Better than a PC?

With the Apple Mac's low profile in the market you could be forgiven for thinking that PCs were the only choice for home computing. We find out whether it's worth taking the Mac route or wiser to stick with a PC

If you're looking for a home computer you've almost certainly come across PCs. Shop shelves the length and breadth of the country are full of them, and computer magazines are heaving with adverts for the latest and fastest machines. However, even though their prevalence might suggest otherwise, PCs aren't the only choice.

Years before PCs became as popular and widespread as they are today, Apple was producing a computer called the Macintosh. The Mac, as it's popularly known, managed to build up a huge worldwide following during the 1980s, thanks, in the main, to its easy-to-use graphical interface.

Today its user base is as faithful as ever, but does the Mac still represent the serious alternative to the PC it once did? After all, when it comes to software support the PC beats the Mac hands down. It has the widest selection of business applications,

and as far as games are concerned, the PCs are streets ahead.

On the other hand, PCs have a reputation for being difficult to set up and use, and you might need to make a million and one tweaks before you get some of those wonderful-looking games up and running. Then there are your friends: they've assured you that using a Mac involves none of this intricate configuration nonsense – simply plug it in and it will work, letting you get on with whatever you want to.

The fact is, both Macs and PCs have their fair share of good and bad points, which just adds to the difficulty of deciding which one to buy. To help you choose which one is right for you we've taken several Macs and PCs into our Labs and pitted them against each other. Over the next few pages we'll tell how easy, or hard, they are to set up and use, and give you the lowdown on which machines represent the best value for money.

Setting up the system

Buying a computer is just the first step to getting a system up and running. After unloading the box, you've still got to unpack it and put it all together.

Naturally, the urge to see your computer burst into life is strong and you'll probably want to start getting yourself tangled up in cables immediately. However, doing so is unwise and you might end up damaging a delicate plug by forcing it into the wrong socket. The first thing to do is unpack the entire system – monitor, keyboard, mouse, cables and so on – and find the manual.

An unfortunate fact about PCs is that the quality of their manuals varies enormously – if you get one at all! While noteworthy manufacturers such as Compaq and Hewlett-Packard supply detailed, and clearly illustrated tomes, others – sadly too numerous to mention – throw in any number of slim, piecemeal guides. It's at this stage that Apple's systems score a major plus point. Before you've even parted with your cash you can be assured that there will be a manual, which is likely to be of a high quality. The best manuals have comprehensive trouble-shooting sections to guide you through the whole business of setting up your system, including any problems you might have. This feature appears consistently in Apple's manuals but with PCs it is much more of a hit-and-miss affair.

Once you've familiarised yourself with the various parts of your system, it's time to start joining them together. Macs and PCs have a plethora of con-nection sockets, or 'ports', most of which are at the back of the machines. Although each platform's ports look different, they connect much the same types of peripherals. There will be variously shaped con-nectors for monitors, keyboards, mice and printers, as well as many others.

The locations of the ports vary between Macs and PCs. As an example, in both cases the keyboard plugs into a small port at the rear of the machine, but the location of the mouse ports differs.

A PC will come with a separate monitor that has to be attached to a rear port and often there will be a set of speakers. Sometimes it is possible to power the monitor through the PC's built-in power supply – this is known as a 'pass-through' power supply – otherwise, you'll need a second wall socket. And the speakers usually need a power socket of their own.

Apple's Performa Mac presents the more elegant solution of an 'all-in-one' unit. All parts of the computer, apart from the keyboard and mouse, are squeezed into a single, hefty box, making it very nearly a plug-in-and-go system. There have been some attempts at all-in-one PCs, but these fared badly in this fiercely competitive market.

Action stations

Now we come to the moment when you flip the power switch and gingerly hold the mouse for the first time…

Regardless of whether you're caressing a single-buttoned Mac mouse or the multi-buttoned PC equivalent, the computer will launch its operating system. This is the interface between you and your computer, and it responds to your actions. You might like to think of it as the dashboard of your car: when you depress the accelerator the dashboard reacts by raising the speedometer needle. With Macs and PCs you perform actions using a mouse and a keyboard, and the computer's responses appear on the monitor.

Both systems employ highly intuitive WIMP interfaces – they display windows (the W of WIMP) and icons (I) and you interact with them using a mouse (M) and an on-screen pointer (P). Apple's operating system, MacOS, appears, in one form or another, on all its computers. Almost without exception, PCs are supplied with Microsoft's

Setting up the system (continued)

Windows 95 pre-installed. Although MacOS and Windows 95 are both WIMP environments, coming from different developers they have a number of differences (*see later on in this feature*).

