



# Print perfection

Choose the right printer and you'll get a hardworking device that will produce excellent photos and documents. Our latest tests have revealed six new Best Buys

**W**hen it comes to buying functional products, such as printers, it can be tempting to head to your nearest computer superstore and buy the cheapest model on offer.

However, our tests have revealed that there's a good deal of variation between printers currently on the market in terms of print quality, features and running costs. Carrying out a little research before you head to the shops will make sure you get one that really meets your needs.

We've grouped our Best Buys and best alternatives into those that excel at printing photos and those that are best for a home office. We've also found some good budget printers for those who just want a basic model.

## Quality control

A first-rate printer will be able to produce photos that look as good as, if not better than, anything you'd get from a high-street processor. It should also produce good-quality text documents that

are sharp and clean, with text that is dark enough to read easily. We've highlighted some of the results of our quality tests opposite, on p58 and p59 (see 'Common printer problems').

## Multi-function or bare essentials?

A multi-function printer (or an 'all-in-one', as they're sometimes known) allows you to scan and photocopy as well as print, and some models have a built-in fax. It's worth bearing in mind that the quality of scans won't be as high as that of a standalone scanner. And the extra mechanics needed for these functions will

**A cheap printer won't have many extras, but this shouldn't put you off**



You can spend £137 to £565 on ink over three years. Want to find out how to change your printer settings to reduce ink waste? Visit our handy guide at [www.which.co.uk/saveink](http://www.which.co.uk/saveink).

# 467

The average number of text pages we print on each model to establish the cost of an A4 page.

# 500 million

The number of new ink cartridges and laser toner cartridges sold in Europe each year.

# 58

# seconds

The time it took the speedy Epson Stylus Photo PX800FW to print an 8x10-inch colour photo.

make the printer a lot bigger than a standard inkjet model.

A very cheap printer won't have many extras, although this shouldn't necessarily put you off buying one. If you're just printing text documents, there's little point paying for the ability to print photos from a memory card, for example.



We've found a great budget Best Buy – the HP Photosmart D5460 (see p58). It produces excellent photos and high-quality text documents, and only costs around £68.

## Long-term costs

Finally, it's important to consider how much your printer will cost you to run. We list the cost for a text document, a page of colour graphics and a photograph for all the printers we test in our table on p58 and at [www.which.co.uk/printers](http://www.which.co.uk/printers). Our three-year running costs are a guide and are based on moderate use. Check these costs carefully before you buy.

## Great for photos

### 68% Epson Stylus Photo PX800FW £260

which? **BEST BUY**



This versatile Epson takes less than a minute to print an 8x10-inch photo from a computer. Photo quality is good if you're printing this way, and even better if you're printing straight from a memory card or a PictBridge-enabled digital camera. You can preview photos on the tilting touchscreen, which is very easy to use. The printer has a separate tray for photo paper, a built-in tray for printing directly on to CDs and DVDs, a fax and an automatic document feeder.

**WORTH KNOWING** This model comes with Wi-Fi Protected Setup, so adding it securely to a home network is really easy if you have a compatible router.

**Cheapest at** Independents and online **Type** Multi-function printer **Wi-Fi** Yes **Separate colour cartridges** Yes **Three-year running costs** £234



#### TEST RESULTS

**Desktop publishing:** Documents containing text and images can be a struggle, but this model did well.

**Photo:** The quality of Epson photos, like this one, impressed our panel of experts.

#### ALTERNATIVE PRINTERS Go to [www.which.co.uk/printers](http://www.which.co.uk/printers) for more

### 66% Epson Stylus Photo PX700FW £140

This Best Buy is a lot cheaper than the Epson PX800FW, but photos printed from memory cards and PCs are excellent, and printing takes only a few seconds more.

which? **BEST BUY**



### 66% HP Photosmart C6380 £134

The HP C6380 delivers good-quality colour prints. It's compatible with Pictbridge-enabled cameras and a good range of memory cards, and it can be connected to your home computer wirelessly.

which? **BEST BUY**



## Office workhorse

### 66% Canon Pixma MP980 £233

which? **BEST BUY**



Canon's top-of-the-range wireless multi-function printer isn't cheap, but it scores well across the board. The quality of text documents is good, and speeds are fairly impressive, at just under seven pages of black text a minute. The printer slows a little when producing the same document with a small amount of colour, though.

Scanning and photocopying are easy, and the results are good. This model is one of the few on the market that also has a slide scanner for old 35mm negatives. It's quite large, so make sure you've got enough space before you buy one. And it doesn't include a fax, which is disappointing.

