

SHARPENING PHOTOS

The term “unsharp mask” is a carry-over from the darkroom days. One would make a blurred copy of the original photo and this “unsharp” version was used over the top of the original as a mask to create a new photo whose edges appeared sharper.

All digital images need sharpening. Taking a photograph and translating it into a mosaic of millions of tiny, square pixels, will introduce some softening into an image. Your initial capture in the camera is NOT the place to apply sharpening. Many cameras are able to apply a sharpening pass after they capture an image. Sharpening permanently alters the contrast and colour of pixels and because you have little control over how these cameras apply the sharpening, turn off this feature if it is possible.

Sharpening is an optical illusion, designed to fool our eyes into thinking that the image is sharper. It does this by increasing the contrast of pixels where there is an edge, or a natural difference in contrast, brightness or colour.

The best sharpening choice is to do it in your editing program. You have more control over the process:

- you can selectively sharpen certain areas, and;
- your final sharpening is influenced by how large the final image will be. This means, you resize a copy of your image, then sharpen it for output(e-mail, digital projection, print, billboard).

There are three other filters in the Photoshop and Elements, ‘Sharpen’ category. They are: Sharpen, Sharpen More and Sharpen Edges. You have no control over what and where the sharpening these filters do, and I strongly

recommend first learning and using the Unsharp Mask filter outlined below.

THE 'UNSHARP MASK' FILTER

The Unsharp Mask filter is available in many editing programs. It offers many controls over the sharpening process:

- **AMOUNT:** This first setting increases the contrast of pixels by either lightening or darkening them. It's like a volume control for the contrast. If the amount is set too high, you notice halos or fringing at the tonal edges in your image. A normal range can go anywhere from 50% to 150%. However, this is not set in stone.
- **RADIUS:** This setting determines the width of the sharpening halos. The wider halo gives a more pronounced sharpening effect. If the halos are too wide, the image is likely to look over sharpened. Radius and Amount work together in a seesaw relationship. Increase one and you usually need to decrease the other. A radius of 1 will be fine for much of your sharpening, however, as noted below, there is a time and place for radius amounts for less and for more.
- **THRESHOLD:** With this setting, you control which pixels the filter considers as candidates for sharpening, depending on the value you use. The range is 0 to 255. A value of 6 asks the filter to sharpen a pixel only if there is a difference of at least six tonal levels between it and its' neighbour pixels. This is useful for minimizing sharpening areas such as smooth even areas of skin tones or pure blue skies. Threshold is a quick and easy way to determine which parts of your image will be ignored. Some experts rarely go over 8, while others use 20 as their top value. A very low

threshold value will increase the intensity of sharpening in your image, while a higher one will increase its subtleness.

Here are a number of factors to consider in the topic of "How Much Should I Sharpen?"

- The number of pixels in your image;
- How sharp the original image was;
- Are you sharpening to compensate for capture softness;
- Are you sharpening for a specific output device?

Before you begin to sharpen your photo, zoom in to view it at 100%. You now see each pixel as it is and are able to see the effects of your sharpening. In Photoshop or Elements, you can see the percentage either in the image window title bar at the top of your image, or in your Navigator window.

Before you commit to your Unsharp Mask settings, zoom back to 50% to get a better impression of how it is affecting your image as a whole.

WHAT SETTINGS SHOULD I USE TO SHARPEN MY IMAGE???

The following is borrowed from Scot Kelby's Photoshop book for Digital Photographers. These are guidelines to start from, as every person's image as well as their vision of their image is unique.

- Sharpening soft subjects (flowers, puppies, people, etc.): Amount 150%, Radius 1, Threshold 10.
- Sharpening portraits (close-up): Amount 75%, Radius 2, Threshold 3.

- Moderate sharpening (interiors, exteriors, landscapes): Amount 225%, Radius 0.5, Threshold 0.
- Maximum sharpening (photo out of focus or one that has well defined edges – buildings, cars, coins, machinery, etc.): Amount 65%, Radius, 4, Threshold 3.
- All-purpose sharpening: This is generic enough and not over the top, enough so, that you can apply it twice if you need to: Amount 86%, Radius 1, Threshold 4.
- Web sharpening (also could be for digital projected): Amount 200% to 400%, Radius 0.3, Threshold 0.

This is the tip of the sharpening iceberg. Some photographers will do a gentle overall sharpening when they first open a new image. They are trying to bring the viewer attention to an important detail in their image. (eg. Eyes) They finish by applying some more sharpening and then they sharpen after resizing for output.

There are other methods of sharpening within Photoshop and Elements as well as plug-in programs for sharpening.

Sharpening as I stated at the beginning is an illusion and one we rely on to present our digital images in the best possible way.