Obviously a computer is of limited use unless you can do something with it. Whether you want to track your accounts, create artwork, or simply write a letter, you'll need some software. Because PCs and Macs have different processors and operating systems, and thus 'talk' different languages, you cannot simply buy any program: you must check which system it is designed to run on.

PCs have the widest selection of software (particularly games) but all the big-name applications, such as Microsoft's Office and Adobe's Photoshop, are as readily available for Macs as they are for PCs. Such applications operate in broadly similar ways on each platform, but there are subtle differences.

Using emulation programs (which cost extra) Macs can run a certain amount of software designed for Windows PCs, but the results are often frustratingly slow and the programs are by no means guaranteed to run. Another option is to buy a plug-in card that gives faster and more reliable emulation, but these add even more to the cost of your system.

So, you've now got your shiny new computer buzzing away on your desk, how does it measure up against other mass-market products like televisions or hi-fis? While it's true that PCs, and to a lesser extent Macs, are now seen as 'consumer' electronics products, they're still not quite as straightforward as most other consumer electronics products. But computers are unlike any other electronics product. A hi-fi plays CDs and cassettes and lets you tune in to your favourite radio station – all basic functions that most people get to grips with quickly. On the other hand, a computer can do everything and nothing: it requires plenty of commitment to master, but it's well worth the effort.

Apple Mac Performa 5400/160

Unless you're a clued-up computer buff, the cryptic labels most computer manufacturers give their machines will mean little to you. And, even with its reputation for producing 'friendly' computers, Apple is just as guilty as any PC maker as the '5400/160' tag demonstrates. In this case the '160' refers to the speed of the computer's processor (its 'brain'), and the 5400 is simply the identifier of this low-end Performa range. Through all of Intel's advertising hype, it is sometimes difficult to remember that the Pentium is not the only processor in the world. The 5400/160's processor is the so-called PowerPC 603e, which was invented by a consortium made up of IBM, Motorola and Apple.

The 5400/160's all-in-one design makes pulling it from the box a muscle-building job. However, on the plus side, having just the one monitor-encompassing unit does make it very simple to set up – all you need do is plug the keyboard into the back of the box and the mouse into a socket underneath the keyboard before powering up.

Incredibly simple to set up, well packaged, and with a good manual, this will appeal to those who want a computer but aren't yet sure why.

○ £1,498.13 (inc VAT)
○ Apple: 0800 127753

Apple Mac Performa 5400/160	
Build quality	★ ★ ★ ★ ★
Features	★ ★ ★ ★ ☆
Value for money	★ ★ ★ ☆ ☆
Overall	★ ★ ★ ★ ☆

Compaq Presario 4704

Compaq hardly needs much of an introduction. It's one of the best-known PC brand names in the world, and you'd struggle to find a high-street store chain that doesn't stock Compaq machines. The Presario range comes in a variety of flavours, with the 4704 in the 'entry-level' category.

The machine is housed in a tower case, the sort typically designed to be buried somewhere under your desk. However, Compaq's tower design is slightly unusual because the box is topped off by a raised control panel that sports a number of buttons. These enable quick-access control of audio CD functions and a few more of the 4704's features.

A Pentium 133MHz processor takes centre stage in the 4704, supported by 16Mb of RAM and an eight-speed CD-ROM drive.

The machine's 15in monitor is nothing special – images are fine in resolutions up to 800x600 pixels, but thereafter appear unfocused. But it does have a couple of redeeming features – the volume control dial has a nice stepped action, and the 'mute' button is also quite handy.

The Presario 4704 has an unusual look, but it's very easy to set up and use. If you have the time to shop around for the best price, this system is worth considering.

○ £1,499.30 (inc VAT)
○ Compaq: 0990 134456

Compaq Presario 4704	
Build quality	★ ★ ★ ★ ★
Features	★ ★ ★ ★ ☆
Value for money	★ ★ ★ ★ ☆
Overall	★ ★ ★ ★ ☆

Apple Mac Performa 5400/180

Apart from the fact that it has the faster 180MHz PowerPC 603e processor, the 5400/180 is almost exactly the same as the cheaper 5400/160 (*see previous page*). But one, very striking, difference is the casing, which is entirely black.

