

reviews

One of the major pieces of hardware news this month is the release of **APPLE'S iMAC**. There's been a huge amount of interest in it since its announcement, so we've been giving it the once-over. You'll find our verdict opposite. On the PC side of things, **PACKARD BELL** is going for the throat of the high-street computer market with its new offering. On the **TECHNO-WIDGET** front, we've got one revamped and one brand-new **PDA** for those who still haven't taken the palmtop plunge. And for those with more money than they know what to do with, **PANASONIC'S PORTABLE DVD VIDEO PLAYER** will



lighten your wallet by a few pounds. Continuing with the video theme, **IOmega's Buz** gets our thumbs-up. The tidal wave of **NEW FLATPANELS** continues apace, with 15in and 18in offerings from two of the major names in monitors. There's a **FINANCIAL FLAVOUR** to our software reviews, with a couple of tax and accounting packages — an area where a PC can be a godsend. On the fun side, there's a great piece of **PDA SOFTWARE** that'll interest you if you're a Londoner.

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VNU European Labs



VNU Labs tests all kinds of hardware and software, from PCs to modems to databases. All our tests simulate real-world use and for the most part are based around industry-standard applications such as Word, Excel, PageMaker and Paradox. Our current PC tests for both Windows 95 and NT are the Sysmark tests from BAPCo. In all our performance graphs, larger bars mean better scores.

Ratings

- ★★★★★ Buy while stocks last
- ★★★★ Great buy
- ★★★ Good buy
- ★★ Shop around
- ★ Not recommended

Apple iMac Different by design

Cool-blue, translucent and compact. As an object of desire, the iMac **scores highly** inside and out.

“Apple forgot how to be different.” That was one Apple executive’s recent explanation for all the problems Apple has been through in the last couple of years. Well, it may not be perfect, but the iMac certainly is different. From the cool-blue translucent case to the tips of its translucent cables, the iMac boasts one of the most eye-catching designs that the personal computer industry has ever seen. You notice the main case first, of course, but a closer look reveals that the mouse is translucent as well, as are the keycaps on the keyboard.

The iMac is an utterly desirable object of technolust, no doubt about it. The surprising thing about it is that its insides are just as impressive as the outside. It’s a compact all-in-one unit that houses both the main motherboard and the 15in monitor. The iMac is aimed primarily at the consumer and education markets, so a compact and simple design was one of Apple’s main design aims.

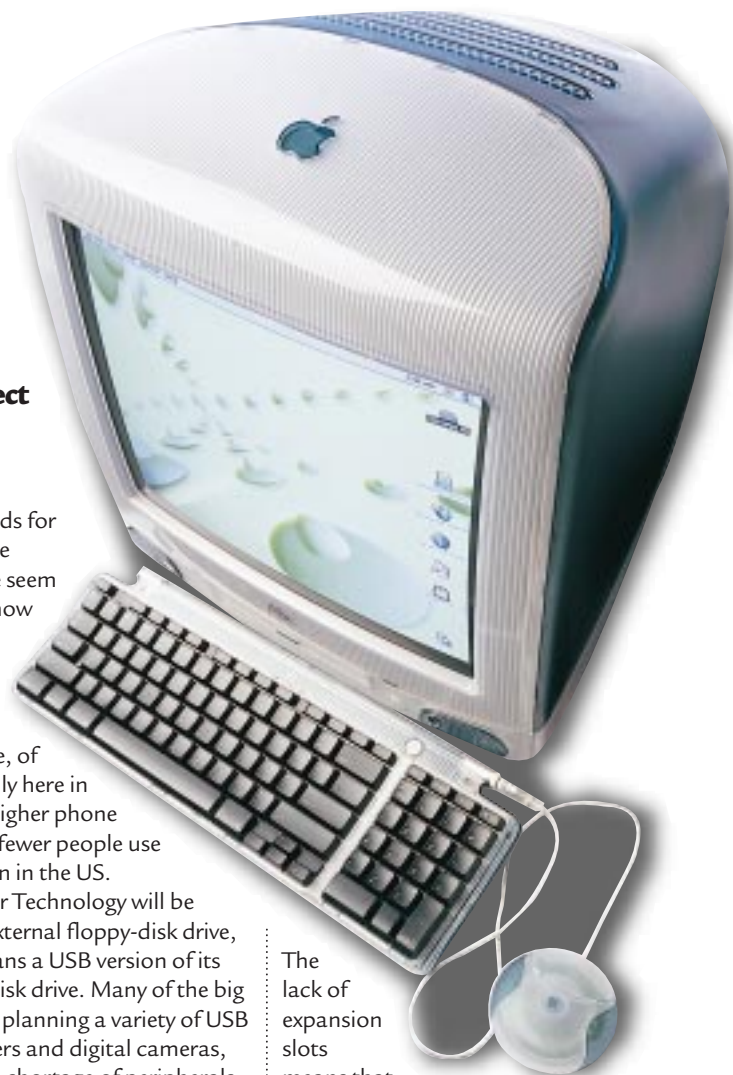
All the cables feed into a small panel on the right-hand side of the unit. Pull the panel down and you can also see one of the system’s main innovations. It has no parallel or serial ports, or specific connectors for the keyboard and mouse: all its expansion options are provided by two USB ports. The keyboard connects to one of the ports and also acts as a hub that allows you to connect additional USB peripherals such as the mouse, digital cameras, scanners or external storage devices.

The only other connections with the outside world are the built-in 56K modem and the 100Mbit Ethernet interface. These two features add to the iMac’s value for money but they also bring us to one of its weaknesses: the machine has no floppy-disk drive. The

“i” in iMac stands for internet, and the people at Apple seem to think that’s how we can send all our files and documents to other people. That’s nonsense, of course, especially here in Europe where higher phone bills mean that fewer people use the internet than in the US. However, Newer Technology will be producing an external floppy-disk drive, and Imation plans a USB version of its 120Mb SuperDisk drive. Many of the big players are also planning a variety of USB printers, scanners and digital cameras, so there’ll be no shortage of peripherals.

The iMac represents excellent value for money. It is based on a 233MHz Motorola G3 PowerPC processor, with 512Kb of high-speed backside cache. Apple claims that the G3 is almost twice as fast as a Pentium II running at the same clock speed. In fact, its performance depends very much on the type of software you run on it, but there’s no denying it’s a fast machine.

The processor is backed up by 32Mb SDRAM, 4Gb hard disk, 24X CD-ROM and 56K modem. The graphics chip on the motherboard is an ATI 3D Rage IIc with 2Mb VRAM, which handles both 2D and 3D graphics. That’s just as well, because the iMac doesn’t have any expansion slots. If you want to boost 3D graphics performance you can increase the VRAM to 6Mb, but you don’t have the option of adding a dedicated 3D graphics card. The G3 processor and ATI chip can handle 3D games such as Quake and MDK with no trouble, but dedicated gamers who want their slots will have to buy one of Apple’s other models.



The lack of expansion slots means that the iMac won’t be suitable for all users. However, its striking and innovative design is well-suited for the home and education markets at which Apple is aiming. And, although it breaks the £1,000 barrier that is so important in the consumer market, the iMac still manages to pack in some pretty powerful hardware. Above all, the iMac proves that Apple has learnt to be different again, and it should sell bundles this Christmas.

CLIFF JOSEPH

PCW DETAILS

★★★★★

Price £999 (£850 ex VAT)

Contact Apple 0870 6006010

www.apple.com

Good Points Looks gorgeous. Good value for money.

Bad Points No floppy drive or PCI slots.

Conclusion A superb machine for the home or education, but serious gamers may prefer a machine with more expansion potential.

Packard Bell Platinum 2020

With its powerful, high-tech Platinum range, Packard Bell is cornering the **PC retail** market.

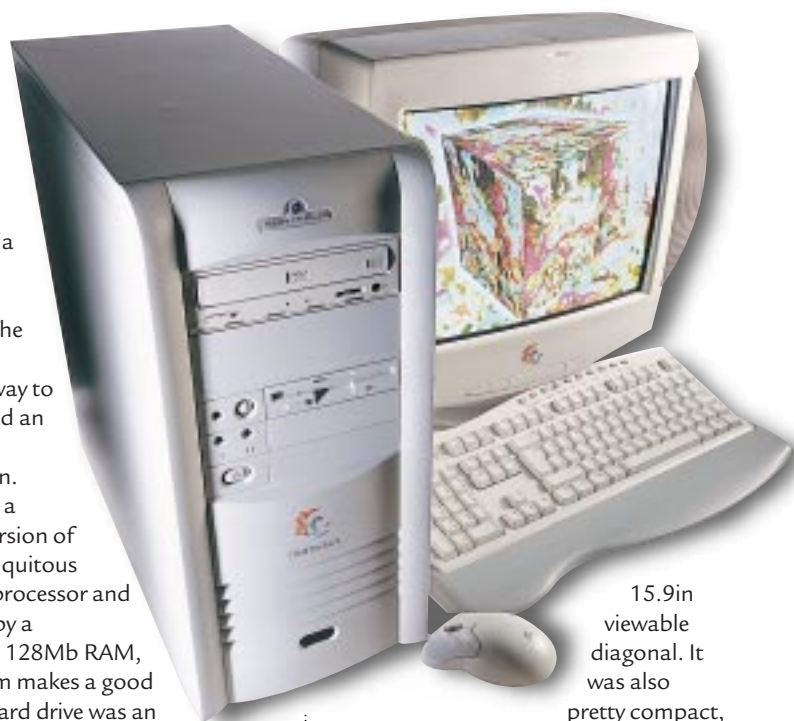
Packard Bell is up with the giants in the PC sales league. This is down to several factors. First, the company has a powerful brand. Second, and more pertinently, Packard Bell sells its PCs almost exclusively through the Dixons Stores group — so you'll see them in Dixons, PC World, Byte and Currys. Since there has been a certain shift towards buying PCs on the high street, Packard Bell has come out well. However, historically the machines themselves have tended to be respectable rather than outstanding, and perhaps slightly overpriced.

