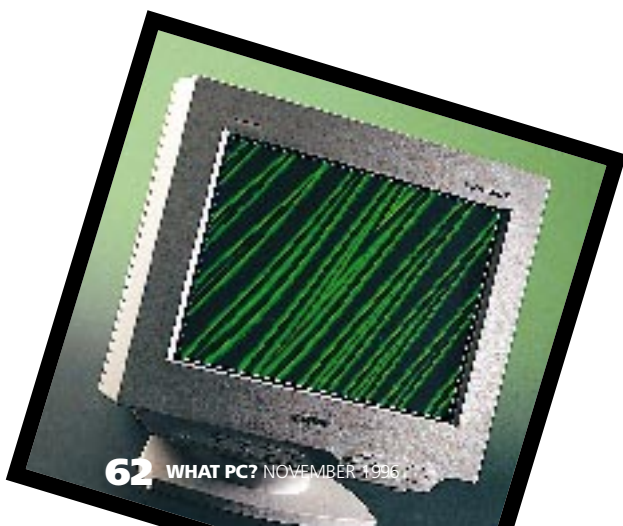# People's choice

We name the top-selling hardware and software products of the past year. In addition, our regular team of reviewers suggest alternative buys well worth considering

Welcome to *What PC's?* annual best sellers issue. This is where we review and rate the top-selling products to provide a comprehensive guide to the current state of the market. In addition to the best sellers we also include our own alternatives to produce a balanced, detailed buyer's guide.

This year there are 28 categories, split between PCs, software and peripherals. Each consists of four products – the best seller, two other good sellers and the *What PC?* alternative. We've used data from top market research companies including Romtec, Dataquest and Context, as well as our own knowledge of the products most relevant to *What PC?* readers, to identify the top products. Even so, a best seller isn't necessarily the best product, which is why we have included our alternatives.

Things change rapidly in the computer market, and some top-selling products may have been updated or replaced by the time you read this. In these cases we've made every effort to report on the newer versions where possible.

PCs

When it comes to illustrating the pace of change, a comparison with the 1995 best sellers issue is informative. Last year's PC categories were largely made up of 486-class machines, but these have now been completely replaced by Pentium systems. Furthermore, the original 60MHz, 66MHz and 75MHz Pentium processors are themselves all but history, and the P100 is now the entry-level chip.

Whereas VESA local bus machines were still current last year, the VESA bus has, as predicted, given way to the technically superior Intel-designed PCI (peripheral component interconnect) bus. These changes, along with a general revision of basic motherboard technology, have resulted in a much-improved PC. Memory access has been speeded up, the movement of data between the various components is now better organised and faster than before and the interface with the hard disk has also been updated and enhanced.

If you are running Windows 95, there is a further element of improvement, namely plug'n'play. The new motherboard design is much more closely coupled to Windows than previous versions, which allows Windows to react automatically to changes in configuration. If you change your graphics card or add a modem, Windows should detect the new device and reconfigure itself accordingly. In point of fact this doesn't always happen, but things have still moved a big step closer to true plug'n'play.

Apart from the greatly increased power of an entry-level system, the other major changes in the last year have been in the prices of memory and hard disks. This is extremely fortuitous as the increasing popularity of Windows 95 means that more and more people need fast Pentiums with a decent amount of RAM and hard disk space to cope with the demands of the software. Machines with 8Mb and even 16Mb are now becoming common, often with hard disk sizes of over 1Gb (gigabyte, or a thousand megabytes).

Best of all, this hasn't sent prices soaring. On the contrary, the cost of typical entry-level and mid-range machines has either stayed roughly the same or fallen, despite the improvement in specifications.

Broadly speaking, all these developments also apply to notebooks. Compared to last year's crop, the current generation of portables are faster, better specified in terms of memory and disk storage, and either cheaper, or at least no more expensive, than their predecessors. Here though, there have been other changes. Multimedia, in the form of integrated audio processing, built-in stereo speakers and either a fixed or modular CD-ROM drive is becoming increasingly common in notebooks. A particularly popular option seems to be the modular build, where the floppy drive can be removed and replaced with the CD-ROM drive and sometimes a choice of other things as well, such as a second battery pack or hard disk.

The other major evolution has taken place in screen technology. A year ago colour was widespread, typically in the form of dual-scanning passive-matrix LCD displays running at the standard VGA resolution. Since then, the default resolution has increased to SVGA (this is from 640x480 dots wide by lines high to 800x600), greatly improving the usability of the average portable by increasing the Windows desktop area it displays and giving you more room to work. At the same time, the diagonal size of notebook screens has increased from 9.5in to 10.4in, with 11.4in and even 12.1in panels becoming increasingly common. Already Toshiba has released a notebook with a 1,024x768 resolution screen, and other manufacturers will doubtless follow suit. Furthermore, the once discouraging cost of active-matrix or TFT (thin film transistor) screens has fallen, bringing the improved brightness and wider viewing angles offered by this approach within the reach of more and more users.

As a final word on PCs, it was interesting to see that despite good sales through outlets like PC World,

the retail channel is still relatively expensive. We ran into a lot of problems trying to find complete retail-sold systems with VAT-inclusive price tags of under £1,000, which is why most of the machines in the sub-£1,000 category are from direct vendors. While we're on the subject of price, we at *What PC?* aim as far as possible to provide only the VAT-inclusive cost of products so that you know exactly where you stand – what you see is what you pay.

Software

The world of software is still undergoing the transition from 16- to 32-bit as developers re-engineer their applications to take full advantage of Windows 95. 32-bit software runs faster but also takes up more space in memory, which is why the minimum workable configuration for a Windows 95 machine is 8Mb, preferably more.

The trend begun several years ago of larger companies buying smaller ones, and each other, continues. This produces some impressive concentrations of expertise – notably at Microsoft, it must be said – but it also reduces diversity and alternatives to the major applications. Already the pressure to adopt Microsoft Office is noticeable, and this cannot be good for innovation in the business applications market as a whole.

There's a definite move toward 'Office compatibility' within the industry, with non-Microsoft products adopting the look and feel of the Microsoft Office applications, which in turn set out to make the best of the features such as long file-names and document-centred organisation offered by Windows 95. On current evidence the immediate future is looking decidedly Office-shaped.

It's also undoubtedly looking fat, with applications getting bigger and bigger. Thanks to cheaper memory and hard disks this tendency can continue unchecked, at least for the time being, and may possibly be the inevitable consequence of software development. Once the functional limits of, say, current word processors have been reached, no doubt developers will start experimenting with disk-filling goodies like 3D and motion video help systems.

Printers and peripherals

Peripherals haven't stood still either, with significant price reductions changing the shape of the laser printer market from its once business-only orientation to encompass the home as well. Affordable 300dpi

and even 600dpi lasers are now available in sufficient numbers to give inkjet manufacturers serious competition.

Although lasers are cheaper to run than inkjets and offer better mono print quality, the inkjet is still the only low-cost colour printer technology on the market. This considerable strength has been exploited vigorously by inkjet manufacturers and the quality of colour inkjets has improved dramatically, but again without driving prices up.

Modems have really taken off in the last twelve months as demand jumped following the sudden public interest in all things Internet. Once expensive specialist products, high-speed modems are now selling as relatively cheap accessories to home PCs, or even being included as part of the package by some suppliers.

Mass sales of multimedia machines into the domestic market have brought down the prices of sound cards and CD-ROM drives, while at the same time driving the specifications of each rapidly forward. The demand for image capture systems both for DTP and Web page authoring has produced a similar effect on scanners, which, like modems, have gone from expensive specialist tools to cheap but highly capable accessories within the reach of most buyers. ●

Microsoft Word 7

The world's long-standing favourite, Microsoft Word for Windows, has kept its position by a careful balancing of powerful features, ease of use and writing aids.

Taking the last first, Microsoft pioneered what it called 'Intellisense' – now imitated by Lotus and WordPerfect under different names. Version 6 introduced such comforts as automatic capitalisation of the start of sentences, insertion of correctly-handed quote marks and the ability to be taught – and automatically correct – an individual's most

common typing errors, such as 'teh' for 'the' or 'manger' for 'manager'.

Version 7 has built on this, with 'on-the-fly' spelling checks. Suspect words are underlined in red as you type them, and a right-click brings a list of suggested replacements and the option to ignore the word or add it to the user's dictionary. The search-and-replace facility now has a 'word form' replacement option – replace 'walk' with 'run', and it will also replace 'walking' and 'walked' with 'running' and 'ran'.

Power features include an outliner to view a document as collapsible headings and sub-headings, a macro language, and the facility to split a 'master' document into sections.

Page layout and graphic features are plentiful, with newspaper-style columns, tables, drawing tools and a 'WordArt' feature for tweaking text into fancy logos. The interface is completely customisable – you can create multiple button bars for specific tasks, alter the menus, and run macros from menus, buttons or keystroke combinations.

Despite a staggering feature list, Word doesn't intimidate and help is never far away. All buttons have a pop-up 'Tooltip' describing their function and dialog boxes have a 'What's this?' button to explain every

control and option. Wizards offer step-by-step guidance for common tasks and a 'Tipwizard' provides context-sensitive suggestions to speed up your work as you go.

A well-thought-out interface offering a wealth of powerful features, without intimidating newcomers.
○ £250 (incl VAT)
○ Microsoft: 0345 002000

Microsoft Word 7

Performance	★ ★ ★ ★ ★
Ease of use	★ ★ ★ ★ ★
Features	★ ★ ★ ★ ☆
Value for money	★ ★ ★ ☆ ☆
Overall	★ ★ ★ ★ ☆

WordStar 2
RUNNERS UP

WordStar 2 takes a DTP-like approach to WP, with all text and graphics contained in 'frames' that can be positioned precisely on the page. It hasn't seen much in the way of development and is starting to lag behind the other big names. Nevertheless, with macros, grammar-checking and sophisticated page layout, it's impressive for the price.
○ £49.99 (incl VAT)
○ Softkey: 0181 246 4000

WordPerfect 7

Now owned by Corel, this is very much for power users. Sophisticated graphics, spreadsheet-style tables and the ability to produce platform-independent electronic documents in both HTML (Web page) and Envoy formats keep it at the top. Doesn't have the ease of use of Lotus or Microsoft products, particularly for newcomers.
○ £233.82 (incl VAT)
○ Corel: 0800 973189

Lotus WordPro

Available in both 16-bit (for Windows 3.1) and 32-bit (for Windows 95 and NT) flavours, WordPro's emphasis is on teamwork. It supports e-mail, the Internet and Lotus Notes, and has the facility for team members to add their own colour-coded annotations to a group document.

It comes with five menu and ten spelling languages, a range of Smartmaster interactive templates, and extras include viewers for Screencam and Acrobat files. Despite all this it retails for less than half the Microsoft or WordPerfect heavyweights.

Document management is another strong point. Long documents can be arranged in sections, with tabbed dividers which serve both as labels and 'handles' to drag the sections around. Added to this is the facility to combine views of a document. Screen space permitting, you can have a row of tiny – but editable – thumbnails of multiple pages below the current full-size page.

As with MS Word, there's an 'on-the-fly' spell-checker – suspect words are highlighted immediately, although this doesn't quite match the convenience of Word as you have to go to the spelling controls at the top of the screen, rather than right-click for an on-the-spot menu. There are also plenty of 'Smart' features, such as handed quote marks and correction of common mistakes, but no capitalisation of sentences or 'word form' replacement.

In other aspects – notably tables and graphics, it outdoes Word both in features and ease of use. All the power features you would expect from a front-runner, such as outlining, macros, revisions and complex page layout, are included.

Ever innovative, Lotus has made some significant changes to working methods. A 'task sensitive' interface means that simple jobs

have a simple menu structure. The interface 'grows' with the user as progress is made.
Offering more for less, and available in both 16 and 32-bit versions, WordPro injects team spirit into word processing.
○ £100 (incl VAT)
○ Lotus: 01784 445808

Lotus WordPro

Performance	★ ★ ★ ☆ ☆
Ease of use	★ ★ ★ ★ ☆
Features	★ ★ ★ ★ ☆
Value for money	★ ★ ★ ★ ☆
Overall	★ ★ ★ ★ ☆

Microsoft Excel 7.0

The first successful Windows spreadsheet, Excel has always held on to its lead. Like any self-respecting, top-end spreadsheet, it is 'three-dimensional'. In two dimensions, it's possible to create a table showing, say, different categories of product sold each month. Adding a third dimension means you can introduce a third factor – location, for example.

The first two dimensions form the rows and columns of a single sheet, while the third forms 'layers' of stacked sheets, navigable by a set of tabbed dividers at the bottom of the screen. Hence it's possible to total a solid block of cells,

such as all the sausages you've sold in Solihull in September.

Microsoft's 'Intellisense', first seen in Word for Windows, has now migrated to Excel, with features such as automatic correction of commonly misspelled words and capitalisation of the start of sentences.

However, here we're dealing principally with numbers and tables, and there are several different 'smart' features designed to simplify use. One such is 'Autocomplete' – as you type an entry into a column, Excel will compare it with the entries above and 'fill in' after the first two or three letters. It's especially useful for typing in things such as product names, where the same text appears many times in the same column. Another 'smart' feature is 'Autocalculate' – for quick and temporary calculations on a range of figures; if you don't want to create a permanent formula on the sheet, highlight the range and the total will appear on the status line. Right-click on this and you can switch to see the average, maximum, minimum or number of items.

Charting is superb and simple, and advanced users have esoteric tools such as Pivot Tables, database query and an Analysis Toolpack. As with its suite sister, Word, Excel brims with user-friendliness. Tool-

tips, Wizards and Help panels all combine to make this highly complex program approachable.

Once again, Microsoft packs a great feature list into a logical, accessible interface.
○ £250 (incl VAT)
○ Microsoft: 0345 002000

Microsoft Excel 7.0

Performance	★ ★ ★ ★ ★
Ease of use	★ ★ ★ ★ ★
Features	★ ★ ★ ★ ★
Value for money	★ ★ ★ ★ ☆
Overall	★ ★ ★ ★ ★

Quattro Pro 7 for Windows
RUNNERS UP

Having migrated from Borland, via Novell, to Corel, this 32-bit version sees some innovation. The Formula Composer has 100 new functions, and Internet support means you can link a cell to a Web site or export a spreadsheet to HMTL format. Improvements to the interface, charting and data-filling show that Corel means business.
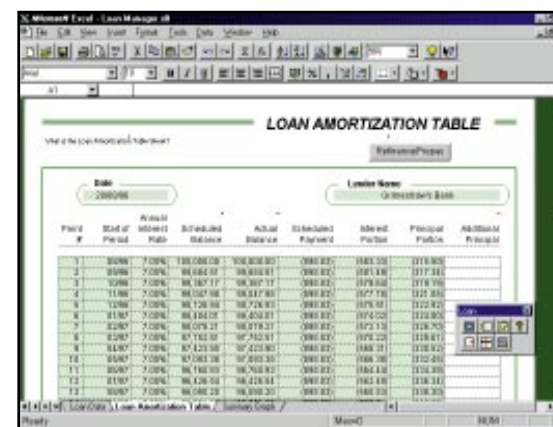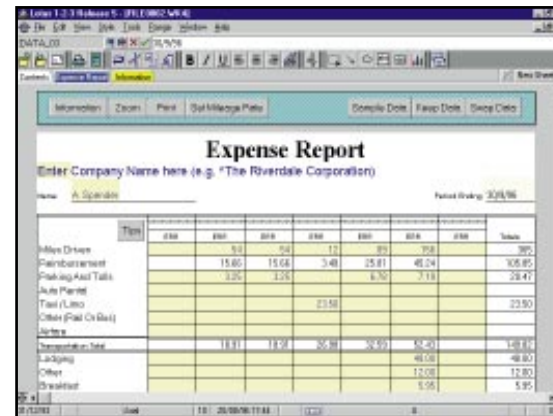○ £233.82 (incl VAT)
○ Corel: 0800 973189

Supercalc

Smaller than the top-end giants, Supercalc has nevertheless some unique features – for instance, it can handle up to twelve dimensions of data, and uses meaningful names to reference them. There are special tools for auditing, forecasting and goal-seeking, and it runs happily on Windows 3.1 and 4Mb of RAM.
○ £75 (incl VAT)
○ Computer Associates: 01753 577733

Lotus 1-2-3 version 5

The original 1-2-3, which included database and word processing features as well as a spreadsheet, is often cited as the 'killer app' responsible for the rapid take-off of what was originally known as the 'IBM Compatible PC' – now simply 'PC'.

At the time of writing, unlike WordPro, 1-2-3 was only available in a 16-bit version, but this works under both Windows 3.1 and 95. A fully 32-bit version is expected shortly, which will incorporate all the Windows 95 advantages and, like WordPro, sport a 'task-sensitive' interface that grows with the user.

Like the rest of the SmartSuite components, 1-2-3 places strong emphasis on teamwork, with e-mail and Lotus Notes support built in. The 'Range Router' tool lets you mail selected data – rather than an entire file – to other users on a network. Like Excel, 1-2-3 is three-dimensional, with tabbed pages of worksheets contained in a single file.

A Version Manager brings another dimension to a worksheet, in that alternative sets of data can be saved and loaded into the same place on a sheet – for example, 'Second quarter conservative forecast' or 'Second quarter wildly optimistic forecast'. The Version Manager can be used in conjunction with the Range Router to track individual contributions to a team project, but we'll have to wait for version 6 for the 'Team Review' and 'Team Consolidate' features that appear in WordPro and Approach.

The interface is full of neat Lotus touches, such as the interactive status bar for changing font attributes, and the use of the title bar as a hint area. 'Assistants' provide step-by-step guides to charting, database and mapping procedures. A range of 'Smartmasters' provide multi-paged, automated templates for constructing things such as cash-

flow reports or sales plans. Interface comforts include in-cell editing and drag-and-drop copying.

A powerful application with a long pedigree – but wait for the Windows 95 version for full 32-bit benefits.
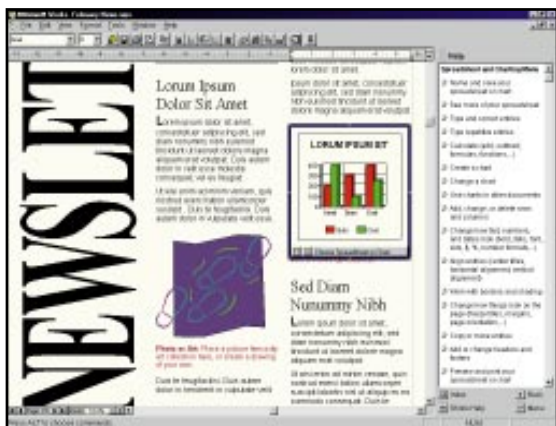○ £270 (incl VAT)
○ Lotus: 01784 445808

Lotus 1-2-3 version 5

Performance	★ ★ ★ ★ ☆
Ease of use	★ ★ ★ ★ ☆
Features	★ ★ ★ ★ ★
Value for money	★ ★ ★ ☆ ☆
Overall	★ ★ ★ ★ ☆

Microsoft Works

A significant proportion of Microsoft Works' sales is through 'OEM' copies – that is, coming pre-installed on new computers – and for those taking the daunting step of buying their first PC, it's undoubtedly the most painless introduction to computing.

