

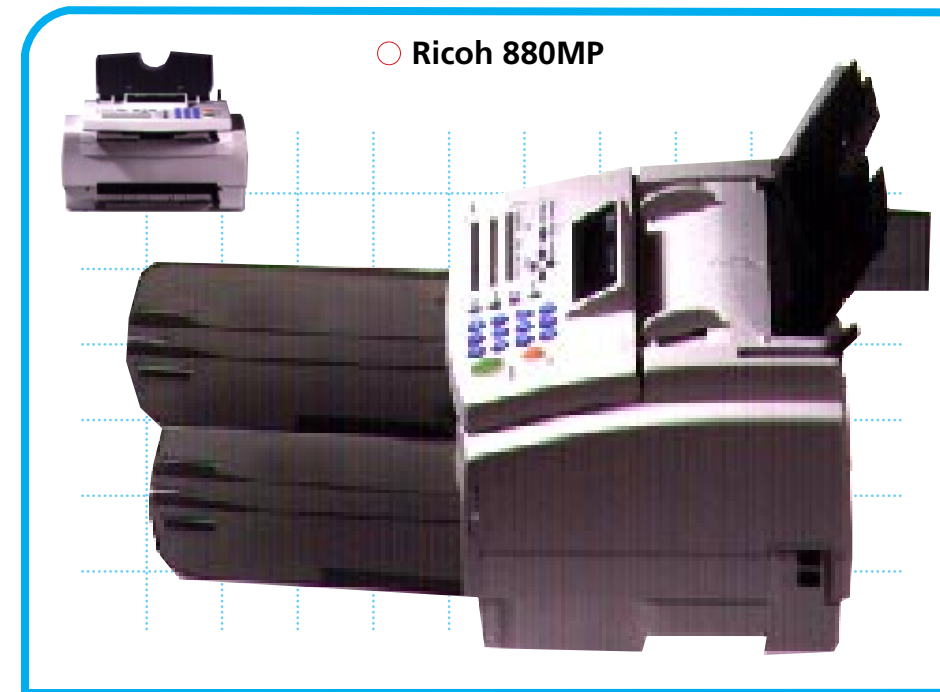


One for all

An all-in-one unit combining faxing, copying and printing facilities could be the answer for small or home businesses with little work space and budgets to match. We examine six of the latest machines to help you weigh up the pros and cons

If you run a small business, either from home or from an office, you've probably already invested in a computer. However, its usefulness is limited without a printer attached, and as your business expands you may find yourself wanting a fax machine and a photocopier as well. Once you've decided that the time is ripe to upgrade your office facilities you will have two options: you can either assemble each of the components necessary for performing the required functions, or you can buy a single machine that can do them all – a multi-function device.

Multi-function devices combine faxing, copying and printing facilities in a single box, and many of the latest models can also be used as scanners. As the all-in-one trend continues, there is no shortage of manufacturers offering a machine to fill the empty spot on your desk and, of course, relieve you of a few hundred pounds in the process. In this roundup we've taken six multi-function devices from well-known manufacturers and put them through their paces. All the machines tested can fax, copy and print, and most of them can be used as scanners as well.



Ricoh 880MP

In recent years Ricoh has made increasingly long strides into the Soho (Small Office/Home Office) arena; the 880MP is Ricoh's latest entry in this burgeoning market.

The top of the machine has an array of colourful buttons used for dialling telephone numbers and controlling fax and copy operations. To the left of these is a set of less eye-catching membrane buttons used for the more mundane tasks of configuration and entering lists of 'speed dial' numbers. Speed dialling – a feature common to all the tested machines – is the ability to recall and dial pre-stored numbers with minimum fuss, usually by touching only one or two buttons. Once connected to the telephone socket via the included splitter, the 880MP can be set to receive faxes in one of two modes: Auto Select or Manual Receive. Incoming calls under Manual Receive mode will ring until you pick up the receiver, at which point, if necessary, you can return control of the call to the 880MP by pressing the start button. In Auto Select mode, the machine answers all calls and will try to determine their origin; an incoming fax silences the ringer and initiates the 880MP to receive, whereas voice calls cause the handset to continue ringing until either you or your answering machine takes the call.

Ricoh's system for altering the 880MP's many settings is abysmal and, at some stages, entails entering a series of lengthy number codes to access the numerous modes. The manual does provide some compensation for this awful control system, though, as it is humorously illustrated and clear.