The Platinum range of PCs is designed to appeal to the advanced home user. They are well-specified and fast, and will endure the rigours of modern gaming as well as hardcore greedy applications, too. It also makes use of new technologies, with, for instance, the

presence of a DVD-ROM drive as standard. The model that winged its way to our Labs had an impressive specification. Powered by a 400MHz version of the now ubiquitous Pentium II processor and backed up by a thunderous 128Mb RAM, the Platinum makes a good start. The hard drive was an 8.4Gb UDMA Maxtor model; this was slightly disconcerting, as the specification stated it would have a 10Gb drive.

Packard Bell has chosen to use branded components only, and this makes for lots of interestingly uncanny names. Starting at the bottom we see the Packard Bell own-brand "MediaBooster" motherboard based on the Intel 440BX chipset, currently the most advanced chipset for Pentium II processors. The whole system itself is quite stylish, with speakers and subwoofer built in to the monitor, an easy-to-access "Gulliver" midi tower and a "Legacy MediaControl" keyboard containing quick-access keys to the various multimedia functions. You get the point about the branded components, anyway.

The Platinum also makes use of emerging technologies, or to be more precise, those which have hatched but are not yet flying. For example, everybody knows about DVD, but most people don't yet have a DVD-ROM drive. The 17in monitor arrived with a slight magenta bloom towards the top right-hand corner, but this was soon fixed by degaussing the monitor manually several times. That aside, the monitor had a



15.9in viewable diagonal. It was also pretty compact,

considering the built-in speakers.

The graphics card included was an 8Mb ATi 3D Rage Pro-based card which fitted into the AGP slot. The Rage Pro features hardware assist for DVD decoding: in other words, it won't completely decode a film but will help with some of the scaling operations. The graphics capabilities were duly put to the PCW benchmark sword and emerged with a respectable overall score in the Final Reality graphics benchmark. Also worth mentioning are the 64-voice sound card — fairly unusually, a PCI version — and an internal 56Kbps voice modem. The rest of the system was tested using SYSmark 98, when the results continued to hold their own.

There is plenty of room for upgrading — one ISA, two PCI, one shared PCI/ISA and one DIMM slot within the chassis. There are also three front-loading bays, one 5.25in and two 3.5in.

A plethora of software goodies is provided — from MS Word and Works 4.5 to the DVD version of Blade Runner and a wealth of communications software. And all this for £1,761 including VAT. Packard Bell is clearly getting the message with its pricing.

JIM HARYOTT

PCW DETAILS



Price £1,761 (£1,499 ex VAT)

Contact Packard Bell 01628 508200

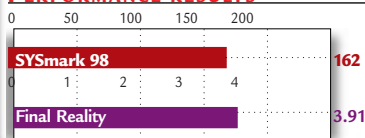
www.packardbell.co.uk

Good Points The Platinum 2020 is well-specified and has a marvellous software bundle. It also benefits from good documentation and ease of use, plus the reassurance of high-street buying.

Bad Points The price, while good for a high-street PC, can still be undercut elsewhere.

Conclusion The Platinum 2020 is a great top-end high-street PC. But you can still do better by buying direct.

PERFORMANCE RESULTS



Siemens Nixdorf Scenic Mobile 800

A high-end notebook with some novel features.

Technical innovation is not always easy to achieve. As a result, many of the notebooks that pass through the PCW Labs are all very similar, with slight differences in build quality and components. The Siemens Nixdorf Scenic Mobile 800 stands out from the crowd for one simple but innovative reason — it has a detachable keyboard.

The whole of the front of the notebook lifts off, so the keyboard and trackpad can rest on the desk. The keyboard communicates with the notebook via infra-red, with an IR port on the front of the notebook and the back of the keyboard. You can put the notebook up to 3m away at an angle of up to 120°, and a little way above or below the main unit. If the keyboard temporarily loses contact with the main unit, keystrokes will be stored, then sent once it's in range again. But don't expect to go away and type your novel and then feed it into the notebook — it will only remember a few dozen characters. The battery in the keyboard recharges when it's reattached to the main unit.

The removable keyboard would be useful in presentations, enabling you to set the notebook up for your clients to see and use the keyboard to control the presentation from a comfortable distance. It's also better in terms of ergonomics than the average notebook, as the keyboard is at a more comfortable height to type on, plus you can place the main unit back on your desk and raise it up, so the screen will be further back and at eye level. As the screen is a 14.1in TFT, you can probably dispense with a second screen on your desk and, of course, a second keyboard and mouse, although there are ports on the notebook for all these devices should you need them.

Despite all the advantages of the removable keyboard, it's not wonderful to use. The keys and trackpad are housed in fairly flimsy plastic. If you're a heavy-handed typist, you'll feel the housing needs to be much tougher to withstand the pressure. It could also do with some

rubber feet underneath to stop the keyboard from sliding across your desk as you type. The trackpad hasn't been very well thought out either. It's responsive, but the buttons which sit at either side are awkward to use.

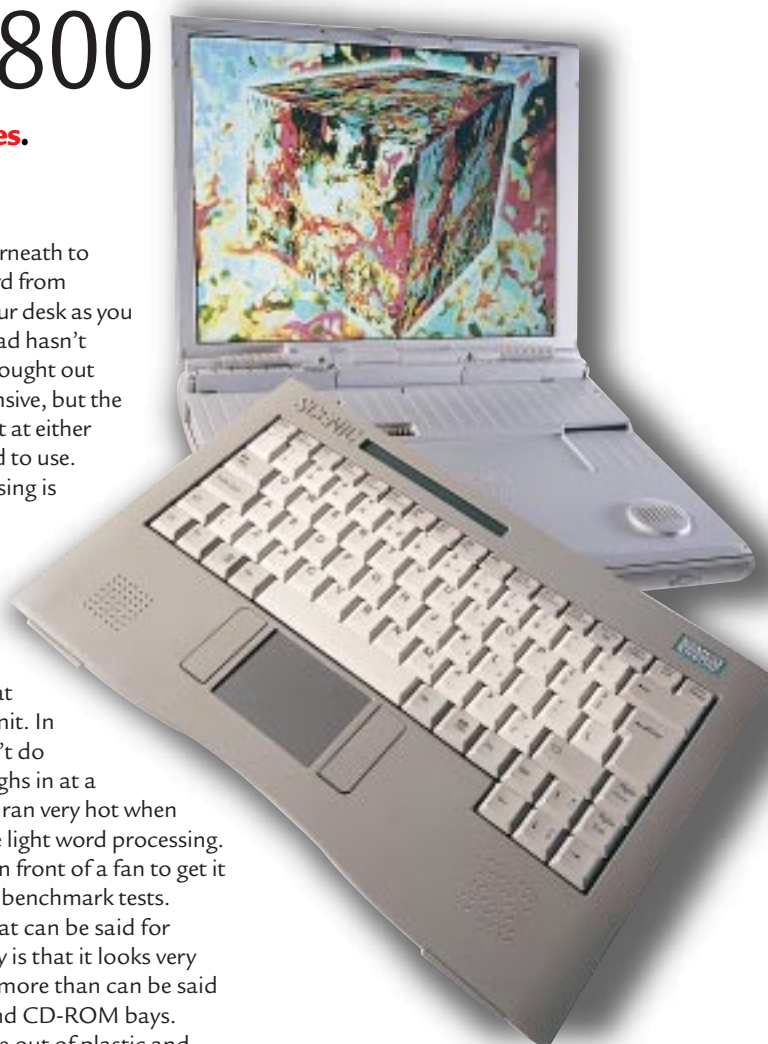
The unit's casing is made of magnesium alloy, which is supposed to keep the weight down and conduct heat away from the unit. In our tests, it didn't do either. It still weighs in at a heavy 3.8kg and ran very hot when just doing a little light word processing. We had to sit it in front of a fan to get it to complete our benchmark tests.

One thing that can be said for magnesium alloy is that it looks very stylish, which is more than can be said for the floppy and CD-ROM bays. These were made out of plastic and felt insubstantial. Another poor design point is the lack of a cover over the rear ports, leaving them open to dirt and damage.

But all is not doom and gloom. The 5Gb hard disk is partitioned into three segments and loaded with a number of useful utilities. Meanwhile, the 14.1in XGA screen is driven by an ATi 3D RageLT Pro chipset, backed up with 4Mb of SGRAM. This would allow an external monitor to be driven at up to 1600x1200 at 85Hz in 64K colours. The processor is a mobile PII 266 and there's 64Mb of system RAM.

All things considered, the Scenic Mobile 800 suffers from trying to be too clever. The removable keyboard is a superb idea, but needs to be refined before it can prove its worth. And, of course, the heat problem needs to be addressed.

ADELE DYER



PCW DETAILS

★★★★

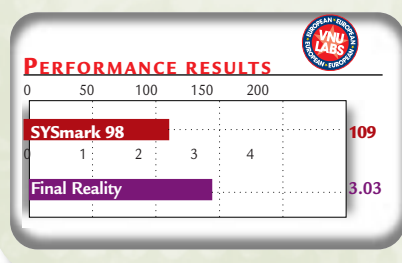
Price £5268 (£4499 ex VAT)

Contact Siemens Nixdorf 01252 373035
www.sni.co.uk

Good Points The removable keyboard is a nice idea.