Nothing is taken for granted, and when you first run Works, the emphasis isn't on technical things such as 'word processor', 'spreadsheet' or 'database', but rather on the sort of document you want to create. Choose 'Newsletter', 'Loan Schedule' or 'Address Book' from the Task Launcher, and the appropriate Wizard will spring in`to action. This leads the user through an easy multiple-choice questionnaire before setting up the document in the appropriate module, with a context-aware 'Help' panel sitting alongside.

Despite the easy interface, there's a respectable array of features. The word processor offers drag-and-drop editing, a thesaurus, 'smart' left and right-handed quote marks, newspaper-style columns and automatic hyphenation. You can store often-used bits of text – such as your address or 'Yours faithfully' – as 'Easy Text' for instant re-use and similarly, can store and re-use combinations of formatting, such as font style, size, colour and alignment as an 'Easy Format'.

The spreadsheet offers 76 functions with 256 columns and 16,384 rows to use them in, and has comforts such as an 'Autosum' button for quickly calculating the total of a row or column. The database has a 'design as you go' approach: if you decide that your address book needs a slot for 'mobile phone number' you can add this to any record and the category will then appear on every other record, without having to redesign the database 'form'.

OLE support means you can embed a spreadsheet table into a letter, for example, as well as insert 'objects' from the OLE applets such as WordArt, drawings or mathematical equations, without having to leave the 'container' document. **Well designed, and taking nothing for granted, Works offers a near-painless introduction to SOHO computing.**
- £79.99 (incl VAT)
- Microsoft: 0345 002000

Microsoft Works

Performance	★ ★ ★ ★ ☆
Ease of use	★ ★ ★ ★ ★
Features	★ ★ ★ ★ ☆
Value for money	★ ★ ★ ★ ★
Overall	★ ★ ★ ★ ★

Perfect Works
RUNNERS UP

The most ambitious of all the integrated packages, Novell's product has such an impressive feature list that it doesn't seem like a 'budget' product at all. Aimed at more advanced users, features include column layout, graphic tools, a 100-function spreadsheet, multiple undo in all modules and a database that can accommodate pictures.
- £79 (incl VAT)
- Novell: 01344 724100

PFS Works
Cheap, cheerful and rather old-fashioned looking – it hasn't had a major overhaul since 1992 – PFS packs a lot into a small space, with word processing, a huge 10,000x30,000 spreadsheet, purpose-built address book, label maker, general database – plus a comms program and a copy of Winfax Lite. You're limited to black and white, but how many users have a colour printer?
- £49.99 (incl VAT)
- Softkey: 0181 246 4000

Claris Works 4.0

A long-established Apple Macintosh favourite, this was brought to Windows in 1993. Though it doesn't offer quite so much hand-holding as Microsoft Works, there's more creative scope for the ambitious.

Here, as well as word processor, spreadsheet and database, you get vector drawing and bitmap-editing (painting) software. Start off, and you're given the choice of creating a new document from scratch, using a template – called 'Stationery' – or employing an 'Assistant' to help you design the document using a question-and-answer technique similar to Microsoft's Wizards.

The word processing environment, which at first sight appears positively spartan, in fact offers a wide range of features, including an outliner for structuring documents by nested headings and subheadings, a drag-and-drop clip-art library and support for HTML publishing. The spreadsheet has its own short-cut palette, again customisable and, as well as auto-summing, offers 'smart' incremental filling of numbers or dates. The database is a simple affair, but supports check boxes, pop-up lists and calculations.

The key point of Claris Works is its flexibility. Although it supports the Windows OLE standard of embedding objects in other documents, it also uses its own, much faster, embedding technology. Consequently, it doesn't matter if you've started a new document in the word processor, spreadsheet or drawing module, as you can mix and match boxes of text, tables and graphics throughout by drawing a 'frame' on the page to accommodate them.

Overall, the drawing module offers the most flexibility. Indeed, the range of graphic and typographic features, such as text rotation or shaded colour fills, along with extensive clip-art, make it a serious rival to a budget DTP application. **Expensive and idiosyncratic, but a graphics-rich, flexible approach to document creation makes this an attractive package for the creatively inclined.**
- £151.58 (incl VAT)
- Claris: 0181 756 0101

Claris Works 4.0

Performance	★ ★ ★ ★ ★
Ease of use	★ ★ ★ ★ ☆
Features	★ ★ ★ ★ ★
Value for money	★ ★ ★ ★ ☆
Overall	★ ★ ★ ★ ☆ ▶

Demo: Using Publisher with outside printing services

Spot color printing

For very high-quality color printing, designing and printing a spot color publication is your best choice.

"Spot color" means that all colors are shades of one or two base colors.

Spot color is used a lot in advertising, because it's inexpensive to print large quantities at high quality.

3 of 7   Cancel |< < Next >
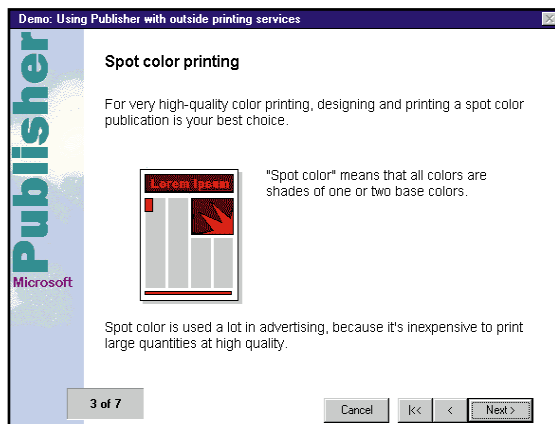
Microsoft Publisher

Although the first choice for professional publishers is Quark Xpress, sheer volume of sales prove that Publisher has captured the hearts and minds of the public. As with previous versions, the emphasis is on achieving professional results without having to struggle with either the interface or the principles of page design.

Having taken the guided tour, new users have a choice of 100 'PageWizards' – interactive templates covering all sorts of business, educational and home categories, with examples ranging from adver-

tising brochures to origami. The Wizards guide the user by asking questions before setting up the document with dummy text and graphics. Pop-up instructions help the user replace the dummies with their own data, and a more detailed, context-aware help panel slots in neatly beside the document.

Going beyond the templates, there's a wide range of effects and features available. 'Smart' shapes such as arrows and stars, 'smart' fancy borders which resize themselves to suit and the WordArt tool for rotating, shaping and shadowing text, all help to bring graphic interest to a document. Further page elements, such as coupons and calendars, are available off the peg from the 'Page Wizards', and the 'Design Gallery' offers a range of ready-made headlines, contents panels, sidebars and other typographic elements.

Moving up another easy notch, the 'Format' menu leads to special effects such as 'dropped' or 'raised' capitals at the start of paragraphs – or in the non-technical Publisher language 'Fancy First Letters' – wrapping text around the contours of a graphic, and fancy 'borders on a roll'.

Microsoft Office users have the comfort of a familiar interface, and shared resources such as the spell-checker and OLE applets. Finally, the

250-page manual provides sound advice on the theory and practice of page layout and typography. **Very user-friendly, Publisher makes it easy for the complete beginner to get started, while allowing plenty of scope for the more creative user.**
○ £80 (incl VAT)
○ MIcrosoft: 0345 002000

Microsoft Publisher

Performance	★ ★ ★ ★ ☆	
Ease of use	★ ★ ★ ★ ★	
Features	★ ★ ★ ☆ ☆	
Value for money	★ ★ ★ ★ ★	
Overall	★ ★ ★ ★ ☆	

Pagemaker 6
RUNNERS UP

A high-end product, formerly from Aldus but now owned by Adobe, this one-time leader was rather left behind by Quark Xpress. But it has caught up considerably, with free text rotation, colour separation, multiple master pages and support for plug-ins, including output to the Web (HTML) and Adobe Acrobat format.
○ £460 (incl VAT)
○ Adobe: 0181 606 4000

Corel Ventura 5
In the early days of DTP, Ventura was the professional choice for long documents such as technical manuals. Now owned by Corel, the current version comes on three CDs with a host of extras, including image processing and database query, 700 fonts and 17,000 pieces of clip-art. Corel has also added powerful graphic-design elements and a Corel Draw-style interface.
○ £275 (incl VAT)
○ Corel: 0800 973189
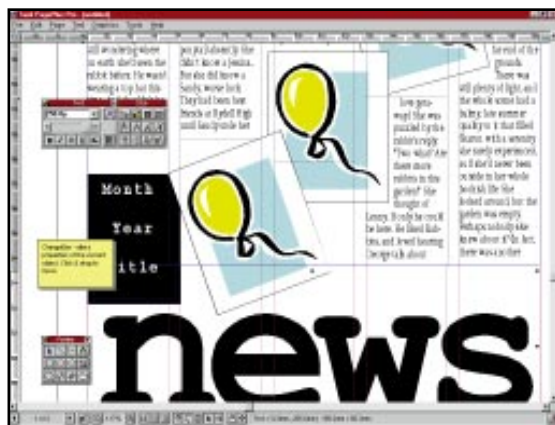
Serif PagePlus

PagePlus comes in two flavours. The Windows 95 Home/Office edition is pitched directly as an 'easy-to-use' rival to Microsoft Publisher, but it was the flagship product – the Windows 3.1 PagePlus Publishing Suite that won our 'Best Buy' award in the last group test. As we stated, it has 'most of the features of the high-end packages at a fraction of the cost'.

As well as the DTP application itself, you get a fully-fledged vector drawing program, DrawPlus; a bitmap editor, PhotoPlus; the TypePlus text-effect tool; the

WritePlus story editor; the TablePlus table creator; 400 fonts and a 7,000-piece collection of clip-art.

Though not offering the same degree of hand-holding as Microsoft, there's still plenty of help, with 'Tool Tips' describing each button, 'sticky-note' help panels and a comprehensive set of demonstrations.

The interface can be set to one of three levels of complexity. Even with the interface set to 'Pro' level, the screen is still uncluttered, as the secret to control of all text and graphic elements is via two small floating panels – the Toolbox and the Changebar. The former contains the wherewithal for creating free and framed text, lines and simple shapes, rotating, moving and sizing objects. The latter contains the means of formatting or fine-tuning all type and graphic settings – if you're drawing lines, for instance, the box will offer a choice of thickness.

Despite the low price, there are some very advanced features. Professional-style colour support includes Pantone libraries (industry-standard printing colours), and full-colour separation with automatic 'trapping' – overlapping colours so that misalignment in the printing process doesn't produce unsightly gaps. Finally, just for fun, there is the

'Elvis Detector' – a feature unique to Serif, which detects the spiritual proximity of the late, great Presley! **Astonishing value for money, with many high-end features and a host of extras – ideal for the ambitious user on a budget.**
○ £75 (incl VAT)
○ Serif: 0115 9421502

Serif PagePlus

Performance	★ ★ ★ ★ ☆	
Ease of use	★ ★ ★ ☆ ☆	
Features	★ ★ ★ ★ ★	
Value for money	★ ★ ★ ★ ★	
Overall	★ ★ ★ ★ ☆	▶

Corel Draw 6

Right from version one, dating from the early days of Windows, Corel Draw was simply the best illustration program for any desktop computer platform, and subsequent versions have consistently broken new ground.

In 1992, version three spearheaded the move to CD-ROM, with generous helpings of fonts and clip-art, and subsequent versions grew bigger and better, consistently outperforming major rivals such as Adobe Illustrator, Micrografx Designer and Aldus Freehand. The only drawing application that came near
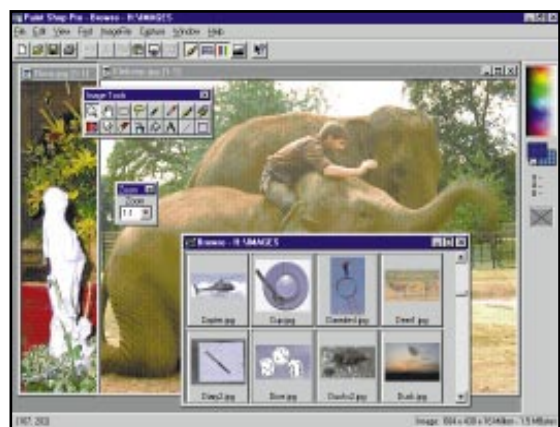
to rivalling its originality – Xara Draw – was promptly bought by the Corel Corporation in 1995.

Corel Draw is now gargantuan, coming on four CDs and containing not just the eponymous vector drawing program but an image processor, optical character recognition, 3-D modelling, multimedia and font management, animation and presentation graphics. The full installation takes nearly 200Mb of disk space. Add the raw material kept on CD, in the form of 1,000 fonts, 1,000 photographic images and 25,000 clip-art files, and you have the ultimate graphics arsenal.

The feature list of the drawing module alone could fill several pages, but a 'best of...' would include fractal-generated fills that simulate rock, sky and water, calligraphic pen strokes, 'lenses' that magnify, distort or change the colours of what's below, 'knives' and 'erasers' to break up shapes, and a maximum drawing size of 150 feet square. New to version 6 is the long-awaited multiple document interface (MDI) — you were previously limited to loading just one drawing at a time, but can now open several and drag-and-drop between them.

The sheer weight of features could be off-putting, but the basic toolbar has changed little from early

days. Subsequent additions to the interface have taken the form of 'roll-ups' – moveable formatting palettes that can be 'rolled-up' into their own title bar to save screen space. **Huge, powerful and expensive, Corel Draw continues to upstage everything else on the market.**
- ○ £581.62 (incl VAT)
- ○ Corel: 0800 973189

Corel Draw 6
Performance	★ ★ ★ ★ ☆
Ease of use	★ ★ ★ ★ ☆
Features	★ ★ ★ ★ ★
Value for money	★ ★ ★ ★ ☆
Overall	★ ★ ★ ★ ☆

Photoshop version 3.05
RUNNERS UP

It was the Apple Mac version that established Photoshop as the leading image processor, with PC users having to wait until 1993 to join the club. A contributing factor to its success is the 'Plug-in' – independently developed additions, such as Kai's Power Tools. Horrendously expensive, but brilliant, it remains the first choice for professionals.
- ○ £635 (incl VAT)
- ○ Adobe: 0181 606 4000

Serif Draw Plus 2
Draw Plus is the ideal vector drawing package for those who don't need or can't afford the luxury of Corel. The interface can be simplified for beginners and there is plenty of help. It has professional features such as graduated fills and text-shaping. Available as a standalone package or as part of the excellent Page Plus Publishing Suite.
- ○ £34 (incl VAT)
- ○ Serif: 0115 942 1502

Paint Shop Pro 4

A shareware legend, Paint Shop Pro started out as a utility for viewing, and converting between, the huge variety of graphic file formats. Unlike Corel Draw, which is primarily a vector-drawing program dealing with geometrical objects, Paint Shop deals with bitmapped graphics – photographs or 'paint' files.

In its latest, Windows 95-only version, Paintshop will read 33 different file types and write to 25 – the discrepancy arises because it will convert vector images (like Corel Draw's) to bitmaps, but not vice-versa.

Since its humble beginnings as a viewer/converter it has grown to offer a wealth of image-processing and painting features, including support for plug-ins. It also has a handsome range of its own special effects, including shadowed text, 3D button, motion blur, and all sorts of weird and wonderful distortions.

On a more mundane level, it will take direct scanner input, and offers the usual image-enhancement features, such as adjusting brightness, contrast and colour balance, resizing images and increasing or decreasing the colour depth.

As well as changing the overall look of a picture, Paintshop has a wide range of retouching and painting tools. You can brush, spray, use chalk and charcoal and paint on to a textured surface. A cloning tool lets you use one part of an image – or a completely different one – to paint over another, thus scotching the myth that the camera cannot lie as you clone disgraced politicians in and out of group photographs.

For further convenience, there's a browser to preview thumbnails of all your image files. Also, the habit of opening multiple copies, rather than multiple windows, when double-clicking on an image file has been cured; and the lame use of the Win-

dows colour controls has been replaced by a purpose-built colour palette. Despite the improvements, the price is still low and, being shareware, you can try before you buy. **Fabulous value, Paintshop Pro is essential for anyone who deals with bitmaps.**
- ○ Shareware (registration: £58.69)
- ○ Digital Workshop: 01295 258335

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

The rankings in the personal finance software market remain unchanged, with Intuit's Quicken 5 still way out in front. Running under either Windows 3.1 or 95, it's sufficiently versatile to help with virtually any facet of your money management, and also admirably easy to learn and use.

For instance, Quicken 5's setup procedure uses a simple interview to create your first bank account, complete with income and expense categories. Novices can then navigate through Quicken 5's rich functionality using a central access window, called Homebase. Every time you open a new window, such as an

account register, report or graph, a tab is added at the left of the screen, so you can switch between windows quickly, working with a single screen to keep everything clearly in sight.

Many users get great value from Quicken 5 by using it to manage only their current account. But if you do install some of the other types, such as deposit, cash, credit, building society, investment, asset or liability accounts, then transferring money between them is simple.

Most account maintenance is done in a transaction register, where the chore of data entry is minimised by various clever productivity aids. For example, memorised lists of payees and categories allow the program to automate your later entries, based on the first few characters that you type. Reports and graphs are another strength; it's easy to get fast responses to questions like: 'How much did I spend on my house last year?' and 'What are my investments worth now?'.

