

Graphics Image Builder

Great advice on how to improve your corporate identity, marketing materials, and product design.

This Month's Topic: What to Consider When Buying a Scanner

Scanners are very popular tools for desktop publishing and web design. A wide range of scanners are available, from the low-cost black and white hand-held variety to high-quality, professional color devices. Expensive drum scanners, used by printers and service bureaus, produce some of the highest quality scans, required for high-end printing projects such as book and magazine covers, images for coffee table books, and advertisements. CCD flatbed scanners, when used by skilled operators, can produce similar quality scans.

Optical Resolution

Look for optical resolution specifications. These will be two numbers, indicating how many pixels per inch (i.e.: 600 x 600 DPI) are scanned in each direction. Ignore interpolated resolution numbers — these are measurements made when the scanner inserts new pixels between scanned ones. How much resolution you need depends on how you plan to use your scanned images. Photos for offset printing are usually scanned at 300 DPI. Line art (such as B&W pen and ink illustrations) for offset printing need to be scanned at 1200 DPI to insure that the lines are smooth. Images to be printed on desktop laser or color inkjet printers are scanned at 100 to 200 DPI. Photos and line art for the web are scanned at 72 DPI and images for PC-PowerPoint presentations are 96 DPI. Text that will be converted to text characters (using OCR technology) are scanned at 300 to 400 DPI. Always scan your images at actual size. You will need more resolution if you plan to enlarge your scans.

Dynamic Range

Most flatbed scanners have a dynamic range of about 2.4. If you need to display better detail in shadow areas, or plan to scan negatives and slides, you may need a top-quality color flatbed or drum scanner that can provide 2.8 to 3.2 dynamic range.

Bit Depth

Most color scanners are at least 24-bit (near-photographic quality in range of colors). 30- and 36-bit scanners can capture billions of colors, and are recommended for scanning slides and negatives, but very few software packages can open these files. Note, not all monitors can display 24-bit color. A 24-bit image may look blotchy on an 8-bit (256-color) monitor.

Other Items to Consider

In general, CCD (charge-coupled devices) produce better scans than low-profile, less expensive CIS scanners. Make sure the scanning bed is large enough for your documents. Consider the scanner's speed, and if you need a slide adapter. An option that may affect the cost is bundled software. Image-editing software (such as Adobe Photoshop) is essential for creating quality scans, especially from less than perfect originals. Sheetfed scanners take up less room, but you cannot scan a 3-D object or book. Determine what type of connection your computer can support: parallel port, SCSI port or USB port.



FYI:

OCR (Optical Character Recognition) software, allows the scanner to read handwritten or printed text, then convert it into text characters that can be read by any word-processing software. OmniPage and Text Bridge are two OCR software programs.

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**Brought to you monthly
by Karen Saunders
of MacGraphics Services**

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