct a small area, it's more efficient to choose Hide All, and paint the correction in, rather than choosing Reveal All, then painting the correction out.

Note that when you add the layer mask, it automatically becomes targeted in the channels palette, and the background and foreground colors are automatically set to Black and White, ready for editing the layer mask.

4. Constrain the correction.

With the foreground color set to Black, use the Brush tool set to a soft-edged brush to paint out the correction in the areas where you don't want it applied. In this case, we painted with an opacity of 33% to reduce the correction along the waterline to 1/3 stop.



5. Experiment.

This technique lends itself to numerous variations. Once you've constrained the correction to the desired area of the image, you can vary its strength by changing the layer's opacity—for example, if you decide that you need a two-stop correction, increase the opacity from 38% to 76%.

You can also experiment with different techniques for constraining the correction. If the area to be corrected or the area to be protected is easily selectable, you can create the selection before adding the Layer Mask, then use the Reveal Selection or Hide Selection options, respectively. If you want to constrain the correction to a specific tonal range, you can use the Blend If options in the Layer Styles dialog box to limit the correction to the desired tonal range. For small local corrections, you can use the History Brush, with the source set to the current image state, and the Brush Mode set to Screen or Multiply—this method is particularly useful for making delicate corrections with the History Brush set to very low opacities in the 3% to 10% range.