

# Buyers' choice

We give a rundown of the best-selling products over the past year, along with our suggestions for alternative buys

well, especially at the lower end of the market, thanks to their combination of excellent performance and keen pricing.

Essentially, this is nothing new. Intel has a history of making progress at the top end of the market and simply abandoning the lower end to its competitors rather than trying to take them on.

Nevertheless, the drop in MMX pricing has had a concrete effect at the mid-range too: now, a typical, affordable PC can be based on a 200MHz MMX chip.

The latest innovations haven't had time to find their way into the best seller category yet, but the shape of the PC continues to change, providing a glimpse of the future. This year the first Universal Serial Bus ports have appeared on the back of PCs, promising a one-for-all approach to connecting peripherals, and perhaps, at last, a Plug 'n' Play that works.

Hard disks have doubled in size, and now seem set to take a leap forward in performance thanks to the new UltraDMA interface. Faster memory technology is emerging in the form of SDRAM, which looks set to replace standard EDO memory, and as with disk drives, the typical size fitted to a mid-range machine has doubled, making a 200MHz MMX PC with a 2Gb hard drive and 32Mb of RAM an affordable reality.

More esoteric developments include the new Pentium II processor, which combines advanced features from the Pentium Pro range it replaces with MMX technology, and promises to develop into a worthy successor to today's standard Pentium MMX. Pentium II is likely to be combined with USB, the UltraDMA disk interface and a further development called AGP, or the Accelerated Graphics Port. This is a high-speed connector for the graphics controller offering a base

throughput twice that of the normal PCI bus. The real purpose of AGP is to give the next generation of PCs the power to run the complex, highly realistic 3D graphics that will characterise the next step in the evolution of most aspects of desktop computing.

## Software

Some might say that there has been less change in the software world than in the realm of hardware over the last year. Nothing springs to mind that quite matches the change implicit in Pentium II and AGP, for example, and it's fair to say that any change that has occurred has been incremental rather than dramatic.

It's a sign of the times that Web authoring tools have proliferated, and one only has to look at Office 97 to see that an ever tighter integration with Web and Internet functionality is at the heart of Microsoft's strategy. This is no more blatantly obvious than in the way Internet Explorer is slowly disappearing into the background of Windows 95, and the next version of the operating system, Windows 98, promises a seamless blend of desktop functionality and Net access.

## Peripherals

The typical PC monitor has increased from 14in to 15in during the past year or so, and more people than ever are opting for increasingly affordable 17in displays to take advantage of the comforts of the roomy, high-resolution workspace this opens up.

As monitors have got larger, so printers have become smaller, but capable of ever-more impressive colour output. The market is still dominated by the major players of previous years such as Hewlett-Packard, Canon and Epson, but

they are all working tirelessly towards the goal of cheap, compact devices capable of photo-realistic output. The rewards for the winner of this race will be considerable, as this will be the point at which digital cameras can really take off because you will be able to edit, enhance, then print snaps - at home.

# 1000 BEST SELLERS

Once again it's time for our annual Best Sellers issue, where we bring you details of the products that have led the field over the past 12 months. As usual, we've distilled the results of a range of market research surveys to find the best-selling hardware and software, and combined the results with our own alternatives in each category.

Not every best seller is automatically the best product in its category, which is why each one includes a *What PC?* alternative. You'll also find details of two other leading products, together with pricing and contact numbers, to give you a complete guide. Where a top-selling

product has been superseded by a more up-to-date version, we've concentrated on the currently available rather than the obsolete, and to paint the clearest picture, all the quoted prices are inclusive of VAT.

## PCs

The most significant technical development over the last year has to be Intel's introduction of its MMX-enhanced range of Pentium processors. The new chips are clearly intended to become the entry-level standard, a fact sharply underlined by Intel's recent decision to cease production of its 133MHz, 150MHz and even 166MHz standard Pentiums altogether.

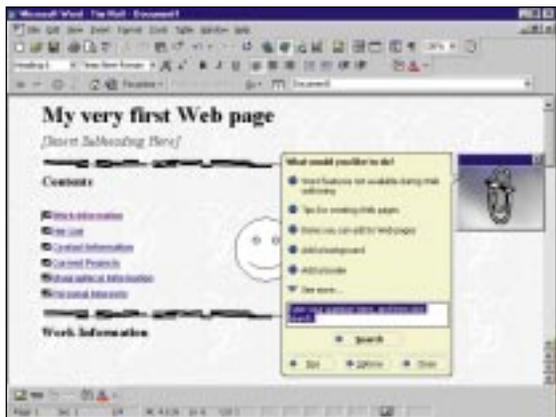
Nevertheless, it's only fair to point out that, as yet, software vendors have been slow to take advantage of the MMX's potential, and consequently not many people have really experienced the full benefit of the chip's improved performance. This may in part explain why Intel has made significant cuts in the pricing of its P166MMX and P200MMX processors.

The other reason it may have done this is to attempt to head off its increasingly troublesome rivals AMD and Cyrix. Both companies have enjoyed successes with their Pentium alternatives over the past year, and deservedly so. AMD's K6 and Cyrix's 6x86 series have both done

Software	page
Office suite	70
Integrated package	75
DTP package	76
Creative graphics	79
Personal finance	80
Small business accounts	82
Game	83
Reference/family multimedia	84
Anti-virus software	86
<b>Computers</b>	
Sub-£1,000 desktop PC	95
£1,000-£1,499 desktop PC	97
£1,500-£2,000 desktop PC	98
Direct sold-only desktop PC	100
Sub-£2,000 notebook PC	101
£2,000-plus notebook PC	102
Macintosh	108
Palmtop	109
<b>Printers &amp; peripherals</b>	
Sub-£500 laser printer	114
£500-£1,200 laser printer	115
Sub-£300 inkjet printer	116
£300-£800 inkjet printer	118
Portable printer	121
Monitor	125
Modem	126
Graphics card	132
Sound card	134
Scanner	135

100  
BEST SELLERS

# Microsoft Office 97



No surprises here – Microsoft Office has long been the front-runner in business suites, with its combination of Word, the Excel spreadsheet, PowerPoint presentation graphics, and Outlook which provides scheduling, mail and personal organising. There's also Bookshelf Basics – a compact version of the Microsoft reference library CD – and the Office Binder, which lets you gather

different Office files (and third-party Office-compatible files) together into one container and switch between them. If you want database management then the Pro version includes Access.

Microsoft again takes the lead on 'Smart' features, and this latest version of Word will check spelling and grammar, as you type. However, as with all grammar checkers, the suggestions are frequently wrong or unhelpful. Internet mail and Web site

addresses can be automatically converted to live links. There's a new suite-wide set of drawing tools, with lots of 'smart' shapes, such as arrows or speech bubbles, and 3-D text effects that wouldn't shame a dedicated drawing program. Also suite-wide is the Office Assistant: you get a choice of animated characters ready to answer your queries and provide suggestions as needed.

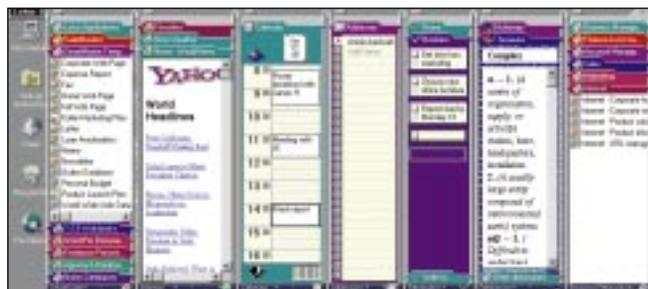
The Excel spreadsheet also sports automatic Hyperlinks, as well as HTML output for Web-ready tables. You can now refer to cells by the existing row and column titles – say 'January – London' – without having to explicitly create named references. PowerPoint has similar link and HTML support, so you can now create a presentation directly onto the Web, or a company Intranet.

**Stylish and powerful but easy to use, MS Office is a natural leader.**

£411.25; Office Pro £528.75 (both prices inc VAT)  
Microsoft: 0345 002000

Microsoft Office 97					
Ease of use	★	★	★	★	★
Performance	★	★	★	★	★
Features	★	★	★	★	★
Value for money	★	★	★	★	★
Overall	★	★	★	★	★

# Lotus SmartSuite 97



Lotus follows the hallowed business tradition of being in the number two spot and trying harder. With SmartSuite 97 you get spelling checkers in 20 languages, thesauruses in 12 and grammar checking in eight. The package consists of WordPro on text, the legendary 1-2-3 on number crunching, Freelance for presentation graphics and Approach for database management – unlike the rival products from Corel and Microsoft you don't have to pay extra for the latter. Extras include the very popular Organizer personal information manager and ScreenCam for recording videos of screen actions.

Fronting all of this is the SmartCentre – a desktop-based control bar that goes

much further than the Microsoft or Corel equivalents by offering file management, new documents based on 'SmartMaster' templates, an address book, full-scale dictionary and thesaurus and links

to Internet news feeds, weather and stock reports. All this is organised through an ingenious system of Drawers and Folders, and integrates well with the components. You can click a button beside an address book entry, for example, and Word Pro will fire up with a letter template and the recipient's name and address already inserted.

The first of Word Pro's strongest features – apart from its multilingual capabilities – is teamwork, with the ability to 'group review' a common document and combine different versions. Second is document organisation and viewing, with tabbed sections that can include other files, and a variety of views that can combine, say, multi-page thumb-

nails with a single full-size page. Like Word Pro, 1-2-3 has an 'InfoBox' – a tabbed dialog box which can be kept permanently open for instant one-stop formatting. Freelance graphics has a range of SmartMasters.

As with Microsoft Office, there is suite-wide Internet support and a common development language. Help isn't quite so prolific but the profusion of 'SmartMasters' means that you can accomplish many common tasks without wading through menus, toolbars and dialog boxes.

**Second place, but tries harder in terms of value.**

£ 468.82 (inc VAT)  
Lotus Development: 01784 445808

Lotus SmartSuite 97					
Ease of use	★	★	★	★	★
Performance	★	★	★	★	★
Features	★	★	★	★	★
Value for money	★	★	★	★	★
Overall	★	★	★	★	★



## Corel WordPerfect Suite 8

WordPerfect, Quattro Pro, Presentations, supported by a generous bundle of utilities.  
£286.70 (inc VAT)  
Corel: 0800 973189

## Microsoft Office Small Business Edition

Includes Word, Excel and Outlook. PowerPoint is gone, and Autoroute Express and Publisher 97 added.  
£381.88 inc VAT  
Microsoft: 0345 002000



# Microsoft Works 4



Even if you want to use a PC to help run a business, you may not need the power and expense of an office suite. Integrated packages are cheaper and include a word processor, spreadsheet and database, and often a simple graphics package. Works is bundled with many PCs, sold separately, and comes as part of Microsoft's Home Essentials.

For beginners, Works' pre-prepared

templates lead you through creating a new Letter or Address Book rather than just presenting you with a blank page. In fact, it's quite tricky to start a blank document.

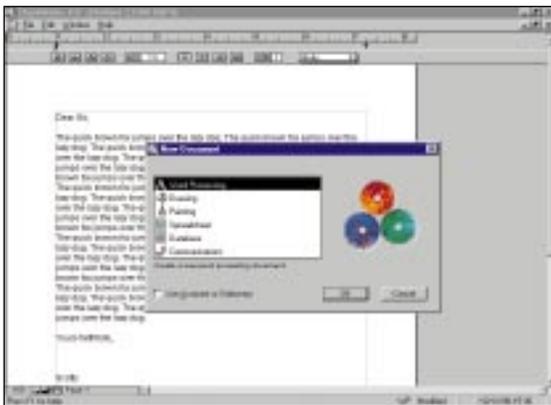
Once you've completed their questionnaires, the Task Wizards make producing and laying out a document easy. Behind the nice facade lurks a rather powerful set of applications.

The word processor will probably be used the most - unless you've bought the

Home Essentials pack which includes Word as well. It's just as well, then, that it's powerful, with multiple columns and 'smart' quotes among other features.

The spreadsheet is limited in size - but not many people need more than 256 columns or 16,000 rows. Ample functions for everyday use are coupled with enough built-in macros to make your life easy. The database is simple;

# ClarisWorks Internet Edition



ClarisWorks on the PC has always been something of a poor relation to the Mac version. It's the best-selling package on the Mac, helped by the close ties between Apple and Claris and the fact that ClarisWorks is bundled with every new Mac sold.

Having said this, the PC version is well featured and you can select from the normal range of modules (word processing, spreadsheet, database, drawing and painting) when creating a new document. However, because you can access elements of, say, the drawing module

from the others, your initial choice isn't too important.

As usual, the word processor is the most powerful module, but is simple to use. If you intend to produce longer documents it has an outliner, and a wide range of page layout tools. The database is functional and has a good search facility, while the spreadsheet has a good range of functions and can produce charts competently. Using the graphics module,

you can create simple presentations or benefit from various DTP-style features.

ClarisWorks supports OLE, so it's a simple matter to move data between your documents. This can be a bit slow though, and Claris has created its own method of doing the same task. This system is significantly faster, but OLE is the industry standard and allows you to include information from applications that aren't a part of the package.

Unfortunately, this custom integration doesn't extend to Claris's Web page creator HomePage. This is included in

you can add fields to files at will, rather than having to design them at the start.

Integration is assured by OLE (Object Linking and Embedding) which lets you insert a spreadsheet, say, in a word-processed document, and then edit and save it from the word processor.

**If you want to be productive straight out of the box, Works has a lot to offer.**

**Simple yet powerful, the fact that it is bundled with so many systems reflects both its quality and price.**

v4.0 £79.99, v4.5 £99.99

Home Essentials: £99.99 (all prices inc VAT)

Microsoft: 0345 002000

### Microsoft Works 4

<b>Performance</b>	★	★	★	★	★
<b>Ease of use</b>	★	★	★	★	★
<b>Features</b>	★	★	★	★	★
<b>Value for money</b>	★	★	★	★	★
<b>Overall</b>	★	★	★	★	★

### Mini Office Works

Simple to use. It contains a basic spreadsheet, a capable database and a word processor that's only limited by the lack of drag-and-drop editing.

£29.99 (inc VAT)

Europress: 01625 859333

### Toplevel Complete Works

Includes a word processor, database and spreadsheet, plus a charting module and a Collins Dictionary.

£29.99 (CD-ROM), £49.99 (CD-ROM, disks and manual) (both inc VAT)

Toplevel: 01453 753955

ClarisWorks Internet Edition and, although it's a good package, you have to rely on standard Windows functions to bring in data from Works modules.

Before you buy ClarisWorks, bear in mind that version 5 has been announced and should now be available. It will only be sold as part of ClarisWorks Office, which includes HomePage Lite, an enhanced HTML converter for publishing documents on the Internet, and a collection of small business templates.

**Powerful and easy to use. Well-integrated and, although more expensive than the competition, the ability to create Web pages makes it good value.**

v4E151.58; v5/Office £116.38 (both inc VAT)

Claris: 0345 413060

### ClarisWorks Internet Edition

<b>Performance</b>	★	★	★	★	★
<b>Ease of use</b>	★	★	★	★	★
<b>Features</b>	★	★	★	★	★
<b>Value for money</b>	★	★	★	★	★
<b>Overall</b>	★	★	★	★	★

# Microsoft Publisher 97



publications ranging from newsletters to Origami birds. Once you've finished the question-and-answer session, the publication appears on screen, with dummy text for you to replace with your own content. There's also a large, context-sensitive help panel, but you can turn this off to regain screen space.

Other Wizards create things such as small-ads or coupons, and there's a huge range of clip-art, 'Smart' shapes such as stars and

arrows, and ready-made boxes. Other touches include a 'Smart' cursor whose shape tells you whether you're about to move something or link text frames so that a story runs over several columns.

New in this version is Web support, with tools to create and format links, HTML output for creating Web pages, and a range of Web-style buttons and bars. Another new feature is mail-merge

**W**hen Microsoft Publisher first appeared, it was obvious that the design brief was to enable people to achieve good-looking results with a minimum of experience or effort. Publisher 97 continues in that tradition.

