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You don't need to wait until your computer is groaning and gasping before trying Robert Irvine's upgrade tricks in our Cover Feature. I performed them all on a newish Lenovo laptop that felt speedy enough, yet still succeeded in unlocking extra levels of performance I hadn't anticipated. What was already a greyhound is now a greyhound wearing a jet pack.

But you're bound to notice bigger differences in machines that are beginning to show their age, saving you the cost and hassle of having to buy and install

expensive new components.

As an example, I'd been planning to add extra RAM - and possibly a new processor - to a sluggish Dell PC bought about seven years ago (less greyhound, more bloated bulldog). But Robert's tips have perked it up to the point where I click a folder and expect it to open within the same minute. Before, I often had time to make a cuppa. I don't know about dogs, but you can certainly teach old PCs new tricks.

Daniel Booth

[editor@computeractive.co.uk](mailto:editor@computeractive.co.uk)



## THIS ISSUE IN NUMBERS



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**£26**

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## HOW TO USE SNIPCA URLS

We use snipcas to turn long URLs that are hard to type into ones that are short and simple. They aren't websites themselves, which means they won't be recognised if you type them into Google. Instead, you need to type them into your browser address bar, then press Enter. Doing this will take you to the correct website.

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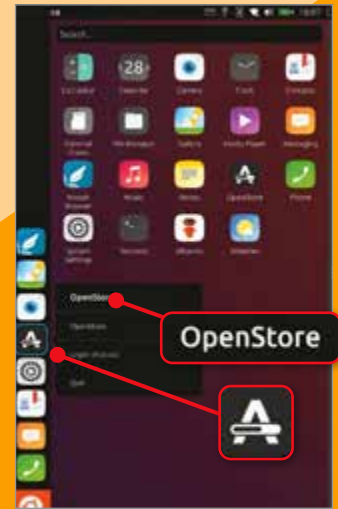


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### Transform your old tablet

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# Upgrade YOUR PC FOR FREE!

COVER  
FEATURE  
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Make old hardware run like **NEW** - no need to buy anything!

- Unlock hidden PC memory
  - Speed up your processor
  - Boost monitor & audio quality
  - Overclock your graphics card
- + Remove hard-to-find junk



# Don't overpay for broadband

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## File Explorer tabs coming to Windows 11 – finally!

Microsoft will add tabs to Windows 11's File Explorer in October, just weeks after it released the first Feature update (version 22H2) for the operating system.

The feature is part of what the company's Chief Product Officer Panos Panay called an "additional set of experiences" to support the recent update.

He wrote online ([www.snipca.com/43493](http://www.snipca.com/43493)) that tabs

in File Explorer was the most requested feature from Windows 11 users.

Panay added that the new feature will "help you organise your File Explorer sessions like you do in Microsoft Edge". Our main screenshot shows two tabs open at the top left **1**, above a revamped homepage where you can pin Favourite **2** and recently used files **3**.

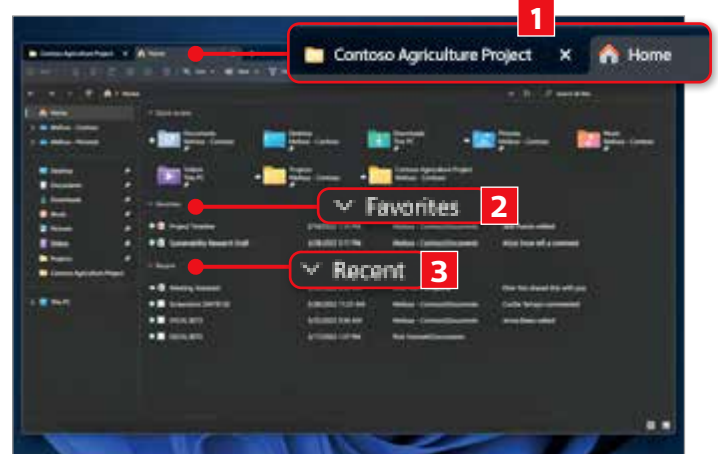
There are several other features coming in October, including a new-look Photos app that adds a "gorgeous gallery" to make it easier to find and view your pictures, as well as back them up to OneDrive.

Also new is an 'overflow' menu for Windows 11 that will make more icons appear above your taskbar when you've filled up the existing space.

If you open more programs than the taskbar can fit, a three-dotted button will appear (**1** in our screenshot below).

Clicking this shows the overflow bar **2**, which in this case contains icons for Microsoft's Camera, Paint, Solitaire, Outlook and Command Prompt.

Microsoft says the overflow



### WHAT WE THINK

You wait ages for a decent Windows 11 update, then two arrive at once. The 22H2 update restored popular tools from Windows 10, while these latest features – or "experiences" as Microsoft clumsily calls them – have the potential to turn 11 into a truly great operating system. But we still don't fully understand Microsoft's update strategy. Our best guess is that it will continue with one annual Feature update and add more tools whenever they're ready. If so, these regular mini-updates should be given a name everyone can understand.

### NEW VERSION OF WINDOWS 10 ALSO COMING

October will be a busy month for Microsoft, with the 22H2 Feature update also coming for Windows 10. However, it's expected to contain far fewer new tools than the equivalent update for Windows 11, released on 20 September.

Microsoft said earlier this year that the update would



have a "scoped set of features", which surprised many users because early builds of 22H2 for Windows 10 had consisted of small

fixes only, and no new tools.

It's likely to be a small download, and should take only a couple of minutes to install.

contains many options that already exist in the main taskbar, including pinning programs to it, and Jump Lists, which show files recently opened in a program when you right-

click its icon.

This batch of features is the first in Microsoft's plan to release new tools more frequently, so you don't have to wait until an annual Feature update.



You'll like this... Type [nasa dart](https://www.nasa.gov) into Google and press enter ([www.snipca.com/43508](http://www.snipca.com/43508))



but not this... Ukraine warns that Russia is planning "massive cyber-attacks" ([www.snipca.com/43509](http://www.snipca.com/43509))

# Sky launches TV-streaming service for £26 a month

Sky has launched a 'dishless' TV-streaming service that it claims will be the cheapest way to get Sky TV and Netflix together.

Called Sky Stream, it comes with a box (pictured) that plugs into a power socket and your TV's HDMI port, and connects through your broadband and Wi-Fi, not by a satellite dish.

The cheapest package is £26 a month for 18 months, or you can sign up to a rolling 31-day contract for £29 a month that lets you cancel without charge at any time.

You can also upgrade to the Whole Home pack for an extra £12 a month to get Sky Stream on five more devices in your home.

Set up costs £39.95 for the rolling contract, or £20 for 18



months, but you can do this yourself without needing to book a visit from an engineer.

As well as Netflix and standard Sky channels, it includes Freeview, Apple TV+, Amazon Prime, Disney+, BBC iPlayer, ITV Hub and All4. You'll have to pay more to add extra Sky channels, including Cinema and Sport.

The interface is the same as used on Sky Glass – the company's streaming service that's built into a £649

TV (see review Issue 621, page 29).

It comes with a remote control that has backlit keys, making it easier to switch channels in the dark, and a voice search.

Unlike Sky Q, there's no internal drive for storing recordings of shows, but you can save them in a Playlists section to watch later.

Sky Stream goes on sale on 18 October. Visit Sky's site for more details: [www.snipca.com/43479](http://www.snipca.com/43479).

## Google to fix flaw that ruins your photos

Google says it will fix a fault with its Photos site that's causing pictures uploaded by users to look damaged and corrupted.

The problems were first reported on a Reddit forum ([www.snipca.com/43500](http://www.snipca.com/43500)), where users complained that their pictures were showing the signs of age you might see on a physical photo, such as cracks distorting the image.

Others uploaded photos that appeared to show water damage, such as the blurring on the left side of the image pictured, as well as stains and discolouration. Worried users also posted damaged pictures to Google's Photos Help page ([www.snipca.com/43501](http://www.snipca.com/43501)).

Some users say the



problem only affects photos uploaded to Google Photos (<https://photos.google.com>) between 2013 and 2015, and that the damage remains even after downloading the images.

The company has yet to confirm this, but has

acknowledged there is a problem and is working on a solution. It attempted to reassure users by saying that their original photos "are not impacted", so it shouldn't affect images you have saved on your computer or external drive.

### IN BRIEF



#### SAMSUNG SHOWS OFF 'SLIDEABLE' TABLET

Samsung has shown off a 'slideable' tablet (pictured) with a screen that extends from 13 to 17 inches. It's just a concept at the moment, but the company says that slideable screens might eventually replace the foldable screens in its own Galaxy Z Flip and Galaxy Z Fold phones. Watch at [www.snipca.com/43502](http://www.snipca.com/43502).

#### NHS APP DOWNLOADED 30 MILLION TIMES

The NHS app has now been downloaded 30 million times in England since launching in 2018. You can use it to book GP appointments, order prescriptions and download Covid passes. Nearly 450,000 people also used it to register organ donations between September 2021 and August 2022, a rise of 69 per cent from the previous year. Read more and get the app from [www.snipca.com/43506](http://www.snipca.com/43506).

### TOMORROW'S WORLD



It's vital to keep your eyes on the road when driving, but researchers from Tokyo



University say putting eyes on a car may be just as important. Their study found that robotic googly eyes on self-driving cars (pictured) helped pedestrians decide when it was safe to cross the road. Watch at [www.snipca.com/43497](http://www.snipca.com/43497).

## IN BRIEF

### GOOGLE REMOVES QUEEN FROM STREET VIEW

Google has removed from Street View the cartoon image of the Queen that appeared when you dragged the yellow 'pegman' to streets around Buckingham Palace, Windsor Castle and Balmoral Castle. The image (pictured), affectionately dubbed PegMa'am, was added in 2015 as a quirky alternative to the normal pegman that appears at the bottom right of Google Maps.



### MICROSOFT AXES SWIFTKEY APP FOR iOS

Microsoft has removed its keyboard app SwiftKey from Apple's App Store, meaning you can no longer install it on iPhones and iPads. It remains available for Android devices ([www.snipca.com/43519](http://www.snipca.com/43519)), and will continue to work on iOS devices that have it installed. See our next issue for our advice on which keyboard app to use instead.

### THE WORLD'S GONE MAD!



Next time you're struggling to sleep, try reading 'The Multidimensional Lexicon of Emojis' ([www.snipca.com/43530](http://www.snipca.com/43530)), a study by psychology students at British Columbia in Canada. They asked 2,230 people over 17 months to examine more than three million tweets containing emojis and give them "emotion ratings". Is there an emoji for 'what a complete waste of time, effort and money', we wonder?

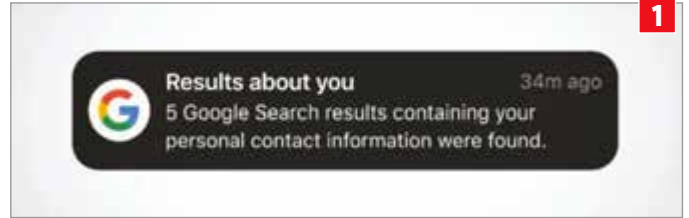
# Google to warn you if personal info appears in search results

Google will soon warn you if your phone number, email address or home address show up in search results (see screenshot 1).

Clicking the warning will show you the results Google has found 2. You can click a 'Request to remove' button to ask Google to remove the information from its results. However, to remove the details from the internet completely, you'll have to contact the website they appear on.

Google said on Twitter ([www.snipca.com/43528](http://www.snipca.com/43528)) that it will start sending alerts from early next year, initially in the US, and that it's "opt in" – meaning you'll have to agree to receive the warnings.

The alerts are part of Google's forthcoming 'Results About You' tool, which lets you request the removal of personal info you've found online. The tool will also make it

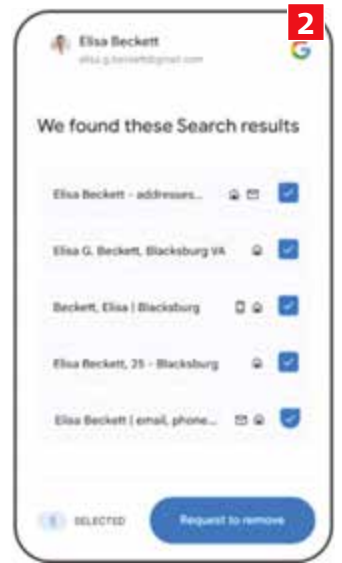


easier to find out how to request removal of other types of personal information, such as sexually explicit content.

You can already ask Google to remove personal content through its Help Center. Visit [www.snipca.com/43527](http://www.snipca.com/43527) then click the blue link below 'Personal information that Google will remove' that best describes what you want to be taken down.

On the next page click 'Start removal request' and answer the questions about the content you want removing.

Read Issue 617 (pictured left) for more advice on removing yourself from Google's



services, including Maps, Gmail and YouTube. You'll find it on our Back Issue CD – available to buy from [www.snipca.com/42077](http://www.snipca.com/42077).

# Brave browser to start blocking cookies

Privacy-focused browser Brave (<https://brave.com>) is to start hiding cookie requests from websites, which it described as an "infamous and near-constant annoyance on the web".

When you update to version 1.45, due in October, Brave will ask if you'd like to block 'cookie consent notices' (see screenshot). To activate this you just need to click or tap the blue button. Tap 'No thanks' if you want to continue seeing cookie notifications.

Brave said it will "hide and, where possible, completely block" these notifications

"within a minute or less" of the tool being turned on. It claims this approach is better at preserving your privacy than methods used by other browsers, such as automatically giving consent to cookies.

The tool will work on Brave 1.45 for computers and Android devices (install the app from [www.snipca.com/43524](http://www.snipca.com/43524)), while it will come soon on iOS ([www.snipca.com/43525](http://www.snipca.com/43525)).

In its blog ([www.snipca.com/43523](http://www.snipca.com/43523)) Brave is scathing about cookie notifications, saying they "break and disrupt one of the main benefits of the web: the ability to browse



content across many sites and publishers conveniently and easily".



# Amazon's new Fire HD tablet is 30% faster

Amazon has launched a new Fire HD tablet with a six-core processor that it claims is 30-per-cent faster than the previous Fire HD, which had four cores.

The new Fire HD 8 also improves battery life – albeit by only one hour – from 12 to 13 hours, and has a tougher screen made from aluminosilicate glass.

Other than that, it's roughly the same device as the last edition of the Fire HD 8, released in 2020. It has the same eight-inch screen, two-megapixel front and rear cameras, and microSD card slot for up to 1TB of extra storage.

Amazon Prime members can watch Prime Video on the tablet, and also get free and

unlimited full-resolution photo storage and 5GB video storage.

As before, it charges via USB-C, has 2GB RAM and comes in 32GB and 64GB storage. However, at £99.99 and £129.99 respectively ([www.snipca.com/43433](http://www.snipca.com/43433)), they're both £10 more expensive than the 2020 tablet.

Amazon is pinning its hopes on the faster processor being enough of an improvement to encourage people to buy the new version. It claims the extra speed will make advanced tasks easier to perform, such as using the split-screen feature to send an email while having a video chat.

There's also a new Fire



HD 8 Plus, though the only difference from the 2020 version is a five-megapixel camera – up from two megapixels.

The main difference between the Plus and the standard Fire tablet is that it has 3GB RAM, and charges to a full battery faster. It's available for £119.99 (32GB) and £149.99 (64GB) from [www.snipca.com/43435](http://www.snipca.com/43435). Both tablets go on sale on 19 October.

## IN BRIEF

### GOOGLE LAUNCHES CHEAPER CHROMECAST HD

Google has launched a cheaper version of its 'Chromecast with Google TV' streaming stick (pictured), with an HD resolution (1920x1080 pixels) rather than the existing model's 4K. It's available in white only, and at £34.99 is £25 cheaper than the 4K model. Buy it from Google's store by visiting [www.snipca.com/43450](http://www.snipca.com/43450) and selecting HD. Read Google's blog for details: [www.snipca.com/43449](http://www.snipca.com/43449).



### PRICE OF ASDA MOBILE PAYG SHOTS UP

Asda Mobile has more than doubled the price of calls, text and data on its pay-as-you-go (PAYG) packages. Calls now cost 15p a minute (up from 4p), texts cost 10p each (up from 4p), and data costs 10p per megabyte (up from 4p). However, it's now free to call voicemail, which previously cost 4p a minute. For details visit [www.snipca.com/43471](http://www.snipca.com/43471).

### CHECK FOR MALICIOUS APPS SHOWING ADS

An international team of security researchers have found 75 Android and 10 iOS apps that appear legitimate, but actually bombard you adverts – both visible and hidden. The apps – most of which are games – have been downloaded 13 million times. To see them listed, visit [www.snipca.com/43475](http://www.snipca.com/43475) then scroll down to the black Scylla heading and look in the Name column. Also look for the Charybdis heading and look under App Name.

# TalkTalk says Government should promote full-fibre broadband

TalkTalk has called on the Government to launch a national campaign promoting the benefits of full-fibre broadband in order to encourage more people to sign up for it.

The company warned that without a "full-fibre first approach" from the Government, regulator Ofcom and other providers, the UK could end up "falling behind the rest of the world", while individuals face losing out on the advantages of fast broadband.

It said in a report ([www.snipca.com/43470](http://www.snipca.com/43470)) that more focus should be placed on how many people actually upgrade to full-fibre speeds, not just on how many households are able to get it.

Without urgent action, it

## TalkTalk

claimed that more than a third of Brits would be left out of the "full-fibre revolution", and one million people wouldn't be able to rejoin the workforce because they'd not be able to work from home.

To boost uptake, TalkTalk said the Government should create a right for people renting to have broadband, and require property listings to show if a home has full-fibre.

