Boost laptop performance

Laptops are incredibly useful – until they run out of steam. **Rick Broida** looks at ways to boost the battery life and performance of your trusty road warrior

Although desktop computers are what most of us use for work, at home and on the road it's a laptop that allows us to get online, read our email and finish off that overdue report. But while their slimline profiles and lack of heft make laptops attractive and relatively portable, the compromise is their often limited specification.

The good news is that you don't necessarily have to stick to your original hardware list. It's a fairly simple process to add memory to a laptop, swap the existing hard drive for a more capacious one and tweak the power settings so you get more use from it before needing to recharge its battery. We'll even show you how to use the old laptop hard disk as an external drive.

Add RAM to a laptop

Our laptop was taking forever to boot. We inspected it for spyware, excessive startup programs and the other usual suspects, but everything appeared fine. However, it was about three years old and wasn't a powerhouse to begin with. In fact, it was a Windows Vista model that was running off a mere 1GB of RAM. Vista needs at least 2GB of memory to run smoothly (as does Windows 7, in theory, although we've seen it run adequately on less). A RAM upgrade is perhaps the simplest and most effective update you can make.

Upgrading a laptop's RAM may sound daunting, but it's a very easy task. First, though, you need to determine how many RAM modules your system currently has and what kind they are.

Turn off your system, unplug it, remove the battery and flip it over. You should see at least one panel that a small screwdriver can remove. Consult your manual if you can't find the one covering the RAM sockets.

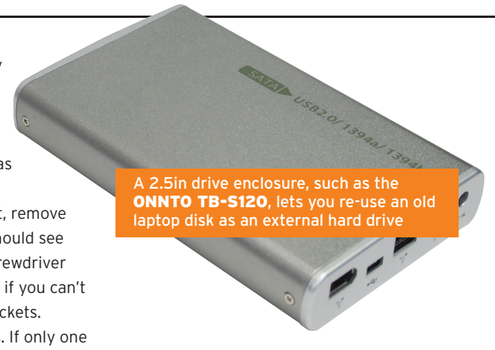
Most laptops have two sockets. If only one of your laptop's sockets is occupied, buy and insert a module that exactly matches the existing one. Doing so will effectively double your system's RAM.

If both sockets are filled, you'll have to replace both modules. Our laptop had a pair of 512MB modules for a total of 1GB of RAM. We replaced them with a pair of 1GB modules to make a total of 2GB. If you're not sure what kind of memory your laptop takes, browse to a site such as **crucial.com**, which can identify nearly every make and model of memory. Once you know what you need, you can shop around to find the best price.

A **RAM** upgrade is simple: you'll need to open up your laptop to access the existing modules

Reuse an old laptop hard drive

Inexpensive hard drive enclosures are ideal for giving old laptop drives new responsibilities. An enclosure is an external case that lends an internal drive a USB interface, so it can act as a compact



A 2.5in drive enclosure, such as the **ONNTO TB-S120**, lets you re-use an old laptop disk as an external hard drive

USB hard drive for backups, storage, transporting files and so on.

An enclosure lets you easily drag-and-drop data to the new drive. You can then wipe the old drive or keep it as a backup.

Make sure you choose an enclosure that offers the correct type of interface for your old drive. If it's more than a few years old, it's probably IDE. A newer drive is more likely to have a SATA interface. Either way, you can find an enclosure for just £20 or so at sites such as **maplin.co.uk** and **dabs.com**.

Rouse a laptop from Sleep mode

As well as hardware limitations, most of us struggle with how to keep our laptops powered up and alert. For example, if you shut the lid on some laptop models the PC will enter Sleep mode – even if you return just a couple of minutes later.

The default lid-closing action for most laptops is to put the system into Sleep mode, and Windows is notoriously bad at waking up properly. Instead, you should set your laptop to Hibernate mode. This lets the laptop wake up much more reliably.

Sleep (also known as Standby) mode puts your system into a low-power state, so you can pick up where you left off after just a few seconds (in theory). But a PC in Sleep mode continues to consume battery power, so it's not uncommon to return to a 'sleeping' laptop to find that it's out of power or plain unresponsive.

Hibernate mode, on the other hand, saves your machine's current state to a temporary hard drive file, then shuts down completely (much like Off). When you start the laptop up again, it returns you to where you left off with no booting up required.

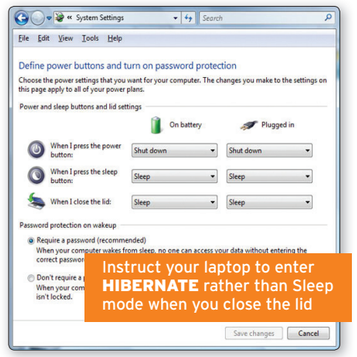
Use **MOUSE JIGGLER** to prevent your laptop entering Sleep mode while you're trying to watch a video or TV programme

Hibernate mode takes longer than Sleep mode to enter or leave (usually 10 to 20 seconds), but you avoid the issues that can arise when Windows suddenly loses power.

As noted, Sleep mode is, by contrast, flaky. And if your system refuses to wake up properly, you'll end up losing any documents and/or web pages you had open.

Blinking but not powering down

Powering down your laptop using the power button doesn't always have the desired effect. Sometimes it puts it into Standby mode instead – indicated by the fact that the Power button light stays on and blinks. To change this you can click the Start button, hold the cursor over the arrow at the bottom-right corner of the Start menu and click Shut Down. Assuming you're not using Vista with the Windows button set up to enter Sleep mode rather than power down fully, this should produce results.



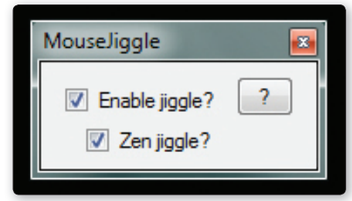
Instruct your laptop to enter **HIBERNATE** rather than Sleep mode when you close the lid

To change from a Sleep to shutdown effect in Vista, open the Control Panel and go to Power Options. Click 'Change plan settings for your selected power plan', then 'Change advanced power settings'. Expand 'Power buttons and lid', then expand the 'Start menu power button'. Change the setting to Shut down and click Ok.

What you should never do is pull out the battery when the power LED is blinking. That's the equivalent of turning off your PC without letting Windows shut down properly, which can cause problems.

Screen dimming

How many times has this happened to you? You're watching a movie or giving a PowerPoint presentation and the screen dims. In some cases, the laptop may even go to sleep. This can happen after a period of supposed idleness when the operating system detects no mouse or keyboard input. Blame Windows' power settings,



which by default try to conserve power if the operating system thinks that you aren't doing anything.

The occasional jiggle of the mouse is enough to stop this happening, provided that you remember to do so. That's the simple idea behind Mouse Jiggler (**mousejiggler.codeplex.com**), a free utility that simulates mouse input so you don't have to mess around with power settings.

Just run this tiny program before you start your movie or presentation and click 'Enable Jiggle'. Then take your hands off the mouse for a couple seconds. You'll see that your pointer starts to hop back and forth, and will trick Windows into staying awake.

In programs such as Windows Media Player, mouse activity can make onscreen controls visible. For such situations, enable 'Zen Jiggle', which handles the mouse jiggling behind the scenes, with no actual cursor movement.