Start up, and you're presented with a huge variety of 'Page Wizards': automated templates that will guide you through all the important decisions for

– you can create personalised, pre-addressed copies of a newsletter. Publisher will also warn you of potential problems before they happen – if, say, you use fonts that won't display properly on line or place text and graphics too close together. Although it's all very easy to use, the manual is worth reading. It contains sound advice on the principles of page design as well as a catalogue of the clip-art and fonts.

**The most user-friendly start to desktop publishing, now with Web page creation.**

£99.99 (inc VAT)

Microsoft: 0345 002000

Microsoft Publisher 97					
Ease of use	★	★	★	★	★
Performance	★	★	★	★	★
Features	★	★	★	★	★
Value for money	★	★	★	★	★
<b>Overall</b>	★	★	★	★	★

# Serif PagePlus 4



the right. All the buttons are grouped and labelled, and while this does waste a little screen space it makes life a lot easier for the newcomer. In addition, the floating Change and Status bars let you control further formatting, positioning and sizing of all text and other objects on the page. A floating help panel gives details of the tool or button in use, and a further hint panel offers advice. Someone at Serif has a sense of humour – every so often

the hint panel will detect the spirit of Elvis or Bill Gates in the vicinity.

Despite the effort to be user-friendly, there's a lot for the more ambitious user. Two Pantone industry-standard colour libraries are included, as is the facility to produce spot and process colour separations, with automatic 'knockouts' (so light colours don't print over dark) and 'trapping' (small overlaps to avoid white cracks between colours) – all essential for professional colour printing.

There is tight control over kerning

**F**or those with greater DTP (desktop publishing) aspirations but a limited budget, Serif PagePlus 4 has a lot to offer. It comes with 400 fonts, 17,500 pictures and over 50Mb of Wizards. The clip-art and fonts, though not of top quality, are fully catalogued in a printed manual, and the former can also be previewed through a thumbnail browser.

The interface is logical and simple, with a word-processor-style toolbar for formatting text at the top, the drawing tools at the left and the colour palette at

(adjusting the space between adjacent letters) and you can rotate text to any angle, as well as 'warp' it with the bundled LogoPlus applet. This last also acts as a miniature drawing program – you can build up layers of text and shapes to create custom logos or stickers.

There's a Story Manager to keep track of the different articles in a publication, as well as a built-in word-processor, WritePlus, which comes complete with spelling and grammar checkers, a thesaurus and an auto-correct feature for common mistakes.

**Budget DTP for the more ambitious – a good balance of power and ease of use.**

£99.95 (inc VAT)

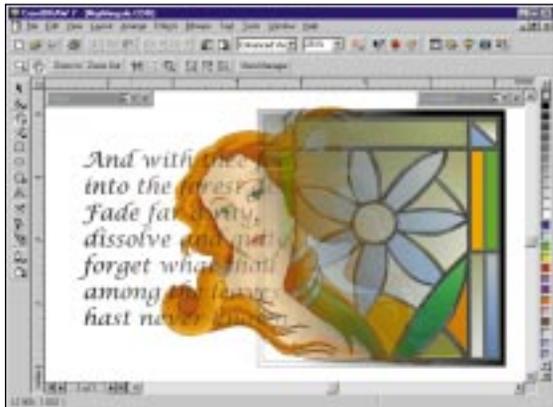
Serif: 0800 924925

Serif PagePlus 4					
Ease of use	★	★	★	★	★
Performance	★	★	★	★	★
Features	★	★	★	★	★
Value for money	★	★	★	★	★
<b>Overall</b>	★	★	★	★	★



100 BEST SELLERS

# Corel Draw 7



As usual, the package is huge, with separate vector drawing, image processing and 3D modelling programs, a host of extra utilities and a huge array of 1,000 fonts and 30,000 pictures. In fairness, every release of Draw has been a hard act to follow, and over the years we've seen some great innovations, such as warped and extruded text, fractal-generated textures, and multi-coloured fills. This year's innovations,

though not entirely original, are similarly impressive. A transparency feature lets you make text or graphics more or less opaque. Multi-coloured shaded (or 'fountain') fills are, like the transparency feature, interactive - instead of fiddling with dialog boxes you can drag and drop colours on to 'handles' on the object.

There's a new high quality viewing option, and a scrapbook for storing text and graphics or accessing the clip-art

Corel Draw has long been the most powerful drawing program for the PC. Since its inception it grew and grew, and version 3 was shipped on CD-ROM. Version 6 came on four CD-ROMs and Draw was showing the Elvis effect - successful, sluggish and overweight - with an insanely complex interface featuring over 30 floating 'Roll-up' palettes. It was time for a rethink, and Corel pulled out all the stops for v7.

collection and any other graphic files. The interface has been much improved and, although most of the old Roll-ups are still available, most of their functionality has been taken over by a multi-purpose Property Bar, which changes to suit the tool in use or the object being worked on. Finally, it's considerably faster than version 6, especially in redrawing the screen and saving files.

**An interface makeover and a performance boost make this the most usable and the most powerful Draw yet.**

£581.62 (inc VAT)

Corel: 0800 973189

Corel Draw 7				
Ease of use	★	★	★	★
Performance	★	★	★	★
Features	★	★	★	★
Value for money	★	★	★	★
Overall	★	★	★	★

# Paint Shop Pro 4



Paint Shop Pro 4 will also catalogue pictures - point it at any folder on your hard disk or a CD-ROM and it will create a series of thumbnail views of all the graphic files therein - double-clicking on one loads the full image.

Over the years it has expanded. You can now grab images directly from a scanner or digital camera, as well as from file. Having loaded a picture, you have a range of image processing features, such as sharpening or softening a picture, changing the colour balance or contrast and adding text. There are also lots of special effects, such as motion blur simulation, 3D shadow and button effects, mosaic and even hot wax coating. Complementing this is a range of masking tools, for selecting parts of an image to change or protect from change, and retouching tools for repairing damaged photos or getting rid of faults such as 'red-eye' in flash photos.

For the more artistic there is a set of freehand brushes which give paint,

Although it's our 'alternative', there's really no comparison between this and Corel. Unlike the former, it deals only in bitmaps - photographic or 'paint' type images rather than the vector objects of Draw itself. Unlike Corel it's cheap, and as it's shareware, you can try it out for free.

Paint Shop started out as a utility to view, and convert between, the huge and confusing range of graphic file formats. The present version will open 35 file types and save files in 26 formats.

spray, chalk and charcoal effects, together with textured 'papers' that interact with the brushes.

For the devious, there's even a clone tool, which enables you to use part of the same - or another - image to overpaint another part of the image. Clone out unwanted sheep from the landscape by overpainting them with nearby grass, or clone in an extra Eiffel Tower to your holiday snaps of Paris. Paint Shop Pro is great fun, great value and genuinely useful for anyone whose work or play involves bitmaps.

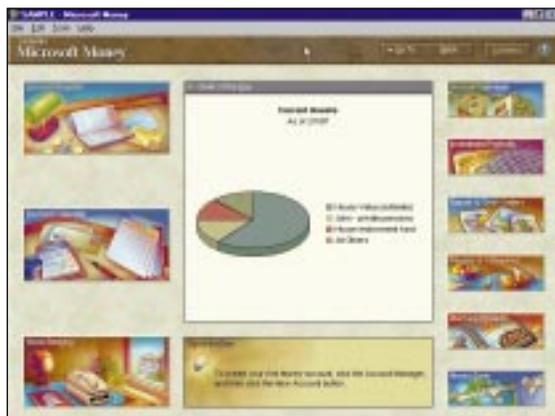
**An inexpensive essential for all who use bitmapped graphics.**

Shareware - registration £58.69 (inc VAT)

Digital Workshop: 01295 258335

Paint Shop Pro 4				
Ease of use	★	★	★	★
Performance	★	★	★	★
Features	★	★	★	★
Value for money	★	★	★	★
Overall	★	★	★	★

# Microsoft Money 97



The thriving personal finance market is dominated by two packages - Quicken from Intuit, and Microsoft Money. Their respective sales volumes have been closely matched this year, but Money 97 has the edge.

Money's greatest attraction is that it's easy to learn and use. Microsoft has focused on the home user, rather than trying to cover small business needs too,

so simplicity is the keynote. An 80-page user guide offers operating instructions and a clearly written, jargon-free guide to everyday financial matters. Microsoft is not shy about its target market, as the tour of the program's features is tailored to those with Quicken experience.

The bright and friendly look and feel starts with the Contents screen, from where you can reach any of the main areas: Account Register, Payment Calendar, Account

Manager, Investment Portfolio, Report and Chart Gallery, Payees and Categories, Planning Wizards, Money-Zone (a Web site) and Home Banking.

The latter allows you to make an on-line connection to your account at either Barclays or The Royal Bank of Scotland. You can obtain your balance, and download details of recent transactions and post them to your Money 97 account.

The report and chart gallery offers simple choices such as 'Where the Money Goes', and 'How I'm Doing On My Budget'. You can also set up useful analyses of your financial status and trends, personalising and storing them easily for later use. Right-click support is good too; clicking on just about any element within a window opens a menu listing everything you can do with it.

**The novice home user will find that Money 97's sweet and friendly user interface makes it an excellent choice.**

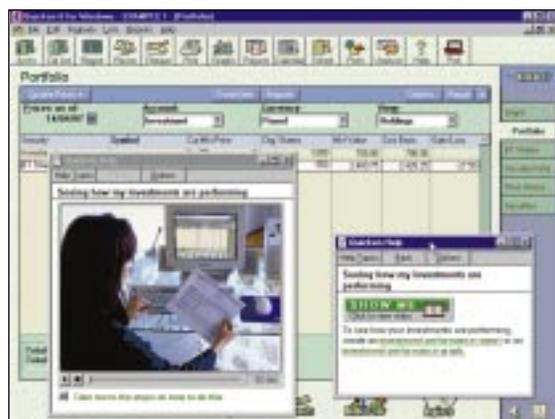
£29.99 (inc VAT)

Microsoft: 0345 002000

### Microsoft Money 97

<b>Ease of use</b>	★	★	★	★	★
<b>Performance</b>	★	★	★	★	★
<b>Features</b>	★	★	★	★	★
<b>Value for money</b>	★	★	★	★	★
<b>Overall</b>	★	★	★	★	★

# Intuit Quicken 6



Intuit's classic, Quicken 6, has a somewhat richer feature set than Microsoft's Money 97, and a slightly more complex interface, but it's still easy to use. The program can manage six types of account: current, credit, deposit, cash, building society, investment, asset, and liability. You enter transactions into Quicken's account register, using various memorising tools to reduce the chore. Regular bills and income can be entered just once and Quicken reminds you of upcoming bills you need to pay as

well as income due, such as salary or monthly building society interest.

Quicken's investment management features are impressive. They let you keep complete records of all your investments in one place and track prices and investment balances. You can also calculate return on investments, track capital gains and taxable investment income for tax returns, and follow foreign investments.

Providing you have an Internet Provider account, Quicken 6 lets you update your portfolio prices from the London Stock Exchange automatically. However, Intuit has lost some ground to Microsoft, as Quicken 6 does not yet offer on-line banking, although a trial is under way. We had problems with this and disappointingly didn't get much help from Intuit's UK HQ to resolve them - hopefully not a sign of falling support standards or complacency.

As a new Quicken user you get generous help. You can start with a simple

### Money Matters 2.02a

While not matching the features of Money and Quicken, this supports splits and transfers, and its reports and graphs are perfectly adequate.

£19.95 (inc VAT).

GSP: 01480 496 575

### TaxCalc for Windows 1997

Helps with your tax return. Easy to use, with a reliable and well-designed feel, it prompts you through the form.

£29.99 (inc VAT)

Which?: 0800 252100

overview, or study the comprehensive on-screen user guide and instructions for setting up a first account. Tools help you work with the program's rich set of features, and the Activity Bar at the bottom of the screen provides easy access to the most commonly used ones. On-screen assistance includes a 'How Do I?' button you can click from the main windows to get help on common tasks, and there's a 'Tell me about it' facility which plays an explanatory audio clip the first time you use a facility.

**Quicken continues to go from strength to strength and v6 is the best yet. Definitely a worthy alternative to Money 97.**

£34.95 (inc VAT)

Intuit: 0800 072 7343

### Intuit Quicken 6

<b>Ease of use</b>	★	★	★	★	★
<b>Performance</b>	★	★	★	★	★
<b>Features</b>	★	★	★	★	★
<b>Value for money</b>	★	★	★	★	★
<b>Overall</b>	★	★	★	★	★

# Sage Instant Accounting 97



Inexpensive, simple to use and generously featured, Instant Accounting 97 runs on both Windows 3.1 and 95, and was designed especially for small and start-up business users without great experience in either IT or accounting. You can store all customer and supplier information, so that every time an order is received the details are simply entered and the system will raise an invoice or statement. All transactions, credit bal-

ances and credit limits can be listed to help you chase outstanding debts systematically. The comprehensive repertoire of reports includes variable aged debt analysis, a daily purchases summary, income and expenditure, balance sheet and many others. Invoices can be based on standard templates or your own designs, and can contain free text. The program strikes a nice balance between rigour and flexibility

too, because, although there are limited error-correction capabilities, it still provides a full audit trail. To help you with some of the more complex routines, like transferring money from one bank, cash or credit card account to another, wizards guide you, step by step. You also get extensive drill-down facilities to let you see the detail behind all summaries.

The software is Internet-ready, and you can launch your browser without

leaving the program. With appropriate links to other Web sites, this means you could, for example, download supplier price lists, check supplier stock levels before placing orders, and even perform some on-line credit checking. With the millennium in sight, the program is fully year 2000 compliant. As to future security, if your business grows, you can post payroll data to Sage Instant Payroll. **Combining all the basic features needed by the smaller business, Instant Accounting 97 is a great all-rounder.** £99 (inc VAT) Sage: 0800 447777

Sage Instant Accounting 97					
Ease of use	★	★	★	★	★
Performance	★	★	★	★	★
Features	★	★	★	★	★
Value for money	★	★	★	★	★
Overall	★	★	★	★	★

## M.Y.O.B. Accounting 6.0

Includes extended customisation of reports, expanded project and job management functions, and an expanded on-screen help system. £229.12 (inc VAT) BestWare UK: 0800 026 0261

## TAS Books

This incorporates solid features including the fundamental 'Account Processor' technology that allows particularly easy error correction. £116.32 (inc VAT) Megatech: 0181 874 6511

There are various handy tools to help with setup. For example, you can customise QuickBooks 5.0 by displaying only the features that you need, based on answers to a set of simple questions. It's also easy to set up your chart of accounts, customers, suppliers and so on. There are some 60 preset lists and summaries on QuickBooks' Reports menu, but you also have flexibility to tailor these to suit your requirements. **QuickBooks 5.0 offers an impressive combination of features and user friendliness, at an affordable price.** QuickBooks 5.0: £233.82 (inc VAT); QuickBooks Accounting and Payroll 5.0: £351.32 (inc VAT) Intuit: 0800 585058

QuickBooks 5.0					
Ease of use	★	★	★	★	★
Performance	★	★	★	★	★
Features	★	★	★	★	★
Value for money	★	★	★	★	★
Overall	★	★	★	★	★

# QuickBooks 5.0



The latest version of QuickBooks is also aimed squarely at the huge small business market. Many such users have previously tried and abandoned accounting packages because they proved too complicated, so QuickBooks aims to be simple to learn and use. Both QuickBooks 5.0 and its sister product, QuickBooks Accounting and Payroll 5.0, are aimed mainly at companies with fewer than 20 employees which don't employ qualified accountants. Nevertheless, for rigour, double-entry book-keeping still underpins the application in the

background. QuickBooks 5.0 provides a comprehensive set of well-integrated modules, including the main sales and accounting functions, purchase and nominal ledgers. You also get stock management, job costing, tax reports, time sheets, estimating and audit trails. The program is fully year 2000-ready.

If you get immediate cash payment, invoices can be prepared in the Enter Cash Sale window. Alternatively, you would use the Create Invoices window. In either case the approach is simply to choose from the drop-down lists and QuickBooks automatically fills in the fields. It also calculates sub-totals, discounts and VAT. Repetitive chores are minimised by various drop-down lists and other tools. For example, if you select a customer's name, the program will display the latest balance plus a list of outstanding invoices. When a payment is entered, by default the program applies it against the oldest outstanding items, but you can change that.

