


# Q&A FOCUS

# Windows XP

## YOUR QUESTIONS ANSWERED

 This month, we share our valuable XPerience and draw the curtain on all your Windows nightmares...

### Frag-mental

**Q** From time to time, I read that Windows XP users don't need to defragment their hard disks. Is this really true? I'm sure my system is more responsive after I run the Windows defragmenter tool.

**A** Also, when I run the tool, there seem to be several large files that don't get defragmented – why is this and what can I do about it?

Felix

**A** It's quite true to say that Windows XP users who have formatted their disks

using the NTFS file system will suffer fewer disk fragmentation problems, as NTFS is designed to keep fragmentation to a minimum during day to day use. However, for more demanding audio use, it's not quite the magic bullet that it was originally marketed as; in order to keep your disk in tip-top condition, you'll still need to defragment your hard disk from time to time.

There are steps you can take to help prevent fragmentation becoming a problem in the first place. First of all, try to keep your disk less than 60% full, as the file system can allocate storage to files more efficiently when more space is available. Second, consider

creating a dedicated partition for audio recording and try to keep it completely empty when not in use. This will help to ensure you always have a perfectly defragmented disk to work with. Finally, save emptying the Recycle Bin until you have the opportunity to run the disk defragmenter.

To answer your second question, although the disk defragmenter that comes with Windows is better than nothing, it suffers from a number of shortcomings – the most serious (from a computer musician's

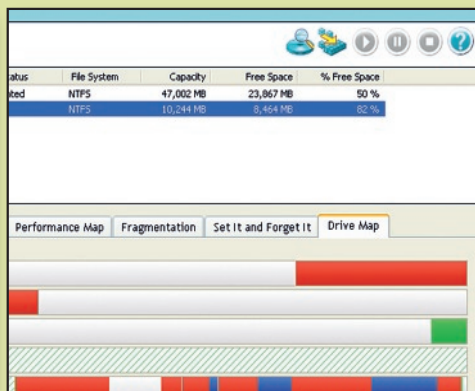
perspective) being the inability to defragment particularly large files, such as ROMpler soundbanks, which can cause sluggish behaviour when loading large projects. The best way to address this is to get one of the better third-party disk tools – we recommend Diskeeper from Executive Software ([www.executive.com](http://www.executive.com)).



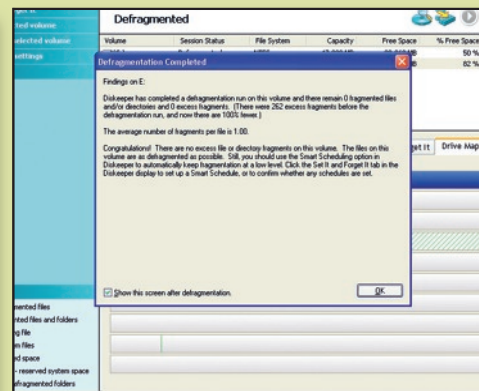
## STEP BY STEP Defragging with Diskeeper



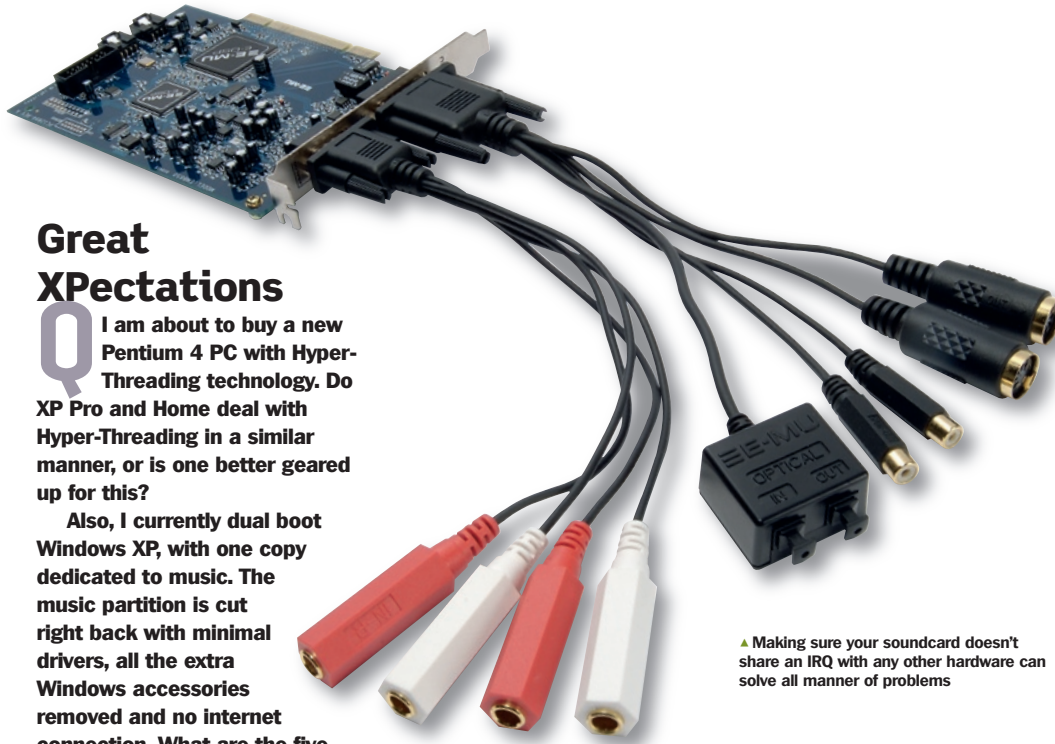
**1** Start off by heading over to [www.executive.com](http://www.executive.com) and downloading the Diskeeper 9 free trial. Once the installation is complete, start Diskeeper with the shortcut on your desktop, or via the Start Menu in the usual way. >>