It also called on Ofcom to set a date for all copper networks to be switched off and publicise this to motivate



people to switch to full-fibre.

The report identified several key reasons why people don't upgrade, including a lack of reward for doing so – no 'feel-good factor' – and sticking with what they've got because switching is perceived as being too difficult.

Is it the Government's responsibility to boost take-up of full-fibre broadband? Let us know: [letters@computeractive.co.uk](mailto:letters@computeractive.co.uk)

# Question of the Fortnight

## Will 2023's broadband price rises be scrapped?

Ofcom puts more pressure on firms to reconsider above-inflation hikes

**A**s passive-aggressive threats go, being told to “think carefully” before doing something is one of the most effective. It combines sly menace with the sense that you’ll be sorry if you don’t change your mind. It’s perfectly worded to place deep doubt into the mind it’s directed at.

So Lindsey Fussell, Ofcom’s Group Director, knew exactly what she was doing when she used those words to ask internet providers whether tying price rises to above the rate of inflation can be justified. She said that firms have a duty to treat their customers fairly, particularly when the “cost-of-living crisis is putting an unprecedented strain on household budgets”.

### “ Labelling above-inflation price rises as unfair might shame providers into backing down ”

However, Ofcom can’t cap or regulate prices, so what might Fussell’s comments achieve? She’ll hope that labelling above-inflation price rises as unfair will heap pressure on providers, and shame them into backing down. This tactic might work.

Even with the Government’s price cap now in place, energy companies will continue to face public anger this winter about soaring profits. Some of that fury is bound to spill over into other sectors, such as broadband and mobile.



Fussell’s comments came as Ofcom’s annual affordability study ([www.snipca.com/43541](http://www.snipca.com/43541)) showed that nearly a third (29 per cent) of customers – around eight million – now have problems

affording broadband, TV, streaming and mobile services. This is double the number from April 2021, and the highest ever.

Nine per cent of people said they had cancelled a service, while 14 per cent said they had cut back on food and clothing so they could afford to pay for services.

In response, Ofcom once again called on providers to put a “far greater focus” on promoting the social tariffs they offer to people on benefits. These packages cost

between £10–£20 a month and save households an average of £144 a year.

Around 136,000 homes have now signed up to a social tariff, a rise of 55,000 in the past six months, but this still represents just three per cent of all eligible customers. This low take-up is hardly surprising when, according to Ofcom, 70 per cent of people entitled to a social tariff don’t even know they exist.

Ofcom also repeated calls for providers who don’t currently offer social tariffs to introduce them, naming (and perhaps shaming) TalkTalk, Shell Energy, EE, Plusnet and Vodafone. Until they do, it “expects” these firms to waive early-termination fees for customers who switch to another company’s social tariff.

In addition, Ofcom wants Virgin Media to improve its social tariff. For £15 a month it provides 15Mbps, which is far slower than every other deal. BT for example offers 36Mbps

### THE FACTS

- Ofcom has said internet providers should “think carefully” about whether above-inflation price rises are justified
- The number of households struggling to afford broadband, mobile, TV or streaming services has doubled to eight million
- Only three per cent of eligible customers have signed up to a social tariff

and 67Mbps for £15 and £20 a month respectively, while Sky delivers 36Mbps for £20 (see the full list at [www.snipca.com/43542](http://www.snipca.com/43542)).

Ofcom called Virgin’s package an “outlier” and said it doesn’t “recognise the importance customers place on speeds”.

Eventually, we think Ofcom’s emphasis on social tariffs will pay off, and every company – including mobile networks – will soon feel morally obliged to offer them. Persuading them to ditch above-inflation rises is a far bigger challenge, though it’s possible that some providers will suspend increases for a year and bask in the positive publicity this generates.

Even if companies are considering this, it’s unlikely they’ll make any decision until January’s rate of inflation is announced. That’s when they’ll know what next year’s increase will be, and how prepared customers will be to accept them again.

# Protect your tech

Scams and threats to avoid, plus new security tools

WATCH OUT FOR...

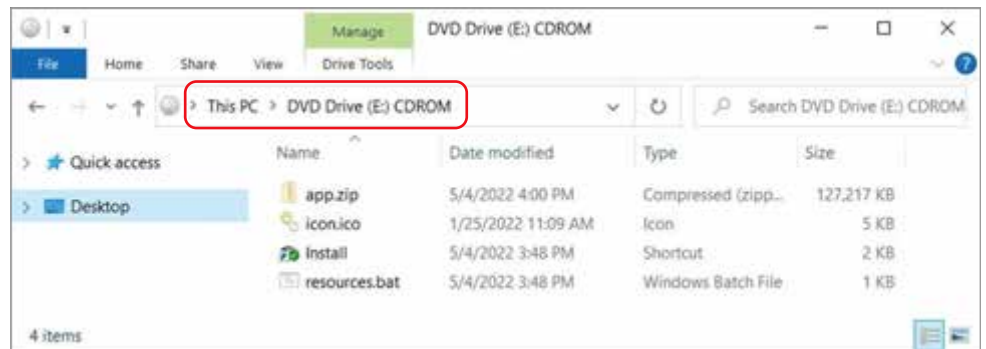
## Fake programs that hijack Chrome

### What's the threat?

Hackers are impersonating genuine programs in order to infect computers with the ChromeLoader malware. Once installed, it hijacks the Chrome browser using a malicious **extension**, and then redirects you to advertising sites, making money for the hackers.

The latest attack, discovered by US firm VMware, hides the malware in what appear to be legitimate downloads for software including FLB Music Player and OpenSubtitles, which provides files containing subtitles for TV shows and films. Downloading the fake program installs an **ISO file**, which appears as a CD-ROM under a new drive letter (see screenshot).

VMware said that once ChromeLoader has been installed on a computer, the hackers are able to add features such as **ransomware** and **spyware**, making it far deadlier than an ordinary browser



hijacker. It can also drop a 'ZipBomb' on to computers – a collection of files that, if clicked, can overwhelm all the data stored on the machine, making it unusable.

### How can you stay safe?

The surest way to avoid fake software is to type the URL for the genuine program into your browser's address bar, so you go straight to the correct download page. This will avoid dodgy results in Google

search results.

In addition, never click a software link posted by someone in an online forum unless you're convinced you can trust the person recommending it. ChromeLoader has also been spotted spreading through links added to YouTube comments, so avoid clicking those too.

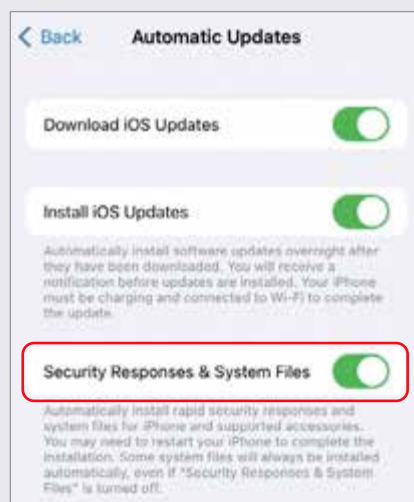
To download the genuine versions of OpenSubtitles and FLB Music Player, visit [www.opensubtitles.org](http://www.opensubtitles.org) and [www.snipca.com/43428](http://www.snipca.com/43428) respectively.

## New tools | Apple's automatic security updates

You may think you'd need to call 999 on your iPhone to get a Rapid Security Response (RSR), but these are actually security updates that Apple installs automatically, without you having to tap anything, or restart your device.

Released as part of iOS 16 in September, these updates are turned on by default. To check yours are activated, open the Settings app, then tap General followed by Software Update. You should see the green slider next to 'Security Responses & System Files' (see screenshot).

Apple thinks RSR fixes are so urgent that they can't wait to be part of a bigger update to the operating system. They'll be especially effective in blocking **zero-day attacks**, which target security flaws developers haven't spotted. For the complete list of new



tools in iOS 16, visit [www.snipca.com/43505](http://www.snipca.com/43505). Hopefully RSR updates will also be added to iPads in iPadOS 16, due in October.

## ScamWatch

Readers warn readers



### Win a Smeg kettle

Would I like to win a Smeg kettle? So asked an email from hello@ simplyflying, though the message itself claimed to be from Currys. The kettle was the "newest model" apparently, and it would take me "only a minute" to win. Why not, I thought, so I clicked the required link. But it then asked me to fill in a survey about my shopping habits, and pay a fee to enter. Pay a fee to win a kettle? What is it – a diamond-encrusted kettle? I was also given the chance to participate in Currys' 'Loyalty Program'. No thanks. I realised it was a scam, and had it confirmed online (see [www.snipca.com/43404](http://www.snipca.com/43404)).

Dennis Paxton



Warn your fellow readers about scams at [letters@computeractive.co.uk](mailto:letters@computeractive.co.uk)

# Letters

Tell us what's on your mind

## Pointless to choose hard drive when upgrading old PC...

✉ Issue 641's 'Question of the Fortnight' (pictured) raised some interesting points about the relative merits of hard drives and SSDs and you're undoubtedly right that the former are much cheaper per gigabyte than the latter. But it seems pointless to me to choose a hard drive over an SSD when upgrading an old computer. It's true that the upfront cost saves you about £50, but think about it spread over five years, by when your hard drive would probably have run out of life. Viewed this way, buying an SSD costs you just an extra £10 a year, and you won't have to go through the hassle of replacing it as early. I've installed SSDs in three of my ageing machines, and they've all made a massive difference. I can't recall how much I paid for them, but I'm fairly sure they were each under £100.

Trevor Keaton

## ...unless you think it hasn't got long to live

✉ I agree with the conclusion of your debate on SSDs and hard drives that if you're upgrading an old computer without much hope of it lasting five years, it would be a false economy to buy an SSD. I was in this dilemma a few years ago. I had an old Dell PC that was slower than a sloth in syrup. It was obvious to me that it might soon die, so I opted for an affordable gamble by buying a 500GB hard drive for £25. This was the right move, because it kept the PC running reasonably smoothly for 18 months before becoming unworkable. I doubt an SSD would have prolonged its life any further, so there would have been little point buying one just to get a speed boost for a short period of time.

Stephen Callaghan

## Great PC, shame about the operating system

✉ I followed your advice in Issue 637 and converted to a mini PC by buying the Chillblast AMD 3500U (£430 from [www.snipca.com/42667](http://www.snipca.com/42667)) that you recommended. Wow! It's amazing, and probably takes up a tenth of the space of my old desktop PC. Chillblast provided

the brackets for it to sit behind the monitor, and it's very quiet and boots in an instant.

It comes with Windows 11, which I'm getting familiar with. Some changes, like pinned apps, work well, while others are more of a pain. For example, in Windows 10, when putting the PC into sleep mode I always swept my cursor to the bottom left and clicked twice on the power button. But in Windows 11 I have to remember to navigate to the middle and then across to the right. I also have to hover the right-click icons

for cutting, copying, pasting and renaming so I can see which is which.

I wonder how much Microsoft considers the retraining of a user's muscle memory when they make these tweaks. It may look nicer, but does it really warrant the change?

Nick Symes

## Why is it so expensive to post USB sticks?

✉ Over the years I've sent and received many USB sticks via Royal Mail, with a covering letter, without any problems. But last week a stick I was expecting to receive was held up for several days. Eventually I received it, but only after paying a £1.50 'postage underpaid' fee.

I was mystified as to why this fee had been charged until it dawned on me that about one per cent of the letter's surface area was about 10 millimetres thick. With even the most slender drive being 4.6mm

thick, plus at least 0.2mm for the envelope, it's clear that even *without* a covering letter, you're very likely to break through the 5mm barrier at which point it becomes a 'large' letter, and subject to Royal Mail's higher postage rate. I'm guessing that they must have invested in some expensive fancy kit to identify such minor infringements.

For an organisation like Royal Mail that might well be in terminal decline, it seems crazy to antagonise unsuspecting customers in this pettifogging manner. Have other readers been caught out in this way?

Oliver Dixon

## BT fixed the phone cable I snipped through

✉ I was interested in David Ethelston's question in Issue 640 (page 67) asking whether criminals might be able to cut his broadband connection by damaging the BT box outside. My ISP is also BT and I have an exposed cable that rises from the ground and passes from a terminal box to a hole in the wall near my front door and then to a master phone socket in the lounge.

One day some years ago I was cutting out a small forest of ivy that had grown by my front door and – you guessed it – I snipped right through the phone cable. I reported it as a fault, wondering how much I would have to pay to get it fixed. In due course an engineer turned up, replaced the cut cable and told me that, as the break was on the supply side of the master socket, it was not my responsibility, so his visit would cost



## What's the Issue...?

✉ I've switched to Bitwarden password manager (<https://bitwarden.com>) and remember a recent How To feature explaining the way to import browser passwords into it. When was it?

Kevin Duffy

**CA SAYS** It was in Issue 636, page 35.

✉ When did you explain how to copy program discs to USB sticks?

Charles Finch

**CA SAYS** This was in the Problems Solved section – Issue 621, page 66.

✉ I seem to remember an article on cheap-but-good Amazon cables. Can you jog my memory?

Greg Hislop

**CA SAYS** Yes, we looked at the best Amazon Basics bargains in Issue 625, page 60.

me nothing!

So, in the event that David becomes a victim of the criminals he fears and in the way he described, he may well be back online quite quickly and at no cost.

Alan Turk

### Amazon Prime Video is 'world's biggest video store'

✉ In all this debate about whether to cancel Amazon Prime, one benefit I've not heard mentioned is the vast range of films available through Prime Video. It's like having the world's biggest video store (remember those?) on your TV. It's true that you have to pay extra to subscribe to these, but they only cost about £4 a month. My strategy is to subscribe for one or two months, aim to watch every film available, then cancel and move to the next service. If readers want advice on where to start, I'd recommend trying the MGM, StudioCanal and BFI Player channels.

Lawrence Davison

### Mast notices were hard to read

✉ Your article in Issue 639 (page 8) about companies notifying residents when building telegraph poles made me think about the poles and masts built here in Blackpool by local firm 6G Internet.

In spring this year the only communication we received from 6G about the plans to build a phone mast and poles near us were notices tied to the bottom of a lamppost, and in other hard-to-read locations. By summer the wireless mast and associated cabinets had been built and the overhead fibre poles had been put up (pictured left).



The only thing we are waiting on now is for 6G to notify us when its service goes live. Perhaps that will also happen via obscurely placed notices on lampposts.

Ian Thayre

### How I keep my 17-year-old printer going

✉ In 2005, I bought an Epson Stylus Photo R220 printer (pictured right), and use it regularly even now. It prints first-class photos, along with CDs using cheap compatible inks. However, in

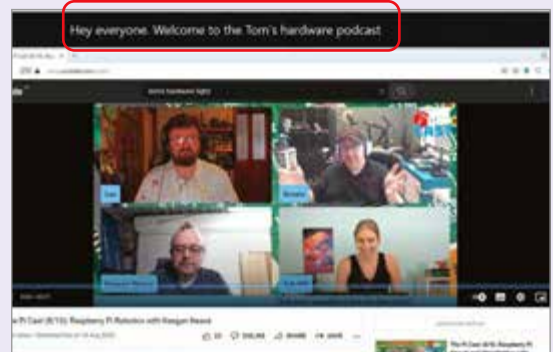
## STAR LETTER

### I timed my upgrade to Windows 11 just right

✉ When Windows 11 launched and I read about the hardware requirements needed to run it, I assumed my middle-aged computer wouldn't tick enough boxes. I was surprised, therefore, that it was given the thumbs up by Microsoft's PC Health Check app ([www.snipca.com/43460](https://www.snipca.com/43460)). But I chose not to upgrade at the time because Windows 11 didn't seem to offer any significantly new tools.

I convinced myself it was time to make the leap after reading your article on the new Feature Update (Issue 640, page 60). I think I got the timing just right, particularly with the addition of two tools I use a lot in Windows 10 – creating Start menu folders and pinning files to taskbar icons. I also love the new-look Task Manager – it makes much more sense having the tabs down the left-hand side.

It's also handy having the Clipchamp app built in. It's one of the easiest video-editing tools I've ever used, perfect for people who want to create



basic videos without any gimmicky effects. However, the best new feature is definitely Live Captions (pictured above), which gives me subtitles when catching up on news bulletins on YouTube.

My lucky timing is similar to what I did with Windows 7 and 10 – waiting until the first major updates had been released before upgrading. It seems that Microsoft always needs at least two attempts to get an operating system right. If other readers are as cautious as me, I'd suggest that now is the time to take the plunge and make the move to Windows 11.

Marcus Whyte



The Star Letter writer wins a Computeractive mug!

2012 it stopped working and showed a message that it needed servicing, even though it was working well. I found a repair disc on eBay which resolved the problem.

Before completion of the task it required confirmation that the ink pad had been replaced. Confirming this, although I had not done so, the printer worked perfectly. I did this all again about seven years later, when the same message appeared. It does lead one to the conclusion that these end-of-life messages are just a built-in marketing tool.

I love my old technology. My 14-year-old Epson V300 photo scanner also does a great job, including scanning 35mm slides. I have a large collection of these, which I'm slowly digitising.

Graham Bishop



#### CA SAYS

Full marks to Graham for keeping his printer and scanner working. We share his enthusiasm at finding tricks to prolong a device's life. Turn to page 60 for more ways to beat restrictions imposed by printer manufacturers.



We stand up for your legal rights

## Is £174 a decent refund after five years' use?

**Q** I'm having real problems with Currys concerning the 2015 MacBook Pro (pictured) that I bought in May 2017 for £1,100. The screen developed a fault and Apple then recalled the laptops because it said the problem is inherent. Currys says it can't repair it, and wants me to keep the laptop and give me £174. Doesn't the Consumer Rights Act (CRA) say a retailer has to try to repair a device? And is £174 a fair refund after five years of use?

