

Among the new products under review this month are: Psion's next-generation Personal Digital Assistant, two Pentium II desktop PCs, the beta version of Corel's WordPerfect Suite 8, a low-cost photographic-quality colour printer and an accounting package for small businesses



Psion Series 5

The next generation of Psion's PDA, with a RISC processor, new operating system, rewritten applications and innovative keyboard.



A £500 PC that fits into your pocket hardly sounds possible, but that's what you get with Psion's new Series 5 computer. While its Series 3, 3a and 3c palmtops were aimed at users looking for advanced electronic organisers, Psion sees the Series 5 as a more portable alternative to an A4 notebook.

To this end it has been fitted with a real keyboard (with large responsive keys instead of buttons) and a larger backlit screen that enables you to use the Series 5 in any lighting conditions.

The screen is touch-sensitive and can be operated by tapping it with the stylus Psion provides or with any pointed object. The image on the screen is very detailed and uses the same number of horizontal dots as a standard Windows VGA screen, but it's not particularly sharp under normal office or domestic lighting. In bright light it's fine and in low-light conditions you can switch on the screen backlight, though you might have trouble making out the charcoal grey keys on the keyboard. The worst situation is the one you usually have to work in, where there's a moderate amount of light coming from all

directions. In this case, switching on the Psion's backlight helps, but this is only a partially effective solution.

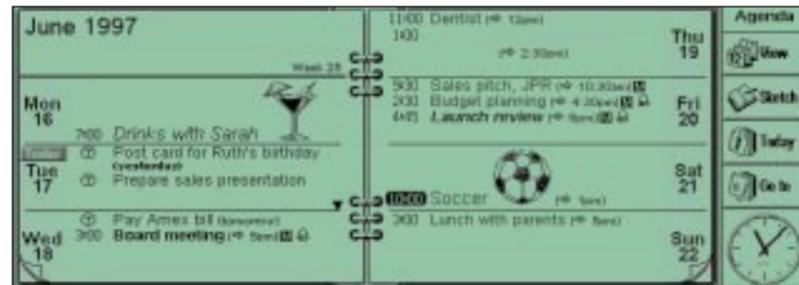
While we have reservations about screen clarity, it's hard to imagine a better keyboard than the one Psion has managed to squeeze into the Series 5. You can place the computer on a desk or table and type on it properly instead of picking it up and using your thumbs, as most Psion Series 3 users do.

The operating system is EPOC32 (there's a 32-bit RISC processor in the Series 5) and while it's not Microsoft Windows, it offers many of the same features. There are drop-down menus; information can be cut and pasted between different programs and you can embed 'objects' inside documents. The latter means you can, for example, create a word-processed report and put charts from the spreadsheet inside it, with voice annotations recorded on the built-in microphone.

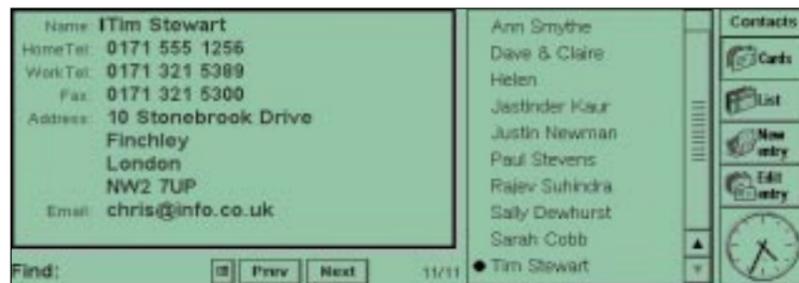
The operating system and built-in programs are stored on a 6Mb ROM and everything else is stored in RAM – 4Mb or 8Mb, depending on which model you have. There are no SSD (solid state disk) slots, so if you want to install more software, you have to connect the Series 5 up to a Windows 95 PC by

- Touch-sensitive backlit screen, 135x50mm (640x240 pixels, 16 greyscales)
- Fast 32-bit RISC processor
- 8Mb of RAM
- 32-bit EPOC32 operating system
- Accepts single Compact Flash memory upgrade cards
- IrDA-compatible infra-red port
- PsiWin2 cable and software for linking to PC
- Digital sound recording through built-in speakers/microphone
- 6Mb of ROM containing operating system and built-in software
- Powered by two AA batteries
- Size (wxdxh) 170x90x23mm
- Weight 354g including batteries

Psion Series 5 (continued)



Above: The week view in Agenda showing the use of embedded graphics.
Below: The default layout of the contact database.



With PsiWin2, files on the Series 5 appear in Windows Explorer.

- Extensive on-screen help
- Spiral-bound printer manual
- Built-in software:
 - Word processor
 - Spreadsheet
 - Database
 - Time manager and diary
 - Sketchpad
 - World Map and time
 - Calculator
 - Recording utility
 - Thesaurus and spelling checker
 - OPL32 programming language

using a supplied serial cable, or make an infra-red connection. The built-in infra-red port should work with most similarly-equipped PCs and printers but is not compatible with Psion 3c and Siena palmtops.

Communication between the Series 5 and a PC is handled by the PsiWin2 utility. This hooks into Windows 95's Explorer and shows the contents of the Psion alongside the PC drives. Files can be dragged and dropped between the two, with appropriate conversions being done automatically. You can print documents created on the Psion in the same way by sending them to the printer connected to your PC.

Psion has not made the conversion process as straightforward as it could be. If, for example, you drag a Psion spreadsheet containing a chart to your PC, the numbers will be converted into an Excel, Lotus or Quattro spreadsheet but the chart will be lost. The same goes for pictures or sounds embedded in word processor documents, but Psion promises that a future upgrade to PsiWin2 will fix these problems.

Managing files is best done with PsiWin 2 and Explorer, as there is no drag and drop facility in the Psion's operating system (the use-

ful Files application on the 3c has gone). The only way to handle files otherwise is to cut them from one location, select a new location, and then paste them into place.

Apart from this, the software built into the Series 5 is exceptionally powerful and easy to use, responding well to menu, touch-screen and keyboard shortcut commands. The word processor has a good range of formatting options, including borders and styles. There's no outlining facility but there is an excellent spelling checker and thesaurus. This can also be used by other Psion programs or as a stand-alone utility for solving anagrams and crosswords.

The spreadsheet has 100 pre-defined functions for dates, statistics and finance and there's an 'auto-sum' button on the toolbar for quick calculations. Most text and formatting enhancements used in the word processor are available here. Charts are created easily from spreadsheet data, displayed on a separate screen and printed out separately. They cannot be incorporated with the figures on the spreadsheet as they can in most Windows programs, but you can put a spreadsheet object inside a word processor document to combine text and graphics.

All applications have drop-down menus.

