

# 25 WAYS TO GET THE PC YOU ALWAYS WANTED

• FREE CUSTOMISATION • SIMPLE DOWNLOADS • FAST UPGRADES



At no cost and with just a bit of time, a few adjustments will let you personalise your computer and boost its efficiency. With a little more time and a modicum of investment you can get close to creating your perfect PC. Simon Williams shows you how to get the system that's just right for you

A PC is a unique piece of equipment. Although it can be used straight from the box with all the settings and parts exactly as they're supplied, it is more expandable and customisable than even a car. The range of improvements and upgrades you can make to your home or workstation PC goes way beyond those most people would consider for the family runabout.

For instance, there aren't many people who would swap the engine of a trusty Mondeo, but a good few who would consider a new processor to pep up a flagging PC. There are fewer still who would whip out the dashboard instruments to fit an improved set, but plenty who would install a new version of Windows.

There's a lot you can do to improve your PC and customise its features to better fit your workload. It doesn't need to cost you any money, either. By investigating Windows and spending a bit of time configuring it, you can tailor your PC to save you time and improve your

productivity. Simply look at the things you do and work on the parts of your PC where improvements will reap the greatest benefit.

With a bit of cash to spare you can do a lot more, but it's still important to target your spending to best effect. There's little point in adding the latest 3D graphics adapter if you never play games, for instance, or in fitting a TV card to an

office PC. Decide what more you want out of your computer and spend to achieve that extra.

We've drawn up a list of 10 free upgrades and a second list of ways to improve your PC that will cost you something. We've also organised them into three levels of difficulty, so there's something for the people who don't want to open their PCs' cases as well as for those who are quite at home tinkering away at the motherboard.

Level 1 improvements involve nothing that's going to disturb the smooth running of your PC or require you to raise a screwdriver. A Level 2 upgrade may include taking the cover off your computer but will still be quick and simple. Level 3 upgrades are a bit more involved and may require you to know a bit about the running of your PC. Even these, however, are not beyond anybody with a degree of common sense and patience. So here are 25 great value improvements you can make to your PC today. Just pick the most appropriate for you.

## FREE AND EASY IMPROVEMENTS



### LEVEL 01

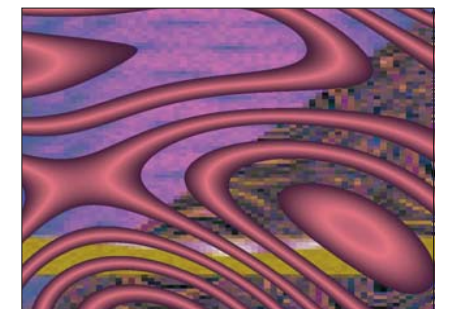
**01** Arrange your desktop for your needs  
Don't feel you have to live with the desktop setup Microsoft provides. There may well be icons on it you never use and others you would find very useful to add. It's easy to make an icon for any application or drive simply by right-clicking on the icon in Start, Programs or access it via My Computer and selecting Create Shortcut. Clicking on it once on the desktop enables you to rename it, too. Wait until the filename is highlighted and then type in a new name directly.

**02** Shop around for the best ISP deal  
Before you part with your money to start using the internet, check you have the right deal for the way you intend to use it. Fixed-fee services such as BTOpenworld ([www.btopenworld.com](http://www.btopenworld.com)),

Freeserve Anytime ([www.freeserve.com](http://www.freeserve.com)) and Virgin Net ([www.virgin.net](http://www.virgin.net)) are fine if you intend to spend quite some time on the web each month. If you only want to pick up your email and make occasional use of the web, though, it may work out cheaper to pay as you go with a service such as Tiscali's ([www.tiscali.co.uk](http://www.tiscali.co.uk)).

**03** Install a free download manager  
If you download a lot of files from the internet, you'll probably benefit from a download manager. The key feature of these pieces of software is that they can re-establish a download that has been interrupted for any reason and continue it from that point.