Jackie Blake

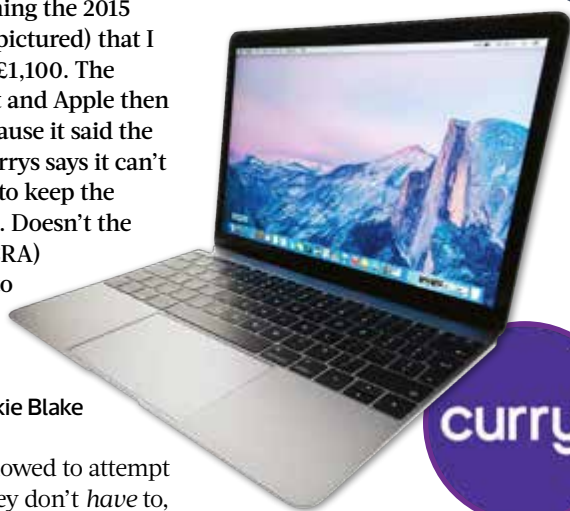
**A** Retailers are allowed to attempt a repair, but they don't *have* to, so Currys can offer money back instead. It's harder to answer whether £174 represents an acceptable refund. The CRA states that any partial refunds must be "reasonable", which leaves it wide open to interpretation.

Apple announced the recall in July 2019 ([www.snipca.com/43407](http://www.snipca.com/43407)), and until recently was offering to repair the screen for around £460. As the retailer, Currys is responsible for fixing the MacBook, so Jackie asked it to pay for the repair. But it didn't respond to this request, and Apple

has stopped offering the repair because it no longer stocks the screen for the 2015 model.

Currys may have simply ignored Jackie's request and offered £174 instead, or perhaps didn't even see it. It may have thought that £460 was too much to pay to fix a seven-year-old laptop, but it should have had the courtesy to tell Jackie. We want answers, so have asked Currys to investigate Jackie's complaint further.

CASE ONGOING



## Why won't Shell fix my smart meter?

**Q** In February, Shell Energy installed a smart meter in our home, but I've never been able to see what my usage is on the separate in-home device. I've pursued this with Shell Energy, but had no success. Can you ask the company to fix this?

Anthony Allen

**A** We'll be happy to bring this to Shell Energy's attention. Given the sharp rise in bills this year – and how important it is to keep an eye on your usage – we're disappointed that Shell hasn't done more to help Anthony by either checking the smart meter, or sending a replacement device.

If he thinks he's getting the wrong readings from the smart meter, he should complain to energy regulator Ofgem ([www.snipca.com/43409](http://www.snipca.com/43409)). He could also switch to a new energy supplier, though he may face an early-termination fee for leaving Shell. If Shell does demand a fee to leave, he should say that he's unhappy with the service he's received and he's considering complaining to Ofgem. That may be enough to make Shell waive its fee, or actually motivate it to help him.

CASE ONGOING

### CASE UPDATE

## John Lewis refunds half the cost to fix iPhone



One of the obstacles in claiming a decent refund for a broken device is proving what caused the flaw, as reader Michael Newton has found out. He contacted us not knowing whether to chase John Lewis or Apple for help when his wife's iPhone 8 (pictured) stopped working after it was updated to iOS 15 (see Issue 636).

Had the update broken the device, then Apple would have been responsible. But the

company said the phone was unrepairable, and insisted Michael talk to John Lewis, which had sold it to him in 2019. While we were investigating, a local shop actually managed to fix the phone, despite Apple saying it was beyond help.

The shop charged Michael £125, so he asked John Lewis to refund that amount. However, it agreed

to pay only half of this, so Michael is now £62.50 out of pocket.

He doesn't think this is fair, and nor do we because it seems clear that the phone was inherently faulty – albeit still fixable. The obvious question to ask John Lewis is why it hasn't taken Apple's word for it and accepted that the phone was faulty. We'll let you know if we get a response.



Contact us so we can investigate your case

✉ **Email:** [consumeractive@computeractive.co.uk](mailto:consumeractive@computeractive.co.uk)  
Please include your name, phone number and address.

## Monitor's energy rating is wrong – can you help?

**Q** When I bought a second monitor for my computer from Amazon seller IT Ltd ([www.snipca.com/43401](http://www.snipca.com/43401)), it was listed as having an energy rating of A. However, when it arrived I saw that it was marked as F rated. The company apologised to me, saying the reason for the error is that Amazon hadn't changed to the new ratings system. What are your views?

Pete Daniels



**A** Pete noticed the energy rating soon after receiving the monitor and would have been entitled to return it because it was 'not as described'. If IT Ltd was selling and delivering the monitor itself, then it would have been responsible for the refund. If Amazon was acting as IT Ltd's fulfilment agent – which means it stores and sends items on behalf of companies – then the responsibility would have

fallen to Amazon.

However, he has now kept the monitor for a few months, which means under law he may be deemed to have accepted it. IT Ltd certainly wouldn't be allowed to resell the monitor as new because Pete has now used it for several months.

If you're unsure about a device's energy rating, check on the manufacturer's site. This should be more reliable than anything stated by a seller online. On Amazon, you'll see a device's energy rating stated on the left, below the images – as pictured.

**CASE CLOSED**

## Can a company withdraw offer of free ink?

**Q** In July 2021, I bought a printer online from a local firm. It stopped working about four months later, so I contacted the company, who sent a technician to fix it. He said as compensation the company would offer me free ink for one year, which I thought was a nice gesture. But the



company later said he wasn't authorised to make this offer, and has refused to honour it. Surely it *must* honour it?

Gavin Carmichael

**A** We can understand why Gavin and other readers would think so, but companies aren't legally obliged to fulfil an offer if it's been made mistakenly. This protects them from rogue employees making implausible offers that they shouldn't be expected to honour.

However, companies often do decide to honour an offer if it's not too


financially damaging. We suggested this to the company, and it agreed that customers shouldn't have to suffer just because the technician was making unapproved offers. It also told us that the technician had made this offer to several customers without permission, and has now been made redundant.

A few days after our conversation with the company, Gavin told us that it had emailed him to apologise for the confusion, adding that it would give him one year's free ink. Hopefully all affected customers will get this too. We think this was a sensible decision by the company, which otherwise would have lost a lot of local goodwill.

**CASE CLOSED**

### CREDIT WHERE IT'S DUE

## Samsung fixed tablet when Amazon wouldn't

 Last December, I bought a Samsung Galaxy Tab S7 (pictured) for my wife's Christmas present. It's a super device with great sound, but in June it stopped charging, then finally died completely.

Amazon told me they hadn't sold the tablet to me directly, so I had to contact the seller who was responsible, called Virtos. Amazon rejected my claim for a repair or replacement because more than two weeks



had passed since purchase.

Eventually Amazon wrote to Virtos, who said I was out of time for a refund, repair or replacement. I then spent a lot of time writing letters concerning my consumer rights, but Amazon just went round and round in circles.

Finally, I contacted Samsung directly – and what a difference it made. They sent a DPD

✉ Has a company impressed you with its customer service? Please let us know: [editor@computeractive.co.uk](mailto:editor@computeractive.co.uk)

van to collect the tablet, and it was returned four days later, working fine. This was all free of charge. Fabulous customer service from Samsung.

Gervais Sawyer

Contact  
Samsung

• Product support  
[www.samsung.com/uk/support](http://www.samsung.com/uk/support)

# Grow Your Family Tree



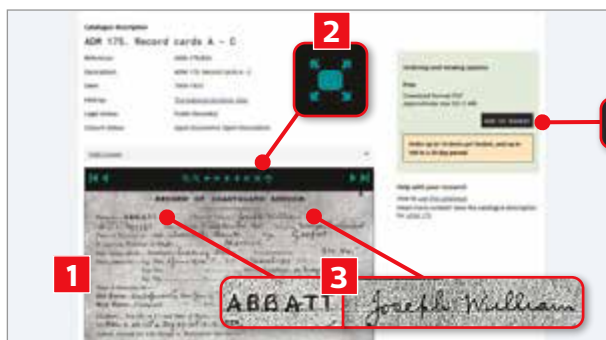
One of the National Archives' best resources is free to browse online. **Chris Paton** explains how to...

## Search and download old microfilms

The UK's National Archives, based at Kew, offers access to many of its records through subscription-based websites such as Ancestry, Findmypast and TheGenealogist. Perhaps less well-known are the free records available on the Archives' own website, provided as digital microfilms that you can search and download.

### Look through the A-Z of documents

There are 79 wide-ranging collections, sourced from Government departments including the Admiralty, the War Office, the Home Office, the Treasury and the Foreign Office. To name just five, you'll find 'Records of service of the Coastguard



Browse the microfilms and download them as PDFs

Add to basket 4

View microfilms and download as PDFs

The Coastguard records come under the

1816-1947'; 'Lists of officers in the Royal Marines 1760-1886'; 'Home Office: Convict Transportation Registers'; 'War Office: Long Service and Good Conduct Awards, Registers' (covering 1831-1953); and the 'War Office: Records of Officers' Services' registers'. Here, I'll explore the Coastguard records.

Admiralty, so are catalogued as ADM 175. Clicking the link takes you to a page giving more info about what they contain. Click the small 'Details' link to go to a page where you can search the records.

Alternatively, click one of the 'subseries' records on the right for more specific information. For example, clicking 'Service Records of R.N. Ratings and Royal Marines' shows more results on the right, including the collection ADM 175/82A, containing service record cards from 1900-1923 (surnames A-C). Click 'Details' in the bottom right of this box, then click 'Preview an image of this record' and you'll see it appear below.

At the bottom of the page is a viewing panel for the microfilm (1 in our screenshot above). You can move forward or back one page at a time, zoom in, or fill the whole screen with the record set by clicking the 'Enter full screen mode' button 2. The first image of this particular microfilm shows an entry for Joseph William Abbatt 3 from Alverstoke in Hampshire, born on 5 September, 1881. Clicking the next-page button at bottom shows the vessels on which he served between 1912-1923.

To download the microfilm as a PDF, click 'Add to basket' on the right 4, then follow the instructions. A link to the microfilm will be emailed to you. You can order a maximum of 10 films per basket, and up to 100 within 30 days.



Microfilm records are listed alphabetically by catalogue reference number – ADM stands for Admiralty

Visit the National Archives' site ([www.snipca.com/43414](http://www.snipca.com/43414)) and you'll see the records are listed alphabetically by 'catalogue reference' number. So, for example, Admiralty records are catalogued as ADM (see screenshot left), Home Office as HO and War Office as WO.

## Your Genealogy Problems Solved

**My ancestor was a sergeant in the 26th Regiment of Foot, as noted in an 1803 marriage record and his daughter's baptism record. I have never been able to find a pension or death record for him. How else can I find what became of him?**

Phil Everett

First, try the regimental description books in the 'UK, Regimental Registers of Service, 1756-1900' collection on Ancestry ([www.snipca.com/43405](http://www.snipca.com/43405)),

which may note if he died in service or was discharged. Also try the monthly muster rolls of his regiment at the National Archives ([www.nationalarchives.gov.uk](http://www.nationalarchives.gov.uk)), which should record whether he was present at the various musters. If absent, a note may explain why – such as if he was in hospital. It should also say whether he died in service.



Have a genealogy question for Chris? Email [letters@computeractive.co.uk](mailto:letters@computeractive.co.uk) with 'Grow Your Family Tree' in the subject line.



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All information correct at the time of printing. Subject to change.

 Windows 11



# Best Free Software

Robert Irvine recommends new programs that won't cost you a thing



## AUDIO EDITOR

# Audacity 3.2

[www.snipca.com/43504](http://www.snipca.com/43504)

**What you need:** Windows 7, 8.1, 10 or 11, macOS or Linux



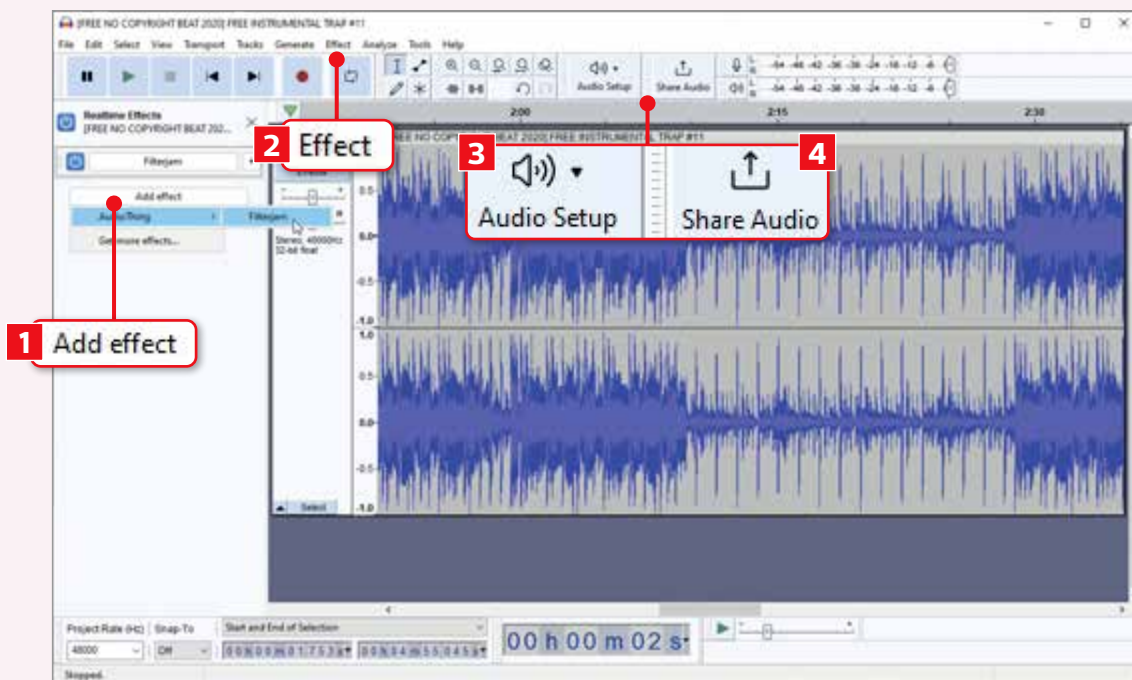
Described as a “gigantic release” by the developer, Audacity 3.2 breathes new life into the popular audio editor, which has been around for more than 22 years. The program’s interface has been streamlined and simplified, and new options bring it closer to being a professional digital audio workstation (DAW). Regardless of your level of experience, Audacity is the best free tool for editing audio files, and it’s now even better.

The most exciting new feature is support for ‘real-time’ effects, which you can now apply to entire tracks to enhance and experiment with their sound. These are installed as **plug-ins**. Click the Effect menu and choose Add Real-time Effects (or just press E on your keyboard), then click ‘Add effect’ and ‘Get more effects’. This will open the Audacity Plugins site where you can browse and download dozens of free and paid-for real-time effects. Once installed, restart Audacity and it will automatically detect and add the plug-in. Apply

the effect by selecting it in the ‘Add effect’ menu, then save the result by either clicking Tracks, then Mix and choosing ‘Mix and Render’, or clicking File then Export.

The other big new feature in Audacity 3.2 is an audio-sharing feature, which lets you quickly upload tracks you create and edit, so they can be enjoyed by other people. To use it, you’ll need to sign up for a free account with Audacity’s new service Audio (<https://audio.com>). Then simply click the Share Audio button on the toolbar, click Link Account and upload your track – all content on Audio is private by default, so only people you share a link with can play it.

Other improvements include a new Audio Setup button, which makes it easier to configure your microphone and other audio devices, and ‘non-destructive’ editing, which lets you tweak tracks without overwriting the original files.



**1** Add real-time effects to your audio tracks by clicking ‘Add effect’. You’ll need to install the effects as plug-ins by choosing ‘Get more effects’. Audacity will automatically detect a new plug-in when you restart it.

**2** Further effects are available in the Effect menu. These include boosting the volume of your track, fading it in and out, applying distortion and reverb, adjusting the pitch and tempo, and removing hiss and clicks.

**3** Click the Audio Setup button to configure your recording and playback devices. These can include your microphone, speakers and headphones, and musical instruments you connect to your computer.

**4** Once you’ve finished editing your track, you can share it with other people by clicking Share Audio – you’ll need a free account with Audacity’s Audio service. Only people with a link can play the content you upload.



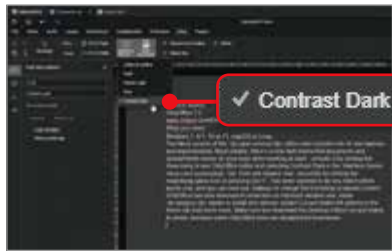
## OFFICE SUITE

### OnlyOffice 7.2

[www.snipca.com/43496](http://www.snipca.com/43496)

**What you need:** Windows 7, 8.1, 10 or 11, macOS or Linux

The latest version of this **open-source** office suite includes several new features and improvements. Most notably, there's a new dark theme that makes OnlyOffice easier on your eyes when



working at night. To activate it, click the View tab and select Contrast Dark in the 'Interface theme' menu (see screenshot), then 'Dark document'. The 'Find and replace' tool - launched by clicking the magnifying-glass icon or pressing Ctrl+F - has been updated to let you match whole words only, and you can now use 'hotkeys' to change the formatting of pasted content. OnlyOffice has also removed its restriction on minimum window size, made plugins easier to install and remove, added Cut and Select All options to the Home tab, and much more. Make sure you download the free Desktop Editors version linked to above, because some OnlyOffice tools are designed for businesses.

