



# Wired for sound

There's nothing like a good tweak of your system to **optimise it** for sound, says Steven Helstrip.

If you're running a virtual studio inside your PC, you'll already have an idea of the resources needed to play back, say, 16 tracks of audio alongside a software synth that's equipped with real-time effects. It's not trivial stuff. Audio programs need all the resources they can get their hands on to run glitch-free, but you don't need the latest processor with a shedload of memory to get more from your software.

A clean installation of Windows will invariably speed up your system's performance, but in addition there are many ways you can tweak your PC to optimise it for sound.

**It often goes unnoticed**, but Windows has stacks of utilities running in the background to boost system performance. These include memory, cache and disc managers, and code to optimise graphics and the day-to-day running of office and internet applications. However, many of these are of little or no use to your virtual studio and, furthermore, require resources themselves. By freeing up these resources, your music apps will run more smoothly, with overheads to run additional plug-ins or a few extra audio tracks.

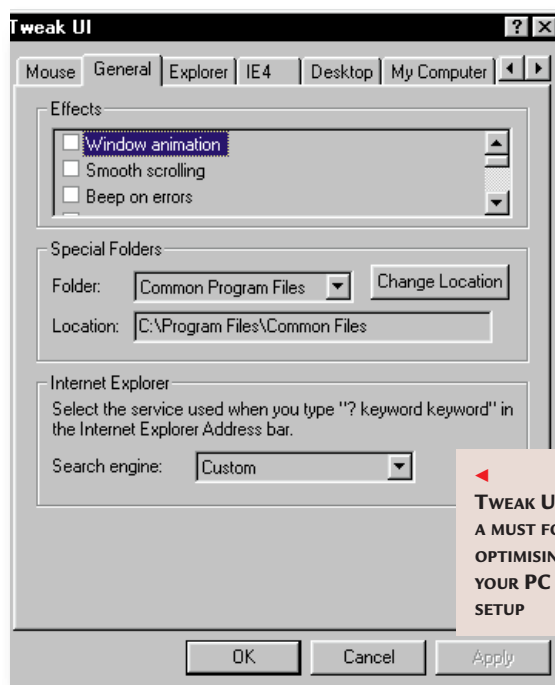
## Disc optimisation

If at all possible, you should dedicate a hard drive for recording audio to. This will enable speedier transfer rates and ultimately more tracks. Formatting the disc with FAT16, as opposed to FAT32, can also improve transfer rates. But this should not be undertaken lightly, and is only recommended if you're experienced with FDISK. To keep your drive in tip-top condition, it should be defragmented regularly.

By default, Windows dynamically allocates hard-disk space for virtual memory. By fixing the minimum and maximum settings to the same value,

you can prevent possible glitches and relieve Windows of another task.

For optimum performance, virtual memory should be set to 2.5X of the amount of RAM you have installed: if you have 64Mb, set virtual memory to



160Mb. To change these settings, hold Alt and double-click My Computer to load System Properties. In the Performance tab, click Virtual Memory.

Windows does something similar with file caching. By setting a fixed amount of memory to be used as cache,

there will be another performance gain.

To do this, the following lines need to be added to your system.ini under the [vcache] heading:

**MaxFileCache=xxxx**

and

**MinFileCache=xxxx**

where xxxx = 12.5 percent of your total RAM in kilobytes (1Mb = 1024Kb). With 64Mb installed, this would be 8192.

## System Properties

Read-ahead optimisation and write-behind caching offer little benefit for audio apps and can be disabled in the System Properties dialogue. In the Performance page, select File System and set read-ahead optimisation to none. Next, select Troubleshooting and disable write-behind caching.

**Further tweaks** can be enabled with Microsoft's Tweak UI Control Panel. This can be installed from the Windows 98 resource kit or downloaded from [www.microsoft.com](http://www.microsoft.com).

Disabling Windows effects (animations, and so on) releases more resources. These can be found in the General section, as shown [left].

