SCANNERS

Details	Last month's position	First reviewed	Price (ex VAT)	Warranty	Type	Maximum scanning area	Interface connection	Supported operating system	Scanning element
1 **Canon D1250U2** 08705 143 723 www.canon.co.uk	NEW	Aug 02	£101	1-year	Flatbed	A4 (216x297mm)	USB 2.0	98/Me/2000/XP	CCD
2 **Umax Astra 4500** 0870 906 4400 www.umax.co.uk	NEW	Aug 02	£68	2-year	Flatbed	A4 (216x297mm)	USB 1.1	98/Me/2000/XP	CCD
3 **Visioneer OneTouch 8700** 01483 445 480 www.visioneer-europe.com	1	Jan 02	£83	1-year	Flatbed	A4 (216x297mm)	USB 1.1	98/Me/2000/XP	CCD
4 **HP Scanjet 4400** 08705 474 747 www.scanjet.hp.com	NEW	Aug 02	£89	1-year	Flatbed	A4 (216x297mm)	USB 1.1/ parallel	95/98/Me/2000/XP/NT	CCD
5 **Visioneer OneTouch 9820** 01483 445 480 www.visioneer-europe.com	NEW	Aug 02	£120	1-year	Flatbed	A4 (216x297mm)	USB 1.1	98/Me/2000/XP	CCD
6 **Mustek BearPaw 1200CS** 00 49 2131 16260 www.mustek-europe.com	NEW	Aug 02	£50	2-year	Flatbed	A4 (216x297mm)	USB 1.1	98/Me/2000/XP	CCD
7 **Trust Direct Webscan 1200** 0800 328 0261 www.trust.com	NEW	Aug 02	£60	2-year	Flatbed	A4 (216x297mm)	USB 1.1	98/Me/2000/XP	CIS
8 **Benq 5300U** 01633 628 600 www.benq.co.uk	NEW	Aug 02	£70	2-year	Flatbed	A4 (216x297mm)	USB 1.1	98/Me/2000/XP	CCD
9 **Epson Perfection 2450 Photo** 0800 220 546 www.epson.co.uk	NEW	Aug 02	£254	1-year	Flatbed	A4 (216x297mm)	USB 2.0/ FireWire	98/Me/2000/XP	CCD
10 **Microtek ScanMaker 5700** 01327 844 880 www.microtekeurope.com	NEW	Aug 02	£298	2-year	Flatbed	A4 (216x297mm)	USB 1.1/ FireWire	98/Me/2000/XP	CCD

1 Canon D1250U2

Canon enters our chart at number one with the D1250U2, due to its excellent image quality and speedy interface. USB 1.1 is a convenient interface but is let down by its slow 12Mbps (megabits per seconds) maximum speed. USB 2.0 ups this maximum to a massive 480Mbps, removing the bottleneck. Canon has embraced this new technology and the results are well worth it. It has little effect on smaller scans, but when faced with a challenge the difference was marked.

Where USB 1.1 scanners averaged around three and half minutes to scan an A4 colour document at 600dpi (dots per inch), the D1250U2 romped home at only 49 seconds. If scanning large documents at high resolution makes up a considerable amount of your workload, then it should significantly cut the time taken to process them. The quality of the resulting scans could prove to be a great timesaver, with the images needing little correction. Colours were vibrant and the detail of the original photograph was retained.

← A simple setup, lots of software and USB 2.0 gets the Canon D1250U2 the Best Buy

Setup was simple and, although the supplied driver wasn't certified for Windows XP, it worked flawlessly. The Canon's software package is generous, comprising a copy of the excellent Adobe Photoshop Elements, ScanSoft OmniPage Pro for OCR (optical character recognition) plus ArcSoft PhotoBase and Canon Photo Record.

There's an Adaptec USB 2.0 card in the box so you can make the most of your scanner, and the D1250U2 features a locking mechanism to prevent damage to the unit during transit. At £101, the Best Buy D1250U2 combines fast scanning with excellent quality.

→ The Umax Astra's good price and scan speeds make it a deserved Recommended winner

2 Umax Astra 4500

Umax may not have embraced the newer USB 2.0 interface, but its Astra scanner makes the most of the older USB 1.1 technology. Although the 4500 couldn't come anywhere close to the speed achieved by Canon on the 600dpi (dots per inch) A4 image, it did prove itself competent elsewhere. A colour photo at 300dpi took just 21 seconds, with 600dpi only taking a further 15 seconds. A colour A4 scan took just 33 seconds at 300dpi, showing off the speed of Umax's engine. However, upping the resolution showed the bottleneck of the USB 1.1 interface, with a time of three minutes five seconds, nearly six times greater.