Ricoh 880MP

The quality of the printed output deserves a special mention – the 880MP gives outstanding mono results with hardly any banding visible, even on the darkest of images; it also performed well with our test document, producing a sustained print speed of 2ppm (pages per minute). By fitting a cartridge, the device can also print in colour, although the results from this were not as remarkable.

An acceptable multi-function system with exceptional print quality, but its usability is hindered by a poor control system.

£938.83 (incl VAT)
Ricoh: 0181 261 4000

Ricoh 880MP

Ease of use	1	2	3	4	5
Performance	1	2	3	4	5
Documentation	1	2	3	4	5
Features	1	2	3	4	5
Value for money	1	2	3	4	5

Toshiba TF461

Of the units reviewed, the Toshiba TF461 is the device which most resembles a traditional fax machine, and it's also one of the simplest to operate.

For the purposes of printing, the TF461 is connected to your PC using a standard parallel cable. If you add a serial cable and software (Winfax 4.0), costing £99, the machine can also be used as a scanner. Like most multi-function devices, the TF461's scanning mode has a maximum resolution of 200x200dpi. This is equivalent to a dedicated fax machine's 'fine' setting and is really only suitable for basic scanning requirements. The software supplied with the TF461 is limited to a disk containing drivers for Dos and Windows.

The TF461's manual is quite brief – just 60 sparsely populated pages – but in a way this is testament to its ease of use; all functions can be accessed using a series of menus displayed on the TF461's single-line LCD panel. Unfortunately, the TF461 cannot be set up automatically to detect voice calls; unless you pick up the telephone handset first, the device will assume an incoming call is from another fax machine.

Print quality is good, as you would expect from a device which boasts a mono resolution of 600x300dpi. With the colour cartridge fitted, the print resolution drops to a less impressive 300x300dpi, although the quality is still good and is marginally better than that produced by Ricoh's device. Toshiba has thoughtfully built in a storage receptacle for an ink cartridge at the front of the TF461, so an occasionally used colour cartridge can be stored without the risk of it drying out.

The TF461 is not particularly fast, with our test documents

Why buy a multi-function machine?

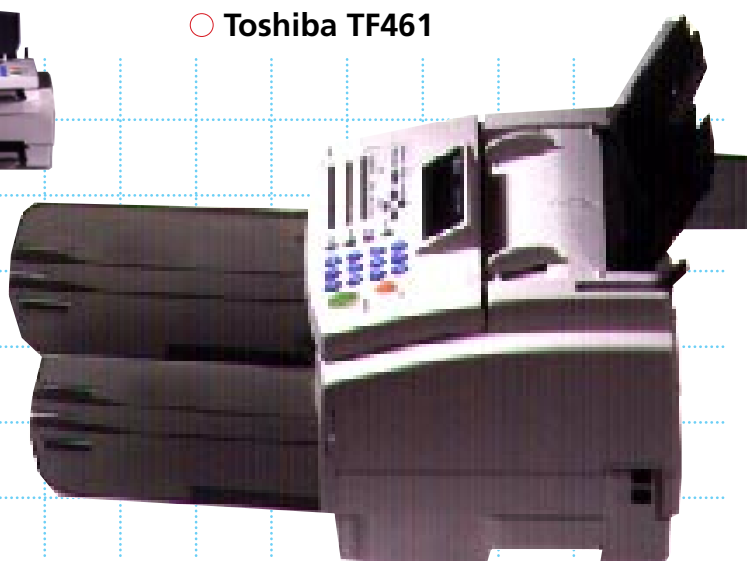
There are reasons for and against choosing a multi-function device instead of a separate printer, fax machine and photocopier. Buying a multi-function unit means you only have one machine taking up desk space as opposed to three, and you can be assured of compatibility between each of the elements. As a bonus, you are likely to make a reasonable saving over the cost of buying three separate machines.

Should your multi-function device break down, however, you face the prospect of being unable to fax, copy or print for the period of its repair. With separate machines, your inconvenience would be limited to the loss of only one function.