Getting to grips with all these features is easy too, as Quicken 5 comes with graphical tutorials about 'Organising your finances', and 'Planning for the future', and guidance on more advanced features like mortgages and investments. **Quicken 5 combines friendly usability with rich features,**

Quicken 5 Home Pack
RUNNERS UP

Presented on CD, this bundles Quicken 5 with two other programs. QuickInvoice might suit small business users, but we found it unstable with the specified minimum 8Mb of RAM. With Quicken Home Inventory, you can log your possessions' resale values and replacement costs – useful for insurance purposes.
- ○ £64.95 (incl VAT and postage)
- ○ Intuit: 0181 990 5500

Money Manager Personal Edition 5
Running under Windows 3.1 or 95, this program is very different in character from its mainstream rivals. Not as easy to learn and use, but you quickly come to appreciate its power. It bristles with cleverly-designed tools and offers strong reports and graphs, but it's strictly for account management.
- ○ £39.95 (incl VAT and postage)
- ○ Connect Software: 0181 743 9792

Quicken 5 for Windows

giving versatility across a range of personal finance applications, from basic bank account management to simple financial planning.
- ○ £39.95 (incl VAT and postage)
- ○ Intuit: 0181 990 5500

Quicken 5 for Windows
Performance	★ ★ ★ ★ ★
Ease of use	★ ★ ★ ★ ★
Features	★ ★ ★ ★ ★
Value for money	★ ★ ★ ★ ★
Overall	★ ★ ★ ★ ★

Following the collapse of its bid to buy Intuit, Microsoft put concerted effort into making major improvements to its own offering. The resultant product, Microsoft Money for Windows 95, is aimed principally at the 80 percent or so of UK households that have computers but don't yet use personal finance software, so it's truly easy to use. It comes on CD-ROM for fast and simple installation, including an on-line manual that provides lots of practical guidance.

There's an attractive contents screen, with large buttons that take you to the main areas: the account

register, payment calendar, account manager, investment portfolio, report and chart gallery, payees and categories, and planning wizards. You use a simple form to enter transactions into the account registers, rather like a cheque or deposit slip.

As in Quicken 5, typing is assisted by a feature that memorises previous entries. Right-click support is generous too; clicking on almost any element in a window opens a menu listing everything you can do with it.

Any regular transactions, such as standing orders, can be entered into the payment calendar, which provides prompts on due dates.

Finding your way around is even simpler than in Quicken 5. There's always an uncluttered navigation bar at the top of each window, with four choices: back to the main contents, revisit places you've already been to, go directly to another area, or get context-sensitive help.

If you invest in shares and unit trusts, the investment portfolio helps you update market prices, study price histories, analyse market value, and see how much you've gained or lost on any holding. Using the reports and charts, you can set up analyses of your financial status and trends. **An attractive user interface and a strong feature set –**

Money for Windows 95

including some useful planning tools and account management – makes Money especially attractive for the novice home user.
- ○ £29.99
- ○ Microsoft: 0345 002000

Money for Windows 95
Documentation	★ ★ ★ ★ ★
Ease of use	★ ★ ★ ★ ★
Features	★ ★ ★ ★ ★
Value for money	★ ★ ★ ★ ★
Overall	★ ★ ★ ★ ☆ ▶

In version UK3, QuickBooks subscribes to the newer philosophy of hiding its double-entry bookkeeping behind a more user-friendly interface. This works very well for non-accountants, less so for those brought up on traditional separate ledger accounting. You still get all the benefits of separate ledger reporting, with one or two extra — and highly useful — reports thrown in.

QuickBooks uses an easily-searched spreadsheet-like 'register' to hold details of your transactions, although data entry is usually through a 'form' or dialog box. All transactions can be reached through the menu, and

there's a complementary toolbar with some of the more common ones.

Version UK3 includes an integrated stock-control and stock-reporting facility which, when active, gives you a 'stock part' category with item quantities that you can increase by making purchases and decrease by making sales. There's no 'parts explosion' facility. You can turn stock control off, when it reverts to being the Invoice Item list from version 2 — very useful to service providers. There's also a *flexible* job function, assignable to individual customers and which lets you charge invoices to specific jobs.

Three different invoice layouts (professional, service and goods) let you add, drop, or rename fields until the information on the invoice is what you want. You can do the same thing with cash sale receipts, credit memo forms and purchase orders. You can also add finance charges to your invoices when they haven't been paid by the due date.
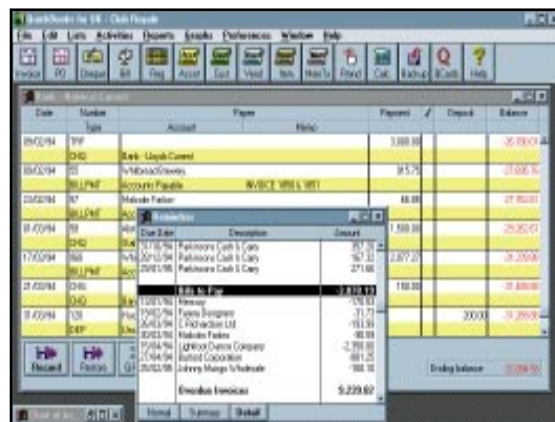
All the previous version's features are retained — the easy invoice production and statement generation, the on-screen cheque forms, the graphical interpretation, QuickFill data entry help, and automatic reminders. You get accounts category templates for several

QuickBooks

types of business and can specify either accrual or cash accounting. **A highly-competent business tool, and perfectly satisfactory for most small businesses, QuickBooks' capabilities now extend to**
○ £99
○ Intuit: 0181 990 5500

QuickBooks	
Features	★ ★ ★ ★ ☆
Documentation	★ ★ ★ ★ ☆
Ease of use	★ ★ ★ ★ ☆
Value for money	★ ★ ★ ★ ☆
Overall	★ ★ ★ ★ ☆

Intuit Quicken deluxe Business Pack

RUNNERS UP

Incorporating QuickInvoice, this is essentially a home finance package. Its main features include multiple accounts (bank, cash, credit card), VAT tracking, standing orders, direct debits, post-dated cheques. Should suit the micro-business, with the added benefit of personal finance tracking thrown in.
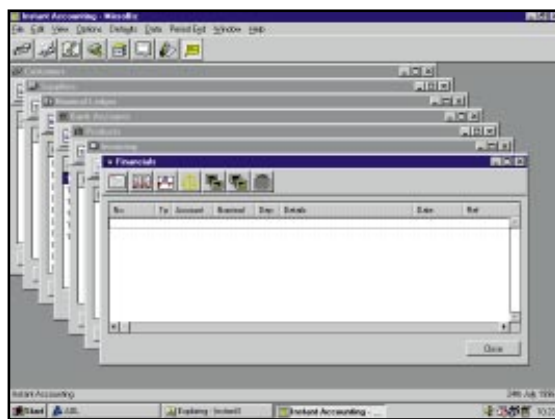○ £59 (ex VAT)
○ Intuit: 0181 990 5500

TAS Books
There are two TAS Books programs. TAS 1 is the starter program, with three ledgers; a wide range of reports, including an audit trail; refund and bounced-cheque handling; and invoicing, with predefined item details. Although there's a year-end procedure built in, TAS Books doesn't wipe out any transactions, so you can always recall any item in detail.
○ £99
○ Megatech: 0181 874 6511

With a user-friendly interface, Instant Accounting combines traditional accounting controls, like an authoritative audit trail, with the convenience to the smaller business of instant updating of bank and other account balances. It's also compatible with Sage's Sterling software, to which you can upgrade for extra facilities such as stock control and order processing.

Most small businesses should find all the essential bookkeeping here though, with recording of sales and purchase transactions; cash and credit trading facilities, including

credit cards; and financial and management reports. Mistakes can be rectified easily and invisibly, including mis-postings. Either cash or accrual VAT accounting can be chosen, and is taken care of automatically, with Sage's famous on-screen replicas of real-life forms making the production of VAT returns as painless as is humanly possible.

There's a 'drill-down' facility for transaction activities in sales, suppliers, nominal or control accounts, allowing analysis of the individual items that make up the transaction. Transactions themselves can be assigned to up to 999 different departments, and you get 999 different product categories for analysis purposes. When invoicing, products can be easily pre-defined by making a selection from a drop-down list. Aged debtors can be identified and there's a debt-chasing letter writer.

Wizards guide you through awkward procedures like transferring money from one bank, cash or credit card account to another. There's also flexible document-customising facilities so you can design paperwork for most eventualities, including invoices, reports and letters.

To cap it all, the package is accr-

Sage Instant Accounting

edited by the Institute of Chartered Accountants in England and Wales. **Easy small business accounting package with painless upgrading to Sage's more comprehensive packages if**
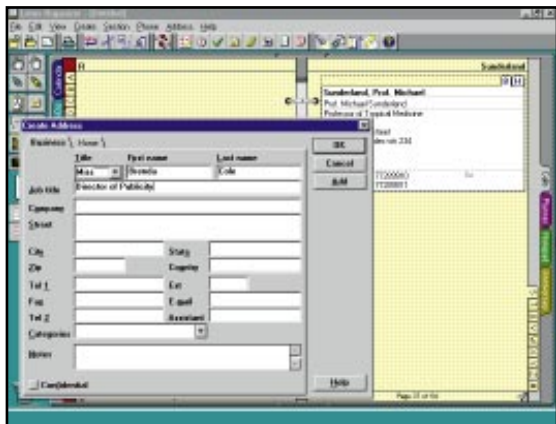○ £127.50
○ Sage: 0191 255 3000

Sage Instant Accounting	
Features	★ ★ ★ ★ ☆
Documentation	★ ★ ★ ★ ☆
Ease of use	★ ★ ☆ ☆ ☆
Value for money	★ ★ ★ ★ ☆
Overall	★ ★ ★ ★ ☆

Lotus Organizer 2.1

The PC equivalent of the paper filofax, Personal Information Managers (PIMs) are designed to help you keep your life in order.

Far and away the most popular is Lotus Organizer, which gives you the equivalent of a filofax on screen. There are coloured dividers running down the right-hand side separating the Notepad, To-Do list, Diary, Address Book, Anniversary List and Planner.

Contact information is entered on a representation of a paper page. You have a box for the contactõ

first name, then another one each for the surname, position within the company, the company name, and the address (this is sensibly in one field, which means Organizer can accommodate unusually long addresses). There is a separate field for post code, fax and phone numbers, and an extension number.

It is possible to assign a category to each contact, such as personal or business, or separate your customers from those to whom you are a customer. There are also two user-definable boxes — which is a bit limiting these days when contacts can have personal and business e-mail addresses, WWW addresses, mobile phone numbers, home fax numbers, and so on. Contacts can be viewed one, two, four or six per page.

The appointment scheduler is good. You can create conflicting, overlapping and temporary appointments, whereas in some PIMs (including earlier versions of Organizer) you canõt schedule two appointments for the same time — often a necessity! The Anniversary section lets you display anniversaries by year, month, category — even zodiac sign.

Version 2.01 offers new group-scheduling and shared-calendaring features for Lotus Notes and cc:Mail users.

Organizer is an easy-to-use and well-designed PIM. The group scheduling and links to Notes and cc:Mail make it useful for fixing meetings with co-workers, but it doesnõt have the power for serious contact management

- ○ £99
- ○ Lotus: 01784 445808

Lotus Organizer 2.1

Performance	★ ★ ★ ☆ ☆
Ease of use	★ ★ ★ ★ ★
Features	★ ★ ☆ ☆ ☆
Value for money	★ ★ ★ ☆ ☆
Overall	★ ★ ★ ☆ ☆

### ACT! for Windows 2.0

RUNNERS UP

A robust high-end Contact Manager, rather than a PIM, this uses a double-sided file card to store information. Plenty of user-definable fields, contact history files, and an integrated WP. A separate package, ACT! Mobile Link, connects a mobile sales force to a central ACT! There is also a version for the Psion 3a.
- ○ £189 (incl VAT)
- ○ Symantec: 01628 592222

Schedule+

This comes with Windows 95 and is a clever, well-constructed address book and a very impressive planner and scheduler. It makes full use of drag-and-drop, OLE, and linking with Microsoft Word. Schedule+ looks good and is easier to use than even Organizer, but lacks a few refinements that distinguish a PIM from an address book/diary.
- ○ £79 (Windows 95)
- ○ Microsoft: 0345 002000
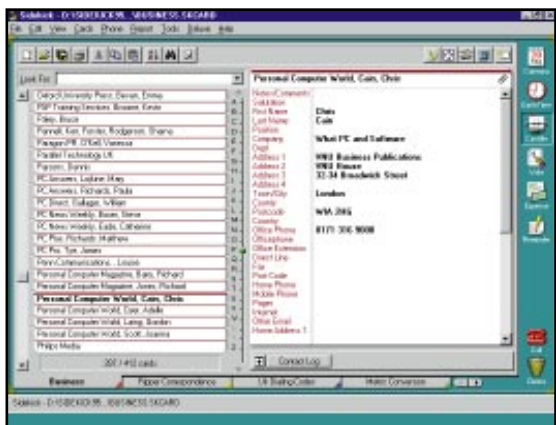
Sidekick 95

A great product about which it is difficult to find anything bad to say, Sidekick 95 is a real personal information manager and indisputably the best you can buy.

The contact database is excellent and fully customisable and you can create multiple databases, which in turn means you can store not just contact details, but anything from a price list to details of your music collection. You can view your contact list by whatever criteria takes your fancy — surname, business name, postcode etc, or search it by word.

The superb write module is a fully-functional word processor, which will satisfy all simple WP needs: you can choose and change fonts and font size, use text formatting such as bold and underline, text alignment, and even run a spellcheck and take a word count. All documents are stored within Sidekick, which means you can access lots of text documents as well as keep tabs on letters and faxes without having to load another program. You can create a letter template headed with your own address details into which Sidekick will automatically insert the date and address of the person to whom you are writing.

There is a simple yet powerful module for recording business expenses — if only there was a Quicken-like finance manager you would probably have all your personal information needs housed under one roof! — and a great reminder page providing an at-a-glance overview of To-Doõs and other appointments.

Sidekick dials the phone, lets you send faxes and e-mail, and with the Delux version (which comes bundled with Dashboard) you get a connection to America On Line.

Sidekick 95 combines elegance of appearance with simplicity of use. With

fantastic customisability, it lets you track almost anything. There is a lot of power under the bonnet, and you might find it fulfills most of your word-processing and record-keeping needs — all for a moderate price.

- ○ £39 (Delux version: 49.99)
- ○ Starfish Software: 0181 875 4455

Sidekick 95

Performance	★ ★ ★ ★ ☆
Ease of use	★ ★ ★ ★ ★
Features	★ ★ ★ ★ ★
Value for money	★ ★ ★ ★ ★
Overall	★ ★ ★ ★ ★

Can there be anyone in the world who has used a PC and yet hasn't heard of ID Software's Doom? Probably not. Its fast and frantic behind-the-shotgun approach revolutionised the world of PC games and, despite its chunky 'lego brick' graphics, it was an instant worldwide hit.

Then, along came Duke Nukem 3D. Imagine Doom with a much higher resolution, more-animated monsters, a greater degree of movement, and stereo sound. Then, chuck in a plot that's even more far-fetched, and some highly dubious gameplay and you wouldn't be far from Duke Nukem 3D.

Civilisation 2

Civilisation 2 puts you in the role of ruler over an entire race. Your job is to guide your people as they progress from wandering savages to technologically sophisticated city dwellers over the course of several thousand years. You're not alone, however, and neighbouring cities pose a constant threat. A big game and a megalomaniac's dream!
○ £44.99
○ Microprose: 01454 893900

Wing Commander 4

Cross Elite with Babylon 5 and you'd probably end up with Wing Commander 4. With an all-star cast, the game mixes big-budget video sequences with dazzling space fights. WC4 has you flying numerous spacecraft through numerous missions, with scope for player interaction in between. Not cheap and it needs a fast PC, but incredible nevertheless.
○ £59.99

RUNNERS UP

When the programmers at ID Software first unleashed Doom on an unsuspecting world a few years ago, little could they have known the effect it would have and the volume of imitations it would spawn. Since then, ID Software has not been resting on its laurels and, after much speculation, Quake, the successor to Doom, is now on sale.

Quake uses the same first-person perspective as Doom, but that's where the similarity ends. The game is set inside a military installation, itself based in a large castle. 'Quake' the eponymous extra-

The plot, for what it's worth, involves aliens invading Los Angeles and turning the local police into warthogs. Obviously, this won't do but, fortunately, Duke Nukem is in town. You may have seen Duke saving the world before in such epics as Duke Nukem 1 and Duke Nukem 2 and, needless to say, he doesn't take kindly to alien invasions. With only a few weapons of mass destruction at his disposal, it's down to Duke to sort Los Angeles out and send the aliens packing.

None of this matters, of course. What does matter is how the game plays and, in short, it's excellent. On a fast PC (something like a Pentium 90), it's possible to run Duke Nukem 3D at an impressive 800x600 resolution. The attention to detail is superb: in one of the three game worlds, Duke wanders around a cinema that has readable posters on the walls and a video game arcade featuring a previous incarnation of Duke. Blast your way to the projection room and you can screen a film with a plot almost as complex as the game itself. Touches like this abound, and add greatly to the game's enjoyment.

Duke Nukem 3D's appeal does, of course, rest with blowing aliens and other assorted nasties into very small pieces indeed, and

dimensional villain, is using slipgates to drop death squads inside the base in order to kill, kidnap, steal and um, kill. You're sent in to sort things out.

Apparently, ID Software originally intended Quake to have a medieval setting, complete with swords and shields. But, after initial tests, the designers concluded that jabbing at a twelve-foot monster with a spear compared poorly to blowing it away with a rocket launcher, so the ancient hand-held weapons were replaced with modern ones and the game redesigned.

The designers didn't, however, have time to revamp the setting, so the castle stayed, with the military installation retro-fitted into it. The result — long, dark, damp corridors with hi-tech military fittings — may sound like an odd contrast, but it works extremely well. This isn't a game to breeze through, guns blazing — the 'feel' is so successful that, at times, you have too creep around, literally on the edge of your seat.

Although impressive, the castle is overshadowed by the design of its occupants. Drawn largely from supernatural sources, the various creatures exist in three, rather than merely two dimensions and are realistically animated. Ogres lurch towards you, chainsaws screaming inches from

Duke Nukem 3D

anyone concerned about violence in computer games won't be impressed. That said, the game does feature a toggle to switch off much of the gore but, even so, Duke Nukem 3D is not for young children.

If you're happy with the dubious morality and want to spend several hours indulging in an orgy of mindless violence, then this
○ £39.99
○ US Gold: 0121 625 3366
....
Duke Nukem 3D ★★★★★

BEST SELLER

Quake

your face and armoured knights leap from dark corners with swords swinging. Shoot something and the bad guys stagger, fall over and, in some cases, come back for more. Realistic and extremely unnerving.

Just like Duke Nukem 3D, violence is at Quake's core, but it's a much more sophisticated affair. A game for dark nights with the rain lashing the window.
○ £29.99
○ GT Interactive: 0171 258 3791
....
Quake ★★★★★

ALTERNATIVE

Microsoft Encarta

The Encarta 96 Encyclopaedia World English Edition (to give it its full name) is a deserving best seller, and the just-announced 1997 version will, no doubt, enjoy the same success.

