

Scanning information from www.zdnet.com

All About Numbers

The first thing you need to consider before scanning an image is the resolution you'll need. Scanners measure resolution in a grid pattern, typically 300 x 300 pixels. That means that for every square-inch of a scan, the device will transfer 90,000 light readings back to the computer (300 pixels wide for each of the 300 pixels deep). The higher the resolution, the more light readings per inch. Given this information, people assume that they need to scan the maximum resolution possible for an image to look good. This however is simply not the case. Doing so only increases the file size of the resulting scan. There's no use in scanning something at a high resolution when it will be viewed on a low resolution device.

To best determine the resolution you need for your scan, you need to know how you plan to display the final image. Once you have that information, use the following guidelines.

PC monitor	96 ppi
300 dpi laser printer	100ppi
600 dpi laser printer	150 ppi
720 dpi inkjet printer	150 ppi

The other factor you may need to choose is the file format of your scan. This too can greatly effect the file size, since most of the formats use a varying amount of compression. The two primary formats used with today's scanners are TIFF and JPEG and the use of the resulting scan will dictate the file format you should use. Whenever you scan an image that you'll print, use the TIFF format. The compression method used in the TIFF format is lossless, which means that you'll have a smaller file without loss of detail. The TIFF format is also optimized for today's desktop publishing software. If you're going to be using the scan for the Web or possibly as an email attachment, use the JPEG format. It won't provide as much detail as the TIFF file but you won't miss it, since your monitor can display so much anyway.

Tips For The Best Possible Scan

Finally with a good basic knowledge of your scanner and your software, we'd like for you to remember the following tips as you prepare to scan everything in sight.

Work With the Best That You Have

While scanners can produce some really nice results, don't think for a second that they can actually produce images better than the original, especially before you doctor the image up in a program like Photoshop. Always start out with the best image possible.

Know Where You're Going

To get your best possible scans, know what the image is going to be used for. You won't be please with the results if you scan an image in at 72 dpi and then print it on a high resolution printer.

Scan In The Orientation That You'll Ultimately Use

If you know you're going to rotate the image before you print it, rotate the original before you scan it. You lose a small degree of quality when you rotate an image in a desktop publishing or image editing application.

Save As A Native

When you create a scan, always save it in the native format of your image editing software. This will reduce any image loss possible when you convert the image from one format to another. It will also save you time.

Scan Only What You Need

There's no use in scanning a large area when you know you'll only be using a small portion of the page. You can keep your file size down if you preview the scan and then select only the area you're going to use. This will also save you valuable time.

Adjust For Gamma when Possible

If a scan appears darker or lighter than normal, chances are it's because of the device's gamma settings (the relationship between the input levels and the output levels). If your software lets you correct the gamma settings, always do this before you attempt to solve the problem with the much less sophisticated brightness and contrast.

Talk To the Scanner In Black And White

Once you've set the gamma for your scanner, it's time to look at things in black and white. If your scanning software allows it, set the white and black points. You'll get better overall color if you do.

Cover the Scan

If the item you're scanning is on thin paper with text or graphics on both sides, your scanner may pick up all of one side and part of the other with a single scan. While you could look at this as a time saver of sorts, the resulting image doesn't turn out looking too acceptable. To overcome this problem, keep a piece of black construction paper handy. Cover the document with the black paper before you scan it to prevent the bleed-through from occurring.