After turning on the 5400/180 it loads MacOS (Apple's own oper-ating system especially for Mac-intosh machines) and automatically opens a folder called 'Launcher'. This folder contains icons leading to a number of useful tutorials, cov-ering topics from basic mouse skills to more complicated oper-ations such as copying documents and folders.

An eight-speed CD-ROM drive sits at the front of the machine with two small speakers bordering it. Unlike the PC sector, the Macintosh market isn't awash with sound cards from third-party manufacturers. Instead you get Apple's proprietary 16-bit SRS Surround system, although this provides more than adequate audio facilities.

A faster, and hence more expensive, Mac aimed at novices. If you believe consumer electronics products should be black, the 5400/180 will grab your attention.

○ £1,761.33 (inc VAT)
○ Apple: 0800 127753

Apple Mac Performa 5400/180	
Build quality	★ ★ ★ ★ ★
Features	★ ★ ★ ★ ☆
Value for money	★ ★ ★ ☆ ☆
Overall	★ ★ ★ ★ ☆

Evesham Vale Platinum HX

Evesham Micros trades mostly by mail order, but the company also has a number of retail stores dotted around the country. The Platinum HX was Evesham's first PC to feature a Pentium MMX processor, and it's the cheaper (and slower) of the two types currently available: a 166MHz. Wisely, the company has complemented this with 32Mb of RAM, but the cache (a special area of very fast memory) size is disappointing at only 256Kb.

Inside its midi-tower case the Platinum HX is exceptionally tidy, with every single cable bound along its entire length. There's a 2.5Gb hard disk nestling neatly underneath the spare 5.25in and 3.5in drive bays, while a floppy disk drive and a 12-speed CD-ROM drive occupy the other two bays.

The Platinum HX's 17in monitor, made by LG Electronics (for-merly Goldstar), is much larger than the norm. A pair of side-mounted speakers contributes to its ample bulk, but their high-quality output means they're more than welcome.

Considering that the Platinum HX has only a 166MHz MMX processor, it is a bit too expensive. On the plus side, though, Evesham does offer one year's on-site maintenance as standard.

○ £1,999 (inc VAT)
○ Evesham: 01386 765500

| Evesham Vale Platinum HX	
Build quality	★ ★ ★ ★ ★
Features	★ ★ ★ ★ ☆
Value for money	★ ★ ★ ☆ ☆
Overall	★ ★ ★ ★ ☆ ▶

The operating systems compared
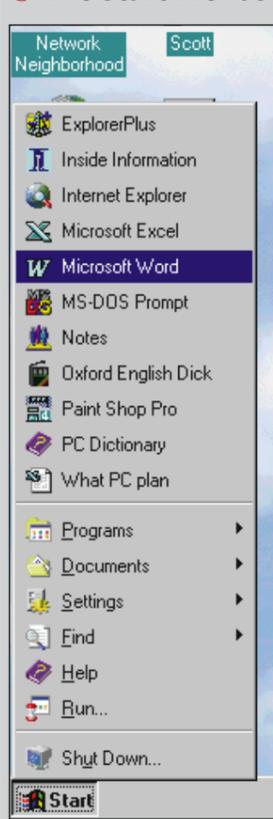
The start menus
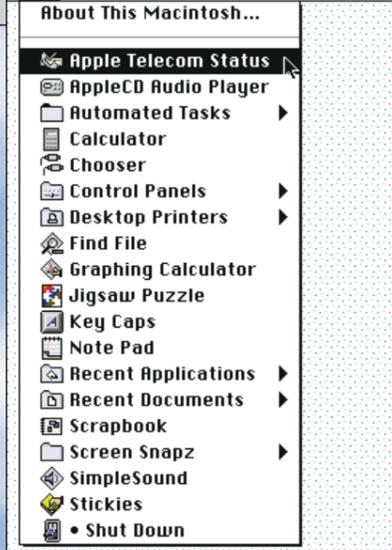
WIndows 95 and MacOS share similar menu-based interfaces. You navigate the menus using a mouse and menu items are highlighted as you move the pointer over them. The menu items will vary according to the software that is installed on the machine.