With a large download, this can save a lot of time. A good download manager to look at is Download Accelerator Plus, available from [www.speedbit.com](http://www.speedbit.com). Further help with internet files can be found in the Downloads section of the PCA website ([www.pcadvisor.co.uk/registered](http://www.pcadvisor.co.uk/registered)).



↑ The Seraline screensaver creates attractive, brightly-coloured abstracts while you're out

**04** Download an interesting screensaver  
Screensavers, the full-screen animations initially created to stop your monitor screen from suffering 'burn-in', are a matter of personal taste. The screen you choose to show visitors can say as much about you as a T-shirt logo. Go to sites such as [www.gotoscreensavers.com](http://www.gotoscreensavers.com) or [www.seraline.com](http://www.seraline.com) for everything from collections of photo stills to weird and wonderful dynamic modern art. You'll also find a huge selection of screensavers in PC Advisor's Download Directory ([www.pcadvisor.co.uk/registered](http://www.pcadvisor.co.uk/registered)).



## LEVEL 02

**05** Clean your PC from the inside out  
Dust and fluff are big enemies of all PCs. From dust and crumbs trapped in keyboards and mouse rollers, to PCs running hot because of congested fans, grime is bad news. The occasional clean-up can make a big difference.

To clean a mouse, remove the cover to the ball compartment and then the ball. Clean the ball in warm, slightly soapy water and dry it thoroughly. Clean any dirt off the two mouse rollers with a fingernail or a smooth cloth and then reassemble it.

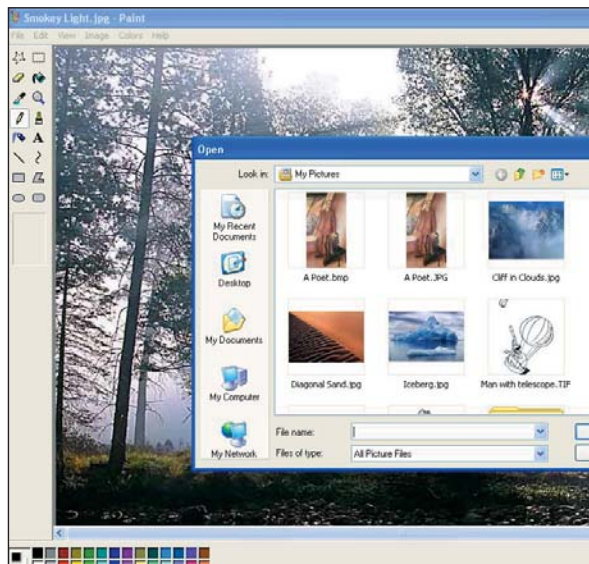
Disconnect the power lead and take the case off your PC. Using a fine-nozzle vacuum, suck out the dust. Pay particular attention to the case, processor and power supply fans. Use a duster on the fan blades. Reassemble the PC and it should run more quietly and reliably.

**06** Explore Windows applets  
Windows provides a wealth of small applications (applets). You're unlikely to need all of them, but exploring Start, Programs, Accessories will highlight the little extras you may not realise you have.

Take Direct Cable Connection, for example, available under Windows Me and earlier versions. You can use it as an effective way of copying files between desktop and notebook PCs. For basic tasks, you may not need to invest in a LapLink-style specialist software.

