

GIVE YOUR PC A SPRING CLEAN



Is your PC feeling sluggish? Are programs running slower than they used to? Then it's time to give your system a spring clean! Follow our simple step-by-step maintenance tips, and you'll soon find your computer back on top form. You'll be amazed by the results! MARTIN COOPER shows us how.

Your PC is a bit like a car. Use it every day without giving it a regular service, and you'll store up problems for the future. Thankfully, you don't need to be a skilled mechanic with years of experience to ensure your PC is running as well as it should be. Windows has many cleanup and efficiency tools built into it. All you need to know is which buttons to press and which icons to select, and Windows does most of the job itself.

As you read on, we'll look at some essential tools and techniques, that will help you keep Windows purring. Some are major jobs; others are small cleanup tasks that you can do occasionally. So, no matter how little time you have to spare, there will be a job you can do that will keep your PC healthier – and you, as a result – happier.

WINDOWS UPDATES

After Microsoft releases a new version of Windows, the company doesn't wash its hands of its creation. Quite the opposite, in fact – it continues to develop and improve the program. It irons out bugs and plugs security holes. With this in mind, you should keep Windows (and, ideally, all your Microsoft programs) bang up to date with any new patches as they become available. The process is free – the only problem is that some of the files involved are very large, so if you don't have broadband you could be in for a long wait. If you're stuck with a dial-up modem connection, it makes sense to download updates the moment they become available and don't wait until you need to download a swathe of big improvements.

The most important of Microsoft's recent updates is Windows XP Service Pack 2 (SP2).

Released at the end of 2004, SP2 made some major changes to Windows XP's security. It also contained all of Microsoft's previous updates and patches for XP, making it an essential update. You can download it from www.microsoft.com. The update is over 200MB in size, so it's impractical to download with a dial-up modem. Regular readers will already know that we gave away a CD copy of SP2 free with our November 2004 issue. If you missed out, call our Back Issues Hotline on 01789 490215 to order your copy. You can also order a SP2 disc online

from Microsoft at the following Web page: www.microsoft.com/windowsxp/downloads/updates/sp2/cdorder/en_us/default.mspx.

When you've installed Windows XP Service Pack 2, your PC should start downloading any new security updates and patches automatically. To make sure it does, open Internet Explorer, click Tools and then Windows Update. In the next Window you should see a green emblem stating 'Automatic Updates: Turned On'. You can set the automatic updates system to check for patches at a given time by using the 'Pick a time to install updates' option.

Windows Update

Express Install

Express install allows you to quickly download and install only the critical and security updates your computer needs.

Microsoft strongly recommends that you install the following high priority updates to help keep your computer up-to-date and secure. To install these updates, click Install.

Total updates selected: 1 items, 10.2 MB, less than 1 minute

High Priority Updates

Microsoft Corporation - Windows XP family

Microsoft .NET Framework 1.1 Service Pack 1

Install...

Windows Update Privacy Statement

To avoid potential security risks and solve software problems, Microsoft regularly publishes software updates. You can configure Windows XP to download these automatically as they are released – or do the job yourself.

REGULAR MAINTENANCE TASKS

Like your car, your PC will keep running more smoothly, and for longer, if you give it small amounts of regular care. If you do, you should be able to stave off huge overhauls and even upgrades. Here are some smaller tasks that we recommend you carry out. Each comes with an indication of how often you should do it.

UPDATE YOUR VIRUS PROTECTION SOFTWARE

DAILY

You must have an antivirus program installed on your PC – if you don't, you're heading for disaster. If you can't afford our current Top 50 favourite, F-Secure Anti-Virus 2005 (£26 inc VAT), try downloading AVG 7. It's available for free from www.grisoft.com, and comes with regular updates.

Updating your software is critically important. When a new virus is detected, antivirus companies work feverishly to come up with a cure. When they do, they publish it as a downloadable update, enabling users to protect their computers from the new threat. New viruses appear almost daily, so it's an excellent idea to set your program to automatically update itself daily, or to ensure that you manually download the latest updates every time you log on to the Internet.



