











Top 10 Colour inkjet & Mono laser printers

			Colour inkjet printers	Maximum paper size	Maximum resolution	Quoted print speed	Dimensions (wxdxh)	Interface types	
						Actual print speed			
PC ADVISOR RECOMMENDED	BEST BUY	1	 Canon Bubble Jet i865 0870 514 3723 www.canon.co.uk New	• £169 inc VAT • 1-year warranty • First review Dec 03	A4	4,800x1,200dpi	B=23ppm C=16ppm B=11ppm C=8ppm	420x311x185mm 5.8kg	USB 1.1, parallel
		2	 Canon Bubble Jet i850 0870 514 3723 www.canon.co.uk Last month 1	• £164 inc VAT • 1-year warranty • First review Apr 03	A4	4,800x1,200dpi	B=22ppm C=14ppm B=9ppm C=7ppm	418x274x159mm 4.8kg	USB 1.1, parallel
PC ADVISOR RECOMMENDED	BEST BUY	3	 Canon Bubble Jet i470D 0870 444 0044 www.canon.co.uk Last month 2	• £179 inc VAT • 1-year warranty • First review Oct 03	A4	4,800x1,200dpi	B=18ppm C=12ppm B=10.5ppm C=3ppm	393x298x218mm 4kg	USB 1.1, parallel
		4	 Lexmark Z705 0870 444 0044 www.lexmark.co.uk New	• £53 inc VAT • 1-year warranty • First review Dec 03	A4	4,800x1,200dpi	B=17ppm C=10ppm B=5.5ppm C=3ppm	439x236x152mm 2.1kg	USB 1.1
PC ADVISOR RECOMMENDED	BEST BUY	5	 Epson Stylus Photo 900 0800 220 546 www.epson.co.uk New	• £200 inc VAT • 1-year warranty • First review Dec 03	A4	5,760x720dpi	B=9ppm C=8.8ppm B=5ppm C=3ppm	493x306x183mm 6.9kg	USB 1.1, parallel

			Mono laser printers	Installed/maximum memory	Hardware resolution	Quoted print speed	Dimensions (wxdxh)	Interface types	
						Actual print speed			
PC ADVISOR RECOMMENDED	BEST BUY	1	 Brother HL-5050 0870 830 4000 www.brother.co.uk Last month 1	• £230 inc VAT • 1-year warranty • First review Jun 03	16MB/144MB	600x600dpi 2,400x600dpi	16ppm 14ppm	382x401x252mm 11.5kg	USB 2.0, parallel
		2	 Brother HL-5040 0870 830 4000 www.brother.co.uk New	• £180 inc VAT • 1-year warranty • First review Dec 03	8MB/136MB	600x600dpi 2,400x600dpi	16ppm 14ppm	382x383x252mm 10.5kg	USB 2.0, parallel
PC ADVISOR RECOMMENDED	BEST BUY	3	 Lexmark E323 0870 444 0044 www.lexmark.co.uk New	• £252 inc VAT • 1-year warranty • First review Dec 03	16MB/144MB	600x600dpi 1,200x1,200dpi	19ppm 15ppm	391x361x221mm 9kg	USB 1.1, parallel
		4	 Oki B4300N 01753 819 819 www.oki.co.uk Last month 2	• £445 inc VAT • 1-year warranty • First review Jul 03	16MB/48MB	600x1,200dpi n/a	18ppm 18ppm	355x395x200mm 9kg	USB 2.0, parallel
PC ADVISOR RECOMMENDED	BEST BUY	5	 Xerox Phaser 3130 0870 241 3245 www.xerox.com/officeprinting New	• £285 inc VAT • 1-year warranty • First review Dec 03	32MB/32MB	600x600dpi 1,200x600dpi	16ppm 13ppm	348x355x193mm 7kg	USB 2.0, parallel

Top 5 Colour inkjet printers

1 Canon Bubble Jet i865

PC ADVISOR BEST BUY There's a new Best Buy in the Colour inkjets chart for the first time in eight months. A new addition to the Bubble Jet range that has dominated this category for so long, the i865 offers an unbeatable combination of value for money and quality that the opposition just can't match. With Canon taking the top three spots in this chart it seems that the other manufacturers have some way to go.

