

Sharpening a Photo in PhotoShop

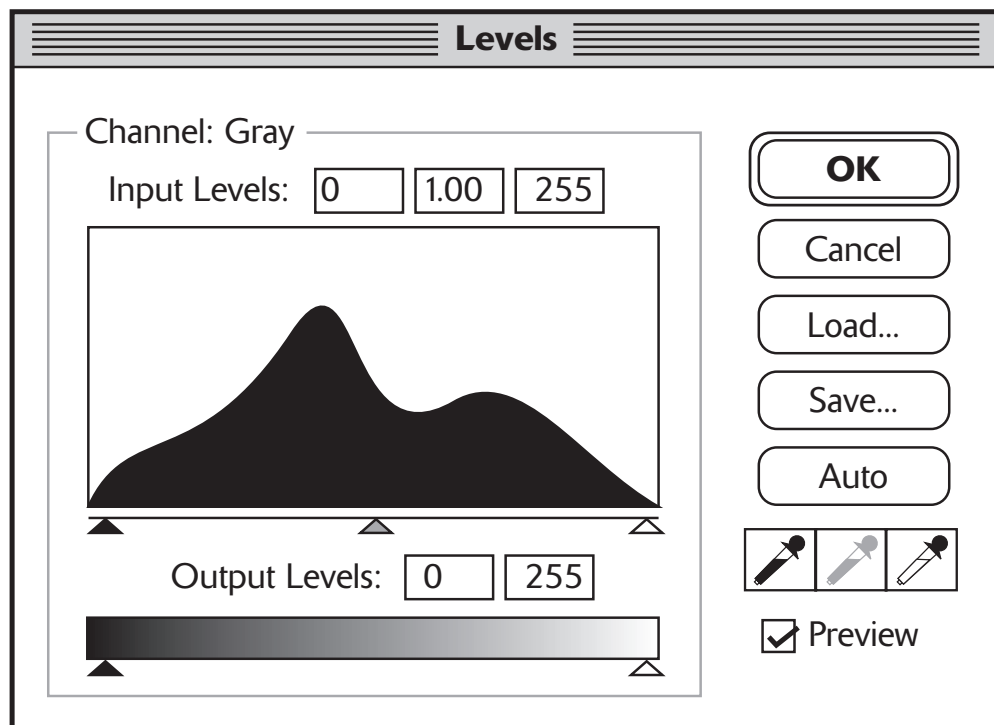
Under the "Filter" menu, go down to the "Sharpen" menu where you will find four sharpening options. If you use "Sharpen", PhotoShop will sharpen the photo according to its default setting. The "Sharpen Edges" will cause the identifiable edges of objects in a photo to be sharpened. The "Sharpen More" will do precisely that; however, try to avoid oversharpening a photo!

The most accurate option is found under the "Unsharp Mask..." Choosing this option will launch the "Unsharp Mask" window. Use the Preview window to zoom in on an area of the photo so you can view the sharpening effect up close. Placing the arrow pointer on the Preview window and holding down the mouse key will engage and remove the sharpening effect so you can compare. Below are three "sliders". The "Amount" slider controls how much sharpening will occur. The "Radius" and "Threshold" sliders determine how "wide" the sharpening effect will be. We recommend setting the "Amount" to 33%, the "Radius" to 5.0 pixels and the "Threshold" to 2 levels. Now click on the Preview window to see the effect. If the effect is pleasing, hit OK. If not, experiment with the sliders until you get the desired effect.

Adjusting Levels

This is probably the most important (and misunderstood) step in correcting your photos. Go to the "Image" menu, go down to "Adjust", and go to "Levels..." (Command-L on a Mac; Control-L on a PC). This will launch the "Levels" window, which is shown here.

You want to become very familiar with the Levels window!!!



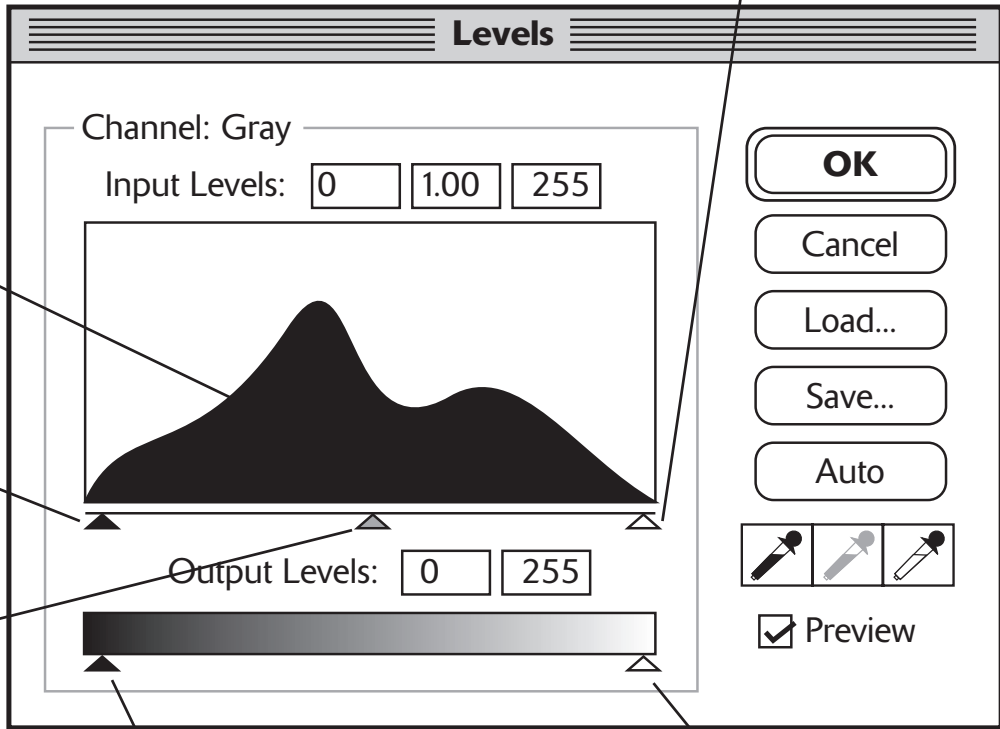
Adjusting Levels, Cont.