# Dungeon Keeper



Shooting straight to the number one spot in the charts as far back as July, and still selling like hot cakes, Bullfrog's Dungeon Keeper is set to become this year's best-selling game.

All new games are preceded by a certain amount of hype and Dungeon Keeper was no exception. The difference was that it took so long to appear. Dungeon Keeper was released well over a year after its original launch date. Was it worth it?

things running smoothly. The twist is that this world is a squalid dungeon, populated by fiendish monsters.

Each game begins with a room containing your dungeon heart and a handful ofimps. Imps are the dungeon's labour force and like nothing more than being handed a pick and being told to get digging. Their first job is to clear a path to a nearby portal so that other monsters can get in. Dig a seam of gold or gems and you'll soon need a room to stack up your

Well, not quite. Great though Dungeon Keeper is, it's difficult to see quite why it took so long to produce. The premise isn't particularly original and the graphics aren't revolutionary but it is a fascinating game and one with lasting appeal.

It is a 'god-sim' and like others in the genre, it puts you in charge of a world and it's your job to keep

treasure - pretty much an essential since no-one works for free underground.

Other important rooms are a lair and a chicken-filled hatchery, for resting and eating respectively. Dig deeper into the game and workshops, libraries and training rooms must be excavated if the dungeon is to be a success. The bad news is you're not alone down there and the chances are you'll meet other dungeon keepers and questing heroes. Conquer the former and capture the latter and everything will be fine. Lose your dungeon heart and its all over...

**Though far from the masterpiece we expected, Dungeon Keeper is a superb game - one of the best of its kind.**

£29.99 (inc VAT) Electronic Arts: 01753 549442 www.bullfrog.com

Dungeon Keeper					
Overall	★	★	★	★	★

## Interstate 76

Fast cars, big guns and wide flares - what more does a game need? Possibly great graphics and lasting gameplay, and Interstate 76 has them all. £39.99 (inc VAT) Activision: 01865 456700

## Diablo

Try Diablo's swords and spells. Amazing graphics bring new life to this old formula, and group play over the Internet boosts the appeal still further. £44.95 (inc VAT) Zablac: 01626 332233

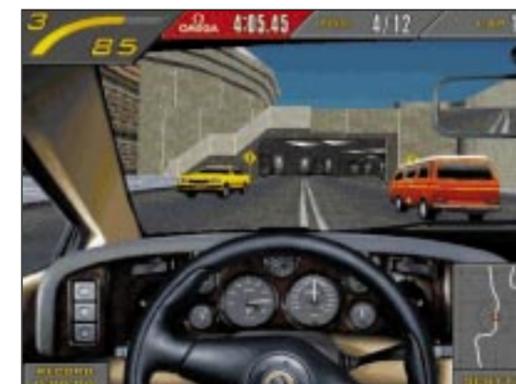
seem to be capable of superhuman feats of driving but the difficulty level is pitched just right to keep you coming back for more. If you should find it too easy, then you can also turn on other traffic, giving you the chance to contend with oncoming Volvos as well as speeding Ferraris.

Although no simulation, NFS II does claim to offer car handling that is accurately modelled on the real thing - something we obviously cannot confirm. There is an 'arcade' mode though, which makes handling a little easier and crashes a little less likely. **The Need For Speed II is the perfect driving game - it looks great, plays even better and has you gripping the joystick in sheer panic more times than is healthy.**

£39.99 (inc VAT) Electronic Arts: 01322 665652 www.ea.com

The Need For Speed II					
Overall	★	★	★	★	★

# The Need For Speed II



Nothing shows off a PC's performance like a good old-fashioned racing game and they don't come any better than Electronic Arts' The Need for Speed II.

If Batman and Robin has put you off sequels for life, don't despair. The original Need for Speed may have been an excellent game, but NFS II leaves it on the starting grid.

Nothing has changed in the ideas department though, and just like before, Need For Speed II gives you the chance to sit behind the steering wheel of cars

that would otherwise be solely the preserve of Jeremy Clarkson.

There are eight cars in all and the fact that the Jaguar XJ220 is the least exciting of the lot gives you some idea of the range on offer. What they all share are tyres a foot wide and the ability to crack 100mph in second gear.

All that horsepower isn't much use without a hefty strip of tarmac though, but NFS II scores well in this department too. The tracks range from a simple loop that takes in the sights of London (which seems to have been programmed by someone who's obviously never seen the North Circular), through cobbled Mediterranean streets and twisty mountain passes.

Visually, NFS II is a positive treat but it's a welcome surprise to find that it plays just as well as it looks. As ever, the objective is to win and there's a choice between single, knockout and tournament races.

Typically, your opponents always

100 BEST SELLERS

# Encarta Encyclopedia 97



The power of today's Pentium PCs combined with CD-ROM storage can bring a whole new dimension to traditional reference material, such as encyclopaedias and dictionaries. It comes as no surprise, then, to find that Microsoft's excellent Encarta is still topping the family software charts.

Encarta is by far the best multimedia encyclopaedia on the market, and UK copies are called the British English

Edition. The content reflects British priorities and interests and, of course, spelling.

Microsoft takes advice on these changes from an editorial committee. This means articles are split into categories suitable for British schools - and include topics like Media Studies which are more popular here.

Although it's got fewer articles than some of its rivals, Encarta treats its subjects in depth and has a tremendous variety of multimedia clips. These are well chosen and help to give a very good feel for their subjects.

It's easy to navigate your way around the encyclopaedia too. Its searches are easy to use, and you can look for a word in the text of any of the articles rather than just in their headings. Finding the meaning of any word in an article is simple, as the Concise Oxford Dictionary is included.

# Oxford Interactive Encyclopedia



If you don't want Encarta, then try an encyclopaedia compiled in the UK. The Oxford Interactive Encyclopedia takes its content from the authoritative Oxford Illustrated Encyclopaedia, and its interface from the well-established Compton's Multimedia Encyclopedia.

Like Encarta, it's easy to use, although its three windows can't be moved around to suit your research. Searches are simple enough and results are informative. Even passing references to your subject thrown up by a full-text search are likely to be helpful, for the content is

detailed despite not having the same depth as Encarta.

The British slant of the main articles makes a refreshing change from the US bias of most encyclopaedias. More importantly, they are clear and illustrated with a good range of well-chosen pictures. These normally display in a small window beside the main entry but can be expanded to full screen; they include famous works of art as well as clear

diagrams to explain various concepts. Sound and video clips are also included: the sound clips are extensive, but the videos play in such a tiny window that it can be difficult to follow them. As with most current encyclopaedias, on-line links are included, with Web sites shown by a special icon. All the ones we tried seemed well chosen, but it's a pity there is no facility to update the encyclopaedia from the Internet.

Other extras include a Planetarium giving different views of the night sky

The 1998 edition is now out and is bigger than ever. Even the standard edition contains more articles and multimedia clips. The deluxe edition costs more but has even more content, including essays which give a welcome dose of informed opinion on many subjects.

**Any version of Encarta is a good buy, and its continuing sales prove this. The latest edition, though, gives you updated articles, more multimedia and on-line updating for the next year. It's definitely worthwhile.**

Encarta 98 £49.99;  
Encarta 98 Deluxe £79.99 (both inc VAT)  
Microsoft: 0345 002000

Microsoft Encarta Encyclopedia					
Presentation	★	★	★	★	★
Ease of use	★	★	★	★	★
Value for money	★	★	★	★	★
Overall	★	★	★	★	★

## AutoRoute Express

A travellers' program which plots the shortest or most pleasant route. It has surprising omissions, but its list of UK towns and roads is comprehensive.

£59.99 (inc VAT);  
Microsoft: 0345 002000

## DK First Incredible Amazing Dictionary

The only dictionary we've seen aimed at pre-school children. It's bright, colourful and incredibly easy to use.

£29.99 (inc VAT)  
Dorling Kindersley: 0171 836 5411

and a timeline allowing you to compare events in history. There's also an atlas, but this is rather disappointing. It shows no topographical information, and many cities - including London - are shown in entirely the wrong places.

More than offsetting this, though, the disc looks even better value when you consider that it includes a special, encyclopaedia edition of the New Shorter Oxford English Dictionary, with all the entries of the full edition although without its sophisticated search mechanisms.

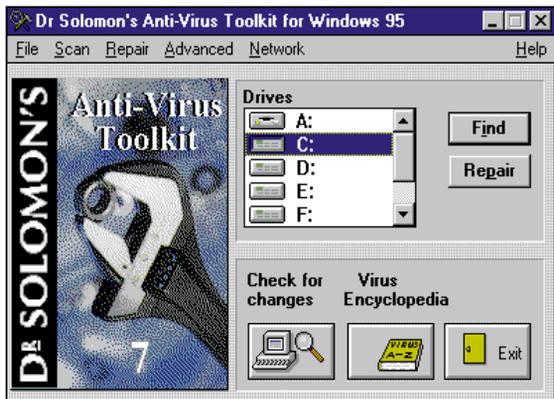
**A worthy contender to Encarta. If you want a British reference disc then, despite its somewhat inadequate atlas, it is an excellent choice.**

£39.99 (inc VAT)  
The Learning Company: 0181 246 4000

Oxford Interactive Encyclopedia					
Presentation	★	★	★	★	★
Ease of use	★	★	★	★	★
Value for money	★	★	★	★	★
Overall	★	★	★	★	★

100  
BEST SELLERS

# Dr Solomon's Anti-Virus Toolkit for Windows 95



**D**r Solomon's is the leading player in the UK anti-virus market, and its Anti-Virus Toolkit has been a consistent top scorer in product tests over many years, and is popular in the business and corporate market. This year has seen the introduction of HomeGuard, a simplified version of the Toolkit aimed at home PC users. It's much cheaper, and just as good at detecting viruses.

The Anti-Virus Toolkit contains all the

elements of a traditional anti-virus package. There's a program to check disks for viruses on demand and one that is loaded when Windows starts and checks files as you access them. This last, WinGuard, is the main component of HomeGuard. WinGuard has been upgraded so it removes viruses on the fly.

The Toolkit is strong on functionality but weak on usability. The user interface has been the same for years and needs an update. To check a folder rather than an entire disk you have to drill down through a couple of configuration windows. On the plus side, the product can check files that have been compressed into a wide range of archive types. You also get the invaluable Magic Bullet, a disk that makes cleaning an infected PC a matter of booting from it and pressing one key.

Like many products, the Anti-Virus

# Norton AntiVirus 2 for Windows 95



**N**orton AntiVirus (NAV) never quite achieved the same degree of success as Symantec's other Norton utilities. Older versions were often panned for their habit of missing common viruses. It has taken until version 2 for Windows 95, released a year ago, to address all these shortcomings, but NAV is now a dependable and full-featured product that is well worth considering.

A well designed user interface offering a high degree of configuration choice has always been a Norton hallmark. This

version is no exception. An eight-page tabbed dialog box lets you decide what to check, how to check it and what the software should do if it finds a virus. The only criticism is that you can easily disable checks that should never be disabled, which could compromise NAV's effectiveness. A Repair Wizard takes you through the steps required to clean up an infected PC, and you can create Rescue Disks for when files are so badly damaged

that you can't start Windows.

NAV includes an on-demand and an on-access scanner, AutoProtect. The latter will warn you if any file or document is infected the moment you access it, and can remove most types of infection on the fly. AutoProtect can also be set to watch for a range of virus-like activities, which can provide extra protection though it could also point the finger of suspicion at innocent programs.

Norton's virus scanner uses a database to identify specific viruses, as well as

Toolkit uses heuristic (knowledge-based) scanning to detect viruses it can't specifically identify. Unlike other products it does this without generating frequent false alarms. It is one of the first products to use heuristics to detect macro viruses. Nevertheless, updates to the virus database are still important, and the price you pay includes one year's quarterly updates on disk.

**In need of a face-lift, this is nevertheless a technically outstanding product and makes a very good buy.**

£146.87 (inc VAT)

S&S International: 01296 318800

Anti-Virus Toolkit for Windows 95					
Features	★	★	★	★	★
Performance	★	★	★	★	★
Ease of use	★	★	★	★	★
Value for money	★	★	★	★	★
Overall	★	★	★	★	★

## McAfee VirusScan

VirusScan's scanning engine has had a major overhaul and it is now right up with the leaders. The price is attractive but only includes one free upgrade downloaded from the Web.

£34.07 (inc VAT)

McAfee: 01344 304730

## TouchStone PC-cillin 95

A well thought-out product designed to be installed and forgotten. It monitors what you do and adjusts its level of vigilance accordingly.

£49.99 (inc VAT)

TouchStone: 0181 875 4452

knowledge-based scanning and integrity checking. The latter, which Norton calls 'inoculation', lets the software detect modifications which might have been caused by an unknown virus. This might tempt users into using the software without getting the database updates. These are free if you download them from Symantec's Web site - just click the Live Update button on the interface - but expensive on disk, making NAV a good buy for those with Internet access.

**AntiVirus provides excellent protection from viruses, but the cost of updates makes it less good value than it seems.**

£69.32 (inc VAT)

Symantec: 0171 616 5600

Norton AntiVirus 2 for Windows 95					
Features	★	★	★	★	★
Performance	★	★	★	★	★
Ease of use	★	★	★	★	★
Value for money	★	★	★	★	★
Overall	★	★	★	★	★



## Acer Acros P166



The Acer Acros P166 comes in an old-fashioned desktop case but the design is clean and functional and there's plenty of room for extra bits inside. But you may never need to add anything because the standard specification is fine for most home or office applications. There is a 1.6Gb hard disk, 16Mb of RAM, a 33.6Kbits/s modem, 16x CD-ROM drive and a 3D graphics card suitable for games and business software.

Behind all this lies a Pentium 166MHz MMX processor. This is no slouch and while it may have been overshadowed by faster additions to the MMX family, it's all you need unless you're running heavy-weight specialist applications, in which case an extra 16Mb of memory may serve as well as a faster processor.

The build quality of the system unit and the AcerView monitor is very high. The picture on the monitor has no trace of flicker and the exceptionally wide range of brightness and contrast adjustments mean you can work comfortably in any lighting conditions. The free-standing column speakers are small and not capable of ear-splitting volume, but their output is undistorted and they have hardware volume and tone controls.

The software supplied includes everything you need to make good use of the hardware, but not many frills: there's a communications module to turn the modem into a fax or answering machine and some essential utilities, including a virus scanner. The main program is

Microsoft Works, plus a couple of games and a choice of trial Internet accounts.

There is not much hand-holding documentation and the on-screen help system seems to have been tagged on as an afterthought, but all the software and hardware components are correctly installed and configured and the manual tells you how to connect everything up.

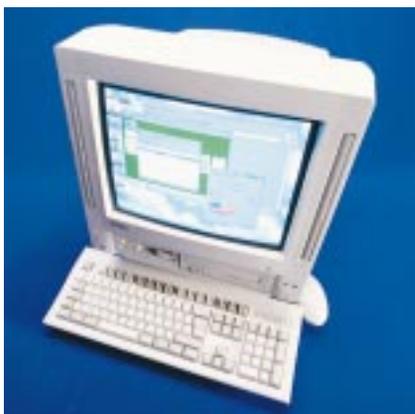
**Looks and feels like a versatile office PC. While it hasn't been targeted at domestic customers it offers everything home users need and is very solidly built.**

£999 (inc VAT)

Acer: 01628 533422

Acer Acros P166					
Performance	★	★	★	★	★
Features	★	★	★	★	★
Build quality	★	★	★	★	★
Value for money	★	★	★	★	★
Overall	★	★	★	★	★

## CTX Maxiputer



All-in-one PCs, in which all the components including the monitor and speakers are boxed in a single case, are particularly attractive to users with limited space. Unfortunately, such designs have failed to capture the public's imagination in the way manufacturers had hoped, and consequently many of them have been discontinued. The good news if you're in the market for an integrated PC is that CTX is selling off the remaining stocks of its Maxiputer through PC World and Dixons for only £899. Stocks should last until Christmas.

It really is superb value for money. When we reviewed one in April this year it cost £1,526 and was powered by a 133MHz Pentium. Now the processor has been beefed up to a 166MHz Pentium, yet the Maxiputer costs £600 less.

In performance terms it's not a high flyer, mainly because it's based on rather dated internal components, but it includes enough memory (16Mb) and enough hard disk space (1.7Gb) for most purposes. There's an 8x CD-ROM drive and a Creative Labs sound card to drive the 3W per channel speakers at either side of the screen.