**2** The Diskeeper user interface shows a list of hard disk volumes in your computer. Select your system volume from the list and click the **Analyse** button towards the top right of the window. When the analysis has finished, click through the tabs and use the information to decide whether to go ahead with a full defrag session. >>



**3** Assuming you decide to defrag your system volume, click the **Defragment** button and take a break while the program does its job. Afterwards, you should find your computer to be that bit more responsive, and large ROMpler soundbanks should load a lot more quickly.



## Great XPEctations

**Q** I am about to buy a new Pentium 4 PC with Hyper-Threading technology. Do XP Pro and Home deal with Hyper-Threading in a similar manner, or is one better geared up for this?

Also, I currently dual boot Windows XP, with one copy dedicated to music. The music partition is cut right back with minimal drivers, all the extra Windows accessories removed and no internet connection. What are the five best other things I can do to maximise the performance of this partition?

Marc Lee

**A** According to Intel, Windows XP Home and Professional editions both support Hyper-Threading, but we'd recommend going for Professional unless you're on a really tight budget (it isn't possible to upgrade from Home to Professional at a later date if you discover you need any of the features from the Pro version).

Here are our top Windows XP optimisation tips...

- ▶ Only install the bare minimum of applications and plug-ins on your music partition, and avoid continually installing and uninstalling demo software. This will help to keep the Registry lean and clean.
- ▶ Make sure your soundcard has been assigned its own interrupt

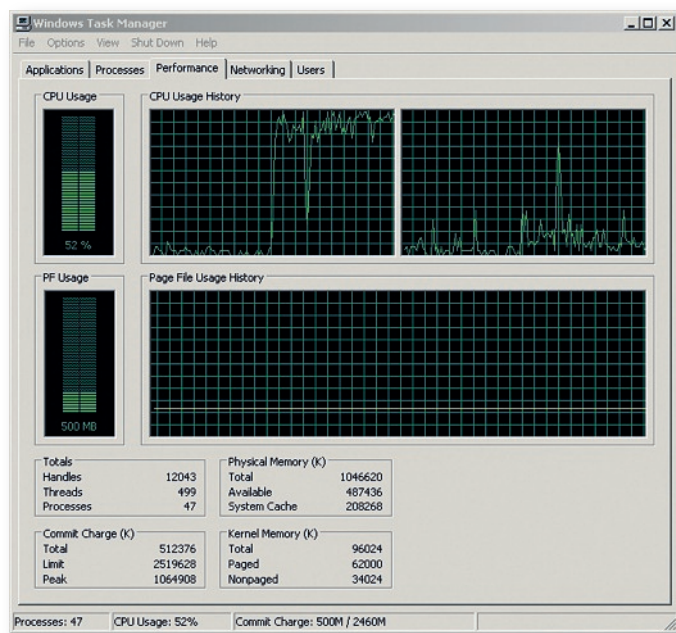
▲ Making sure your soundcard doesn't share an IRQ with any other hardware can solve all manner of problems

request (IRQ) – you can check this using the Device Manager. Try swapping cards between PCI slots if your card is currently sharing an IRQ with your video card, for example (see the walkthrough for a step-by-step guide to this).

- ▶ Consider switching off Windows services that are not required. You can do this by going to **Start** ▶ **Run** and typing **services.msc**. Check out [www.blackviper.com/WinXP/servicecfg.htm](http://www.blackviper.com/WinXP/servicecfg.htm) for more information on service tweaking, including information relating to Windows XP Service Pack 2.

