



# Stop the press

Choose a printer carefully or you could end up paying more in the long run

Buying a printer is unlikely to result in friends banging at your door to coo over your new toy, but it is an essential piece of kit if you want to make the most of your computer. However, unless you pick your purchase carefully, your new printer could end up costing you a small fortune.

Initial costs aren't necessarily high – it's using a printer that chips away at your wallet. For instance, the Lexmark Z640 (11) is just £30 but ink for three years of reasonable use – meaning printing one A4 photo, three pages of text and two colour pages a week – comes in at £580.

By contrast, the £149 HP Photosmart D7360 (6) will cost you only £100 in ink over the same period. Of course, if you plan to print only very occasionally, a cheap printer with high running costs might be worthwhile. For further details about running costs, turn to p66.

Overall, laser printers have cheaper long-term running costs than inkjets, and they're very effective at printing out black-and-white text and colour graphics. However, inkjets are more versatile – they can print on photo paper and produce professional-looking photographs.

**Initial costs aren't that high – it's using a printer that chips away at your wallet**



**Unlike some other magazines, we don't just rely on what the manufacturers tell us – our data on cost per print comes from our own test results**

## What you should look for

### MEMORY CARDS

To print photos directly from your digital camera's memory card, check that the printer's compatible with the type of card used by your camera

### PICTBRIDGE

PictBridge allows you to connect a digital camera directly to your printer using the camera's USB cable. It's a useful feature that speeds up the printing process, as you don't have to download images to a computer before printing. Not all printers are PictBridge compatible, so use the table, p67, to check

### LCD SCREEN

An LCD screen is useful for printing from a digital camera or memory card, as you can select a picture to print and do basic image editing, such as removing red eye and cropping. But this is no substitute for image-editing software. Adobe Photoshop Elements 5, £63, is a current Best Buy (see *Computing Which?*, January 2007, p38)

### NETWORKS

When two or more computers are connected, either via cables or wirelessly, this is called a network and it allows PCs to share, among other things, a printer. Many printers will work like this only if they're directly plugged in to one of the computers – which must be switched on. Some printers, including the Canon iP5200R (1 in the table), can connect directly to a wireless or wired network via a router



## Cost per print

We count how many copies of an international standard, plain-text letter it takes to drain a full-sized, own-brand black ink cartridge. This figure varies from as low as 154 pages from a poor-quality inkjet to thousands of pages from a laser printer. We then use the same method to print out a page of graphics and an A4 photo.

To make sure our results are consistent, we repeat the process with a new cartridge. And we recycle all the printouts.

We find out the price, including VAT, for the manufacturer-branded ink cartridges on the high street. Then it's just a case of dividing this price by the average number of pages you get from a cartridge to reach the average cost per print.

## Print quality

An independent panel of experts assesses a range of printouts, including colour and mono photographs, colour documents featuring both text and pictures, plain-text letters and spreadsheets, from each of the machines we test. All of the models we recommend as Best Buys will produce excellent or good-quality printouts.

**1 INKJET**

## 78% Canon Pixma iP5200R £140

All our Best Buy printers produce high-quality documents and photographs at good speeds, but not all can connect directly to a wired or wireless network – the iP5200R is an exception to this rule. It's easy to set up and add to a network, and we were particularly impressed with its ability to find wireless networks. Available from Comet.

**WHICH?**  
**BEST BUY**

**WORTH KNOWING** This printer is identical to the iP5200 (2), except that this one can connect directly to a network. If you don't need this, buy the iP5200 and save £40.

**Cheapest store** Comet **Memory cards accepted** None  
**Size** 44.2x56x36cm **LCD screen** No **Paper trays** Two

**2 INKJET**

## 77% Canon Pixma iP5200 £100

Although it lacks the networking capabilities of the iP5200R (1), this model still produces excellent-quality documents and photographs. Although plain-text document printing could be quicker, an A4 photo took just over one and a half minutes – which is outstanding. Like the iP5200R, the iP5200 can also print photos without borders at both A4 and postcard size directly from your digital camera using PictBridge. Available from Comet.