The rather clumsy name draws attention to the fact that Microsoft revamped the 1996 version by dubbing over the American narrations and modifying the content for an international English-speaking audience. Encarta is also unusual in that it's not based on a printed work, but designed from the ground up to be distributed on CD-ROM. This accounts for its wealth of multimedia features and the many different ways in which information can be retrieved.

Naturally, you can search for the information you need by typing in key words or phrases, but if you want to use Encarta as a sort of electronic coffee table book, you can browse through its multimedia elements. These include film clips and animations to illustrate many of the articles, and there are over 900 sound recordings of musical instruments, famous people, national anthems and the like. Throw in 5,000 still pictures and 500 maps and there's plenty of scope to hit upon interesting visual attractions that draw you in to the main topics.

Ten 'interactivities' on themes such as climate, diet and languages provide a learning-by-doing approach that appeals to children of all ages. The Timeline, which chronologically presents major events in history from the discovery of fire to the reunification of Germany, also encourages deeper research.

The presentation is colourful and the language used in the articles is suitable for adults, teenagers and bright children, who can double-click on difficult words to pull up a definition, courtesy of the Concise Oxford Dictionary. Our main criticism of Encarta is that the screen can get very cluttered with overlapping information, so it works best on systems with larger monitors.

Encarta is a superb example of how good a CD-ROM reference work can be. It looks rather cramped on a 14in screen but, if you use it regularly, you can find ways round this limitation.

○ £49.99
○ Microsoft: 0345 002000

Microsoft Encarta

Ease of use	★★★★☆
Features	★★★★★
Value for money	★★★★☆
Overall	★★★☆☆

Infopedia 96
RUNNERS UP

Too new to be a best seller, Infopedia 96 offers an easy-to-use search system providing access to eight British English reference works on a single CD: Hutchinson's Encyclopaedia, Longman's Dictionary, the three-volume Concise Oxford Biographies — plus quotations, maps, a thesaurus, an almanac and a guide to English usage.
○ £39.99
○ Softkey: 0181 246 4000

Cinemania

Cinemania, the movie-goers' database, provides information on thousands of films and actors. As well as factual details there are reviews culled from several printed sources, background articles, video and soundtrack clips — and film themes from Batman to the Wizard of Oz. Revamped annually, the 1997 version should be ready by the time you read this.
○ £39.99
○ Microsoft: 0345 002000

Compton's Interactive Encyclopaedia

Compton's strength lies in its simplicity, which is in keeping with its self-publicity as the encyclopaedia for families.

Lacking the super-slick interface of Encarta, it adopts a more conventional approach by splitting the screen into three sectors that stay put, instead of popping up in unexpected places. The right-hand side of the screen shows the main text of the articles, while multimedia elements are up at the top left, with search tools and special features below.

Each of the three areas has a set of miniature control buttons which change according to what is currently being displayed, and there are two permanent toolbars occupying the leftmost edge of the screen and a narrow strip along the bottom. This arrangement means you can jump from one part of the program to another without searching through a host of pull-down options to do so.

Searching is unsophisticated so you can't, as you can in Encarta, construct complex logical searches to narrow your search results. This makes it easy to use, but rules it out for serious research.

All the usual elements of a multimedia encyclopaedia are here, including animations, illustrations, sound and video clips. There's also an atlas, which is wonderfully simple to use just by pointing and clicking, but is very sparse on detail. For this reason, a separate CD atlas called The Small Blue Planet is bundled: a nice bonus but not as convenient as a decent set of maps integrated with the main articles.

The Info Pilot, Topic Tree and Explore features all provide different means of browsing the encyclopaedia's contents without looking for specific words or phrases and you can assemble interesting articles into a customised presentation using the Editing Room.

Compton's is easy to learn, easy to use and very good value at £30 for two CDs. Buy Encarta for yourself and your teenage children, but don't rule out Compton's for the rest of the family.

○ £29.99
○ Softkey: 0181 246 4000

Compton's Encyclopaedia

Features	★★★★☆
Ease of use	★★★★★
Value for money	★★★★★
Overall	★★★★☆

The best-selling product in the UK, Dr Solomon's Anti-Virus Toolkit enjoys an enviable reputation worldwide as one of the leading virus scanners. Independent tests show that it is consistently one of the best performers at detecting and identifying viruses.

The software is easy to use. From a small dialog box you select the drives to check and press Find. The program then scans the disk and tells you whether any files are infected. Besides boot sectors and executable files, the program will check document files for macro viruses, which are already the most prevalent type. It can also check files that have been compressed using popular file compression tools. Most files on install disks, magazine cover disks and downloaded from the Internet are compressed, and the Toolkit can check a wider range of formats than any other product.

An important component is the memory-resident checker, VirusGuard. Its Windows equivalent, WinGuard, is installed as a true Windows device driver so it doesn't use memory that DOS programs need. VirusGuard and WinGuard are undetectable in everyday use, but check every file and every floppy disk automatically in the background to make sure they are virus-free.

S&S recently introduced a new tool: Dr Solomon's Magic Bullet. If you boot from the hard disk and the boot sector or DOS are infected, a 'stealth' virus could prevent your scanner from seeing the infection. By booting from the Magic Bullet and using the anti-virus software on it, this problem is avoided.

Included in the price is access to Dr Solomon's legendary technical support. In case of trouble, you can talk to people who are experienced in dealing with virus problems. If you have a suspicious file, S&S' research laboratory is here in the UK and the file can be analysed and the results faxed back to you within hours.

McAfee VirusScan for Windows 95
RUNNERS UP

McAfee claims VirusScan is the biggest selling anti-virus product worldwide. It has a memory-resident scanner, Vshield, but lacks support for checking archived files. Virus-checking ability is close to the leaders, though the scanner has a reputation for occasional false alarms. It's undeniably good value, though.
○ £34 (incl updates from Web)
○ McAfee: 01344 304730

Sophos Sweep for Windows 95

Sweep gains its popularity from its sales into corporates. It's one of the top products at identifying viruses, but lags far behind on features. Sweep is purely a scanner: there's no memory-resident detector and only boot sector viruses can be repaired. It's easy to use, and Sophos is renowned for the quality of its technical support.
○ £346.62 (incl 1 year's updates)

Many people choose Norton AntiVirus (NAV) for its familiar name, which appears on some of the most indispensable tools for PC users.

The Windows 95 package is cheaper than that for Windows 3.1, but doesn't include the DOS version. This will present a problem if you want to clean an infected machine without booting from the hard disk.

The Windows 95 interface is quite similar to Dr Solomon's, and makes scanning the complete system easy. You choose which drives to check from a list and press 'scan' now. To scan specific files you can use a standard file browser accessed from the Scan menu.

Though one of the biggest software houses in the anti-virus market, Symantec hasn't yet produced a product that performs on a par with those from specialist anti-virus companies. Successive releases get better, but NAV still misses more rare and polymorphic viruses than the best products. It's also occasionally prone to false alarms, in which harmless files are flagged as infected.

NAV includes an 'inoculation' option which records details of each file so that modifications can be detected. This closes the gap in the scanner's armoury and allows files that become infected to be returned to their previous state.

A memory-resident checker called AutoProtect scans files as you access them, and automatically checks boot sectors when you insert a floppy disk. NAV gives you a great deal of say over which types of file should be checked, when they should be checked and what to do if it finds an infection.

NAV was one of the first anti-virus products to support scanning of compressed archives, and it's still one of the quickest at this. A new version of the product is expected
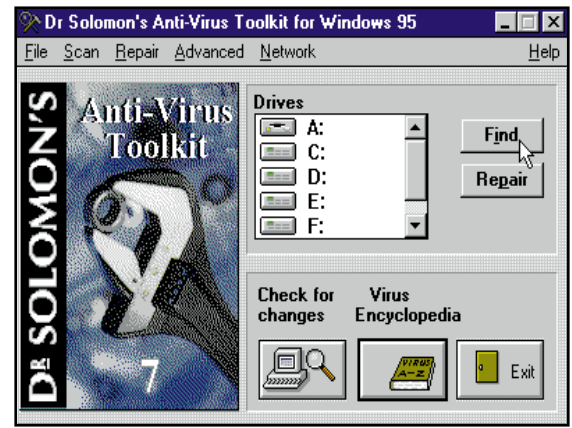
Dr Solomon's Anti-Virus Toolkit

For a single user this is quite an expensive investment but it is, indisputably, the best.

○ £146 (includes 1 year's quarterly updates)
○ S&S International: 01296 318800

Dr Solomon's Anti-Virus

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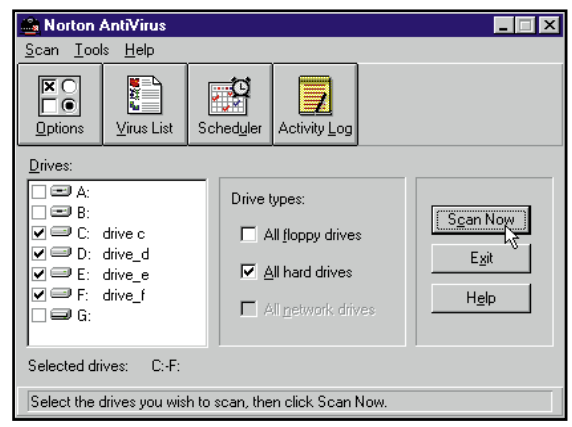
Norton AntiVirus for Windows 95

shortly which may add new features. **NAV is highly configurable, in the Norton tradition, but when it comes to basic virus detection it isn't a match**

○ £92.82
○ Symantec: 01628 592222

Norton AntiVirus for Win 95

Performance	★★★☆☆
Ease of use	★★★★☆
Features	★★★★★
Value for money	★★★★☆
Overall	★★★★☆

MJN P120W

Our best-seller here comes from MJN's Workstation range (hence the 'W' in the model designation).

What you get is a Pentium 120MHz PC with 16Mb of RAM assisted by 256Kb of cache memory. There's an enhanced IDE hard disk, a 64-bit accelerated graphics card and a 14in monitor. All this adds up to a solid specification that delivers good performance – and because of the use of standard branded components and a spacious interior design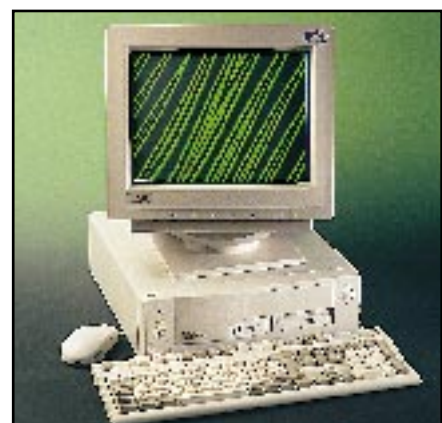, there's ample scope to upgrade the machine to multimedia or to add other accessories and improvements when and if they are required.

There are, for example, three front-facing 5.25in drive bays, one of which could be used for a CD-ROM drive, leaving space for backup disks or tape drives in the others. An interior 3.5in bay is suitable for a second hard disk – not that the 1Gb Seagate drive already installed won't be enough for most people – and there are six free expansion slots. Even the 1Mb of memory on the Number Nine graphics card can be doubled by inserting extra chips into the two sockets provided.

The monitor, made by CTX, is only a 14in model but displays a bright, steady picture that can be expanded to fill the 12.75in screen diagonal. Although the screen is fairly bulbous, the curvature of the glass doesn't adversely affect straight lines at the edges of the screen. Simple adjustments can be made to the image's size and position, as well as to contrast and brightness, by using old-fashioned rotary knobs.

Windows 95 is pre-installed on the hard disk and supplied on a CD-ROM which you won't be able to use without a CD-ROM drive.

A capable, well-made Pentium 120MHz computer for less than a grand is great value for money, even without software. If you can afford to pay a little more up front, take advantage of MJN's low-cost optional enhancements, such as a CD-ROM drive for under £60.

○ £985.83 including VAT
○ MJN: 01282 777555

MJN P120W

Performance	★★★★☆
Build quality	★★★★☆
Features	★★★☆☆
Value for money	★★★★★
Overall	★★★★☆

Tiny P120

RUNNERS UP

The Multimedia P120 from Tiny Computers is good value, but the price doesn't include any pre-installed software. The standard configuration includes 8Mb of memory and a 1Gb hard disk, plus unspecified brands of CD-ROM drive and sound card. However, one shouldn't be too critical of one of the few multimedia PCs of this price.

○ £844.82
○ Tiny: 01293 821333

IBM PC 340

IBM's PC 340 in its Pentium 100 form has 8Mb of memory and an 850Mb hard disk but no monitor, though a graphics controller is built onto the motherboard. Windows 95 (or 3.1) and networking utilities are pre-installed and cache memory can be added. Four free drive bays and four expansion slots enable upgrading to multimedia.

○ £997.58
○ IBM: 0345 727272

Viglen Contender ES P100

Viglen's Contender ES P100 is a desktop PC in a slimline moulded case. There are three case styles (slimline, desktop or medium tower) so your choice will depend on how many expansion bays you require and how much room there is on your desk. Inside there's a Pentium 100MHz processor and 8Mb of memory. No cache memory is provided, but 256Kb can be fitted for only £25.

The Contender's graphics are generated by a controller built onto the motherboard and a Viglen-badged Envy 14PE monitor. The built-in controller can be disabled if you want a specialist graphics card, or you can add an extra video memory straight onto the motherboard. The Envy monitor is virtually identical to the 14in CTX model supplied with the MJN. It has the same curved screen, rotary controls and case design.

Inside the Contender, there's room to fit a CD-ROM drive (though no other drives), and four expansion slots are free if you want to add a sound card or modem. The pre-installed software includes Windows 95 itself and Microsoft Works for Windows 95, which together provide the basic tools for word processing, spreadsheets, simple data storage and graphics. There's plenty of room to store these, and more, on the 1Gb Seagate hard disk.

Viglen also supplies Windows 95 on floppy disks, so even if you don't add a CD-ROM drive, you can re-install Windows from these. A super keyboard with a heavy metal base, a real Microsoft mouse and manuals for the PC, Windows and Works complete the line-up.

The Viglen Contender is a really neat and compact machine, superbly put together with quality accessories and components. It's not as fast as the MJN because it has a slower processor and less memory, but it has a quality feel and is the sort of machine you could grow attached to.

○ £999 (incl VAT)
○ Viglen: 0181 758 7000

Viglen Contender ES P100

Performance	★★★★☆
Build quality	★★★★★
Features	★★★★☆
Value for money	★★★★☆
Overall	★★★★☆

Leading the retail market in this category is the AST Bravo LC 1500. This comes in two versions, both with Pentium 100MHz processors. The 1200W model (described here) is the more powerful of the two, being equipped with twice as much memory and a bigger hard disk than the cheaper 630W. The street price of £1,138 doesn't include a monitor, which means you can choose the one which best suits your needs, and a canny buyer should be able to find a dealer who can supply a Bravo with a 15in monitor at just below £1,499.

The PC itself looks a a little bit old-fashioned on the outside, with slimline styling compensated for by increased width and depth – you'll need a fairly spacious desk to accommodate this machine. Inside, it's not old-fashioned at all: a tiny motherboard sits at one side of the case and, because of the way all the essential bits and pieces have been built onto this board, the expansion slots are free.

Not only is there no graphics card, there is no graphics memory: the AST borrows 1Mb or 2Mb of RAM from the main system memory according to the way you set it up. This system has the advantage of cutting out delays in communication between the graphics card and the memory in the computer, but also reduces the amount of memory available for Windows.

If you want to start adding things to the LC 1500 (it's sold without a CD-ROM drive or sound card) there are two free 5.25in bays accessible from the front panel and an internal 3.5in bay.
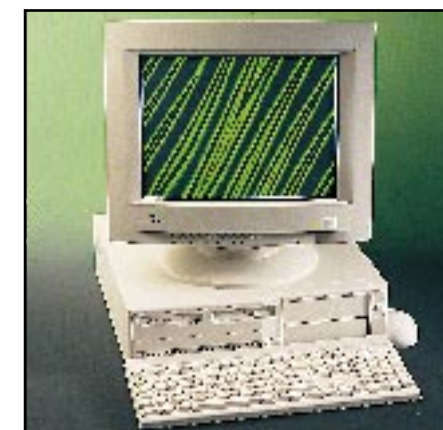
The Bravo's real strength is the quality and rigidity of its construction, both chassis and outer case being made from incredibly heavy metal pressings. No software is bundled with the machine other than Windows 95 and a few utilities, such as a virus checker and a management tool for administering computers on a network.

The Bravo 1500 proves that best-selling PCs are not necessarily the cheapest. This is a well-made, entry-level machine being sold at a mid-range price.

○ £1,461.70 (with 15in monitor)
○ AST: 0181 587 3000

HP Pavilion 5032

RUNNERS UP

This is a multimedia-equipped Pentium PC, with 8Mb of memory and an 850Mb hard disk. It's aimed at the home market, and the extensive bundle of Microsoft Works, leisure and entertainment software, together with HP's easy-to-use Windows front end, mean that it's ready to run. You get a 14in monitor but no speakers.

○ £1,498
○ HP: 01344 360000

Olivetti M24 NEW

Olivetti's M24 is a slimline desktop PC based on a 133MHz Pentium processor. This, plus the 1.2Gb hard drive and 8Mb of memory, delivers adequate performance, but the system needs an upgrade to 16Mb. With an Olivetti 14in monitor, Windows 95 and MS Works software it costs £1,291, or £1,479 including the upgrade to 16Mb.

○ £1,291 (£1,479 with 16Mb)
○ Olivetti: 0181 785 6666

AST Bravo LC 1500

AST Bravo LC 1500

Performance	★★★★☆
Build quality	★★★★★
Features	★★★☆☆
Value for money	★★★☆☆
Overall	★★★★☆

Packard Bell 923D

Packard Bell's 923D was just pipped at the post for the accolade of best seller by AST's Bravo, but we think the 923D offers much better value for money.

It's quite a large desktop computer with full multimedia, the speakers for which are conveniently mounted on the monitor, thus providing good directional sound and reducing the space required on desktop or table.

Inside the case is a pretty decent set of hardware for a home PC. There's 8Mb of EDO (extended data out) memory, which is sufficient to run most programs, though if you expect to use several big programs at the same time an upgrade to 16Mb would be a good idea. Multimedia is provided by a 16-bit sound card, a quad-speed CD-ROM drive and a 1Mb graphics system on the motherboard. Once again, for home multimedia, this is a reasonable setup, and our only complaint on the hardware front is the very springy feel of the keyboard.

The hard disk is a 1Gb model: big enough to store your own work as well as the extensive range of software supplied with the computer. Almost half the disk is used by the pre-installed goodies, including Windows 95, Microsoft Works, Money and Organizer (providing you with all the productivity tools you need) but you also get a massive set of 17 CD titles encompassing games, reference, sport and education.