Bad Points The nice idea doesn't work well.

Conclusion Too many gimmicks and too little thought have gone into this notebook.



Philips Nino

Chic and cheerful

The range of **Windows CE palmtops** grows with this stylish offering from Philips.

The Nino is all about style. Sure, this review is going to tell you about the processor, the memory options, the built-in software, and all that jazz. But if you decide to become a Nino owner, I bet that the styling is a significant factor in your choice. Why? Well, for a start, the choice of PDAs is now very wide, and the technical specs are often similar. Secondly, and more importantly, this is simply a very stylish bit of kit.

The Nino fits comfortably into the hand (13.3x8.7x2.2 cm) and weighs 200g including the two AA batteries. It comes with a set of NiMH rechargables, and a recharger. Philips claims about 12 hours per recharge (I reckon a bit less, but then, I use the backlight reasonably frequently). The unit is roughly the same size as a 3Com Palm, being 1cm longer. The comparison with the Palm is significant, since that must be the main competitive target for all of these up-and-coming machines running Microsoft Windows CE for a Palm-size PC.

The screen is significantly better than a Palm's. Not only is it backlit and touch sensitive, it also has four shades of grey and a resolution of 320x240.

Just like the Palm there is no physical keyboard, so all data is input through the screen with a pen. There are several alternative methods, however. There's a virtual qwerty keyboard from which you can select letters with the pen tip, then there are two flavours of character recognition. One of these, the annoyingly

capitalised smARTwriter, requires a degree of training but it repays the effort. All you have to do is show it how you like to form your characters by entering several examples. Then you can print on the screen — no cursive script — and as soon as you pause for breath, the software will turn your characters into text. Accuracy is fair to good, and the system is certainly usable for inputting notes. The second flavour of character recognition requires you to learn a character set and is similar to Graffiti on the Palm.

A whole host of other software is included: the standard CE pocket apps

If you decide to become a Nino owner [I bet] that the styling is a significant factor in your choice

— NoteTaker, Voice Recorder, Channels, Calculator, Solitaire, and Tegic T9 smart keyboard; and ART Pocket Commander and the Nino Expense Manager.

The Nino is based around a 75MHz RISC processor and comes with 4Mb of RAM. An 8Mb version should be available by the time you read this, although prices are not available at the time of writing. Philips assures me that the former is fine if you use the Nino as a data repository for contacts, agenda, and so on. In other words, 4Mb is enough if you don't go loading lots of extra software like I did. The temptation was just too great, because there is so much software becoming available for these machines — games, street maps and the like. The result was a continual string of complaints from the Nino that



its brain was full. This condition actually hung the machine several times and it had to be rebooted — a technical term meaning that I removed one of the batteries for a second.

There is a unidirectional microphone that can be used for recording memos and this function can be controlled via buttons built in to the side of the machine. The microphone can also be used, after another training session, for voice activation. I liked the machine a lot, but I never actually got around to talking to it. At least, not in public. There is also an IrDA infra-red transceiver which can be used for, among other exotic functions, beaming your business card to other happy Nino owners.

PC synchronisation software and a rather cute docking station are provided with the Nino, and by the time you read this, the optional 19.2Kbps modem should be out with European approval.

MARK WHITEHORN

PCW DETAILS

★★★★★

Price £299.99 for the 4 Mb version (price for the 8Mb version not available)

Contact Philips 0800 961445

www.philips.com

Good Points Style and screen.

Bad Points 4Mb just isn't enough for play time.

Conclusion A fine machine to be used as a mobile data store.

Psion 3mx

A classic case

Psion's most popular palmtop gets a revamp.

When innovative UK-based computer manufacturer Psion hurriedly called a press conference recently, the hushed tones of the attendees carried predictions of an announcement of a new machine. But while the expectation was of a Series 5c or even a Series 6, what we got was rather less exciting. A blast from the past, the hugely popular Psion Series 3, has been given a new lease of life in the form of the 2Mb Series 3mx.

It doesn't look appreciably different. Sure, the case has a sleeker look and smoother feel than its rubberised predecessor, the 3c, but that's just a cosmetic makeover. The clamshell case is exactly the same design as before, but that's not a criticism because it's a fine one. Flip it open and still, no difference. The keyboard has the same, small, vaguely pearlescent buttons topped off with a line of membrane-style shortcut icons for the various applications. These, too, remain unchanged. You get a competent word processor and spreadsheet, flexible agenda-cum-calendar, reasonably versatile contacts database, limited jotter facility, user-friendly calculator and a novel though not entirely useful digital audio-recording program. You even get a patience card game to while away those in-between moments of productivity.

Viewed individually, none of these applications represents excellence. But

as a collection of professional applications, there are very few

electronic organisers that can compete.

So what's actually new?

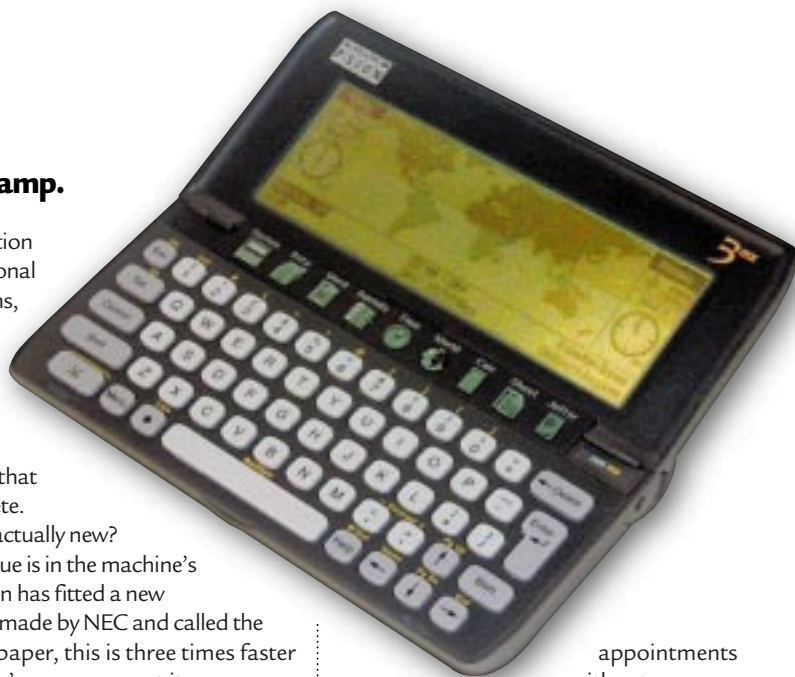
Well, the clue is in the machine's name. Psion has fitted a new processor, made by NEC and called the "mx". On paper, this is three times faster than the 3c's processor, yet it consumes equivalent amounts of power and costs little more to produce.

If it sounds like a good thing, that's because it is. The 3mx's applications now zoom along — and they could hardly have been described running slowly on

The 3mx's applications now zoom along — and they could hardly have been described as running slowly on earlier incarnations

the machine's earlier incarnations. Where once you would have had to wait maybe a second or two for the Series 3 to respond to certain actions, now things happen more or less immediately. It is easily the fastest of its kind on sale.

Of course, there's more than just speed to consider when buying a PDA (personal digital assistant). Perhaps the most important aspects are the screen and keyboard, simply because you will be using them most of the time. We've already mentioned the keyboard, which is for the nimble-fingered, certainly, but quite usable. The screen is almost beyond criticism, however. The ocean-green background offers a near-perfect contrast to the crisp, black pixels displayed upon it. It's also big enough that you can easily edit spreadsheets and documents, and view a week's worth of



appointments without squinting. The

machine even has a zoom feature, so you can choose how much information to squeeze onto the display. And then there's battery life. The latest organisers might boast colour screens, pen-based operation and highly graphical

environments, but these features come at the cost of power. Few such devices can manage double-figured hours, and most will conk out after about 4-5 hours of average use. The 3mx's manual claims up to 80 hours — certainly

you can comfortably bank on 25, and often you'll get even more. In terms of average daily use, you're looking at a couple of months or so before you have to get friendly with the battery compartment.

A final word about software. The Series 3mx has an impressive suite of applications, but it is also wholly compatible with other Series 3 machines. If you've already got software, this means you won't have to throw it away if you upgrade, and, if you're just starting out, there's a huge library of existing titles to choose from. What's more, for a limited period Psion is bundling the 3mx with a software voucher. Pop this in a post box and in return you'll receive a copy of AutoRoute.

SCOTT COLVEY

PCW DETAILS

★★★★★

Price £269.95 (£230 ex VAT)

Contact Psion 0990 143050

www.pSION.com

Good Points A classic design, superb battery life, loads of software.

Bad Points Not exactly state of the art.

Conclusion The Series 3mx is a great electronic organiser but not a huge step forward. Psion is aiming it at first-time buyers and, if you're one such, you won't be disappointed.

Eizo FlexScan L66

A big flatpanel monitor with a big price.

The high costs and low manufacturing yields involved in making large TFT screens has meant that up to now, most flatpanel monitors have stuck at the 15in mark. However, Eizo now has this 18.1in model. It is not the largest flatpanel monitor available — NEC has a 20in display — but it represents a significant step forward.