## Useful contacts for listed improvements

Company	Website	Improvements
AMD	<a href="http://www.amd.com">www.amd.com</a>	25
APC	<a href="http://www.apc.com/gb">www.apc.com/gb</a>	11
ATI	<a href="http://www.ati.com">www.ati.com</a>	18, 19
Belkin	<a href="http://www.belkin.co.uk">www.belkin.co.uk</a>	13, 20, 23
BTopenworld	<a href="http://www.btopenworld.com">www.btopenworld.com</a>	2, 15
Crucial	<a href="http://www.crucial.co.uk">www.crucial.co.uk</a>	17
Dabs.com	<a href="http://www.dabs.com">www.dabs.com</a>	17, 18, 19, 20, 22, 23
Freemove	<a href="http://www.freemove.com">www.freemove.com</a>	2, 15
Hercules	<a href="http://www.hercules.com">www.hercules.com</a>	18
Hauppauge	<a href="http://www.hauppauge.com">www.hauppauge.com</a>	19
IBM storage	<a href="http://www.storage.ibm.com">www.storage.ibm.com</a>	21
Intel	<a href="http://www.intel.com">www.intel.com</a>	12, 25
Jungle.com	<a href="http://www.jungle.com">www.jungle.com</a>	17, 18, 19, 20, 22, 23
Kaspersky Labs	<a href="http://www.kaspersky.com">www.kaspersky.com</a>	12
KeyTronic	<a href="http://www.keytronic.com">www.keytronic.com</a>	14
Lindy	<a href="http://www.lindy.co.uk">www.lindy.co.uk</a>	20
Logitech	<a href="http://www.logitech.com">www.logitech.com</a>	14
Maxtor	<a href="http://www.maxtor.com">www.maxtor.com</a>	21
McAfee	<a href="http://www.mcafee.com">www.mcafee.com</a>	12, 13
Microsoft	<a href="http://www.microsoft.com">www.microsoft.com</a>	14, 24
Norton	<a href="http://www.symantec.com">www.symantec.com</a>	12, 13
nVidia	<a href="http://www.nvidia.co.uk">www.nvidia.co.uk</a>	18
Orange Micro	<a href="http://www.orangemicro.com">www.orangemicro.com</a>	20
Overclockers.co.uk	<a href="http://www.overclockers.co.uk">www.overclockers.co.uk</a>	16
Panasonic Ind.	<a href="http://www.panasonic.com/industrial">www.panasonic.com/industrial</a>	22
Seagate	<a href="http://www.seagate.com">www.seagate.com</a>	21
Seraline	<a href="http://www.seraline.com">www.seraline.com</a>	3
Simply Computers	<a href="http://www.simply.co.uk">www.simply.co.uk</a>	17, 18, 19, 20, 22, 23
Sophos	<a href="http://www.sophos.com">www.sophos.com</a>	12
Tiscali	<a href="http://www.tiscali.co.uk">www.tiscali.co.uk</a>	2, 15
Videologic	<a href="http://www.videologic.com">www.videologic.com</a>	18
Western Digital	<a href="http://www.westerndigital.com">www.westerndigital.com</a>	21



← Its features may be limited, but Windows Paint is capable of basic photo editing and annotation – and it's completely free

Then there's Paint, a serviceable bitmap painting program for easy screen capture and creating simple pictures. Images can be saved as BMP, GIF, Jpeg and, in Windows XP, TIF formats.

**07** Clear temporary internet files  
The files Windows automatically builds when you're using the internet, to speed the redraw of pages on websites and make it easier to return to previous pages, soon start clogging up your hard drive. Deleting these, which can be done from Internet Options, Temporary Internet files, Delete Files in Internet Explorer (or from Disk Cleanup in Start, Accessories, System), releases what can often be hundreds of megabytes of disk space.

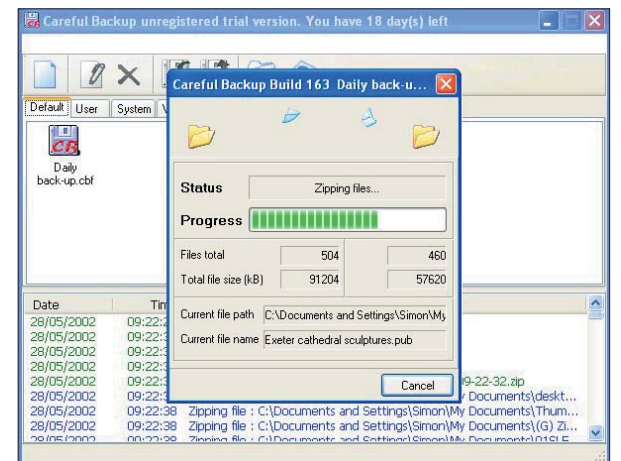
## LEVEL 03

**08** Implement a backup regime (try CD-RW)  
One of the frustrating facts of computing is that most of us don't create backups until they've lost something very important. However many friends/ consultants/magazine pundits tell you you'll be sorry, you don't back up until you are. So make a resolution now to change your ways before it's too late.

