
Images for PowerPoint

Scanning, adjusting, & saving digital images

Susann Lusnia

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Scanning

hints for using flatbed and slide/filmstrip scanners

FLATBED SCANNING

Flatbed scanning is best for producing digital versions of images in books, magazines, or other print sources. You can scan color images (RGB), black and white (Grayscale), line drawings (Line Art), and even text. You must always keep in mind what your end-use will be for any image you scan because how you intend to use the image determines what resolution scan you should make and what file type you should use for saving the image.

Basic scanning of color images

The default setting for most flatbed scanners is for RGB color image scanning. Most scanners will have a “setup wizard” or some other basic control panel for setting the parameters of the scan before it is made. To scan images for use in PowerPoint, you need to set up both the Input and the Output methods for your scanned images:

Output: Choose JPEG as the file type.

Magnification (%) = 100 [i.e., do not enlarge or shrink the image]

JPEG size reduction = 1

JPEG quality = 100

[If you have the option, choose to have the print size = scan size.]

Input: Choose ‘Scan to file’

Your scanner should give you the choice of media - Color photo, B/W photo, Line Art, Text, Magazine, Newspaper.

When scanning illustrations from books, choose “Magazine” as this will allow you to “Descreen,” which eliminates the dot-effect normally present in printed images. Set the descreen dpi at half the scan resolution you are using (i.e., 75, for 150 dpi; 150 for 300 dpi) to get the best results. Although you can use Photoshop to reduce grain or ‘noise’ in a

digital image, using ‘descreen’ in the scanning process will prevent graininess from occurring in the first place.

Scan resolution: The minimum resolution you use should be 150 dpi. If the original image is smaller than about 5 x 7 inches, you should use 300 dpi. For slides and similarly small originals, use 600 or even 1200 dpi. This will allow you to enlarge the image without loss of quality and clarity in the final image.

Do a ‘Preview’ scan first. All scanning software has this feature. After the preview image is captured, you should **rotate and crop** it to suit your needs. Although you can rotate and crop the image in Photoshop, doing it at this stage is preferable.

Scan the image and save. Your scanning software may assign a file name to the scanned image or it may ask you to give it a name. Save the image as a JPEG file type (unless you want to have a print-quality image, in which case save it as TIFF – some scanning software allows you to save images as multiple file types, without having to scan it again for each type).

FILMSTRIP / SLIDE SCANNING

Filmstrips (e.g., negatives) and slides are best scanned using dedicated film scanners, although some flatbed scanners can be fitted with adaptors for this use.

How slide and filmstrip scanning differs from flatbed

The main difference is that the original image is small, only 35 mm wide in most cases. Therefore, you must scan slides and negatives at the highest possible resolution, 1200 dpi (or 2400 dpi, if your scanner can do this). You do not need to ‘descreen’ when scanning slides and negatives.

For film scanning, your choice of media will be Slide (or Color Positive), Color Negative, B/W Negative, or Microfilm.

Except for scanning at a higher resolution, all the steps for scanning slides and film are the same as for scanning on a flatbed scanner.

Save the images in the same way, JPEG for most uses, but TIFF if you plan to produce a printable or publishable image.

Adjusting the image

Using Photoshop to enhance and resize your scans and digital photos

PREPARING SCANNED IMAGES FOR POWERPOINT

Because your scanned images are at resolutions of 150 dpi or greater, you will want to resize them using Photoshop (or similar photo-editing software). At this point, you can also correct problems that have not already been dealt with in the scanning process. This section will deal with three basic areas of image preparation: **basic adjustments** (levels, hue, brightness, contrast, etc.), **useful filters**, and finally, **image size**.

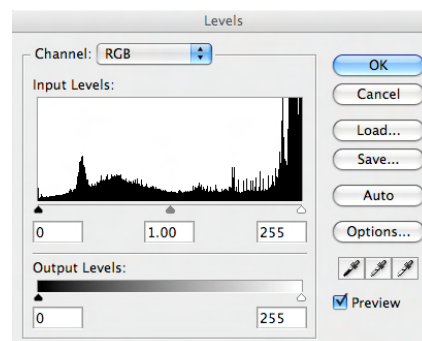


Basic Adjustments

The software that you use with your scanner, whether it is the manufacturer's or a third-party product, allows you to make some adjustments before you scan. After you make the scans, however, you may still need to make adjustments to color (hue) levels, brightness/contrast, or shadow/highlight. The following basic adjustments can compensate for problems such as over-/underexposure, fading, graininess, and strong shadows.