The Astra may be able to keep up, but it can't rival Canon on image quality. The resulting scans were slightly dark

Optical resolution	Software interpolated resolution	True colour depth	One-touch scanning	Transparency adapter	Dimensions (width x depth x height)	Graphics software	Optical character recognition software	Other extras
1,200x 2,400dpi	9,600dpi	48bit	Scan, copy, email	Optional	257x460x71mm	Adobe Photoshop Elements	ScanSoft OmniPage Pro	Adaptec USB 2.0 card, Photo Record, ArcSoft PhotoBase
1,200x 2,400dpi	9,600dpi	48bit	Scan, copy, email	Optional	270x440x61mm	MGI PhotoSuite SE	TextBridge 2.0 SE	Papercom document manager
1,200x 4,800dpi	4,800dpi	48bit	Fax, copy, OCR, email	Optional	427x297x94mm	MGI PhotoSuite LE	TextBridge Pro	Scan Manager, ScanSoft PaperPort Deluxe
1,200x 1,200dpi	not supplied	48bit	Scan, reprint, copy, email	Optional	305x505x72mm	ArcSoft PhotoImpression	HP PrecisionScan Pro	Trellix Web Express, HP Print Creator, ACDSee, HP share-to-web software
1,200x 4,800dpi	4,800dpi	48bit	Scan, copy/print, email, fax, custom, OCR	Yes	424x297x114mm	Adobe Photoshop Elements	TextBridge Pro	ScanSoft PaperPort Deluxe
600x 1,200dpi	19,200dpi	48bit	Scan, copy, email, fax	Optional	261x436x80mm	Ulead Photo Express SE	Abbyy FineReader Sprint	None
600x 1,200dpi	19,200dpi	48bit	Scan, email, fax, copy	No	279x398x38mm	Ulead Photo Express SE	Abbyy FineReader Sprint	None
1,200x 2,400dpi	19,200dpi	48bit	Scan, copy, OCR, web, Palm	No	286x449x93mm	ArcSoft PhotoImpression	Abbyy FineReader Sprint	ArcSoft PhotoBase, Merge Magic
2,400x 4,800dpi	12,800dpi	48bit	Scan	Yes	304x476x122mm	Adobe Photoshop Elements	TextBridge Pro	Epson Smart Panel
1,200x 2,400dpi	9,600dpi	42bit	Scan, copy, email, web	Yes	290x500x114mm	Adobe Photoshop Elements	Abbyy FineReader Sprint	Ulead PhotoExplorer, Lasersoft SilverFast

and required further adjustment. The Umax does come with a good software bundle, though, including a lock to prevent damage to the mechanism during transit and a stand so you can store the scanner vertically when not in use – great for those short on desk space.

Umax chose not to include a quick setup sheet, although installation proved simple with the supplied driver certified for Windows XP. There are three quick-scan buttons at the front, proving a great timesaver if you only want to scan one document. Umax has been less generous on the software front, only running to a copy of MGI PhotoSuite SE, TextBridge 2.0 SE for OCR (optical character recognition) and Papercom document management. Combine Umax's low price of £68 and its surprisingly fast USB 1.1 interface, though, and you can see why the Astra scanner won a Recommended award – a great option for those on a budget.

3 Visioneer OneTouch 8700

Down but not out, Visioneer's OneTouch 8700 has to make way for two new entries this month. Couple the impressive optical resolution of 1,200x4,800dpi (dots per inch) with 48bit colour depth and you get crystal-clear quality across all scan jobs combined with speedy delivery. However, you won't see the benefits of a faster interface such as USB 2.0 or FireWire.

If you're opting for style, the 8700 isn't the prettiest or smallest scanner on the market. Its landscape shape makes it easier to house than the more common portrait scanners, and its black case is attractive. However, it's still a bulky device.

The case features hot-key scanning, so you can quickly and easily transfer images to the bundled software, and should you need a transparency adapter there's also an optional upgrade.