To ensure your PC is protected from viruses, you must update your antivirus software daily. The process differs from one antivirus program to another.

SCAN FOR SPYWARE

WEEKLY

Spyware is an umbrella term for programs that are secretly loaded on to your PC as you surf the Internet, and which can be used to snoop on your surfing habits or reveal other personal details. As well as compromising your privacy, spyware can make your PC unstable – and the fact that you have additional programs running in the background means your PC will be slower. Installing Windows XP Service Pack 2 will provide some protection against it, but you can still do better.

To keep your PC free of spyware and its accompanying risks, you should download an anti-spyware program. Our tried and tested favourites are Spybot – Search & Destroy (available from www.safer-networking.org) and AdAware (from www.lavasoft.com). Anti-spyware software searches out and removes known spyware programs from your computer. As new risks become apparent, software makers post updates to their program on the Web, helping you combat them. Like your antivirus program, anti-spyware software should be kept up to date. Neither of these programs are 100% effective, so

we'd advise installing and using a combination of the two to ensure you mop up any spyware infecting your PC. As we go to press, Microsoft has also released an early (beta) version of its own anti-spyware program. Follow the Downloads link at www.microsoft.com.



Spyware poses a huge threat to your online security. Spybot Search & Destroy can delete existing spyware and immunise your computer against future threats.

CLEAN UP YOUR REGISTRY

EVERY 3-6 MONTHS

When you install programs on your PC, files are stored here, there and everywhere. This doesn't cause any problems when the software is running, but it can cause headaches when you come to remove the program. This is because Windows finds it hard to remove all these fragments. This is particularly true of changes made to the Registry – a huge internal database of Windows' settings. Every time a program installed, it makes changes to the Registry. When you remove the program, these changes are not always reversed, leading to conflicts or the slowing down of your PC.

You can edit the Registry manually using a Windows program called Regedit, but this is really a job best left for hardened PC experts. Thankfully, programs are available that can clean up your Registry automatically. Try RegClean, available from www.pcworld.com/downloads/file_description/0,fid,4666,00.asp. This scans your Registry, looks for entries that are redundant or wrong and lists them so that they can be deleted.

If you've bought the DVD edition of this month's *Computer Buyer*, you'll find the program TweakNow RegCleaner SE 2.03 included on its cover-mounted disc. This sophisticated bit of software does a more thorough job of flushing out debris than RegClean. Even so, editing the Registry isn't entirely risk-free. If you or a cleaning program changes a setting that shouldn't be touched,



As you install programs, changes are added to Windows' Registry settings. These changes can remain even after you've deleted the program.



It is a very good idea to remove old and unused programs from your PC. This will both speed up your machine and also free up valuable hard disk space.

Windows can become damaged and may not even load properly. Most cleaning applications allow you to make a backup before doing their work – make sure that you do! In the event of things going wrong, boot your computer into Windows' Safe Mode to restore the backup. See last month's issue for details.

REMOVE PROGRAMS

EVERY MONTH

Installing programs is easy – but once you have, it's just as easy to end up leaving them languishing, forgotten, on your hard disk. This doesn't just take up disk space, it also slows your PC down, as it has to search for the programs it actually wants amid a sea of those it doesn't.

Most programs come with their own uninstaller. You'll find this under the program's entry in All Programs, from the Start menu.

If the program doesn't come with its own uninstaller, open Control Panel from the Start menu, and double-click Add/Remove Programs. Your PC will pause briefly while it gathers a list of all the programs you have installed. Once it has done so, find the program you'd like to get rid of, click it and then select Change/Remove.