Extended menus
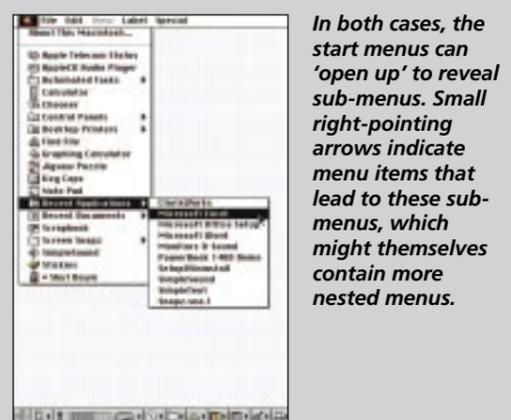
In both cases, the start menus can 'open up' to reveal sub-menus. Small right-pointing arrows indicate menu items that lead to these sub-menus, which might themselves contain more nested menus.

The operating systems compared (continued)

Applications
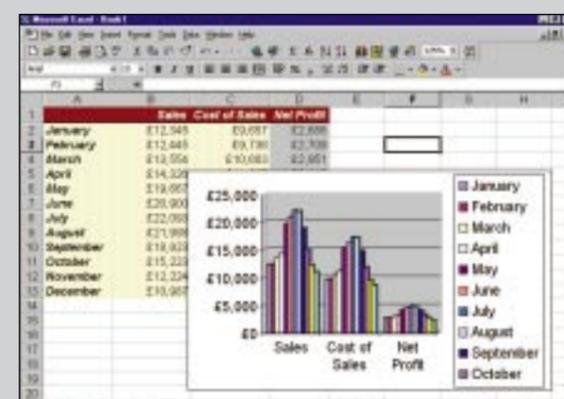
Because Windows 95 and MacOS are graphical operating systems, their applications can be made to look and work in much the same way, regardless of the system that they're running on.

Drag-and-drop files

Drag-and-drop file operations feature in both Windows 95 and MacOS. You 'pick up' document icons with the mouse before dragging and dropping them to the desired locations.
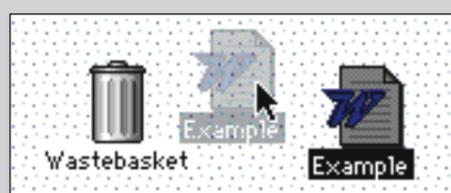
● File and folder selection
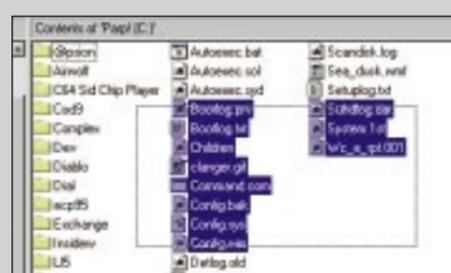
Both the MacOS and Windows 95 allow multiple file operating, but Windows' Explorer program offers extra functionality.

Apple Power Mac 7600/132

If you're looking for a computer for professional rather than family use, the Power Macintosh 7600/132 is typical of the sort of Mac you'd find on office desks around the world. It is supplied with the more traditional separate monitor and base, as opposed to the Performa's all-in-one unit.

Inside there are several other differences too. The processor is a high-end PowerPC 604 running at 132MHz. It is possible to upgrade this processor, so the 7600/132 can grow to meet your future needs. Also, the machine has three free PCI expansion slots, which can accommodate a multitude of add-in cards.

The 15in monitor has a pair of side-mounted speakers attached. The display quality is not the best we've seen, and, if you want to use it for professional desktop publishing, you'd probably want to opt for a larger 17in model.

As we went to press, Apple announced that the 7600 range is soon to be replaced by the 8600 series. Essentially, these machines will be much the same as the 7600s but with lower prices and higher specifications. The obvious knock-on effect of this move is that the price of 7600 machines will drop, probably quite dramatically.

Not really a machine to have sitting in your front room, but if you want a very powerful Mac this is the sort of machine you should be looking at.

○ £2,095.03 (inc VAT)
○ Apple: 0800 127753

Apple Power Mac 7600/132	
Build quality	★★★★★
Features	★★★★★
Value for money	★★★★☆
Overall	★★★★☆

Dan Ultimate 200/X

Dan's UK-manufactured PCs have performed consistently well in our reviews over the past year or so. Indeed, the Ultimate 200/X reviewed here achieved Best Buy status in our April 1997 group test of MMX PCs. Now Dan has reduced the machine's price, making it even better value for money.

