

## Capture Sharpening for Digital Images.

If you've started to shoot with a digital camera, you've probably noticed that the images you're getting don't seem quite as sharp as slide or film images. This is because almost all digital cameras have a filter in front of the image sensor that imparts a degree of 'softness' to the image. You can easily remedy this and restore an image to its proper sharpness in 1 of 3 ways: 1) sharpening within the camera; 2) sharpening within the raw conversion utility; or 3) the method I prefer, because it gives me the most control, capture sharpen within Photoshop early in the workflow. This is the method I will discuss here.

First, it is important to distinguish this 'capture' sharpening from the standard 'output' sharpening that you will apply near the end of your workflow. Capture sharpening, as already stated, compensates for the softness imparted by the digital camera, while output sharpening compensates for the intrinsic properties of the medium in which you intend to show your work (print, screen, or web). The art of sharpening an image is a continually evolving discipline. This technique of sharpening twice for an image is known as 'two-pass' sharpening and is now considered by most experts as the best way to produce a great image.

When you apply the technique of capture sharpening in Photoshop it is important that you shut off the sharpening option in your camera or in the camera raw conversion utility (if you used it). Otherwise you will be effectively sharpening 3 times which could degrade your image. The only advantage to sharpening within the camera or the raw utility is speed, you can get a much greater degree of control by using Photoshop's tools for this process.

Capture sharpening should be done quite early in the workflow, definitely before any resizing or resampling has been done. I don't have room in this article to give a complete tutorial on how to sharpen but I will provide some important tips. First, it's always wise to work non-destructively by using a duplicate of the background layer. Since we're doing it early in the workflow there shouldn't be a problem with having to flatten multiple layers.

The two most popular techniques for sharpening are the Unsharp Mask filter (USM) and the Highpass filter. Both are quite acceptable for use in capture sharpening. It is very important to note that whichever technique you prefer, it should be done with great care. You definitely want to avoid burning out highlights, blocking in shadows or amplifying any noise in your image. If more aggressive sharpening is needed, do it later when you sharpen for output.

If you prefer USM, use a low radius setting of between 0.3 and 0.5, an amount between 200% and 500%, and a threshold between 0 and 2. To avoid sharpening noise in large flat areas you can add an edge mask to the layer mask.

If you prefer to run the Highpass filter on your duplicate layer, set the blending mode to Soft Light, Overlay, or Hard Light. The latter two will produce more intense effects. You

can also use layer masks with Highpass as a method to reduce noise. You can lessen the overall effect of sharpening by lowering the opacity of the layer, typically to around 60-70%.

Right click [Mac: command-click] on the sharpening layer and choose 'blending options' from the pop-up box. Find the 'Blend If - Grey' setting midway down the dialog box. Beneath the 'This Layer' bar, split the left triangular slider by alt [option]-clicking on it and moving the two half triangles to 20 and 65. (The numbers appear above the bar.) Do the same with the right slider setting them to 200/245. On the 'Underlying Layers' bar set the left sliders to 20/40 and the right sliders to 230/245. These settings will confine the effect of sharpening to the midtones and protect the highlights and shadows from oversharpening.

As with any technique, your eye is the final judge. And good judgment only comes from practice and experience. I must stress that the most important thing is to not overdo capture sharpening but to remember that you are only restoring the sharpness caught by your lens and camera.