For absolute beginners Packard Bell's own Navigator program makes the computer easier to use during the learning stage when you don't want to do anything complicated. Switching to a normal Windows set of controls can be done at any time.

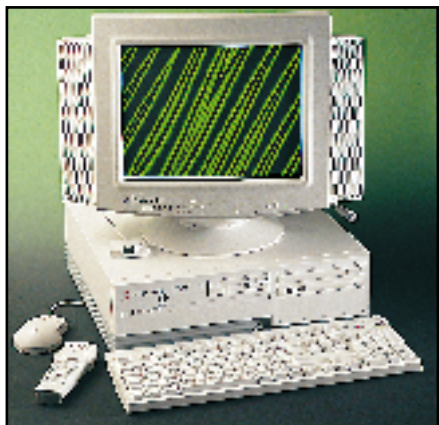**An ideal first PC, equipped with a little bit of everything you need – all** properly set up and ready to go. Adding another 8Mb of memory would enable this PC to handle anything you could reasonably want to do from home.

○ £1,399 (£1,489 with 15in monitor)
○ Packard Bell: 01753 831914

Packard Bell 923D

Performance	★★★★☆
Build quality	★★★★★
Features	★★★★☆
Value for money	★★★★☆
Overall	★★★★☆

Packard Bell Executive 916D

Popping to the shops to buy a PC only became possible in the last couple of years, but now 'consumer' PCs are big business. Buying a PC from a high-street store may be more expensive than mail order but at least the machine can be tried out first and any potential problems can usually be resolved with a trip into town.

Aimed squarely at the consumer, the Executive 916D has a number of touches designed to make life easier for the beginner.

Open the box and the first thing you find is a large sheet of paper explaining how to connect everything together. If this proves too much, the job of setting up is further simplified by the colour-coded plugs and sockets. Even the software bundle is pre-installed. A novice's dream and something other PC manufacturers might like to take note of.

Software is another strong point. Rather than leave beginners to get to grips with Windows 95 by themselves, Packard Bell installs its own 'Navigator' interface. Based on the notion of a house, the 916D's various functions and applications can be accessed by going into a room and clicking on an appropriate household implement – the bookshelf opens the manuals and reference CDs, for example.

The two-tone case is more stylish than most and has ample scope for expansion inside. A 1.2Gb hard drive and six-speed CD-ROM drive are fitted but peculiarly, the machine is only available in an 8Mb configuration. If you need a 16Mb machine (strongly recommended with Windows 95), you have to make your own arrangements. The 15in monitor, complete with screw-on speakers, works well and the presence of a V.34 modem, integrated 16-bit sound and radio tuner add to the multimedia features.

For first-time PC users, the Executive 916D is ideal. Unfortunately, such user-friendliness doesn't come cheaply and the 916D compares badly on price with other PCs.

○ £2,089
○ Packard Bell: 01753 831914

Packard Bell Executive 916D

Performance	★ ★ ★ ★ ☆
Build quality	★ ★ ★ ★ ☆
Features	★ ★ ★ ★ ★
Value for money	★ ★ ★ ☆ ☆
Overall	★ ★ ★ ★ ☆

AST Advantage! 624

RUNNERS UP

AST's Advantage! line is aimed at home and small business users. The Pentium 100-based 624 has 16Mb of RAM, a 1.2Gb hard drive, six-speed CD-ROM drive and 15in monitor. A fax/modem is supplied, as are speakers to accompany the integrated 16-bit sound. The slimline case makes expansion tricky.
○ £1,799
○ AST: 0181 587 3000

Compaq Presario 4704 (7230)

Designed with ease of use in mind, the curvaceous 4704 has buttons on its front panel for quick access to useful PC functions, and a volume knob on the 15in monitor to control the JBL speakers. The Pentium 133-based 4704 has 16Mb of RAM, a 1.6Gb hard drive, eight-speed CD-ROM drive and internal 33.3Kbs modem.
○ £1,999
○ Compaq: 0181 332 3000

Dan Dantum Home Plus-133

If you're working to a tight budget, then Dan Technology's PCs may not necessarily be for you, as it's possible to buy similarly specified machines cheaper elsewhere.

Do this, however, and you won't necessarily get a machine that has been put together as well and as thoughtfully as those from Dan. Internally, all cabling on a Dan PC is neatly clipped out of the way, giving unrestricted access to the important components. Dan PCs have also consistently out-performed the competition in our group test.

We've looked at a couple of variations of Dan's Pentium 133-based multimedia PC over the last year and it's been the recipient of our 'Best Buy' award each time. It also won the *What PC?* award for best Professional Multimedia PC. Since then, the specification has gone up and the price has gone down, which means that the current Dantum Home Plus-133 represents great value for money.

Supplied in either a midi-tower or desktop case, the Dantum Home Plus has 16Mb of EDO Ram, a 1.6Gb hard drive and eight-speed CD-ROM drive. The video card is the excellent Matrox Millenium with 2Mb of RAM and this gives a clear, steady image with the CTX-made 14in monitor. The supplied Sound Blaster AWE 32 sound card needs no introduction and an internal V.34 modem is also fitted. This still leaves four PCI and three ISA slots free for expansion, and further memory expansion is possible via the two remaining Simm sockets. Documentation isn't copious but it is clear and contains everything a new user needs to know.

In terms of software, the Home Plus is equally well-specified. Microsoft Works 4 is supplied, together with Intuit's Quicken 4 and Serif's PagePlus DTP software. You also get a bundle of multimedia CDs to get you started.

Dan PCs are fast, well built and well priced – what more could you ask for?
○ £1,733.13
○ Dan Technology: 0181 830 1100

Dan Dantum Home Plus-133

Performance	★ ★ ★ ★ ★
Build quality	★ ★ ★ ★ ★
Features	★ ★ ★ ★ ☆
Value for money	★ ★ ★ ★ ☆
Overall	★ ★ ★ ★ ☆ ▶

Dell has just updated its best-selling Dimension P133t and the restult, the P133v, incorporates recent innovations in PC design and technology.

Most of the changes are inside the machine, where you'll find the latest Intel VX motherboard. This is significant, not only because it incorporates high-performance PCI control chips, but also because it takes a new type of fast memory called SD-RAM, which is supplied as a single 16Mb module. The graphics system is also mounted on the motherboard, rather than on a separate card, and features 2Mb of memory and the latest internal tweaks to enhance Windows 95 graphics performance.

From the outside, the P133v appears more conventional: it's housed in a standard desktop case of generous size, with a little bit of designer attention given to the front panel to soften its serious-looking appearance.

The Dell VS 15X monitor is in keeping with the general style of the machine and performs well. The image can be adjusted to fill the 15in screen, which has a viewable diagonal of 13.75in and presents a stable picture with barely any distortion in the corners. A full range of adjustments is available via an on-screen control panel operated by slightly fiddly buttons under a flap on the case's bottom edge.

In keeping with its role as a powerful Windows 95 workhorse, the P133v has an efficient eight-speed CD-ROM drive and a capacious 1.6Gb hard disk on which Microsoft Office Pro comes pre-installed. Windows 95 and Office CDs are also supplied, as well as comprehensive manuals for both system unit and monitor.

Gateway P5-133

RUNNERS UP
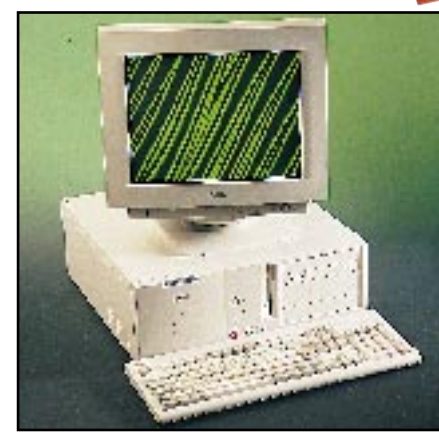
Gateway's P5-133 offers similar features to the Mesh Genius! Connect, being equipped with a V.34 modem, Altec Lansing speakers and full multimedia. The Gateway Vivitron 15in monitor provides a bright, clear image, even if focus is poor in the corners. The P5 is not cheap, but performance is excellent and build quality superb.
○ £1,755.45
○ Gateway: 0800 552000

Viglen Power 150 Multimedia

This is a tower-case design supplied with a 15in monitor and amplified speakers. Standard equipment includes a 1.6Gb hard disk, six-speed CD-ROM drive and ATI graphics card. There's also an internal V.34 Dataflex modem which can be used as an answer-phone and speakerphone with the microphone supplied.
○ £1,749
○ Viglen: 0181 758 7000

Mesh has long held the reputation of being a supplier of solid-value PCs, housed in rather unimaginative solid-looking boxes. The Genius! range, of which the 133 Connect is just one example, changes all this with its futuristic, slimline design.

Inside, there's still plenty of room to add bits and pieces, though the basic specification is so comprehensive you probably won't want to do so. Built onto the motherboard is a 16-bit sound system using Creative Labs' Vibra chips for full Sound Blaster compatibility. An eight-speed Toshiba CD-ROM drive and amplified Altec-Lansing speakers provide the rest of the multimedia features most users require.

Also built onto the motherboard is the ATI graphics controller with 2Mb of memory. The output from this produces a perfectly steady image on the Microscan 15in monitor and, although resolutions of 1,280x1,024 are possible, by sticking to 800x600 you can enjoy a True Colour picture (using millions of colours) while maintaining a 75MHz refresh rate to reduce flicker and prevent tired eyes.

There's enough memory for good Windows 95 performance with 16Mb of EDO-RAM being mounted in two sockets, leaving two more free for a potential upgrade. The 1.2Mb hard disk comes pre-installed with Windows 95 and Lotus SmartSuite and there's a selection from Microsoft's Home range of CD-ROMs for leisure and entertainment.

The Connect part of the name comes from the inclusion of a Pace V.34 modem, which is mounted in one of the ISA expansion slots, leaving two others free.

The Mesh Genius! 133 Connect offers topnotch features and performance

Dell Dimension P133v

users should part with another £59 for the almost identical XPS 133s model, which has full multimedia and extra cache memory.
○ £1,350 (incl VAT)
○ Dell: 01344 720000

Dell Dimension P133v

Performance	★ ★ ★ ★ ☆
Build quality	★ ★ ★ ★ ☆
Features	★ ★ ★ ☆ ☆
Value for money	★ ★ ★ ★ ☆
Overall	★ ★ ★ ★ ☆

The Dell Dimension P133v is a worthy machine for business users who don't want to pay for features they don't need. Home

Mesh Genius! 133 Connect

for the price. It has all the software and hardware you need for business and recreational use either at home or in the office.
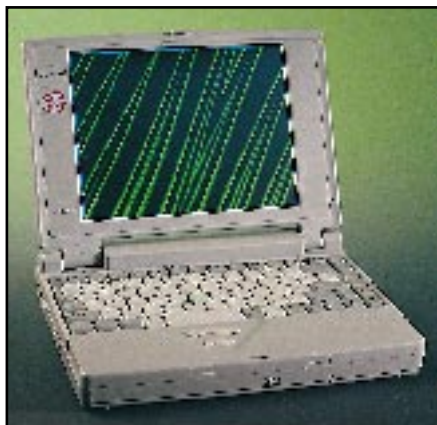○ £1,467.58 (incl VAT)
○ Mesh: 0181 452 1111

Mesh Genius! 133 Connect

Performance	★ ★ ★ ★ ★
Build quality	★ ★ ★ ★ ★
Features	★ ★ ★ ★ ☆
Value for money	★ ★ ★ ★ ★
Overall	★ ★ ★ ★ ☆ ▶

Toshiba T2130CT

A runner-up in our PC Awards this year, the Toshiba T2130CT has proved a popular choice among users looking for a quality product that doesn't cost a small fortune.

Toshiba has always led the laptop market, in fact the company doesn't even make desktop PCs, preferring to concentrate its not inconsiderable resources and expertise solely on making notebooks. This shows, both in the design and characteristics of its machines, and in the company's consistently high sales year after year.

Dell Latitude XPi P100SD

In June the Latitude XP 475D won our award for the best budget notebook. Dell hasn't stood still with this line, however, and the original DX4/75 specification has been upped to a Pentium 100.

The Latitude range features a characteristic black case and attractive, clean lines, which make the machines distinctive and a touch more handsome than the run-of-the-mill portable. Like its siblings, the XPi P100SD is robustly constr-

Physically, it's getting harder to tell Toshiba portables apart as the whole range has become increasingly standardised on a specific look. This is characterised by a light-grey case with rounded edges and corners, designed to resist impact without cracking, and a broad palmrest with a pair of distinctive, banana-shaped mouse buttons mounted slightly off-centre.

The basic system comprises a 486DX4/75 processor, 16Mb of main memory and a 520Mb hard disk, coupled with a 10.3in active-matrix VGA screen. This carries an RRP of £1,645. It differs from a number of current machines in its lack of modularity – you cannot remove the floppy drive and replace it with a CD-ROM module or second battery pack, for example.

The keyboard is sensibly laid out, without any function-doubling which requires you to hold down a modifier key to get at common commands like 'page-up', 'home' and 'end'. It does suffer from a bit of bounce in its baseplate however, and the action is rather light, which may not appeal to all tastes.

The screen is clear, readable and sufficiently bright so as not to be rendered useless every time the sun comes out, but it only operates at VGA resolution not SuperVGA

ucted, but very portable at under 6.5lb, which belies the impressive internal specifications. These include 8Mb of fast EDO memory, 256Kb of secondary cache to boost processor performance, a removable 540Mb hard disk, integrated 16-bit audio, a souped-up 128-bit graphics controller and a 10.4in high-resolution SVGA dual-scan screen.

The keyboard is a comfortable affair laid out along standard lines to avoid confusion. It has a large 'Enter' key – something missing from many notebooks – and benefits from a firm, but quiet action. The screen is a good-quality dual-scan panel with above-average brightness and clarity, coupled with the benefit of more working area from its high-resolution capability.

Like the Toshiba, the Latitude has the added convenience of a Windows-based power management setup utility, so you can make changes to the level of power saving without rebooting. The software squeezes three hours out of the Lithium Ion battery.

LiION batteries have the advantage over their NiMH counterparts of not becoming inefficient at storing charge if they aren't fully drained before being recharged. You can simply top up the batter-

like a number of newer machines, which limits the area of the Windows desktop somewhat. **A robust, practical portable with good power management and a number of thoughtful design touches, including an integrated power supply.**
○ £1,645
○ Toshiba: 01932 828828

Toshiba T2130CT

Performance	★★★★☆
Build quality	★★★★☆
Features	★★★☆☆
Value for money	★★★★☆
Overall	★★★★☆

HP Omnibook 600C
RUNNERS UP

The 600C is very small and light with a sub-A4 7x11in footprint and a weight of just 3.8lb. It has a 486DX4/75 processor, 8Mb of RAM and a 340Mb hard disk in the form of a Type III PC Card. There are two versions: one has an 8.5in DSTN screen, the other a 9.4in TFT panel. Both feature the HP 'mouse on a stalk'.
○ £1,680 (excl VAT)
○ HP: 01344 360000

Compaq Armada 1100
The Armada, effectively the successor to the Contura 420C, offers Pentium power with its P75 processor. It comes as standard with 8Mb of RAM and a large 810Mb hard disk. An excellent keyboard design features a spacious, desktop-like layout with a large 'Enter' key and a firm, decisive action. Both DSTN and TFT screen versions are available.
○ £1,644 (with DSTN screen)
○ Compaq: 0181 332 3000

ies whenever you need to without worrying about a build-up of the so-called 'memory effect'. **The Latitude offers plenty of features, good performance and long battery life in an attractive, but solidly-built package.**
○ £1,996
○ Dell: 01344 720000

Dell Latitude XPi P100SD

Performance	★★★★★
Build quality	★★★★★
Features	★★★★☆
Value for money	★★★★☆
Overall	★★★★☆ ▶

Toshiba Satellite Pro 410CDT

With its light-grey case, rounded corners and distinctive curved mouse buttons, the Satellite Pro could almost be mistaken for the T2130, but a closer inspection reveals a number of significant differences. Not least of these is price – for the Satellite Pro will set you back about £2,995 including VAT.

The considerable extra cost over the sub-£1,700 T2130 is accounted for by features such as the Pentium 90 processor, the

BEST SELLER

810Mb hard disk and the large 11.3in active-matrix SuperVGA screen. The machine also has fast EDO (extended data out) memory – 8Mb is supplied as standard – and it comes with a Lithium Ion (LiION) battery pack which can be recharged before it is flat without impairing its efficiency.

The keyboard looks pretty much like the one fitted to the T2130 but, although it has a similarly light action, the baseplate is solid, which improves the overall effect. The Satellite has a pressure-sensitive stud set into the middle of the keypad which you push with a fingertip to control the mouse pointer. In terms of ease of use this falls somewhere between the old trackball approach and the increasingly popular mousepad technology which looks set to replace it.

What distinguishes the Satellite from other notebooks is its modular build which allows you to replace the floppy drive with a quad-speed CD-ROM module. A number of portables offer this feature, but few provide a connection so the floppy drive can be run externally while the CD-ROM is installed.

The screen is spacious, bright and highly readable, and is out-performed only by the latest panels operating at 1,024x768 resolution,
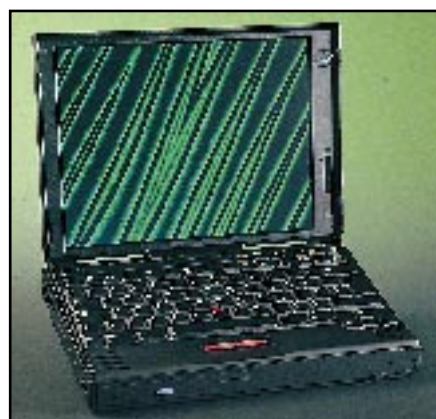
rather than the 800x600 of SVGA. **A flexible, quality portable with an excellent screen and the ability to run a CD-ROM and a floppy drive at the same time, but without the weight and bulk of machines with both drives permanently installed.**
○ £2,995
○ Toshiba: 01932 828828

Toshiba Satellite Pro 410CDT

Performance	★ ★ ★ ★ ☆
Build quality	★ ★ ★ ★ ★
Features	★ ★ ★ ★ ★
Value for money	★ ★ ★ ★ ☆
Overall	★ ★ ★ ★ ☆

AST Ascentia J30 P100

RUNNERS UP

The J30 features a 100MHz Pentium processor, 256Kb of secondary cache, a removable 800Mb hard disk and an active-matrix SVGA screen. It also has integrated 16-bit audio with built-in stereo speakers and, although there is no facility for an internal CD-ROM drive, an external unit is an option.
○ £2,231 (incl VAT)
○ AST: 0181 587 3000

Compaq LTE 5150

The 5150 is the faster, Pentium 100-based successor to the P90 5100 but, apart from the processor, the 5150 is little changed from the original. The floppy drive can be removed and replaced by either a quad-speed CD-ROM, a second hard disk or an optional second NiMH battery pack. A dual-battery configuration will run for around four hours between charges.
○ £3,378.12
○ Compaq: 0181 332 3000

IBM Thinkpad 760CD

In common with the Toshiba notebooks, IBM's Thinkpads have a very distinctive look. The 760CD is right at the top of the tree in terms of features, with a price tag to match: including VAT, the list price for the P120 version is £6,394.