In addition, the photocopying resolutions offered by a multi-function device are usually limited to the maximum resolution of the fax part of the machine, and this normally means that a mere 200x200dpi is possible. While this is just about acceptable for basic scanning purposes, copy quality suffers at this low resolution and is not a patch on that produced by a dedicated photocopying machine. You must also take into account the copy speed. Most photocopiers use printing mechanisms similar to those found in laser printers and this means they can churn out several pages per minute. With the notable exception of the Brother MFC-6000, the multi-function devices reviewed here use inkjet cartridges and can barely manage copy speeds of 2ppm.

Fax/printer/copiers

Toshiba TF461



machine was the smallest of the devices reviewed and its sleek yet angular design was also the most appealing.

Opening the MultiPass 10's front cover yields no surprises as it looks like the inside of any one of the company's recent printers, although it does reveal the introduction of yet another Canon ink cartridge, the BX3.

The machine comes with a piece of Windows software called Desktop Manager, which is exceptionally ease to use. With Desktop Manager, it is possible to use the MultiPass 10 either as a scanner or as a PC-based fax system. The unit can only scan to a maximum resolution of 200x200dpi, but this seems to be about par for the course for multi-function devices. Using the Desktop Manager to transmit and receive faxes allows

churning out at a rate of around 1.5ppm.

The TF461 is competitively priced and a good all-round performer but would benefit from some bundled software.

○ £763.58 (incl VAT)

○ Toshiba: 01932 825052

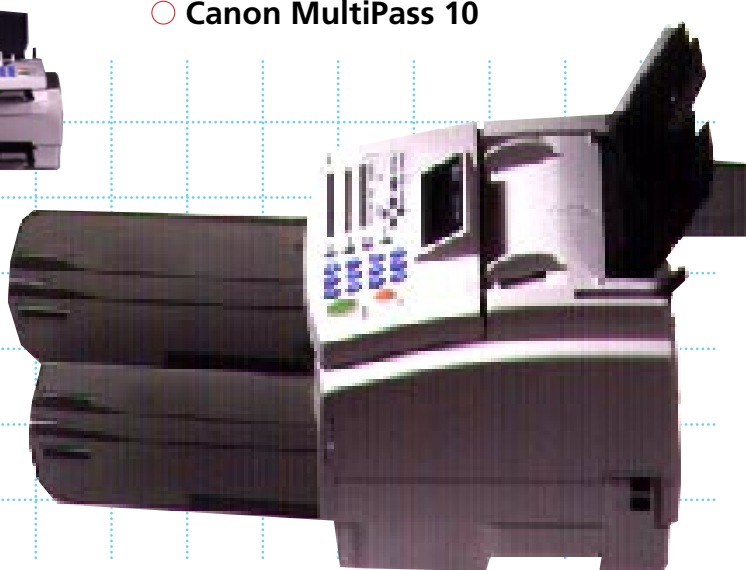
Toshiba TF461

Ease of use	1	2	3	4	5
Performance	1	2	3	4	5
Documentation	1	2	3	4	5
Features	1	2	3	4	5
Value for money	1	2	3	4	5

Canon MultiPass 10

Canon is well-known for its excellent range of inkjet printers, and the MultiPass 10 is an extension of that range. Measuring only 360mm wide by 294mm deep, the Canon

Canon MultiPass 10



The alternatives...

To get the same capabilities from your computer as a multi-function device, you'll need to assemble a printer, a scanner and a fax modem.

There is a vast range of printers available and you have to weigh up aspects such as quality, features and cost. Laser printers give excellent print quality but often at a high price, although recent releases have seen prices dropping. Inkjet printers strike the best balance between cost and quality and are deservedly successful. A typical black-and-white inkjet printer with a resolution of 300x300dpi will cost you around £150 to £200, with colour models adding around another £30 to £50 to the price.

Similarly, scanners come in all shapes and sizes and with differing resolutions, and selecting the right one will depend very much on individual needs. However, if you intend to scan documents for subsequent faxing, a hand-held device is out of the question as you will need an A4-sized scanning window. With this in mind, basic black-and-white scanners with resolutions equivalent to that offered by the best fax machines (a fax machine's 'superfine' resolution being around 300x300dpi) start at around £175.

Choosing the correct fax modem is relatively straightforward. Assuming you want to use it for nothing more than faxing across a normal telephone line, then a 14,400bps modem will suffice – Group 3 fax machines do not communicate at speeds beyond this and Group 4 fax machines are ISDN-based, so buying a 28,800bps modem would be pointless. However, if you intend to use your fax modem for connecting to the Internet or other online services, then making the extra investment and plumping for a faster 28,800bps modem would result in lower phone charges.

you to keep an electronic log of all your fax traffic, and you can also set up address books of individual and grouped contacts.