❖ Levels

In Photoshop, there is a command that will automatically adjust levels. Go to the Image menu, and under Adjustments, select Auto Levels (Image > Adjustments > Auto Levels). If you are dissatisfied with the result, go to Edit > Undo (or Step Backward). You can also adjust the levels manually by choosing, Image > Adjustments > Levels. A separate dialog window will



appear. In this window you'll see a graph of the RGB input levels of your image. Below the graph are three sliders: black (left), gray/mid-tones (center), and white (right). You can move these to change the input levels manually. Be sure to click the Preview box, in the lower right of the window, so that you'll see the effect of the changes you are making. When you are satisfied with the appearance of your image, click 'OK.' If not, click 'Cancel' and you can start over again.

❖ Shadows/Highlights

This adjustment is especially handy for digital photographs but can sometime improve a scanned image as well. In photographs where the lighting was not ideal and there are either strong shadows or bright spots, this adjustment allows you to minimize their presence and can bring out details hidden in shadows. Go to **Image > Adjustments > Shadows/Highlights**. As with level adjustments, you can play around with the slider bar settings and see what makes the image better or worse. If you can't remember what the original settings were and want to get back to them, simply cancel and start over.

❖ Filters

Photoshop has built-in filters that can be used to alter the overall appearance of an image. Some are useful for correcting images that are slightly out of focus or ones that suffer from the moiré effect (i.e., appear dotted and grainy). The two most useful filters are:

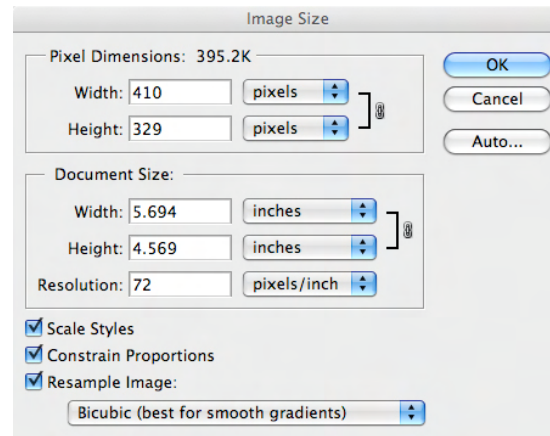
- ◆ **Noise > Despeckle:** this filter can remove some of the moiré effect that occurs if a printed illustration (e.g., book, magazine or newspaper) was scanned without de-screening.
- ◆ **Sharpen > Sharpen:** this filter will make a slightly fuzzy or 'soft' image look sharper, more defined. (also useful, Sharpen > Sharpen Edges).

As with adjusting levels, if you are not pleased with the result of the filter, you can simply use the Edit > Undo (or Step Backward) command to go back to the previous state of your image.

❖ Image Size

After making all the aesthetics adjustments you feel are necessary to enhance the image, you are now ready to save it. Image sizing involves two settings: resolution and pixel dimensions.

Choose **Image > Image Size**, and you will see a dialog window, like this one to the right. You'll notice that width and height are linked. This keeps the image proportional, preventing distortion as you resize it. Be sure that all of the boxes in the lower left of the window are checked, especially 'Constrain Proportions.'



The images you have scanned (and some digital photographs) have a resolution of 150 dpi or greater. You can put these high resolution images into PowerPoint, but because the standard screen settings for its slides are 100 dpi, 1000 pixels wide x 750 pixels high, there is no point in using images greater than 100 dpi. In fact, you can get away with using images at 72 dpi, 1024 x 768 pixels (you need slightly more pixels to compensate for the lower resolution). Using images at this lower resolution will keep your PowerPoint presentation from ballooning in size and becoming sluggish when running.