However, for this you get the 120MHz Pentium processor, 256Kb of performance-boosting secondary cache, 8Mb of main memory, a whopping 1.2Gb removable hard disk, a removable quad-speed

ALTERNATIVE

CD-ROM drive and an impressive 12.1in active-matrix SVGA screen.

As if this weren't enough, the machine is powered by a Lithium Ion battery pack, and it offers hardware MPEG-1 and 2 motion video decompression, integrated 16-bit audio and twin infra-red serial ports, front and back.

The existing floppy drive won't run externally, but there is a connector for hooking up an optional external module, and the drive bay can be used for a second battery or hard disk as well as for the CD-ROM, giving the machine a considerable degree of versatility.

Features are nothing without ergonomics to match, but the 760CD delivers on this front too. When you open the lid the keyboard tilts up at the back and locks at an optimum angle for typing. The keypad itself is a real treat, with full-sized modifier keys, a big 'Enter' key and a firm, clean action, all of which combine to make typing on the 760CD as close to the comfort and practicality offered by a desktop as we've come on a portable.

The big screen diagonal makes the image large and readable, despite the high resolution, and the panel can operate at 65,536 colours (16-bit colour) if you want

to display photorealistic images or high-colour video clips.
Excellent ergonomics, plenty of power, and bags of features, including a modular build, make the Thinkpad a convincingly superior notebook.
○ £6,394 (incl VAT)
○ IBM: 0345 727272

IBM Thinkpad 760CD

Performance	★ ★ ★ ★ ★
Build quality	★ ★ ★ ★ ★
Features	★ ★ ★ ★ ★
Value for money	★ ★ ★ ★ ☆
Overall	★ ★ ★ ★ ★ ▶

Power Macintosh 7600/132

Contrary to popular belief Macs aren't just for DTP, and you don't have to be a graphic designer to use one. With the right software they're as versatile as any PC-compatible, and offer the only real alternative. Apple claims its best-selling model at the moment is the recently updated Power Macintosh 7600/132.

Classed as a mid-range business system, the 7600 comes in a desktop case with a 3.5in, 1.44Mb SuperDrive, eight-speed CD-ROM drive and internal speaker mounted at the front. The rear houses sockets for a monitor, NTSC/PAL video-in, stereo sound in and out, SCSI, Ethernet networking, a modem, a printer and the keyboard. Unfortunately, neither a keyboard nor monitor are supplied as standard.

Getting inside has been made as easy as possible, and instantly visible are the processor, mounted on a plug-in card for easy upgrading, three PCI slots, a 256Kb cache card, and the built-in video circuitry.

The 7600 uses a 132MHz PowerPC 604e processor, roughly equivalent to an Intel Pentium Pro in terms of performance. Coupled with this is 16Mb of RAM, expandable to 512Mb, and 2Mb of V-RAM, upgradable to 4Mb. The latter gives a maximum resolution of 1,280x1,024 pixels at 75Hz.

Other features on the motherboard include 16-bit CD-quality stereo sound recording and playback. A 1.2Gb SCSI hard disk is the standard storage option, but larger drives are available.

The 7600 is ideal for both general business and advanced graphics work, and comes bundled with Mac OS 7.5.3 and MS Office 4.2. However, with an official SRP of £2,583.82 including VAT but excluding a monitor or keyboard, it's no wonder the majority of people take the PC option. Unless you really need the power on offer, the ever-evolving Performa line is a far better bet. **Powerful and expandable, this is a great workhorse, suited to any task. However, it's just far too expensive for the average user.**

○ £2,583.82 (SRP incl VAT)
○ Apple: 0990 127753

Power Macintosh 7600/132

Performance	★ ★ ★ ★ ★
Build quality	★ ★ ★ ★ ★
Features	★ ★ ★ ☆ ☆
Value for money	★ ★ ★ ☆ ☆
Overall	★ ★ ★ ★ ☆

BEST SELLER

Power Mac 8500

RUNNERS UP

The 8500 is ideal for serious multimedia. Along with a powerful 604e 180MHz processor, it comes as standard with a video digitiser supporting NTSC and PAL video input and output, and stereo sound recording and playback facilities. A typical configuration has 32Mb of RAM, a 2Gb hard disk and 8x CD-ROM drive.

○ £3,630.75 (incl VAT)
○ Apple: 0990 127753

Performa 6400

The 6400 'Home Office Mac' runs at 180MHz and comes with 16MB of RAM, a 1.6Gb hard disk, a 8x CD-ROM drive and integral 28.8 modem. The basic system also includes a monitor, keyboard and mouse as standard. Bundled software includes System 7.5, Claris Works 4.0 and a horde of CD titles. It comes in 180MHz and 200MHz versions.

○ £1,878.82 (180MHz; incl VAT)
○ Apple: 0990 127753

Performa 5400

More interesting than the 7600 and packed with useful features, the recently-launched Performa 5400 is a much better bet for the average user. Dubbed 'The Family Macintosh' it does just about everything you could want a computer to do, at an affordable price.

Supplied in either a cream or black case depending on the configuration, the 5400 is based on the all-in-one design introduced with the 5200. It integrates a 15in monitor with stereo speakers and the main system box into a single, attractive unit that doesn't hog desk space. This approach does mean that you can't easily upgrade the monitor at a later date, but most would agree the trade-off is worth it. An Apple Design keyboard and mouse are bundled in the box, as is the power lead.

Internally you get either a 160MHz or 180MHz PowerPC 603e, roughly equivalent to an 166MHz Intel Pentium, together with 16Mb of RAM, expandable to 136Mb, and an optional 256Kb secondary cache card. The display is handled by 1Mb of separate D-RAM, providing support for a maximum resolution of 1,024x768 pixels in 256 colours.

Along with a 1.6Gb IDE hard disk, other internal features include a 28.8 data/fax/voice modem, 16-bit CD-quality stereo sound, an optional TV tuner card, and a single PCI expansion slot. The TV tuner also acts as video digitiser with both composite and S-VHS inputs.

Performas are designed to be ready to roll straight out of the box, and the 5400 comes with a horde of bundled titles including Mac OS 7.5.3, Claris Works 4.0, Apple's Internet Connection Kit, The Grolier Multimedia Encyclopaedia, Descent, and Dorling Kindersley's The Ultimate Human Body. **A well-rounded machine at a sensible price that's ideal for home and office use. It also looks good, which is not something you can say about most computers.**

○ £1,699 (160MHz; SRP incl VAT)
   £1,999 (180MHZ with TV tuner)
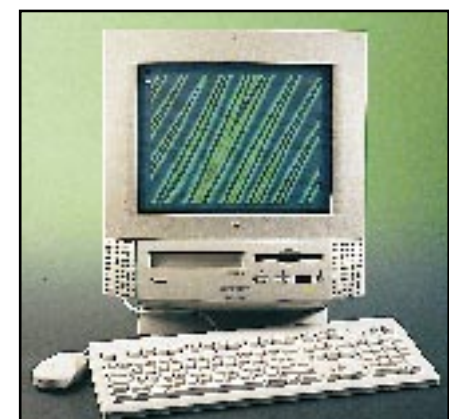○ Apple: 0990 127753

Performa 5400

Performance	★ ★ ★ ★ ☆
Build quality	★ ★ ★ ★ ☆
Features	★ ★ ★ ★ ★
Value for money	★ ★ ★ ★ ★
Overall	★ ★ ★ ★ ☆

ALTERNATIVE

The name 'Psion' is more or less interchangeable with PDA (Personal Digital Assistant), such is the company's dominance of the market. The Series 3a and its predecessor, the Series 3, redefined the whole concept of a PDA from mere electronic address book into fully-fledged hand-held computer with features more in keeping with a desktop PC.

The 3a looks very much like a spectacle case, albeit a slim, stylish one. A cleverly-designed hinge along the back of the case acts as a rest that holds the screen and keyboard at a comfortable angle when the case is open. Expansion is via two slots, one at each end of the case. These take proprietary Psion SSDs (Solid-State Disks) that add extra storage capacity to the 3a.

The screen fills almost all of the inside of the lid. Measuring 480x160 pixels, it can display a readable 80 characters a line and the keyboard, although small, doesn't feel cramped. Obviously touch-typing is out of the question, but it is still possible to build up a reasonable speed using two fingers of each hand.

Hardware aside, it's the built-in applications that really set the Series 3a apart. They have a familiar graphical appearance, complete with drop-down menus, and it's possible to cut and paste information between applications running at the same time. The word processor, spreadsheet and appointments manager have the same functionality as most PC applications, which means the 3a is capable of replacing, rather than just complementing, a desktop computer.

Should the built-in applications prove insufficient, there are hundreds of commercial and shareware applications available. Installing them is easy, particularly if they are supplied on SSD. If not, applications on floppy disk or downloaded from the Internet can be transferred from a PC to a 3a via a special serial cable

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Sharp ZR-5700

RUNNERS UP

The lack of a built-in programming language put Sharp's ZR-5000 firmly in the PDA camp. It's now been replaced by the ZR-5700, which has a spreadsheet and built-in CompuServe access. The large touch-sensitive screen is useful for taking quick hand-written notes, but there's no handwriting recognition.

○ £429
○ Sharp: 0800 262958

Hewlett-Packard Omnigo 100

The Omnigo 100 crams a lot into a small package. The screen is small (240x240 pixels) but it's touch-sensitive and uses Graffiti handwriting recognition. It can also be folded back so that you can hold the Omnigo in one hand while writing with the other. It also has a keyboard and a Type II PCMCIA slot for expansion.

○ £340
○ HP: 01344 360000

The Palm Pilot is no replacement for a desktop PC, but then it isn't supposed to be. It is designed as a PC 'accessory' to provide information when your PC isn't at hand.

About the size of a pack of playing cards, the Pilot is both small and light enough to fit easily into a shirt pocket. The reason for its small size is its lack of keyboard – instead, the Pilot depends on its 160x160-pixel touch-sensitive screen.

For text input, the Pilot relies on recognising letters written on the screen using the supplied stylus. Handwriting recognition on palm-tops hasn't been a great success in the past, but the Pilot is pretty good at it. This isn't because it can recognise a wide variety of human scrawls, but rather because it uses the Graffiti recognition system.

Graffiti requires you to write letter-by-letter, using a simplified version of the alphabet. In effect, you have learn the Pilot's handwriting. This makes the recognition process much simpler and, more importantly, much more accurate. Don't be put off – the process sounds more complicated than it is, and the Graffiti basics can be mastered in under half-an-hour.

The Pilot has four main applications – date book, phone book, to-do list and memo pad – each activated by pressing one of the four buttons along the bottom of the case. The applications are quite simple, but they do work very well. Small touches, like the ability to store entries in one of several user-definable categories, also make them extremely versatile.

One nice feature is the PC link system included in the price. This consists of a 'cradle' into which the Pilot slots, and a serial cable to connect it to the PC. PC software is also supplied which duplicates that on the Pilot. The clever part is that,

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Psion Series 3a

and Psion PsiWin software. You can even write your own using the 3a's built-in programming language. **Despite its age, the Series 3a is still the only practical solution if you want a true hand-held computer.**

○ £339.95 (1Mb version; incl VAT)
   £399.95 (2Mb version; incl VAT)
○ Psion: 0171 258 7368

Psion Series 3a

Ease of use	★ ★ ★ ★ ★
Build quality	★ ★ ★ ★ ☆
Features	★ ★ ★ ★ ☆
Value for money	★ ★ ★ ★ ☆
Overall	★ ★ ★ ★ ☆

BEST SELLER

US Robotics Pilot

when the cradle's 'Hotsync' button is pressed, information on both the PC and Pilot is quickly synchronised. **Quite literally a 'palmtop'; few sacrifices have been made for the sake of its size.**

○ £279 (Pilot 1000)
   £349 (Pilot 5000)
○ US Robotics: 0800 225252

US Robotics Pilot

Ease of use	★ ★ ★ ★ ★
Build quality	★ ★ ★ ★ ★
Features	★ ★ ★ ★ ☆
Value for money	★ ★ ★ ★ ★
Overall	★ ★ ★ ★ ☆

ALTERNATIVE

Hewlett-Packard LaserJet 5L

Unsurprisingly, Hewlett-Packard printers yet again feature heavily in the list of best sellers. Of all the HP models included, though, the LaserJet 5L is by far the biggest selling.

The LaserJet 5L wouldn't look out of place on the set of a sci-fi movie: it's been given a futuristic feel with curved surfaces and a couple of paper supports that disappear completely into the casing when not in use. The front of the case can be pulled forward – rather shakily –

when you need to remove jammed paper or replace the toner cartridge.

Both the paper feeder and the paper output tray stand vertically, which means the LaserJet 5L takes up less room on your desk than most. However, if you prefer your paper to exit at the front, this can be achieved by the flick of a switch.

Under our tests the 5L's text prints were about average, although there was noticeable speckling on the white areas of the pages. However, this may well have been caused by the battered-looking toner cartridge that we received with our review machine. However, the 5L performed very well with our graphics test, producing crisp images with exceptional shading contrasts. Unfortunately, it was not particularly fast at just over 3ppm (pages per minute).

Usefully, with the LaserJet 5L Hewlett-Packard has included DOS drivers and an accompanying utility called Remote Control Panel (RCP). RCP lets you configure the LaserJet 5L's settings to allow it to work harmoniously with older, or obsolete DOS-only programs.

The LaserJet 5L is capable of printing to a maximum resolution of 600dpi (dots per inch), but the 1Mb of RAM fitted as standard is unlikely to be enough for much more than

text and basic graphic image output. However, it is possible to upgrade to 8Mb of RAM by installing the appropriate memory card.

Superb graphics output, acceptable text prints and an interesting design; our gripes are its dubious build quality and the price.
○ £527.58 (incl VAT)
○ Hewlett-Packard: 0990 474747

Hewlett-Packard LaserJet 5L

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

Panasonic KX-P6100
RUNNERS UP

The KX-P6100 stands out, literally, among laser printers. It rises vertically from the desktop, giving it one of the smallest footprints of all lasers – just 132mmx378mm. It's a Windows-based GDI printer with PCL 4.5 emulation, a print speed of 6ppm, and a true print resolution of 300dpi.
○ £304.33 (incl VAT)
○ Panasonic: 0500 404041

Epson EPL-5500

The EPL-5500 is a 600dpi laser printer. It uses Epson's Bi Resolution Improvement Technology which reduces the appearance of jagged edges on text and graphics. Epson quotes a print speed of 6ppm and its SPARClite 22.5MHz RISC processor gives a first-page print time of under 20 seconds. It's fitted with 1Mb of RAM, has a 150-sheet paper tray and uses PCL5e.
○ £468.83 (incl VAT)
○ Epson: 01442 61144

Brother HL-730

Brother has established a reputation for producing high-quality printers with price tags to match. The HL-730 is, therefore, something of a departure for Brother: it's a high-quality laser printer at a distinctly budget price. A perfect *WhatPC?* alternative.

The HL-730 has a very sleek design with a cover that swings forward and down to form the paper catch tray; when raised to access the toner cartridge this cover feels a little unsteady.

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

marily 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 ten envelopes. Slightly in front of this sits a slot through which you can feed a single sheet of paper – useful if, for example, you print primarily on plain paper, but occasionally need to print on a sheet of headed paper.

There's only one control button on the HL-730, and this is only used for performing test prints – all other controls are accessed via the included Windows driver. Above this are four status LEDs that indicate when the printer is powered, busy, jammed or low on toner.

With a maximum print resolution of 600dpi, the quality of printed text from the HL-730 is superb, and its graphics output manages to outshine many other machines in the same class. Brother claims a print speed of 6ppm for the HL-730 and this proved quite accurate: during our tests, just under 6ppm were pushed into the catch tray. The printer took an average of nine seconds to warm up and the first page appeared after 30 seconds.

A word of warning: Brother has only fitted 0.5Mb of memory in the HL-730. This may not be enough if

you're intending to print complex documents or graphics.

The HL-730 is a very appealing machine. It combines three factors which are essential to a good printer: high quality, ease of use and a low price.
○ £433.58 (incl VAT)
○ Brother: 0161 330 6531

Brother HL-730

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

The best-selling printer in the £500-1,200 laser category is HP's LaserJet 5P, and everything about its design tells you that this is not a printer destined for use beside a desktop PC. From the sheer size and weight of the machine to the cautiously shielded interface sockets, Hewlett-Packard has built the LaserJet 5P to cope with heavy workloads in busy environments.

For experienced users, setting up the LaserJet 5P for the first time isn't too vexing, but from a beginner's point of view the manual gets far too technical, far too quickly. That said, once up and running the printer is simple to operate and the

driver software's interface is clear and uncluttered, which makes altering the LaserJet 5P's many settings a quick and easy process.

The base of the printer pulls out to reveal a 250-sheet capacity paper feed tray, and above this is a smaller multi-purpose feeder that holds up to 100 sheets of A4, or 10 DL-size envelopes.

To the left of the lower paper tray is an infra-red communications port that conforms to the IrDA standard, and this facilitates wireless printing – particularly useful, for instance, in an office environment catering for transient users with notebook computers.

The LaserJet 5P's quoted print speed of 6ppm is a little optimistic: during our tests the printer managed around 3.5ppm for text printed at a resolution of 600dpi. To be fair, it did hit the 5.9ppm mark when set to print at 300dpi in Hewlett-Packard's toner-saving 'EconoFast' mode, but this is only suitable for draft printing.

Out of the box, the LaserJet 5P comes with 2Mb of RAM. This is acceptable, but a workload with a heavy graphics bias may demand more. In this instance, the LaserJet 5P can be upgraded using SIMMs (single in-line memory modules) to a maximum of 50Mb.