It's not that difficult to back up your files with Windows, as most of the important ones are likely to be in the My Documents folder anyway. In its simplest form backup can involve just copying the My Documents folder to a removable disk of some description – a Zip, SuperDisk, CD-R or CD-RW – on a regular basis. There are shareware and even freeware utilities to help you; try Shareware Junkies ([www.sharewarejunkies.com](http://www.sharewarejunkies.com)) or PanteraSoft ([www.panterasoft.com](http://www.panterasoft.com)).

**09** Check for the latest drivers  
To keep your PC in optimum condition, you should periodically check you have the latest software drivers for its most important components: motherboard, graphics card, sound card, drives and any peripherals you have such as printers, scanners and cameras.

→ Careful Backup, a try-before-you-buy utility from PanteraSoft, offers all the basics of backup, including Zip compression to save space



Manufacturers write new drivers on a regular basis to produce continually better performance from devices. Most of these drivers are available from the hardware manufacturers' websites and are easy to download and install. Go to the Support or Service areas of the sites and look for the model number of equipment whose drivers you want to check out.

**10** Optimise your PC for CD recording  
To get the best results when copying files to a CD-R disc, check the drives are cabled up for optimum performance. This will depend on how you go about performing the copying process.

If you to copy the data from the CD to your hard drive and then back out to the CD-R, you should have the CD and CD-R

on the same IDE cable, with the hard drive on the other one. On the other hand, if you copy straight from CD to CD-R 'on the fly' you should have them on different IDE cables.

This is because a single IDE controller can't read and write at the same time, so you need to share the tasks between the two controllers in your PC for best performance. Read from a CD on one controller and write to the CD-R or hard drive on the other.

Now you've had a look at some of the cost-free options for improving your PC, it's time to get out the chequebook and invest in a few bits of kit that will protect your system and make it run smoother than ever. Our next section, below, will take you through your options.

## SPECULATE TO ACCUMULATE

## LEVEL 01

**11** Add antivirus software  
If you are using an internet link, you should have protection against viruses on your PC. Not only are you risking your own data files and programs, but with many modern viruses automatically propagating themselves by sending emails to all the contacts in your address book you could easily lose friends and valued clients.

AV programs are now often sold as downloads from the internet and most update themselves with new virus definitions this way. A year's subscription to a service like McAfee ([www.mcafee.com](http://www.mcafee.com))

or Norton ([www.symantec.com](http://www.symantec.com)) costs £20-£30 and is money well spent.

**12** Fit a UPS  
In the UK our electricity supply is fairly free of spikes and surges. But they do happen, as do power cuts, which can mean data loss. So think seriously about running your PC through a UPS (uninterruptible power supply). UPSs use batteries to provide short-term power when the mains supply fails, typically providing between three and 15 minutes cover – time enough to close down your applications without losing the files you're working on. Prices start at around £100 for a single PC UPS.



↑ APC is one of the main players in the UPS market. Its desktop power supplies start at around £150



← ZoneAlarm continues to fulfil its mission to protect systems from hacker attacks and viruses. The free version of ZoneAlarm 2.6 is on our cover disc this month

### 13 Add a firewall

Attacks from the internet don't all come attached to your email. The other essential protection you should consider – particularly if you have a broadband, always-on connection – is a firewall. A firewall detects and prevents access to your PC by others on the internet who may want to use it as part of a malicious attack on an internet site, or to access your own data illicitly.

Most firewalls for home PCs work through software, but you can also buy hardware devices which sit between your PC and your internet connection. Software options start at around £30, while hardware devices (usually combined with routers) come in at around £150. Don't want to pay? ZoneLabs offers a free version of its excellent ZoneAlarm firewall.