On the front panel are the CD-ROM and floppy disk drives and a volume control. The integrated design means that you can't add extra drives, but there are slots for expansion cards in the back so it is possible to add an internal modem quite easily.

Probably the most important component of an all-in-one PC is the screen (because you can't upgrade it) and this one is a beauty. This is hardly surprising considering that CTX is best known as a monitor manufacturer. The Maxiputer's screen is based on a very flat 15in tube

### Tiny Budget 166M

A conventional desktop PC, with a Pentium 166MMX processor and a roomy 2.5Gb hard disk.

£821.33 (inc VAT)

Tiny Computers: 0800 821333

### Evesham Prestige P166 Multimedia

Includes a 2.1Gb Quantum hard disk, Diamond Stealth graphics card, a Panasonic 12x CD-ROM drive, a Vale 15in monitor and a Pentium 166MMX processor.

£985.83 (inc VAT)

Evesham Micros: 01386 765500

making it suitable for use in 800x600 SVGA mode, and the picture is sharp, well-focused and bright.

A matching keyboard and a Microsoft mouse complete the Maxiputer's hardware line-up. There's no big bundle of software included, but you do get the all-important Windows 95 as well as a full complement of utilities for sound and multimedia.

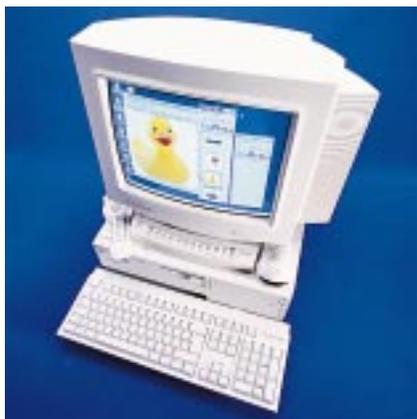
**If you're not after cutting-edge performance but want a PC that's cheap, unobtrusive, easy to use and very good to look at, grab a Maxiputer while they're still around.**

£899 (inc VAT)

CTX: 01923 810800

CTX Maxiputer					
Performance	★	★	★	★	★
Features	★	★	★	★	★
Build quality	★	★	★	★	★
Value for money	★	★	★	★	★
Overall	★	★	★	★	★

## Packard Bell 9005D



This PC has proved to be a firm favourite with the home users for whom it was designed, though if you want to buy one you'll have to look smart because it is no longer in production. Those already in the pipeline are being heavily discounted.

The primary virtue of the 9005D is the single-minded way it has been designed and packaged for the benefit of the first-time user. A poster explains how to set it

up and the cables are colour-coded to help you connect them correctly. There are two manuals explaining how to use the hardware and introducing the extensive bundle of built-in software, which includes Corel WordPerfect Suite, MS Works, Money, Encarta and Publisher, plus games, graphics and multimedia titles. Packard Bell's Navigator (a simple alternative to the standard Windows 95 interface) and several other software aids are installed to ease new users into the intricacies of running their own PCs.

The hardware has been adapted to make it easier to use, the most obvious addition being a console of extra controls which sits between the monitor and system unit. This MediaSelect tray incorporates buttons to access most of the PC's multimedia features, including the modem, radio, fax facility and the answering machine. The speakers clip onto the sides of the 14in monitor and the ingenious mouse incorporates an infra-red receiver to pick up signals from a separate hand-held remote controller.

The 9005D was a good buy at the original price of £1,899, but it's even better now the last few are selling for as little as £1,199. If you can't find one, look for its replacement, the Packard Bell Pulsar 16, which for £1,299 has many of the same features plus a larger hard disk and a 166MHz processor.

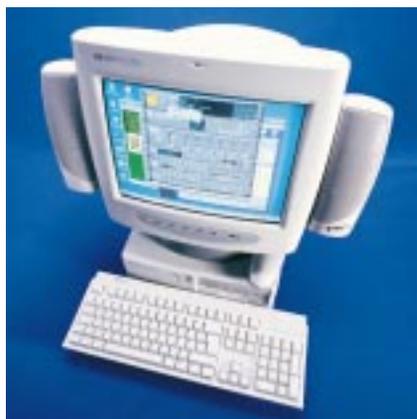
**Not a great performer but one of the easiest PCs to use and an excellent choice for the first-timer. Its replacement, the Pulsar 16, looks set to continue the best-selling tradition of the 9005D.**

£1,199 (inc VAT)

Packard Bell: 01753 831914

Packard Bell 9005D					
Performance	★	★	★	★	★
Features	★	★	★	★	★
Build quality	★	★	★	★	★
Value for money	★	★	★	★	★
Overall	★	★	★	★	★

## Hewlett-Packard Pavilion 3120



Hewlett-Packard's new Pavilion 3120 is distinctive and compact. It comes in a remarkably streamlined, space-saving desktop case finished in two-tone grey with a matching mouse and monitor. The only drawback is that there's not much scope for adding extra hardware - just one expansion slot.

The processor is a 166MHz Pentium MMX supported by 16Mb of RAM. Storage is provided by a 2Gb hard disk and a 16x CD-ROM drive, while for communicating with other PCs or using the Internet there's a 33.6Kbits/s modem. The

Pavilion's weakest feature is the built-in graphics card with only 1Mb of video memory. This restricts the number of colours in high-resolution screen modes, but as you probably won't want to run anything more than 800x600 with 64,000 colours this isn't a big problem.

A selection of pre-installed software includes HP's Personal Guide, which is a program describing many of the features of the PC and serving as an easy introduction to Windows 95; Microsoft Works, for office applications; Quicken, for personal finances; and Infopaedia, an electronic shelf of reference books. In addition there are a couple of games and some essential utilities, the most useful of which is McAfee's VirusScan.

HP's claim that owning a Pavilion is 'like having tickets to the best cinema in town' is somewhat over the top, but there's no doubt that this is a very capable multimedia workhorse. The 15in M50 monitor produces sharp, flicker-free pictures and is supplied with matching clip-on speakers that sound bigger than they really are, thanks to 3D spatial sound effects. There's a microphone built into the monitor and the plug for



### Apricot MS5166

This comes with a Pentium 166MMX processor, 16Mb of RAM, 14in monitor, a modem, and a big bundle of software.

£1,199 (inc VAT)

Apricot: 0121 717 7171

### Compaq Presario 4220

A Pentium 166MMX with some added dash - a charcoal-coloured case, speakers built into the system unit and 'Easy Access' buttons for controlling volume and instant-on functions.

£1,199 (inc VAT - street price)

Compaq: 0845 2704000

this is combined with the monitor's cable, reducing the clutter of leads.

The 3120 is not a brutally fast machine but it responds smoothly to keyboard and mouse commands and goes about its tasks in magnificently silent splendour, without the usual drone of fans and power supplies. It's very competitively priced and sold with a full year's 'at-home' warranty.

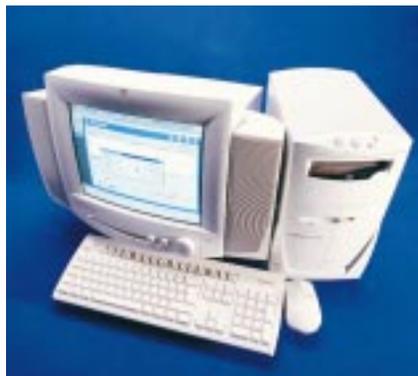
**A well-designed and well-made PC. It's cheaper and more powerful than its predecessor, the 5320, and can be bought with a more utilitarian 14in monitor for as little as £1,199.**

£1,299 (with 15in monitor & inc VAT)

Hewlett Packard: 0990 474747

Hewlett-Packard Pavilion 3120					
Performance	★	★	★	★	★
Features	★	★	★	★	★
Build quality	★	★	★	★	★
Value for money	★	★	★	★	★
Overall	★	★	★	★	★

## Compaq Presario 4526



The Presario range appeals to users who want carefully-designed branded products that are easy to use, well supported and readily available. Compaq's Presario 4526 offers all the above plus decent performance and a dash of style.

The Flash Gordon styling of the mini-tower case serves no useful purpose but the squat profile makes it easy to get at Compaq's extra control buttons on the top edge. These are used for logging on

to the Internet via the fast (33.6Kbits/s) internal modem, controlling the volume of the speakers and activating the 'instant on' feature, which awakens the computer from standby without having to sit through the usual boot sequence.

Inside the system unit is a 233MHz Pentium MMX processor and, rather disappointingly, only 16Mb of RAM which is the minimum for this class of PC. Compaq is more generous with the hard drive, which offers 4Gb of storage, and there's a 24x CD-ROM drive into which you simply post CDs without having to use a tray. Colour-coded sockets and cables make the Presario easy to set up and there are two USB ports for the new generation of add-on devices.

Compaq makes much of the multimedia features of the PC. These are derived from a combination of a 64-bit graphics card, Dolby digital surround sound and JBL 3D speakers that clip onto the sides of the sturdy 15in monitor. Output volume can be set by a knob on the monitor and it's claimed that with

just two speakers the system can simulate the positional audio effects of a five-speaker system. Not quite - but audio CDs and multimedia clips sound great.

A minor criticism is that not all the software is pre-installed and it's disappointing to see that a machine at this price is supplied with the ubiquitous Microsoft Works instead of Office 97. **A good PC for the first-time buyer with deep pockets. It's easy to set up, easy to use and works more like a piece of hi-fi or video equipment than a PC.**

£1,799 (inc VAT)  
Compaq: 0845 2704000

Compaq Presario 4526					
Performance	★	★	★	★	★
Features	★	★	★	★	★
Build quality	★	★	★	★	★
Value for money	★	★	★	★	★
Overall	★	★	★	★	★

## MJN 233M Ex



MJN's 233M Ex is more traditional in design than Compaq's Presario but it's a worthy competitor thanks to its higher specification and cheaper price. The processor is the same, a 233MHz Pentium MMX, but in this case is supported by a far more useful 64Mb of RAM and twice as much cache RAM.

The hard disk is one of the new Ultra ATA drives with a massive 6.4Gb of storage and very fast program loading times. Sound is provided by a Creative Labs wavetable card outputting to a pair

of neat column speakers with control knobs for tone and volume, and a separate sub-woofer unit. As with Compaq's Presario (above), there's an internal 33.6Kbits/s modem that can be upgraded to 56Kbits/s.

The system case is a midi-tower and the 15in monitor is rather boxy in design, so the appearance of MJN's 233M Ex is less likely to impress than the Compaq 4526. However, the quality of the multimedia sound and graphics is just as good. There are, in fact, some advantages to a conventional design in that it has more space for expansion cards and extra drives, as well as being easier to upgrade.

As well as supporting 3D games, the ATI Rage II+ graphics card can receive TV and Teletext pictures either in a window or by using the full screen. Pictures can be grabbed and saved on disk for later replay or editing. You can also receive video conferencing calls - this seems rather futile if you can't respond in kind, but MJN supplies a videophone upgrade package consisting of a colour camera, microphone, joystick and software for only £116. Third-party

### Carrera 266MHz Pentium II Power Pro



This has 32Mb of RAM, a GoldStar 15in monitor, one of the latest fast Ultra ATA 4.3Gb hard disk drives, and a Matrox Mystique graphics card.  
£1,761.33 (inc VAT)  
Carrera: 0171 830 0486

### IBM Aptiva 56S

This eye-catching PC with a Pentium 166MMX processor and 3.1Gb hard disk is being discounted to £1,999.  
£1,999 (inc VAT)  
IBM: 0345 727272

cameras can also be connected to the existing interface or to one of the two USB peripheral ports.

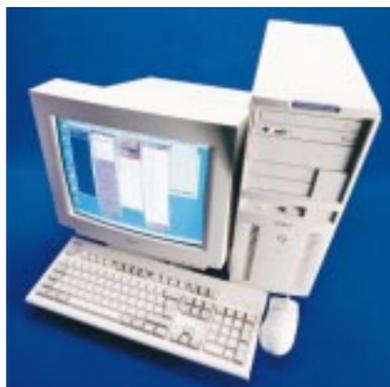
As with all MJN machines, there's a comprehensive bundle of software, most of which is pre-installed. There are practical applications such as Lotus Smart Suite 97 and Quicken, plus desktop publishing and graphics software, a multimedia reference library and a handful of leisure and lifestyle titles.

**This is the machine to buy if you want maximum value for your money, especially if you're looking for a PC to form the heart of a versatile, expandable system.**

£1,643.83 (inc VAT)  
MJN: 01282 777555

MJN 233M Ex					
Performance	★	★	★	★	★
Features	★	★	★	★	★
Build quality	★	★	★	★	★
Value for money	★	★	★	★	★
Overall	★	★	★	★	★

## Dell Dimension D233



Dell's Dimension range is aimed at home users and the combination of innovation and Dell's reputation, together with reasonable cost, has been a winner.

The Dimension XPS D series is the latest development. For around £1,500, this offers a specification that only a year ago would have seemed like a fantasy. It's equipped with Intel's latest Pentium II processor, albeit in its slowest 233MHz

incarnation, a reasonable 3Gb of hard disk space and 32Mb of RAM.

Inside the box, everything is ship-shape. Build quality is excellent, with access to all the slots unobstructed by any cables. There are two free memory slots as that 32Mb is on a single DIMM, leaving plenty of room for expansion.

Other components include a fast CD-ROM drive, 33.6Kbits/s modem (soon to be upgraded to a 56Kbits/s model), sound card and speakers and a 4Mb STB Nitro graphics card. Although the STB Nitro is not the fastest 3D card around it's an admirable performer. Bundled software is limited to Microsoft Office Small Business Edition.

None of this, though, is abnormal. What makes the D series special is that it uses Intel's latest support chipset, the 440LX. This allows the processor to communicate with other components including graphics card and hard disk. Unlike its predecessor, the 440LX supports SDRAM (a faster type of memory), and Ultra DMA (a more efficient way of

controlling your hard disk). Both these technologies are found in the D233, but the 440LX also supports Intel's latest graphics technology, AGP.

Although you'll need to look at this month's Close-up of the Dimension D266 for an explanation of AGP, suffice to say it gives you extremely fast graphics. The D233 is ready to be upgraded if you ever feel you've outgrown the capabilities of its STB card.

**We'll have a full review of the D233 next month, but on paper it's a great system and excellent value.**

£1,502.82 (inc VAT)

Dell: 0870 1524629

Dell Dimension D233					
Build quality	★	★	★	★	★
Features	★	★	★	★	★
Value for money	★	★	★	★	★
Overall	★	★	★	★	★

### Viglen Performance PC

Where this PC really scores is in fitting a gargantuan hard disk into an affordable package – 5Gb of storage should keep the greediest applications happy for quite some time.

£1,585 (inc VAT)

Viglen: 0990 944944

### Mesh Titan 233MMX

The Titan boasts an AMD K6 clocked at 233MHz, a big hard disk, fast modem and quality 15in monitor.

£1,173.83 (inc VAT)

Mesh: 0181 452 1111

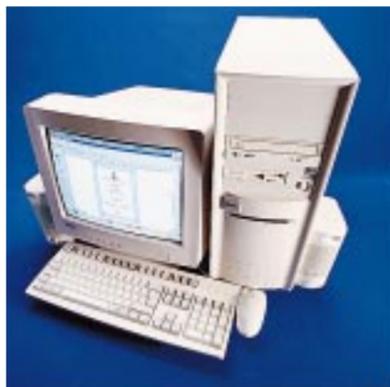
ately. Microsoft Works, perhaps the most capable of the integrated packages, is included, while Quicken takes care of your home finances and you can look things up in Encarta. To take advantage of the MMX processor's extra multimedia capabilities there are six specially-optimised titles, together with a choice of software packs. Both include Serif Page Plus DTP software; as for the rest, one pack is aimed at children and the other firmly at their parents with Cinema 97 and the Microsoft Wine Guide. **If you would rather have a slightly classier mix of components than the raw power of a Pentium II, the Home Plus is a great choice.**

£1,594 (inc VAT)

Dan: 0181 830 1100

Dan Home Plus					
Build quality	★	★	★	★	★
Features	★	★	★	★	★
Value for money	★	★	★	★	★
Overall	★	★	★	★	★

## Dan Home Plus



From its north London base, Dan turns out machines which have a consistently high build quality and a good reputation for reliability. They're generally fast and come with a good selection of quality extras as well, so it's no surprise to find that the Home Plus sells well.