Visioneer has made the OneTouch both consumer friendly and manually

← Larger and slower than the top two, this Visioneer still produces great results

configurable, pleasing both novice and advanced users. You can stick with simple one-touch scanning or opt for detailed gamma and colour correction. The advanced settings require some patience, but novices can always turn to the manual for advice. Fortunately, the huge software bundle comes with an excellent scan manager to make it easy to use.

The 8700 USB offers good value for money and great results. It's been pushed out by newer models this month, but still retains a Recommended award.

4 HP Scanjet 4400

HP grabs the final Recommended award this month with the Scanjet 4400, combining good image quality with value for money. It may not be the fastest scanner available but, if you're prepared to wait, the results won't be disappointing. Scanning a colour photo at 300dpi (dots per inch) took 27 seconds, which is

SCANNERS

← The HP Scanjet may not be fast but its scans are well worth waiting for

↑ Although it is very cheap, the Mustek BearPaw 1200CS is slow and complicated to get up and running

reasonable, but upping the resolution to 600dpi added an extra minute to the time taken. A4 colour documents proved a similar challenge, with 300dpi taking 52 seconds compared to three minutes 12 seconds for 600dpi. Even line art was a struggle; where other scanners averaged 30 seconds at 600dpi the 4400 limped in at one minute 37 seconds.

Setup was simple thanks to the included quick-start sheet, with the supplied driver Windows XP certified. On the software front, the bundle is generous in quantity but less so in quality. In the box you'll find ArcSoft PhotoImpression, HP PrecisionScan Pro, Trellix Web Express, HP Print Creator, ACDSee, HP copy utility and HP share-to-web.

5 Visioneer OneTouch 9820

Visioneer's OneTouch 9820 resembles the 8700 further up the chart but offers more features – for a price. If you're interested in scanning transparencies and negatives in addition to normal media then the 9820 is ideal as it includes a built-in transparency adapter in the lid.

This is necessary as slides require a backlight to be scanned properly. Although many scanners offer an adapter as an option, it's simpler and easier to buy everything in one bundle.

There's a quick-start sheet, making installation simple and the software also provides checks to ensure the scanner is installed correctly before you start using it. The lid hinges along the long edge of the scanner (as if for landscape pages), which can often be far more convenient on a crowded workspace.

Software support is good, with a copy of the excellent Adobe Photoshop Elements. Speed wise, the 9820 held its ground despite only offering a USB 1.1 interface. Colour photos took 19 seconds and 50 seconds at 300dpi (dots per inch) and 600dpi respectively with a colour A4 document taking 32 seconds at 300dpi and two minutes two seconds at 600dpi.

↓ Visioneer's second entry includes extra functions, such as negative and transparency scans, but at a price

6 Mustek BearPaw 1200CS

Mustek's BearPaw 1200CS is the cheapest new entry this month at only £50. It also proved to be one of the slowest. Although Mustek should be commended for producing a scanner at such a low price, there are areas where cost-cutting was evident.

Unlike all the other scanners in the chart, the BearPaw 1200CS features a captive USB cable, meaning it can't be replaced inexpensively should it fail. Image quality was also poor compared to the competition and we experienced problems with green-tinged scans, although this was solved with a reboot.

As for drivers, Mustek doesn't even supply a setup CD that runs under the latest Windows system. After installing the XP update driver, you then have to install the applications manually. After all that palaver, you'll find the driver isn't certified, although it functions perfectly well.

Scanners: flatbed vs sheetfed

The majority of scanners available on the market are flatbed models. The flatbed design is preferred as it provides consistent quality in image output. As the document being scanned is stationary and the element moves over (or rather under) it, coverage is more consistent than keeping the element still and moving the document. Flatbeds also have the advantage that they can accommodate different formats easily, from single sheets to pages of a bound book. The down side is they occupy a lot of space – something generally lacking on all but the tidiest of workspaces.

One alternative for a limited space is a sheetfed scanner, such as Visioneer's Strobe Pro model. Measuring just 285x51x64mm (width x depth x height), it's easy to find this model a home – even on the messiest or busiest of desks. To scan a document, you simply feed it in the Strobe Pro's slot on the front where rollers grab it and feed it through. As the sheet goes through, it passes over the scanning element producing a digital image.

Although the specs don't match those of a flatbed, with an optical resolution of 300x600dpi (dots per inch) and a 30bit colour depth, the images produced are more than satisfactory for OCR (optical character recognition) or internal use.