### 14 Check the quality of your keyboard and mouse

The PC business is cutthroat and to keep system costs down manufacturers will always cut corners. A smaller monitor, less RAM and, most likely, a low-quality keyboard and mouse.

It might sound picky, but take it from us: all keyboards and mice are not created equal. Not only can the feel of a keyboard's keys and the shape of a mouse have a denting affect on productivity but, used a lot, they can also have major repercussions on the incidence of RSI-like symptoms affecting your wrists and fingers.

Consider spending a bit of money and investing in a quality keyboard and mouse, like those from Logitech, Logitech or KeyTronic. Their latest ranges include wireless devices, which get rid of the cables snaking across your desk, and optical mice, which have no rolling balls to clog with dust and fluff.

rolling balls to clog with dust and fluff.

➤ All keyboards are not equal and picking the right one, like this cordless kit from Logitech, can stave off RSI-related complaints

## LEVEL 02

### 15 Ditch dialup internet access for cable/ADSL

Although it's far from universally available, if you live in an area where broadband services are accessible, think about making the change. Broadband is more expensive than a dialup link (a minimum of £30 per month), but the extra speed and convenience is very attractive to anybody using the internet regularly. Links to a range of broadband providers can be found at [www.pcadvisor.co.uk/about/printplus.cfm](http://www.pcadvisor.co.uk/about/printplus.cfm).

### 16 Fit an extra cooling fan

If you have already upgraded your PC with more memory, a faster graphics card or a higher-performance processor, you should also consider fitting an extra fan to improve the airflow and keep the components cool. It needn't cost more than £10 and it's a simple job to attach the fan to the case – most cases already have mounting holes for extra fans. Just screw them in and attach their power leads to a spare power connector from the PC's power supply.

### 17 Add more memory

Probably the single biggest overall performance improvement after a change of processor is to add more memory. Windows hogs memory and 64MB is very much a minimum these days. Even PCs sporting far more RAM than this will benefit from a noticeable performance boost if applications have more memory to share between them.

New memory is simple to fit: switch off your PC, open the case, press the memory module into any spare socket on the motherboard, close it up and switch back on again. The only thing to be cautious of is the type of memory fitted in your PC. The manual for your motherboard will tell you what type to fit, while websites like [www.crucial.com](http://www.crucial.com) and [www.kingston.com](http://www.kingston.com) specify memory for well-known PCs, too. Websites are usually the cheapest place to buy. You should also wear an antistatic wriststrap or otherwise earth yourself, as static charges can damage PC components.

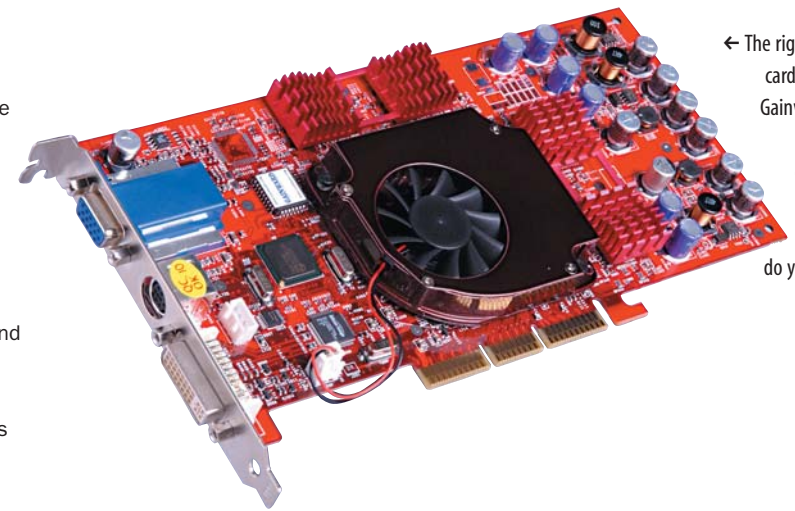
### 18 Fit faster graphics card

Games fans will already know the difference a good graphics card can make to the 3D performance of a PC. Fitting a new one is a very simple task; the graphics card in a modern PC fits into a special slot, (normally the right-most one looking from the front of the computer).