Canon has not included a telephone line splitter so the telephone has to be routed through the MultiPass 10, which plugs directly into your telephone socket. This means your telephone has to be situated near the unit unless you buy an extension cable. All communication between the MultiPass 10 and the Desktop Manager package is carried out through a parallel cable; another small piece of software, the MultiPass Server, alerts you in the event of any problems.

With the resolution set to 360x360dpi, the machine produced a print speed of just over 1ppm on our test document. This is by no means fast but it is quite acceptable for everyday printing purposes.



Fax/printer/copiers compared

	Ricoh 880MP	Toshiba TF461	Canon MP10	Xerox 3006	HP Officejet LX	Brother MFC6000
General						
Dimensions (mm)	370wx281dx235h	363wx282dx269h	360wx294dx328h	413wx546dx356h	438wx394dx283h	455wx428dx299h
Weight (kg)	7	9.2	5.7	8.7	8.85	11.9
Interface	Parallel	Parallel & serial	Parallel	Parallel	Parallel	Parallel & serial
Printer specifications						
Printing method	Inkjet	Inkjet	Inkjet	Inkjet	Inkjet	Laser
Paper feeder capacity (A4 sheets)	100	150	100	100	100	200
Resident fonts	8	12	8	3	4	3
Emulation	Canon BJ10, Epson LQ	PCL 3	Canon BJ10, Epson LQ	HP Deskjet 500	PCL 3	PCL 4, Epson FX-850, IBM Proprinter XL
Resolution (dots per inch)	360x360	600x300 (300x300 colour)	360x360	300x300	600x300	300x300
Colour option	●	●	○	○	○	○
Claimed print speed (pages per minute)	4	3	2	3	3	6
Actual print speed (pages per minute using our test document)	2	1.5	1.5	3	1.5	4
Fax						
Compatibility	Group 3	Group 3	Group 3	Group 3	Group 3	Group 3
Transmission speed (seconds per page using our test document)	9	9	10	6 at connected speed of 14,400 10 at 9,600	10	9
Maximum fax modem speed	9,600	9,600	9,600	14,400	9,600	9,600
Broadcast send	●	●	●	●	●	●
Page memory (manufacturer's estimate)	21	35	47	35	24	15
Fax/telephone switch	●	○	●	○	●	●
Speed-dial memories	60	70	70	100	65	124
Other facilities						
Copier facility	●	●	●	●	●	●
Scanning facility	○	●	●	●	●	●

● = Yes ○ = No

As you would expect from Canon, the MultiPass 10 combines high-quality printing with simplicity of use and represents an excellent buy.

- £938.83 (incl VAT)
- Canon: 0181 773 6000

Canon MultiPass 10

Ease of use	1	2	3	4	5
Performance	1	2	3	4	5
Documentation	1	2	3	4	5
Features	1	2	3	4	5
Value for money	1	2	3	4	5