**WHICH?**  
**BEST BUY**

**WE LIKE** You can print directly on to CDs or DVDs using the additional supplied printer tray.

**Cheapest store** Comet **Memory cards accepted** None  
**Size** 44.2x56x36cm **LCD screen** No **Paper trays** Two

**4 INKJET**

## 72% Canon Pixma iP6600D £140

The iP6600D is ideal for photo printing. It connects directly to a digital camera has memory card slots and a good, pop-up LCD screen allows you to crop and edit your photos. Photo print speeds were also good: 6x4-inch images took just 74 seconds. Available from PC World and Currys.

**WHICH?**  
**BEST BUY**

**WE LIKE** 6x4-inch photos were printed in one of the fastest times we've seen.

**Cheapest store** PC World **Memory cards accepted** CompactFlash, Secure Digital, MultiMediaCard, Smart Media, Memory Stick, xD-Picture Card **Size** 44x58x36cm **LCD screen** Yes **Paper trays** Two

**5 INKJET**

## 68% Canon Pixma iP6700D £130

This Canon comes with an excellent LCD screen, memory card slots, PictBridge and on-board editing features such as red-eye reduction. If you want to print A4 photographs, this printer is quicker than the cheaper iP6600D (4) model by a couple of seconds. Available from Comet and Jessops.

**WHICH?**  
**BEST BUY**

**WORTH KNOWING** All Canon Best Buys can print borderless photos.

**Cheapest store** Jessops **Memory cards accepted** CompactFlash, Secure Digital, MultiMediaCard, Smart Media, Memory Stick, xD-Picture Card **Size** 43x53x36cm **LCD screen** Yes **Paper trays** Two

The Canon Pixma iP6600D printed 6x4-inch photos in one of the fastest times we have seen

**3 INKJET**

## 73% Canon Pixma iP4200 £70

**EXCEPTIONAL VALUE** **which?**

Results from the iP4200 are impressive before you even consider that it costs only £70. The quality of text, graphics and photos was very good and everyday printing speeds were also impressive; plain black-and-white text printed at nearly eight pages a minute and it took under three minutes to print one A4 photo. Available from PC World and Currys.

**WHICH?**  
**BEST BUY**

**WE FOUND** This Canon has the cheapest running costs of all our Best Buy inkjets.

**Cheapest store** PC World **Memory cards accepted** None  
**Size** 41.5x53.5x36cm **LCD screen** No **Paper trays** Two

**12 LASER**

## 67% Dell Colour 3010cn £221

The speedy Dell 3010cn prints 13 pages of plain-text documents a minute and takes 30 seconds to produce a page of good-quality colour graphics. Running costs are low; plain text documents cost just 1p a page and colour graphics documents 15p. Available from [www.dell.co.uk](http://www.dell.co.uk).

**WHICH?**  
**BEST BUY**

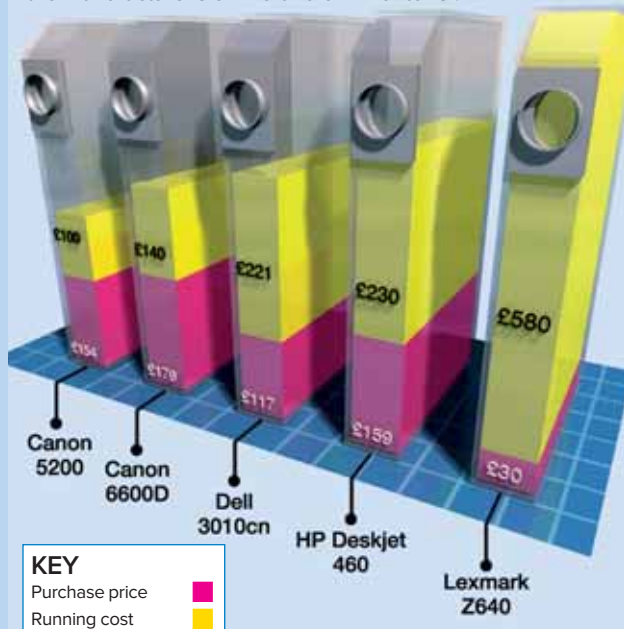
**WORTH KNOWING** A full set of toner cartridges costs about £200, but you won't need to replace them often.