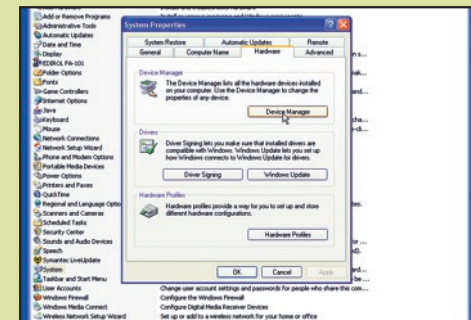
- ▶ Keep eye candy to a minimum – turn off desktop pictures and consider going back to the Windows 98/Windows 2000 look and feel, which can be done in the **Display Properties Appearance** tab.

- ▶ Try to avoid any programs that cause unpredictable disk access loads, including antivirus auto-protect features (you should have an antivirus program installed, but it should be configured to run on demand only). Also, turn off disc indexing, as this can cause audio drop-outs if it starts working at the wrong time.

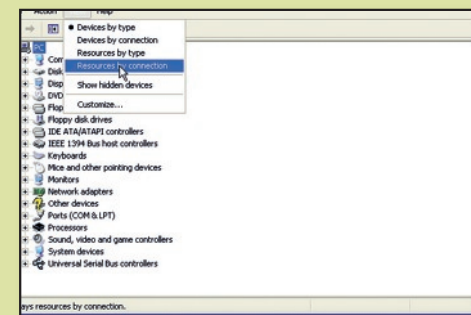


▲ Hyper-Threading allows multi-thread applications to implement threads in parallel. In other words, your processor is able to utilise its resources better!

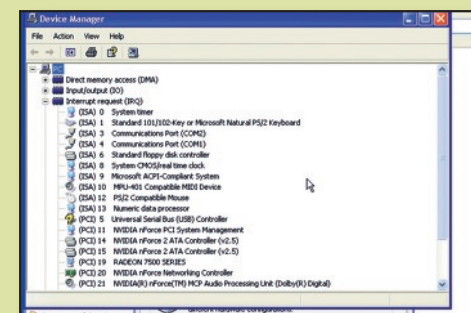
## STEP BY STEP Checking assigned IRQ numbers



**1** Click **Start** ▶ **Control Panel** to open the Control Panel window. Double-click on the **System** icon to open the **System Control Panel**, then click on the **Hardware** tab at the top of the window. >>



**2** Open the **Device Manager** by clicking the button towards the top of the hardware pane. The Device Manager presents you with a list of all the hardware in your PC. Select **View** ▶ **Resources By Connection**. >>



**3** Click the + symbol next to the IRQ list to expand the list of interrupt requests. The list should be sorted by IRQ number, allowing you to make sure that your soundcard is not sharing an IRQ with any other hardware.

## Copy cat

**Q** Like most people, I've seen my fair share of crashes, blue screens and driver conflicts, but at last Windows XP actually seems to be fairly stable here (touch wood!). However, one problem that continues to bug me is the extremely poor interactivity which Windows suffers from when copying large files around.

For example, if I've just

Unfortunately, however, we're unable to offer a perfect fix (if anyone has found a solution, do let us know). We can offer some advice on how to try and improve the situation slightly though.

First of all, make sure windows is configured to share resources between applications, rather than giving most resources to the application that's currently active. To do this, follow the walkthrough below.

Secondly, make sure that

## MAKE SURE WINDOWS IS CONFIGURED TO SHARE RESOURCES BETWEEN APPS

mixed down to a final master (at high res) and I want to copy the file before normalising it in my sample editor, the whole computer becomes unresponsive and I can't do anything until the file copy is complete – it drives me insane!

How do I get rid of this problem once and for all?

**Paul Fletcher**

**A** We see exactly the same thing here every day – so it's not just your computer system that exhibits the problem.

the auto-protect feature of your antivirus software is disabled, as this can seriously tie up the CPU when copying a lot of data around. Of course, you'll have to remember to run manual virus checks on your system on a regular basis though. Finally, make sure your computer has enough RAM. 1GB is considered the minimum for serious use these days.

As a quick side note, you shouldn't really normalise your final masters – they should be mixed to the correct level with the aid of a hard limiter.

## Put the boot in

**Q** Three years ago I bought my first PC from Digital Village. It came with all software pre-installed, and the hard drive already partitioned. Being new to computers, I haven't touched the second partition since purchase, and all my software is on partition 1.