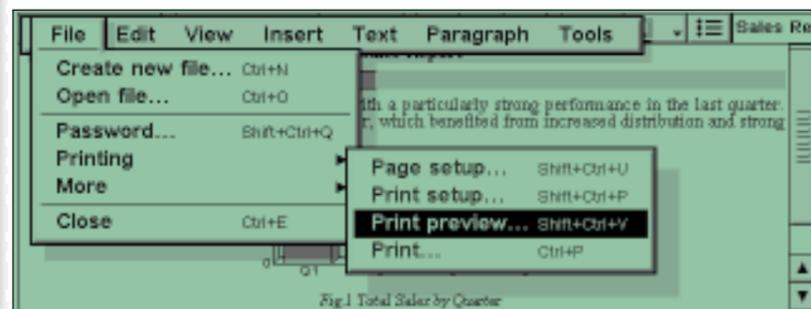
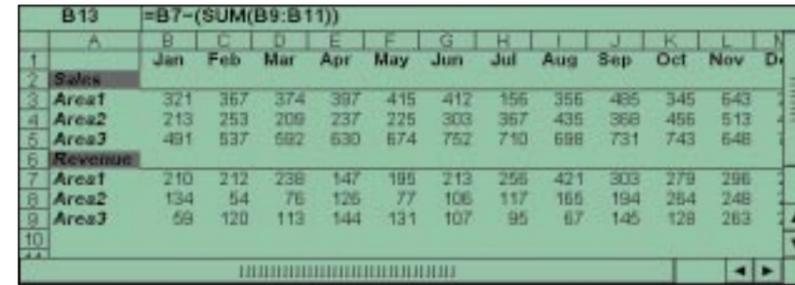
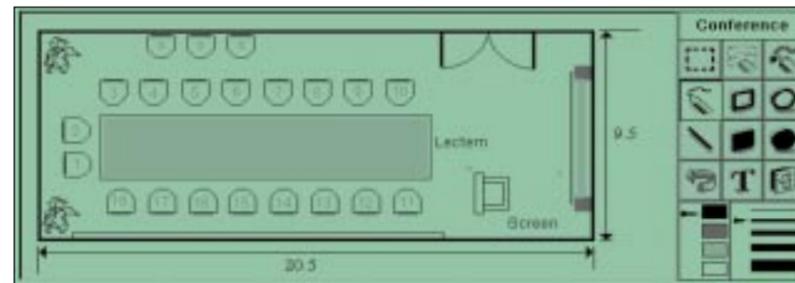


Fig.1 Total Sales by Quarter



Above: The data view within the spreadsheet – charts are displayed separately.
Below: Sketch is easy to use with the stylus and touch-screen.



The Agenda time-management program offers a range of facilities based on a diary with daily, weekly and annual views, but a month view is still lacking. Diary entries can contain graphics and voice notes and you can attach word processor documents to an entry if you want to store a lot of information. Within Agenda you can create 'To Do' lists and set alarms to remind you of appointments. Then, using PsiWin2, Agenda entries can be automatically synchronised with Schedule+ and Lotus Organizer diaries on a PC.

The database, which is designed primarily for use as a contact file but can be modified to store other information, stores pictures and sounds as well as text. You can sort on up to three levels, view records as cards or lists, and search for words or phrases stored in any field.

New to the Series 5 is Sketch – a bitmap drawing program that is remarkably easy to use. You can create pictures to put in other documents, either starting with a blank screen or with items culled from a bank of 72 pieces of clip-art.

Recording sounds can be controlled through a software utility or by using three buttons on the exterior of the case (record, play and rewind). The results are excellent but making long recordings eats up memory – a megabyte for every four minutes – so it's best used for short voice notes and reminders.

It would be nice to be able to use pictures and sounds from the Psion on your PC (and vice versa) but the current version of PsiWin2 cannot convert them automatically. A set of complicated MS-DOS utilities is provided to enable you to convert files and the PsiWin upgrade will hopefully simplify this process.

Other software includes desk-

top and scientific calculators, a world map with time zones and dialling codes, a minesweeper game called Bombs, and the OPL32 programming language based on OPL16 from the Series 3. Psion says Series 3 programs will run on Series 5 with minimal modifications.

There's a communications program for linking up to remote PCs via a modem, but no fax software is built in – this will be sold separately. If you already have a PC Card modem, it can be used with the Psion by buying a separate PC Card adaptor with its own power supply. The Psion Travel modem can be used but it is limited to 14.4Kbits/s.

Solid state disks of programs designed for the Series 3 cannot be used with the Series 5. Neither can Series 3 memory cards, but a slot on the Series 5 takes the new Compact Flash type of memory used in digital cameras. Psion sells this in 2Mb, 4Mb and 10Mb capacities but larger capacities are on the horizon.

Where the Series 5 scores is in battery life. The average is around 35 hours from one pair of AA cells, depending on how much you use the backlight. This only works during the first half of the batteries' lives – as they deplete, they cannot provide sufficient power to drive it – but you can go on using the Series 5 long after this happens.

The Series 5 is a great machine and could act as a notebook PC alternative in many situations. It's a great shame that the Windows 95 side of things isn't better implemented and this may be a deciding factor when Windows CE machines start to arrive on the high street. With a few software improvements, the Series 5 may become the world beater that the Series 3 was.

Paul Wardley

Psion Series 5 (continued)

The Psion Series 5 is fantastically innovative but hasn't quite matched expectations. The incredible keyboard makes prolonged typing possible and the big screen is very welcome, though its murkiness is a disappointment.

- £8Mb: £499.95
- 4Mb: £439.95 (both prices inc VAT)
- Psion: 0990 143050

Psion Series 5

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

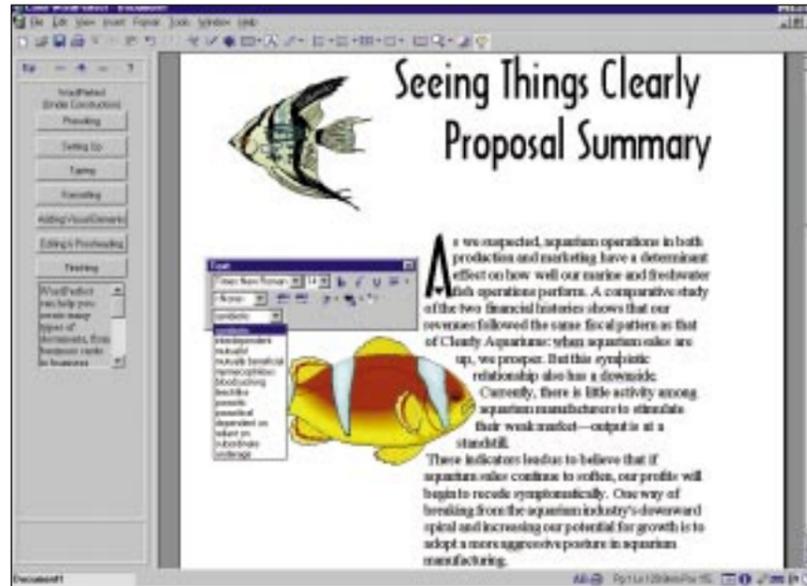
Minimum requirements: None – if you intend to use the Series 5 as a pocket organiser – but to transfer files to other computers, install new software or print out your work, you will need a Windows 95 PC with a CD-ROM drive and a printer.