Moving Slider #3 to the left lightens the lightest part of a photo.

"Histogram"
(a visual picture of how the pixels are distributed throughout a photo)

Moving Slider #1 to the right darkens the darkest part of a photo.

Moving Slider #2 right or left darkens and lightens the mid-tones of a photo.



Moving Slider #4 to the right ADDS "white" to the darkest areas of a photo

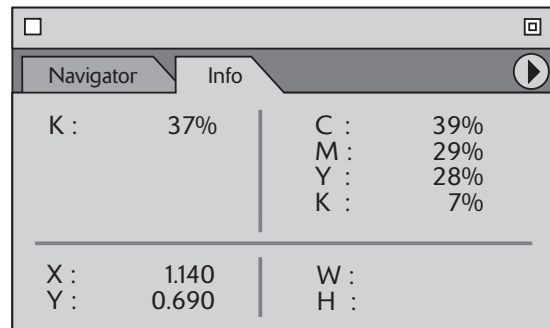
Moving Slider #5 to the left ADDS "black" to the lightest areas of a photo

To get familiar with the Levels window, scan a black and white (grayscale) photo and bring it into PhotoShop. Experiment with this photo to see how adjusting levels works.

Grayscale photos consist of 255 levels of gray "pixels" (the building blocks of images). The DARKEST pixel is "255" (pure black); the LIGHTEST pixel is "0" (pure white). All the pixels that range between are various shades of gray (lighter or darker); altogether they form a grayscale photo.

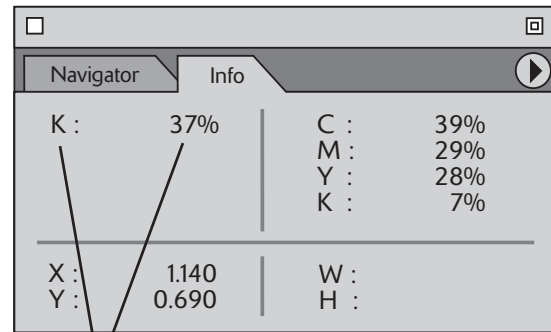
Adjusting Levels consists of lightening and darkening the Shadows (darkest part of a photo), the Highlights (lightest part of a photo) and the Midtones (medium tones of a photo). The various sliders provided in the Levels window enable these adjustments to be made. The best results are achieved when a photo has pixels which are evenly distributed from dark to light with the majority of the pixels in the Midtone Range.

How can you measure the Levels of a photo? You can evaluate the distribution of pixels by using your pointer tool and the "INFO" Window. Launch the INFO Window by going to the "Window" drop down menu and then select "SHOW INFO". It will launch a window that looks like this:



Using the Adjust Levels window and Info window to adjust photos.

1. Position the "Info" window in a place where you can see your photo, the Info window, and the Adjust Levels window all at the same time.
2. As you move your pointer tool over the photo, you will notice the numbers in the Info window change. These numbers are measuring the levels of gray pixels wherever your pointer is pointing. You are most concerned about the "K" measurement in the upper left corner of the Info window.



The letter "K" stands for "black". The percent number next to it tells you what percentage of black is present in any pixel you point at on a photo.