It's also a 233MHz machine, but the Home Plus is powered by the fastest version of the Intel Pentium MMX. The rest of its vital statistics are remarkably similar to the Dimension – 32Mb of RAM, 3.2Gb hard disk, fast CD-ROM drive and

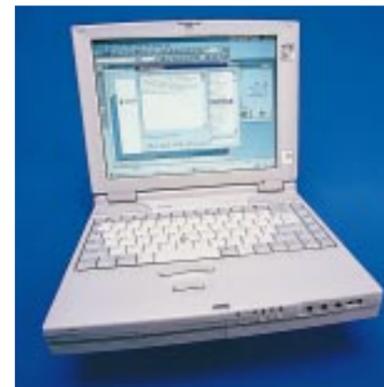
15in monitor – but some other components are a worthwhile improvement.

A Sound Blaster AWE 64, one of the best sound cards on the market, provides richer sound quality than the 16-bit chips integrated with the Dimension's motherboard. Fast graphics are assured by an ATI 3D Rage card: this comes from one of the biggest graphics card manufacturers, so compatibility with games isn't an issue. Finally, you'll get speedy access to the Internet with the supplied 33.6Kbits/s modem and a free trial with Pipex Dial, chosen because it doesn't demand a credit card number before you sign up.

Of course, Dan can build a system exactly to your specifications, so you're not restricted to the components mentioned above. The most popular upgrades to the Home Plus include a Zip drive, useful for backups, and a faster 56Kbits/s modem as well as a 17in monitor. Dan can furnish you with the superb iiyama Vision Master 8617E for an extra £300, a bargain compared to its retail price.

It's unlikely, though, that you'll need to upgrade the software bundle immedi-

## Toshiba Satellite 220CS



Once again Toshiba has held on to its market-leading position in both notebook categories, proving that it can and does deliver the right stuff in this market. Its notebooks are arranged into three brands, with Tecra at the top, Satellite serving the mid- and entry-level, and Portégé for the sub-A4 market.

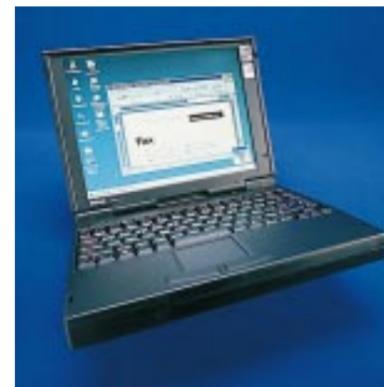
The Satellite 220CS is one of the most affordable machines Toshiba currently produces, but in the main its specifica-

tions aren't adversely affected. The two areas where the effects of price are evident are the screen, which is a dual-scan rather than an active matrix type, and the lack of a CD-ROM drive as a standard feature. An optional CD-ROM module is available which can be fitted to the machine in place of its floppy drive.

The core of the machine is a 133MHz Pentium processor, coupled to 256Kb of secondary cache and 16Mb of EDO RAM. Storage is provided by a 1.4Gb hard disk, and the usual pair of Type II PC Card slots offers a means of expanding the system. Both the slots support the 32-bit Cardbus standard, plus the so-called Zoomed Video feature, which isolates video-intensive tasks like hardware MPEG decoding and prevents them from slowing the rest of the machine down.

The Satellite has features in common with more expensive Toshiba notebooks, including its lithium ion battery and its multi-purpose bay which can accept a secondary hard disk, a second battery pack, or a CD-ROM module.

## Dell Latitude LM P133ST



Dell Latitude was our choice of alternative in this category in last year's best seller awards (November 1996), and we were happy to pick Dell again on the basis of quality, value for money and a generally good reputation for after-sales support.

The Latitude LM is a little more expensive than the Toshiba, but although the core specifications are the same, with both machines based around a Pentium/133 processor, 16Mb of RAM and a 1.4Gb hard disk, the Dell has an SVGA TFT (active-matrix) screen rather

than a dual-scan panel like the Toshiba.

Like all Dell's notebooks, the LM P133ST is black, with clean, angular lines, and the general quality of the build is good. The floppy drive is removable, but on this model the 10x CD-ROM module that can replace it is an option. One useful feature on the Latitude notebook is that, if you do have the CD option, you can run the floppy drive externally by plugging the module into the parallel port. This can be done 'live' and the drive is detected automatically, without needing a reboot.

If you opt to add the CD-ROM drive, the Latitude then becomes fully multimedia-capable, with on-board audio provided by a 16-bit ESS Audiodrive chip and a pair of stereo speakers next to the screen hinges.

The screen itself has a 12.1in diagonal like the Toshiba's, so once again text and screen objects in the 800x600 resolution Windows workspace are large enough to read with ease. The superiority of TFT over even good-quality DSTN panels is obvious, especially in terms of brightness and the wider viewing angle afforded by active-matrix panels.

Although the 12.1in screen uses dual-scan rather than TFT technology, it is still designed to operate in 800x600 resolution and it can deliver 65,536 colours – enough to make photographic images look reasonably convincing.

**Toshiba's Satellite offers a practical base configuration and a degree of flexibility thanks to its multifunction bay, but the dual-scan screen and lack of a CD-ROM drive as standard should be considered if you are thinking about buying this machine.**

£1,521 (inc VAT)

Toshiba: 01932 828828

Toshiba Satellite 220CS					
Performance	★	★	★	★	★
Build quality	★	★	★	★	★
Features	★	★	★	★	★
Value for money	★	★	★	★	★
Overall	★	★	★	★	★

### Acer Acernote 370PC+

There are several models, with base memory configurations ranging from 8Mb to 16Mb. Hard disk sizes start at 810Mb and go up to 1.35Gb.

£1,150 to £2,000 approx

Acer: 01628 533422

### AST Ascentia A51

Based on a P133, with a 256Kb cache, 16Mb of RAM, a 1.3Gb hard disk and a 12.1in SVGA TFT screen.

£1,950 approx

AST: 0990 611611

The lithium ion battery delivers between two and three hours worth of continuous use, and power management can be configured on the fly from within Windows.

The Latitude lives up to Dell's reputation for fast notebooks, and delivers a respectable all-round performance which makes it ideal as a general-purpose portable. **The Dell Latitude LM P133ST is a good-value notebook which offers a practical set of specifications, a nice SVGA TFT screen and both the punch and the battery life to enable you to get the job done.**

£1,908 (inc VAT)

Dell: 0870 1524629

Dell Latitude LM P133ST					
Performance	★	★	★	★	★
Build quality	★	★	★	★	★
Features	★	★	★	★	★
Value for money	★	★	★	★	★
Overall	★	★	★	★	★



# Toshiba Tecra 520CDT



The market-leading Toshiba in this category belongs to the company's high-end Tecra range, and is clearly aimed at the business user wanting desktop-like functionality on the move. Consequently, it is armed with a 166MHz Pentium MMX processor, coupled with a standard helping of 32Mb of EDO RAM, enough to run the likes of Office 97 at a sensible speed.

Performance gets a further boost from

256Kb of pipeline burst secondary cache, and there should be room for most users' data on the 2Gb hard disk. Like most luxury notebooks, the Tecra is a multimedia machine, with an integrated 16-bit sound chip and stereo speakers. The multimedia aspect is rounded off by a 10x CD-ROM module which can be fitted in place of the removable floppy drive. When the CD-ROM is in use the floppy drive can be connected to the parallel port and run externally if it's needed.

The Tecra benefits from a large, well-lit active-matrix screen with a 12.1in diagonal, which isn't much less than the viewable diagonal of a conventional 14in monitor. The screen runs at 800x600 resolution, at a maximum of 16.7 million colours, and the 2Mb graphics chipset can drive an external monitor at 1,024x768 resolution at a flicker-free 85Hz vertical refresh.

The system is powered by a lithium ion battery which provides around two hours of running time if the machine

isn't pushed too hard. If more operating time is essential, the multipurpose bay can be used to house a second battery pack rather than a drive module.

Although the Tecra is a match for many desktops in terms of features, it retains the A4-type notebook footprint, is only 47mm thick with the lid shut, and weighs 2.9kg with its CD-ROM drive.

**The Tecra is a robust though by no means excessively hefty machine which provides the features and power required of a quality high-end notebook** £4,224 (inc VAT)

Toshiba: 01932 828828

Toshiba Tecra 520CDT					
Performance	★	★	★	★	★
Build quality	★	★	★	★	★
Features	★	★	★	★	★
Value for money	★	★	★	★	★
Overall	★	★	★	★	★

# Hewlett-Packard Omnibook 800CT 5/166



A quick comparison between the Tecra and the Hewlett-Packard Omnibook reveals plenty of similarities. Like the Tecra, the Omnibook is powered by a Pentium 166MMX processor, it has pipeline burst secondary cache (512Kb rather than 256Kb though), a 2.1Gb hard disk and an active-matrix screen. There are some differences too, including the fact that the Omnibook comes with 16Mb of RAM, not 32Mb, as standard, and while it can be used with a CD-ROM drive, this is external only and sold as an option.

What really sets the two machines apart though is size. Instead of being a full-scale, 2.8kg notebook, the Omnibook is a tiny machine measuring just 281x186x39mm (wxdxh) and weighing a remarkable 1.8kg. This is why it has no internal CD-ROM, and why its screen diagonal is 10.4in as opposed to the Tecra's 12.1in, although it too operates at 800x600 resolution and offers just as crisp an image.

Despite its size, the Omnibook has a comfortable, firm keyboard, which has the benefit of a strip of programmable function keys which can be used to launch applications. The distinctive Omnibook pointing device has also been preserved. Press a small button towards the top of the case and a 'mouse on a stick' pops out from the right of the keyboard. This is perhaps the neatest solution to the notebook pointing device problem we've yet to see and certainly one of the most effective.

The 'mouse' has two buttons and folds up into a wedge shape to fit comfortably between the right-hand thumb and two fingers. Since it's the attached strip, not the mouse, that transmits

## AST Ascentia P80

The P80 includes a 166MHz Pentium processor, 32Mb of EDO RAM, 256Kb of pipeline burst cache, a 2.1Gb hard disk, integrated audio, a 10x CD-ROM and a 12.1in screen. £2,936 (inc VAT); AST: 0990 611611

## IBM Thinkpad 760CD MMX

The CD model is typically configured with a P166MMX, 32Mb of RAM, a 3Gb hard disk and a 12.1in screen. £4,200 approx  
IBM: 0345 727272



movement to the PC, the system also works without a suitable surface.

Remarkably, Hewlett-Packard's Omnibook 800 even has audio, in the form of an above-average monaural speaker driven by a 16-bit ESS Audiodrive chip. Graphics are provided by a 128-bit Neomagic chip with 1Mb of integrated memory capable of driving the screen at its maximum 65,536 colours in SVGA (800x600) mode.

**If you want a powerful but extremely compact portable rather than a full-sized notebook, Hewlett-Packard's Omnibook is an elegant and cleverly engineered alternative.**

£4,077 (inc VAT)

Hewlett-Packard: 0990 474747

Hewlett-Packard Omnibook 800CT 5/166					
Performance	★	★	★	★	★
Build quality	★	★	★	★	★
Features	★	★	★	★	★
Value for money	★	★	★	★	★
Overall	★	★	★	★	★



## Apple Power Macintosh 5500/225



With its tidy all-in-one design the Power Macintosh 5500/225 is Apple's best-selling consumer machine. It's easy to see why - it offers just about everything you could want from a home computer.

It has a speedy 225MHz PowerPC 603e processor, 256Kb of cache, and 32Mb of RAM - enough to run even the most power-hungry applications. The memory comes on 168-pin EDO DIMMs

(Dual In-line Memory Modules) for the fastest performance, and is upgradable to a maximum of 128Mb.

There is a built-in 15in screen with speakers, a 2Gb hard disk, 1.44Mb SuperDrive that can read and write PC and Mac format floppy disks, 16-bit stereo sound, 12x CD-ROM drive, video recording facilities, plus 2D and 3D graphics acceleration. The highest graphics resolution supported is 1,024x768 pixels in 16-bit (thousands) colour, and millions of colours can be used in lower modes.

No home machine would be complete without a modem, and the 5500 comes with an internal 33.6Kbits/s device preinstalled. There's a single PCI slot for other internal cards, although most users won't need to add anything to the system, and the usual array of Mac ports - a SCSI interface, two serial sockets, and ADB sockets for the keyboard, mouse and other devices.

All this hardware is useless without some good software and Apple bundles a large range of titles including System 7.6



(an upgrade to the new Mac OS is available), Claris Works 4.0 integrated suite, Apple's Internet Connection Kit, Kai's Power Goo, Disney's Pocahontas Interactive and Lion King Activity Centre for kids, as well as Actua Soccer and Full Throttle to keep games fans happy. **A great all-round package that's ideal for the home user. At £1,934 it's not the cheapest system around, but you definitely get a lot for your money. If you're after a family Mac with the works then go for this.**

£1,934 (inc VAT)  
Apple: 0800 127753

Power Macintosh 5500/225					
Build quality	★	★	★	★	★
Features	★	★	★	★	★
Performance	★	★	★	★	★
Value for money	★	★	★	★	★
Overall	★	★	★	★	★

### Apple Power Macintosh 9600/350

This boasts the 'Mach 5' PowerPC 604e processor running at 350MHz, 64Mb of RAM, 4Gb SCSI hard disk, 24x CD-ROM and an internal Zip drive.  
£4,409 (inc VAT)



### Apple Power Macintosh 6500/250

This has a 250MHz processor, 32Mb of RAM, 3Gb hard disk, 3D graphics acceleration, two PCI slots and plenty of pre-loaded business software.  
£2,053 (inc VAT)



## Apple Power Macintosh 4400/160



If you're looking for a low-cost Power Macintosh then the 4400/160 may be more up your street. It's not as powerful or stylish as the best-selling 5500 (above), but it's perfect for home and small business users.

Housed in a more traditional desktop case, the 4400/160 is based on a PowerPC 603e processor running at 160MHz. It comes with 16Mb of EDO RAM, upgradable to 96Mb, a 1.2Gb hard disk, a 1.44Mb SuperDrive, and an 8x CD-ROM. Unlike the 5500, the 4400 is sold without a secondary cache memory

card but this can be added at a later date. On the whole this is a rather basic specification compared to most of today's models, but it will still run all mainstream applications, such as Quark Xpress, Adobe Photoshop, and games, with ease.

Display-wise this Mac has 1Mb of video RAM, which gives a maximum resolution of 1,152x882 in 256 colours. You also have the option of 800x600 with thousands of colours, and the display memory can be increased to 4Mb with a single DIMM. Sound is 16-bit with up to 44.1KHz sampling for CD quality, and stereo speakers can be attached via mini jack plugs at the rear.

Despite its minimal specification, the 4400 boasts plenty of room for expansion. There are three internal PCI slots and an external SCSI interface, plus the other ports on just about every Mac.

The 4400/160 features Apple's obscurely named GeoPort system. This is nothing more than a bog-standard 28.8Kbits/s modem. Software is supplied that allows the modem to be used as both a speakerphone and answering machine and the GeoPort can send and receive faxes.

Apple bundles a 15in monitor, keyboard and mouse, and System 7.5.3 and Claris Works 4.0 are preinstalled on the hard disk. Most users will want to upgrade the system to Mac OS 8, and this should run without problems. You don't get any additional games or business software, but this helps keep the price down. At the moment the 4400 has an RRP of £1,175, although you may well find it discounted by dealers.

**A basic system that can be upgraded later to become a more powerful machine. Ideal for people on a budget, or those who want to 'build' their own custom system.**

£1,175 (inc VAT)  
Apple: 0800 127753

Apple Power Macintosh 4400/160					
Build quality	★	★	★	★	★
Features	★	★	★	★	★
Performance	★	★	★	★	★
Value for money	★	★	★	★	★
Overall	★	★	★	★	★

## Psion Series 3c



Although the Series 5 palmtop is the hot product from Psion this year, the company's best seller is the Series 3c. It's not hard to see why, with a functional keyboard, a backlit screen and a set of flexible applications all in a case measuring just 165x85x22mm and weighing only 275g with batteries.