I downloaded Windows XP Service Pack 2 in February and upon re-booting was faced with a blank screen (not even a start button or task bar); I had to use Task Manager to get to any files and eventually managed to uninstall SP2. The next day, issue 83 of cm came through my letterbox, featuring details of how to set a System Restore point. I did this and thankfully Service Pack 2

now know was a big mistake). When I go to Add/Remove Programs in the Control Panel, windows XP is not listed, so every time I boot up my DAW I'm asked which OS I want to run. My second partition is now completely unused and reformatted, but how do I get rid of the additional OS from my boot menu? Can I also delete a partition so that all the space is on one partition? And can programs be moved from one partition to another?

**Steve Kelk**

**A** First of all, it's always a good idea to back up your entire system before going through with a major update like SP2, especially as you have a lot of valuable software on your hard disk.

To fix your boot menu problem,

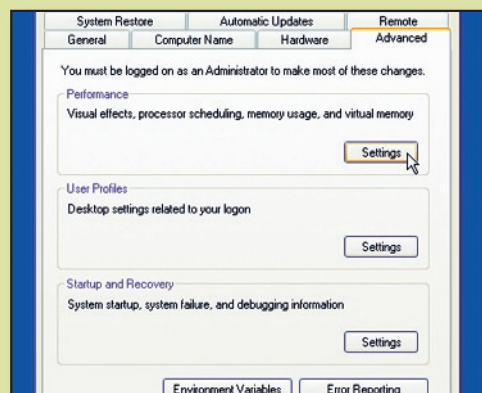
## IT'S A GOOD IDEA TO BACK UP YOUR ENTIRE SYSTEM BEFORE A MAJOR UPDATE LIKE SP2

worked fine the second time I downloaded it.

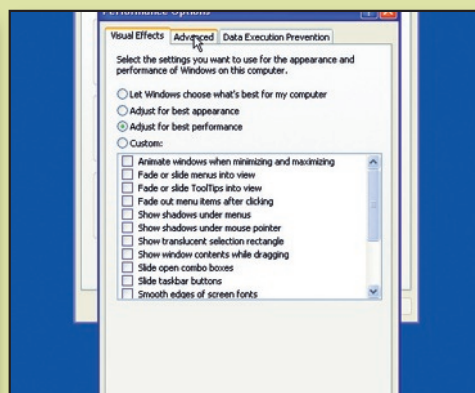
The problem is that before I uninstalled SP2, I installed a second installation of XP onto my second partition (which I

you need to edit a file called **Boot.ini**, which you should find in the root directory of your C: drive (**C:\Boot.ini**). Make a backup copy of this file, then use Notepad to change it, so that only one

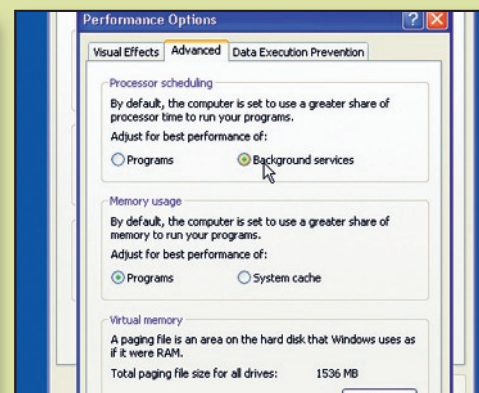
## STEP BY STEP Adjusting processor scheduling



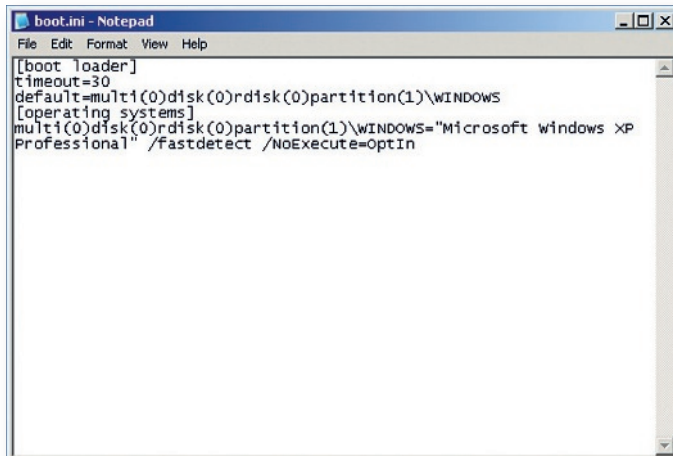
**1** Right-click on **My Computer** and select **Properties** (or open the **System Control Panel** in the usual way). Then click on the **Advanced** tab at the top of the window. >>



**2** In the **Performance** box at the top of the pane, click the **Settings** button to open the **Performance Options** window. Here, you can disable some visual effects by clicking the **Adjust for best performance** radio button. Next, click the **Advanced** tab. >>



**3** In the **Processor Scheduling** box at the top of the pane, you should see two options: **Programs** and **Background Services**. Make sure **Background Services** is selected (however odd that might seem), as this will ensure that Windows distributes processor time more evenly among all running processes.