The extra size makes it ideal for financial institutions with more money than space, who will use this screen to display large spreadsheets, but it also means that the resolution can be pushed

up from the standard 1024x768 on 15in models, to 1280x1024. Dual analogue inputs connect two computers at once, and there is a switch on the front to swap between inputs. You can also prioritise one input, so the screen will automatically display that input as soon as it is activated. The OSD is comprehensive and easy to use, with an information option to check your current settings. There are three customisable colour settings.

Overall, the quality of the display was good, although the top of the screen was noticeably darker than the bottom, a problem none of the controls could address. The on/off button is sensibly positioned at the front of the base, which itself is small and houses a USB hub. The FlexScan L66 is also available as a free-mount model, so it can be hung on a wall.

ADELE DYER



PCW DETAILS

★★★★

Price £2783.58 (£2,369 ex VAT)

Contact PDS 01483 719500

www.eizo.com

Good Points Screen size equivalent to a 19in CRT but much smaller footprint.

Bad Points Cost.

Conclusion One for those with significantly more money than desk space.

Sony CPD-L150

Sony style applied to an LCD.

Like all the Sony's equipment, the company's monitors have always cost a little bit more but have generally been stunners. Now Sony has dipped its toe

into the LCD waters with its first flatpanel monitor, the CPD-L150. This 15in TFT screen runs at 1024x768 at up to 85Hz. Remember, though, that refresh rate is not as important with LCD panels as it is with conventional monitors.

The first thing that struck us about this monitor was its vibrancy and very even luminosity. Adjusting the clock-phase settings is a doddle. However, as is so often the case, the auto-adjust button seemed to make the screen worse than it was before, in this case creating clearly visible banding. The controls are all managed through an OSD and a series of six buttons running, unusually, up the side of the screen. There are four colour-temperature settings. The monitor sits on a very small base, giving it a tiny footprint. Alternatively, it can be wall-mounted. The VGA cable and power

cables are well hidden behind the unit. There is just the one input, so you can't attach the monitor to more than one feed as with the Eizo unit (above). However, it does have a very wide viewing angle of 140° and can be tilted forwards or backwards through an angle of 30°. Overall this is a sound flatpanel monitor, and is a creditable first effort on Sony's part.

ADELE DYER



PCW DETAILS

★★★★

Price £1404.13 (£1195 ex VAT)

Contact Sony 0990 424424

www.sony-cp.com

Good Points Bright and vibrant.

Bad Points A little overpriced.

Conclusion A good monitor, but better deals can be found elsewhere.

Panasonic DVD-L10

Portable home cinema

The world's first **portable DVD** player.

If you're a self-confessed gadget freak with a grand burning a hole in your pocket, then why not swap it for the world's first portable DVD player? At 160x160x43mm and weighing 910g without battery, Panasonic's DVD-L10 resembles an early portable CD player with its silver finish and retro angular sides. Open the lid, however, and you'll find a 16:9 widescreen active matrix TFT colour display measuring 147mm across its diagonal. A button under the screen cycles through the display aspect ratios of 4:3, zoom, or anamorphic-stretch.

The PalmTheatre, as it's more charmingly known, is just that, a portable home cinema on which you can watch DVD feature films or listen to old-fashioned audio CDs: it will even play those dodgy-old Video CDs if you have any lying around, but not CD-R discs. The rechargeable clip-on battery is good for around 2.5 hours — enough for all but the longest director's cuts. Rather messily, the battery supplies its juice through a short external cable which plugs into the same socket used by the supplied AC adapter.

The unit is essentially a portable version of Panasonic's full-size DVD-A150 (£399). It shares the same 10-bit video DAC, although with a slightly lower video-signal-to-noise ratio, and the same spec audio DAC which can handle 96kHz 24-bit audio DVDs. Round the back is an S-Video output, along with a pair of mini-jacks for audio and composite video. The audio jack, cunningly, supplies converted analogue stereo or, with the supplied optical adapter, raw digital PCM, Dolby Digital AC3 or MPEG audio for an external decoder. With the supplied remote control, this makes the unit suitable as a home player connected to your TV and surround sound system. More clever still, both audio and composite video jacks can be used as analogue inputs, turning the PalmTheatre into a colour stereo monitor.



The literature doesn't mention an anti-shock memory like a modern portable CD or MD player, but the PalmTheatre still seems fairly oblivious to mild knocks and shakes. A pair of built-in speakers deliver tinny but acceptable sound for their size. The image is bright but unsurprisingly most resembles watching video on a notebook computer. Come to think of it, you could spend a bit more and buy a notebook with a DVD-ROM drive and do essentially the same thing, and you may be able to tweak software to play titles from multiple DVD regions. We have found that most DVD players for PCs, whether decoding in hardware or software, ask you during installation which region you are in. At this point you could select Region 1, allowing you to play back the wide range of North American titles available. Unfortunately, you can only have one region installed at a time, and most packages only allow you to change it a few times. One trick is to set up two Windows hardware profiles with, say, Region 1 drivers installed on one, and Region 2 installed on the other, offering the best of both worlds.

The UK PalmTheatre is fixed in hardware as a Region 2 device, so will only officially play UK PAL or Japanese NTSC titles. Unofficial hardware tweaks are being offered by some specialist

dealers on full-size Panasonic players to play all regions, so it may be possible to modify the unit if you want to play US or other foreign titles; we couldn't find anyone who could do this at the time of writing, though. Anyone unwilling to dabble should evaluate the currently limited range of Region 2 UK titles in the shops and decide whether they're prepared to keep their fingers crossed for more in the future.

Interestingly, most of the shops we visited in London were prepared to sell either the Region 2 UK PalmTheatre or the Region 1 US version. Either way, it's still a versatile, sexy gadget, but I'm not sure who's going to buy it other than a mobile-movie addict.

GORDON LAING

PCW DETAILS

★★★★

Price £999 (inc VAT)

Contact Panasonic 0990 357357

www.panasonic.co.uk

Good Points DVD movies for the home, office, caravan or train.

Bad Points Relatively short battery life and messy battery cable.

Conclusion Sexy, but a notebook with DVD may be a more flexible choice.

Lego Mindstorms

Not just kids' stuff

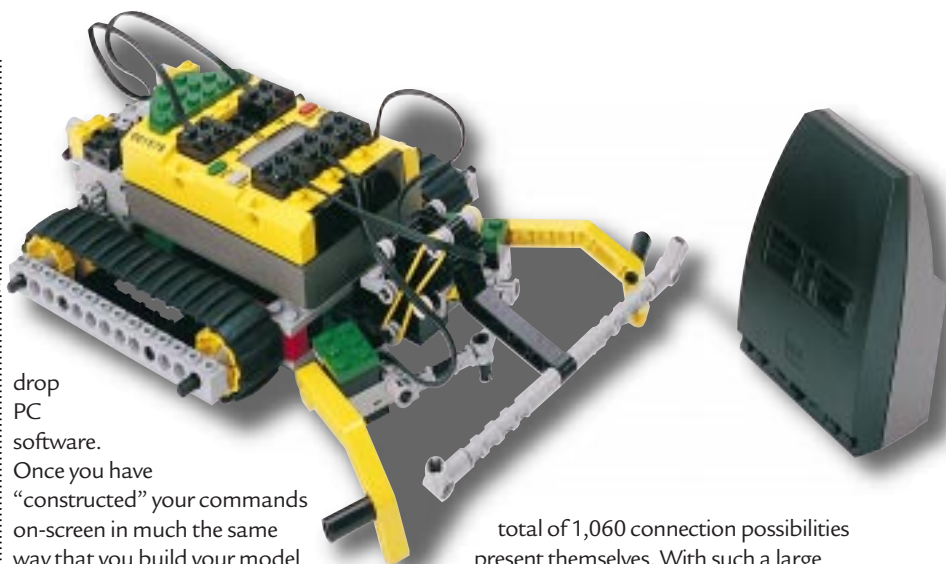


A hot **new gadget** that is literally a mindstorm.

Some people say Wagon Wheels are smaller now than they were when you were a kid and, in truth, it seems that most things have got smaller as you have got bigger. Something that has reversed the trend, though, is the work of those clever people at Lego, which just seems to have got bigger, better and more diverse as the years go on. Now, with Lego Mindstorms, they seem to have surpassed even themselves, by venturing into the formerly uncharted territory of programmable plastic bricks.

With a staggering 700 building components in the box — we're reluctant to call them bricks as they include tubes, wings, bands, wheels and all manner of strange and unusual attachments — this is a mammoth set. Delve a little deeper and you'll find yourself coming across light sensors clever enough to know the difference between red and blue, and pressure gauges with built-in switches to make your creations turn or move on their own. Perhaps the most important and impressive bricks, though, are two large blocks bigger than the rest: these are the driving force behind Mindstorms.

The first, shaped somewhat like the nose cone of a NASA Shuttle, attaches to your PC's COM port. The second, a more conventional rectangular shape, is the basic block around which you will build your models. Each sports an IR device — transmitting on the nose cone and receiving on the block — that allows you to program the actions of your creations using the simplistic drag-and-



drop
PC

software.

Once you have "constructed" your commands on-screen in much the same way that you build your model by putting subroutine bricks on top of one another, it can be transmitted to the model and, because it is written to the remote memory, the PC can be turned

total of 1,060 connection possibilities present themselves. With such a large set, we sometimes found it difficult to find what we were looking for. Although the pieces were sorted into a semi-logical collection of bags, it still took us a good ten

minutes to find the sensor bricks, even though we knew exactly what we were looking for. We also found the software's insistence that we complete the training sessions before being let loose on the programming language a little irritating; we would

have liked to be able to get straight into the product and use it.