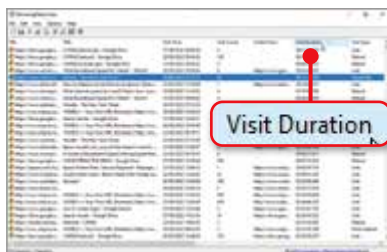
## BROWSER TOOL

### BrowsingHistoryView 2.5.2

[www.snipca.com/43499](http://www.snipca.com/43499)

**What you need:** Windows 7, 8.1, 10 or 11

This useful tool from the prolific software developer NirSoft lets you view your web history from all the browsers installed on your PC in one place. You can sort the list of pages you've visited chronologically by clicking the title of the Visit Time column, discover which sites you've been to most often by clicking Visit Count and even see the pages that you clicked through from.



This update adds a Visit Duration column (see screenshot), which tells you how long you spent viewing a specific page over the last 10 days. To change the time range, click Options, then Advanced Options and adjust the 'Filter by visit/date time' setting. However, this information is only available for Chrome and other Chromium-based browsers, so not Firefox. BrowsingHistoryView now supports Brave and generates **QR codes** for web pages that you can scan with your phone's camera to open them instantly.

## WHAT SHOULD I DOWNLOAD?

We tell you what software & apps to use

### What can I use to combine two video files?

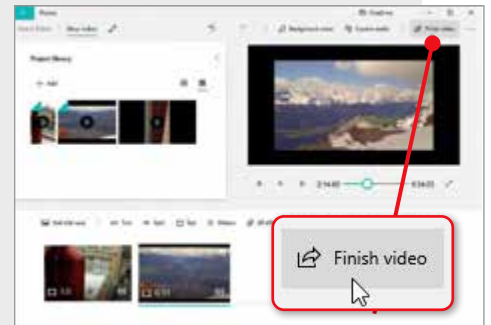
**Q** I have some video files in MP4 format that were produced from a DVD of some old 8mm home movies. I'd like to join two of the files together and save the combined video separately. Is there a built-in way to do this in Windows 10 or can you suggest a simple video-editing program that can?

Campbell Russell

**A** You can easily combine two MP4 files into one video by using the Photos app in Windows 10. This saves you having to download a video-editing program, which may have lots of advanced features that makes it confusing to use.

Open the Photos app from the Start menu and click the Video Editor tab in the top-left corner. Click the 'New video project' button and give your video a name. Next, click the Add button, choose 'From this PC' and select the MP4 files you want to merge.

Drag the imported files to the Storyboard section at the bottom of the Photo window - or select them and click 'Place in the storyboard' - and rearrange them if necessary. You can edit the clips by clicking Trim and adjusting the start and end points; add a title card and text captions; and apply filters and effects. Play the preview of your video to make sure everything looks the way you want.



Once you're happy with your combined video, click the 'Finish video' button in the top-right corner (see screenshot) and select the quality to save it at - High (1080p) is recommended. Click 'Export', then Export again to save your previously separate MP4 files as a single merged video.

Alternatively, download the free program MP4 Tools from [www.snipca.com/43503](http://www.snipca.com/43503). This has an MP4 Joiner feature that lets you join and save MP4 videos in only a few clicks.

Do you need our advice on what software to use? Just email us at [letters@computeractive.co.uk](mailto:letters@computeractive.co.uk)

## HOW I USE...

# TamoSoft



When testing routers and detecting dead spots, **David Ludlow** needs to record his network's Wi-Fi speed. This powerful tool helps him do just that

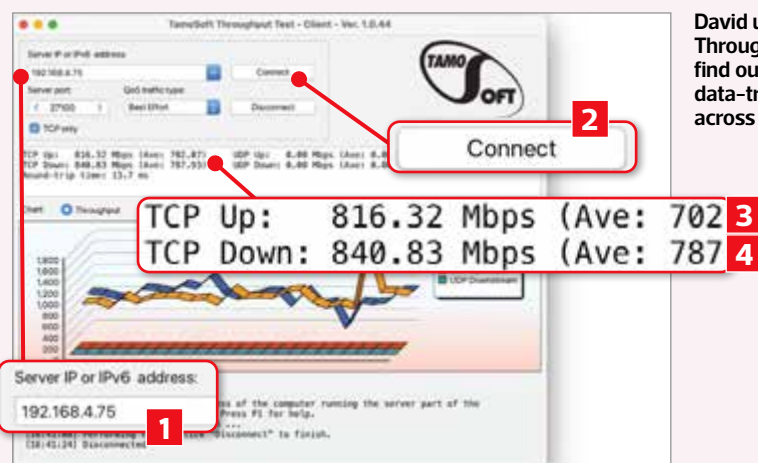
Many speed sites, such as [www.speedtest.net](http://www.speedtest.net), test how fast your internet connection is – and this is fine for checking your broadband speed. But what they don't do is test how fast your actual Wi-Fi network is at home. This should be much faster than broadband, and is crucial for tasks you perform on your local network, such as copying files to and from a **NAS** drive.

I need to measure network speeds when testing routers, so I use TamoSoft's free Throughput Test. I also use it around my house to identify Wi-Fi dead spots. TamoSoft requires two components: a server and a client. The former is the computer that the test data is sent to and from; the client is the device that starts the test and measures the speed.

The server can be a Windows PC or Mac, while the client can be a Windows PC, Mac, iPhone or Android phone. I find that choosing either Windows or Mac for both server and client produces better results.

The program works by measuring the speed between the client and the server. For that reason, it's worth running the server on a computer connected to your router via Ethernet. In this setup, only the client is running over Wi-Fi, so only it will show you how fast your network is.

When I first downloaded the software, I did so to my desktop PC because it's connected to my router. This created the server. To do this, visit



David uses Throughput Test to find out the average data-transfer speed across his network

[www.tamos.com/download](http://www.tamos.com/download), then scroll down a little to find 'Throughput Test' on the left. Now click the Download button on the right, next to Windows, and install the software.

Next, in the Start menu, type **server** then select Run Server. You'll now see the message 'Listening on port 27100 at the following IP addresses:'. Note down the **IP address**. If you see two listed, it's because your computer is also connected via Wi-Fi. In this case, turn off the Wi-Fi on your PC, quit the server program and run it again, then note down the single IP address that's listed.

I then downloaded the program again, but this time on my laptop to add the client. I searched for **client** in the Start menu, then selected Run Client. In the tool that appears, I entered the IP address I noted down previously in the box labelled 'Server IP or IPv6 address'

(**1** in our screenshot). I also ticked the 'TCP only' box, as this is the most common communications standard used over a network.

I first ran the test in the same room as my router, clicking Connect **2** when ready. I usually leave it to run for one minute and then stop it. I look at the average figures for TCP Up **3** (that's data sent from my laptop to the server, 702Mbps in our screenshot) and TCP Down **4** (data downloaded from the server – 787Mbps). Ideally, both the upload and download results should be faster than my internet speed (or certainly no worse than it). This first test gives me a baseline result that I make a note of.

I then walk around my home, laptop in hand, testing in different locations. Speeds falling the further you go from your router is to be expected, but big drops show that I'm either at my router's limit and need a Wi-Fi booster, or there's interference.

I record all results, so I can see what difference changing Wi-Fi channels or adding new hardware (such as a booster) makes.

## WHAT I'D LIKE TO SEE IN TAMOSOFT

To make it easier to interpret recorded speeds, it'd be great if TamoSoft produced a baseline result, then automatically

compared this with future tests. Then I'd be able to see at a glance whether changing Wi-Fi channels affects the speed.

# Named & Shamed

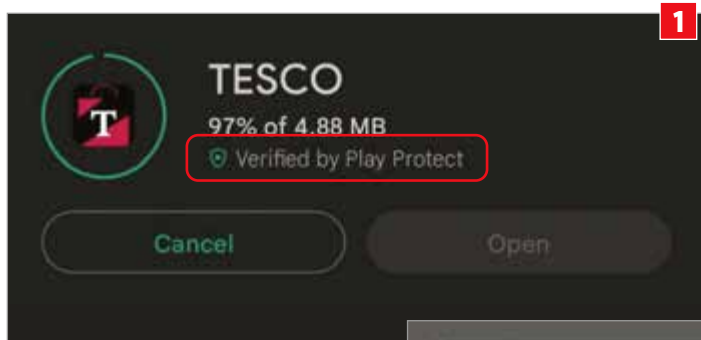


Barry Collins puts the boot into tech villains, jargon-spouting companies and software trying to trick you

## SOFTWARE WARNING!

### 'Tesco' app that wants to make phone calls

If Google approves an app for its Play Store, you'll see 'Verified by Play Protect'. It's there in screenshot **1** for this app that appears to be from Tesco. It must be genuine then, yes? No. Despite appearances, it has absolutely nothing to do with the supermarket giant.



The fake logo is bad enough, but this 'Tesco' app also wants permission to 'manage' your phone calls

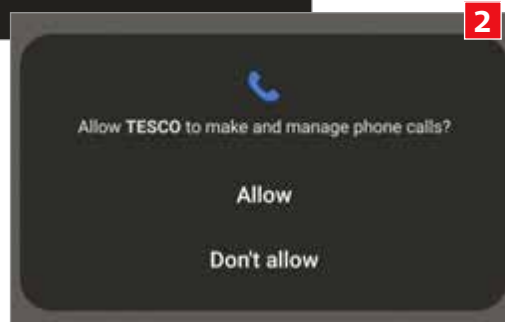
Google Play Protect apparently "checks your apps and devices for harmful behaviour" and "warns you about potentially harmful apps". So perhaps someone at Google can explain why this shopping app asks for permission to access your photos and make phone calls as soon as you launch it **2**?

If using the name of one of the world's biggest supermarket brands wasn't enough to trigger the Google alarms, there are other red flags. That logo, for starters, whose upper-case T looks suspiciously like the font used by the genuine Tesco. Not to mention the fact the developer uses a Gmail address – not

one from Tesco – and the only app they've ever submitted is this knock-off store.

What's the problem, you might ask? The genuine Tesco app comes out top when you search for the brand in the Google Play Store ([www.snipca.com/43466](http://www.snipca.com/43466)). Who's going to find this copycat? Well, people directed straight to the app from online forums, social-media posts and phishing emails, for starters.

It's shoddy that Google even allows



apps such as this into its Play Store, let alone legitimising it with the Play Protect seal of approval. Whoever was responsible is clearly off their shopping trolley.

### WHAT ARE THEY TALKING ABOUT?



#### WHAT THEY SAY

Wangui McKelvey, Microsoft  
[www.snipca.com/43454](http://www.snipca.com/43454)

"Windows Autopatch is a new automated managed service that uses the Windows Update for Business client policies and deployment service tools included in the Windows Enterprise E3 and higher subscription, to reduce endpoint vulnerability by maintaining healthy, secure, and compliant endpoints with automated updates and patches on schedule but without interruption."

#### WHAT THEY MEAN

Perhaps somebody *should've* interrupted me so I would know when to make my sentences come to an end(point).

### BARRY'S VILLAIN OF THE FORTNIGHT

## Jack Allen

It's not only Romford market where you can pick up some Bobby Burberry or Graham Gucci gear. There's plenty of counterfeit goods knocking about online too, although a wee bit less now that Jack Allen has been shut down by City of London Police.

The Leeds lad made almost £15,000 selling fake designer clothes and mobile phones, all of which were promoted via an Instagram account.

He also operated a YouTube



account called The Masked Gang Man where, according to the police, he "shared videos of himself reviewing counterfeit items while wearing a face mask and sunglasses to conceal his identity" (pictured). Amazingly, the account hasn't been Ray-Banned by YouTube.

The master of disguise was given a 16-week jail sentence, suspended for 12 months, and was ordered to complete 150 hours of unpaid work.



**MINI PC** | £199 from Beelink [www.snipca.com/43395](http://www.snipca.com/43395)

## Beelink U59 N5105

Small wonder

The range in prices between computers that run Windows 11 is vast. At one end of the spectrum, there are desktop PCs and laptops that can cost £2,000 and more. And at the other we see devices like the Beelink U59 N5105 mini PC, which is available directly from Chinese manufacturer Beelink for £199, or from Amazon for £254 ([www.snipca.com/43397](http://www.snipca.com/43397)).



“Saves you space and money, and copes well with light Windows tasks”

Obviously you aren't going to get the same performance from a £200 mini PC that you'd get from a desktop PC that costs 10 times as much, but if your needs are modest, the U59 runs Windows 11 surprisingly well. Inside its tiny case (126x113x40mm) it has a four-core Intel Celeron N5105 processor, backed up with 16GB of RAM and a 500GB SSD. It's the processor where much of the savings have been made, with the low-price chip also taking care of the graphics duties, with Intel's built-in UHD graphics.

The toll this takes on performance is illustrated in our benchmark tests, where the processor scored just 2,042 in multi-core tests designed to push a

processor to its limits. Compared that with the MSI laptop reviewed opposite, which achieves 6,668 in the same test, and you can see the compromises you'll need to live with.

What's more impressive, however, is that in our Windows 11 test – a better indicator of general Windows performance – the U59 managed a score of 2,439. The MSI laptop's score (4,976) is still superior, but the difference is less pronounced. In other words, the U59 is ideal for light Windows tasks, not for demanding programs or games.

The case is well-equipped with ports. The front panel (pictured above and below left) accommodates one USB-C and two USB 3.0 ports, as well as the power button. On the rear (pictured right) you'll find two more USB 3.0, two HDMI and two Ethernet ports.

Those two HDMI ports will let you use this PC with multiple monitors, but we wouldn't recommend pushing it too hard. While it should easily handle a pair of 1080p screens, or perhaps a single 4K monitor, it will struggle with anything more demanding. Intel's built-in graphics

simply don't provide enough clout to cope well with very high resolutions.

The U59 comes with Windows 11 installed, and once we'd carried out the usual flurry of Windows updates needed by any new device, it ran Windows well. This is undoubtedly helped by Beelink's willingness to keep the installation nice and clean, with no sign of any additional bloatware.



**VERDICT** With such a low price tag it would be easy to dismiss this small PC as too under-powered, but if you mainly carry out basic Windows tasks it runs surprisingly well



### ALTERNATIVE

Geekom MiniAir 11 £199

A similarly priced mini PC that isn't quite as powerful, but has more monitor-connection options, including a DisplayPort



### SPECIFICATIONS

Four-core Intel Celeron N5105 processor • 16GB memory • Intel UHD graphics • 500GB SSD • Wi-Fi 5 • 2x Gigabit Ethernet ports • 2x HDMI ports • 1x USB-C port • 4x USB 3.0 ports • Windows 11 Pro • 126x113x40mm (HxWxD) • One-year warranty [www.snipca.com/43395](http://www.snipca.com/43395)

LAPTOP | £599 from Cyberpower [www.snipca.com/43403](http://www.snipca.com/43403)

## MSI Notebook Modern 15 B12M-026UK

### Light relief

The latest laptop from Taiwanese firm MSI is an affordable model that ticks many of the most important boxes, with one of the latest-generation Intel processors, a decent, spacious screen and a nicely designed case.

The Intel i7-1255U processor is backed up by 8GB of RAM and a 512GB SSD. We'd have preferred to see 16GB, because the processor is more than capable of carrying out serious work, but might be held back somewhat by the limited amount of memory.

“Has a large screen and is light, though only has 8GB RAM”

Our benchmark tests confirmed these suspicions. The processor performs well in isolation, achieving a decent multi-core result of 6,668 across the chip's 10 cores. However, it struggled more in our general Windows tests, with a score of 4,976.

Beelink's mini PC reviewed opposite has a much cheaper two-core processor that can't hope to compete with this in terms of raw power, but its 16GB memory means it performs Windows tasks much faster.

The screen is fairly typical for a laptop at this price and is certainly good enough for general Windows work. It's a crisp IPS model with a resolution of 1920x1080 pixels. However, it didn't excel in our colour-accuracy tests, so it's more suited to browsing the web and working on



spreadsheets than it is for editing photos. We were very impressed by the laptop's design. The 15.6in screen dictates that the chassis is large, but it has a relatively thin depth (20mm when folded up) and is impressively light at just 1.75kg. It has a large and easy-to-use backlit keyboard, along with a small, but decent numeric pad. It also has a good-sized trackpad, providing plenty of room for navigating your cursor around Windows.

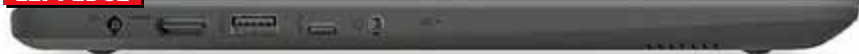
The left edge of the laptop's case hosts the power socket, HDMI port, one USB 3.0 port, a USB-C port and a 3.5mm audio jack. On the right edge are two USB 2.0 ports and a microSD card slot (all pictured below).

For a laptop of this size and price, it's a respectable configuration. It might be worth spending a little more on a model providing more RAM and storage, but if you're looking for an affordable Windows 11 laptop with a 15in screen and a comfortable keyboard to type on, this might just fit the bill.

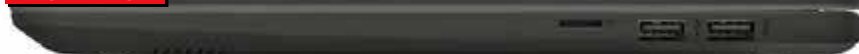
### SPECIFICATIONS

Ten-core Intel Core i7-1255U processor • 8GB RAM • Intel Iris Xe graphics • 15.6in 1920x1080-pixel screen • 512GB SSD • Wi-Fi 6 • Bluetooth 5.2 • 1x USB-C port • 1x USB 3.0 port • 2x USB 2.0 ports • 1x HDMI port • 1x SD card port • Windows 11 Home • 20x359x241mm (HxWxD) • 1.75kg • One-year warranty [www.snipca.com/43403](http://www.snipca.com/43403)

LEFT EDGE



RIGHT EDGE



### HOW WE TEST

Computeractive is owned by Future PLC, which employs a team of specialist technical reviewers. You'll often read references to our benchmark testing, which is a method of assessing products using the same criteria. For example, we test the speed of every PC and the battery life of every phone and tablet in exactly the same way. This makes our reviews authoritative, rigorous and accurate.

