

Flatbed and Sheetfed Color Scanners

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It wasn't too long ago that color scanners were misunderstood devices best left in the hands of graphic artists and document management professionals. They were noisy, bulky, expensive and difficult to operate. In short, they were about as frustrating as installing the latest version of Windows and getting everything to work correctly.

In the past 18 months, the price of the typical color scanner has dropped to the point where almost everybody can afford one. Scanners that cost \$600 a year ago now cost \$199 or less; some color scanners have even been advertised as low as \$69 in trade magazines. And you won't get just some bare-bones model for that price. Most scanners include all the necessary cables and software to let users import photographs and edit text documents onto their systems.

The lower price does not necessarily mean poorer scans, either. Most inexpensive flatbed and sheetfed scanners offer surprisingly good image reproduction. With the software that's usually included, users can manipulate the images they scan in to fit whatever purpose they have in mind. Among the options available, users can resize pictures, change contrast and color levels, save images as different types of files and add text to graphics.

Scanners can also do much more than just import pictures. When used with a printer or fax machine, scanners can perform low-volume photocopying and color fax duties as well. With OCR (optical character recognition) software, users can scan in a printed page and then edit the text as a word processing document. And other scanning software can let users store and index valuable items like tax forms and receipts.

Buying the Right Product

Not all scanners are created equal. Although most low-end models are in the same price range, scanners come in a variety of models, specifications and sizes. The two basic types are flatbed and sheetfed, each with their own strengths and weaknesses.

If the amount of size on your desk or in your home office is a factor, a user may want to opt for a sheetfed scanner; even the smallest flatbed scanner usually takes up more than twice the desk space of the average sheetfed scanner. And if you're a person who spends a lot of time traveling, a sheetfed scanner's portability can be a real plus.

Sheetfeds have another advantage. You can scan in multipage documents, such as a fax or large report, without much hassle. With a flatbed, having to switch pages and wait for the scanner to warm up can be a chore. Inserting a stack of documents in a sheetfed scanner is much more convenient and takes less time.

What flatbed scanners lack in their portability, however, they more than make up for with the quality of the scans they register. On average, flatbeds are much better at reproducing color documents than sheetfed scanners. Sheetfed scanners also sometimes grab a photograph and scan it in at an angle, resulting in a crooked image and a wasted scan.

Flatbeds also have the upper hand when it comes to the type of material scannable. Because of their design, flatbed scanners can reproduce an image from a book or magazine as easily as a photocopier. Most sheetfed scanners are restricted to scanning material no larger than 8-1/2 by 11 inches; some have even greater size limitations.

Once you've decided on the design of the scanner you want, there are a couple of other factors to consider. Some scanners operate with 24-bit color support; others offer 30 or 36-bit support. The higher the number, the better scanning results you'll get. Most scanners now available work with 30-bit color; a year from now, though, 36-bit scanners should be the norm.

Scanners come in both parallel (printer port) and SCSI (small computer systems interface) versions. SCSI scanners offer faster performance, but they often cost more and are far more difficult to install. If you're not that familiar with opening up your PC and installing new hardware yourself, go for the parallel version. The color quality is just as good as what you'd get with SCSI scanners without the hassle of tearing your system apart.

Flatbed Scanners -- SCSI and Parallel-Port

One of the least expensive flatbed SCSI scanners around is the Prisa 310S from Acer. At a suggested retail price of \$109, it's cheap enough to compete with most parallel port printers for users who are on a tight budget.

While the Prisa 310S is one of the fastest SCSI scanners available, it leaves a lot to be desired in scanning quality. On average, photos and even black-and-white images suffer a loss of detail because of contrast problems. These problems can be solved by altering the images with the software that comes bundled with the scanner, but the extra work involved in reworking the images negates the scanner's speed.

Another issue of contention is the software included with the scanner. Acer bundles only two programs (IPhoto Plus and Xerox's TextBridge for OCR) with the Prisa 310S. Most manufacturers offer twice as many programs. Still, if money is the deciding factor, the Prisa is a decent product that will handle the basic tasks that color scanners offer. For more information on the Prisa, you can access Acer's website at <http://www.acer.com>.

If you've got a little extra money to spend and are concerned about the image quality of your scans, the Polaroid CS-300LE is a worthy candidate. Reviewers from other publications have consistently given Polaroid's model the best ratings in matching the original colors of photographs and other scanned images.

However, the large size of the CS-300LE makes it difficult to set up on most normal-sized desks, and although it is connected with an SCSI adapter, it does not have an SCSI terminator included. (A terminator is a piece of hardware used to attach multiple SCSI devices to the same computer.)

Tests show that the CS-300LE consistently falls behind other scanners in the time it takes to scan an image. For instance, a 300 dpi color photo took 90 seconds to scan using the CS-300LE. The Agfa SnapScan 600, on the other hand, needed only 17 seconds to scan in the same image.