Xerox 3006

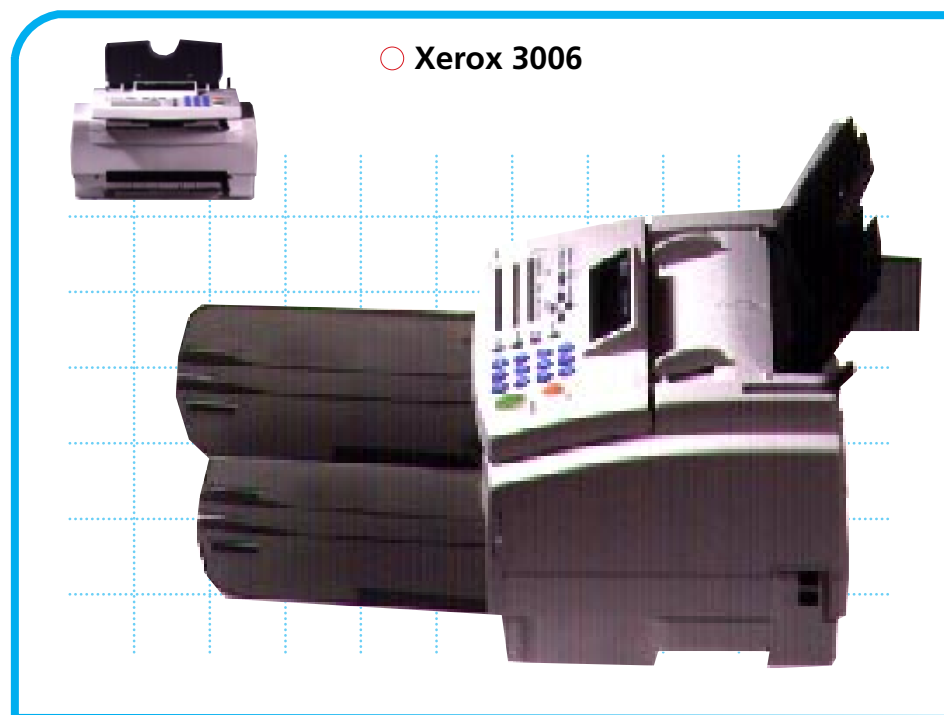
Xerox has a reputation for high-quality machines that are built to last and the 3006 is no exception. This is an imposing machine which would make a sizable dent in the amount of free space you have on your desktop.

Most of the control buttons are hidden under a flip-up panel which, when raised, doubles as a hopper for documents waiting to be faxed or scanned. Under this is yet another flip-up panel that surrounds 20 one-touch speed-dial buttons.

Used in conjunction with a second button, the speed-dial buttons can be programmed with an additional 80 frequently-dialled numbers,

giving a total capacity of 100.

When it comes to copying, the 3006 doesn't dawdle. Whereas other machines in this test first ►





To refill or not to refill...

Most manufacturers recommend that when your ink cartridge runs dry you replace it with a new one. Apart from being environmentally unsound, throwing away cartridges which can be easily refilled makes little economic sense. Although there may be some merit in arguments that manufacturers' original inks are superior, refilling spent cartridges is now commonplace and, as long as you use good-quality printing ink, damage is unlikely to occur. Refill kits are readily available for those who prefer an off-the-shelf solution.



have to read in and process the page being copied, the 3006 bursts into life as soon as you've inserted a page and pressed the copy button. It also has one of the largest printheads we've seen on an inkjet – 128 nozzles compared with, for example, the Canon's more typical 64.

As a result of the large print-head the 3006 produces copies extremely quickly and with little noticeable banding, even from a completely black original. Similarly, printing is extremely swift and our test document appeared at a satisfying rate of around 3ppm.

We particularly liked the way the 3006 dealt with printed pages: rather than forwarding them to a protruding catch tray like most of the others, the 3006 has a set of automated prongs that lift and guide exiting documents to a vertical tray which is parallel to the paper feeder.

Surprisingly, the Xerox 3006 does not have an automatic fax/telephone switch; if you don't have a dedicated fax line you have to answer each call manually to check whether it is a fax or voice call.

We didn't have any problems setting up and using the 3006, although our review model lacked some of the software that should have been included. Along with drivers for Windows you get Xerox's excellent Textbridge optical character recognition (OCR) software and a fax management package.

If you want to save space and money, don't buy the Xerox 3006. But if both your budget and your desk space stretch a little further than most, you won't be disappointed by this machine.

○ £1,338.33 (incl VAT)
○ Xerox: 01895 251133

Xerox 3006

Ease of use	1	2	3	4	5
Performance	1	2	3	4	5
Documentation	1	2	3	4	5
Features	1	2	3	4	5
Value for money	1	2	3	4	5

Hewlett-Packard Officejet LX

Hewlett-Packard is a force to be reckoned with in the world of printers. Since inkjet printers became mass-market products, the company has been among the leading manufacturers.

Apart from the panel of control buttons on the top of the device, the Officejet look just like any of Hewlett-Packard's Deskjet printer range. This should come as no surprise because that's essentially what the Officejet is: a Deskjet printer with additional scanner and fax modem.

Hooking up the Officejet is awkward because the parallel port is located halfway under the machine and can be reached only by turning the machine on its side, which is annoying if you intend to share your parallel lead with another device. However, it does mean you can save desk space by pushing the Officejet close to a wall as there isn't a bulky parallel connector jutting out the back.