There are two steps to changing the size of the image:

1. Change the resolution. In the Document Size area of the Image Size window, change the resolution to 72. (Don't worry that the numbers in the pixel dimensions suddenly shrink; you'll change those in Step 2.)
2. Change the pixel dimensions. If the image is oriented horizontally, change Width to 1024. If the image is vertical, changed Height to 768. The dimensions will adjust automatically in relation to each other as you make these changes.

YOU MUST MAKE THE CHANGES IN THIS ORDER. After these steps, click 'OK.'

All of the adjustments and resizing described here can be applied to digital photographs. Depending upon the camera's default settings, digital photos may already have a resolution of 72 dpi.

Saving images

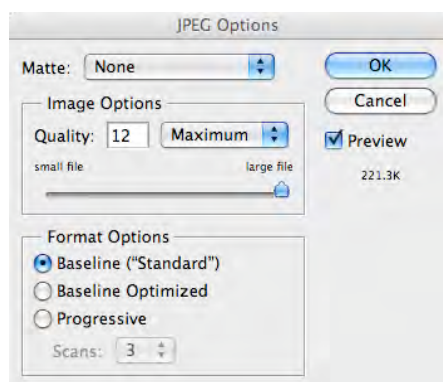
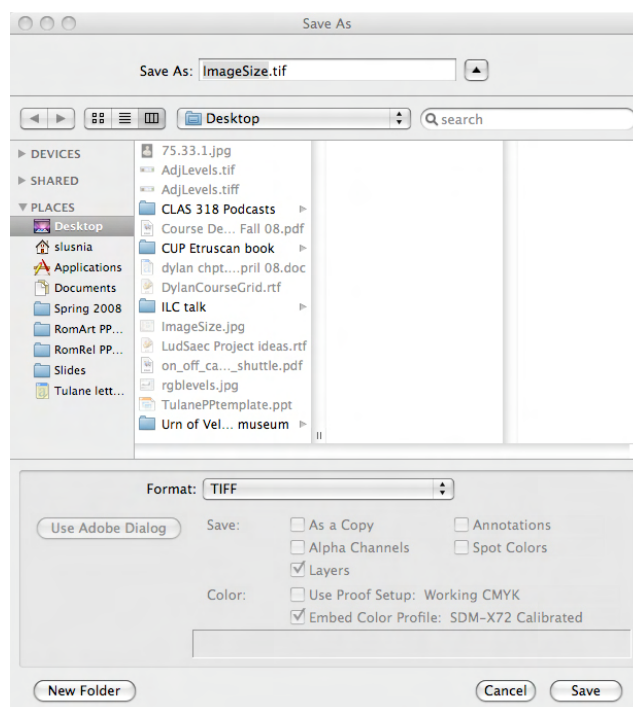
For use in PowerPoint or on the web

JPEG OR TIFF?

Once you have adjusted and resized your image, you must save it for later use. There are a multitude of file formats for images, each best for particular types of images and end-uses. If you are saving images for publication and print uses, uncompressed TIFF is your best file format. For PowerPoint and Web uses, however, a slightly compressed JPEG format is preferred.

Saving as JPEG

If you want to keep a copy of the original scan as an archive copy, choose **File > Save As** and give your edited image file a different name. Once you have named the file and specified where it should be saved, choose the file format from the drop-down menu and click ‘Save.’ At this point another dialog window will appear, “JPEG Options,” and you will need to set the **Image Quality**. Choose **10 or higher, i.e., Maximum** (least compressed). If you do not, you may



have problems with the image not being visible in a PowerPoint presentation running on a Windows-based PC. [Apple doesn’t have problems with such images, but if you’re a Mac user you need to be aware of this, especially if you work cross-platform, creating PowerPoint files on your Mac but then viewing them with a PC.]

One Last Trick...Removing Backgrounds in Photoshop

In some instances, it can be useful to have an image without any background, i.e., a transparent background. This is relatively easy to do if the object has clearly defined edges and the background contrasts strongly with the object. Here is what you do to remove a background:

- ▶ Open the image in Photoshop
- ▶ Select **Layer > New > Layer from Background**
- ▶ Select the background (usually with the ‘magic wand’ tool)
- ▶ Delete the background using the delete key
- ▶ Save the image as a TIFF file : under TIFF Options, select ‘Save Transparency’.