Corel WordPerfect Suite 8 beta preview

A preview of the latest version of Corel's business suite, which offers word processing, spreadsheet, presentation graphics, scheduling and Web site design, with a host of accessories, fonts and media resources.



- Property Bar speeds formatting, reduces screen clutter
- New Application Bar for switching between documents
- Suite-wide PerfectExpert for instant assistance
- Web page design and site management
- Electronic publishing to HTML, Barista or Envoy
- MMX processor support for faster graphics
- Voice and whiteboard conferencing promised in final version



The Corel Corporation is most noted for its graphics products. CorelDRAW is perhaps the most widely known but it also has applications such as Ventura Publisher and Visual CADD that it has acquired and developed along the way.

Last year it bought the ailing WordPerfect from Novell, together with the right to market Borland's Quattro Pro. An odd step, you might think, for a graphics company to market a business suite, but if you bear in mind that WordPerfect's 25 million user base is five times that of DRAW, it starts to make sense.

Although the version of WordPerfect Suite 8 we saw was still in beta with portions unfinished, it looks like there is going to be a lot in the final box. The main applications are the WordPerfect word processor, Quattro Pro spreadsheet and Presentations business graphics. There's also WEB.SiteBuilder, for doing just that, Envoy for publishing graphics-rich electronic documents and various accessories including scripting, database querying and a file finder. All that is lacking is an information manager to compete with Microsoft Outlook or Lotus Organizer. CorelCENTRAL wasn't included in the beta version but it will fill the gap on release with scheduling and contacts management.

The professional version will add integration with Netscape to offer e-mail, newsgroups and on-line conferencing – you'll be able to communicate by voice and via a common electronic whiteboard with others for the price of a call to your local Internet Service Provider. Casualties from version 7 include the popular QuickView Plus, Sidekick and Dashboard utilities, which are no longer bundled but

there's compensation in the form of PhotoHouse. This wasn't included in the beta, but will let you use clip-art or your own photos to create greetings cards, certificates, posters and stationery from a range of templates.

Taking the eponymous word processor first, the initial difference you'll notice is the panel to the left of the work area. This was still under construction at the time of writing but offers context-sensitive help, hints and step-by-step instructions in much the same way as Microsoft's Office Assistant. Known as the PerfectExpert, or ACE for short (no, we can't work it out either), this is a suite-wide innovation. Another new across-the-board feature is the promotion of the status bar, seen at the bottom of the screen, to the title of 'Application Bar'. In WordPerfect, for example, this can be customised to show all sorts of information and carry out actions, such as insert a date. Added to this now is a section rather like the Windows Taskbar in that you can see the title of each open document and switch between them without having to go to the 'Window' menu.

The toolbars have also seen some tidying up – they sport the Internet Explorer-style flat buttons that leap into three dimensions when the mouse pointer wafts over them but, more importantly, they've been simplified. Instead of a profusion of 'Powerbars' and those irritatingly elusive little 'hot spot' buttons that used to pop up in a document beside a paragraph to open a formatting control, there is now a Property Bar that changes instantly to suit the job in hand. Though it's not as comprehensive as Lotus's multi-tabbed equivalent, it's a great improvement on the

way things were, and is again, suite-wide.

WordPerfect now checks grammar, as well as spelling, as you go, catching up with Microsoft in this respect and there's a neat touch in that the Property Bar has a list of suggested corrections for misspelled words, or a list of synonyms for correctly spelled ones. Tabling – long a strong point of WordPerfect with its spreadsheet-like capabilities and the ability to rotate text – has been enhanced with visual joining and splitting of cells. The new 'drawing layer' lets you draw objects directly on top of text, group them and stack them like a DTP or drawing application. There's more Internet aid, too – type in a URL or e-mail address and a 'QuickLink' hotspot will be created in the document.



Turning to Quattro Pro, we've covered most of the new features, such as the PropertyBar, PerfectExpert and QuickLinks already – though in the beta version the last didn't appear to be working yet. But the Application Bar, as well as showing status info and open files, also sports a neat little feature called the QuickCell. You can drag and drop a cell here, then watch its value change as you alter other cells – useful if the worksheet is bigger than the display.

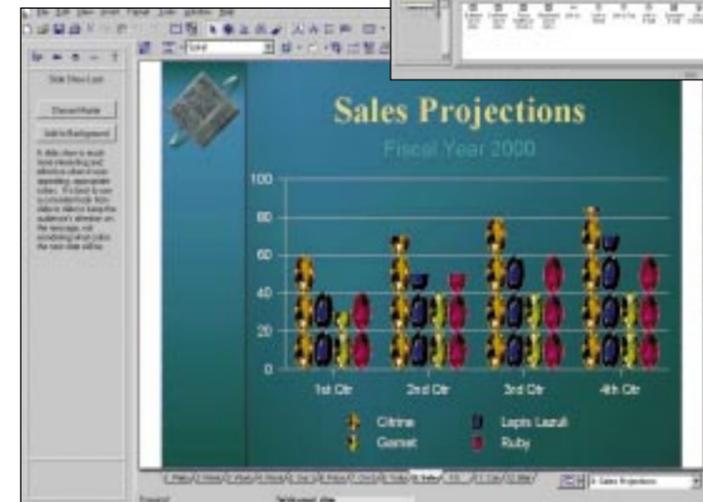
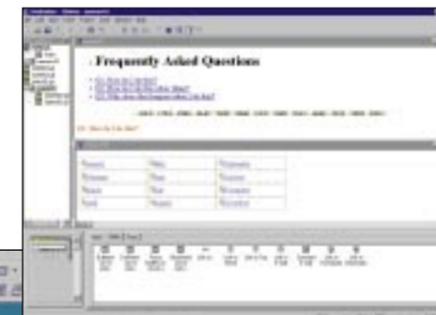
Corel Presentations has again been brought into line with the interface enhancements. There are new sound, video and art clips, together with a suite-wide media browser. Bubble charts are added to the range of data displays and support for Intel's MMX (multi-media extensions) chip promises 'accelerated transitions and turbo-charged drawing'. There's also a facility to publish presentations to the World Wide Web, which takes

us neatly on to the final major component, WEB.SiteBuilder. Besides setting new standards in bizarre capitalisation and punctuation, this does pretty much what the title states. Not only can individual pages be designed but entire sites can be constructed and organised.

Electronic publishing isn't just limited to WEB.SiteBuilder. Documents can be exported as HTML from any application or for more ambitious documents, Corel Barista supports multiple columns, multiple fonts and Java applets. Finally, for non-Web publishing, there's Envoy. Like Adobe Acrobat, this produces platform and font-independent documents that can be read on any machine. Unlike Acrobat, however, the recipient doesn't need a special reader – documents can be compiled into a free-standing executable file.