The clamshell case is rubberised and opens to reveal a 480x160 pixel screen mounted above a standard Qwerty key-

board. As soon as you turn it on it's ready for use and you can switch between any of the built-in applications using task buttons along the top of the keyboard.

Programs include an appointments manager, word processor, spreadsheet and contacts database; all surprisingly sophisticated and supported by numerous software tools and utilities. Data is stored in RAM and if you need more than the standard 2Mb of memory there are two expansion slots for Psion's proprietary solid state disks. The slots can be used for add-on software including personal finance and games.

Two AA batteries give around 60 hours of power, but battery life is diminished if you use the screen backlight and the integral communications facilities. These consist of an RS-232 serial port and an infra-red transceiver for communicating with other Psions.

Psion has been selling the 2Mb Series 3c alongside a non-backlit 1Mb model and the earlier Series 3a, but since the introduction of the Series 5 these have



been discontinued and the price of the 2Mb model has dropped to £299.95. Its strengths are excellent balance, allowing it to be held in one hand and operated with the other, a responsive keyboard, excellent built-in software and a zoom facility to switch quickly between several views of the same document. **Still the best keyboard-operated palmtop and one that should continue to sell well alongside the Series 5, which lacks the single-minded let's-get-things-done approach of the Series 3c.**

£299.95 (inc VAT)  
Psion: 0990 143050

Psion Series 3c					
Performance	★	★	★	★	★
Features	★	★	★	★	★
Build quality	★	★	★	★	★
Value for money	★	★	★	★	★
Overall	★	★	★	★	★

### Psion Siena

The screen is half the width of the Series 3c's and there are no solid state disk slots. There is a separate calculator keyboard. The Siena weighs 183g and can exchange data with PCs. £129.95 (512Kb), £199.95 (1Mb) (both inc VAT); Psion: 0990 143050



### HP 320LX

The pocket computer with a Windows interface, simplified versions of Word and Excel, and a backlit screen. £634.50 (inc VAT)  
Hewlett-Packard: 0990 474747

revised and is now available in two versions, the Personal and Professional, differentiated by the amount of memory provided as standard and the inclusion on the Professional version of a Mail facility that stores your messages for subsequent uploading and transmission via a PC-based e-mail application. The Personal model can be upgraded to the Professional version by adding a 1Mb memory module.

**As a pocketable electronic organiser that communicates effortlessly with a PC, the PalmPilot is hard to beat, but don't buy it as a stand-alone computer.**

£219 (Personal version),  
£299 (Professional version)  
US Robotics: 01734 228200

US Robotics PalmPilot					
Performance	★	★	★	★	★
Features	★	★	★	★	★
Build quality	★	★	★	★	★
Value for money	★	★	★	★	★
Overall	★	★	★	★	★

## US Robotics PalmPilot



If you're looking for the ultimate in portability the US Robotics PalmPilot is the answer. It's small enough and light enough to carry in a shirt pocket and makes even the Psion 3c look clumsy. However, there's no room for a keyboard, most of the front surface being occupied by a 160x160 pixel screen. This does not normally require a backlight, though one is provided.

The lack of a keyboard reflects the fact that the PalmPilot is sold as an accessory to a PC, not as a replacement for one. It comes with a HotSync cradle

that connects to a PC's serial port and when you drop the PalmPilot into its cradle this activates a synchronisation process between the PalmPilot and the PC. The PalmPilot data is synchronised with standard PC information managers such as Schedule+, Sidekick, ACT and Lotus Organizer.

Entries are made using a stylus on the PalmPilot's touch-sensitive screen and then interpreted by a handwriting recognition system called Graffiti. This system is easy to learn and entering Graffiti characters becomes second nature within a few hours, but data can also be entered by tapping on a screen representation of a conventional keyboard or by typing it into your PC and using HotSync to download it to your PalmPilot.

The four main applications are Date Book, Address, To Do and Memo Pad. Between them, these let you manage appointments, organise your time, keep your contacts up to date and make short notes. There's also a rudimentary expenses log, which is actually used to maintain a pre-formatted Excel-compatible spreadsheet.

The PalmPilot has recently been



## Hewlett-Packard LaserJet 6L



pushed this up to six. Our speed tests showed this to be no idle boast by HP and a 50 percent increase in print speed is certainly a welcome improvement.

The LaserJet 6L is easy to set up under Windows 95, and it also comes with drivers for Windows 3.1, 3.11, NT 4.0, OS/2 and DOS. The 1Mb of memory that comes as standard is adequate for everyday needs, and it can be expanded to 9Mb to sate more demanding users. The paper in-tray holds 100 sheets and there are two paper exits.

At this price, laser printers are restricted to monochrome printing but text output is superior to that produced by any inkjet. The maximum resolution is 600x600dpi (dots per inch) but switching to economy mode restricts printing to 300x300dpi. HP's REt (Resolution Enhancement technology) boosts the apparent quality further, rendering both text and graphics sharp and clean.

As a mere printer, the LaserJet 6L performs extremely well but HP has also released an optional extra in the shape of

the LaserJet Companion. This is a greyscale document scanner with sheet feeder and it allows a PC to scan documents but, perhaps more usefully, can function as a photocopier that can be used even when the PC is turned off.

**The HP LaserJet 6L is an excellent printer both from the point of view of quality and speed. The LaserJet Companion has some clever functionality but compared to other document scanners it is overpriced.**

LaserJet 6L £433.58 (inc VAT)

LaserJet Companion £217.36 (inc VAT)

Hewlett-Packard: 0990 474747

Hewlett-Packard LaserJet 6L					
Performance	★	★	★	★	★
Features	★	★	★	★	★
Build quality	★	★	★	★	★
Value for money	★	★	★	★	★
Overall	★	★	★	★	★

### Panasonic KX-P6300

This Windows-based GDI printer with PCL 4.5 emulation has one of the smallest footprints around, and has a quoted print speed of 6ppm with a true print resolution of 300dpi. £370.13 (inc VAT)  
Panasonic: 0500 404041



### Epson EPL-5500

A 600dpi printer with a quoted print speed of 6ppm. It is fitted with 1Mb of RAM, and has a 150-sheet paper tray. £468.83 (inc VAT)  
Epson: 01442 61144

of the paper is 'straight', meaning that it passes through the printer on a gently-sloping curve as opposed to the acute angles imposed by traditional box-shaped lasers. As a result of this the printer is able to handle much heavier media, such as card and envelopes, with less likelihood of a jam occurring.

As a word of warning, if you're intending to print complex documents or graphics the standard 0.5Mb of memory fitted by Brother is unlikely to be enough, but it can be easily upgraded. **The HL-730 is an appealing machine. It combines good-quality output and ease of use at an attractive price.**

£351.33 (inc VAT)

Brother: 0161 330 6531

Brother HL-730					
Performance	★	★	★	★	★
Features	★	★	★	★	★
Build quality	★	★	★	★	★
Value for money	★	★	★	★	★
Overall	★	★	★	★	★

Once again Hewlett-Packard printers feature heavily in the list of best sellers, which is little surprise given the company's stature in the market. Of its many offerings, though, the LaserJet 6L is by far the biggest selling, succeeding last year's LaserJet 5L.

The improvements in the LaserJet 6L are mainly to do with speed. The LaserJet 5L was capable of producing four pages per minute (ppm), while the 6L has

## Brother HL-730



because Brother has built a pair of small handles onto the drum unit. Towards the rear is a vertical paper hopper that can take up to 200 sheets of A4 paper, or 10 envelopes. Slightly in front of this is a slot through which single sheets of paper can be fed. This is useful if, for example, you print mostly on plain paper but occasionally need to print on a sheet of headed paper.

The HL-730 has just one control button, and this is only used for performing test prints - all other controls are accessible via the included Windows driver. Above this sit four status LEDs (light-emitting diodes - small indicator lights) that show when the printer is powered, busy, jammed or low on toner.

With a maximum print resolution of 600dpi (dots per inch) the quality of printed text from the machine is superb, and its graphics output manages to outshine many other printers in the same class. Brother claims a print speed of 6ppm (pages per minute) for the HL-730 and this proved quite accurate: during our tests, just under 6ppm were pushed into the catch tray.

A useful feature is that the transport

Brother has built a reputation for producing high-quality printers with price tags to match. The HL-730 is, therefore, somewhat of a departure for the company: it's a high-quality laser printer at a distinctly budget price level.

The design is sleek with a cover that swings forward and down to form the paper catch tray; when raised to access the toner cartridge this cover does, however, feel a little unsteady.

Installing the two-piece toner cartridge and drum is very easy, primarily

## Hewlett-Packard LaserJets 6P & 6MP



Usually, two printers share the podium in the best-selling high-end laser printer category: the LaserJets 6P and 6MP, both from Hewlett-Packard. The only difference between them is that the MP version comes with Postscript.

The new LaserJets look the same as the 5P and 5MP models they replace, but the differences soon become apparent. The new models can churn out eight pages per minute (ppm) instead of six,

which is good considering that they also cost less than the old ones. Both print at a resolution of 600dpi, producing high-quality text and pictures, and feature HP's Resolution Enhancement technology (REt), which boosts quality further by smoothing out jagged edges.

There's a 250-sheet paper tray mounted underneath the units so even if the cases are quite bulky compared to personal laser printers, at least they don't have any bits sticking out - printed sheets being deposited in a well on top of the printer. A fold-out multi-purpose paper tray on the front of the printer takes 100 sheets of paper or special materials such as envelopes or cards.

While the advantages of Postscript printing have virtually disappeared since Microsoft added TrueType fonts to Windows' repertoire, there are still occasions where the MP version comes into its own. One is when your work is destined for a commercial printing house using Postscript equipment, because you can use the LaserJet to see proof copies that

accurately reflect the final version. The MP version of the printer can also automatically detect and switch between Mac- and PC-originated material, adjusting the printer emulation between the LaserJet's own PCL6 language and Postscript as necessary.

**The 6P and 6MP are built to meet the needs of a specific group of users requiring network connectivity, sophisticated paper handling, relatively high throughput and the option of Postscript. They serve this niche market admirably.** LaserJet 6P: £752; 6MP: £928.25 (inc VAT)  
Hewlett-Packard: 0990 474747

Hewlett-Packard LaserJets 6P & 6MP					
Performance	★	★	★	★	★
Features	★	★	★	★	★
Build quality	★	★	★	★	★
Value for money	★	★	★	★	★
Overall	★	★	★	★	★

### Kyocera FS-1550+

Uniquely - to our knowledge - the FS-1550+ has a 'cartridge-free' design, so you need only top up the toner reservoir from time to time to maintain your printing activities. £938.83 (inc VAT)  
Kyocera: 01734 311500



### Lexmark Optra S 1250

A true 1,200x1,200dpi laser printer, with 4Mb of memory as standard and a quoted print speed of 12ppm. £1,056.33 (inc VAT)  
Lexmark: 01628 481500

If, in the future, you have need to upgrade the Print Partner's 3Mb of memory, you can use industry-standard SIMMs (Single In-line Memory Modules) in order to take it up to a maximum 67Mb of memory.

A number of accessories are also available, including a duplex module (allowing you to do double-sided printing) and various paper trays. **Fujitsu's Print Partner 10V is a great alternative to the ever-dominant Hewlett-Packard's offerings. This printer offers excellent performance at a realistic price and even has reasonable running costs.** £621.58 (inc VAT)

Fujitsu: 0181 606 4415

Fujitsu Print Partner 10V					
Build quality	★	★	★	★	★
Performance	★	★	★	★	★
Features	★	★	★	★	★
Value for money	★	★	★	★	★
Overall	★	★	★	★	★

## Fujitsu Print Partner 10V



Over the past few years, laser printers have grown taller at the same time as taking up less room on the desktop. The Print Partner 10V follows this trend: it's a tallish box with just enough curves to keep it interesting, but it's unmistakably a laser printer.

The upside of this is that there's plenty of room for paper - 250-sheet input and output trays are standard - and the control panel is well laid out and easily accessible. However, you'll find that you rarely need to use this because all the main functions of the printer can

be controlled from your PC through the printer driver.

Interestingly, the Print Partner is able to tell you its troubles verbally, thanks to the MarkVision software utility that comes with it. A useful reminder perhaps, but it was mildly disconcerting to be told in a nasal American accent to shut the top cover.

In terms of performance, the Print Partner is excellent. Fujitsu claims a print speed of 10 pages per minute (ppm) for text, and our tests bore this out. Despite this, print quality is very high, with text as small as two points (which is very small indeed) remaining legible as long as your eyes hold out. As you would fairly expect from a high-end printer, it produced crisp graphic prints with little evidence of banding.

Like most printer manufacturers, Fujitsu has built in image-enhancement technology to fool the eye into thinking the printer works at a higher resolution than it really does. In truth, however, unless you're exceptionally picky, the results from the Print Partner's 600x600dpi true resolution output are impressive enough.



## Canon BJC-4200



In last year's *What PC?* Best Sellers roundup Canon's BJC-4100 inkjet printer ran away with the best seller award in this category, and this year the honour falls to its replacement, the BJC-4200. Though ostensibly the same, Canon has added a couple of new features to the new model aimed at boosting the quality of printouts.

The BJC-4100 had a very angular design but this has been drastically toned

down to give a more curvaceous look. However, while the BJC-4200 appears to be quite a compact unit at first glance, pulling out its paper catch tray consumes a significant chunk of desk space.

One of the new features of the Canon BJC-4200 is the so-called Photo-Realism ink cartridge which, it's claimed, allows the printer to output images as near-photographic quality. While the graphics printouts in our tests were certainly good, it has to be said that we've seen better, and we'd hardly call them photographic. At the top print resolution of 720x360dpi (dots per inch) text prints looked very sharp, but this resolution is restricted to use on expensive 'special' paper. At the standard 360x360dpi resolution on plain paper the quality of text dropped, though not alarmingly.

The Photo ink cartridge contains both coloured (cyan, magenta and yellow) and black inks. If your main task is text printing, the good news is that Canon sells a separate black-only ink cartridge. With

this fitted the cost of text output works out to under a penny per page, which isn't at all bad.

The BJC-4200 allows plenty of time for the dust to settle while printing: it managed just under 1.5ppm during our speed tests. Naturally, graphics printing was even slower, but then the same is true of most inkjet printers.

**The BJC-4200 is not a remarkable printer, considering the mass of colour inkjets that you can get for under £300, but it's a reasonable buy.**

£210.33 (inc VAT)

Canon: 0121 680 8062

### Canon BJC-4200

<b>Performance</b>	★	★	★	★	★
<b>Features</b>	★	★	★	★	★
<b>Build quality</b>	★	★	★	★	★
<b>Value for money</b>	★	★	★	★	★
<b>Overall</b>	★	★	★	★	★

## Epson Stylus Color 400



For a really low-cost colour inkjet printer, Epson's Stylus Color 400 is a hard one to beat. Though it only boasts a 720dpi (dots per inch) resolution (half that of its big brother, the Stylus Color 800), this is still much higher than many of the rival products can offer.

Design-wise the printer is nothing special, and could even be described as looking and feeling cheap (which indeed it is). However, the Stylus Color 400's appearance does little justice to the quality of its graphic printouts, which

are almost beyond criticism considering the low price. The printer's text quality is perhaps not so impressive, particularly when you reach the smaller font sizes where there's evidence of ink bleeding. However, it's still quite acceptable for everyday purposes.

Epson's quoted print speeds of 3ppm (pages per minute) for colour and 4ppm for monochrome output are, in fact, laughably optimistic and, unless you're printing very basic pages the printer manages barely a couple of pages per minute. Having said that, however, the Stylus Color 400 printing speed is not noticeably slower than any one of its closest rivals.

The paper feeder can accommodate up to 100 sheets of A4 paper and smaller numbers of other media, such as transparencies and envelopes, can also be automatically fed.

Epson has also put together a well-presented help utility, known as Answers. This is designed to guide you through any hiccups that you might encounter when you are setting up and using the Stylus Color 400. However, we experienced no problems at all installing

the unit, and the actual time taken from unpacking the printer from the box to watching the first print fall into the catch tray is short.

Bundled with the Stylus Color 400 printer are PhotoDeluxe from Adobe, plus Sierra's Print Artist. This latter program is great for family users because it enables you to create stationery such as banners, signs and greetings cards very easily.