▲ Stop booting around the bush: if you've gone and messed up your system like Steve has, fix it by editing the Windows Boot file in your root directory

bootable operating system is listed. The entry you want will almost certainly be: "multi(0)disk(0)rdisk(0)partition(1)\Windows="Microsoft Windows XP Professional" / fastdetect /NoExecute=OptIn".

You could use a program like Partition Magic to join your two existing partitions, but we recommend you keep them separate and use the second one just for audio recording and storage – that's what Digital Village put it there for in the first place! And no, software can't just be moved from partition to partition, but you could uninstall the program and then reinstall it to the second partition.

## Strip me down

**Q** Would you recommend using any shareware utilities to strip down Windows XP to the bare minimum? If so, what kind of performance increase could I expect? Is it worth the effort?

Dick Jones

**A** As each release of Windows seems to be more bloated than the last, there's definitely something to be said for adopting a minimalist approach. At a basic level, this involves performing a customised installation and only installing the minimum of optional components.

As you've noticed, there are also a handful of useful utilities out there that can be used to slim down an existing installation. The

most popular are nLite (see <http://nuhi.msfm.org/nlite.html>) and XPLite ([www.litepc.com/xplite.html](http://www.litepc.com/xplite.html)).

When combined with other forms of manual tweaking, you can expect minor to moderate performance improvements in certain areas, but unless your system is particularly old or short on RAM (ie, less than 1GB), you're unlikely to notice a huge difference. As to whether it's worth the effort, the only way is to give it a go!

## I hate updates!

**Q** Although I find XP to make a generally OK music production platform, one thing that wastes a lot of time and really winds me up is this whole business of



▲ Put Windows on a diet: slim it down with XPLite! This will ensure you're operating at optimum capacity and getting maximum music power from your machine

staying up to date with drivers and applications. Is there any way of avoiding this chore? Why can't new drivers be delivered using Windows Update and installed automatically, and why did Microsoft bother to launch their driver approval initiative if virtually no soundcard drivers are approved?

Sean Foster

**A** While staying up to date with drivers and applications can be a chore, it doesn't always have to be so. Keeping an eye on websites like [www.kvraudio.com](http://www.kvraudio.com) and [www.versiontracker.com](http://www.versiontracker.com) with an RSS reader can be a good way to stay on top of application updates.

While driver updates can actually be delivered and installed by Windows update, they tend to lag behind manufacturer driver releases considerably and, of course, not all hardware can be supported in this way.

It's also worth considering the motivation for having the absolutely latest drivers for every component in your PC – if you've found a set of hardware components and driver revisions that work well together, it may not be worth risking the upgrade for the sake of a few percent of additional performance.

On the issue of driver approval (or driver 'signing' as it's actually called), it generally only tends to be mass market manufacturers who can afford to have their drivers

certified and signed, removing those annoying but ultimately meaningless warnings during the driver installation process.

## A good Service

**Q** There seem to be very mixed opinions as to whether computer musicians should run Service Pack 2 on their computers. What's your take on this issue?

Ronni Hayles

**A** As a general rule, you should always try and keep your computer completely up to date using Windows Update – something particularly important if your computer is connected to a network or used online.

However, it's also a good idea to do your homework before applying updates. The best way to do this is to have a look in any number of online forums; use the search feature to locate relevant topics, get

# KEEP YOUR COMPUTER UP TO DATE WITH WINDOWS UPDATE

the low-down on the latest update and see if anyone has experienced any problems. Some updates in the past have caused performance degradation for musicians, but generally speaking, these issues have always been resolved in subsequent updates.

With regard to Service Pack 2 specifically, the general consensus seems to be that musicians should install the update unless they have some specific reason not to – ie, compatibility problems with a major software package, which is generally quite rare. **cm**

## COMING SOON: ENVELOPES AND LFOS

In issue 88, our experts will be answering your **envelope** and **LFO** questions. If you're having trouble getting your modulations grooving, mail [ronan.macdonald@futurenet.co.uk](mailto:ronan.macdonald@futurenet.co.uk).