Oki OL610ex
RUNNERS UP

The OL610ex isn't strictly a laser printer as it uses a row of LEDs (light-emitting diodes) to build up an image. Quality doesn't suffer as Oki's MicroRes technology offers a top resolution of 600dpi with a quoted print speed of 6ppm. Unusually, it can operate as either a PCL5e or GDI printer, with DOS or Windows.
○ £609.83 (incl VAT)
○ Oki: 01753 819819

Lexmark Optra-E

The Optra-E is a true 600dpi laser printer, with 1Mb of memory as standard and a quoted print speed of 6ppm. It is an exact replica of the Epson EPL5500W, although it uses PCL5 emulation and not the Windows Printing System. It measures 335x246x219mm and has a 150-sheet paper tray. A useful utility called 'MarkVision' allows you to monitor the status of print jobs.
○ £562.83 (incl VAT)
○ Lexmark: 01628 481500

Compared with many modern laser printers, the Print-Partner is a giant. It weighs 17kg and gobbles up more than its fair share of desk space. That said, we could not find any fault with the quality of build – it's an extremely solid machine that has obviously been designed to handle large throughputs. The documentation confirms this view with a recommended duty cycle of up to 20,000 pages per month. A worthy alternative to the best-selling HP.

The PrintPartner has a slide-out paper cassette underneath it, and this can take up to 250 sheets of

Hewlett-Packard LaserJet 5P

Solidly built and reasonably fast; as an office printer, the LaserJet 5P is hard to beat, but it's excessive for use with a standalone PC.
○ £957.63 (incl VAT)
○ Hewlett-Packard: 0990 474747

Hewlett-Packard LaserJet 5P

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

A4. By attaching an optional second cassette this capacity rises to 750. Above the main cassette is a slot through which you can feed single sheets or envelopes. Only one control button is present on the case, and this is used to toggle the 'ready' status.

Fujitsu quotes a print speed of 10ppm for the PrintPartner. Our tests showed this to be pretty near the mark, with the page output pile rising by around nine pages every minute using our text document. Graphics printing is slightly slower, though, at just under 7ppm. The quality of text is excellent, and the graphics prints are outstanding. This is hardly surprising as the PrintPartner 10 can print at true resolutions of up to 600dpi and, using Fujitsu's Enhanced Image Technology (FEIT), an effective 1,200dpi is possible.

Fujitsu supplies the PrintPartner fitted with 2Mb of RAM as standard, which should be sufficient for all printing at 300dpi, as well as limited 600dpi output. There's also a pair of SIMM (Single In-line Memory Module) sockets, each of which will accommodate up to a 16Mb SIMM, which means that the Fujitsu PrintPartner could be upgraded to a slightly-more-than-

Fujitsu PrintPartner 10

comfortable 32Mb.

The PrintPartner 10 is an expensive machine, and it is not aimed directly at the home user. However, if you can afford it, you will not be disappointed.
○ £821.33 (incl VAT)
○ Fujitsu: 0181 573 4444

Fujitsu PrintPartner 10

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

Canon is a force to be reckoned with when it comes to inkjet printers. The company produces a huge variety of them, ranging from basic, low-cost monochrome machines to more expensive, higher-resolution colour models. The best-selling BJC-4100 sits somewhere in between those two extremes.

At first sight, the BJC-4100 appears to be quite compact, but once you've pulled out the paper-catch tray you realise that it in fact commands a large chunk of desk space. There are two buttons on the top of the machine, and these are used for cycling power and for resolving miscellaneous errors.

The front of the BJC-4100 pulls open to reveal a print carriage containing two ink cartridges – one black and one three-colour (cyan, magenta and yellow) – housed in a unit that has a built-in printhead. Because the ink cartridges do not have their own printheads – it's a separate replaceable unit – the long-term running costs of the BJC-4100 should be lower than many of its rivals.

At the maximum print resolution of 720x360dpi, the printer's text output looks sharp enough, although the characters lose definition at point sizes of 10 and below. Graphics output is average on plain paper, but on Canon's coated paper the appearance is greatly improved. The BJC-4100's true print resolution is 360x360dpi, but Canon employs a smoothing system which effectively doubles the horizontal resolution.

The BJC-4100 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 the BJC-4100 is far from unique in this respect. **The Canon BJC-4100 is not a remarkable printer, particularly considering the**

Canon BJC-4100

mass of colour inkjets that are available for under £300, but it's acceptable enough and has the advantage of separate black and colour ink cartridges.
○ £292.58 (incl VAT)
○ Canon: 0121 680 8062

Canon BJC-4100

Performance	★ ★ ★ ☆ ☆
Build quality	★ ★ ★ ★ ☆
Features	★ ★ ★ ☆ ☆
Value for money	★ ★ ★ ☆ ☆
Overall	★ ★ ★ ☆ ☆

Canon BJC-210

RUNNERS UP

The BJC-210 has a true print resolution of 360x360dpi, which can be improved to 720x360dpi using Canon's smoothing technology. Its paper feeder can hold up to 100 sheets of A4, or 10 European DL envelopes. It can print in colour or monochrome, but you have to switch cartridges to do so.
○ £198.58 (incl VAT)
○ Canon: 0121 680 8062

HP DeskJet 400

The DeskJet 400 is also capable of printing in mono or colour by swapping ink cartridges. It weighs 3kg and measures 335x279x178mm with its paper tray fully extended. The DeskJet 400 uses HP's 'ColorSmart' technology to produce the best possible screen-to-page colour match, and it can print to a maximum resolution of 600x300dpi in mono, or 300x300dpi in colour.
○ £223.25 (incl VAT)
○ HP: 0990 474747

Apart from a small badge bearing information to the contrary, the DeskJet 600 could be easily mistaken for its younger sibling, the DeskJet 660C. Indeed, on the surface, the two models are identical, with the only difference – and it's an important one – being hidden from view under the cover: the DeskJet 600 can only accommodate a single ink cartridge.

However, this does not mean the DeskJet 600 is limited to black-and-white printing – with an optional colour kit, you can use it to print in colour. This 'kit' is, in fact, just a three-colour ink cartridge with an accompanying storage container. The container will store either the black, or the larger colour cartridge when they're not in use and has a double-walled design to prevent the contained cartridge from drying out.

Mono print speeds are about the same as that of the DeskJet 660C – around 1ppm – but colour prints are slower because the DeskJet 600 has to use a three-colour composite to produce black. Similarly, the quality of mono print-outs is near-perfect – as can be had from an inkjet – but the vibrancy of colour prints suffers because of the lack of a true black.

The supplied software is quite a clever affair. You don't need to check which cartridge you have installed before you start a print job, the software puts up an appropriate message if it a detects that a cartridge swap is required, or would be beneficial. For example, printing a mono page with a colour cartridge would be not only wasteful, but slower and of a lower quality than with the black cartridge.

As with all the printers in the DeskJet series, the 600 comes with a good illustrated manual and the software includes graphical help files and tutorials. **The need to swap ink**
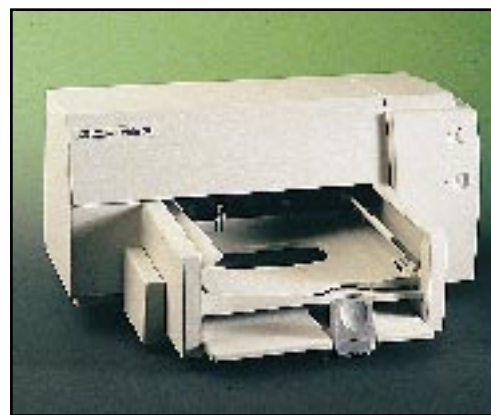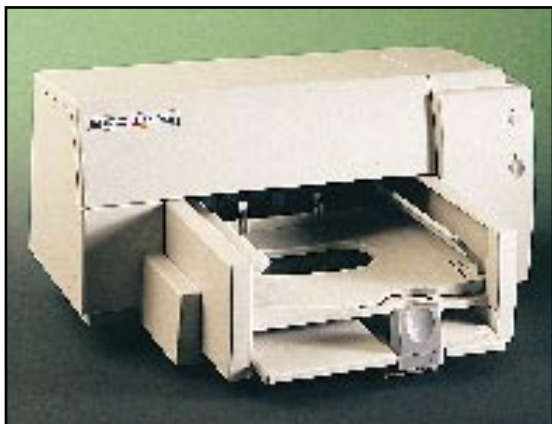

Hewlett-Packard DeskJet 600

cartridges when you want to print in colour reduces the DeskJet 600's appeal, but at this price it is well worth considering.
○ £223.25 (incl VAT)
○ Hewlett-Packard: 0990 474747

Hewlett-Packard DeskJet 600

Performance	★ ★ ★ ☆ ☆
Build quality	★ ★ ★ ★ ☆
Features	★ ★ ★ ★ ☆
Value for money	★ ★ ★ ★ ☆
Overall	★ ★ ★ ★ ☆

ALTERNATIVE

Hewlett-Packard DeskJet 660C

There are really no surprises when it comes to this category – Hewlett-Packard scoops it again with the 660C.

The 660C has a sturdier build than most of the other printers that make up the DeskJet range. Also, it has a sleeker, more appealing design with a gently curved cover and soft corners. Under the cover is a pair of ink cartridges, one three-colour and a separate black cartridge.

Start a print job, be it graphics or text, and the DeskJet 660C bursts into life with the print carriage zipping back and forth at a fair rate of knots. Unfortunately, the DeskJet 660C is a lot slower at printing than it would at first appear. During our tests it could only sustain a shade over 1ppm in 'Normal' mode, with graphics printing being naturally much slower. The main reason for this, it would seem, is that the 660C prints in much smaller bands than many other printers we've seen. But it does give a very consistent graphics output and, even on very dark areas, you'd have to squint hard before banding becomes even vaguely evident.

If you do need a quick printout and aren't overly concerned about the output quality, then the DeskJet 660C can be set to operate in 'EconoFast' mode. In this mode the printer managed 2.5ppm and the quality is surprisingly good, although at smaller font size the text does tend to break up quite badly.

At the highest-quality output setting, 'Best' (600x600dpi), the print speed can be measured in fractions of pages per minute, but the results are worth the wait.

Like many of Hewlett-Packard's printers, the DeskJet 660C supports each page whilst printing progresses, before dropping it into a catch area below. While this system does give time for the ink on previous pages to dry, on heavily inked areas, such as large graphic images, it leads to curved pages and curling edges. **Top-quality prints and an excellent software bundle combine to make the Hewlett-Packard DeskJet 660C a deserved best seller.**

○ £345.45 (incl VAT)
○ Hewlett-Packard: 0990 474747

Hewlett-Packard DeskJet 660C

Performance	★ ★ ☆ ☆ ☆
Build quality	★ ★ ★ ★ ☆
Features	★ ★ ★ ★ ☆
Value for money	★ ★ ★ ★ ☆
Overall	★ ★ ★ ★ ☆

Epson Stylus Color IIs

RUNNERS UP

The Color IIs is the Color 500's older brother and it shares many of its sibling's specifications, except for one – it can print in either colour or mono at resolutions up to 720dpi, but you have to switch ink cartridges accordingly. For the low workloads of a home user this should not prove a major disadvantage.

○ £231.48 (incl VAT)
○ Epson: 01442 61144

Canon BJC-610

The biggest advantage of the 720dpi, colour BJC-610 lays with its ink cartridges. Whereas many printers use a twin-cartridge system, Canon has opted for four separate cartridges – one for each colour, including black, so you can replace colours individually. It has a quoted print speed of 1.6ppm and runs under the Windows Printing System.

○ £468.83 (incl VAT)
○ Canon: 0121 680 8062

Epson Stylus Color 500

Epson has had great success with its Stylus Color range of inkjet printers and, with the recent release of the 500 model, it seems set to continue the trend.

The Stylus Color 500 has a rather unappealing, shoebox-like design. At the front is a pull-down flap which serves as the paper-catch tray, and on the top sit three control buttons; one loads and ejects paper and the other two initiate head-cleaning processes. Two cleaning buttons are required because the Stylus Color 500 employs a twin-cartridge printing system. One cartridge contains cyan, magenta and yellow inks, while the second has only black.

The Stylus Color 500 has a maximum print resolution of 720x720dpi, and you would expect the printouts to be reasonable. However, to describe the output as simply reasonable would be a great injustice, for the Stylus Color 500 produces some of the highest-quality prints we have ever seen from an inkjet printer. On plain paper the results are outstanding, and even more so on coated paper. However, you'll need to try printing on Epson's specially-treated glossy paper to discover why the company can feel fully justified with its claim of 'photorealistic printouts'. This paper does not come cheap, though, and a mere 15 sheets costs £27.01 (incl VAT).

Epson attributes the high quality to the piezo printhead technology used in all its Stylus printers. Piezo printheads use a pump-action method to transfer ink onto paper. Epson believes this allows greater control over the shape and frequency of ink droplets than is possible with the heat-and-bubble method. As well as being of exceptional quality, the printouts don't display any banding – a factor which might, ordinarily, sway your decision away from an inkjet and towards a laser printer. **While we have a couple of quibbles about its design, this is one of the finest colour inkjet printers you can buy and a worthy alternative to the HP.**

○ £341.93 (incl VAT)
○ Epson: 01442 61144

Epson Stylus Color 500

Performance	★ ★ ★ ★ ★
Build quality	★ ★ ★ ★ ☆
Features	★ ★ ★ ★ ☆
Value for money	★ ★ ★ ★ ★
Overall	★ ★ ★ ★ ☆

The BJ-30 is the successor to the highly successful Canon BJ-10, the model that, arguably, started the ball rolling in the portable printer market. The BJ-30 also happens to be one of the most compact inkjet printers on the market today – with the cover closed it is approximately the same size as a small box of chocolates.

Rather than a selection of soft centres, though, raising the cover of the BJ-30 reveals a small LCD (liquid crystal display) status panel and a selection of control buttons. A second cover swings forward to give access to the ink cartridge. This ink cartridge is also exceptionally small and, of course, this means its ink capacity is less than that of a standard-sized cartridge. Canon estimates a single cartridge contains sufficient ink for around 170 pages, at a coverage of 5 percent, which is reasonable considering the size. Even so, you'll probably want to keep a couple of extra cartridges handy in case of emergencies.

There's an optional rechargeable battery pack available for the Canon BJ-30, which provides sufficient power to produce around 180 pages of printing. With the battery fitted, the BJ-30 weighs a little over 1.4kg so, although you probably wouldn't choose to lug it around in a briefcase all day, it's unlikely to put too much strain on your carrying arm.

As far as speed is concerned, the BJ-30 is no Ferrari. On text pages it can manage about 2ppm, with graphics output considerably slower. 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.

If you're bored with the traditional cream hue so often associated with printers and desktop PCs, Canon will happily supply you with a BJ-30 in a colour more befitting a notebook PC – namely, black.

Canon BJ-30

If you're looking for a compact printer but don't want to sacrifice too much by way of quality, Canon's BJ-30 comes highly recommended.
○ £163.33 (incl VAT)
○ Canon: 0121 680 8062

Canon BJ-30

Performance	★ ★ ★ ☆ ☆
Build quality	★ ★ ★ ★ ☆
Features	★ ★ ★ ★ ☆
Value for money	★ ★ ★ ★ ☆
Overall	★ ★ ★ ★ ☆

Laid flat on its back, Hewlett-Packard's DeskJet 340 is not much bigger in any one dimension than the Canon BJ-30, but it is a good bit heavier. Unlike the BJ-30, though, the DeskJet 340 stands vertically on the work surface, which results in a smaller footprint. However, the problem with this design is that, 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.

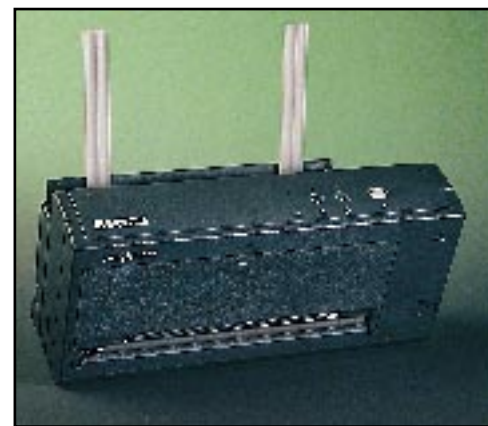With the paper feeder hooked on the back, the DeskJet 340 can hold and automatically feed up to 30 sheets of A4 paper. Sensibly, this feeder has been designed so that it can be folded flat, but even then it extends about an inch from the rear of the printer. With the feeder attached – which is necessary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

A major advantage the DeskJet 340 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 340's size, you have to be content with a three-colour cartridge, and this means that any black areas within your colour output will appear more as a very dark brown than true black.

The print quality is of a higher standard than that which emerges from Canon's BJ-30. Text is clearer and graphics output has better definition and, of course, the option to print in colour is a real bonus. Also, the black ink cartridge is much larger than the one inside the BJ-30 – at least double the size. Not surprisingly, this results in a much longer life, which Hewlett-Packard estimates as around 500 A4 pages at 5 percent coverage.

The DeskJet 340 produces very good text and graphics

Hewlett-Packard DeskJet 340

output in both monochrome and colour. Unfortunately, it's just that bit too heavy to be viewed as comfortably portable.
○ £274.95 (incl VAT)
○ Hewlett-Packard: 0990 474747

ALTERNATIVE

Hewlett-Packard DeskJet 340

Performance	★ ★ ★ ★ ★
Build quality	★ ★ ★ ★ ★
Features	★ ★ ★ ★ ☆
Value for money	★ ★ ★ ★ ☆
Overall	★ ★ ★ ★ ☆

Sony MultiScan 15sfII

The monitor is one of the most important PC peripherals: whatever you're doing with your computer, you're looking at your monitor, so It really pays to spend a bit extra.

The world's most common size of monitor remains the 14in, but Windows looks much better in higher resolutions on bigger screens, hence the increasing popularity of 15 and 17in models.

The going rate for a really good 15in monitor is around £300+VAT on the street, which is approximately what you'd pay for the Sony

BEST SELLER

MultiScan 15sfII. It may sound expensive, but the 15sfII performs as well as most 17in monitors costing over £500+VAT. The 15sfII can display resolutions from 640x480 to 1,024x768 in non-interlaced modes at high refresh rates, which ensures flicker-free results. We recommend running in 800x600 or 1,024x768 resolutions, at 75Hz refresh rate.

Sony uses its own Trinitron technology for its computer monitors and TV sets. These are typically much brighter than conventional tubes, and boast particularly vibrant colours. The 15sfII's picture is sharp, clear and well defined. As to be expected with 15in monitors, the viewable area is about an inch smaller on the diagonal; it measures 353mm on this model.

The 15sfII's cabinet is the same neat design as the earlier 15sf: a thin surround gently curves out in the lower right corner to accommodate adjustment and selection controls. There's no hidden or sliding panel to reveal further controls, and the design is compact and good-ooking.

A clear on-screen display indicates the monitor's modes and image settings in the same way as a TV superimposes volume and channel graphics during adjustment.