Overall, Corel claims the programs run faster, and although we didn't run tests on the beta, it certainly seems crisper in performance. The overall hard disk footprint of the suite is also down, which is another hard-to-believe but nevertheless welcome trend. With the exception of the steadily-advancing Internet features and a few minor improvements, Corel has very sensibly concentrated on consolidating and integrating what's already there, rather than cramming new features into an overstressed interface.

Tim Nott



Corel WordPerfect Suite 8 beta preview (continued)



A much-improved interface, integration and suite-wide assistance make this by far the most elegant version yet. Microsoft and Lotus watch out!

- £TBA
- Corel: 0800 973189

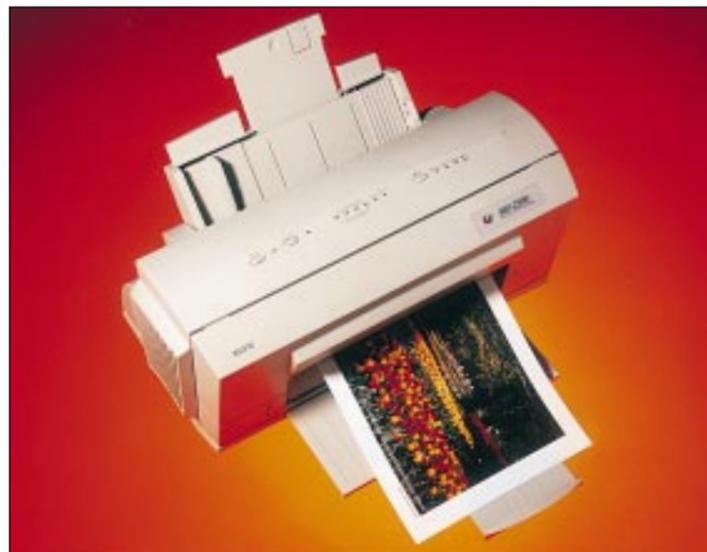
Corel WordPerfect Suite 8

Ease of use	★ ★ ★ ★ ☆
Performance	★ ★ ★ ★ ☆
Features	★ ★ ★ ★ ☆
Value for money	n/a
Overall	★ ★ ★ ★ ☆

Minimum requirements: Information not available at time of going to press.

ALPS MD-2300 Masterpiece

A dry-ink printer capable of producing continuous tone photographic prints with a dye-sublimation print process.



The quest for photographic colour printing at a mass-market price seems never-ending. The end of the tunnel gets ever closer with each new inkjet printer but no matter how small their dots and how glossy the paper, inkjets are still firmly in the realm of the photo-realistic, at least for the time being.

Dye-sublimation printers, of course, have long been producing continuous tone prints that rival those passed over the counter at Boots but at a few thousand pounds a throw, they're best left to professionals. At least that used to be the case, for the ALPS MD-2300 Masterpiece is a continuous tone colour printer that has a price tag well below even the cheapest dye-sublimation model.

Dye-sublimation it may be but the MD-2300 looks just like ALPS' previous offering, the MD-2010 dry-ink printer. Up to 100 sheets of standard paper can be loaded into the sheet feeder jutting out of the rear of the printer and printed pages are collected in a slide-out tray at the front. The paper path isn't particularly tight but for printing onto such things as card and fabric, the sheet feeder lays flat at the press of a button, giving a straight-through path.

Similarities to the MD-2010 extend still further. Pop open the front of the MD-2300 and there are four slots on the inside of the lid for dry ink cartridges and indeed, the printer can function like any other dry ink printer. Rather than an inkjet's liquid ink, dry ink printing relies upon an inked tape stored on a cassette-like cartridge. There are four cartridges (one each for cyan, magenta, yellow and black) and a colour page is produced by passing it through the printer four times – once for each colour.

It may sound a little haphazard

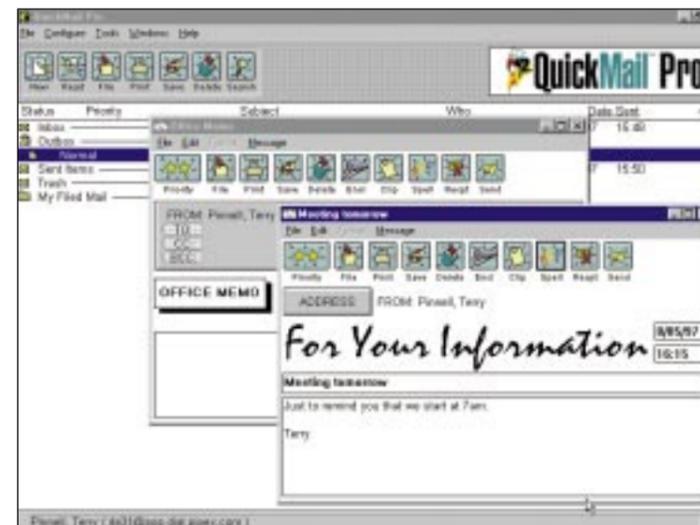
but the results of dry ink printing speak for themselves. Even on plain paper, prints have a vibrant, semi-gloss finish and have the added bonus of being resistant to light and water. A variety of metallic colours are also available and prints can be made on almost any surface, whether it's cheap photocopier paper, fabric or even plastic sheets. In fact, the only reason everyone in the *What PC?* office hasn't got a mock tattoo is that we couldn't get our arms through the MD-2300's sheet feeder.

If there's a downside with dry ink printing, it's in the cost. Colour cartridges cost around a fiver each and last for 40 to 50 pages, depending on the coverage. On the up side, the cartridges can be replaced independently, so at least there's no penalty in producing endless pages of one colour.

ALPS bundles four dry ink cartridges with the MD-2300 but it's the other four photo cartridges (cyan, magenta, yellow and a clear 'overlay') that are of more interest. Fit these in place of the dry ink cartridges and the MD-2300 becomes a true dye-sublimation printer. There's more to this than just special ink, of course, and the printer also has a unique proprietary print-head. When photo ink cartridges are detected, the printhead prints by heating the ink, causing it to vaporise before solidifying on the page.

The big advantage of dye-sublimation is 'continuous tone' prints and the MD-2300 produces pages that have none of the 'dottiness' associated with inkjet printing. The thermal print process does require special glossy paper but the results are nothing short of astounding. Full A4 colour prints are neither fast (15-20 minutes) nor cheap (£2-£3) but they are truly indistinguishable from photographs.

Julian Prokaza



Quickmail Pro is a program for managing your incoming and outgoing e-mail, either over a network at the office or a dial-up Internet connection at home. With so many e-mail packages available, any product entering this competitive market has to offer something special, in addition to being easy to set up and use. QuickMail Pro qualifies on the first of these criteria but for home users at least, falls down on the second.