Future PLC also owns the magazines *Maximum PC*, *PC Pro* and *T3*, and the websites Laptop Mag ([www.laptopmag.com](http://www.laptopmag.com)), TechRadar ([www.techradar.com](http://www.techradar.com)) and Windows Central ([www.windowscentral.com](http://www.windowscentral.com)). This means we can test thousands of products before choosing the most relevant for *Computeractive*.

### FAIR AND IMPARTIAL

Our writers follow strict guidelines to ensure the reviews are fair and impartial. The manufacturer has no involvement in our tests.

### OUR AWARDS

We award every product that gets five stars our Buy It! stamp of approval. It means we were extremely impressed by the product, and we think you will be too.

Every product that gets a four-star review is given the Recommended award. We highly recommend these products, although they just fail to meet the high standard of our Buy It! winners.

### PRICES

Our reviews contain a link to the best price we found online at the time of press.

**VERDICT** A generous-sized laptop at an affordable price, but consider spending more for additional memory and storage

★★★★★

**ALTERNATIVE** Lenovo Yoga 6 Gen 7 £663 A smaller laptop with a squarer screen that looks great and runs Windows superbly



PHONE | From **£849** from Apple [www.snipca.com/43408](http://www.snipca.com/43408)

## Apple iPhone 14

### Great camera work

The iPhone 14 is the basic version of Apple's latest range of smartphone models and comes with a 6.1in screen. There's also the iPhone 14 Plus with a larger 6.7in screen, and two Pro models (the Pro and the Pro Max), which come with 6.1in and 6.7in screens respectively, but contain a few more new features. As you move up the range, the phones get more expensive, with the Pro Max starting at £1,199.

“It doesn't reinvent the wheel, but upgrades to the camera make it worth considering”

Back to the iPhone 14, then, and it's surprising how little has changed since the iPhone 13. It looks identical, uses the processor from last year's Pro models and comes with the same screen. There are some other internal changes, but they're relatively minor. So while those who've been waiting to switch from an older iPhone won't be disappointed, we wouldn't necessarily recommend it to anyone who already has an iPhone 13. For this reason, the iPhone 13 has become our new Buy It! model – see page 30.



At 7.8x147x72mm, it's slightly thicker than the iPhone 13 and is two grams lighter. Annoyingly, this means it won't fit inside an old iPhone 13 case, particularly because the raised section around the cameras is a little higher.

This is due to the fact that the camera has been upgraded, with better lenses and sensors that improve low-light photos. The iPhone has always offered some of the best smartphone cameras and this is no exception, but you'll need an iPhone 14 Pro or better if you want an optical zoom.

The two rear cameras (pictured below left) consist of a 12-megapixel main unit and a 12-megapixel ultrawide option, and it can shoot video at 4K resolution. There's also a 12-megapixel front camera, which introduces autofocus, which helps when taking more complicated selfies such as groups of people.

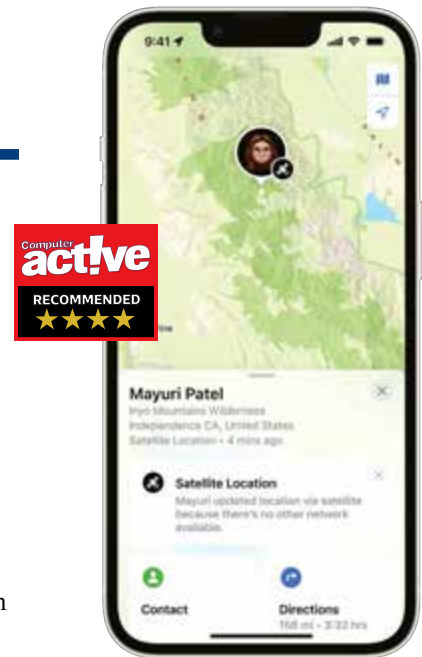
Another new camera feature is Active Mode, which you turn on by selecting the icon of a running person in the top-right corner of the camera app. This is a surprisingly effective way of removing much of the shaking from action videos, letting you use a selection of tools to keep the main subject in the centre of the screen.

We've no complaints about the iPhone retaining the Super Retina XDR OLED screen from the previous generation because it's a great option. However, it does keep the camera notch on the front, whereas Apple has introduced a new 'dynamic island' technology on the Pro models that cleverly helps to hide it. We expect to see this on the iPhone 15.

The screen has a resolution of 2532x1170 pixels, and is bright (up to 1,200cd/m<sup>2</sup>), vivid, and has excellent contrast (with a ratio of 2,000,000 to 1).

### SPECIFICATIONS

Six-core Apple A15 Bionic processor • 128GB, 256GB or 512GB of storage • 6.1in 60Hz 2532x1170-pixel pixels OLED screen • 12-megapixel rear camera • 12-megapixel ultrawide camera • 12-megapixel front-facing camera • Bluetooth 5.3 • iOS 16 • 7.8x72x147mm (HxWxD) • 172g • One-year warranty [www.snipca.com/43408](http://www.snipca.com/43408)



However, it lags behind Android rivals in other areas, sticking to a basic refresh rate of 60Hz. Cheaper Android rivals often go up to 120Hz and have adaptive refresh rates that switch off the highest settings when they're not needed to save battery life. The Pro versions have adaptive screens that go up to 120Hz, including a clever 'always-on' 1Hz mode that keeps the screen running while using minimal battery resources.

Apple's A15 Bionic processor may be last year's top model but it's still very fast and outpaces anything that Qualcomm is currently supplying in Android devices. As a result, our benchmark tests were in line with what we saw in the iPhone 13 Pro, though that still keeps it among the best-performing smartphones available. It also helps the phone maintain a decent battery life, lasting all day during our testing.

**VERDICT** Has great cameras, fast performance and a bright screen, but no outstanding improvements from iPhone 13

★★★★★

### ALTERNATIVE

iPhone 13 **£749** Now one year old and £30 cheaper, this is a better buy than the latest model





PHONE | £479 from Amazon [www.snipca.com/43434](http://www.snipca.com/43434)

## Honor 70

Smooth operator

With Apple still charging a premium for even its most basic new iPhone (see our review of the iPhone 14 opposite), it's always worthwhile seeing what Android rivals are offering. Chinese smartphone manufacturer Honor has launched the new Honor 70 at a tad over half the price of the iPhone 14 on Amazon. It's usually also worth checking out the price when buying directly from Honor ([www.snipca.com/43436](http://www.snipca.com/43436)). At the time of writing it was available for £500, and comes with a case and a set of wireless earbuds included.

“Considering the price, there are no real downsides”

You may remember we reviewed this phone's predecessor, the Honor 50, back in Issue 622. This new model has moved on more in certain aspects than others. For example, it's powered by the Qualcomm Snapdragon 788G Plus, which is only a small step up from the standard 788G in the Honor 50. However, the RAM has been boosted from 6GB to 8GB. This has a noticeable impact on general performance, and we found the phone ran smoothly, with no app crashes or stuttering. Even when playing more intensive games, it performed well, with no noticeable lag or glitches.

The Honor 70 has a slightly larger 6.67in screen than the 6.57in panel on its predecessor. It has a curved edge that's echoed on all sides of device and is mirrored on the reverse, making the phone feel smoothly rounded and comfortable to hold, as you can see from the bottom view below.

It uses OLED technology and has a resolution of 2400x1080 pixels and a refresh rate of 120Hz. The iPhone 14 might beat it on resolution, despite its



smaller size, but Honor's super-smooth refresh is something the more expensive iPhone lacks. Overall it's bright, with rich colours and decent contrast, and no real downsides, particularly considering the price of the phone.

One area where the phone is significantly better than the previous model is the camera. Interestingly, it marks the debut of a new sensor manufactured by Sony – the IMX800. It's a 54-megapixel component that's used as the Honor 70's main camera. This is larger than the sensor in the Honor 50, capturing more light. The resultant photos are brighter and more vivid. Add it to Honor's automated image-processing software and photo quality is a noticeable step up on the 108-megapixel camera in the Honor 50.

### SPECIFICATIONS

Eight-core Qualcomm Snapdragon 778G Plus processor • 8GB RAM • 128GB or 256GB storage • 6.67in 120Hz 2400x1080-pixel OLED screen • 54-megapixel rear camera • 50-megapixel ultrawide camera • 32-megapixel front camera • Wi-Fi 6 • Bluetooth 5.2 • Magic UI 6.1 (based on Android 12) • 7.9x73x161mm (HxWxD) • 178g • One-year warranty [www.snipca.com/43444](http://www.snipca.com/43444)

**VERDICT** An impressive mid-priced smartphone with a great camera and screen, and few compromises



### ALTERNATIVE

Realme GT 2 £549 It's slightly more expensive but the superb performance of this excellent phone justifies the additional cost



## CHOOSE THE RIGHT SPECS

### Thunderbolt



#### What does it do?

Thunderbolt is a way of connecting PCs to peripherals that benefit from a particularly fast connection, such as external SSDs and monitors. The original Thunderbolt specification used its own type of connectors, but when Thunderbolt 3 was introduced in 2015, it switched over to using standard USB-C connectors. We're currently up to Thunderbolt 4.

#### How does it work?

Much like any other USB connection, you just plug the cable into the device and off you go. It has the ability to transfer data to/from and provide power for the device you're connecting.

#### What are the specs?

Thunderbolt 3 can transfer data at a maximum of 40GB/s, carry 15 Watts of power and support a video signal for a single monitor up to 4K resolution. Thunderbolt 4 has the same transfer rate and power capacity, but it can support video for two 4K monitors simultaneously. Thunderbolt 5 will be capable of speeds of 80GB/s, but Intel is only just previewing the technology, so we don't expect to see it for another year or so.

While Thunderbolt now uses USB-C connectors, not all USB-C cables and ports are Thunderbolt-compatible. Look for the lightning bolt symbol on cables (pictured) and ports, or in your device's specifications.



#### Can I change it later?

Because they use USB-C connections, you can plug non-Thunderbolt USB devices into Thunderbolt ports. Likewise, you can connect Thunderbolt 3 devices to Thunderbolt 4 ports. However, you won't get the full benefit unless the cables, ports and devices are all compatible with the later standard.



MESH Wi-Fi | £260 for two units from Box [www.snipca.com/43445](http://www.snipca.com/43445)

## Asus ZenWiFi AX Hybrid (XP4)

### Better by some distance

This kit solves the common problem of poor Wi-Fi coverage by combining a mesh Wi-Fi system with wired powerline that uses your home's existing electrical wiring to transfer data between the two router units. This leaves the Wi-Fi free to handle your PCs, TVs, phones and tablets. Powerline networking is often a good option for larger homes, with multiple floors and thick walls.

“Reaches the parts standard routers cannot reach”

The Zen WiFi includes two identical mesh routers, which support dual-band Wi-Fi 6 with a top speed of 1.8Gbps. That's backed up by the powerline wired connection, which provides a speed of 1.3Gbps. Those rates are relatively modest, but the focus is on reliability rather than pure speed, though it's still fast enough to cope with most domestic broadband needs.



Each router has two Gigabit Ethernet ports to provide wired connections, and a USB 3.2 port (all pictured below left) that lets you connect a USB hard drive or storage device to share with other people on your network.



We found that setting up the system was slightly fiddly, with Asus's instructions bogged down with too much jargon for our liking. Once we'd got the devices installed, however, the accompanying app for tweaking the settings worked well.

To test the system we connected the first device to our existing broadband router to make use of its internet connection. When connecting to devices in the same room the routers performed as we expected, hitting 100Mbps according to the Ookla speed test, and 12.5MB/s for Steam downloads, which is exactly what we achieve with our existing router.

The real test came when we placed the second Asus router in the home office at the back of the house, where we usually have to rely on powerline devices to get any signal – regular Wi-Fi just can't reach this far. However, the Zen WiFi passed with flying colours, maintaining a smooth and steady 100Mbps connection with Ookla and 12.5MB/s with Steam.



This is impressive in a room where we can't normally get reliable Wi-Fi at all.

### SPECIFICATIONS

Dual-band 2.4GHz/5GHz • Wi-Fi 6 • 3x Gigabit Ethernet (per unit) • 210x150x70mm • Three-year warranty [www.snipca.com/43445](http://www.snipca.com/43445)

**VERDICT** A mesh Wi-Fi system that uses powerline to connect its nodes, providing greater reach and leaving the Wi-Fi clear for your other devices



### ALTERNATIVE

BT Whole Home Wi-Fi £150 If your walls aren't too thick, you can get this three-node system for a significantly lower price



### WHAT SHOULD I BUY?

We solve your buying dilemmas

## Can you suggest a printer that's cheap to run?

**Q** After 10 years of use I'm shocked at how much replacement cartridges for my HP inkjet printer cost – around £50 each. Would you be able to suggest a new model? I'd like high-quality colour printing, automatic duplex, iOS support to print from Apple devices, wireless networking, scanning and something that's cheap to run. It's between HP and Epson for me, but which model? My budget is £100 to £200.

Reg Boone

**A** We've scoured the specifications of HP and Epson's multifunction printer ranges, but it's tough to find a model that's cheap to run and can automatically print on both sides of a sheet (duplex) that falls within your budget.

This leaves you with two options: up your budget a little or live without automatic duplexing. We think the best option for cheaper running costs are ink-tank printers. The cheapest Epson multifunction model is the EcoTank 2820 (£190 from [www.snipca.com/43447](http://www.snipca.com/43447),

pictured). It does everything you want except automatically print on both sides. It will print one side of a document first, then prompt you to feed the printed sheets back in so it can print on the back. If you can, consider spending £239 on the EcoTank 2850 ([www.snipca.com/43448](http://www.snipca.com/43448)). This does everything you need, and prints work out at around 0.2p per mono page and 0.4p for colour.



Do you need advice on what you should buy? Email us at [letters@computeractive.co.uk](mailto:letters@computeractive.co.uk)





## Save and upgrade with Kingston



Upgrading to a solid-state drive and increasing memory are two easy and cost-effective options for increasing PC or laptop performance. Even relatively new systems see a significant performance gain when a traditional hard drive is upgrade to an SSD. Users experience pages that load faster and applications that launch quicker. All considered, the benefits of upgrading to an SSD outweigh the cost.

Available from: **ebuyer**

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Upgrading your gaming PC?

## Level up your gaming with Kingston FURY memory & SSD

Kingston FURY is the gaming brand of memory hardware used by gamers, PC enthusiasts, and content creators worldwide. Break through the most rigorous performance demands with the ability to multi-task simultaneously whether you're gaming and streaming or creating and editing while easily handling extreme workload applications.

Available from:



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**USB-C DOCK** | £80 from Amazon [www.snipca.com/43420](http://www.snipca.com/43420)

## DockCase USB C Visual Smart Hub 7-in-1

Port authority

Most **USB-C** hubs let you connect a number of peripherals through a single port on your laptop or PC. This DockCase hub can do this, but it also has a slick 1.3in screen – which most hubs lack – to display useful information about your hub and how it's performing.

As you'll gather from its name, there are seven connections on the device. The front edge has a single **USB 3.0** port, along with **SD card** and **microSD card** readers. The rear edge contains two more USB 3.0 ports, an **HDMI** port, and a USB-C port for passthrough charging from your laptop's adapter (this transfers power only, not data). Having these at the

### SPECIFICATIONS

2x USB-C ports (one for connection to laptop, other for power) • 3x USB 3.0 ports • HDMI 2.0 • SD card reader • microSD card reader • 14x40x122mm • 128g • One-year warranty [www.snipca.com/43420](http://www.snipca.com/43420)

rear makes it easier for you to manage cables on your desk.

The information shown on the screen includes the internal operating temperature of the hub, the screen standard being used, the amount of power passing through the hub to the host laptop, and the size, resolution and **refresh rate** of any connected monitor. It also displays the SD and microSD storage status (ie, whether or not a card is inserted). There are also three USB status symbols that show the transfer speeds and USB versions used by your connected accessories.

Transfer speeds across all connections are pretty impressive, with the USB 3.0 ports hitting a ceiling around 600MB/s and the SD card readers reaching around 90 to 100MB/s. While there's just the one



Computer **active**  
RECOMMENDED  
★★★★

HDMI port, its support for up to a **4K** resolution at 60Hz should handle most single-monitor setups.

**VERDICT** The added screen makes this USB-C hub pricier than most, but provides handy information about its generous selection of connections

★★★★★

**ALTERNATIVE** Anker 7-in-1 USB-C Hub **£37** If you can live without the screen, this USB-C hub with similar features costs less than half the price



**EARBUDS** | £73 from Amazon [www.snipca.com/43423](http://www.snipca.com/43423)

## Audio-Technica ATH-SQ1TW

Sounds simple

There's fierce competition in the sub-£100 earbud market, but there's little point in making a big saving if the overall sound quality isn't good enough to keep you listening. This certainly isn't a problem with these buds from Japanese company Audio-Technica, which sound as good as significantly more expensive rivals.

In testing it produced expansive audio with immaculate detail. You might expect better from earbuds at twice the price, but these are as good as we've heard in this cheaper price range.

The buds don't have noise cancellation, however. They also lack their own app,

### SPECIFICATIONS

5.8mm dynamic speakers • Bluetooth 5.0 • USB-C charging • IPX4 (splash proof) • 5.2g per earbud • Two-year warranty [www.snipca.com/43423](http://www.snipca.com/43423)

which more expensive models offer, so you can't fine-tune how they sound. If you're happy with great-sounding off-the-shelf quality, however, and don't care for tweaking and twiddling, this is unlikely to be a problem. You can still adjust basic controls such as the volume by using buttons on the earbuds themselves.