If you don't have children of your own, borrow a few, then take them with you when you buy. You'll feel less embarrassed...

off. Stored in the receiving brick, it can now be activated using the four buttons on top of your model. If this all sounds a bit intimidating, an extensive set of animated tutorials will take you through everything from installing the batteries to completing your first model, a scaled-down version of the Mars Pathfinder buggy. Leading you through one brick at a time and showing exactly how each should be attached, it then moves on to the rather more important matter of how you tell the model exactly what you want it to do.

Of course, every brick in the Lego range is a standard size, which means that when you've exhausted the possibilities offered by the basic kit you can add to it to create an infinite number of possibilities. Two eight-stud bricks can be joined in no less than 24 different ways. Add another, and a

According to Lego's web site, which also explains that in Latin the word Lego means "I put together", Lego bricks are played with by more than 300,000,000 children in 130 countries. With the arrival of Mindstorms, we feel it's time to redress the balance. Over ten years of development in partnership with MIT have made this set too much fun to be confined to the kids' bedroom. If you don't have children of your own, pop out and borrow a few, then take them with you when you buy the set: you'll feel less embarrassed. But whatever you do, don't let them get hold of it — you'll never get it back.

NIK RAWLINSON

PCW DETAILS

★★★★★

Price £160 (£136 ex VAT)

Contact Lego 0845 606 2043

www.legomindstorms.com

Good Points Innovative, extensive, endless fun.

Bad Points Difficult to find pieces. Bossy software.

Conclusion Guaranteed to bring out the kid in everyone.

Yamaha WaveForce 192XG

Sounds good: an **audio card** that's a boon to music and games.

The WaveForce 192XG is the first in a line-up of low-cost PCI sound cards from Yamaha. Using a combination of hardware and software, it can produce up to 192 instrument voices from three independent synthesisers. The core processor integrates a monophonic S-VA (Software Virtual Acoustic) tone generator and a 64-voice, 2Mb WaveTable ROM based on the popular DB50XG daughterboard. The S-YXG50 software synth provides an additional

128 voices, equal in quality to the DB50XG. This is the first audio card to offer S-VA synthesis, a technology that was once exclusive to professional MIDI instruments. It generates sound by running virtual simulations of acoustic instruments to reproduce music with greater realism than WaveTable alone. There are 256 instruments to play with, which can be accessed using any MIDI sequencing package. Note that this is a highly processor-intensive application and requires a 233MHz Pentium II to run.

Games support comes in the form of Direct Sound, Direct Sound3D, A3D and SoundBlaster compatibility. Inside, the card has connectors for CD audio,



auxiliary and video devices, such as DVD. A TAD port enables compatible modems

to be connected to provide two-way telephonic communications. There are connectors for speaker and line output, mic and line input. Audio from the mic input can be routed to the three internal effects buses, including reverb and chorus settings. Bundled software includes a 100-track MIDI sequencer, an audio-file player with 100 classical-music MIDI files.

STEVEN HELSTRIP

PCW DETAILS

★★★★★

Price £69.99 (£59.56 ex VAT)

Contact Yamaha Kemble 01908 366700
www.yamaha.co.uk

Good Points Easy installation. S-VA synth. Downloadable sound support. Price.

Bad Points Slight hiss when instruments are played back.

Conclusion Wide range of high-quality features for musicians and gamers alike.

Iomega Buz

The Buz is a **real steal** compared to its costlier video-capture competitors.

After almost cornering the market for portable storage devices, the Buz is Iomega's latest venture. It's aimed at multimedia producers and home video enthusiasts. The package comprises a PCI card and a snazzy purple break-out box for connecting the VCR or camera, plus MGI Videowave SE for editing. The card has video capture hardware as well as Ultra Wide SCSI and can be used to connect other SCSI devices.

The rugged break-out box is a particularly useful component. It eliminates the need to fiddle with cables behind the computer or under the table. It sits on top of the system, and connecting a VCR or camera to it is a straightforward process. VCRs come with S-Video or composite video outputs. The box is capable of accepting both types. We first tested the Buz on a new 333MHz Pentium II with 64Mb RAM and a fast hard drive. True to

Iomega's claim, the card captured full-screen MJPEG video with no frame loss or distortion. However, the capture rate became irregular on an older Pentium 133 with 32Mb RAM. You'll also need Windows 98 or Window 95 OSR2 and two free system IRQs. For these reasons, some older systems won't be compatible with the Buz. The unit doesn't capture audio: for that, you'll need to use your existing sound card.

Videowave SE isn't competing with the likes of Adobe Premiere, but it's fine for basic edits, captions and fades. And compared to its costlier counterparts like the Pinnacle DC 30 and the Fast AV Master, the Buz provides almost equivalent versatility at a much lower price.

AJITH RAM



PCW DETAILS

★★★★★

Price £189 (£161 ex VAT)

Contact Iomega 0800 973194
www.iomega.com

Good Points Full frame, full motion analogue video capture. Dual-use SCSI card. Useful software bundle and tutorial.

Bad Points Needs a reasonably powerful PC. No digital video capture.

Conclusion The ideal solution for digital video editing enthusiasts on a budget.

Gravis Xterminator

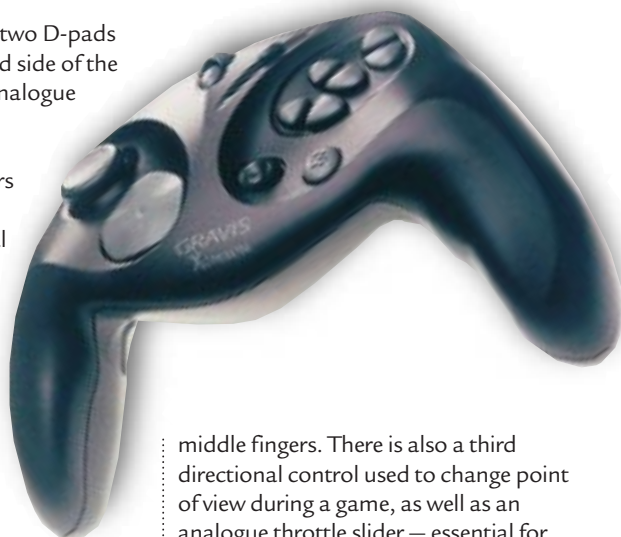
It's a **gamepad** with knobs on.



Gamepads have traditionally been associated with consoles, with PC games generally being controlled via joystick. But the excellent Xterminator digital gamepad from Gravis looks set to change all that. Our first impression was that the ergonomics were excellent. Solid without being overly heavy, the positioning of the numerous buttons and directional pads (D-Pads) feel natural, a sure sign of good design. The Xterminator offers both digital

and analog controls, with two D-pads positioned on the left-hand side of the gamepad. Top left is the analogue controller: similar to the analogue control on the Nintendo 64's pad, it offers pretty much the same response as a conventional joystick. Controlling it with a thumb rather than a hand takes some time to get used to, but we found it precise and well weighted. The other D-Pad is digital and offers eight-way control.

The best thing about the Xterminator is how much else the designers have managed to cram on while still making it a delight to use. There are analogue flippers on the underside, and digital triggers lower down operated by your



middle fingers. There is also a third directional control used to change point of view during a game, as well as an analogue throttle slider — essential for flight sims. Finally, there's a switch that, when pressed, allows a second set of pre-programmed controls to take over, effectively doubling the amount of commands you can give through the pad.

PAUL TRUEMAN

PCW DETAILS

★★★★★

Price £39.95

Contact Gravis 0800 252359

www.gravis.com

Good Points Sensitive analogue controller. Squillions of buttons.

Bad Points No plans to bundle games with it. Gamepads don't suit everyone

Conclusion If you like gamepads, you'll love this.

8x8 ViaTV Phone

Two-way **videoconferencing** sans PC.

Recent months have seen the release of the Quickcam VC from Connectix and Creative Labs' WebCam II — cheap, user-friendly cameras that sit atop the monitor and send the images down the phone lines. The idea behind the ViaTV from 8x8 takes a slightly different tack: to take the PC out of using the videophone. The principle is the same as that of internet videoconferencing devices. But the ViaTV

Phone sits on top of the television, and sends the pictures directly down the phone line through its own internal modem to the other videophone. As well as being able to hook up to other TV Phones, 8x8's camera can also make video calls to any other videophones that use the H.324 standard for modem-to-modem connections over the phone

lines. The camera connects to the TV via the SCART socket, and to the existing phone line via a two-way socket into which you plug the line from your telephone. It

took us about five minutes to set up, ready for our first attempt at

PC-less videoconferencing. Once you have phoned the recipient of your call, you can then initiate the video-connection. Using the buttons on the phone, you can bring up menus that can alter picture quality as well as frame rate. The picture at its "fine" setting was impressively sharp but its frame rate dropped dramatically, and any sense of continuous movement was lost. At the "fast" rather than 'fine' setting, the frame rate was very impressive although the picture was pretty awful.

PAUL TRUEMAN



PCW DETAILS

★★★

Price £399 (£339 ex VAT)

Contact ViaTV 0800 9808889

www.8x8.com/europe

Good Points Ease of use.

Bad Points Can't combine good motion-video quality with a sharp picture.

Conclusion Nice idea, poor performance.

Tax 98 vs Quick Tax 98

Salvation for DIY tax returns

Efficient and **reliable software** to help you sort out your self-assessment.