These days most printers in this category are aimed at digital camera users and the i865 is no exception. Any digital camera compliant with the PictBridge standard can print direct to the i865 without the need to be connected to a PC. The photo printing is brilliant with

sharp detail and absolutely stunning colours. We could only get 11ppm (pages per minute) out of the i865 when printing text, compared with the 23ppm that Canon claims. But this is still very fast for an inkjet and we were very impressed with the results, even when printing in draft mode.

An additional 'photo black' cartridge ensures that images look even more stunning, while for text work you can decrease consumable costs by falling back on the standard black cartridge. There's a good software bundle, a generous supply of glossy paper and the printer even offers special facilities for printing directly on to CD-R or DVD media. The i865 can also be bolstered with a number of optional upgrades, including a 250-page paper tray.



Ink costs	Print life (pages)	Input tray capacity	Photocartridge	Software includes
	Pence per page	Sample paper provided	No of ink tanks per cartridge No of ink colours	
B1=£8 B2=£11 C=£8 x 3	B1=440 B2=330 C=440	150	yes	Easy WebPrint, Easy PhotoPrint, PhotoRecord, Zoom Browser, Photo Stitch
	B1/2=2.5 C=5.6	yes	5	
			4	
B=£11 C=£8 x 3	B=330 C=460	150	no	Easy WebPrint, Easy PhotoPrint, PhotoRecord, Zoom Browser, Photo Stitch
	B=3.2 C=5.4	yes	4	
			4	
B=£4.70 C=£11	B=130 C=160	100	n/a	Easy WebPrint, Easy PhotoPrint, PhotoRecord, Zoom Browser, Photo Stitch
	B=3.6 C=6.4	yes	2	
			4	
B=£22 C=£28	B=225 C=260	100	no	Lexmark Photo Centre, Lexmark Photo Editor
	B=9.7 C=10.7	yes	2	
			4	
B=£18.50 C=£21	B=540 C=340	100	no	Print Image Matching II, PhotoQuicker 3.2, Print Image Framer
	B=3.4 C=6.1	yes	2	
			6	

Replacement toner costs	Print life (pages)	Input tray capacity (standard/max)	Monthly duty cycle (pages)	Full network connection as standard
	Pence per page	Output tray capacity		Noise
£61	6,500	250/500	40,000	no
	0.9	150		50dB
£61	6,500	250/500	40,000	no
	0.9	150		50dB
£88	3,000	150/400	15,000	no
	2.9	100		49dB
£49	6,000	250/750	15,000	yes
	0.8	150		53dB
£65	3,000	250/250	15,000	no
	2.2	50		52dB

2 Canon Bubble Jet i850



Finally the Bubble Jet i850 relinquishes its crown after eight consecutive months at the top of the



colour inkjet chart. The hardware resolution of 4,800x1,200dpi (dots per inch) coupled with Canon's own MicroFine droplet technology is responsible for the high quality of the finished prints that the Bubble Jet i850 produces.

An additional bonus is the separate colour ink cartridges - you only have to replace the colour that has run out rather than all three inks at the same time.

The quoted print speeds did not match our tests results. However, 9ppm (pages per minute) for text and 7ppm for colour prints are still pretty impressive results. The i850 also



produced a high-resolution photo print in just three minutes which was detailed and alive with colour.

The quality of the printout does suffer at the lowest quality setting but the problem's easily eradicated by using the next highest quality setting.

The i865's entrance means that Canon should look again at the i850's pricing, but if you can find this model discounted, it's still an excellent choice for fast high-quality photo printing.

3 Canon Bubble Jet i470D

Having made its debut at number two last month, the Bubble Jet i470D completes a Canon hat-trick in the Colour inkjet category. Slightly more expensive than its two award-winning stable mates, the i470D is aimed at the digital camera enthusiast.

You can connect a Canon digital camera direct to the printer and the memory card slot allows you to print directly from all major flash memory types. With the Photo Viewer button you can display photos on a PC at the touch of a button although, considering the high price, the inclusion of an LCD panel would have been a nice touch.