The earbuds have an unusual square design but were surprisingly comfortable in our ears. They're available in a range of colours, connect to any compatible Bluetooth 5.0 device, and have a 20-hour battery life (6.5 hours in the earbuds and 13.5 hours in the charging case). While they don't cancel external sounds, the noise around you can still be drowned out by the audio quality. Usefully there's also a 'hear-through' option, so you can



Computer **active**  
RECOMMENDED  
★★★★

quickly listen to a tannoy announcement or the person sitting next to you without pausing your music.

**VERDICT** Although they lack many advanced features, these great-sounding earbuds are excellent value for money

★★★★★

**ALTERNATIVE** Sony WF-1000XM4 **£200** Over double the price, but more features and better audio quality, making them well worth the extra cost



4K TV | £299 from Amazon [www.snipca.com/43456](http://www.snipca.com/43456)

## Xiaomi F2 Fire TV

Fire it up

Readers will be well aware of Chinese manufacturer Xiaomi thanks to its Android smartphones that we often review, but this is the first time we've seen it move from small-screen technology to large-screen TVs. And it has made the transition with some aplomb, teaming up with Amazon to produce an affordable range of sets that don't set out to reinvent smart TV, but instead comes with Amazon's Fire TV service – which brings together subscription services such as Amazon Prime Video, Netflix and Disney+ with catch-up services like BBC iPlayer. It's a smart move, helping keep the price of the 43in model reviewed here down to an affordable £299. If you want to go larger, there's a 50in screen for £349 and a 55in model for £399.

“An affordable TV that's great for watching films and has Amazon Fire built in”

It lacks the refined build quality of more expensive models, with its plastic appearance, but we can forgive that given the price. On the plus side, there's barely any bezel around the edge and it comes with a remote control that will look familiar to anyone who's ever used a Fire TV device previously.

Picture quality is impressive and supports HDR in its basic HDR10 and HLG versions, but there's no support for HDR10+ or Dolby Vision. It also



has a generous four HDMI ports among its connections (pictured below left), so there's plenty of room for adding more devices.

What you don't get for this price is an OLED screen. Instead it uses VA technology, which gives the screen better contrast than an IPS panel, albeit with a slower refresh rate. This makes it a better option for watching films, where the quality of the picture is paramount.

Sound quality is also pretty good, though obviously this struggles to compete with the speakers found on more expensive models.

The whole Amazon Fire TV interface and content is present and correct, so it works exactly like having a Fire TV device connected to your TV. We found it to be stable, though a little sluggish at times.

### SPECIFICATIONS

4K 3840x2160-pixel resolution • 43in screen • Supports HDR10 & HLG • 2x 12W speakers • 4x HDMI ports • 607x957x241mm (HxWxD) • 6.95kg • One-year warranty [www.snipca.com/43456](http://www.snipca.com/43456)

**VERDICT** A great-value 43in smart TV that doesn't rival more expensive OLED models, but it works well and comes with Amazon Fire TV

★★★★★

### ALTERNATIVE

HiSense 50A7GQTUK £449

If you're thinking of upgrading to a 50in model, this affordable HiSense is one of the best around for the price



### DO I REALLY NEED...

## A laptop with a folding screen?

### What is it?

The Asus Zenbook 17 Fold OLED (pictured) is a hybrid laptop-tablet with a large 17.3in screen when fully unfolded into tablet mode. However, it can also fold down the middle to convert to laptop mode, with a virtual keyboard available at the bottom half of the screen.



### What are the specs?

It has a 12th-generation Intel Core i7-1250U processor, 16GB of RAM and a 1TB SSD. It also comes with a Bluetooth keyboard if you prefer physical keys or want to make the most of the screen.

### What's the catch?

UK pricing hasn't been announced yet, though the launch price in the US has been set at \$3,499. That means it will be at least as expensive when it arrives on these shores later in the year.

### So can I do without it?

Yes. While a 17in Windows 11 tablet might sound attractive, it's possibly too large to be practical. The folding screen seems like a gimmick, without adding much to either the laptop or tablet element.

### NEXT ISSUE

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## LAPTOP

### Lenovo Yoga 6 Gen 7

**£780** from [www.snipca.com/42509](http://www.snipca.com/42509)

**Tested** Issue 637



Lenovo's new laptop has an amazing screen, a fast processor and lasts 15 hours on a single charge. It has all the ports you need, including two USB-C, two USB 3.0 and HDMI. At £663. It represents stunning value.

**ALTERNATIVE Dell XPS 13** New Intel CPUs and a taller screen make this a more powerful, all-round slim laptop. Prices start at £949 from [www.snipca.com/42979](http://www.snipca.com/42979)

## DESKTOP PC

### Wired2Fire

Ultima WS Home Office Workstation

**£838** from [www.snipca.com/41500](http://www.snipca.com/41500)

**Tested** Issue 630



With an overclocked eight-core chip and a 1TB SSD, this PC performs Windows tasks at a blistering speed. It comes with Wi-Fi 5, and has plenty of ports, including five USB 3.0 and three for monitors (DisplayPort, HDMI and VGA).

**ALTERNATIVE Palicomp Intel Mercury** Over two years old and with a slower processor, but still a mighty PC with a speedy SSD. £600 from [www.snipca.com/34223](http://www.snipca.com/34223)

## APPLE IPAD

### Apple iPad 10.2in

**£319** from [www.snipca.com/36178](http://www.snipca.com/36178)

**Tested** Issue 566



The basic iPad is great value, especially now it's been updated with a powerful A13 processor and iPadOS 15. It includes Scribble handwriting recognition with the £89 Apple Pencil. Storage isn't expandable; consider 256GB at £459.

**ALTERNATIVE iPad Mini** With an even better, but smaller, screen than the 10.2in iPad, the Mini also supports the Pencil and has 64GB of storage. £479 from [www.snipca.com/33050](http://www.snipca.com/33050)

## ANDROID TABLET

### Samsung Galaxy Tab S8

**£649** from [www.snipca.com/42211](http://www.snipca.com/42211)

**Tested** Issue 634



Samsung has replaced its own Tab S7+ to become our favourite Android tablet. It's fast with a stunning 11in screen, and has a longer battery life than the iPad. This model gives you 128GB – you'll need to pay £699 for 256GB.

**ALTERNATIVE Lenovo Tab P11 Pro** It's slower than the Tab S7 and the screen is duller, but has a detachable keyboard so you can use it as a laptop. £599 from [www.snipca.com/41101](http://www.snipca.com/41101)

## APPLE IPHONE

### Apple iPhone 13

**£749** from [www.snipca.com/43498](http://www.snipca.com/43498)

**Tested** Issue 627



Now £30 cheaper than its 2021 launch price, the iPhone 13 has a superb screen, long battery life and an excellent camera – particularly for taking quick snaps without blurring. You could pay £100 more for the newer iPhone 14, but we're not convinced it's worth the extra money.

**ALTERNATIVE iPhone SE** With a single camera and smaller screen but the same powerful A13 processor and 64GB storage as the iPhone 11, it's great value. £449 from [www.snipca.com/34773](http://www.snipca.com/34773)

## ANDROID PHONE

### Realme GT 2

**£499** from [www.snipca.com/41667](http://www.snipca.com/41667)

**Tested** Issue 631



China's Realme has made a phone with a powerful processor, excellent battery life, bright screen and a 50-megapixel camera that takes great photos. It's more expensive than our former favourite (below), but its superior performance justifies this extra cost.

**ALTERNATIVE Xiaomi Poco F3** This remains an excellent phone, with 6GB RAM and 128GB storage. The only phone under £450 that's faster is the iPhone SE. £309 from [www.snipca.com/41102](http://www.snipca.com/41102)

PRICE DROP

# Now's the time to tackle your smartphone

Are you missing out on everything you could do with it? With these helpful books, there's nothing to fear about using smartphones.

## Find out more...

Modern mobile phones – smartphones as they're called – can do so much more than just make phone calls.

From browsing the web wherever you are, checking train times, acting as a sat-nav... And best of all they can make it so easy to keep in touch with family and friends – in so many ways, from sharing photos to making video calls.

But using them isn't always as easy as you'd want – and that's putting it mildly!

## Do the manufacturers do it on purpose?

Sometimes it can seem like the manufacturers deliberately make them complicated – and how you do things is often hidden away. It might be easy once you know, but until you've been shown the easy way, it can drive you mad.

In fact only yesterday I was talking to someone whose Mum had got a new all-singing-all-dancing phone – but she couldn't work out how to answer a phone call on it! She's not daft – it's just that it's different from what she'd used before and the phone didn't come with a manual telling her what to do.

Whether you have similar problems or you're trying to do something slightly more advanced, the thing is, it can be easy to use them... once you know how. But until you've been shown, it can be like talking a different language.

That's why we've published these books: *iPhones One Step at a Time*, *Android Smartphones One Step at a Time* and *Doro Smartphones One Step at a Time*.

## Plain English... and that's not all

They explain how to use the phone, in plain simple language with pictures of the screen showing you exactly where to tap or slide your fingers. No jargon!

## What's covered?

I can't list it all here. But amongst other things, you'll discover:

- The basics of controlling it – swiping, tapping, opening apps & so on.
- Send emails from your phone.
- Most phones have a good camera so you can take photos: here's how to use it properly (and for videos).



Suitable for iPhones and Android smartphones like Samsungs, and DORO (not sure what phone you have? Best send off for the free info pack)

- Video phone calls – a great way to keep up with family who live a long way away.
- Share photos with friends around the world – quickly and easily.
- See updates, photos and video clips from friends and family – as soon as they "post" them.
- Browse the web at home or out and about.
- Instant messaging and how to use it.
- Make it easier to read the screen.
- How to use it as a sat-nav... in the car or even on foot.
- Choosing and downloading apps.
- And obviously, you can make phone calls and send and receive text messages. ("Voicemail" is covered, too.)

All explained nice and simply. (Find out more in the free information pack – read on...)

## What one reader had to say:

*"Thanks for a fantastic smart phone book. Very pleasant staff as usual."*

*I think this book should be sold with every smart phone. I have learnt so much from it, the info you get with the phone is non-existent.*

*Smart phones are quite complex, and your books speak in plain English."*

## Only half the story

That's only half the story but I don't have room to explain here. I've put together full

information on the books – who they're for, what they cover and so on.

What's more the books also come with a free gift – no room to explain that here either.

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The books aren't available in the shops or on Amazon – only direct from the publisher. Send off now to get a completely free, no-obligation information pack. It'll explain what the books cover, who they're suitable for and so on – showing you just how it could help you.

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## EBOOK READER

### Kobo Libra 2

£160 from [www.snipca.com/40645](http://www.snipca.com/40645)

**Tested** Issue 624



A fantastic 7in screen, 32GB of storage and Bluetooth connectivity make this a rival to Amazon's Oasis ebook reader, yet it's £70 cheaper. Battery life is superb – we managed 54 hours of use per charge. It supports OverDrive, so you can borrow ebooks from libraries.

**ALTERNATIVE Amazon Kindle** This low-cost option remains a good choice, especially now it has 8GB of storage. £70 from [www.snipca.com/43178](http://www.snipca.com/43178)

## SECURITY SOFTWARE

### Norton 360 Premium

£19.99 from [www.snipca.com/33247](http://www.snipca.com/33247)

**Tested** Issue 629



Norton has always performed strongly in our antivirus tests, regularly making the top three. Owned by US firm NortonLifeLock, it's available at a discount on our Software Store. Click the link above for a 10-device, two-year licence. Other versions are available, including Norton 360 for Gamers.

**ALTERNATIVE Bitdefender Total Security** Another top performer that we're offering at a discount. £19.99 from [www.snipca.com/41141](http://www.snipca.com/41141)

## WEBCAM

PRICE DROP

### Logitech C925e Business Webcam

£75 from [www.snipca.com/41104](http://www.snipca.com/41104)

**Tested** Issue 608



Despite the name, this webcam is also great for home users. Its standout feature is automatically adjusting itself to keep your picture looking sharp. It offers a 78-degree field of view, which is fine for everyday video chats with one person in front of the camera.

**ALTERNATIVE Anker PowerConf C300** Good image quality, crisp audio and lots of features. £90 from [www.snipca.com/41105](http://www.snipca.com/41105)

## PC MONITOR

### Iiyama ProLite XU2492HSU-B1

£130 from [www.snipca.com/39701](http://www.snipca.com/39701)

**Tested** Issue 618



This 23.8in screen is superb value, with a resolution of 1920x1080 pixels. Colour is good, covering 88 per cent of the sRGB colour range. Connect your computer via HDMI, DisplayPort or VGA, and there's a USB hub to connect your mouse and keyboard.

**ALTERNATIVE AOC 27P2C** This also has a 1920x1080 resolution but it's 27 inches, so pixel density is lower. But you'll only notice if you look really closely. £258 from [www.snipca.com/41609](http://www.snipca.com/41609)

## ROUTER

### Netgear Nighthawk RAX80

£395 from [www.snipca.com/42896](http://www.snipca.com/42896)

**Tested** Issue 603



This is the fastest Wi-Fi 6 router we've ever tested, transferring data at speeds of 520Mbps in the same and adjacent rooms of our test house. Also works with Wi-Fi 5, and comes with four spare Ethernet ports and two USB ports.

**ALTERNATIVE Asus RT-AX82U** Slower than the Nighthawk on Wi-Fi 6, but faster on Wi-Fi 5, so a better choice for older devices. Has four Gigabit Ethernet ports. £195 from [www.snipca.com/41106](http://www.snipca.com/41106)

## PRINTER

### Epson EcoTank ET-1810

£160 from [www.snipca.com/41232](http://www.snipca.com/41232)

**Tested** Issue 627



An inkjet printer that comes with enough ink to print 4,500 mono and 7,500 colour pages, making it exceptionally cheap to run. It's not the fastest printer, but quality is good, especially on photo paper – we've never seen better on an inkjet.

**ALTERNATIVE Brother DCP-J1140DW** Compact multifunction model with rare features at this price, including double-sided printing. £143 from [www.snipca.com/41480](http://www.snipca.com/41480)



## COMPETITION

# Win 1 of 2 Philips Hue Play Gradient Lightstrips

Signify, the world leader in connected LED lighting systems, has released a new range of Philips Hue smart-lighting products that help to create a more immersive entertainment experience for gaming.

In this competition, we're giving away two starter kits each containing a Philips Hue Play Gradient Lightstrip for your PC (main picture), and a Hue Bridge (right).



Once set up, the lightstrips produce ever-changing lights to reflect the content on your screen, adding drama and excitement to whatever game you're playing.

The lightstrips attach to the back of curved or straight monitors with the included mounts, and creates a halo effect when the monitor is placed close to a wall. It comes in three sizes: 24-27 inches and 32-34 inches for single monitors, and 32-34



inches for three-monitor setups.

To enter this competition, answer the question at [www.snipca.com/43406](http://www.snipca.com/43406) and submit your details. It runs until midnight Tuesday 25 October. If you win, we'll contact you to see which size of lightstrip fits your setup.

To buy the lightstrips and other Philips Hue products, visit [www.snipca.com/43410](http://www.snipca.com/43410).

## MESH ROUTER

**BT Whole Home Wi-Fi**  
**£150** from [www.snipca.com/26990](http://www.snipca.com/26990)  
**Tested** Issue 496



BT's set of three discs, managed from an Apple or Android app, connects to your broadband and spreads high-speed Wi-Fi all around the house. Reception is far better than from a single router, and the price is lower than any rival.

**ALTERNATIVE Zyxel Multy X**

These two pillow-shaped boxes are powerful enough for most homes and provide four Ethernet ports apiece. £272 from [www.snipca.com/41109](http://www.snipca.com/41109)

## SOLID-STATE DRIVE

**Corsair MP600 Pro LPX**  
**500GB**  
**£83** from [www.snipca.com/41547](http://www.snipca.com/41547)  
**Tested** Issue 630



In our tests, this M.2 SSD hit speeds of 7,364MB/s and 6,870MB/s when reading and writing data – astonishingly fast scores. It's compatible with the new PCIe 4.0 standard, which is twice as fast as PCIe 3.0. The 1TB model costs £132; 2TB costs £220.

**ALTERNATIVE Crucial MX500 500GB**

As fast as an SSD can get in the traditional 2.5in SATA format, this is a great-value upgrade. £56 from [www.snipca.com/37304](http://www.snipca.com/37304)

## SMART SPEAKER

**Google Nest Audio**  
**£90** from [www.snipca.com/36475](http://www.snipca.com/36475)  
**Tested** Issue 593



Produces a rich, clear sound, and better understands your questions than Amazon's Echo devices. You can use Google's app to control audio from other units around your home (pair two of them for £130). The clever Ambient IQ tool increases the volume if it detects external noise, such as a hairdryer.

**ALTERNATIVE Amazon Echo (4th generation)**

The latest version of the Echo changes the shape from a cylinder to a ball, which improves sound quality – though the Nest's is still superior. £55 from [www.snipca.com/41111](http://www.snipca.com/41111)

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## HOW TO...

# Install Ubuntu on an old Android tablet

by Nik Rawlinson

**What you need:** Old Android tablet; Ubuntu Touch **Time required:** Two hours



**H**ardware doesn't get slower as it ages. Rather, we demand more and more of it by installing software and updates which its components were never designed to handle. In essence, it takes longer for the same hardware to process the increased number of instructions being thrown at it, and inevitably it *feels* like it's running more slowly – even though, technically, it's running as quickly as it ever was.