**A smidgen over £200 for output of this quality? A few years ago that would have been unthinkable but with the Epson Stylus Color 400 it is very much for real.**

£204.45 (inc VAT)

Epson: 01442 61144

### Epson Stylus Color 400

<b>Performance</b>	★	★	★	★	★
<b>Features</b>	★	★	★	★	★
<b>Build quality</b>	★	★	★	★	★
<b>Value for money</b>	★	★	★	★	★
<b>Overall</b>	★	★	★	★	★



### Lexmark 1020

This has a 600x300dpi resolution, a 100-sheet paper input tray and a quoted print speed of 1ppm in high-quality colour.

£129 (inc VAT)

Lexmark: 01628 481500

### Canon BJC-240

The BJC-240 has a 360x360dpi resolution and supports Canon's Photo-Realism technology with the optional BC-06 Photo Kit.

£163.33 (inc VAT)

Canon: 0121 680 8062

## Epson Stylus Color 800



Over the past few years, Epson's printers have been runners-up to equivalent models from the likes of Hewlett-Packard and Canon. This year, however, the tide has started to turn and Epson's Stylus Color 800 takes the award for the most popular, mid-range colour inkjet printer. This is fitting since the super-fine 1,440dpi resolution is a good way ahead of its rivals, and the same can be said of its output quality.

Larger and less square than previous models, it now looks more like a bread-bin than a shoebox. At the front of the traditional cream-coloured plastic case is a three-piece slide-out catch tray, and on the top is a paper feeder for up to 100 sheets of A4 paper - or lesser amounts of special paper.

The Color 800 connects to a PC via a parallel cable and getting it up and running is as simple as inserting the driver disk. The print quality is difficult to criticise. On the recommended 'photo-quality' paper (£12.33 per 100 A4 sheets) the results are outstanding. Colours are vibrant and photographic images look realistic. Printed text is also good, down to the smallest font sizes, but on plain paper it doesn't quite come up to laser printer standard.

There's very little to complain about when it comes to print speed either. Epson's quoted output of a 'laser-fast' 8ppm (pages per minute) in black and white is certainly optimistic, but the sustained 6ppm it managed during our

tests is still very impressive. The speed of colour output varied enormously and depended on the resolution and coverage. A basic page with a few small images and some colour-splashed text took around a minute, but we were kept waiting for nearly four-and-a-half minutes for a full A4 image at the highest resolution. **Best-selling products aren't necessarily the best products, but we're glad to report that Epson's Stylus Color 800 is just that. At this price level its output quality is currently untouchable.**

£432.40 (inc VAT)

Epson: 01442 61144

Epson Stylus Color 800					
Performance	★	★	★	★	★
Features	★	★	★	★	★
Build quality	★	★	★	★	★
Value for money	★	★	★	★	★
Overall	★	★	★	★	★

## Hewlett-Packard DeskJet 820Cxi



Finding an alternative to recommend in this category is not easy because the best-selling Epson's Stylus Color 800 is simply the best in its class. However, of the many inkjet printers that have passed through our European Labs in the past year, Hewlett-Packard's DeskJet 820Cxi stands out as being one of the finest examples.

This printer is quite bulky and weighs in at a hefty 6.5kg, but it's not overbearing when it's sitting next to a desktop PC. Prominent at the front of the machine is a rather unsteady paper tray

that can hold up to 150 sheets of A4 paper; and above this is the paper catch tray. This whole unit can be detached in order to give you access to the roller mechanism, should you experience a paper jam. In all these respects, the 820Cxi is much like any other of the printers that make up Hewlett-Packard's DeskJet range, but the curvy design means it's more aesthetically pleasing than earlier models.

If you raise the cover, the print carriage automatically slides into view to reveal a pair of ink cartridges. Like many other inkjet printers on the market, the 820Cxi employs both a three-colour (cyan, magenta and yellow) ink cartridge and a separate black ink cartridge. This is, in fact, an important consideration if you intend to do a lot of text printing, as you will likely be using more black ink than colour.

As far as inkjet printers go, the HP 820Cxi is reasonably fast. Using our text test document the printer averaged 2.8 pages per minute (ppm) in 'Best' quality mode, and a swift 4.6ppm in the 'EconoFast' mode.

EconoFast is Hewlett-Packard's ink-

### Canon BJC-620

A match for all but the very best inkjet printers. Has a cost-efficient four-cartridge system, so coloured inks can be replaced individually.

£339.58 (inc VAT)

Canon: 0121 680 8062

### Epson Stylus Photo

This produces faithful reproductions of photographic images, with the aid of its piezo printhead. Capable of a true resolution of 720x720dpi.

£480.58 (inc VAT)

Epson: 01442 61144

saving mode and it uses approximately half as much ink as is used in the Best mode. However, the quality of output in EconoFast mode is nothing more than adequate, and it is really only suitable for draft printing.

The speed taken to print graphics was less impressive, with the 820Cxi labouring for nearly four minutes over our test page.

**The Hewlett-Packard DeskJet 820Cxi produces crisp text prints and its graphics output is also good. However, there are some better colour inkjet printers on the market being sold at the same price level.**

£415.95 (inc VAT)

Hewlett-Packard: 0990 474747

Hewlett-Packard DeskJet 820Cxi					
Performance	★	★	★	★	★
Features	★	★	★	★	★
Build quality	★	★	★	★	★
Value for money	★	★	★	★	★
Overall	★	★	★	★	★

## Canon BJ-30



The top-selling BJ-30 is the successor to the similarly successful Canon BJ-10, the model that moved the portable printer market into high gear. It also happens to be one of the most compact inkjet printers you can buy, being not much bigger than a small box of chocolates. However, raising the cover reveals not a selection of soft centres but a small LCD (liquid-crystal display) status panel and several control buttons; a

second cover swings forward to give access to the ink cartridge.

The ink cartridge is also exceptionally small, which naturally means it holds less ink than a standard-sized cartridge. Canon estimates that a single cartridge contains sufficient ink for around 170 pages at a coverage of five percent, which is certainly reasonable considering the size, but you'll probably want to keep a couple of extra cartridges handy in case of emergencies.

An optional battery pack is available, and this provides enough power for around 180 pages of printing on a single charge. With the battery fitted the BJ-30 printer weighs a little over 1.4kg so, although you wouldn't want to lug it around in a briefcase all day, it's unlikely to put too much of a strain on your carrying arm.

As far as speed is concerned the BJ-30 is no race-winner. On text-only pages it can manage about 2ppm (pages per minute), but graphics output churns out at a considerably slower rate. The quality



of text is above average for a portable printer although - as with its speed - the BJ-30 is less impressive when translating images to paper.

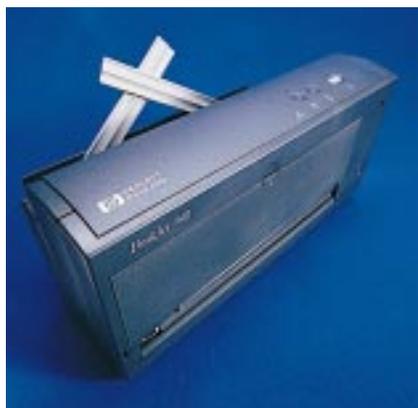
A final point that has probably contributed to the BJ-30's status as a best-selling portable printer, is the fact that you can buy it in one of two colours: desktop-PC cream or notebook charcoal. **Deservedly a best seller in the portable printer sector, the BJ-30 manages to be compact without sacrificing too much by way of quality.**

£198.58 (inc VAT)

Canon: 0121 680 8062

Canon BJ-30					
Performance	★	★	★	★	★
Features	★	★	★	★	★
Build quality	★	★	★	★	★
Value for money	★	★	★	★	★
Overall	★	★	★	★	★

## Hewlett-Packard DeskJet 340Cbi



Laid flat on its back Hewlett-Packard's DeskJet 340Cbi printer is not much bigger in any one dimension than the Canon BJ-30 (see above), though it is a good bit heavier. However, unlike its popular rival, the DeskJet stands vertically on the work surface giving it a smaller footprint.

Unfortunately, while it saves desk space, there is a problem with this design. Unless you attach the optional paper feeder, pages have to be manually fed into the rear of the machine - and this is every bit as awkward as it sounds.

With the paper feeder hooked on the back the 340Cbi can hold and automatically feed up to 30 sheets of A4 paper. Sensibly, this feeder has been designed so that it can be folded flat; however, even then it extends around an inch from the rear of the printer. When it's attached - which is actually necessary for anything more than extremely occasional printing requirements - the DeskJet printer weighs in at an arm-stretching 2.5kg.

A major advantage the DeskJet 340Cbi has over Canon's BJ-30 is that it can print in colour - if you insert a colour ink cartridge. However, because of the DeskJet 340Cbi's size you have to be content with a three-colour cartridge, and this means that if there are any black areas within your colour output they will appear more as a very dark brown than true black.

HP's 340Cbi printer also includes an infra-red interface, enabling owners of IrDA-compliant notebook and palmtop computers to print without the need for a cable.

The DeskJet's print quality is of a higher standard than that which emerges



### Canon BJC-70

But for its ability to print in colour and its mauve front cover, the BJC-70 is identical to the BJ-30. It uses a three-colour ink cartridge and a separate black cartridge.

£233.83 (inc VAT)

Canon: 0121 680 8062

### Citizen PN60

The PN60 360x360dpi, colour or mono printer, weighs 700g with its NiCad battery fitted.

£339.58 (inc VAT)

Citizen: 01 753 584111



from Canon's BJ-30. The text is clearer and the graphics have better definition and, of course, the option to print in colour is a real bonus. In addition, the 340Cbi's black ink cartridge is much larger than the one inside Canon's BJ-30 - at least double the size - and, not surprisingly, this results in a much longer life, which Hewlett-Packard estimates as around 500 A4 pages at five percent coverage.

**The DeskJet 340Cbi produces very good text and graphics output in both monochrome and colour. Unfortunately, it's just that bit too heavy to be viewed as comfortably portable.**

£260.85 (inc VAT)

Hewlett-Packard: 0990 474747

Hewlett-Packard DeskJet 340Cbi					
Performance	★	★	★	★	★
Features	★	★	★	★	★
Build quality	★	★	★	★	★
Value for money	★	★	★	★	★
Overall	★	★	★	★	★

100  
BEST SELLERS

## Eizo FlexScan F56



The falling price of 17in monitors has boosted their sales over the past couple of years. In fact, their popularity is such that the best-selling one of all is a 17in model – the Eizo FlexScan F56.

Windows 95 works at its best on a 17in monitor. The extra screen space makes a resolution of 1,024x768 a realistic proposition, which means you can see more of your spreadsheet or DTP layout, or have two windows displayed side by side.

Interestingly, the F56 isn't the cheapest monitor around. It is, however, one of the best. As far as 17in monitors go, the F56 is quite compact and its squat, stubby case makes siting it less of a problem than usual. It's also relatively svelte for a 17in monitor, weighing in at just 19.5kg.

Unfortunately, the viewable diagonal of just 15.6in is equally lean when compared to other monitors with 16in. Thankfully, image quality more than makes up for this and the F56 is one of the sharpest monitors around. Focus is absolutely pin-sharp all over with excellent contrast and rich colours.

The F56 also shines when it comes to getting a true image. Press a button marked 'auto' and the image is automatically adjusted for the current resolution. This isn't perfect and the image doesn't quite fill the screen but this is achieved with the other controls, which are the best we've ever come across. The concept is simple – a single four-way button controls everything. The button moves

up and down, left and right for quick adjustment of brightness and contrast or it can be pressed to display a menu on screen. From this point on, every aspect of the image can be adjusted and the logical menu arrangement makes it a very straightforward process.

As well as the usual D-Sub input, the F56 has BNC connectors, which means it can connect to Macs as well as PCs – or both simultaneously.

**This isn't the cheapest monitor around but the image quality is superb. The ViewSonic offers a comparable display though, at a much lower price.**

£703.83 (inc VAT)

Eizo: 01483 719500; www.eizo.com

### Eizo FlexScan F56

Controls	★	★	★	★	★
Image quality	★	★	★	★	★
Value for money	★	★	★	★	★
Overall	★	★	★	★	★



### Sony CPD-100SFT

This 15in monitor supports a maximum resolution of 1,024x768 at a steady refresh rate of 87Hz, or a more usable 800x600 at 112Hz.

£292.58 (inc VAT)

Sony: 0990 424424; www.sony-cp.com

### Nokia 449Xa Multigraph

A 15in monitor with stereo speakers, a 13.2in viewable diagonal which seems larger. A refresh rate of 80Hz is supported at 1,024x768.

£309 (inc VAT)

Nokia: 01793 512809; www.nokia.com

## ViewSonic GT775



When we tested a group of 17in monitors in the October issue of *What PC?*, the one that impressed us most was the ViewSonic GT775. Based around an aperture grill screen (called a SonicTron in this case, rather than Trinitron), we felt that the GT775 offered the best value in terms of both price and quality.

All monitors are well known for having a viewable diagonal much less than the quoted screen size. The GT775 fares better than many though, having a full viewable 16in out of its 17in tube. At

20.5kg, it's also one of the lighter 17in monitors around and a smooth stand makes it easy to get the screen at a comfortable angle.

Monitors which are based on aperture grill technology have two thin wires running across the screen and the GT775 is no exception. The wires hold a fine mesh in place behind the screen and, although they are barely noticeable in day-to-day use, some people do find them irritating.

Fortunately, this minor distraction becomes irrelevant once you see the GT775 in action and image quality is nigh on perfect. Focus is even across the screen and colours are both clear and vibrant. High refresh rate support gives a rock-solid image and 1,024x768 at 106Hz is a pleasure to use. The maximum resolution is actually 1,600x1,200 and the maximum refresh rate is 160Hz at lower resolutions.

Image quality does, of course, go hand in hand with screen controls and the GT775 is well equipped in this department. On-screen menus make image adjustment straightforward, though it can be a trifle tedious to step

through menu after menu to get to a required option.

The controls are comprehensive though, ranging from the usual brightness, contrast and position, to such things as image rotation and convergence adjustment. The only absence is a control of moiré but since the screen doesn't suffer from this, it's no problem.

**The GT775's superb image quality, competitive price and three year-warranty (the first year of which is on site) all add up to a great deal. It is excellent value for money.**

£527.58 (inc VAT)

ViewSonic: 0800 833648

www.viewsonic.com

### ViewSonic GT775

Controls	★	★	★	★	★
Image quality	★	★	★	★	★
Value for money	★	★	★	★	★
Overall	★	★	★	★	★



# US Robotics Sportster Flash



If you want to send e-mail or get on the Internet, you'll need a modem to send information from your PC down your phone line. With the price of phone calls these days, it's worth getting the fastest modem you can afford. The quicker you can download information from the Web, the faster things will display - and the lower your phone bill will be.

The fastest official standard for modem speeds is called V.34plus. This

covers modems capable of transmitting and receiving data at up to 33.6Kbits/s: in perfect conditions, this translates to a megabyte in just over four minutes. This still isn't fast enough for a lot of people though, and modem manufacturers have been doing their best to speed things up. US Robotics has come up with X2 technology which, as its name suggests, allows you to download information from the Internet at up to 56Kbits/s - twice the V.34 standard of 28Kbits/s.

To use X2, you need to be signed up with an Internet Service Provider (ISP) which supports it, and have a compatible modem. The Sportster Flash is the latest and best-selling version of US Robotics' popular range of desktop modems, and although it's not cheap, its price reflects its quality and its manufacturer's reputation.

Straight out of the box, it's a V.34plus modem, the fastest current standard and compatible with every ISP. What makes it special is that it contains Flash ROM, hence its name. If your ISP supports X2, you can download a software upgrade,

available now from US Robotics' Web site, and turn your Flash into a really speedy 56Kbits/s modem.

A rival to X2, 56flex, is also available. In the future, the ITU (International Telecommunications Union) is expected to launch an official 56Kbits/s standard, but this won't make your Sportster obsolete. The miracles of Flash technology will allow you to upgrade to this as well. **The Sportster Flash is solidly built and a good performer. Its future upgradability makes it a safe investment too.**

£199 (inc VAT)

3Com/US Robotics: 01734 228200

### US Robotics Sportster Flash

<b>Build quality</b>	★	★	★	★	★
<b>Features</b>	★	★	★	★	★
<b>Ease of use</b>	★	★	★	★	★
<b>Value for money</b>	★	★	★	★	★
<b>Overall</b>	★	★	★	★	★

# Lasat Safire 336 Voice



The Safire's most noticeable features are its size and colour. It's bright blue, and even though it's twice as big as the last Lasat modem we looked at, it's half the size of the US Robotics Sportster. Apart from the blue, its angular features make it perhaps the most stylish modem we've seen.