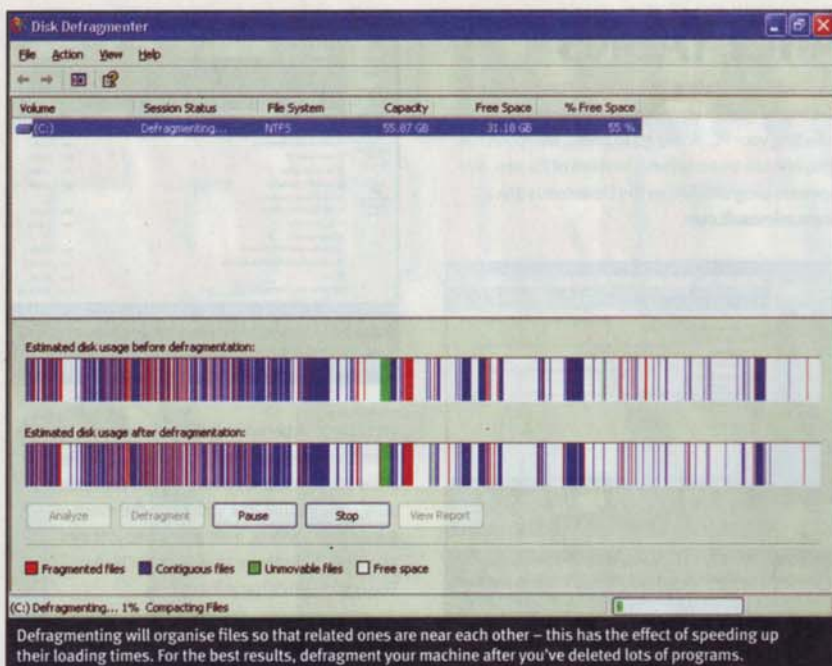
EMPTY THE RECYCLE BIN

WEEKLY

When you choose to delete a file, rather than removing it completely from your computer, Windows first puts it into the Recycle Bin. This gives you a second chance, as it means you can restore files from the Recycle Bin back to their original place on your computer. Although this is a useful feature, keeping a large number of files in the Recycle Bin takes up valuable disk space on your machine. For the best performance, empty your Recycle Bin regularly. To do so, right-click the Recycle Bin icon on your desktop, and choose Empty Recycle Bin.



Regularly Empty Windows' Recycle Bin. This will free up space, make your PC quicker and also ensure snoopers can't rifle through files you've disposed of.



DISK DEFRAGMENTATION

EVERY SIX MONTHS

When Windows stores programs on your PC's hard disk, it does so in a seemingly haphazard way, tucking fragments of files into the nearest available spaces. This slows down your PC, as its hard disk has to spend time hunting down the fragments and piecing files together. There is a simple cure – running the Windows program Disk Defragmenter. This gathers together the fragments of programs that litter your hard disk and puts them back in the right order. This makes it far easier for your hard disk to find what it's looking for, enabling programs and files to load more quickly.

To defragment your hard disk, click Start, All Programs, Accessories, System Tools and then Disk Defragment. When the program has loaded, click Defragment. If you've never cleaned your hard disk in this way before, we'd advise going off and watching TV – the process can take over an hour.

Because defragmenting your hard disk takes such a long time, you really don't want to go through the process too often. Defragment your hard disk every six months or so – ideally after you've removed lots of old and unused programs. This way, you'll get the best results.

EMPTY THE PREFETCH CACHE

EVERY FEW MONTHS

To improve the time it takes to load programs, Windows guesses which files are likely to be



Prefetching anticipates which programs are likely to be loaded, but it can go wrong.

needed next and loads them into a pool or 'cache'. This process is called prefetching, and it generally works well. Over time, though, the prefetch cache can become clogged with files you no longer need – and that can slow down Windows' startup.

With this in mind, it's a good idea to clean out the prefetch cache every few months to stop it filling up. Choose Run from the Start menu, and enter Prefetch into the text box that appears. When you've done that, you'll be confronted by a window filled with icons. Press Alt+A to select them all, and press Delete. The cache will quickly refill with links and files that Windows really needs. As a result, your PC will feel more responsive.