Manufacturers eventually stop supporting old devices because doing so would hold back owners of newer, 'faster' hardware – and, at that point, you must make a decision. Do you buy a new device? Keep running your existing device with out-of-date software? Or

install a new operating system?

Here, we're going to take the third option. We have a second-generation Nexus 7 tablet (pictured right), jointly built by Asus and Google, which was released in August 2013 and discontinued in April 2015. The most recent version of Android it can officially run is 6, released back in September 2015.

Rather than try to force an update to the latest version of Android (13, released in August), we're going to install Ubuntu Touch ([www.ubuntu-touch.io](http://www.ubuntu-touch.io)), an **open-source** Linux-based operating system being developed for a wide range of Android devices. Compatibility varies from device to device and, as you might imagine, replacing an operating system is

a big job. However, if you can get Touch to work on an old tablet or phone that you own, you might be able to breathe new life into an old piece of kit.

Bear in mind that installing a new operating system on your device, or even playing around with some of the advanced settings we'll be accessing here, will probably result in the irreversible loss of all data on it. Make sure you have a full backup of anything you need to keep because you may end up with a device that no longer works and cannot be repaired, and data that can't be recovered.

### 1 Check whether your device supports Ubuntu Touch

The easiest way to check whether Ubuntu Touch supports your phone or tablet is to search for it in the official devices list at [www.snipca.com/43327](http://www.snipca.com/43327). Click the tabs at the top left to see just tablets (eight of them) or phones (72). If your device is listed, click its name to open its full details page, which you'll need to refer to later.

### 2 Unlock the bootloader

Your next job is to unlock the bootloader. This is the code that's responsible for waking up the tablet and loading the operating system. As this is a fundamental function, it's locked to prevent programs interfering with it because some could install malicious code to launch when the tablet starts, monitor everything you're doing and report back to hackers. This would allow them not only to gather

useful information for marketing and advertising, but potentially to gather payment-card details, monitor your conversations via the microphone, watch you through the camera, and more.

The actual process for unlocking the bootloader varies between manufacturers and models, so you have no choice but to search for the method online. We found instructions by searching for **nexus 7 unlock bootloader**, so try something similar for your device.



We found the relevant drivers for our old Nexus tablet on Softpedia

These instructions asked us to install Google's Platform Tools, and **drivers** specific for our device. Again, you'll probably need to search for these (we found ours for the Nexus on Softpedia: [www.snipca.com/43351](http://www.snipca.com/43351), see screenshot above). Having downloaded the drivers, we moved them to a folder on our computer. We then connected the tablet and opened Windows Device Manager (press the Windows key, type **device** and click Device Manager).

Here, we expanded the Mobile Devices section within Device Manager and double-clicked on our tablet. This opened a box, on which we switched to the Driver tab, clicked Update Driver, and navigated to the driver we had just downloaded. With the driver updated, we closed the boxes, quit Device Manager, unplugged the tablet and turned it off completely (just putting it to sleep isn't sufficient).

We then searched for Google's Platform Tools and downloaded them from Google's site for Android developers ([www.snipca.com/43439](http://www.snipca.com/43439)), clicking the 'Download SDK Platform-Tools for Windows' link.



Before unlocking the bootloader you'll see Android's warnings on security and data loss

## How I use my old tablet

I didn't use my day-to-day tablet in this test, as that's an iPad running the most recent version of iPadOS. However, having installed Ubuntu Touch on my Nexus, I rather like it – particularly as I use Ubuntu regularly on one of my computers. I'll be using this device as a secondary tablet, perhaps for use in the kitchen, or other places where I wouldn't want my main tablet getting grubby, wet or damaged.



Nik Rawlinson

What uses do you put your old tablet to?  
Please let us know: [letters@computeractive.co.uk](mailto:letters@computeractive.co.uk)

We then double-clicked the downloaded file to open it in File Explorer. This revealed that it contained a sub-folder called 'platform-tools'. Selecting this, we clicked 'Extract all' on the toolbar and extracted the compressed file to a folder called 'platform-tools' in our Downloads folder.

At this point, we turned on the tablet again while pressing the volume down button, which prevented it from launching the Android operating system. In this mode, the screen displayed configuration data and a 'Restart bootloader' graphic pointing to the power button, which we'd use in a few minutes.

We connected the tablet to our computer, then switched to the Windows Command Prompt by pressing Windows key+R, typing **cmd** and pressing Enter. We navigated to the extracted files by typing **cd Downloads\platform-tools** and pressing Enter, then typed **fastboot oem unlock** and pressed Enter.

At this point, our tablet asked us to confirm that we wanted to unlock the bootloader, warning us that doing so would allow us to install a new operating system (1 in our photo left), which could pose a security risk. It also warned that unlocking would delete all our personal data (2). Because this was what we wanted to do, we pressed the volume up button (the touchscreen was not enabled in this mode) to highlight Yes, then briefly pressed the power button to select it.

This returned us to the previous information screen, where the 'Restart bootloader' had been replaced by a graphic saying 'Start' – again pointing to the power button. We briefly pressed the power button, and our tablet went into a lengthy restart process during which it removed all our personal data. This took more than 30 minutes to complete.

Once rebooted, we then followed the instructions, selecting the language we wanted to use and connecting to our wireless network.

### 3 Turn on developer mode

If you've managed to get this far, well done. Having unlocked the tablet's bootloader, you now need to enable developer mode, which reveals options and tools that are otherwise kept separate for developers to use. Again, the process may vary for your device, so, if the following instructions don't work, search online for your device name followed by 'enable developer mode'.

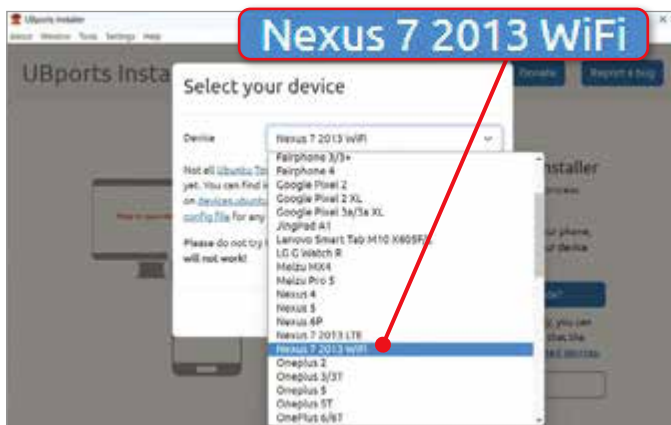
Open 'Settings' on your tablet, scroll down to 'About tablet' and tap it, then scroll down to 'Build number' and tap this seven times. 'You are now a developer!' will appear on screen.

Now tap the left-pointing arrow at the top of the screen to go back to the previous menu, then tap 'Developer options' or 'Developer settings', depending on which is shown on your screen. Look for an option for 'USB debugging', 'ADB' or 'Android Debug Bridge' and enable it. Android will warn you that this function is only intended for development purposes – ie, for software developers to add new tools. It's fine to use in this case, so tap OK.

Now, if you have it, enable the option for 'Allow OEM unlock'. At this point, you're ready to install Ubuntu Touch. Thankfully, things are more straightforward from this point on.

### 4 Install Ubuntu Touch

Now return to the Ubuntu Touch web page for your device that you opened in Step 1, then scroll down to the 'Windows & Mac' section and click Windows to download the installer.



Our tablet was reported as being unsupported, so we selected it manually



Swipe in from the left to open the full list of apps on Ubuntu Touch

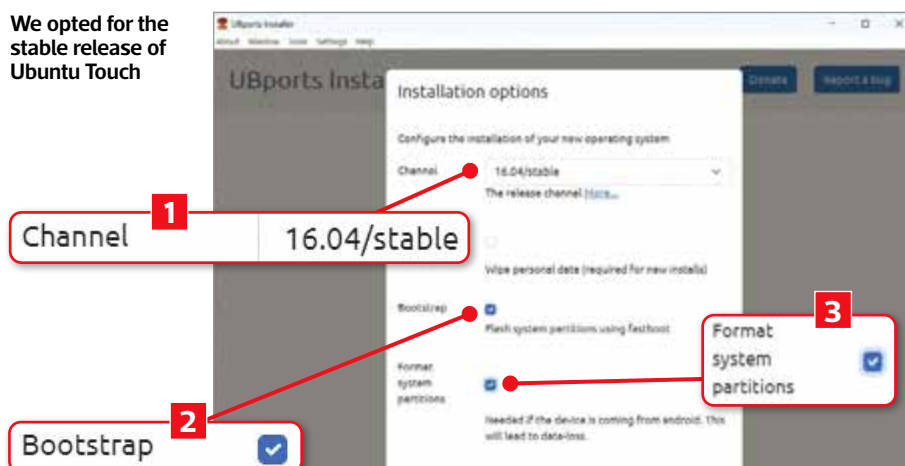
When it's finished downloading, launch the file. On our computer, Windows blocked it from running, warning that it might put our PC at risk. However, we clicked 'More info', followed by 'Run anyway' to launch it. We then ran into our next problem: our tablet wasn't detected.

If you experience the same, click 'Select device manually', then choose your tablet from the menu (see screenshot above) and click Select. Leave 'Ubuntu Touch' selected on the menu asking 'What operating system do you want to install?', then click Install.

You'll now see your installation options. The Channel menu lets you select whether you want stable or development versions of Ubuntu Touch. Leave '16.04/stable' selected (1 in our screenshot below) as this is the smoothest version. Also leave the box beside 'Bootstrap' ticked (2). Finally, tick the box to format the system partitions on the internal memory (3), then click OK.

The installer will download several files from the internet and send them (or 'push' them) to your tablet via the USB cable. When the installation process completes, you'll be prompted to report the outcome

We opted for the stable release of Ubuntu Touch

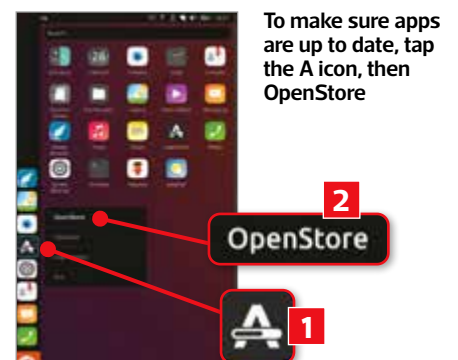


by clicking PASS if everything worked as expected, WONKY if you had a problem, or FAIL if it didn't work at all. If you don't know which applies, just click Dismiss. Meanwhile, in the background, your tablet will complete the remaining configuration steps, with a bar tracking its progress. Once it's finished, your tablet will launch Ubuntu Touch.

### 5 Update apps on Ubuntu Touch

Follow the instructions, choosing a language, connecting to your Wi-Fi network, selecting a time zone, entering your name, and applying a password or passcode. You can then start using your device. The operating system might be different to what you've experienced before, so it's worth spending a few minutes exploring how it works.

Swipe down from the top of the screen to access settings and notifications, just as you would in Android. Swipe up again to dismiss that mode. Swipe in from the taskbar that runs down the left side of the screen to open the full range of apps installed on your tablet (as shown in our screenshot top right), then swipe in from



To make sure apps are up to date, tap the A icon, then OpenStore

the right to close that view. Swipe in from the right when the apps menu isn't open to view running programs and to switch between them – then either tap an app thumbnail to switch to it, or tap the empty area surrounding them to dismiss this view.

You should now make sure your apps are all up to date. Tap the A icon on the taskbar (1 in our screenshot above) then tap OpenStore (2). It's worth noting at this point that the taskbar's contents will change depending on what you've recently launched. The default icons are 'pinned' to it, in the same way that you can pin icons to the taskbar in Windows.

Apps that you launch will be added to them and remain on the taskbar until you close them. To close an app, long-press its icon until a menu appears, then tap Quit. Doing this on the icon for a program that isn't already pinned to the taskbar will give you an option to pin it, while doing it on an icon that is already pinned gives you an option to unpin it. Unpinning doesn't uninstall the program from your device – it just means it doesn't remain in the taskbar when it's not running.

On launching OpenStore you'll be informed whether any updates are available. Tap 'Installed Apps', followed by the green 'Update all' button.

## Remove people from your photos using PhotoDemon

**What you need:** PhotoDemon 9

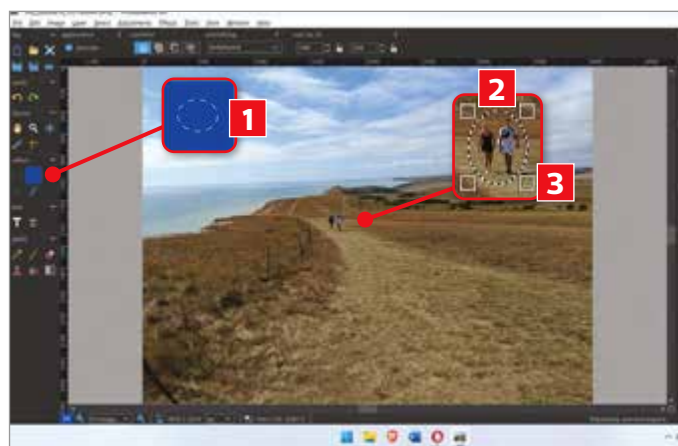
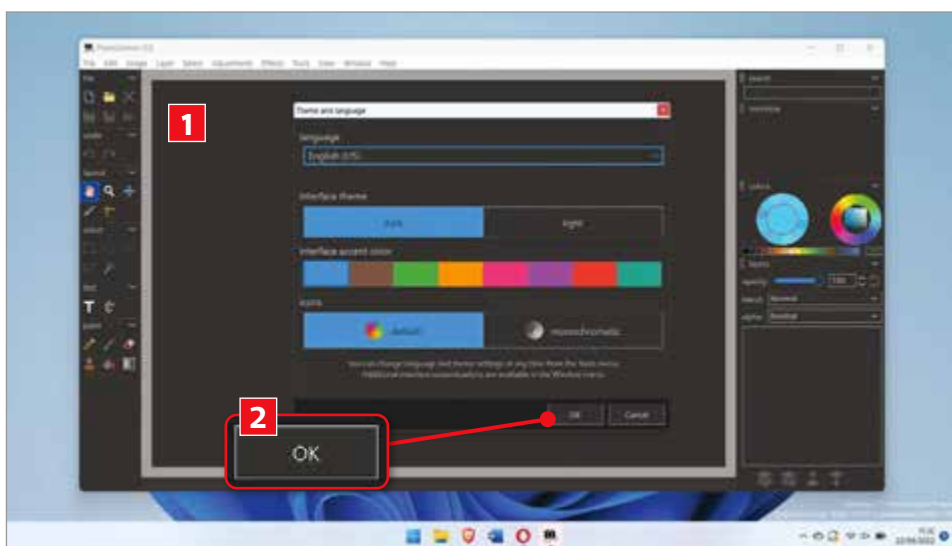
**Time required:** 30 minutes

**P**hotoDemon, a free download from [www.photodemon.org](http://www.photodemon.org), is one of the most accomplished photo-editing tools around – and it's free. It has features that rival many market-leading paid-for alternatives, and has just undergone a significant update. One of its new tools

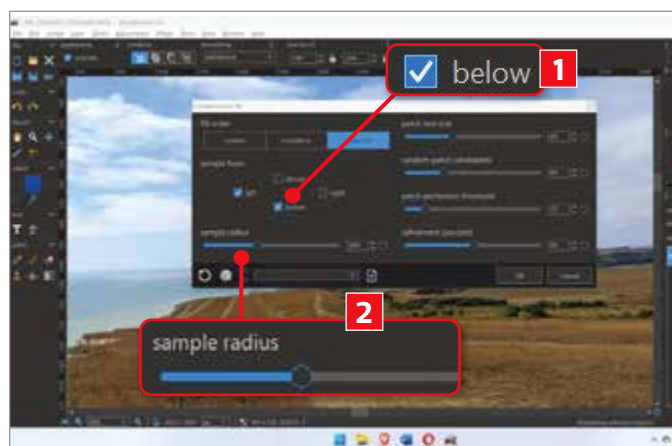
lets you quickly remove unwanted elements – such as people in the background – from your photos. The whole process is controlled using sliders and tick boxes, so you don't need any artistic talents – just a handful of photos that could benefit from a little editing.



**STEP 1** Go to [www.photodemon.org](http://www.photodemon.org) and click the download link at the top of the page, then run the installer. If Microsoft Defender pops up a warning to say it has 'prevented an unrecognised app from starting', click 'More info', then 'Run anyway'. Next, choose how you want the program to look by setting the options in the window that opens **1** then clicking OK **2**. Click 'Open image...', navigate to the photo you want to edit, then click Open.



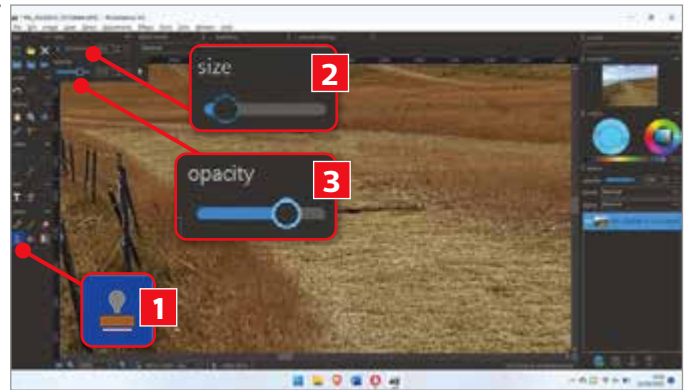
**STEP 2** Press the S key twice to select the elliptical selection tool, or click its button in the sidebar **1**. Click and drag across the photo to enclose the object you want to remove **2**. If you don't get it right first time, use the handles on the corners **3** to resize it. Be careful not to include anything you want to preserve. If the picture is too small to work with accurately, press Ctrl++ (that's Ctrl and the + button) to zoom in.