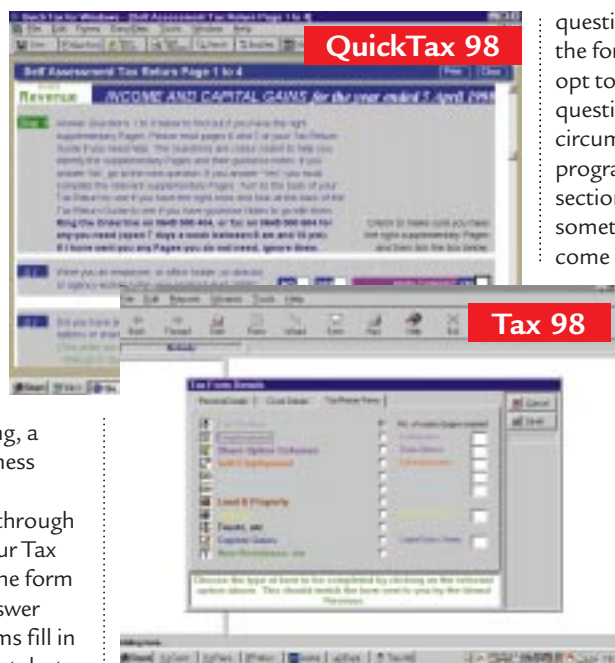
With the Inland Revenue apparently determined to continue its drive to make us all tax inspectors, several software publishers have responded to our anguish by producing software that aims to simplify these arcane matters. Two such are

QuickTax 98 and Tax 98.

Both are by major business software publishers, the first by Intuit, of Quicken and QuickBooks fame, and the second by SB Software Publishing, a division of MAP Pastel, the business accounting software specialists. Both programs aim to lead you through the often-baffling sections of your Tax Return via guided interviews in the form of on-screen questionnaires. Answer them accurately and the programs fill in your Return for you. Not only that, but they print it out too, ready for you to send off.

QuickTax 98 installs without problems, and is ready to run immediately. It comes with a slim manual with enough guidance to get you started. There was no manual with Tax 98, but we were looking at a preview version. QuickTax 98's install does have a couple of idiosyncrasies. It insists on installing onto your C: drive — if you prefer to keep your personal data elsewhere, perhaps for ease in backing up, well, tough. It also needs a password to run, involving telephoning the publisher with an "activation key" apparently generated from your address and telephone number. Though even with a password installed, you can't print anything until you have registered the software first — or at least filled in the registration form — almost as if it were shareware. Not a program to install over the weekend.

Both programs let you enter data directly into on-screen forms, with QuickTax having the more frighteningly realistic representations. In both programs, you do need to know, of course, exactly how to fill in the boxes.



It's also up to you to choose the right forms in the first place. In both programs, you can access the standard Windows Help search box. Tax 98 has the edge here, its help screens being generously illustrated and leavened with wit. In addition, both programs offer context-sensitive help. Again Tax 98 is more elegantly implemented. Moving the mouse pointer over a form's numbered boxes changes the icon to a question mark which, when clicked, displays the Inland Revenue's notes for that question. Similarly, moving the mouse pointer over certain words and icons offers you a relevant tax tip, a little more hit-and-miss. QuickTax has instructions and notes reproduced from the Inland Revenue's own forms and offers advice on saving tax, which you can call up separately. Tax 98 has its Tax Glossary and Tips, although these tend to brevity, but scores with other tools like tax code and liability calculators.

On the other hand, QuickTax 98 can hold your hand all the way through, with its EasyStep on-screen interview in which it automatically fills in the forms' boxes according to your answers to its

questions. Even if you've decided to fill in the forms without its assistance, you can opt to switch it in at any time. The questions vary according to your circumstances: if you're employed, the program skips the self-employment section automatically. If there's something you don't know, you can come back to it later (if you forget,

QuickTax will remind you).

At the end of the procedure, you can ask the program to check for errors for you. If it finds any, it takes you back to them, right down to the individual box, for correction.

Both programs will print your Tax Return for you to send off to your tax office, including your attached notes and calculations. Both programs also let you prepare Returns for any number of people.

JAMES TAYLOR

PCW DETAILS

Tax 98

★★★★

Price £19.99 (£17 ex VAT)

Contact SB Software Publishing
0161 630 7000

www.sbpublishing.co.uk

Good Points Lots of help. Useful tax liability calculators. Low price.

Bad Points Awkward installation. Not so intuitive in use.

Conclusion Does the job efficiently and is remarkable value. Pity about the password palaver.

QuickTax98

★★★★★

Price £29.95 (£25 ex VAT)

Contact Intuit 0800 585058

www.quicktax.co.uk

Good Points EasyStep interview questionnaire. Realistic forms. Inland Revenue guides.

Bad Points Not so easily integrated with Quicken as the advertising suggests.

Conclusion Almost makes self-assessment a pleasure.

WinForecast 32

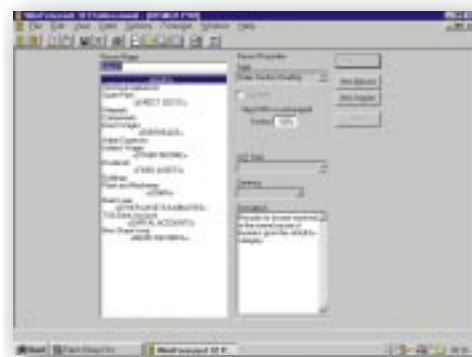
The latest version of PASE's **financial forecasting software** offers 32-bit speed and better integration. Although aimed at accountants, especially in practices or multi-department corporate organisations, this isn't accounting software in the usual sense of that term. It won't record your daily transactions nor do the books. What it does do is calculate the financial effects of changes to your predicted income or expenditure. You can then decide whether these changes will benefit your profit and loss, balance sheet and cashflow.

The obvious alternative to WinForecast 32 is the spreadsheet, which can also offer automatic totalling, carrying forward, analysis, calculation by formulae and percentage, and the ability to work backwards from a target position. It takes a lot of trouble to get up and running though, and won't give you the same level of sophistication as WinForecast 32. Getting your data into

WinForecast is by database-like entry screens, or you can import data from a spreadsheet. You can also hotlink to a database or spreadsheet. Entry fields can include complications like PAYE, National Insurance and pensions, income tax, and overdrafts. You can also enter any opening balances, and allow for overheads, credit periods and discounts, to produce an accurate facsimile of your trading patterns.

Getting your manipulated data out of WinForecast is done through the Report Generator. Installed separately, this is a Word 95 or 97 template which allows data, graphs and Reports from WinForecast 32 forecasts to be incorporated in Word documents. The way in which the data is presented to Word can be customised from WinForecast. Tough, of course, if you haven't got Word.

JAMES TAYLOR



PCW DETAILS

★★★★★

Price £249 plus VAT single licence, to £949 server licence with multi-year & consolidation
Contact P.A.S.E 01289 307000

www.atlantic-coast.com

System Requirements Windows 95 or NT, 8Mb RAM, 8Mb hard-disk space.

Good Points Flexible and fast.

Bad Points The price may make small businesses think twice

Conclusion Useful for small businesses; indispensable for accountancy practices.

Adobe PhotoDeluxe Business

Adobe is better known for its professional graphics packages like Photoshop, but it hasn't cut corners on PhotoDeluxe. It has simply taken the most useful features and made them even easier to use with a spin toward the small business. PhotoDeluxe has a simple task-orientated user interface. All of the regular features can be accessed from the six tabs on the left-hand side.

The tasks are divided up into logical sections. In Get and Fix Photo, you can import your own photos from virtually any source and then use the touch-up tools to fix your image. You can remove dust and red-eye as well as unwanted elements — such as a troublesome ex-boyfriend. A huge number of special



effects are included, ranging from adding silhouettes, motion effects and tinting. The special projects section is especially useful and includes business cards, labels, report covers, stationery and flyers. You can even design presentations.

The Send and Save function guides you through how to export your work, whether it's to your hard disk, a printer, or the web. Although helpful at first, it

can get irritating to have to walk through all the steps, so the more common methods of export are included in the pull-down menu at the top. Considering the price, PhotoDeluxe Business Edition has an amazing amount of functionality and you'll never get stuck wondering what to do next. You'll probably want to use it on a fairly fast PC, though, or you may find it is a little sluggish.

SUSAN PEDERSON

PCW DETAILS

★★★★★

Price £93 (£79 ex VAT)

Contact Adobe 0181 606 4001

www.adobe.com

System Requirements Pentium processor, Windows 95 or NT4.0, 16Mb RAM, 70Mb disk space.

Good Points Perfect for someone who wants to spend more time running their business than fiddling with software.

Bad Points Once you know how to do something, the step by step process grates.

Conclusion A great graphics package for the small business with a decent-spec PC.