DELETE TEMPORARY INTERNET FILES

EVERY FEW MONTHS

When you visit a Web site, Internet Explorer stores files from it, including graphics and photos, in a folder called Temporary Internet Files. This means that the next time you visit the site, Internet Explorer can find the necessary graphics quickly on your PC's hard disk, and won't need to download them again. The down-side of this is that, over time, the cache can take up a huge amount of disk space.



Cleaning out your cookie files can save disk space and also protect your online privacy from snoopers.

Many sites also leave 'cookies' on your hard disk. Cookies are markers that a site uses to work out if you've visited it before, and enables it to remember your preferences. They don't usually contain any sensitive information, but many people perceive them as a threat to their security and privacy. Aside from this, cookies take up disk space, so it's a good idea to get rid of them from time to time as they can cause a bit of clutter.

Luckily, cleaning the residue of your Internet surfing isn't too difficult. All you need to do is open Internet Explorer, choose Internet Options from the Tools menu, and click Delete Cookies. When you've cleared all your cookies, you can turn your attention to your temporary Internet cache. To purge this, just click Delete Files.

You can also clear your Internet browsing history while you're there. This is a list of all the sites you've recently visited. Clearing it won't speed up your computer, but it will preserve your privacy.

DELETE OLD SYSTEM RESTORE POINTS

ONCE A YEAR

In the event of problems, Windows' System Restore enables you to turn the clock back to a time when your computer worked. The system takes snapshots of your computer setup, but storing these takes up disk space – and the older these snapshots get, the less useful they become.

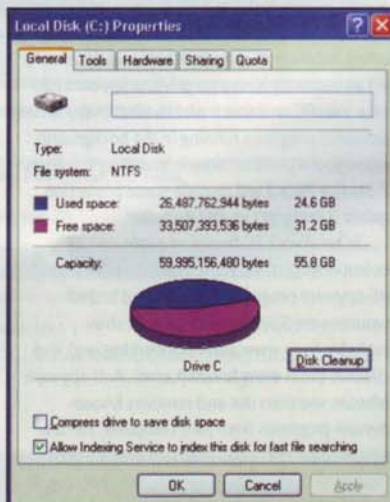
To tidy up old system restore points and delete all but the most recent, double-click on My Computer, right-click on C: and select Properties, Disk Cleanup, More Options, then System Restore. Click Cleanup. When the next screen pops up, just click Next. On our test machine we saved 50MB of disk space – not bad for two minutes' work!

RUN DISK CLEAN UP

MONTHLY

Windows' Disk Clean Up is a fantastic built-in utility that automates regular maintenance tasks. It'll automatically carry out a couple of the cleaning projects we've looked at on this page, along with several more.

To start Disk Clean Up, double-click My Computer, right click on your C: drive and then select Properties. Now click Disk Cleanup. Your computer will then spend a few moments analysing itself and looking for waste.



To make your life far easier, Windows has lots of built-in tools to clean up your hard disk.

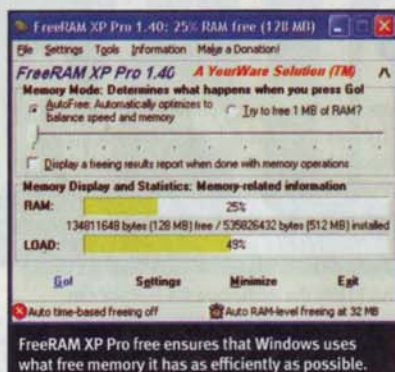
When it has completed the audit, Windows will give you a list of hard disk areas in which it has found waste, along with details about how much junk it has found. To clean an area, put a tick in the box next to it. If you want to leave something intact, such as Temporary Internet Files, just remove the tick next to the item. Once you've made your choices, click OK. Your computer will then begin the removal process. If your machine is very messy, this can take some time.