3. Place your pointer on the WHITEST part of the photo. The "K" reading should read between 2-4%. Now place it on the BLACKEST part of the photo. The "K" reading should read between 96-98%. Now place it on the point closest to a medium gray. It should read about 50%. If this is the case, your photo is at the correct level and it is ready to save.
4. If necessary, use the Adjust Levels window to make the following adjustments:
 - a. If the BLACKEST part of your photo is too DARK (it has a "K" reading of 98% or higher), then move Slider #4 to add WHITE to this area of the photo. Recheck it in the Info window by putting your pointer tool on the DARKEST part of the photo and see how the "K" number has changed.
 - b. If the BLACKEST part of your photo is too LIGHT (it has a "K" reading of 96% or lower), then move Slider #1 to add BLACK to this area of the photo. Recheck it in the Info window by putting your pointer tool on the DARKEST part of the photo and see how the "K" number has changed.
 - c. If the WHITEST part of your photo is too DARK (it has a "K" reading of 4% or higher), then move Slider #3 to add WHITE to this area of the photo. Recheck it in the Info window by putting your pointer tool on the LIGHTEST part of the photo and see how the "K" number has changed.
 - d. If the WHITEST part of your photo is too LIGHT (it has a "K" reading of 2% or lower), then move Slider #5 to add BLACK to this area of the photo. Recheck it in the Info window by putting your pointer tool on the LIGHTEST part of the photo and see how the "K" number has changed.
5. Normally, the Mid-tones will adjust accordingly as you make adjustments to the Shadows and Highlights; however, if the midtones need adjusting, you can move Slider #2 left or right until the photo is correct.

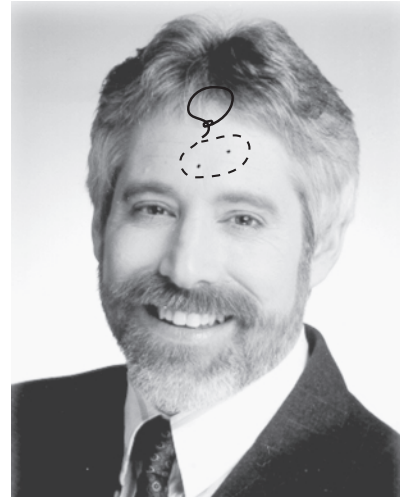
NOTE: Beware of **OVERCORRECTING** a photo! Changing the dark area of a photo will also change the light areas, and vice versa. Remember, **YOUR GOAL IS TO END UP WITH THE DARKEST AREAS BEING ABOUT 98% BLACK AND THE WHITEST AREAS 2% WHITE, with the midtones being distributed in between. WATCH OUT FOR WHITE AREAS THAT ARE 100% WHITE AND BLACK AREAS THAT ARE 100% BLACK! THESE PHOTOS WILL NOT PRINT WELL AT ALL!**

Removing Spots and Scratches from Photos

Sometimes your scanned photos may exhibit unwanted spots and scratches in the image. There are two primary methods for correcting these blemishes: 1. using the “Dust & Scratches” Filter, and 2. using the “Cloning” tool.

Dust & Scratches Filter

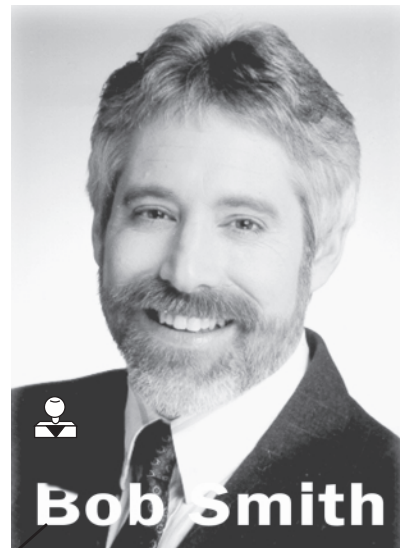
1. Using the Lasso tool, circle the spot or scratch.
2. Launch the “Dust & Scratches” filter by going to the “Filter” drop down menu and then select the “Noise” drop down menu and then select “Dust and Scratches” .
3. Set the “Radius” slider to about “5” and the “Threshold” slider to about “2”. The blemish should disappear. If not, adjust the sliders until it does.
4. Repeat this process for each spot on the photo.



Using the “Cloning” Tool

In this operation, you are essentially copying part of an image from one area of the photo and “painting” it over the top of the unwanted part of the photo. For instance, in the example below, the name “Bob Smith” is obscuring the lower part of the photo and you want to remove it. Proceed as follows:

1. Choose an appropriate Brush size from the “Brush” menu (found under the “Windows” drop down menu - choose “Show Brushes”).
2. Select the “cloning” tool from the tool menu (it looks like a rubber stamp with a black triangle on it).
3. Using the sample below, notice how the cloning tool is positioned over the black part of the suit. In Mac, hold down the “option” key and click the mouse (on a PC, hold down the “Alt” key). As you hold down the key, the triangle in the cloning tool turns white. This shows which area of the photo you choosing to “clone” .
4. Now move the cloning brush over the area you wish to “paint out”. As you hold down the mouse key and move the brush, notice how the area you chose is being “painted” over the area you wish to remove.
5. Continue choosing different areas of the photo to use as “paint” until you have removed the unwanted image.
6. Work in short strokes (clicking and releasing the mouse button) so if you make a small mistake, you can use the “Undo” function to take a step back (Command-Z on a Mac; Control-Z on a PC).



You can use the Cloning Tool to make some very significant changes to a photo, if you are careful and clever. Experiment a little and see what you can do!

The dark part of the suit is being used in this example to “paint out” the letter “B”. The same method could be used to remove this entire name from the photo.