After removing the case, undo the retaining screw at the back of the card and ease out the card. Replace with the new adapter, refasten the screw and refit the case. Run Windows and install the drivers that came with the graphics card.

### 19 Fit TV/FM tuner card

Save on your TV licence (at least for now) and turn your PC into an extra domestic TV by adding a TV tuner card to it. Companies such as Hauppauge ([www.hauppauge.com](http://www.hauppauge.com)) specialise in these and, for about £100 and an extra aerial, you can add TV and FM radio to your PC.



← The right 3D graphics card, like this £210 Gainward GeForce4 Ultra/700 XP, can be the key to enjoyable gaming. But do you love games this much?

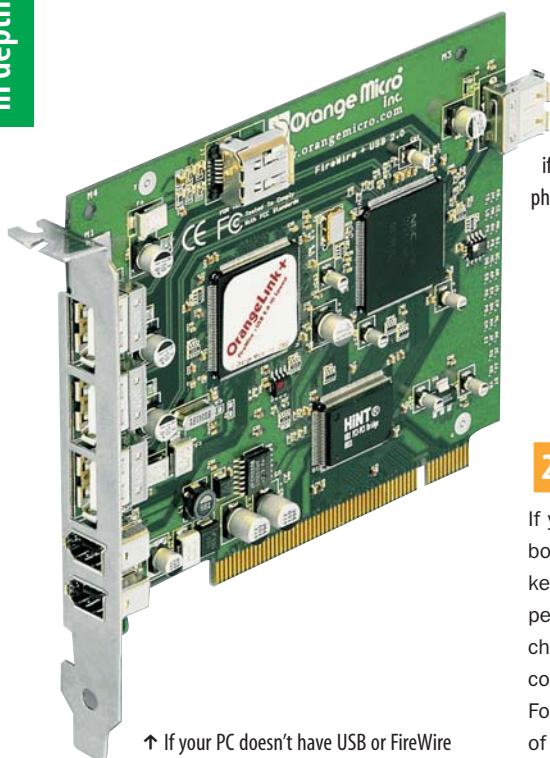
## LEVEL 03

### 20 Add USB and FireWire ports

If you have an elderly PC bereft of USB or FireWire ports, you can add them through a separate plug-in card, such as

the OrangeLink+ from Orange Micro ([www.orangemicro.com](http://www.orangemicro.com)). This provides both types of socket, including four to the backwardly-compatible, faster USB 2.0 standard. Most new peripherals – printers, scanners, cameras, MP3 players – use one or other of these standards to link to a PC.





↑ If your PC doesn't have USB or FireWire capabilities, think seriously about adding them. Most new peripherals use one or the other

## 21 Fit a larger hard drive

Applications such as digital video editing, photo editing and music creation need gigabytes of hard disk space. Hard drives supplied with new PCs typically vary between 30GB and 40GB, but new designs will take this up to 120GB and beyond.