As its name implies, it's a V.34plus modem, transferring data at 33.6Kbits/s. This is more than fast enough to surf the Internet and help speed up downloads of pictures or software. What's more, it has voice capabilities, meaning that you can

use it as an answerphone or voicemail system, with its appetite for messages limited only by the size of your hard disk. And, like many modems these days, it can be used as a fax too.

It's small - the supplied power supply dwarfs it - but the Safire 336 Voice still comes with a full complement of ports. The serial connector and telephone line socket are essential, the pass-through connector welcome as it allows you to daisy-chain your phone to the back of the modem. It even has an on/off switch, something that was sadly lacking from the previous generation.

Usefully - and unusually - the Safire can transmit voice and data simultaneously. This may not sound like much of an advantage, but if you're sending a file to someone, you can chat to them without having to wait for the file to finish transmitting - useful even if you just want to confirm that the data has arrived. Alternatively, it makes co-operative (or abusive!) game-playing possible from the other side of the country.

If you want to get the fastest modem you possibly can, then it might be worth looking at the Safire 560. Recently

launched by Lasat, it supports 56flex (the rival to US Robotics' X2 technology - see review above), and Lasat is committed to offering an upgrade to the ITU (International Telecommunications Union) 56k standard as soon as it is issued. However, if your ISP doesn't support either of the current 56k technologies, or if you're happy to be using the fastest official standard, the Safire 336 is equally stylish and cheaper.

**The Safire 336 is a welcome development from its predecessor, and still good value. If you don't want a conventional-looking desktop modem, this is almost your only option.**

£163.33 (inc VAT)

Lasat: 01270 886223

### Lasat Safire 336 Voice

<b>Build quality</b>	★	★	★	★	★
<b>Features</b>	★	★	★	★	★
<b>Ease of use</b>	★	★	★	★	★
<b>Value for money</b>	★	★	★	★	★
<b>Overall</b>	★	★	★	★	★



## Psion Dacom Gold Card Global

With a GSM kit this PC Card modem can be used with a landline or with any GSM mobile phone.

£245.88 (inc VAT)

Psion Dacom: 01908 261686

## Hayes Accura 336 Message Modem

This is compatible with V.34plus, can act as an answerphone, and all at a very fair price.

£149 (inc VAT)

Hayes: 01252 775577

100  
BEST SELLERS

# Matrox Millennium II



**M**atrox has long been the one to follow in the graphics market, and the Millennium is still at the top of the best sellers list. The current model is the mark II, but the original is still available and considered the standard by which others are judged.

The Millennium was the first display card to use WRAM (Window RAM), a memory system designed to improve performance under graphical operating

systems such as Windows. Version II is available in either 4Mb or 8Mb WRAM configurations, and can be upgraded to 8Mb and 16Mb respectively.

Matrox uses its own custom-designed 64-bit graphics engine, the MGA, as opposed to the standard chips on most other products. The latest revision boasts AVI software video acceleration, and offers basic 3D functions such as Gouraud shading, perspective correct texture mapping, and Z buffering. The chip can't complete with the latest 3D games accelerators, but it is designed to help with applications such as CAD. The hardware side of things can also be upgraded to include frame capture and hardware MPEG playback.

Resolutions on offer from the MGA processor range from standard VGA through to a maximum of 1,920x1,200 pixels at a rock-steady screen refresh rate of 76Hz. Far more widely used modes include 800x600 in 16.7 million colours, and 1,024x768 in 65,000. The bundled PowerDesk Control Panel will also allow

you set up a 2,048x1,536 'virtual' desktop that scrolls around the screen.

The Millennium II comes with optimised drivers for Windows 3.11, 95, NT 4.0 and IBM's OS/2, and software for use with CAD applications such as Microstation. In addition, Picture Publisher, Simply 3D and Kai's Power Tools 3 are bundled at present.

**The original Millennium was the graphics card to beat, and mark II has taken its place as the number one choice. It's not the cheapest around, but you're unlikely to meet a dissatisfied owner.**

£164 4Mb; £234 8Mb (both prices inc VAT)  
Matrox: 01793 441144

Matrox Millennium II					
Build quality	★	★	★	★	★
Features	★	★	★	★	★
Value for money	★	★	★	★	★
Overall	★	★	★	★	★

# Videologic GraftixStar 600



If the Matrox Millennium II graphics card is a wee bit out of your price range, and you don't need the basic 3D features offered by the MGA chip, then the GraftixStar 600 is a worthy alternative. Produced by home-grown British company Videologic, it offers top 2D performance under Windows and DOS at a reasonable price.

The engine at the heart of Videologic's GraftixStar 600 is a Tseng Labs ET6000 128-bit graphics processor. Tseng Labs has long been a leader in its field, and its previous chips were noted

for their exceptional speed under DOS. The ET6000 doesn't disappoint with its lightning-fast acceleration, and includes video acceleration and scaling so that you can play back those postage-sized clips at full screen without them becoming too blocky.

As with the Matrox card, Videologic has chosen to use an innovative memory architecture to speed up its displays. The 600 comes with 2Mb of MDRAM (Multi-bank DRAM), which provides a wide memory bandwidth and allows the graphics processor to work with data almost as fast as it could with more expensive VRAM.

The practical upshot of all this is that you get a fast graphics card without paying through the nose for it. The memory can be upgraded to 4Mb for £53.

With the standard 2Mb the card supports displays from VGA through to 1,600x1,200 pixels in 256 colours. Lower modes offer more colours, with 1,024x768 in thousands and 16.7 million at 800x600. All modes except the maximum can be refreshed at high levels for a flicker-free image, as the card comes with a 135MHz RAMDAC.

**STB Velocity 3D**  
This uses the S3 Virge VX 2D/3D chipset. It has 4Mb of EDO VRAM, and resolutions up to 1,600x1,200.  
£152.75 4Mb; £223.25 8Mb  
STB: 0181 897 1003

**ATI Video Xpression**  
Outstanding performer from graphics giant ATI, with optional TV tuner and MPEG modules. Offers 2Mb of DRAM and a maximum resolution of 1,280x1,024 pixels.  
£57.58 (inc VAT)  
ATI: 01628 533115

Videologic currently bundles the 600 with drivers for Windows 3.1, 95, OS/2 2.1, OS/2 Warp, Windows NT and AutoDesk AutoCAD.

The Smart Tools Control Panel also includes a virtual desktop facility, and can be used to define a number of custom resolution and colour settings that can then be switched to on the fly.

**The Videologic GraftixStar 600 is a great graphics accelerator that performs well with both Windows 95 applications and DOS-based games. Ideal for the typical home user. It also comes with a five-year warranty.**

£81 RRP;  
Upgrade to 4Mb £53 (both prices inc VAT)  
Videologic: 01923 260511

Videologic GraftixStar 600					
Build quality	★	★	★	★	★
Features	★	★	★	★	★
Value for money	★	★	★	★	★
Overall	★	★	★	★	★





## Sound Blaster AWE64 Value



With Creative Labs sound cards outselling others by four to one, it's no surprise to find one at the top of the best seller list. The Sound Blaster AWE 64 Value is the junior member of a trio, the others being the standard AWE64 and the AWE64 Gold.

The AWE64 Value is used by Windows to provide the sound effects and music used in programs, videos and games. Most software developers write

specifically for Creative Labs cards, so you can be sure the AWE64 will work with all your programs, whether they are DOS-based games or conventional Windows applications. The card is also backwards-compatible with earlier sound cards, ensuring it will work just as well with older programs.

The 64 in the name refers to the number of musical instrument sounds, or voices, which can be reproduced at the same time. Half of these voices are built into the card's hardware using a conventional wavetable - a bank of stored recordings of the sounds produced by real instruments. Others are produced by WaveGuide modelling. The effect is very natural-sounding compositions.

If you want to use your sound card for more than reproducing the effects built into other programs the Value 64 card incorporates SoundFonts. Using the supplied Vienna SF software you can record any sound and turn it into a unique musical instrument stored as a SoundFont. The 512Kb of memory pro-



vided for this purpose can be extended by adding SIMM memory modules.

Connectors are provided for line in and out, microphone input and CD audio input. There's also a combination socket for use as a MIDI interface or joystick port.

**Why buy a copy when you can buy the real thing for less than £80? However, the WaveGuide synthesis of the AWE64 Value demands a Pentium PC, so 486 owners should consider buying last year's best seller, the AWE32.**

£79.99 (inc VAT)  
Creative Labs: 01734 344322

Sound Blaster AWE64 Value					
Performance	★	★	★	★	★
Features	★	★	★	★	★
Sound quality	★	★	★	★	★
Value for money	★	★	★	★	★
Overall	★	★	★	★	★

### Yamaha SW60XG

A supplementary card, which occupies its own ISA expansion slot, and adds superior wavetable synthesis to older FM sound cards.

£149 (inc VAT)  
Et Cetera: 01706 228039



### Aztech Sound Galaxy WaveRider Pro 32-3D

With 32-voice wavetable synthesis and Sound Blaster emulation this provides everything most users need.

£39.95 (inc VAT)  
Aztech: 01734 814121

effects can be applied independently to each track.

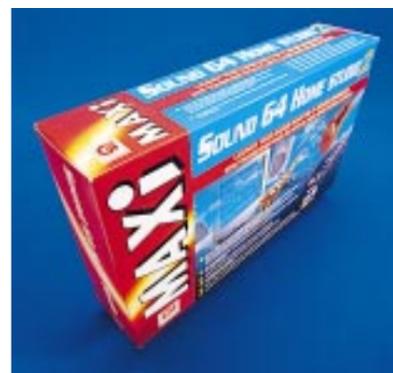
There's little point in buying a sound card like this if all you want is good audio playback from your games and Windows programs, but for the musician or budding recording engineer the Home Studio emulates the facilities of a whole rack of expensive recording and mixing equipment in one low-cost package.

**A sound card and software package for enthusiasts. It offers Sound Blaster compatibility for standard applications and sophisticated audio playback and recording facilities for those who want to create their own music.**

£139.99 (inc VAT)  
Ubi: 0181 944 9000

Ubi Sound 64 Home Studio 2					
Performance	★	★	★	★	★
Features	★	★	★	★	★
Sound quality	★	★	★	★	★
Value for money	★	★	★	★	★
Overall	★	★	★	★	★

## Ubi Sound 64 Home Studio 2



Ubi's Sound 64 Home Studio 2 is based on the MaxiSound 64 card, which was awarded Best Buy in our group test of sound cards in March this year. Since then, prices of sound cards have fallen and the MaxiSound 64 is now available with the Home Studio bundle for less than the March price of the sound card alone. The Home Studio includes MIDI cables and a microphone as well as some fairly high-powered software for creating and editing your own sounds.

The card has 64 wavetable voices for

playing back orchestral MIDI scores and these produce a level of realism at least on a par with that of the best-selling Sound Blaster AWE64 Value (above). Two separate stereo outputs provide true positional audio, and there's a separate surround-sound output socket for simulated stereo effects.

Many of the advanced features of the sound card can be applied through the Maxi FX program, which is a real-time special effects control centre for customising incoming audio from any source. This enables you to do things such as make a speech sound as if it was recorded in a vast hall, and even modify the built-in sounds of your favourite game and save your customised settings for future sessions.

The principal software component of the Home Studio bundle is Quartz AudioMaster SE 2.0, an 8-track digital audio recording studio. It can be used to create and mix both MIDI and wave audio, so you can record voice accompaniments to MIDI backing tracks and save them direct to disk. Eight stereo playback tracks can be mixed onto a single stereo recording track, and any special



## Hewlett-Packard ScanJet 5p



Chances are, at some point you've wished you could get a picture into your computer. Whether it's a child's painting or a photograph, getting it on screen lets you edit it, put it up on the Internet or even e-mail it to friends - all without harming the original. Getting it there can be a problem though, and that's where scanners come in. They work like half of a photocopier, except that most can now handle colour as well

as black and white, and come in three main types.

Although they've traditionally been expensive, flatbed scanners provide the highest quality and are now becoming more affordable; Hewlett-Packard's consumer products are no exception. Although the 4c, last year's best-seller, is still available, the 4p, aimed at the home market, has been replaced by the 5p.

It's most notable for its ease of use. Pressing the green button on the front of the 5p will trigger a scan; much simpler than wading through software options to do the same thing. If you want finer control of your scan, you can set it up through software as with other scanners.

The 5p's vital statistics are quite respectable. It has an optical resolution of 300dpi, but the supplied software can interpolate - or guess at the intervening areas - with enough accuracy to give an effective resolution of 1,200dpi. The more dots, the more detail can be recorded and the better the final image.

The 5p is a 24-bit device, so can dis-



tinguish between 16.7 million colours. This is more than enough to fool you into thinking you are seeing a continuous tone, as on a photograph. Detailed, realistic-looking scans are produced.

Despite the detail it's capable of, the 5p is fast and, because it's a SCSI device, there's little hanging around waiting for the data to be transferred to your PC.

**The 5p is well-suited to beginners. It's fast and good value, and produces competent and detailed scans. There are, though, better deals available.**

£233.83 (inc VAT)  
Hewlett-Packard: 0990 474747

Hewlett-Packard ScanJet 5p					
Build quality	★	★	★	★	★
Performance	★	★	★	★	★
Ease of use	★	★	★	★	★
Value for money	★	★	★	★	★
Overall	★	★	★	★	★

### Visioneer PaperPort Vx

Popular if you don't need a flatbed scanner. If you want to scan in colour, the Strobe is now available.

£151.58 (Vx); £233.83 (Strobe)  
Visioneer: 0800 973245



### Umax Astra 600S

A 30-bit scanner for a budget price. Its optical resolution is 300x600dpi which can be interpolated up to 4,800x4,800dpi.

£199 (inc VAT)  
IMC (distributor): 01344 871329

## Epson GT-5000



In our June 1997 issue, we awarded the Epson GT-5000 the Best Buy award in our scanners group test and gave it one of our hardware awards; it was, and still is, that good. It's neatly styled although it breaks no new ground: a simple white lid lifts up to reveal a scanning surface with the usual measurements marked along the sides and plenty big enough for an A4 sheet.

Its optical resolution is 300x1,200dpi (dots per inch); this can be interpolated by software to 2,400x2,400dpi. Usefully, there's a magnified preview scan, which

enables you to zoom in on even the most detailed image, as well as a choice between a 'one-touch' express scan, or one that lets you choose all the options.

Like the ScanJet 5p, the GT-5000 uses 24 bits of memory per pixel, allowing it to register over 16 million colours. At this price especially, there's no real advantage in going for a scanner that claims to register 30-bit colour - although the human eye can theoretically benefit from the billion colours that can be scanned, in real terms they translate into an enormous amount of data for the scanner and the computer to handle.

The GT-5000 scans reasonably quickly - our tests back in June showed that it could handle a full-colour A4 page in under two minutes - and combines this with excellent image quality. The optional SCSI interface card supplied with our machine proved easy to install, improving the machine's speed. If you ever want to use it with another PC though, the fact that it can also function as a parallel port device will be welcome: it is slower, but the portability is convenient.

To round out the package, the



GT-5000 comes with a well thought-out software bundle. Optical character recognition (OCR) is dealt with by a cut-down but perfectly functional version of Textbridge, while Corel has supplied both PhotoPaint 5 and Corel Draw 4; although this is an old edition, in its day it was the market-leading graphics package and is still excellent. What's more, Epson has included Presto PageManager which allows you to organise your scanned documents.

**The GT-5000 is possibly the best scanner you can get for the money. If you want high-quality images on your PC and it fits your budget, get it.**

£386.58 (inc VAT)  
Epson: 0800 289622

Epson GT-5000					
Build quality	★	★	★	★	★
Performance	★	★	★	★	★
Ease of use	★	★	★	★	★
Value for money	★	★	★	★	★
Overall	★	★	★	★	★