And the software that comes bundled with the scanner has flaws. PhotoFix, the photo editor included with the scanner, can't open any file larger than 12 megabytes. High-resolution images can often be much larger than what PhotoFix can handle. Polaroid recently announced that a parallel-port version of the CS-300LE will be available soon, and perhaps the manufacturer will resolve the problems that seem to plague this version.

Perhaps the best SCSI flatbed scanner for the price is the Perfection 600 from Epson. It is a bit expensive (\$229), and it takes up a lot of space, but it has a great selection of software and scan quality. The programs that come bundled with the Perfection 600 are among the most generous included with a scanner. In addition to PhotoDeluxe, a wonderful image editor, users also receive copies of PaperPort (a document manager), Textbridge (for OCR scanning) and PageMill (for designing web pages). And the onscreen controls let users adjust color, contrast, and resolution before scanning an image.

The Perfection 600 also comes with an SCSI terminator, which allows you to hook up multiple SCSI devices to a computer. And although it's larger than most scanners, it will allow users to scan in legal documents. Those extra features, combined with the good scan quality and great selection of programs that are included in the price, make Epson's flatbed scanner one of the best packages on the market.

As for parallel-port models, there are two that users might want to consider purchasing. The first is the Astra 610P from Umax, which was recently advertised at a local CompUSA for only \$59.99. While the models from Polaroid and Epson are large, hulking monsters that take up valuable space, the Astra 610P is one of the smallest flatbeds available, slightly larger than a sheet of legal paper. Like the Perfection 600, the Astra 610P also comes with a generous offering of bundled software: you get PhotoDeluxe for image editing, Presto PageManager for organizing your documents; OmniPage OCR for scanning in text files; and other programs for arranging photographs and copying. And the controls for manipulating images are quite easy to use.

There are a couple of drawbacks to buying Umax's scanner, however. First and foremost is speed. Out of all the flatbeds mentioned in this article, the Astra 610P was rated as the slowest when scanning images at the 75 and 400 dpi settings. The other issue is the time needed for the scanner to warm up before it's ready to operate. Most of the time, it will take the scanner a minute or more before it is ready for use, and if you have to spend a lot of time flipping between pages or scanning material from different sources, this becomes tiresome.

Nevertheless, the Astra 610P is the easiest scanner to install, requiring that a user only attach the device to the computer's parallel port and load the necessary software. It also has a nice feature that lets people launch its scanning software with the touch of a button. For more information, you can visit Umax's website at [[url=http://www.umax.com](http://www.umax.com)]<http://www.umax.com>[/url].

For a little more money, users might be interested in MicroTek's ScanMaker V300. At \$139, its overall performance is much slower than most SCSI models, but it's just as fast as other parallel-port models when it comes to scanning color and black-and-white images at low to medium resolution. The quality of the scanning is good, needing only slight tweaking to produce crisp, clean pictures online.

The ScanMaker has some other nice features: the scanner's lid slides up and can rest on two posts, making it easy to scan images from large books. It warms up in less than 30 seconds, quicker than the average flatbed. And it comes with three software programs for image editing, OCR scanning and document management. Users can find out more about the ScanMaker V300 online at Microtek's website ([[url=http://www.microtekusa.com](http://www.microtekusa.com)]<http://www.microtekusa.com>[/url]).

Sheetfed Scanners

There are also a number of sheetfed scanners worth considering. Among them, Visioneer's PaperPort Strobe is the smallest available (smaller than a loaf of bread). It also comes with an outstanding supply of software for OCR scanning and enhancing images. There's even a program

called CardScan SE, which lets users scan business cards and catalog them for future reference.

The PaperPort Strobe is also quite fast at scanning text. An 8 1/2 x 11 page can be scanned in less than 10 seconds. But it gets bogged down at higher-resolution scans: a 300 dpi color photograph can take up to two minutes or longer. And as is the case with most sheetfed scanners, it occasionally will grab a photograph at an angle, resulting in a crooked scan (which can usually be fixed with the software included). Still, for \$229, this scanner would be a good buy for users who don't have much free office space or want to take it with them on business.

Another sheetfed scanner worth considering is the Logitech FreeScan. At \$289, it's more than double the price of the average parallel-port flatbed scanner, but the FreeScan has a number of features that make it great for general business use, with free versions of PhotoDeluxe and TextBridge OCR, plus a program called Control Center that automatically launches when you insert a page into the scanner.

The FreeScan is also one of the fastest sheetfed units available, scanning in 75-dpi color photos faster than most parallel-port scanners. And it has an automatic document feeder that handles up to 25 pages at a time, a great feature if you need to scan in a large text document or report.

Readers can find out more about the FreeScan at
[url=<http://www.logitech.com>]http://www.logitech.com[/url].

To Buy or Not to Buy

Whether you've got a multi-page newsletter with lots of pictures and graphics, or if you just want to save some pictures of your grandchildren and put them on a PC for posterity, a scanner could be just the thing to make your experience with computers more enjoyable. And at these prices, they've become affordable for even the most budget-conscious computer user.

As always, we welcome your feedback. If you have any questions about the scanners mentioned in this article, feel free to contact me by phone or at the e-mail address below.

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