Installation from the two disks is slightly more tricky than it needs to be. All e-mail programs require information about your Internet account, but QuickMail Pro's documentation conflicts just enough with what you see on your screen to cause unwelcome ambiguity. When you're eventually up and running and want to send your first e-mail, you choose 'New' from the File menu – one of many slightly illogical choices, since choosing 'New' from the Message menu would be more intuitive. Creating new mail activates one of the program's distinctive features – a drop-down list of e-mail templates with names such as 'announcement', 'heart' and 'chill!'. These certainly add some variety to the otherwise nondescript world of e-mail but they can be deleted or altered to suit your tastes.

A novel feature of more practical value is that you can peek at any messages by right-clicking them, before deciding if you want to open them. Another is QuickMail Pro's search facility. This lets you find messages in which specified text appears in either the Subject, From or To fields and you can also select on a message's priority. If you're a heavy e-mail user this will be useful but it would be a lot more valuable if it searched the body content too.

One of the major strengths of QuickMail Pro is its flexibility over the choice of formats when sending attachments or enclosures.

Most of us have experienced problems in this area, whether as recipients faced with scrambled attachments, or as senders who learn that the luckless recipient faces similar gobbledegook. Often it's due to incompatibilities between mail systems, whether Windows, UNIX, Mac or whatever. When you're setting up a new address, QuickMail Pro provides useful options to set computer type, message format and enclosure encoding, so you can experiment to get it optimised.

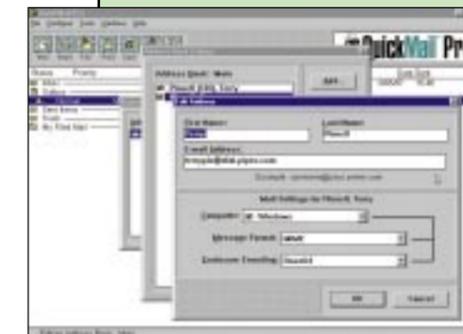
This is one of many examples of areas in which the program's interface is exasperatingly non-standard, so it's worth a closer look. Suppose you set both Computer and Message Format to QuickMail; when you come to the encoding option you're offered BinHex, UUencode or Base64. But as soon as you select either of the last two, the computer entry is mysteriously blanked – the standard practice greys out unavailable options.

More positively, other attractions include sorting facilities and the ability to filter incoming mail. Unfortunately, praise here must be tempered with criticism. Learning about these and other features is handicapped by the absence of any conventional help. You have to go on line to CE Software's Web page from the program's help menu. The user manual too is unimpressive. Its index in particular fails to include many significant words you'd want to look up. Perhaps the weakest area of QuickMail Pro is its poor on-line/off-line integration, especially its lack of automatic dial-up. To send a message or check for mail you must first establish your Internet connection, unlike rival products which integrate these functions. While operations are in progress there's minimal feedback – and you must remember to disconnect afterwards.

Terry Pinnell

QuickMail Pro 1.0

An e-mail program with several attractive features, including 'peeking' at the content of messages before opening them.



- Background on-line processing
- Drag and drop in address book
- Encoding of files to suit Max/UNIX/Windows
- Filters on incoming e-mail
- 'Peek' at messages
- Sorting flexibility
- Search engine

Basically attractive and a brisk performer, QuickMail is spoiled by interface flaws and if it's to deliver on its promises of user friendliness, the dial-up connection software needs to be an integrated part of the program.

- £49.95 (inc VAT)
- Computers Unlimited: 0181 200 8282

QuickMail Pro 1.0

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

Minimum requirements: 486, Windows 95, 6Mb of RAM, 4Mb of hard disk space, e-mail account with POP3 support, dial-up software.

- Four-colour dry ink printing for photo-realistic prints
- Three-colour photo ink printing with clear overlay for true photographic-quality colour prints
- Media pack, dry ink and photo ink cartridges included
- Resolution: 600x600dpi colour, 1,200x600dpi mono
- 100-sheet feeder
- Size (wxdxh): 432x239x196mm
- Weight: 5.9Kg

The MD-2300 is not a general-purpose printer but it is the best sub-£1,000 colour printer we've ever seen. Unsurpassed at this price.

- £703.83 (inc VAT)
- Rotec Distribution: 01604 402012

ALPS MD-2300 Masterpiece

Ease of use	★★★★★
Performance	★★★★★
Build quality	★★★★★
Value for money	★★★★★
Overall	★★★★★

Minimum requirements: Windows 3.x, 16Mb of RAM, bi-directional printer port and cable.

Gateway 2000 G6-266XL

Gateway's new-look Pentium II desktop, aimed at small businesses and home users who are looking for a powerful, fully-featured PC.

- 266MHz Intel Pentium II with 512Kb of integral pipeline burst level 2 cache
- 64Mb of EDO RAM
- Intel 440FX motherboard chipset
- Universal Serial Bus (USB)
- 6.4Gb Quantum Fireball Ultra DMA hard disk
- Iomega Zip drive
- 4Mb STB ViRGE/VX graphics
- 17in FST monitor
- 12/16-speed Mitsumi CD-ROM drive
- 32-bit Ensoniq Vivo 90 wavetable sound card
- Three-piece Boston Audio active speaker set
- Internal 33.6Kbits/s data/fax/voice modem
- Stand-mounted microphone
- Windows 95, Office 97 Small Business Plus (Outlook, Excel, Word, Publisher, AutoRoute Express, Encarta 97), data, fax and voicemail modem utilities

The Gateway G6-266XL has a strong core configuration with quality components but although very fast, the lack of a proper Pentium II support chipset stops it from realising its full speed potential.

- £2,525 (inc VAT)
- Gateway 2000: 0800 552000

Gateway 2000 G6-266XL

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



Gateway was one of the first major manufacturers to release a system based on Intel's new Pentium II processor. The machine, dubbed the G6-266XL, is aimed at the small business and home user and comes with Microsoft's Office 97 Small Business Plus and full multimedia to prove it. Obviously, at £2,525, it's not fishing for the budget buyers out there but the specification is impressive in its own right, Pentium II processor notwithstanding.

The core of the machine consists of 64Mb of EDO RAM, a huge 6.4Gb Quantum Fireball hard disk and a 4Mb STB 3D graphics adaptor based on the ViRGE 3D accelerator chipset. This is fleshed out by an Ensoniq wavetable sound card (effectively a Sound Blaster AWE32 clone), CD-ROM drive, internal Iomega Zip drive and 33.6Kbits/s internal data/voice/fax modem.

This lot is presented in an eye-catching midi-tower case with unusual bowed sides and top. This makes it look slightly like a space age hibernation pod but it's different and we liked it a lot. The fact that its cooling fan made only the merest purr was another big point in its favour.