**WE FOUND** It uses 0.4 watts when turned off. To save even more energy, turn it off at the mains when not in use.

**Cheapest at** Jessops **Type** Multi-function printer **Wi-Fi** Yes **Separate colour cartridges** Yes **Three-year running costs** £151



#### TEST RESULTS

**Text:** Clean text on a patterned background is very difficult to print as accurately as this.

**Photo:** Accurate colours and sharp outlines help this printer score highly for photo quality.

#### ALTERNATIVE PRINTERS Go to [www.which.co.uk/printers](http://www.which.co.uk/printers) for more

### 64% Kodak ESP 9 £194

The ESP 9 has everything you could wish for, including a fax, automatic double-sided printing and built-in Wi-Fi. Text quality is poor, but running costs are low – 2p for an A4 text document and 19p for an 8x10-inch photo.



### 63% Canon Pixma MP630 £126

This Canon produces excellent text documents and good photos at fairly impressive speeds. Print costs are also reasonable, particularly when printing photos. It can print double-sided documents and takes separate colour cartridges.



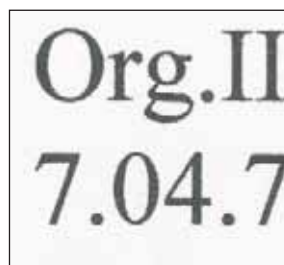
# Basic but brilliant

## 70% HP Photosmart D5460 £68

The HP Photosmart D5460 is a standard inkjet printer, but the quality of the black-text documents it produces is high, and printing speeds are quite impressive, at about six pages a minute. Photos printed from a computer are excellent, but take a bit longer to print. The quality of photos printed from a memory card or via a digital camera is a little lower – our testers noted that images were a little grainy. There's a separate tray for printing on CDs or DVDs, which is conveniently stored inside the printer when not in use.

**WE FOUND** Printing photos is more expensive than average – 64p for an 8x10-inch photo, excluding paper.

**Cheapest at Asda** Type Standard inkjet printer  
Wi-Fi Yes Separate colour cartridges Yes  
Three-year running costs £175



### TEST RESULTS

**Text:** Text is sharp and clean, which makes it very easy to read – perfect for important documents, such as CVs.

**Photo:** Clean lines help this photo look realistic. Creases and checks like these are difficult to print accurately.

### ALTERNATIVE PRINTERS Go to [www.which.co.uk/printers](http://www.which.co.uk/printers) for more

## 66% Canon Pixma iP4600 £80

If you're looking for a no-frills printer that does the basics well, this model is well worth considering. Photo quality is great and text quality is good. Power consumption is excellent: 0.7 watts in idle mode, and 0.2 watts when turned off.



## 62% Epson Stylus Office B40W £83

This Epson doesn't have many extras, but it produces good-quality text documents at excellent speeds (about 13 pages a minute). Built-in Wi-Fi is a plus for those with a small home network, and running costs are lower than average.



MODEL	SPECIFICATION				WHICH? TEST PERFORMANCE					SCORE (%)
	PRICE (£)	BLACK TEXT (£)	COLOUR GRAPHICS (£)	PHOTO (£)	TEXT QUALITY	TEXT SPEED	PHOTO QUALITY	PHOTO SPEED	EASE OF USE	
MULTI-FUNCTION PRINTER										
1 EPSON Stylus Photo PX800FW	260	0.04	0.20	0.98	★★	★★★★★	★★★★★	★★★★★	★★★★★	68
2 CANON Pixma MP980	233	0.05	0.17	0.48	★★★★★	★★★★★	★★★★★	★★★★★	★★★★	66
3 EPSON Stylus Photo PX700FW	140	0.05	0.21	1.02	★★	★★★★★	★★★★★	★★★★★	★★★★★	66
4 HP Photosmart C6380	134	0.02	0.18	0.65	★★★★★	★★★★★	★★★★★	★★★★	★★★★★	66
5 KODAK ESP 9	194	0.05	0.12	0.19	★★	★★★★★	★★★★★	★★★★★	★★★★★	64
6 CANON Pixma MP630	126	0.05	0.16	0.54	★★★★★	★★★	★★★★★	★★★★★	★★★★	63
7 CANON Pixma MP540	78	0.05	0.16	0.49	★★★★★	★★★★★	★★★★★	★★★	★★★★	61
8 CANON Pixma MP620	149	0.04	0.15	0.51	★★★★★	★★★	★★★★★	★★★	★★★★	61
9 EPSON Stylus SX400	62	0.04	0.22	0.75	★★★★★	★★★	★★★	★★★	★★★★	60
10 HP Photosmart C4580	100	0.05	0.18	1.02	★★★★★	★★★★★	★★★★★	★★	★★★★	59
STANDARD INKJET PRINTER										
11 HP Photosmart D5460	68	0.04	0.18	0.64	★★★★★	★★★★★	★★★★★	★★★★	★★★★★	70
12 CANON Pixma iP4600	80	0.05	0.16	0.51	★★★★★	★★★★★	★★★★★	★★★★★	★★★★	66
13 EPSON Stylus Office B40W	83	0.03	0.15	0.45	★★★★★	★★★★★	★★★	★★	★★★★	62
14 EPSON Stylus Photo R285	64	0.04	0.18	0.94	★★	★★★	★★★★★	★★★	★★★★	59