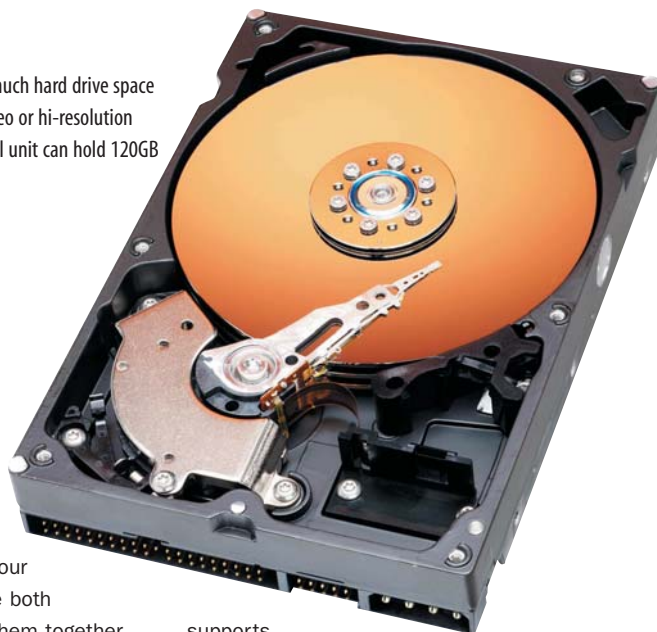
To fit a new hard drive to your PC, physically slide it into a spare drive bay, screw in the retaining screws and connect the leads for power and data. If you are adding it as a second drive, make sure the jumpers at the back of the drive are set to Slave; otherwise set them to Master. Windows should automatically detect a new Slave drive but you may have to format it before you can start work.

## 22 Exchange floppy drive for LS-240

Floppy drives provide just 1.44MB of storage on each disk and are of less and less use as file sizes continue to grow. You can fit a Zip drive to augment your storage, but you should also consider Panasonic's LS240 SuperDisk drive.

This £150 drive can read and write to 1.44MB floppies as well as 120MB SuperDisks and the newer 240MB variety. It can also reformat standard floppies from 1.44MB to 32MB, so suddenly your old floppies have a new lease of life. The LS-240 SuperDisk connects in the same way as a hard drive, or you can buy a slower, external USB version.

→ You can never have too much hard drive space if you're interested in digital video or hi-resolution photo editing. This Western Digital unit can hold 120GB



## 23 Network your PC with others

If you have recently bought a new PC and kept your old one – perhaps passing it on to your children – you can improve both computers by networking them together. For around £70 you can buy a couple of network cards, a network hub which administers the data travelling between them and cables to connect everything up. For under £200 you can buy a pair of wireless networking cards, which need neither hub nor cables.

Once your two PCs are networked you can share resources like printers and storage space and even a connection to the internet, so both PCs can use the same phone line at the same time.

## 24 Upgrade Windows

If you have an old version of Windows, you may find the extra or improved features of a newer version useful. Moving from Windows 98 to Millennium or XP shows benefits for most people. Note, though, that if you decide to install an upgraded version of the operating system you should pay particular attention to the hardware requirements of the new Windows OS. You're almost bound to need to upgrade the processor, memory or hard drive to meet the minimum specification, so check how cost-effective the whole process will be before you start.

## 25 Fit a faster processor

This is a fairly obvious improvement you can make to almost any PC, but there are a couple of points to check before you start. Firstly, can the motherboard (the main circuit board into which the other components plug) accept a faster processor – that is, one with a higher clock rate? The motherboard manual will tell you which processor types and clock speeds it

supports.

Alternatively, phone the PC's manufacturer for advice.

Keep in mind the heatsink and fan – the cooler – on the processor. Replace the cooler as well as the chip as the old one probably won't offer sufficient cooling for the heat output of the new processor.

To replace the processor, switch off the PC at the wall but leave it plugged in to ensure a good earth. Earth yourself by touching the case before starting, or wear an antistatic wriststrap. Unplug the fan on the cooler, usually plugged into a pair of pins on the motherboard. Undo the clip retaining the cooler. There are many different designs, so you'll have to experiment here.

Remove the cooler and lift the arm attached to the side of the processor socket out and up to release the chip. Carefully lift out the chip and put it on to a piece of conductive foam, like that supplied with the new chip. Holding the new processor by its corners and being careful not to touch any of its pins, orient it with the holes in the socket and gently drop it in. Push down the arm on the chip socket to fix the processor in place.

Fix the new cooler on to the top of the processor, making sure there's sufficient heat-conductive paste or a pad fitted between the two. Connect the new cooler's fan lead to the system board and try out your new, improved PC. ■



Don't forget to load up our cover disc for a range of great software utilities to enhance your PC