Like Evesham's Platinum HX (*see earlier review in this feature*), the Ultimate 200/X is fitted with a Pentium MMX processor, but in this case it's the more powerful 200MHz version. The 32Mb of RAM is fairly standard at this sort of price level, while the fitted Iomega Zip drive is a welcome inclusion. In case you've not come across a Zip drive before, it's a device that lets you store around 100Mb of information on cheap, removable disks – it's a bit like having an unlimited number of small hard disks at your disposal.

Dan's choice of monitor, an iiyama 17in model, is a good one and at all resolutions right up to 1,280x1,024 pixels it gives an impressive picture. Backing it up is a popular 2Mb Matrox Mystique graphics card.

Dan machines rarely disappoint and the Ultimate 200/X is no exception. It costs plenty, but then you're getting plenty for your money.

○ £2,245.43 (inc VAT)
○ Dan: 0181 830 1100

Dan Ultimate 200/X	
Build quality	★★★★★
Features	★★★★★
Value for money	★★★★☆
Overall	★★★★★

Apple Mac PowerBook 1400CS

As in the PC market, not all Macs are tied to the desktop, and Apple's PowerBook is a system that you can use when you're out of the office and on the move. Apart from its customisable top cover, this doesn't look very different from a PC notebook and the PowerBook 1400CS's specifications are a match for many of its Intel-based equivalents.

The PowerPC 603e processor makes its third appearance in this feature, but this time it's the lower-speed 117MHz version. This is fine for use in notebooks because they are generally used for less demanding tasks than their desktop counterparts.

Pointer control is performed using a 2in-square trackpad in conjunction with a wide single button. Unfortunately, control is a little tricky using this pairing because they precisely emulate a Mac mouse, so the button must be held down while negotiating the menus.

Upgrading the PowerBook 1400CS is unusually simple because the keyboard can be flipped forward, giving access to all of the major components.

Control is a little tricky because the trackpad button needs to be held down during menu navigation, but, on the whole, the 1400CS is very appealing and usable.

○ £2,357.05 (inc VAT)
○ Apple: 0800 127753

Apple Mac PowerBook 1400CS	
Build quality	★★★★★
Features	★★★★★
Value for money	★★★★☆
Overall	★★★★☆

Compaq Armada 4120

Not everyone is happy being restricted to using a desktop PC and Compaq's second appearance is designed for just that sort of person. Housed in a slim (1.5in), A4-size notebook case, the Armada 4120 is one of Compaq's most recent offerings and, although hardly state of the art, it does have a respectable specification.

Even though the Armada 4120 is being touted as a multimedia system, it lacks a CD-ROM drive. That, along with other useful multimedia features such as wavetable sound synthesis, comes as an extra with Compaq's Mobile CD Expansion Unit (MCD).

Without the MCD fitted, the 4120 still has lots going for it. The keyboard with its wide, responsive keys is as good as any you're likely to find on a notebook computer, and its unusual design of having the battery in its handle, which doubles as a tilt-stand, is appealing as well as useful.

A Pentium 120MHz processor is no longer remarkable for a notebook, nor is 16Mb of memory, but it's not often we come across one fitted with a NTSC/PAL video output socket. Using the supplied cable, it's possible to route the 4120's display to either a television or a video recorder.

Balancing size and weight over functionality is tricky, but Compaq seems to have got it just about right with the Armada 4120.

○ £2,226.63 (inc VAT)
○ Compaq: 0990 134456

Compaq Armada 4120	
Build quality	★★★★☆
Features	★★★★☆
Value for money	★★★☆☆
Overall	★★★☆☆ ▶

Alternatives

PowerComputing PowerCenter 132

Gone are the days when only Apple made Macs. Sensibly – and, it must be said, not before time – the company now licenses its operating system, so now other manufacturers can share Apple's pie. PowerComputing is one such manufacturer and its PowerCenter 132 is fitted with the powerful 132MHz PowerPC 604 processor. For the £1,607.40 asking price you also get 16Mb of memory, a 1Gb hard disk and an eight-speed CD-ROM drive.