BIGGER TASKS

So, you've been maintaining your PC regularly – but it still feels a little sluggish? Don't worry. There's still plenty that can be done to make your PC feel as nimble as it did when you first bought it.

MEMORY

Random Access Memory (RAM) is the workspace that Windows uses to run programs. When you have a number of programs and files open, your PC may run short of available memory, and start to crawl. This is because Windows cordons off a section of your hard disk, known as a 'swap file', and uses it to make up for a shortfall in RAM. Because your PC's hard disk is a mechanical device, it's much slower to access than memory – leading to a significant dip in performance. You'll be able to tell very quickly if this is happening, as your hard disk will make a far more noticeable chattering noise than it did previously and the disk indicator light will start blinking a lot.

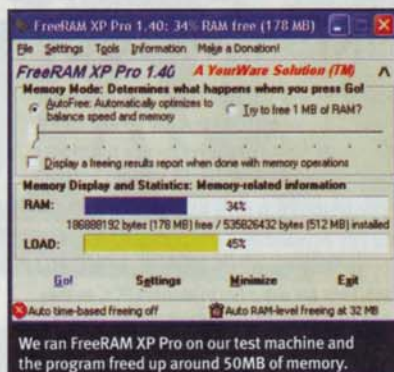


FreeRAM XP Pro free ensures that Windows uses what free memory it has as efficiently as possible.

Thankfully, there are several ways to address this problem. The first is to disable any programs running in the background that you don't need. These are often indicated by icons in the System Tray. Right-click an icon for the option to close the program. It's also worth opening Task Manager by pressing Ctrl+Alt+Delete, clicking the Applications tab and closing any unnecessary programs by highlighting them and clicking End Task. Cleaning out the Windows prefetch cache may also help.

The next option to try is a memory management program. These clever applications configure Windows, making the most efficient use of what memory is available. You can do this manually within Windows – but it's a tricky and time-consuming job to get it right.

One of the best memory managers is a tiny program called FreeRAM XP Pro. If you've bought



We ran FreeRAM XP Pro on our test machine and the program freed up around 50MB of memory.

the DVD edition of this month's *Computer Buyer*, you'll find it on your cover disc. If you've bought the CD version, don't worry. FreeRAM is only 543K in size, so you can download the program fairly quickly from www.boostware.com/hardware/ram/freeram_xp_pro.html.

Once you've installed it, all you need to do is click the Go! Button and FreeRAM will work its memory managing magic. Within seconds, the program managed to claw back an impressive 50MB of memory for our test system.

If all else fails and you still need more free memory, there's one solution that's quick, easy and 100% effective – you can add more memory in the form of RAM. This is among the simplest and most cost-effective improvements you can make to your PC. Indeed, you can currently buy 512MB of DDR RAM for around £50 including VAT.

HOW TO ADD MORE MEMORY

If you need more memory, fitting extra RAM is one of the most cost-effective improvements you can make to your PC. The process is relatively straightforward and instantly boosts your PC's performance.

For the best performance when running Windows XP, your PC needs at least 512MB of RAM. If you can't afford this, 256MB will do – but 128MB is far too little. At the other end of the scale, the performance gains to be made by upgrading from 512MB to 1GB of RAM aren't huge (unless you regularly work with very large video or image files).

To begin your upgrade project, visit www.dabs.com, select Memory & Accessories from the components menu and then select Crucial's Memory Configurator. This asks you

for your PC's make and model, and recommends the right type of memory.