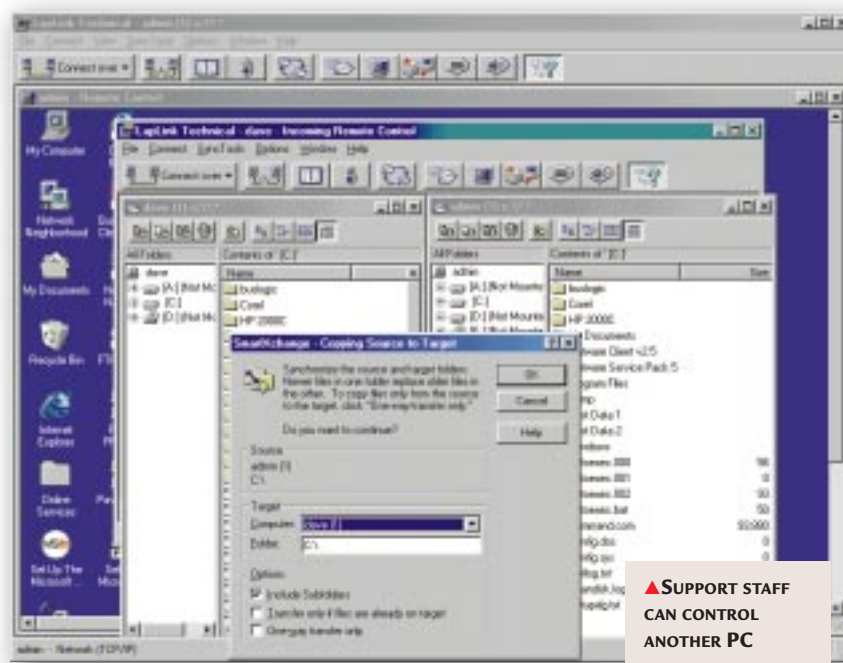
LapLink Tech v1.5

LapLink has been growing at meteoric speed. It is now capable of **connecting and supporting** a whole host of connection methods.

LapLink has gone from strength to strength to become a standard-setter in the realms of mobile computing and remote access. It now supports myriad connection methods backed by a host of useful tools. LapLink Tech v1.5 targets technical support staff directly and brings in some extra tools specifically aimed at easing their life. Standard serial or parallel links for local connections are available and both types of cable are included. Or, you can dial-up a remote PC directly, using modems, or link across a network. Both IPX and TCP/IP protocols are supported so, for the latter, you can access another PC over the internet for the price of a local call. Using this method can leave both systems wide open, and it's reassuring to see that LapLink comes with some tough security measures.

There are four main differences between this version and the standard LapLink. LapLink Tech now includes print redirection so a user running a remote control session can load a document on the remote PC and print it locally on their own printer rather than copying it across first. Alternatively, documents on the local PC can be printed directly onto a remote printer attached to another system running LapLink. A Chat facility allows keyboard-related conversations between LapLink users and this has now been beefed-up with support for full-duplex voice communications. Not all sound cards support this, so

▼ **DUPLICATE ENTIRE HARD DISKS OR PARTITIONS WITH GHOST SE, BUT BRING A GOOD BOOK IF YOU'RE USING A PARALLEL CONNECTION**



▲ **SUPPORT STAFF CAN CONTROL ANOTHER PC WITHOUT LEAVING THEIR DESK, WHILE SMARTXCHANGE KEEPS FILE AND FOLDER SYNCHRONISATION SIMPLE**

you may have to use half-duplex. In this mode, you must wait for the other user to stop talking before you speak. To help, the Voice Chat window has a small indicator in the corner that turns green when it's your turn to talk. The other two utilities are not actually a part of LapLink and are installed separately.

Ghost SE is a DOS utility for cloning complete hard disks or partitions. Support staff will find this useful as they can create a hard-disk image and restore it to a new PC. A complete byte-for-byte image, including the boot sector, can be taken so that a standard set of applications can be applied to multiple systems. Unfortunately, Ghost SE is haunted by a few minor problems. I cloned a Windows 98 system with a 750Mb hard disk onto another bare system using a parallel-port connection and it took over one and a half hours — try this with 6Gb of data and you'll be waiting the best part of a day. Ghost SE supports removable media so I cloned the same system to a Jaz disk which took 16 minutes, while restoring the image to the recipient PC took only 12 minutes. A further problem will be hardware conflicts if the recipient is not identical to the donor machine; on my system, Windows 98 spent another half-hour running a new hardware discovery routine. After that it worked fine, but

Windows NT will not be so amenable. Virus protection is Dr Solomon's WinGuard, which loads as a background task and provides real-time virus scanning. Open a file, load a floppy disk and read it, download something from the internet or copy a file from another PC, and WinGuard will check it first before allowing it on to your PC.

LapLink Tech offers no major improvements over the standard product. However, the extra utilities will undoubtedly prove useful and turn what is already an extremely good remote access product into a great one.

DAVE MITCHELL

PCW DETAILS

★★★★★

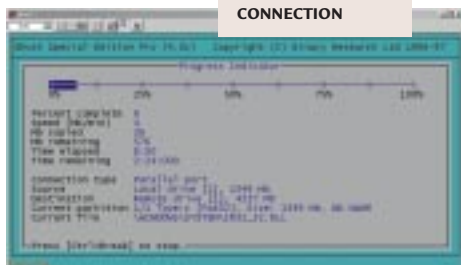
Price Single user £199.69 (£169.95 ex VAT); ten users £89.89 (£76.50 ex VAT) per user; 500-1,000 users £69.91 (£59.50 ex VAT) per user.

Contact Traveling Software 0800 374849 www.travsoft.com

Good Points Supports a wide range of connection methods, backed by good security.

Bad Points Disk cloning over parallel connection is excruciatingly slow.

Conclusion No radical improvements but still one of the best remote access products around.



Macromedia Fireworks

Fireworks really sparkles and makes creating complex web graphics a simple affair.

Web sites are no longer just graphics and text. Although there is no substitute for quality content, it certainly helps if it is presented well. You are not, after all, going to have many repeat visitors if the presentation of what you have written is ugly or inaccessible. Macromedia has made creating complex web graphics simple. It was formerly necessary to use a number of packages to generate many effects, but with Fireworks this is no longer true. Far more than the simple image editor it appears to be, this package is a powerful tool for generating economical elements while retaining high image quality.

First time users would be wise to start working through the tutorials in the manual, which start by introducing the user to the 32 basic tools and the toolbars used to generate and customise images. Each lesson is presented as a case study, outlining a problem and its solution. Launching with a look at image maps, it shows that users no longer need to create the base image in one package before either loading it into an image mapper or embarking on the rather fiddly process of working out the co-ordinates themselves.

Fireworks cuts out the need to switch packages, by using the same selection tools utilised in the original drawing process to define the map hotspots. Similarly, its innovative use of a layered effect allows for the easy creation of animated gifs. It was previously necessary to paint several images, each of which would be loaded into a generator for sequencing.

Fireworks is intelligent enough to realise that a multi-layer image could potentially be an animated gif and presents this as a file-type option in the Save dialog. Before committing yourself to exporting your work, an option for previewing the animation allows for image-quality



tweaking and the fine-tuning of timings between frame changes.

One of its most impressive functions is its simple creation of rollover buttons; in effect, an image that hides another behind it — rolling the mouse over one reveals the graphic beneath. This is most often used to “highlight” a button but can be put to good use by placing context-sensitive help beneath an image that links to another part of your site. It’s a simple concept, but it takes a certain amount of complex programming to put to use. By setting up the initial image and the rollover on separate layers, Fireworks will allow you to export the graphics with the associated HTML section which can then be copied and pasted into your own pages. Drop shadows with faded edges, as well as highlights or emboss effects

employing a portable light source, can be applied with a single mouse click. Further, Fireworks understands that users may start

with an original image from a digital camera or scanned photo onto which they wish to overlay drawn elements. While the images retain their bitmapped format, the vector objects are formed using paths and brushstrokes, which effectively means they can be edited and

▲ **EVERY EFFECT AND TOOL YOU COULD NEED FOR SIMPLE WEB GRAPHICS PRODUCTION**

filled without damaging the

underlying structure of the photograph. With a 30-day trial version available on the net, Fireworks is not a fully-fledged web-page creation package, but then, it doesn’t set out to be. It will not generate award-winning pages from scratch, sorting out tables, frames and style sheets; that is left to the likes of FrontPage 98 or HotDog. Fireworks will, however, generate the JavaScript coding necessary to create impressive content. Its real strength, though, lies in its ability to produce space-saving graphics that retain their original high-quality look. It does this well, and will enable even the greenest of web designers to produce graphics and menu elements that lend an air of quality previously only available to those who could afford the services of a professional developer.

NIK RAWLINSON

PCW DETAILS

★★★★★

Price Price £239 (£203.40 ex VAT)

Contact Macromedia 0181 358 5857

www.getfireworks.com

Good Points Easy to use. Logical interface. Impressive results using the minimum of web space. 30-day free trial on the net.

Bad Points Don’t expect it to produce your whole site for you.

Conclusion A must-buy product for anyone serious about web design.

A powerful tool for generating economical elements while retaining high image quality

Sonic Foundry Acid

This music production tool with **editing facilities** and a wide selection of samples is a real breakthrough.



Acid is a breakthrough loop-based music production tool. Its concept and approach to making music is entirely new. It enables users of all skill levels to produce high-quality, royalty-free music from a wide selection of audio samples. What sets Acid apart from any other multi-track audio recorder with editing facilities is its ability to recognise the key (pitch) and tempo (speed) of any audio sample and then make it "fit" musically within an arrangement. If you have worked with audio samples in the past, you'll appreciate how time consuming this can be using traditional pitch-shifting and time-stretching processes. Moreover, these processes may not always yield high-quality results. With a mixed bag of

▲ **UNLIMITED TRACKS FOR AUDIO SEQUENCING, WITH SUPPORT FOR MULTIPLE SOUND CARDS**
 ► **A VOLUME ENVELOPE BEING ADDED TO AN AUDIO REGION. IN THE LOWER HALF OF THE SCREEN, WAVES' MAXxBASS AUDIO PLUG-IN IS BEING USED TO MAXIMISE BASS OUTPUT**



samples loaded into an arrangement, piecing a tune

together simply involves selecting the pencil tool to "paint" elements on to a musical canvas. Acid takes care of the technicalities; all you need is an ear for what sounds good. The installation takes up only 5Mb of disk space for the program files. On the CD there's over 500Mb of audio samples (pop, rock and dance) to kickstart your collection.