**Available Online** **Memory cards accepted** None **Size** 42x42x50cm **LCD screen** Yes (this is a status screen and is not designed for photo editing) **Paper trays** One (additional second tray available to buy for £140)

## HOW MUCH DOES IT COST?

### A cheap printer won't necessarily save you money

The costs don't stop once you've paid for your printer. The levels of ink in these cartridges show you the overall cost of buying a printer and then running it for three years using the manufacturer's own brand of ink or toner.



Running cost based on printing one A4 colour photograph, three text pages and a two-page colour graphic a week

## Facts & scores

### Up close and personal with the latest printers

#### Picture perfect

The HP Photosmart D7360 was the best on test at printing a document that combined a photo and text – it impressed our experts by producing a good, clear image with strong, black text.

#### Price is not right

The most expensive photo award goes to the Lexmark Z640: it cost us £2.96 in ink to print a single A4 image. The HP Deskjet D2360 wasn't too far behind, at £2.93.

MODEL		PRICE (£)
INKJET		
1	CANON Pixma iP5200R	140
2	CANON Pixma iP5200	100
3	CANON Pixma iP4200	70
4	CANON Pixma iP6600D	140
5	CANON Pixma iP6700D	130
6	HP Photosmart D7360	149
7	EPSON Stylus D88	50
8	EPSON Stylus D78	50
9	HP Deskjet D2360	50
10	HP Deskjet 460 (Mobile Printers series)	230
11	LEXMARK Z640	30
LASER		
12	DELL Colour Laser Printer 3010cn	221
13	HP Laserjet 1018 <sup>a</sup>	80
14	CANON Lasershoot LBP2900 <sup>a</sup>	140
15	DELL Laser Printer 1110 <sup>a</sup>	106

<sup>a</sup> Prints only in black and white

## Which should you choose?



### Best for photos

**CANON PIXMA iP6600D, £140** This printer (4) produces good-quality photos at an impressive speed. You can print directly from a camera and it's compatible with several types of memory card (see the table, above, for more details). It also has an excellent LCD screen, so you can see what you're doing if you decide to print directly from a digital camera or memory card.



### Best for budget

**CANON iP4200, £70** A combination of good-quality prints and very low running costs – just 3p a page for black-and-white plain text and 64p for an A4 colour photo – makes this Canon (3) a great choice if you're on a budget. If you print about one photo a week, two pages of colour graphics and three of plain text, the iP4200 will cost you around £139 over three years.



### Best for black and white

**HP LASERJET 1018, £80** This laser printer (13) produces excellent black-and-white documents quickly and cheaply, and, considering it's a mono laser printer, it doesn't do too badly when printing charts and graphs. Although the cost per print is low, toner cartridges are £36 – nearly half the price of the printer – so budget for this before you buy.



### Best for travelling

**HP DESKJET 460, £230** The 460 (10) is worth considering only if you're looking for a portable printer. It's compact and weighs just over 2kg, as opposed to the 5kg of an average printer. It also comes with a battery pack so it can be used on the move, and the paper trays fold down to avoid damage in transit. However, the 460 is best used as a second printer with a laptop or PDA, as it's slow and print quality is variable.