# Your printer dilemmas solved

Which? printer expert Lizzy Payne answers common questions about buying and using a printer

**Q** I want a printer for my home office.

**What should I look for?**

**A** If you have a wireless network, or you plan to share your printer with several devices, look for a Best Buy with built-in wireless connectivity, such as the Canon MP980 or the Epson PX800FW. Consider a printer that has a built-in fax, automatic double-sided printing (known as duplexing) and an automatic document feeder (which will make it easier to photocopy multi-page documents). As you're likely to print more than the average user, you should also look for low running costs – particularly for text and graphics documents.

**Q** How can I get a really high-quality document from my printer?

**A** If you're printing a document from a Microsoft Office application, click on 'File' on the toolbar, select 'Print', and then click on the 'Properties' button. Go to the tab marked 'Quality' and select the highest quality available for the type of document you're printing.

**Q** Is it worth buying premium photo paper?

**A** If you're just printing everyday snaps, you can get cheaper paper from the supermarket or high street. In 2008 we tested a variety of premium and everyday photo papers and found that it wasn't always

worth spending extra money on higher quality products.

**Q** How can I buy cheap ink cartridges?

**A** You could consider buying generic ink cartridges, rather than those made by your printer manufacturer. Our tests have found that the quality is variable, but for everyday document printing you'll probably be happy with the results. Buy ink cartridges online, and consider buying several at once if you're a heavy user. Don't buy too many cartridges, though, as some have a use-by date on a small microchip that communicates with your printer and will stop them from working.

**Q** Will using a generic ink cartridge invalidate my printer's warranty?

**A** The major printer manufacturers have told us that simply using a generic cartridge will not invalidate the warranty, but that any **damage** caused to your printer by a generic cartridge is unlikely to be covered. Read the terms of your warranty carefully to see whether it expressly says that failure to use proper manufacturer's parts will invalidate the warranty. If you're worried, avoid using generic cartridges until your warranty has expired – usually after one year.



## USING THE TABLE

The more stars the better.

### Specification

**Price For Best Buys** we give the lowest widely available high street or online price as we go to press. Go to [www.whichcompare.co.uk](http://www.whichcompare.co.uk) for the latest prices. **Black text/Colour graphics/Photo** The cost of ink per A4 page of text, colour graphics document or photo. Our calculations take into account the number of pages we were able to print before the cartridge(s) ran out. Where models have photo ink, this was used for photo costs.

### Test performance

#### Text quality

Ratings for printing one page of black text. **Text speed** Five A4 text pages must print in less than 30 seconds to achieve ★★★★★. **Photo quality** Quality of printing an A4 photo. Where models have an optional photo ink cartridge, this was used. **Photo speed** An A4 photo must print in less than a minute to achieve ★★★★★.

### Score

Ignores price

and is based on:

#### Multi-function printer

Printing	35%
Ease of use	20%
Scanning	15%
Copying	15%
Power consumption	5%
Versatility	5%
Direct photo printing	3%
Networking	2%

#### Standard inkjet printer

Printing	65%
Ease of use	20%
Power consumption	5%
Versatility	5%
Direct photo printing	3%
Networking	2%

## Contacts

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

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

**HP** 0870 010 4320  
[www.hp.co.uk](http://www.hp.co.uk)

**Kodak** 0870 243 0270  
[www.kodak.com](http://www.kodak.com)

## COMMON PRINTER PROBLEMS

### Colour banding

Colour banding, as shown in the green strip below, is most obvious when there is a gradual change in colour – in a photo of a sunset, for

example. This problem isn't correctable. Models that have scored four or five stars for picture quality don't do this.



### Colour casts

Over the years we've tested hundreds of printers. Some produce photos in which colours look inaccurate (as in the photo

below), or pictures that are cast with one shade, such as red. You'll avoid this problem if you choose one of our Best Buy models.

