

Dealing With “Gloss Differential”

by Mark Campbell - Adobe Certified Expert

With more and more photographers outputting their work on archival inkjet printers, solutions to a whole new set of problems are being sought. For example, Gloss Differential, (which refers to the visual phenomenon that occurs, generally in the highlights, when you turn an archival inkjet print against the light) is bothersome to some. While I don't find it particularly offensive (nor should it even happen often in a well exposed image - *watch that histogram!*) it causes grief to enough photographers that I set out to find a “cure”. Note that I said grief to “photographers”.

We print the majority of our work in house on an Epson Gemini system that is absolutely astonishing in its ease of use and image quality. Even an optimized image will sometimes exhibit this “dreaded” feature, but in the 18 months we've been using it I've never had a customer even notice it, let alone complain. I think sometimes we look for problems where none are really present. In any case, I wanted to set some minds at ease, so the following technique was developed to reduce, and in many cases, eliminate, the problem.

You see the majority of the problem lies in the fact that *there is no white ink!* Since the printer doesn't lay down any ink in an area that is paper base white, and since there is a difference between the reflectance of the paper and that of the ink, we perceive a problem. The solution then, is to force the printer to spray out a small amount of ink into those areas so that the reflectance matches. Not so much as to destroy the tonality or the relationship between highlight areas and those surrounding them, but just a “smidgen” (that's a technical term).

Let's take a look at figure 1. In this image, parts of the water fountain in the background have values that read 255 in all three channels. We need to find a way to make the values in that area come down a little, and we want to make it a way that can be done automatically in an action.



Figure 1

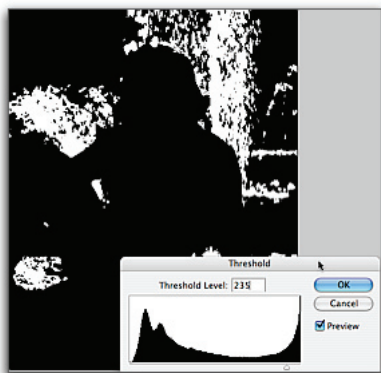


Figure 2

Now that we can see those pixels, we need a way to select them. Your first thought might be to use the magic wand with the contiguous option turned off. Unfortunately, this type of selection is not recordable in the actions palette. Instead, we'll use the Color Range command (Select>Color Range) and use the “highlights” option (Figure 3). This will select all those white areas, and it's recordable! Once they're selected, we can throw the threshold adjustment layer away. This will help us to visualize the results better.

The first step is to identify any pixels in the image that are above a certain level. In my testing I've found the best number to be 235. Although this sounds like it will make a drastic difference, trust me — a later step will reduce the effect. To find those pesky pixels, I'll apply a Threshold Adjustment layer from the adjustment layer popup in the bottom of the layers palette and type 235 into the dialog box (Figure 2).

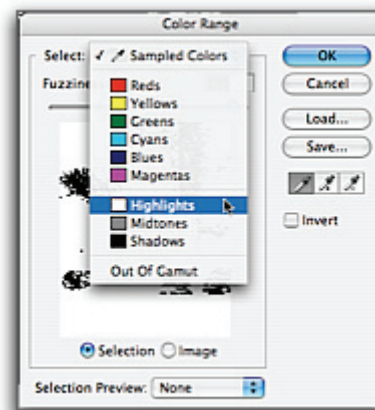


Figure 3

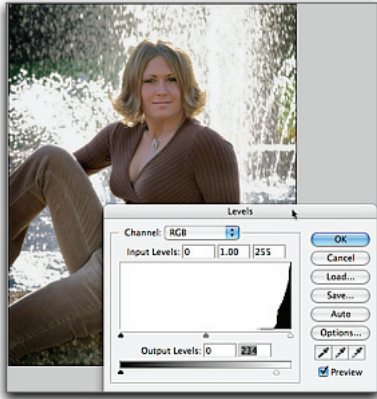


Figure 4

Next apply a Levels Adjustment layer and reset the “Output” highlight slider to 235. This is the lower right slider, not one of the upper three (Figure 4). You can also type 235 into the box if you find it easier. Remember, though, that you only need to do all of this once if you record it as an action. Hit OK to accept the change. Now you may notice that you can clearly see the edge between the area you adjusted and its surroundings. Not to worry. I told you a step that came later in the process would reduce the effect and it will also blend it in.

While the levels adjustment layer’s mask is still targeted (it *will* be automatically after you create the adjustment layer), go to the Filter menu and select Blur>Gaussian Blur. The number you enter will be determined by the file’s size and resolution (the bigger the file, the higher the number). This effectively blends the areas together. You can, if you like, then merge the layers together as a final step.

Don’t worry if the highlight areas appear a bit “gray” on screen. Those areas will still appear white in the final print, but the gloss differential problem will have been reduced or eliminated. You can download this action, along with others, for free from my website - www.prestigephotonet.net. Just click on the “Digital Doctor” link and go to the downloads section. Happy Photoshopping!



Before



After

Mark Campbell has been teaching Photoshop & other topics to photographers across the country for the past eight years. He is a Past President of the Professional Photographers of West Virginia, current President of the Triangle Photographers Association, based in Pittsburgh, PA and serves with the Professional Photographers of America both as a state councilor and as a member of the By-Laws, Rules & Ethics Committee.

With the PPA he holds the degrees of Certified Professional Photographer, Craftsman Photographer, Certified Electronic Imager, and Approved Photographic Instructor. His first ever entry into National print competition found its way onto the cover of the 2002 Loan Collection Book.

He makes his home in Wheeling, West Virginia along with his wife, Cheryl, 2 cats and a dog named Pixel. Together, they have operated Prestige Photography & Video since 1989.

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