○ £1,607.40 (inc VAT)
○ MCM Distribution: 0171 723 7221
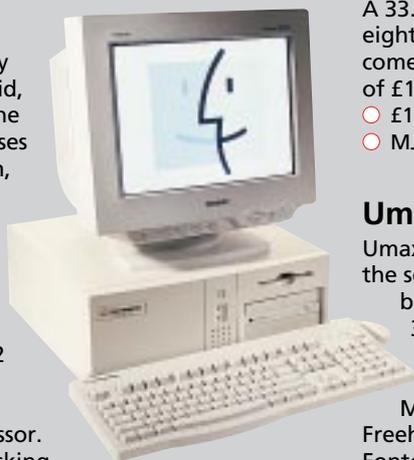
MJN P166 Multimedia

There's hardly any shortage of PCs, but MJN's P166 Multimedia does offer better value for money than much of the competition. The machine's 166MHz processor is of the heavily hyped Pentium MMX variety, and this is

supported by a generous 32Mb of memory and a spacious 2.5Gb hard disk drive. A 33.6Kbits/s modem and an eight-speed CD-ROM drive also come as standard for the price of £1,526.33.

○ £1,526.33 (inc VAT)
○ MJN: 01282 777555

Umax Apus 3000/200

Umax is making big noises over the software packages currently being bundled with its Apus 3000 series of Mac clones. The bulk of these are from graphics specialist Macromedia, and they include Freehand, Extreme 3D and Fontographer. With a 200MHz PowerPC 603e processor, 16Mb of memory and a 2.1Gb hard disk, the Apus 3000/200 seems good value at £1,204.38. Annoyingly, though, this price does not include a monitor and, as the prices of these vary from model to model, you could end up paying a good deal more.

○ £1,204.38 (inc VAT; monitor extra, starting from around £250)
○ IMC: 01344 872800

Dotlink Terminator 200MMX

This PC is named after two of its major components: a 4Mb Hercules Terminator 3D graphics card and a Pentium MMX 200MHz processor. Included in the £1,687.30 price is a 2.5Gb hard disk along with 32Mb of memory. As it does with all its systems, Dotlink offers a two-year warranty on the Terminator 200MMX.

○ £1,687.30 (inc VAT)
○ Dotlink: 0181 902 5802

Retail market share January 1997

Compaq 13%
Acer 8%
Apricot 7%
AST 5%
IBM 3%
Apple 3%
Mitac 2%
Fujitsu/ICL 1%
Olivetti 1%
Hewlett-Packard 1%
Others 56%
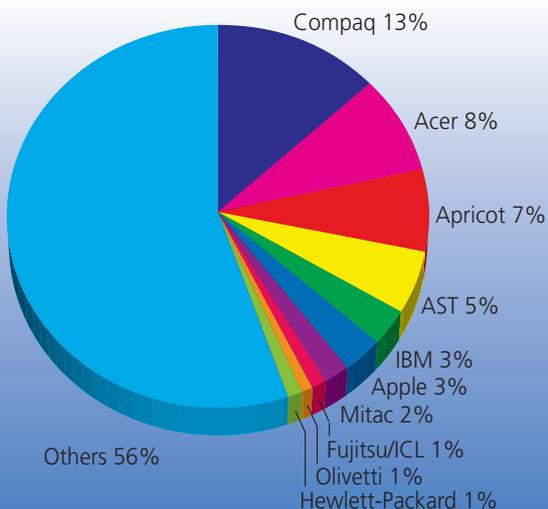
In the overall market for personal computers the PC has a massive 97 percent share. The Mac's three percent is comparatively small, but is still much higher than any one of the many PC makers that come under the banner of 'Others'.

Figures for pie chart and top 10 software titles from Romtec. Note: Top 10 figures based on new user sales of desktop applications through the indirect PC reseller channel in March 1997. Excludes upgrades and OEM sales.

TOP TEN PC SOFTWARE TITLES

Position	Title	Label
1	Office	Microsoft
2	Exchange	Microsoft
3	S&S Anti-Virus	Dr Solomons
4	Arcserve	Cheyenne
5	PK Zip	Atlantic Coast
6	Notes	Lotus
7	cc: Mail	Lotus
8	SmartSuite	Lotus
9	VirusScan	McAfee
10	Word	Microsoft

TOP TEN MAC SOFTWARE TITLES

Position	Title	Label
1	Office	Microsoft
2	Norton Utilities	Symantec
3	Photoshop	Adobe
4	Filemaker	Claris
5	Pagemaker	Adobe
6	Acrobat	Adobe
7	Quark Xpress	QSS
8	Excel	Microsoft
9	SAM	Symantec
10	Illustrator	Adobe