The mouse is the new Microsoft one (the extra rotary control that may or may not let you scroll, depending on the newness of the application) and a pop-not-click Gateway keyboard which was okay to use but rather rattly. The 17in FST monitor is a Gateway-badged MAG Crystalscan with a decent 16in image diagonal.

The monitor's focus was reasonably good – not the best around, but above average – and the controls were particularly easy to use thanks to a synergistic combination of a single rotary selection/adjustment wheel with an on-screen set-up menu. The only thing we were slightly unhappy about was the fact that the highest refresh

rate at 1,024x768 resolution was 75Hz, which doesn't quite give you the comforting appearance of solidity you get at 85Hz and above.

The audio end of things was taken care of by a woofer/satellite combination from Boston Audio. This is relatively compact but very powerful and capable of near hi-fi quality output, which puts it well ahead of the majority of PC speaker systems.

The PC's motherboard is essentially a Pentium Pro board with the new Slot 1 mounting for the Pentium II processor/cache assembly in place of the standard socket. Like others of its type, it follows the more logical ATX layout with the processor up at the top, out of the way of the expansion slots. Pentium II does not yet have its own dedicated support chipset, so the board uses Intel's standard Pentium Pro 430FX chipset.

This chipset does not support the increasingly common SDRAM memory found on many of the latest MMX-based machines, so the slower EDO type has been used instead. The 430FX also lacks support for the new Ultra DMA (sometimes called Ultra ATA) hard disk interface standard, but Gateway has fitted a Promise Ultra DMA controller into one of the expansion slots to get round this. Ultra DMA can in theory double the 16.6Mb/s burst rates attainable with current Mode 4 EIDE drives but although the performance from the Fireball disk was certainly good, it didn't appear to be blasting along at twice the speed of a normal drive.

This isn't really intended as a criticism of the Gateway, since no current production Pentium II has the advantage of board-level UDMA support that will be available when a proper support chipset is released, along with the ability to use faster memory and one or two other things besides.

Dominic Bucknall



At the heart of AST's Bravo LC 6233 lies one of Intel's new Pentium II processors. This type of chip offers most of the advantages of the Pentium Pro in terms of its efficient internal design, but it has the added advantage of being enhanced for multimedia and communications in the same way as Pentium MMX processors.

Like the Pentium Pro before it, the Pentium II is designed to perform best with full 32-bit operating systems such as Windows NT 4.0. Of course, it's still compatible with other Pentiums and so will run Windows 95 but it won't deliver optimum performance because Windows 95 contains a mix of both 32-bit and 16-bit components.

The Pentium II is available in three speeds – 233MHz, 266MHz and 300MHz, though machines based on the fastest of these are currently hard to find. The processor loves memory, so having 64Mb of RAM instead of the more normal 32Mb supplied with Windows 95 offers significant performance advantages.

AST gets part of the performance equation right by supplying its Bravo LC 6233 with Windows NT 4.0, but by opting for the slowest 233MHz version of the processor and giving it only 32Mb of memory to play with, the result is a PC that runs standard applications under Windows NT very little faster than a good 200MHz Pentium MMX using Windows 95.

To be fair to AST, the Bravo LC 6233 is being marketed as an entry-level PC for business professionals who want to run Windows NT 4.0 with 32-bit programs and not as a power platform for demanding users. Even so, the company has cut too many corners. To keep the price down there's a fairly basic graphics system with just 2Mb of RAM built

onto the motherboard. You have to pay extra for the better performance of a separate Matrox Millennium card with more memory. Tests of similar PCs fitted with separate graphics adaptors indicate that the graphics performance of the Bravo LC 6233 (its weakest element) could be almost doubled, so an upgrade would be a wise investment.

Apart from a CD-ROM drive, which is essential for loading new software, there are no other multimedia facilities. This is a surprising omission from a PC fitted with the MMX-enhanced Pentium II. There's no modem either and the bundled software is a selection of utilities.

Having come up with a list of what's missing from Bravo LC 6233, it's good to report that what you do get is very well made and nicely put together. The system unit is a squat but stylish midi tower case with plenty of room inside for expansion cards. To go with the system unit there's a very comfortable and solid keyboard and a 17in ASTVision 7L monitor. This is very easy to use thanks to an on-screen display with dedicated control buttons for all the main functions and thumb-wheel knobs for contrast and brightness. Its 0.28mm dot pitch means it is best restricted to 1,024x768 resolution, but it can be pushed to 1,280x1,024 in non-interlaced mode, at which size it presents a flicker-free image, even if text is not particularly sharp.

Nice features are a capacious 3.0Gb enhanced IDE hard disk with SMART monitoring, which means it can alert you if it thinks it's about to fail, and the provision of two USB ports so you can use the latest plug-in accessories. The AST Bravo LC 6233 has the makings of a good Windows NT workstation but it needs beefing up.

Paul Wardley

AST Bravo LC 6233

A no-nonsense PC workstation powered by the 233MHz version of Intel's new Pentium II processor.

- Midi tower case
- 233MHz Intel Pentium II processor
- 512Kb integrated secondary cache
- 32Mb of RAM
- 3Gb Maxtor SMART enhanced IDE hard disk
- 16-speed CD-ROM drive
- 2Mb S3 ViRGE DX graphics card
- 17in ASTVision 7L monitor
- Two USB ports
- Software: Windows NT Workstation 4.0, McAfee anti-virus software, CleanSweep, Internet tools and utilities

If you need to use Windows NT and the lack of multimedia isn't an issue, the Bravo LC 6233 is a relatively cheap way getting on the bottom rung of the Pentium II ladder. Windows 95 fans will get better value from a fully-equipped 200MHz Pentium MMX system at around the same price, though.

- £1,902 (inc VAT)
- AST: 0181 232 5000

AST Bravo LC 6233

Ease of use	★ ★ ★ ★
Performance	★ ★ ★ ★
Build quality	★ ★ ★ ★
Value for money	★ ★ ★ ★
Overall	★ ★ ★ ★

Canon BJC-5500

A four-colour bubblejet printer that can print on paper up to A2 in size.



- Two-cartridge, four-colour (CMYK) bubblejet printing
- Prints on A2, A3 and A4 paper
- Friction and tractor feed
- Transparency and high gloss output available
- Print resolutions up to 720x360dpi
- Windows 95, Windows 3.1x and DOS printer drivers supplied
- Optional cut-sheet feeders for A4 and A3 pages
- Print speeds up to 7ppm
- Dimensions (wxdxh): 600x364x172mm
- Weight: 9.7Kg

The BJC-5500 isn't a printer for everyone but if you need to get images onto large pieces of paper, it's a cost-effective and efficient way of doing it.

- £880.08
Bin 1 cut-sheet feeder: £129.25
Bin 2 cut-sheet feeder: £105.75
(all prices inc VAT)
- Canon: 0121 680 8062

Canon BJC-5500

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

The name Canon is synonymous with the term bubblejet printing – the company's own term for the technology behind getting liquid ink onto paper.