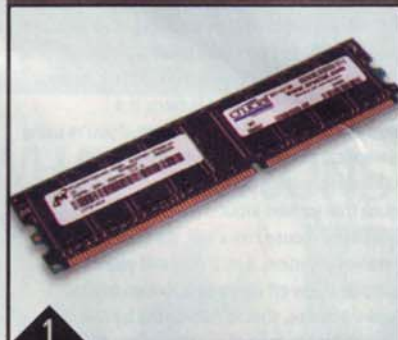
Like most jobs, inserting your new RAM isn't difficult – if you know how. The secret lies in lining up the notch on the gold edge with the notch in the memory's slot. As these notches are off-centre, they'll prevent you from getting the memory stick the wrong way round when you're inserting it. When you've got the stick the correct way round, it should click into place with the two retaining catches

clicking into the notches at either end of the rectangular-shaped memory module.

There are two ways to check you new memory is working correctly. Firstly, when you switch your computer on initially, it will do a memory test and display the total amount of memory fitted.

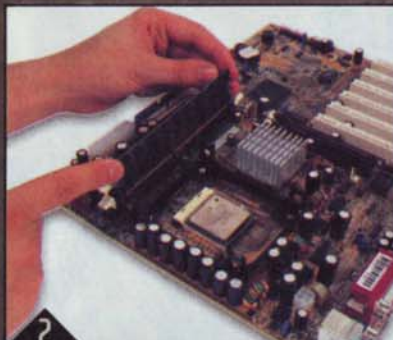
If this all happens too quickly, wait until the machine has finished loading Windows and then right-click on My Computer and select Properties. At the bottom of this window, you should see that your PC's memory has increased.

The benefit of your upgrade will be a PC that feels less ponderous, loads and runs programs more quickly, and doesn't have to access its hard disk quite so often.



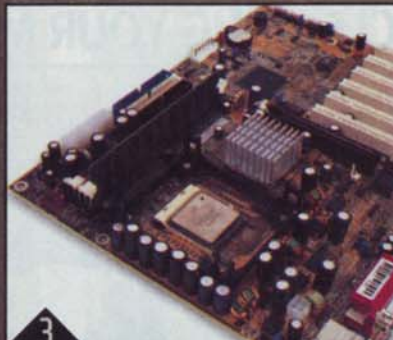
1

PC memory comes in long rectangular sticks. The black chips provide the memory, the gold edge at the bottom is its connector and the off-centre notch helps you orientate it on your motherboard.



2

When you've lined up the notch in the stick of memory alongside the corresponding slot on the motherboard, the new memory module should click into place without the need for much force.



3

When the memory is seated correctly in place on the motherboard, the white retaining clips at either end of the stick should fit snugly and very little of the gold contact should be visible.

FINISHING TOUCHES

Don't think your job is done yet. There are still aspects of your machine that will benefit from a little tender loving care. Give them a sprucing and they'll work better and for longer.

CLEAN UP YOUR PC'S FANS

The first PC maintenance task that requires you to open up your machine's case is cleaning out its fans. Fans are essential to modern PCs, as they keep air flowing efficiently around the case to keep components cool. If your PC is inadequately ventilated, it may overheat. This can lead to instability, and may even damage your machine. Before you start fretting, though, it's worth remembering that you really only need concern yourself with the state of your machine's fans when the computer is two or three years old.

CHECK CONNECTORS

While you're inside your PC, it's worth taking the opportunity to ensure that everything is wired up and connected securely. Generally, the connectors between your PC's components don't tend to come apart easily, but over time they can work loose (especially if you've moved your machine). This can result in your PC becoming unstable, crashing or failing altogether. To stave off this unlikely, but potentially disastrous scenario, exert gentle pressure on each of the power and disk connectors ensure they're seated correctly.

Pay particular attention to the D-shaped white connectors with red, yellow and black wires

attached. These supply power to your hard disks, CD drives and other devices. Check that the grey ribbon connectors that carry data to and from the drives are pushed firmly into the drives themselves, and into the motherboard.

You should also check that your machine's graphics card is seated correctly. Graphics cards that fit into the motherboard's AGP slot can become dislodged when a PC is moved, or if you've just plugged in a new monitor and used a little too much force. If the card does become unseated, it can make the PC behave as if it's completely dead. In truth though, the machine is actually in a self-protective mode, induced by its graphics card becoming disconnected.