Display Properties provides further options: wallpaper, screensavers and visual

effects, all of which can be disabled easily. Likewise, power management can be turned off via its Control Panel applet.

**Installed fonts** require resources. To remove any that you don't use regularly, load the Font dialogue from the Control Panel and drag unwanted fonts to a 'backup' folder on your hard disk. To reinstall them, simply put them back and restart your system.

Disabling Windows sound effects via its Control Panel applet can also boost performance. Any programs that are not audio-related (System Agent, for example) can be removed from your StartUp folder to release further resources.

Although these tweaks will improve overall system performance, they may also slow down office and internet apps. Ideally, you should have a dual-

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## Questions

### & answers

**Q** I'm in a band and we want to record and mix our own material. I have to confess to being a real novice when it comes to PC sound, and was wondering if you could suggest some suitable sound cards? I have an AWE 64, but obviously need something better. The budget is, unfortunately, a consideration, and I have been recommended Creative's SoundBlaster Live! However, after reading the PCW review, which said it's not really suited to having an electric guitar or

bass plugged into it, I realise it's not really good enough for what I need. I'd rather stretch my budget and get a 'good' sound card, than something that isn't up to the job.

MARK LICHNESS

**a** Without spending upwards of £450 for something like EMU's Audio Production Studio (APS), I don't know of a sound card that will take an input straight from your guitar. The problem is this: the output from an electric guitar is so low, it barely registers on the line input of a sound card. And, since most sound card mike inputs are designed for those cheap



▲ MIDIMAN'S AUDIO BUDDY

computer-type mikes, they won't be much use either. If you can't stretch to the APS, your best solution is to go with the SoundBlaster Live! and beg, borrow or steal a guitar amp that provides a line level output. An alternative solution

is MIDIMAN's pocket-sized Audio Buddy [Fig 2], a pre-amplifier that can accept microphones, bass and electric guitars. It offers two inputs with adjustable gain, which connect to your sound card's line input. It costs around £89.



◀ GOOD SOUNDS FROM SOUNDS GOOD

which has caught my eye is **Sounds & Cycles** from Sounds Good. What's so interesting about these are the formats in which the samples are provided: plain audio, .wav, .aiff and Propellerheads' Recycle format (.rex).

boot setup: one for office and games use, the other for music. I achieve this through having two Windows setups on different hard drives: I can select which version to boot from in my BIOS setup.

One last tip: install the latest version of DirectX. This can usually be found on PCW's cover-mounted CD.

#### ■ Prime samples

It's been a while since I looked at sample CDs in this column, but as they play such a big role in music production, it's time we caught up with the latest developments. One collection of discs

So what's that, then? Recycle can take a sampled loop and identify each sound, or hit, and save the parts to separate audio files. This effectively enables you to play back a loop at different tempos and substitute one sound for another without changing its pitch. Furthermore, Cubase can now load Recycle files into audio tracks and synchronise them to your songs effortlessly.

**The Electro Age** [contact, Arbiter] comes with over 400Mb of drum loops, basses, synth lines and effects that are suited to pop and dance genres.

Chemical Brothers meets Kraftwerk would sum up the style quite nicely. Tempos range from 100-160 beats per minute and loops vary in length up to four bars. Loading the .rex files into Cubase worked like a dream; loops snapped into position and stayed locked in time at 10bpm either side of the original tempo, and this was true for both bass and synth patterns.

The quality of production is stunning, even by today's high standards, although some users might find the range of sounds quite limiting. If analogue zaps and oddball effects are your bag, you'll be in electro heaven.

If you're looking for more traditional sounds and textures, then there are four more titles in the collection: **Chemical Big Beats**, **On a Latin Tip**, **Cold Fusion** and **Drum and Bass X-Citers**.

At £49.95 apiece they're not cheap, but they'll save you time and a lot of frustration — guaranteed. Check out the demos on this month's CD.

## PCW CONTACTS

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