The Officejet's control buttons feel rather spongy, and the rest of

the machine doesn't have a particularly sturdy build. However, it's hardly likely to fall apart and the unit is one of the lowest priced in the review group.

Like the Xerox 3006, the Officejet doesn't wait for the whole image to be received or fed through before it starts to print: simply hit the copy button and off it goes. But it's nowhere near as fast, with our test document printing at a paltry rate of 1.5ppm.

The catch tray is quite clever because it supports each page as it is printed and then lets it fall to the collating pile below. This means the chances of smudging are reduced as a previously printed page gets a chance to dry before coming in contact with another one. Print quality is reasonable, although we noticed distinct banding on the dark areas of our test document.

The Officejet comes with a Windows package called Eclipse which serves as both scanning and fax logger, although the latter of these two features is not particularly good and will really only appeal to Windows 3.1 users.

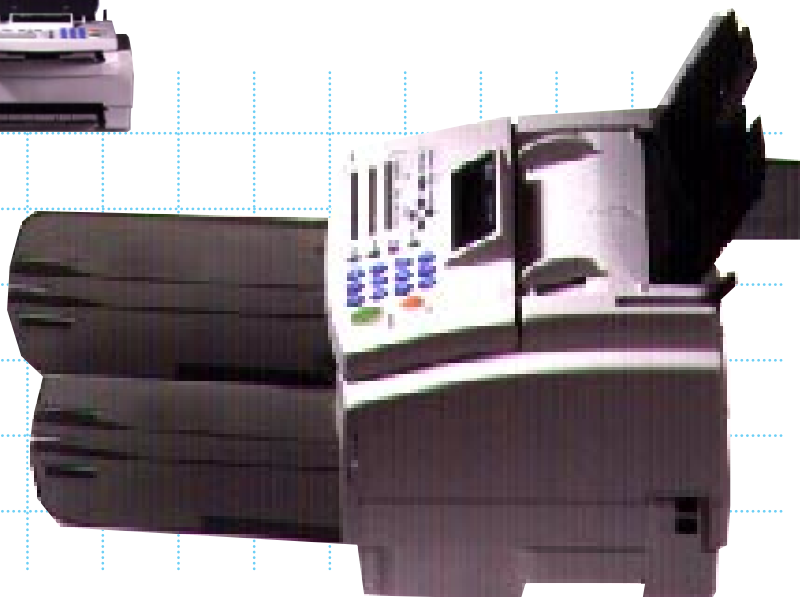
The Officejet is not an outstanding machine by any means, but it performed adequately and it has two points in its favour: it's cheap and it's made by Hewlett-Packard.

○ £763.75 (incl VAT)
○ Hewlett-Packard: 0990 474747

Officejet LX

Ease of use	1	2	3	4	5
Performance	1	2	3	4	5
Documentation	1	2	3	4	5
Features	1	2	3	4	5
Value for money	1	2	3	4	5

○ Hewlett-Packard Officejet LX





Running costs

	Ricoh 880MP	Toshiba TF461	Canon MP10	Xerox 3006	HP Officejet LX	Brother MFC6000
Replacement cartridge cost (incl VAT)	£ 29.36	£ 53.76	£ 30.54	£ 26.32	£ 30.55	See note
Approximate A4 pages per replacement	1,000	1,400	1,000	1,000	800	See note
Pence per A4 page	2.9	3.8	3.1	2.6	3.8	See note

Note: Brother's MFC-6000 is a special case as it uses a replacement drum and toner cartridge system. Toner cartridges cost £27.61 and last for around 3,000 pages while drums sell for £129.25 and need replacing every 18,000 pages, resulting in a cost per A4 page of 1.6 pence.

Brother MFC-6000

Unlike the other machines in this group test, the Brother MFC-6000 has forgone the omnipresent inkjet cartridge in favour of a bulky, drum and toner cartridge laser system.

Because it is a laser system, the MFC-6000 produces the best quality printed output of all the reviewed machines, with clear text (which is readable even in a four-point font) and sharp-edged images; it is also the fastest with an average rate of 4ppm.

The software supplied with the MFC-6000 is very good, although it suffers from a lack of integration. Connect5000 is a collection of programs that gives your PC control over virtually all the MFC-6000's functions. The best part of this collection, by far, is the MFC Remote Setup program, which allows you to enter all set-up information (such as long lists of speed-dial numbers) using your PC's keyboard before uploading it to the MFC-6000 in one quick burst.