The main screen is divided into three areas: track view, track display and a multi-function window. Tabs in the bottom right of the window allow you to view the Media Explorer, file properties, audio mixer and up to eight DirectX plug-in effects. Acid's Media Explorer works in much the same way as the Windows Explorer, showing the available drives and folders in a tree structure. With the File Preview option enabled,

audio files can be auditioned in context with the tune on which you're working. Double-clicking the file creates a new track for the sample and the pencil tool can be used in the track display to paint the sample into place. Once a sample reaches its end, it loops back to the start, enabling you to carry on painting.

Audio files are played back according to criteria set in the audio properties view. These include whether or not a sample should be time-stretched and/or pitch-shifted to match the key and tempo of your arrangement, and whether files should be played from hard disk or loaded into RAM. Despite being flagged as a loop-based production tool,

Acid will also work with single-shot samples, or non-looping material. Saving a file with these settings is known as Acidizing and all the audio samples on the CD come pre-Acidized ready for use. A multi-

function slider in the track view lets you alter settings for volume, pan and effect send levels. The effect sends are configured as pre-fader, which allows insert-type signal processors to be used on individual tracks. Settings can be automated throughout a mix by superimposing envelopes over audio regions. Linear and logarithmic curves are available. The key and tempo are configured globally with the tuning fork and BPM slider, and markers can be placed above the timeline to change these at any point.

The concept is simple but Acid can be used to create complex mixes with the minimum of fuss. The time-stretching and pitch-shifting algorithms are among the best I have come across, and with support for multiple-output sound cards, Acid is well-suited to more professional applications that may require external mixing and processing.

STEVEN HELSTRIP

PCW DETAILS

★★★★★

Price £249 (£212 ex VAT)

Contact SCV London 0171 923 1892

www.sonicfoundry.com/acid/

System Requirements 133MHz Pentium, 32Mb RAM, Windows 95 or NT. Pentium II recommended for real-time effects.

Good Points Easy to use. Flexible. Multi-I/O support. Comprehensive syncing. Stable.

Bad Points Response from plug-in effects is slow. No scissors tool.

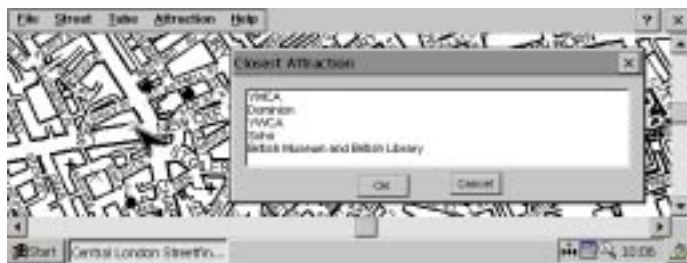
Conclusion A simple yet powerful audio package with plenty to offer every type of user.

London Access

London Access makes finding your way around the capital almost instantaneous.

You can usually spot a tourist in London because his rucksack will contain a brand new London A-to-Z which is furtively consulted on street corners. Indigenous Londoners, on the other hand (on anything but their commuter run) may have a battered copy sticking unselfconsciously out of their jacket pocket because they understand that almost no-one, apart from London cab drivers, can carry the knowledge in their heads.

London Access provides what is essentially the equivalent to a London street map, but with a major difference. Instead of the index in the back, it has an electronic finder. As you begin typing a street name, it will display a gradually diminishing list of streets that match the characters you are typing. As soon as you see the one you want, you can select it and the pointer on the map will jump to the correct location. The "find" is almost instantaneous on an HP 620. You can



◀ **FIND
YOUR WAY
IN
LONDON,
FASTER
THAN A
SPEEDING
BULLET**

PCW DETAILS

★★★★★

Price £30 (ex VAT)

Contact Dynamical Systems Research
0171 584 0084

www.londonmap.com

Good Points Fast. Portable.

Bad Points Doesn't cover the outskirts of London.

Conclusion Go on — treat yourself.

also search for "attractions" such as museums, theatres and so on, and there is a useful option to find the "closest attraction" to your selected street. One minor gripe is that the map doesn't cover all of London and not even as much as a printed A-to-Z. For example, going east, it peters out around Whitechapel. So, oddly, the built-in London Underground planner knows all the tube stations, even if the map doesn't show where they are. Nevertheless, this is a minor gripe compared to the advantages. If you already have a Windows CE machine, buy London Access and sell your A-to-Z to a tourist.

MARK WHITEHORN

Inspire 3D

With this light version of LightWave 3D, aspiring animators will be able to create and manipulate objects with ease.

This is the latest 3D package from NewTek, famous for its LightWave 3D, one of the most versatile high-end software packages in computer animation. It has been used to create some of the most memorable special effects in Hollywood blockbusters like Titanic, Starship Troopers and Lost in Space.

Inspire 3D is a "lite" version of LightWave, boasting about 90 percent of its features. Like LightWave, Inspire 3D is split into two applications: the Modeller and Layout (renderer). Modeller is the application used to create objects. Manipulating 3D objects in the Modeller is slightly different from touching up 2D pictures in more common image-editing programs like Photoshop.

This is because a 3D object has three axes and all three must be manipulated. The Layout tool is the application used to create the surface texturing of objects. For instance, if the 3D object created in the Modeller were a ship, you could add

surface textures such as metallic hull plates, wooden boards for the deck and glass cabin windows. Rendered scenes can be animated by specifying a series of key frames. The software takes care of rendering objects in between each of the key frames, creating a fluid animation. Inspire can render still images up to a resolution of 8000x8000 pixels, but animations are limited to 640x480, to prevent its use in professional TV or video work. Inspire 3D also lacks support for multiple processors. But even considering these limitations, it's still a versatile animation package.

AJITH RAM



◀ **USE THE LAYOUT
TOOL TO CREATE
SURFACE TEXTURES**

PCW DETAILS

★★★★★

Price £441 (£375 ex VAT)

Contact AMGfx 0171 468 3444

www.newtek.com

Good Points Has many features previously available only in high-end animation packages.

Bad Points Steep learning curve.

Conclusion A comprehensive package for aspiring animators and hobbyists.

RealPlayer Plus G2 BETA

Useful improvements for an already **excellent multimedia streaming** software product.

Real Networks continues to tweak its multimedia streaming software. Beta versions of the various components of RealSystem G2 are available at the company's web site, and Real Networks is continuing its practice of giving away the basic Player and charging for the more sophisticated Player Plus software.

Web authors can now stream two new datatypes, RealText and RealPix, that allow high-resolution pictures and scrolling text to be streamed along with RealVideo and Audio. Real Networks claims that its SmartStream technology can eliminate rebuffering by improved communication between client and server: the bandwidth can switch between settings of 14.4K to 56K according to the client bandwidth and



▲ THE REDESIGNED REALPLAYER INTERFACE

subsequent packet loss, thus minimising rebuffering. You will only notice this difference, though, if the author of the page has used the RealSystem G2 to encode the Real file, so it should be a while before the long-term benefits are felt. Other, more tangible improvements are to be found with the redesigned interface. The Plus

version offers one-touch channels and picture-quality controls are now included, as well as a 10-channel graphic equaliser. These are useful improvements to what was already an excellent product. But as the software becomes more ambitious, the more it exposes limitations in the delivery medium. So, until there is a delivery system capable of transferring megabytes per second, the RealPlayer Plus is as good as it gets.

PAUL TRUEMAN

PCW DETAILS

★★★★

Price US\$29.99

System Requirements Windows 95/NT, P133, 16 Mb RAM.

Contact Real Networks www.real.co.uk

Good Points User-friendly. Lots of options.

Bad Points Still struggles to play decent video at 56Kbits/sec.

Conclusion Miles ahead of the competition but limited by bandwidth

Truster 2.40

With your very own **lie detector machine** you may never again fear telesales canvassers.

Five double-glazed windows for the price of one sounds too good to be true, but how can you be sure when you get cold-canvassed at the end of a busy day? Originally designed for counter-terrorism, Truster is now available to the public and could well help you to decide. The main requirement is a phone with a standard receiver base. The receiver is plugged into a splitter box, one cable from which is put back into the receiver socket on the phone base while the other goes to the sound card. The software samples voices at the beginning of each conversation to calibrate itself before passing judgement.

Analysis is shown as a series of graphs, with a text judgement ranging from "Truth" to the rather more incriminating "Outsmart" or "False Statement". It does this by measuring the changes in the speaker's voice, as a lie induces a

▶ 'I'LL RING YOU BACK... HONEST'

slightly increased pulse which draws blood away from the vocal chords. In most of our tests we found its results to be fairly reliable as long as an unsuspecting subject was telling fairly serious lies. Once we confronted our callers and they began to backtrack, Truster cleverly warned us that what we were hearing was "Avoidance/Voice Manipulation". We were a little concerned that when we ran the same lengthy recorded message through Truster several times, it gave different judgements on each occasion, throwing some doubt on its claim of 85 percent accuracy.



PCW DETAILS

★★★★

Price £111.63 (£92 ex VAT)

Contact Hundred Islands Technologies 0171 720 3555 www.truster.com

Good Points Easy to use. Gives a unique slant to conversations.

Bad Points Expensive. Should only be used as a guide.

Conclusion Fun, but potentially insidious. For entertainment only.

NIK RAWLINSON