The 15sfII conforms to MPR-II regulations for safety emissions, and

there's a more expensive version available which boasts the stricter TCO-1992 regulations. Both have an automatic power-down facility. **A great-looking 15in monitor, both in terms of its superb image quality and case design. It's no wonder Sony's 15sfII is a best seller.**
○ £464.12 (RRP); £352.50 (street)
○ Sony: 0181 760 0500

Sony MultiScan 15sfII

Performance	★ ★ ★ ★ ★
Build quality	★ ★ ★ ★ ★
Features	★ ★ ★ ★ ☆
Value for money	★ ★ ★ ★ ☆
Overall	★ ★ ★ ★ ★

NEC MultiSync XE17

RUNNERS UP

This is an excellent-performing 17in monitor with a 15.6in viewable diagonal. Its MultiSync technology allows it to lock on to any resolution between 640x480 and 1,024x768, which it can display non-interlaced at up to 75Hz. It has on-screen controls and a power-saving feature.
○ £989 (RRP); £720 (street)
○ NEC: 0645 404020

Philips 17B

The 17B boasts built-in speakers, which produce good sound with an unusually spacious stereo effect. It meets MPR-II for emissions, supports plug'n'play, and has a power-saving feature. On-screen controls aid image adjustment. The 17B supports resolutions from 640x480 to 1,024x768, which it can display non-interlaced at up to 75Hz. A good all-rounder.
○ £570 (RRP); £540 (street)
○ Philips: 0181 689 4444

Samsung SyncMaster 15Gli

Samsung's almost ubiquitous SyncMaster monitors are supplied with countless PC systems for good reason: they offer the unbeatable combination of a decent picture at a great price. Samsung is in fact the largest supplier of computer monitors in the world. The superb SyncMaster 15Gli is our alternative choice for a 15in monitor.

Most computers are set up by default to run at 640x480 resolution, also known as VGA. However

ALTERNATIVE

typical graphics cards and monitors are capable of much better. Higher resolutions, using smaller and more dots to the inch, mean that you can fit much more on the same screen, which saves you scrolling around documents, Internet pages and spreadsheets, while icons, toolbars and palettes all occupy less space overall. Both the best-selling Sony 15sfII and the Samsung 15Gli are capable of running without flicker at 800x600 or 1,024x768 resolutions.

The 15Gli's flat, bright and clear tube is capable of displaying resolutions from 640x480 to 1,280x1,024, but is happiest and recommended for use at 1,024x768, running at 75Hz in a flicker-free non-interlaced mode. At this setting, Windows looks fantastic, with plenty of detail and space to move around.

The controls are hidden behind a front panel, while all image adjustments are made using the clear on-screen display. Grateful thanks go to Samsung for designing a neat, compact, good-looking case to house its high-performing innards.

You needn't worry about safety either: the 15Gli meets MPR-II emission guidelines and also has power-saving and plug'n'play setup under Windows 95.

The 15Gli has a 350mm view-

able diagonal but, if you fancy something larger, the 17in Gli is essentially the same model with an extra couple of inches to play with. **Samsung's SyncMaster 15Gli offers an excellent image, with good facilities – all attractively housed.**
○ £405.37 (RRP): £327.82 (street)
○ Samsung: 0181 391 0168

Samsung SyncMaster 15Gli

Performance	★ ★ ★ ★ ★
Build quality	★ ★ ★ ★ ★
Features	★ ★ ★ ★ ☆
Value for money	★ ★ ★ ★ ★
Overall	★ ★ ★ ★ ★ ▶
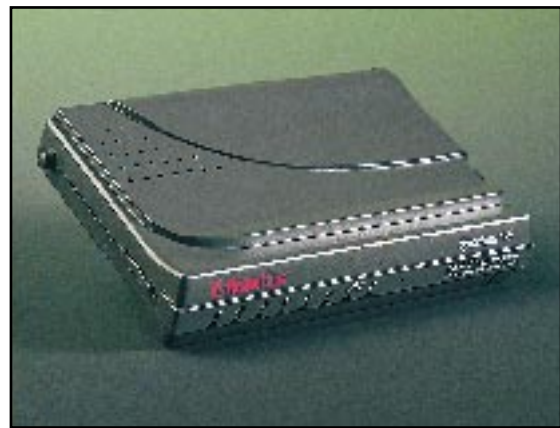
US Robotics Sportster Voice 33.6

U S Robotics' Sportster modem has appeared in various guises over the last few years. It used to resemble a Sixties transistor radio and, although the design wasn't to everyone's taste, there was no denying that it was distinctive.

The latest modem to bear the 'Sportster' name, however, has been redesigned, with new features both externally and internally. Perhaps the most obvious difference with the Voice 33.6 is the case – it's now dark grey and looks more like a traditional modem. It's still quite stylish though and slim enough to be popped into a briefcase with a notebook PC, for example.

The Voice 33.6 has the usual row of cryptic LEDs along the front of its case and a single socket for connection to the telephone socket at the back. If you want to use a 'phone on the same line as the modem, you'll need a line splitter, and US Robotics has thoughtfully popped one in the box for this very purpose.

The fastest *official* speed for a modem is currently V.34, or 28.8Kbs. The Voice 33.6, as its name suggests, is capable of working at 33.6Kbs. This is pretty much the limit for a modem using a normal telephone line, but this speed has yet to be ratified by the ITU-TSS standards committee. For the moment at least, this means that Voice 33.6 users will only be able to take advantage of the faster speed when they connect to another Voice 33.6 modem or an on-line service provider that explicitly supports 33.6Kbs.

As a data modem, the Voice 33.6 works a treat but it's also capable of handling voice calls. Using the supplied QuickLink Message Centre software, the modem, in conjunction with a PC, will answer the 'phone, decide whether the call has a fax, PC or person at the other end, and deal with it accordingly. Human callers can leave messages, and it's possible to configure a voice-mail system for use by several people.

Speed is everything when it comes to modems and the Sportster Voice 33.6 is the fastest there is.
○ £199
○ US Robotics: 01734 228200

Sportster Voice 33.6

Ease of use	★ ★ ★ ☆ ☆
Software	★ ★ ★ ★ ★
Documentation	★ ★ ★ ★ ☆
Value for money	★ ★ ★ ★ ★
Overall	★ ★ ★ ★ ☆

Hayes Accura 288 Message Modem
RUNNERS UP

Supplied with a Windows 95 driver disk for easy installation and configuration, the Accura handles voice, as well as data calls. The Smartcom Message Centre software allows the PC to work as a sophisticated answering machine, but there is no on-line service membership.
○ £199
○ Hayes: 01252 775577

Diamond SupraExpress 28.8I

The ISA Diamond SupraExpress 28.8i is Windows 95 Plug-and-Play compatible, which means that installation consists simply of fitting the card, switching on the PC and inserting the driver disk when asked to. Capable of handling voice, fax and data calls, the modem can act as both answering machine and Internet terminal.
○ £116.33
○ Diamond Multimedia: 01753 501400

Dynalink 1428VQU

F aster is better is the adage when it comes to buying a modem. A V.34 (28.8Kbs) modem can send and receive data twice as quickly as a V.32bis (14.4Kbs) one, but it will cost a little more. However, if you spend a lot of time downloading files, the speed increase will make a big difference – not least to your phone bills.

If you're working to a budget, that doesn't mean you're stuck with V.32bis, though. There are many cheap V.34 modems around and, while they may not have the looks of their more expensive siblings, they work just as well. The Dynalink 1428VQU is a case in point. At around £140, it's cheap and yet offers full V.34 fax/modem operation. Furthermore, it looks as smart as many of its pricier competitors.

In common with the Sportster, the 1428VQU's black case is small enough to be carried around and, although the external mains adaptor adds to the bulk, it doesn't add much to the weight. There's the usual row of status LEDs along the front and a handy on/off switch on the top. A fold-down flap covers the sockets at the back and, although this gets in the way when the modem is being used, at least it protects the sockets when in transit.

An external modem connects to a PC via a serial port. For a V.34 modem to work at its full 28.8Kbs capacity, the PC must have a high-speed serial port. Unfortunately, the older a PC is, the less likely it is to have one of these so, for external modems at least, some PCs simply can't take advantage of the benefits a V.34 modem offers.

Fortunately, Dynalink has considered this eventuality and has included a high-speed PC serial card with the 1428VQU. This fits into a spare expansion slot and provides a high-speed serial port to which a modem can connect. Depending on the PC's configuration, getting the card up and running may be a little tricky but it's worth it.

Net-surfing on a budget is possible, as the Dynalink 1428VQU proves – a nice modem at an even nicer price.
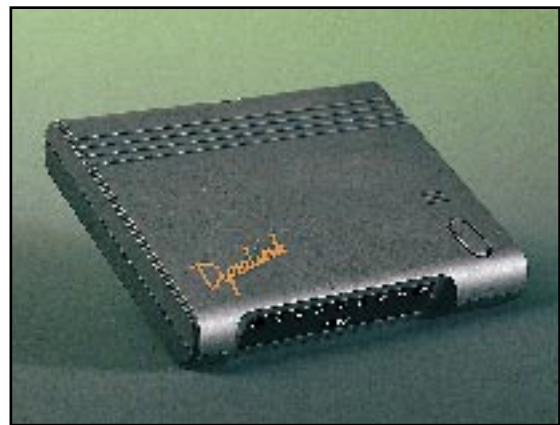○ £139.83
○ Dynalink: 01252 727711

Dynalink 1428VQU

Ease of use	★ ★ ★ ★ ☆
Software	★ ★ ★ ☆ ☆
Documentation	★ ★ ★ ☆ ☆
Value for money	★ ★ ★ ★ ★
Overall	★ ★ ★ ★ ☆

C reative Labs has a commanding market lead when it comes to sound cards. That's partly because 'Sound Blaster' is now the standard for software compatibility as far as games and multimedia developers are concerned.

In terms of the best seller, we're really talking about two cards here – the Sound Blaster 16 and the Sound Blaster AWE-32, the main difference being wavetable sound. More often than not it's the cheaper SB16 which you'll find fitted inside new PCs. But, we'd advise anyone who's serious about sound and MIDI to choose a wavetable-equipped card such as the AWE-32. Both cards are Plug and Play which means, providing you have Windows 95, installation is very straightforward.

In addition to digital recording and playback, and the very basic FM synthesis, the AWE-32 gives you wavetable sound – you'll find this available on most sound cards today. Wavetable synthesis uses short digitally-recorded samples of authentic musical instruments, filtered and looped to give realistic-sounding MIDI playback.

The AWE-32 has 512Kb of RAM on board, and you can add up to 28Mb to store your own samples, using Creative's SoundFont technology. The card comes with its own IDE interface for connecting your CD-ROM drive. There's also a connector for Creative Labs' WaveBlaster II synthesiser module, which gives you an additional 32-note polyphony.

On the back of the card you'll find a MIDI/Joystick connector, stereo inputs for mike/line and outputs for speaker/line. You get a good selection of software, too, including on-screen sound recorder, mixer, MIDI player, audio CD player, sequencing software, and so on.

The SB16 is a little expensive for a non-wavetable card, but you are pretty much guaranteed compatibility with all software packages.

Orchid Nusound PnP
RUNNERS UP

This card has a good range of standard features, including wavetable sound. It has connectors for IDE and Panasonic CD-ROM drives, and is compatible with Ad-Lib, Soundblaster (and Pro), Windows Sound System and General MIDI. It has 343 samples and sound quality is above average, with low noise.
○ £151.58
○ Orchid: 01256 479898

Gravis Ultrasound PnP

Another mid-priced wavetable card, compatible with most software standards, including Soundblaster. In our July group test we found sample quality of the Gravis Ultrasound was generally good: the piano came across as a little timid, but realistic enough. Overall, though, a reasonable sound card, both in terms of price and performance.
○ £189 (incl VAT)
○ Koch Media: 01420 541880

Creative Labs AWE-32 PnP

As for the AWE-32, it's a great all-rounder with decent sound, loads of features, and the assurance of Sound Blaster compatibility.
○ £229.13 (incl VAT)
○ Creative Labs: 01245 265265

Creative Labs AWE-32 PnP

Ease of installation	★ ★ ★ ★ ★
Sound quality	★ ★ ★ ★ ☆
Features	★ ★ ★ ★ ★
Value for money	★ ★ ★ ★ ☆
Overall	★ ★ ★ ★ ★

Yamaha SW60XG and DB50XG

N either of these cards is, strictly speaking, an alternative to the best-selling sound card. Instead, Yamaha's SW60XG and DB50XG can be considered upgrades to your existing sound card. Any sound recording or sample playback is still done by your existing sound card.

The DB50XG fits into the same connector as Creative Labs' own Wave Blaster daughterboard, adding advanced synthesiser features. The SW60XG performs, pretty much, the same function, but instead plugs into your PC's ISA expansion slot. With either card, there are no IRQs or DMA channels to set up, which makes installation painless. You may need to switch the port address, but this can be done simply from within Windows.

The XG standard for sound cards is an extension to the existing GM (General MIDI) standard, which adds more sounds, and greater control. Yamaha claims there is wide support in the games industry for XG.

Although both cards are broadly the same, and have identical price tags, the SW60XG includes extra features such as audio effects, and an 18-bit direct output stage. Both cards come with a massive 737 on-board sounds, and 22 drum kits. All this is stored in 4Mb of ROM, and the quality of the sounds is absolutely superb. Both cards support up to 32-note polyphony with up to 16 different instruments simultaneously.

Since the DB50XG is mounted internally, there are no external ports. On the SW60XG you'll find stereo connectors for audio line input and output, and a mono mike input. These ports enable you to use the SW's digital processing effects on external sound sources. Included with each card is a CD-ROM with audio and MIDI demos, a sequencer, and sound-editing software.

Amazing sound. At the price, there's nothing to touch them. Of the two, provided your PC has a spare slot, we'd suggest the SW60XG.
○ Each card: £152 (RRP incl VAT)
○ Yamaha-Kemble Music: 01908 366700

Yamaha SW60XG/DB50XG

Ease of installation	★ ★ ★ ★ ★
Sound quality	★ ★ ★ ★ ★
Features	★ ★ ★ ★ ☆
Value for money	★ ★ ★ ★ ★
Overall	★ ★ ★ ★ ☆

Hewlett-Packard ScanJet 4c

Hewlett-Packard may be best known for printers, but it is in fact also the number-one seller of desktop scanners. HP offers two colour flatbed scanners: the budget ScanJet 4p, and the mid-range ScanJet 4c, which is the company's best seller.

A colour flatbed is the most versatile type of scanner, able to scan colour photos, artwork, pages of text for OCR work, and even transparencies, with the aid of optional adaptors. A flatbed works like a photocopier, where you lift the lid, place your image on the glass plate, close the lid, and activate. The beauty of a lid is that you can leave it half open, place thick originals such as an open book on the plate, and still scan them successfully. Indeed, about the only thing going against flatbeds is their size.

HP's ScanJet 4c is large even by flatbed standards. Measuring 368x585x105mm, you'll be losing a fair amount of desk, but what you lose in space, you make up for in features, performance and versatility. Most obviously, is its capacity for scanning 8.5x14in documents, a good two inches longer than conventional A4.

The 4c is sold as a 'complete image and text-scanning solution'. It is supplied with Corel PhotoPaint 5 for image editing, Caere Omni-Page LE for OCR, an extremely easy-to-use scanner driver, and even a colour copying utility – particularly handy if you've got a colour printer. The 4c also comes with the document management software supplied with the superb Visioneer PaperPort document scanner.

The 4c itself boasts a high 600x600 dpi true optical resolution, and 2,400x2,400 dpi interpolated resolution. This makes it perfect for picking up the finest details, or scanning small images. It also features 30-bit colour, rather than the usual 24 bits. This allows the 4c to capture subtle shades and colours which are often lost on 24-bit models. **The ScanJet 4c, with superb performance and a versatile software bundle, is an ideal all-rounder.**
○ £985.82 (RRP)
○ Hewlett-Packard: 0990 474747

Hewlett-Packard ScanJet 4c

Performance	★ ★ ★ ★ ★
Build quality	★ ★ ★ ★ ★
Features	★ ★ ★ ★ ★
Value for money	★ ★ ★ ★ ☆
Overall	★ ★ ★ ★ ★

BEST SELLER

Visioneer Paperport Vx

RUNNERS UP

Cheaper and much smaller than a flatbed, you might like to consider a dedicated document scanner. At £250 (RRP excl VAT), the Visioneer Paperport Vx is not the cheapest document scanner, but it offers the best overall quality and software bundle for OCR work.
○ £293.75
○ Computers Unlimited: 0181 358 5857

Logitech ScanMan Colour Pro

Not much bigger than a large glove, a handheld scanner is the ultimate in low-cost convenience. The catch is that handhelds can only capture images around four inches wide per swipe; wider images have to be 'stitched' together in software. The Logitech ScanMan Colour Pro offers a respectable 400dpi optical resolution, and 24-bit colour.
○ £133 (street)
○ Logitech: 01344 894300

Umax Vista S6E

In *WhatPC?* March 1996, we awarded the budget Umax T-630 flatbed scanner with a Best Buy. The bad news is that the model has been discontinued. The good news is that it has been replaced with something even better: the Umax Vista S6E.

It's a single-pass, 24-bit scanner, with an optical resolution of 300x 600 dpi. It is possible for a scanner's effective resolution to be increased using a technique known as interpolation, where the software guesses intermediate values and inserts them between real ones. Some scanners do this much more effectively than others. The S6E's highest-claimed interpolated resolution is 4,800x4,800dpi. In tests, these claims proved justified, particularly when used to smooth edges on small black-and-white images, for which interpolation was intended. Also, colour results were superb, especially when using the automatic exposure settings.

The S6E, like the Umax flatbeds before it, is a speedy little number, offering preview and final images in a matter of seconds. Even the largest images are usually captured in less than a minute.

While some flatbed scanners have parallel interfaces, most are SCSI devices, which means you'll need a SCSI interface card fitted in your PC. The S6E comes with a rebadged Adaptec 1502T SCSI card, which does the job.

The standard software bundle consists of the excellent Adobe Photoshop 3.0.4 LE and Presto, an OCR and document-management package. The TWAIN scanner driver is superb, offering a wealth of features for experts, or simple one-click automatic options for beginners. The scanner with this software bundle and SCSI card comes in at a bargain street price of £299+VAT. Also available is an optional automatic document feeder or transparency adaptor for £495+VAT RRP.

A fantastic-quality flatbed scanner, with a great bundle of software – the Umax S6E is simply a bargain at £299+VAT on the street.
○ £351.32 (street price, incl VAT)
○ IMC: 01344 871329

Umax Vista S6E

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

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