Macs and PCs compared

	Compaq Presario 4704	Apple Macintosh Performa 5400/160	Evesham Vale Platinum HX	Apple Macintosh Performa 5400/180	Dan Ultimate 200/X	Apple Power Macintosh 7600/132	Compaq Armada 4120	Apple Macintosh PowerBook 1400CS
Price (inc VAT)	£1,499.30	£1,498.13	£1,999	£1,761.33	£2,245.43	£2,095.03	£2,226.63	£2,357.05
Processor	Pentium 133MHz	PowerPC 603e 160MHz	Pentium MMX 166MHz	PowerPC 603e 160MHz	Pentium MMX 200MHz	PowerPC 604 132MHz	Pentium 120MHz	PowerPC 603e 117MHz
Operating system	Windows 95	MacOS 7.5.3	Windows 95	MacOS 7.5.3	Windows 95	MacOS 7.5.3	Windows 95	MacOS 7.5.3
Memory (RAM)	16Mb	16Mb	32Mb	16Mb	32Mb	16Mb	16Mb	16Mb
Hard disk size	1.6Gb	1.6Gb	2.5Gb	1.6Gb	2.5Gb	1.2Gb	1Gb	1Gb
Case	Tower	All-in-one	Midi-tower	All-in-one	Midi-tower	Desktop	Notebook	Notebook
Sound card/ hardware	ESS AudioDrive (Sound Blaster compatible)	Proprietary 16-bit SRS Surround Sound	Yamaha sound system (emulates AWE32)	Proprietary 16-bit SRS Surround Sound	Creative Labs AWE32	Proprietary 16-bit stereo audio	ESS AudioDrive (Sound Blaster compatible)	Proprietary 16-bit stereo audio
Speakers included	●	● (built into case)	● (on monitor)	● (built into case)	●	● (on monitor)	● (built into case)	● (built into case)
Graphics card/ hardware	32-bit PCI (1Mb)	Proprietary design (1Mb)	Matrox Millenium (4Mb)	Proprietary design (1Mb)	Matrox Mystique (2Mb)	Proprietary design (2Mb)	Cirrus Logic 7548	Proprietary design (1Mb)
CD-ROM drive speed	Eight-speed	Eight-speed	12-speed	Eight-speed	12-speed	Eight-speed	Optional	Six-speed
Display	Compaq 15in	Built-in Apple 15in	Goldstar 17in	Built-in Apple 15in	iiyama 17in	Apple Multiple Scan 15in	11.3in dual-scan LCD panel (800x600 resolution)	11.3in active-matrix LCD panel (800x600 resolution)
Modem (Kbits/s)	33.6	28.8	33.6	28.8	33.6	28.8	n/a	28.8
Other	n/a	n/a	Iomega Zip drive	TV tuner	Iomega Zip drive	n/a	2xPC Card sockets; infra-red port	2xPC Card sockets; infra-red port

● = Yes ○ = No

Conclusion

So, you've heard about the differences between Macs and PCs, and you've read the reviews comparing specifications and prices. Now the crunch question: should you buy a Mac or a PC? Naturally, you'd be surprised and disappointed if we came up with a simple answer to that age-old question.

The truth is that both platforms have their strengths and their weaknesses. The renowned simplicity of Macs is not in question – the machines are easy to set up and use – and we think even the most ardent technophobes would be able to kick off with the merest glimpse at the excellent manuals. Other programs you might buy and install, such as word processors and spreadsheets, inherit this simple front end, so they, too, are easy to get to grips with. And when it comes to professional desktop publishing and creative graphics, Apple machines have a stronghold that will take the unofficial Microsoft-Intel alliance many years to break.

However, while we'd like to believe Macs have a future in the home, there's a wealth of evidence suggesting otherwise. PCs running Windows 95 are so far ahead in terms of market share and brand awareness that Apple is facing not so much an uphill struggle, as a barefooted scaling of the north face of the Eiger. True, PCs are still far from perfect – a result of a completely open market early on, with standards that are de facto rather than imposed – but the market is fast maturing.

The days when a Windows PC was seen as a poor pretender to the Mac's ease-of-use crown are well and truly over. Love it or loathe it, Windows 95 has brought order and simplicity to the PC marketplace and, in the main, PCs are now every bit as easy to use as Macs. Couple that fact with Apple's well-publicised financial and management problems, and it becomes difficult to recommend a Macintosh to anyone investing in a computer for the home.

So, it comes down to this: if you have a specific reason for wanting to buy a Mac, don't let us put you off; otherwise, buy a PC.

Scott Colvey