To ensure you're not besieged by any of these problems, make sure the graphics card is seated correctly. If you think it isn't quite sitting as it should, press it down gently to slide it into place.

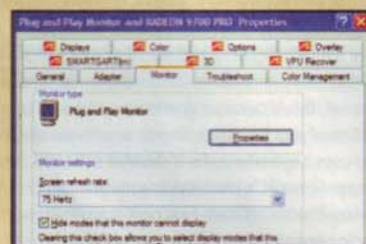
CLEAN YOUR MONITOR

No matter how expensive and perfectly set up your monitor is, if it's covered in dust, you won't get the best view. The best way to clean a monitor, be it a glass-fronted cathode ray tube monitor or a thin LCD flat panel, is to use a soft, lint-free cloth to gently wipe its screen. Never use polish or cleaning products! Most monitors have sophisticated anti-glare coatings applied to their screens. Polish and cleaners can damage or react with these, leaving your screen looking smeared.

CHECK YOUR MONITOR

If you've got a bulky CRT monitor, it's also pays to check its refresh rate. This is the rate at which it redraws the image on the screen. If the monitor is redrawing everything on its screen 85 times a second or over, your eyes will be tricked into thinking they're looking at a solid and stable image. If the refresh rate is set much below this, the monitor's display will flicker, and the lower the setting – the more it visibly blinks. All this can lead to increasingly bad eye strain and headaches.

To ensure your monitor is set correctly, right click on the desktop, click Properties, Settings, Advanced, Monitor and then ensure the screen refresh rate is 85Hz.



CLEAN YOUR MOUSE AND KEYBOARD

According to several scientific studies, there are more bacteria living on your keyboard and mouse than you're likely to find on the average toilet seat. With this in mind, you really should give them both regular clean-ups – ideally using antibacterial wipes. Avoid dousing them in cleaning solutions as you might damage their workings. But, don't be too afraid of giving them a good rub and wipe down if they need it, though!

If the stains on your keyboard are more stubborn, you can even add a little detergent – but don't use anything too astringent.

Keys and their corners and sides can be difficult to clean. If you're careful, though, you can pop the keys off the keyboard, wash and dry them, then press them back into place. Gently slip a screwdriver underneath each key and gently lever upwards to remove it. Pressing the keys back into place is equally easy.

Generally, this approach works for number and letter keys. Bigger ones like the space bar, return, shift and backspace should, however, be left alone. They sometimes have springs and bars underneath, and are tricky to replace.

Your mouse will enjoy a good cleaning too. Again, wiping its top and buttons is a straightforward job for a damp rag. If you're using an optical mouse you should also wipe its underside, paying particular attention to any gunk that gathers around the optics.

If your mouse has a ball, it will need some internal attention. Turn it over and you'll see a circular screw-off cover, which when twisted anti-clockwise, should release the ball.

Inside the mouse you should see three small rollers – around a centimetre and a half long. These can become clogged with fluff. If they become too fluffy, your mouse will skip. To remove it, use a blunt knife to scrape the fluff away. ■

KEYBOARD MAINTENANCE



1 If your keyboard is proving difficult to clean you could try prising the keys off with a screwdriver. If they don't come off easily and take a lot of effort to remove, don't force them or you risk breaking them.



2 Once you've taken off the keys, give the keyboard a good clean and wash the keys in detergent. Dry them thoroughly before replacing. Never try this with larger keys such as the space bar, Enter or Shift.

CLEANING YOUR MOUSE



1 If your mouse has a ball it may get clogged with dust. You can clean it internally by removing the lid. Twist off the circular cover on its underside to reveal the ball and three small rollers. Remove the ball.



2 The rollers easily get clogged with fluff and dirt, which causes the mouse to skip when in use. Carefully clean away the dirt from the internal rollers to restore your mouse to full working order.