Bubblejet printers (or inkjets, as everyone else calls them) are usually compact affairs and so the BJC-5500 comes as something of a shock. Weighing in at a hefty 9.7Kg and occupying a considerable amount of desk space, it's reminiscent of the dot-matrix printers that were commonplace 20 years ago.

The reason for this unusually heavy design isn't hard to find – the BJC-5500 is an A2 printer and once you look a little more closely, it's obvious that it is as compact as it could be and certainly up to Canon's typically high build quality.

Setting it up is quite straightforward, as the sockets on the printer are robust and easily accessible. The array of buttons on the front of the printer are fairly daunting but the manual is well-written and fully illustrated, so there's no problem fitting ink cartridges and installing drivers.

The BJC-5500 has more than the usual selection of buttons dotted across its front but these can thankfully be ignored for day-to-day printing from Windows. A large LCD status panel displays such things as the print mode and the amount of ink remaining in each cartridge, and when a cartridge does run dry, there's an airtight slot at the front of the printer for storing spares.

Although the BJC-5500 can handle A2 paper, it's also perfectly able to cope with A3 and A4 sizes. An A2 piece of paper is pretty big (four times the area of A4) and the BJC-5500 can only take single sheets at a time. These are fed into the printer via a clip-on tray and pass through 180 degrees to

emerge face-up where they started. This is fine for the occasional A2 print but feeding sheets one at a time is rather tedious for A3 and A4 pages, making a cut-sheet feeder (the BJC-5500 can use two at once) an essential optional extra.

The versatile paper handling is one of the BJC-5500's strong points but the story doesn't end with cut sheets. Flick a lever at the right of the printer and it can accept continuous tractor-feed paper up to A2 in width, making it extremely useful for printing large spreadsheets at a legible size. As is the norm these days, printing isn't limited to paper either and the BJC-5500 can also use such media as high gloss film, back print film and transparencies.

In use, the BJC-5500 lives up well to its promises. Text printed onto standard photocopier paper is produced quickly and quietly, and to an excellent standard. Even colour printing onto copier paper is quite respectable, with bright colours and little sign of bleeding. Move up to A3 or A2 paper and the process is obviously slower but the results are just as pleasing. Load some high-gloss paper though, and the BJC-5500 really shows its worth. A full-colour glossy A2 print looks absolutely stunning and such large pages open up whole new areas for colour printing.

There are, of course, additional costs to be taken into account when using this sort of printer. First and foremost, a pack of 10 high-gloss A2 sheets comes in at £47. A similar sum buys 50 sheets of A4 transparencies, whereas ordinary glossy A4 seems a comparative bargain at around £28 for 50 sheets. Pricy maybe, but if you need high-quality colour A2 output then it's a darn sight cheaper than getting it done professionally.

Sheila Hill



This latest version of market-leading QuickBooks adds many new integrated features but remains aimed at the UK's huge small business market. Extracts from recent official statistics show that there are around 1.4 million VAT registered companies turning over less than £1 million and a further 3.3 million self-employed people. Research shows that many have previously tried and abandoned a PC accounting package – often because it was too complicated to learn, use or both. That's where QuickBooks sets its stall.

QuickBooks Accounting 5.0 and its new sister product QuickBooks Accounting and Payroll 5.0 are principally intended for companies with fewer than 20 employees who don't have trained accountants. So terms like debits, credits and posting are out. Double-entry book-keeping still underpins the application but happily it's all in the background. So, if you're getting into business accounting for the first time, you should find QuickBooks relatively easy to learn and use.

The application areas covered are impressively comprehensive. Naturally you get the main sales and accounting functions (accounts receivable), purchase ledger (accounts payable) and nominal ledger. But QuickBooks also includes stock management and other key secondary functions such as job costing, tax reports, time sheets, estimating and audit trails. About the only capability that's missing is sales order processing – true of all similarly-priced rivals too. There are more facilities than we can do justice to here. So we'll look closer at the sales area, which is the most important for many users.

QuickBooks lets you create invoices in either the Enter Cash Sale window (if you receive immediate payment), or in the Create Invoices window. Essentially, you just choose from the drop-down

lists and QuickBooks fills in the various fields automatically. You don't have to worry about calculating sub-totals, discounts and VAT, as the program does it all for you. Then you use the Receive Payment window to record payments from customers. Here and elsewhere the repetitive chores are reduced by extensive use of drop-down lists. For example, you can select the customer's name to see the latest balance and outstanding invoices.

Once you've entered the payment amount, the program applies it against the oldest items, but you can change that default. In an unusual but effective approach, QuickBooks keeps the payments you receive in Undeposited Funds, a special ready-to-deposit account. When you're ready to bank some money, you use the Make Deposits window to record the deposit and to print out a summary.

Drop-down lists and other memorising facilities depend on your having set up the data to begin with, otherwise typing 'Mag' won't prompt you with 'Magnetohydrodynamics International' or whatever. Another strength of the product is the various tools to help with setup. The easiest, Interview, customises QuickBooks by displaying only those features that you need, based on your answers to a set of simple questions. You can set up your chart of accounts, customers, suppliers, personalise aspects like invoice format and activate features such as the audit trail.

The Reports menu lets you choose from over 60 pre-set lists and summaries, and there's excellent scope to tailor many aspects of these to suit your precise requirements. QuickBooks can also display a list of customers with overdue balances in an Assets Finance Charges window. This lets you pick those who are charged interest, which is then automatically calculated.

Terry Pinnell

QuickBooks Accounting and Payroll 5.0

An integrated accounting package for the small business which is the first at this level to include a simple payroll application.

- Guided company setup
- Accounts receivable and payable
- Stock management
- VAT tracking
- Payroll
- Graphs, with zoom-in
- Contact manager included
- Fully integrated
- Ready for year 2000

There's a lot of competition in this sector, but QuickBooks 5.0 offers an impressive combination of features, user friendliness and post-sales support, while still being modestly priced.

- QuickBooks 5.0: £233.83
QuickBooks Accounting and Payroll 5.0: £351.32
(Both prices inc VAT)
- Intuit: 0800 585058

Accounting & Payroll 5.0

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

Minimum requirements: 486, Windows 3.1x or Windows 95, 8Mb of RAM, 33Mb of hard disk space, CD-ROM.

Tiny Accelerator PR200 AMD Printer System

A PC based on the 200MHz AMD K6 processor, supplied with a Lexmark colour inkjet printer and bundled software.

- 200MHz AMD K6 MMX processor
- 32Mb of RAM
- 2.5Mb Maxtor hard disk
- 33.6Kbits/s internal fax/voice modem
- 16-bit Crystal sound card
- 12-speed CD-ROM drive
- 2Mb S3 3D graphics card
- 15in SVGA monitor
- External speakers
- QuickShot joystick
- Lexmark 1020 colour printer
- Windows 95, games, utilities and reference software

The Tiny Accelerator PR200 AMD Printer System is a complete solution for buyers starting from scratch who want a powerful PC, a broad range of software and a colour printer.

