

## Sharpening Photographs By Richard Kennon

Virtually all digital photographs benefit from some degree of sharpening whether they are from a camera or a scanner. Of course, you can just click on “Sharpen” in a quick edit program or you can use the more sophisticated “Unsharp Mask” capability available in most full featured editing programs. Remember – sharpening is the last thing you do after you have corrected the light balance and color and resized or rescaled the picture for its intended purpose..

**Unsharp Mask:** Don’t ask... Just use it. The term has its origin in some arcane film photographic procedure I could never understand. All recommended values, below, are starting values. You must use your own judgment about how far above or below to go.

**Radius:** This number determines how many pixels on either side of an edge (discontinuity or tonal shift) are affected by the sharpening procedure. Too many and you will get a halo effect and too few and you won't get much sharpening. A rule of thumb is to divide the picture resolution (after resizing or rescaling) in ppi (pixels per inch) by 200. Thus a picture sized for the Internet at 74 to 95 ppi, would call for a radius of 0.4 to 0.5 and a 300 ppi picture for printing, would call for a radius of 1.5 as a starting point.

**Amount:** Think of this as the volume control. This adjusts how intense the pixels are on either side of a tonal shift. If you use the radius setting recommended above, start at 200 for the amount and adjust it by eye.

**Threshold:** This setting specifies how far apart the tonal values must be before sharpening happens. Values up near 10 result in less sharpening but might be used for portraits or pictures of sand dunes. You don't want to make a smooth complexion, sand dune or sky blotchy. On the other hand, most scenes will call for a threshold of 0 to 4 to start with.

### **Some start values recommended by various authors:**

Soft subjects: Radius 1, Amount 150, Threshold 10. *Flowers, clouds, sky.*

Portraits: Radius 2, Amount 75, Threshold 3.

Moderate sharpening: Radius 0.5, Amount 225, Threshold 0. *Most indoor shots or product shots for eBay.*

Maximum sharpening: Radius 4, Amount 65, Threshold 3. *For use where the photo is out of focus or the subject has a lot of edges like a brick wall.*

All-purpose sharpening: Radius 1, Amount 85, Threshold 4. *Most general scenes. A moderate sharpening.*

Web photos: Radius 0.3, Amount 400, Threshold 0. *For photos resized to 72 ppi for the web.*

Cut through haze: Radius 30 to 60, Amount 20, Threshold 4. *A weird one but try it on a hazy picture. It works!*

Boost contrast: Radius 200 to 300, Amount 10 to 25, Threshold 0. *Another weird one but worth trying.*

These last two aren't sharpening at all but they use the same tools. You can sharpen after either of these two procedures. You can see there are lots of opportunities to improve a picture (or mess it up). Go slow and experiment and you will have fun.