Another drawback is the wasteful cartridge system - the entire colour

cartridge has to be replaced when just one colour runs out. Running costs are reasonable at 3.6 pence for a monochrome page and 6.4 pence for a colour printout. The cartridges aren't very expensive, which makes up for the fact that you'll be replacing them frequently.

It's a pretty nifty printer too - it managed to print 10.5ppm (pages per

minute) of text, although it could only manage 3ppm of colour. Printouts are crisp, although photographs will look best on glossy or coated paper.

4 Lexmark Z705

Lexmark can only manage fourth spot with the Z705. Attractive, compact and light, this printer could almost be a portable model - if it had a battery. In spite of its mere 2.1kg, it doesn't feel flimsy, but its size does mean



that the input tray can only hold 100 sheets of paper. Speed is relatively low and image quality is moderate.

What's really attractive about the Lexmark is the price. But while £53 may sound like a bargain, if you plan on using it heavily then this is not the printer for you. Buying a replacement colour ink cartridge, for example, is going to cost you almost half of what you originally paid for the printer.

If your printing needs aren't that great then this model makes a cheap introduction to inkjet technology.

5 Epson Stylus Photo 900

In fifth place is the Stylus Photo 900 from Epson. Bulkier than the other printers, the 900 comes armed with a slew of accessories and special features. It can print directly to recordable CD and DVD media, for instance, while text and graphics can be printed on to a continuous roll of paper for perfect banner and



panoramic prints. The BorderFree option lets you stretch images across the entire page, while the resolution can be increased to 5,760x720dpi using high-quality media.

The print quality is extremely good, but considering the high price tag we expected far more in terms of speed. It's also a fairly expensive printer to run (mono prints are 3.4 pence per page while colour prints are 6.2 pence). And when one colour runs out you're forced to replace the entire colour cartridge.

Nonetheless, despite its price, the Photo 900 will be a good acquisition if you have specialist photo printing needs and don't mind waiting for the results.

Top 5 Mono laser printers



1 Brother HL-5050

PC ADVISOR BEST BUY Having sat at the head of this chart since the June 03 issue of *PC Advisor*, the Brother HL-5050 still can't be shifted from the top. It might not have the fastest print speeds but, in terms of value for money, it can't be faulted.

Just £230 gives you a quality laser printer ideal for use in a small office environment. It might be a little too big to be a home printer but, as it has been specifically designed for heavy-duty use, the low print costs will appeal to everybody. At just 0.9 pence per page you'll be able to reach the maximum monthly duty cycle of 40,000 pages without breaking the bank.

The claimed output rate of 16ppm (pages per minute) isn't far away from the 14ppm we actually managed to get from the

Brother in our tests. This certainly isn't the fastest in the chart but it's no slouch either. For example, you'd pay over £200 more for the Oki in fifth place for an increase in speed of only 4ppm.

The print quality was very good, with crisp text produced at a resolution of 600x600dpi (dots per inch). The toner-save option, though, is far too light and should only be used for draft copies, if at all. One minor quibble we have is with the setup - it's not true plug-and-play, but it isn't too difficult to find the correct driver on the list provided.

2 Brother HL-5040

PC ADVISOR RECOMMENDED It's a Brother clean sweep at the top of this month's laser chart due to the high calibre of the HL-5040, little sibling of the Best Buy HL-5050. It really isn't that much different to its brother, Brother, but a couple of issues concerning print quality mark out the HL-5040 as the poor relation.

Printing text is fine at all resolutions, but when we printed a Microsoft PowerPoint slide containing several

degrees of shading the print was far too dark, rendering parts of the slide unreadable. The higher the resolution, the more acute the problem became.

On the upside, the printer is very cheap to run, costing just 0.9 pence per page. It's sturdy and well built and won't have a problem surviving in a busy office environment. The monthly duty cycle of 40,000 pages means that this printer can take anything that you'd care to throw at it, though the measly 8MB of installed memory is a worry. Luckily there's room to upgrade this to 136MB and the healthy paper handling options are welcome at this price point.

So should you choose the HL-5050 or the HL-5040? Well, this depends on whether you need the highest level of print quality. While it can't match the output of the HL-5050, the HL-5040 is capable of

generating strong results - particularly if your work is mainly text. Combine this with the low running costs and the £50 price difference and the HL-5040 stands out as a genuine bargain.