- £1,643.83 (inc VAT)
- Tiny Computers: 01293 821333

Accelerator PR200 AMD

Ease of use	★ ★ ★ ★
Performance	★ ★ ★ ★
Build quality	★ ★ ★ ★
Value for money	★ ★ ★ ★
Overall	★ ★ ★ ★



Tiny's two new Accelerator PCs are based on a new type of processor, which its maker claims is as fast as Intel's 200MHz Pentium MMX (multi-media extensions), yet costs two-thirds of the price. The chip in question is AMD's new K6 with MMX. By opting for this processor and making a few judicious economies elsewhere, Tiny has managed to put together two fast PCs at very attractive prices.

The one reviewed here is the more expensive of the pair and is blessed with the less than snappy designation of Tiny Accelerator PR200 AMD Printer System. As its name suggests, it includes a printer, a Lexmark 1020 colour inkjet complete with cables, paper and ink. It also boasts a beefier specification than its cheaper sibling and is supplied with a more extensive bundle of software.

With the money Intel has spent promoting its Pentium MMX, every potential PC buyer will want to know whether the AMD PR200 performs as well as the 'real' thing. Happily, it does. Compared with a group of rival Pentium 200MHz MMX machines, Tiny's PC falls almost bang in the middle of the range of performance benchmarks.

Apart from using the AMD processor, Tiny has kept down the price of its PC by avoiding big-name brands for the other internal components. The modem, graphics adaptor and sound card all come from little-known manufacturers but they employ reliable chips from the likes of VideoLogic and Rockwell. All these components, as well as the Maxtor hard disk and a 12-speed CD-ROM drive, are housed in a sturdy desktop case, easily able to take the weight of the 15in monitor.

The picture on the monitor is pleasing enough at 800x600 in 16-bit colour but the image isn't sharp enough to push on to higher reso-

lutions. Colours are vivid and the contrast and brightness are easily adjusted using two rotary controls. Three buttons and a set of LED indicators are employed to correct distortions in screen geometry.

The keyboard and mouse are best described as cheap and cheerful – we can't rave about the ergonomic qualities of either but both do the job. The same goes for the small pair of column speakers. There's a volume control and power button on one of these, with tone and balance being set through the software in Windows 95. The sound is fine for games and adequate for playing audio CDs provided you're not a hi-fi buff.

A nice touch is that Tiny has put a power supply for the speakers on the back of the PC. This is in addition to the usual slave socket for the monitor and means you only need a single mains lead to power the entire system apart from the printer, which has its own lead.

Windows 95 and all the bundled software is installed ready to use. From Microsoft there's Encarta 97, Works, Money, Creative Writer, Football and Explorapaedia, plus five 3D games and eight leisure and education titles from other companies. The only setting up the buyer has to do is run the software provided for signing up with an Internet Service Provider.

Tiny's efforts to keep down the price of this PC, coupled with the choice of bundled software and the inclusive printer, suggest that it's aimed at home and family users. Actually, it's an extremely capable PC that would be seriously under-used if you restricted it to the pre-installed software. Anyone looking for a cheap power platform for more serious work should consider the Tiny Accelerator PR200 AMD Printer System as the core of an expandable system.

Paul Wardley



Packard Bell is perhaps best known for its consumer desktop PCs and NEC for its corporate notebooks. Since the companies merged just over a year ago, it should come as no surprise that there is some blurring of the previously distinct product lines.

The Packard Bell-NEC Versa 2535 is one of the first results of the amalgamation – a brand-name notebook (though curiously, only 'NEC' appears on the case) without a corresponding price tag. In terms of design, the Versa 2535 is nothing out of the ordinary. It has a chunky grey plastic case, A4 in footprint but a good couple of inches thick. It's no lightweight either at almost 6.5 pounds but at least it feels solid enough.

The rear of the Versa has the standard ports – parallel, serial and video – tucked away under a plastic flap that flips open in a vulnerable fashion when the ports are in use. The power switch is on the left side of the case and the floppy disk drive, removable hard disk and PC Card slots are on the right.

The front drive bay is usually occupied by the battery but this can be swapped with the optional CD-ROM drive. If you want CDs on the move, the battery will fit the floppy drive bay, but since the floppy drive won't fit the battery bay, using both drives away from the mains involves some careful bay juggling. The eight-speed CD-ROM drive adds another £200 to the Versa's price, which is a little steep, it has to be said. If you're not concerned about compactness, you're probably better off with a cheaper external PC Card drive.

Following what now seems to be the standard design for a notebook, the keyboard is set back close to the screen with the touchpad in

the middle of the generous wrist-rest. The touchpad works well but is rather quirky and registered occasional 'ghost' clicks even with its sensitivity reduced.

The screen is generally good and with a 12.1in diagonal, it's exceptionally big for the money. However, size isn't everything and the Versa makes do with a dual-scan display. Although adequate, this can be difficult to read in a bright light and is wholly inadequate for fast-moving graphics. Dual-scan screens are, however, significantly cheaper than their superior TFT counterparts, which explains the use of one here.

It doesn't matter how good a notebook is if you can't use it when you need to and the Versa's battery life is sadly lacking. On the default power management settings, we could use the machine for little more than an hour and a half before the low battery alarm sounded. More frequent hard disk accesses cut this to under an hour and a quarter. At this rate, even with a second battery, you could scarcely get from London to Newcastle by train before being forced to pass the time by looking out of the window.

The power management tools do little to improve matters. In software, you can do nothing but alter the time before the hard disk goes into low-power mode and any other changes require you to reboot the machine. Moreover, the battery charge indicator seemed inaccurate – several times, the Versa auto-suspended with around 15 percent of charge remaining.

Even the software bundle can't redeem the Versa. Both Corel WordPerfect Office and an on-line guide to Windows 95 are useful but they add little value to the system.

John Sabine

Packard Bell-NEC Versa 2535

A big-screen, brand-name colour notebook at an entry-level price.

- Intel Pentium 133 processor
- 16Mb of RAM
- 1Gb hard disk
- 12.1in dual-scan screen
- Maximum resolution of 800x600 pixels, 8-bit colour
- Touchpad pointing device
- Sound Blaster Pro-compatible sound card
- Stereo speakers
- Two Type II/one Type III PC Card slots
- Ports: serial, parallel, video, PS/2, speakers, microphone, line in, docking station
- Dimensions (wxdxh): 299x240.5x51mm
- Weight: 2.9Kg

Solidly-built and fast enough for most purposes, the Versa 2535 is a competent but uninspiring machine. Reasonable value for a brand-name notebook but there are better deals to be had elsewhere.

- £1,639.12 (inc VAT)
- Optional CD-ROM drive: £205.62
- Packard Bell-NEC: 01753 831944

Packard Bell-NEC Versa 2535

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