It's true you'll only need to use this program occasionally but it saves a great deal of time, even when making small changes. And as the software is so simple to use, you won't need to plough through the manual to find out how to carry out configuration tasks.

Even without the software, using the MFC-6000 doesn't cause any headaches. The device continually reports its current status on a two-line LCD panel, which is also used for displaying the configuration menus. One of the options available using the menus instructs the MFC-6000 to go into a power-saving 'sleep' mode after a set period.

It is expensive but also highly impressive. If Brother had given a bit more thought to the software's implementation, the MFC-6000 would be a formidable package.

○ £1,408.83 (incl VAT)

○ Brother: 0161 330 6531

Brother MFC-6000

Ease of use	1	2	3	4	5
Performance	1	2	3	4	5
Documentation	1	2	3	4	5
Features	1	2	3	4	5
Value for money	1	2	3	4	5



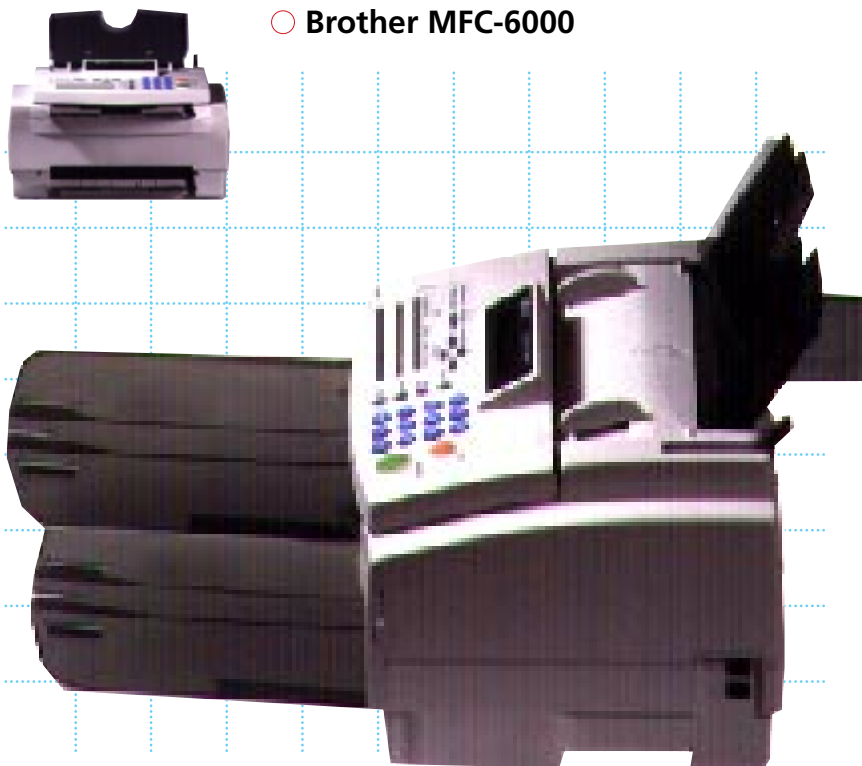
While it is neither the fastest nor the cheapest machine in this group test, we feel that the Canon MultiPass 10 is the one which has the widest appeal. Through its excellent but simple Desktop Manager software it painlessly integrates the faxing, copying, printing and scanning processes.



With a lower price and better-integrated software the Brother MFC-6000 could have challenged the MultiPass 10's Best Buy position; as it stands, we recommend Brother's machine to those who are prepared to pay a premium for speed and quality.

Scott Colvey

○ Brother MFC-6000



The true cost of ownership

In terms of phone calls made to connect with other fax machines, the cost of running a multi-function device is the same as using a dedicated fax machine – both transmit and receive in an identical manner.

The cost of consumables does vary between machines. Although undergoing a gradual change to plain-paper technology, many dedicated fax machines still employ thermal paper for printing received faxes. All the multi-function devices reviewed here use plain paper for printing both faxes and documents sent from a computer for copying.

Plain paper is much more versatile than its thermal counterpart and is cheaper to buy. However, printing on plain paper also requires ink or toner to be applied. With cartridges for inkjet printers starting at around £20, it could prove to be more expensive than you would have thought it would be.