3 Lexmark E323

Almost but not quite breaking Brother's domination of the Mono laser chart is the E323 from Lexmark. First-class prints, smart looks and respectable print speeds count among its strengths, but high running costs make it a far from economical proposition.

Print quality is excellent, with clear text produced at even the lowest resolutions. We didn't experience any paper jams or curled edges when printing. Memory of 16MB is about the norm for printers at this price, but it can be expanded to a massive 144MB - handy if you're in a large office.

We would prefer to see better paper support and the Lexmark can only be fed 150 sheets at a time - all the more reason to buy the optional second input tray and boost this to 400 sheets. But the main reason why the E323 doesn't take the top spot is because of its expensive consumables, and 2.9ppp (pence per page) will soon add up.

4 Oki B4300N

A Gold award winner back in our July 03 issue, the B4300N from Oki offers the fastest print speeds in the Mono lasers chart, actually managing to meet Oki's claim of 18ppm. Network support and the option of upgrading the input trays to a massive 750 pages suggests that this is aimed squarely at the office - indeed, most home users would struggle to justify the whopping £445 price.

At these speeds you won't be getting any print queues, although for heavy use you might want to consider expanding the installed memory from the standard 16MB.

The compact casing allows the printer to blend in with furniture, but don't be fooled by its size. This product boasts some very powerful hardware and, if you pay up front, it'll quickly start paying you back through its extremely low running costs.



use. However, it might struggle to keep up with the demands of all but the smallest offices with its relatively slow print speeds and high consumable costs.

There's 32MB of installed memory which is more than double what you'd usually see at this price but, unfortunately, there's no room to upgrade. The print quality is reasonable but no more. Text is fine across all resolutions, but at lower quality settings our Microsoft PowerPoint slides came out rather light.

The Phaser costs 2.2ppp to use and this, combined with the lack of upgrade options, makes it a poor choice for heavy users. However, its compact size may find favour in a home environment where high performance and the ability to handle large print jobs aren't crucial.

5 Xerox Phaser 3130

Entering the chart in fifth place is the Phaser 3130 from Xerox. It's a good deal smaller than the other printers in this chart. Its weight of only 7kg makes it ideal for home



Buying advice

• **Price** There's no point in paying through the nose if all you're going to print is text. Don't pay more than £150 for an inkjet unless you want photo-quality prints, as a good all-purpose low- to mid-range inkjet shouldn't cost you much more than £100. Mono laser printers will generally cost you more, but make sure you know what your needs are before you buy. If it's going to be heavily used you're better off paying that bit extra for a mid-range networkable device.

• **Interface** Most printers will give you the option of parallel and USB ports. It's easier to hook up to USB ports as the installation process is much easier. USB 2.0 offers faster data transfer rates than the standard USB interface.

• **Resolution** With inkjet printers you'll see massive figures banded

about when it comes to resolution. Very high resolutions are often interpolated and use software to achieve the finished print. Focus instead on the hardware resolution figure - 600x600dpi should suffice for a mono laser printer but if you want really high-quality prints 1,200x1,200dpi is better. Most inkjets can handle 4,800x1,200dpi.

• **Speed** The speed of a printer is affected by the resolution you print at, though this applies more to inkjets than lasers. Manufacturers often quote print speeds that have been achieved in massively unrealistic tests, so remember to take the quoted figure with a pinch of salt. For an inkjet printer 9ppm (pages per minute) in monochrome and 5ppm in colour is good. For low-end laser printers 14ppm is adequate, but for a heavy-duty

£400+ model, expect performance nearer to 20ppm.

• **Running costs** When purchasing any printer check the cost of replacement ink cartridges or toner. You might find something that looks like a real bargain only to find that you're paying 30 percent of the cost of the printer again every time you run out of ink or toner.

Check how many pages of coverage you're going to get from an ink or toner cartridge and work out the cost per page. With inkjets 4ppp (pence per page) for mono prints and 7ppp for colour is the maximum you want to pay, although costs will rise for a dedicated photo printer. In terms of laser printers the costs are much lower - about 2ppp for an entry-level model and less than half that for a more expensive device.