A sheetfed scanner is unlikely to compete with a flatbed for high resolution photo reproduction, and you are limited to scanning flat, individual documents. However, if space is a premium, it may be a worthy alternative for office use.

SCANNERS

Scan times worked out at 47 seconds for a 300dpi (dots per inch) colour photo and one minute 48 seconds for 600dpi. Colour A4 documents took one minute 18 seconds and three minutes 10 seconds at 300dpi and 600dpi respectively.

If you're on a tight budget, the Mustek BearPaw may be worth considering, but if you can spend more there's better to be found in the chart.

↑ Light and convenient for travel, the Trust Direct Webscan 1200 is a bit slower than the competition

7 Trust Direct Webscan 1200

Trust's small and slim Webscan 1200 would make a great scanner for those who travel a lot, but the pay-off is reduced speed and quality. One neat feature the Webscan offers is that it's host-powered; it draws its power from the USB port and doesn't require a separate power supply.

In terms of performance, the Trust wasn't the slowest competitor but it still lagged significantly behind the faster models. A 300dpi (dots per inch) colour photo took 52 seconds to process, with a 600dpi scan taking just over two minutes. A colour A4 document came in at one minute nine seconds at 300dpi and three minutes 43 seconds at 600dpi. Software only runs to a copy of Ulead PhotoExpress SE and Abbyy FineReader Sprint and there's no Windows XP-certified driver or quick setup sheet to aid installation.

8 Benq 5300U

The 5300U from Benq, the new name for Acer Peripherals, is inexpensive but slow compared to the competition. Tying with the Mustek BearPaw, the 5300 came last in three of the eight speed tests performed. A colour photo took 41 seconds to scan at 300dpi (dots per inch) and one minute eight seconds at 600dpi. A full page

↓ The Benq 5300U is attractively low-priced, but lacks speed and an XP-certified driver

colour A4 document came in at one minute six seconds at 300dpi and three minutes 45 seconds at 600dpi.

Hardware installation was simple thanks to the supplied quick setup sheet, and there's a mechanism lock to prevent damage during transit. When it came to driver installation, however, things were different. There's no XP-certified driver, and during installation we had to manually search for a required file on the CD, which isn't that user-friendly. On the software front you'll find a copy of PhotoImpression and PhotoBase by ArcSoft, Abbyy FineReader Sprint and Merge Magic.

9 Epson Perfection 2450 Photo

Epson's Perfection 2450 Photo is one of the fastest of the new entries but was let down by a high price tag. Epson scored the number one position in four of the eight speed tests. When it came to photo scanning, the Epson took just 14 seconds at 300dpi (dots per inch) and 23 seconds at 600dpi. A4 colour scanning at 300dpi took 31 seconds, although 600dpi proved more of a challenge, taking one minute 51 seconds.

Epson's success in the speed stakes is due in part to its high-speed USB 2.0

↑ The Epson Perfection 2450 is fast and has built-in transparency scanning, but you pay for the features

interface, with FireWire also available as standard. The drivers are Windows XP certified, and Epson hasn't skimped on the software; you'll find a copy of Adobe Photoshop Elements and TextBridge Pro.

There's a built-in transparency adapter, so you can scan film and negatives straight out the box. The automatic image recognition is also very good, allowing you to simply put in what you want to scan and press the button. Unfortunately this all comes at a price, and £254 is too much to gain the Epson Perfection a higher chart placing.

↓ Producing good-quality scans at speed, the Microtek ScanMaker 5700 is brought down by its high price

10 Microtek ScanMaker 5700

Like the Epson above it, the Microtek is another great scanner pushed to the bottom of the chart by a high price. If the Epson seemed expensive, the ScanMaker 5700 will set you back nearly £50 more.

Offering FireWire and USB 1.1, the ScanMaker proved speedy when hooked up by the latter interface. A 300dpi (dots per inch) colour photo took just 15 seconds, with a 600dpi one taking 23 seconds. Colour A4 documents came in a 21 seconds at 300dpi and one minute nine seconds at 600dpi. There's a bundled transparency adapter in the lid, plus an illuminated panel on top to allow easy selection of negatives and transparent media.

Software wise you'll find a copy of Adobe Photoshop Elements and Abbyy FineReader Sprint, plus Ulead PhotoExplorer and a couple of Microtek utilities. There's no quick setup sheet or XP-certified driver and it is one of the largest units in the test.