SPECIFICATION			WHICH? TEST PERFORMANCE						PRINT COSTS				SCORE %
MAC	PICTBRIDGE	MEMORY CARDS	TEXT QUALITY	TEXT SPEED	PHOTO QUALITY	PHOTO SPEED	ENVIRONMENT AND CONSTRUCTION	EASE OF USE	BLACK-AND-WHITE TEXT (p)	COLOUR GRAPHICS (p)	PHOTO (p)	COST OVER THREE YEARS (£)	
✓	✓	n/a	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	2	10	73	154	78
✓	✓	n/a	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	2	10	73	154	77
✓	✓	n/a	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	3	8	64	139	73
✓	✓	CF, SD, MMC, SM, MS, xD	★★★★	★★★★	★★★★★	★★★★★	★★★★★	★★★★★	4	17	69	179	72
✓	✓	CF, SD, MMC, SM, MS, xD	★★★★	★★★★	★★★★★	★★★★★	★★★★★	★★★★★	3	10	90	187	68
✓	✓	CF, SD, MMC, SM, MS, xD	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	2	04	50	100	67
✓		n/a	★★★★★	★★★★★	★★★★	★	★★★★★	★★★★	7	13	99	228	58
✓		n/a	★★★★★	★★	★★★★	★	★★★★★	★★★★	5	18	147	309	52
✓		n/a	★★★★★	★★★★★	★★★★★	★	★★★★★	★★★★	8	20	293	557	49
✓	✓	CF, SD, MMC, SM, MS, xD	★★★★★	★★★★	★★	★★	★★★★★	★★★★	3	11	71	159	49
		n/a	★★★★	★★★★	★★★★	★	★★★★★	★★★★	10	23	296	580	41
		n/a	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★	★★★★	1	15	42	117	67
✓		n/a	★★★★★	★★★★★	★★	★★★★★	★★★★★	★★★★	2	n/a	n/a	n/a	59
		n/a	★★★★★	★★★★★	★★	★★★★★	★★★★★	★★★★	3	n/a	n/a	n/a	58
		n/a	★★★★★	★★★★★	★★	★★★★★	★★★★★	★★★★	2	n/a	n/a	n/a	57

## Jack of all trades

### Should you buy an all-in-one printer?

An all-in-one is a printer with a scanner and a photocopier – some models also come with a fax. These devices are useful if you want to reduce the clutter on your desk.

In recent tests, the Canon MP830 (£250) printed photos and plain text quickly and to a high standard – print speed and quality compared favourably with that of our standard Best Buy printers. This model also impressed us with its scanning, faxing and copying abilities.

## MORE INFORMATION ONLINE

### Free website access

You can find the results from this test, and for 20 other tested inkjet and laser printers, on our website at [www.which.co.uk/printers](http://www.which.co.uk/printers). You'll also find results for small photo printers – for printing postcard-sized photos – and all-in-ones. Not sure which printer to buy? Use our innovative online Product Picker to help you. And if you're having problems with your printer, our reports on maintenance and troubleshooting will set you right.

If you haven't logged in to our website before, or if you are having problems logging in, go to [www.which.co.uk/loginhelp](http://www.which.co.uk/loginhelp) and follow our step-by-step guide.

### USING THE TABLE

We tested recent models from leading manufacturers. The more stars the better.

### Specification

**Price** For Best Buys, we give the cheapest, widely available high-street price as we went to press. Prices for other models are in *italics*. **Mac** Whether the printer works with Apple Mac OS X. For older Macs, check before you buy.

**PictBridge** Whether the model can print from compatible digital cameras.

**Memory cards** What type of memory cards the printer accepts, if any.

CF, CompactFlash; MMC, MultiMedia Memory Card; MS, Memory Stick; SD, Secure Digital; SM, Smart Media; xD, xD-Picture Card.

### Test performance

**Text quality** Ratings for printing one page of black-and-white text. **Text speed** Five A4 text pages must print in under 30 seconds to achieve ★★★★★; ★★ means it took over two minutes.

**Photo quality** Quality of A4 colour and black-and-white photos. **Photo speed** An A4 photo must be printed in under a minute to achieve ★★★★★; ★ means it took over eight minutes.

**Environment and construction** Takes into account power consumption, noise and how well the printer is constructed.

**Ease of use** Quality of manuals; layout, size and clarity of buttons; how easy it is to change ink cartridges and clear paper jams.

### Print costs

Ink costs only, based on cost per A4 print.

**Cost over three years** Ink costs for one photo, three text pages and two colour graphics pages a week.

### Score

This ignores price and is based on:

Print performance	55%
Ease of use	20%
Versatility	15%
Environment and construction	10%

## Contacts

**Canon** 0870 514 3723  
[www.canon.co.uk](http://www.canon.co.uk)

**Dell** 0870 907 5818  
[www.dell.co.uk](http://www.dell.co.uk)

**Epson** 0870 241 6900  
[www.epson.co.uk](http://www.epson.co.uk)

**HP** 0870 270 4222  
[www.hp.co.uk](http://www.hp.co.uk)

**Lexmark** 0870 444 0044  
[www.lexmark.co.uk](http://www.lexmark.co.uk)