**STEP 3** Click 'Edit', followed by 'Content Aware Fill...', then experiment with the options as necessary, as each picture will require different tweaks. In particular, tick/untick boxes **1** to select which section of the background you want it to sample when filling the selected area, and use the 'sample radius' slider **2** to specify how far into the background the tool can go for the right sample. Click OK.

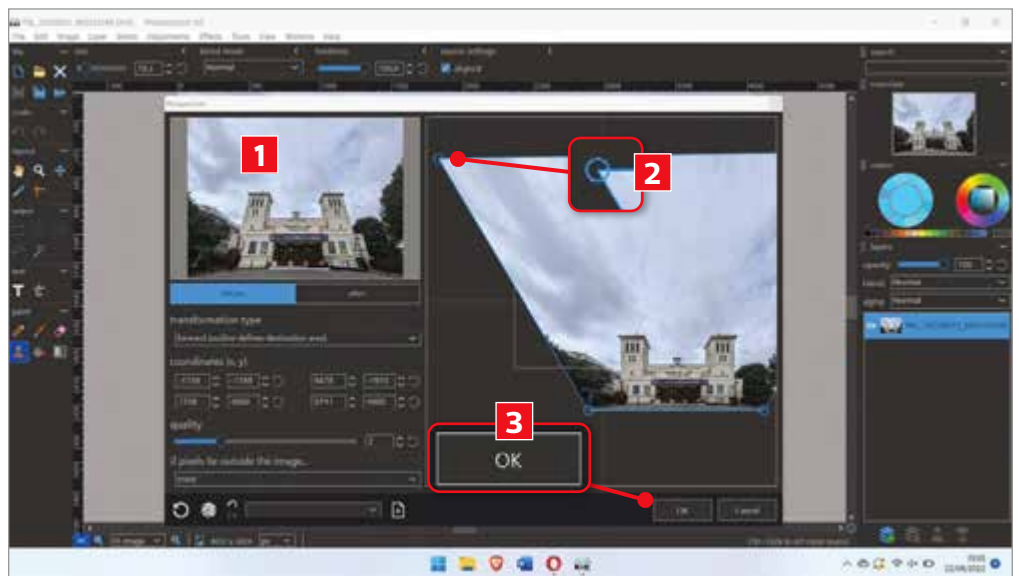


**STEP 4** We're pretty happy with the result of the settings in the previous step, which has accurately removed the walkers from our photo. In our comparison shot above, the original picture is on the right, and the edited version is on the left. If you're not happy with your own edit, press Ctrl+Z to reinstate the original, then repeat Step 3, and adjust the settings. We still need to tidy up a couple of patches of grass **1**, which we'll do next.



**STEP 5** Press Ctrl+D to clear the selection, then press C to select the clone stamp, or click it in the sidebar **1**. Click the 'size' slider **2** and adjust the brush size so it's slightly smaller than the object you want to erase, then drag the opacity level **3** down to around 70 per cent to soften the effect. Hold down the Ctrl key while clicking the area you'd like to clone over the problematic element (we clicked a patch of short grass), then click and drag (without holding Ctrl) across the object to be erased.

**STEP 6** Removing people and other objects from your photos isn't PhotoDemon's only new trick. Here we have a picture of a building, taken at such an angle that we've ended up with a skewed perspective **1**. To correct this, click File, Transform, then Perspective, and drag the handles at the corners of the image **2** to straighten up the walls, before clicking OK **3**.



**STEP 7** If the colours in your image need tweaking, use the new Photo filter tool by clicking Adjustments, Color, then 'Photo filter'. Choose a colour in the table **1** to warm up (make more red) or cool down (make more blue) the tones in the image, then use the density slider **2** to adjust the intensity of the effect. As you can see, we've applied a warming filter, which we think makes our original photo **3** far more appealing **4**.



## TIP OF THE FORTNIGHT

### Double-click to highlight text by words


As I get older and my hands more jittery, I find it harder to highlight words letter by letter using my mouse. So I'm relieved to have found a trick that lets you highlight text word by word, so you don't have to stop precisely after a letter.

If that sounds confusing, just open a document and highlight text in the usual way – by holding down your left mouse button and dragging across. You have to release the button at the correct moment after a letter to finish

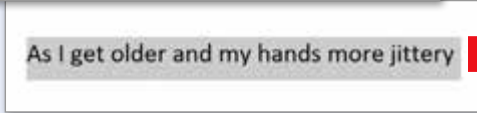
selecting.

Now try double-clicking the first word you want to select, then without releasing the click drag across the text. You should see that the highlighted text jumps from word to word – not by letter to letter. This makes it easier to time when you need to release the mouse click.

Hopefully the screenshots will illustrate this. The top one **1** shows highlighting



As I get older and my hands more jittery



As I get older and my hands more jittery

text by letter, while the bottom by word **2**.

Jonathan Reeves

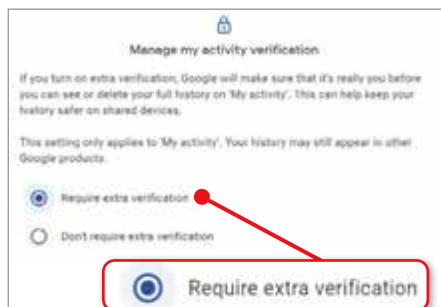


Jonathan wins a copy of our 2021 Back Issue CD [Buy it from us at www.snipca.com/42077](http://www.snipca.com/42077)

## PRIVACY

### Stop people seeing your Google activity

✓ Your article on stopping Google spying on you was reassuring (Issue 641, pages 60-61), but one setting you didn't mention was preventing anyone else from accessing the data about your Google activity. You can do this by signing



in at <https://myactivity.google.com>, clicking 'Manage my activity verification' and then selecting 'Require extra verification' (see screenshot below left). To confirm, click Save. This means that whenever you (or anyone) tries to see your Google activity you (or they) will have to type your password.



Martin Coghill

be astounded that the battery percentage had dropped by so much in such a short time – when I hadn't even used it! I now use the free version of the Android app Gauge Battery Widget ([www.snipca.com/43472](http://www.snipca.com/43472)) to give me a clear view of my battery percentage (pictured left), and

AppKiller (free version again, [www.snipca.com/43473](http://www.snipca.com/43473)) to regularly kill any unused apps, excluding those on my whitelist. Now I have not five per cent charge left in the evening, but 60 per cent. Why doesn't Google make it as easy on Android?

Steve Bown

## PHONES

### See battery percentage and remove apps

✓ I used to look at my phone so many times during the course of a day and

## Why I stopped using...

### Microsoft Office

✓ You regularly mention free alternatives to Microsoft Office, including in your answer to Geoffrey Cowan's question about Windows 11's S mode (Issue 639, page 69). I had Office on a subscription for my work for a number of years, using it mostly for editing and transferring documents.

### And what I use instead...

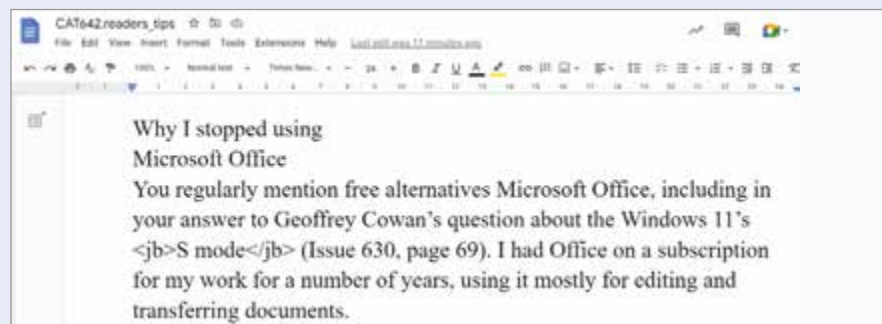
Now fully retired, I cancelled my Office subscription and started using the free Google Docs (pictured), and Sheets. All my documents and spreadsheets from

Office transferred perfectly, and the calculations and layouts still work without problems.

Google's apps on Android and iPad work well also, though using a computer is faster. I also previously used WPS ([www.wps.com](http://www.wps.com)), but found it controlled every document and PDF, and prevented all other relevant programs being used.

John Chilver

Tell us why you stopped using a website, app or program: [letters@computeractive.co.uk](mailto:letters@computeractive.co.uk)





## APPS

### Remove 'Continue' and 'Discover' from Amazon Fire tablets

✓ Many readers might already know that they can pay an extra £10 to buy an Amazon Fire tablet without adverts on the lock screen, but this still leaves apps at the top of your home screen in the Continue and Discover box. The former might be useful because they're apps you've used recently, but the latter are – in my experience – mostly recommended content and apps that are way off the mark.

I've turned them both off because they were just cluttering up my main screen. To do this, you first need to open Settings, then tap 'Apps & Notifications' followed by Amazon App Settings. Now tap Home Screens and you'll see two options. Turn off 'Recommendations' to remove just the Discover section, and turn off 'Continue and Discover Row' to remove both.

Alastair Salt

## OFFICE

### Add coloured borders to your drop-cap letters

✓ I recognised your instructions on adding drop-cap letters to a document in OnlyOffice (Issue 641, page 47), because it's something I do myself when designing newsletters. Perhaps you didn't have space to mention that you can add coloured borders to make the drop cap look more interesting.

Select the text, click the Insert tab, then click the Drop Cap button on the right. Choose where you want the drop-cap letter to appear (in the text or margin), then click the Drop Cap button again and choose Drop Cap Settings, followed by 'Borders & Fill' on the left. You can now choose a border to add by clicking one of the eight small boxes on the right (1 in our screenshot below), and a border colour using the dropdown menu at the top (2). You can also pick a background

## Reader recommends...

### Samsung Galaxy Tab S8

£699 from Currys [www.snipca.com/42240](http://www.snipca.com/42240)

✓ I use tablets mostly for watching videos, so having a big screen is vital. It's what attracted me to the Samsung Galaxy Tab S8, which your review said had an 11in screen (Issue 634, page 24). This is half an inch bigger than the Tab S4 I had been using.

I wanted a high resolution too, so was reassured by the Tab S8's 2560x1600 pixels. You mentioned that it's bright even in sunshine, and I can vouch for that because I've been using it all summer in the garden. It helps that the battery life is decent. I don't get the 12 hours you mentioned, but 10 hours isn't bad.

Videos run very smoothly, and the



tablet has never felt slow when I browse the web. It's an outstanding device.

Malcolm Hill

✉ Want to recommend hardware or software to fellow readers?  
Email [letters@computeractive.co.uk](mailto:letters@computeractive.co.uk)

colour behind the drop cap (3). In my example, there's a red border all around the letter, and a light-blue background (4).

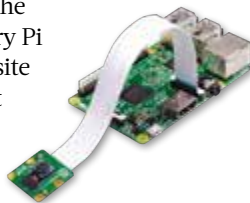
James Elwood

## MINI PCs

### Take time-lapse videos with Raspberry Pi

✓ I enjoyed David Ludlow's explanation of taking time-lapse videos (Issue 641, page 20). I also take time-lapse videos, but instead of a Nikon DSLR which David uses, I've set up the Raspberry Pi's camera module (pictured below) for this job. The results are just as good as using a 'proper' camera. The excellent Raspberry Pi Foundation's website has instructions at [www.snipca.com/43267](http://www.snipca.com/43267).

John Petts



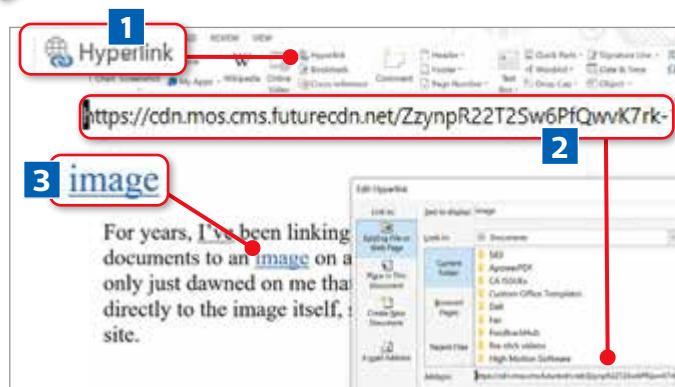
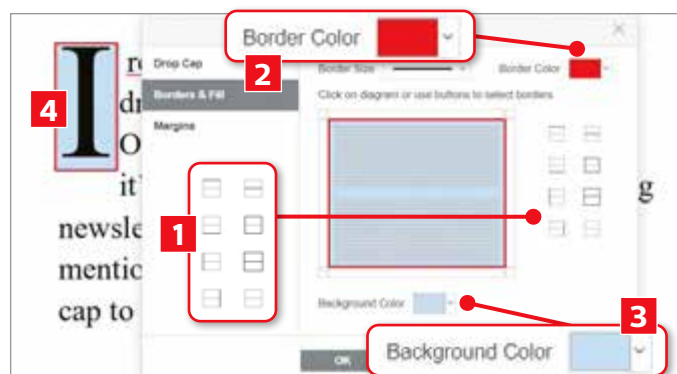
## OFFICE

### Link to online images from Word documents

✓ For years, I've been linking from Word documents to an image on a website, but it's only just dawned on me that you can also link directly to the image itself, so it appears separately from the site.

First, right-click the image on the site then select 'Copy image as' to save its URL. Now open your Word doc, select the text where you want the hyperlink to go, then click the Insert tab and select Hyperlink in the Links section (1 in our screenshot below). Now you just need to paste the image URL you saved into the Address bar at the bottom (2), just as you normally would when pasting any other URL. Now click OK, and the text you linked will appear coloured and underlined (3).

Chris Power



# Browser Tips

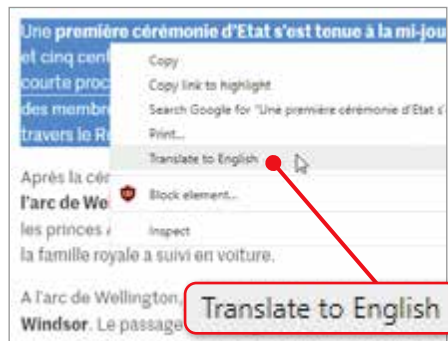
## CHROME

### Translate selected text on web pages

 Chrome 106, which was released on 27 September, doesn't introduce any notable new features – though we have heard some exciting things about version 107. However, it does add a hidden 'experiment' that gives you the useful ability to translate selected text on web pages. Currently, the browser lets you translate an entire page into English – or your preferred language – but with the new option you can translate specific sections of foreign text. Simply highlight the relevant passage, then right-click it and choose 'Translate to English' (see screenshot below).

To activate the experiment, type **chrome:flags** into the browser's address bar then press Enter. Find the entry Desktop Partial Translate, select Enabled in the dropdown menu next to it and click Relaunch. When Chrome reopens, you'll see the new 'Translate to English' option whenever you select and right-click text on a page.

The translated text is shown in a small window in the top-right corner of the



browser. This also includes the option to 'Translate full page' and lets you change the default language.

## CHROMIUM & FIREFOX

### Block cookie consent pop-ups on websites



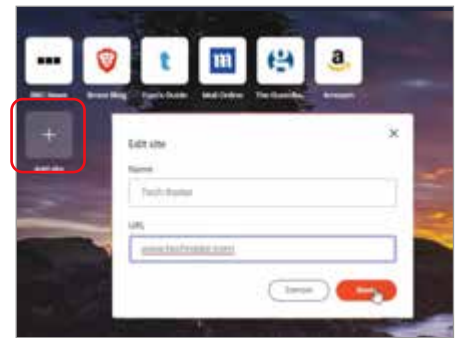
We were surprised and a little dismayed to learn that one of our favourite browser extensions, I Don't Care About Cookies, which hides EU-enforced cookie consent pop-ups on websites, was bought by Avast. Although Avast is a reputable tech-security company, it's also known to



collect user data via its products, most notoriously CCleaner, which it has owned since 2017.


Previously, I Don't Care About Cookies was maintained by an independent developer, but now that it's part of a large corporation it may no longer be as independent and effective at blocking those annoying cookie warnings. Reviews of the add-on on the Chrome Web Store ([www.snipca.com/43415](http://www.snipca.com/43415)) suggest many users are also suspicious.

If you no longer feel comfortable using I Don't Care About Cookies, you can switch to Consent-O-Matic. This extension for Chromium browsers ([www.snipca.com/43417](http://www.snipca.com/43417)) and Firefox ([www.snipca.com/43418](http://www.snipca.com/43418)) automatically answers cookie consent pop-ups for you, so you're not constantly pestered to agree to or reject websites' privacy policies. See our Workshop below to find out how to use Consent-O-Matic.



## BRAVE

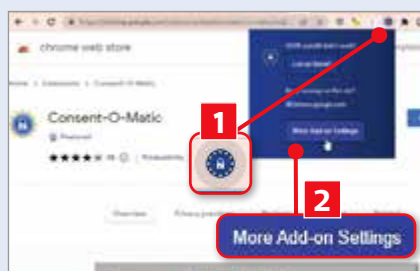
### Add more top sites to your New Tab page

 The latest version of Brave (1.43, released 1 September) increases the number of websites you can add to your New Tab page for quick, one-click access. Previously, the page featured tiles for up to 12 of your 'top sites', but this has now been quadrupled to 48. These are displayed 12 at a time, in two rows of six tiles, and you can move to the next block of sites by clicking the circles below the tiles or using your arrow keys.

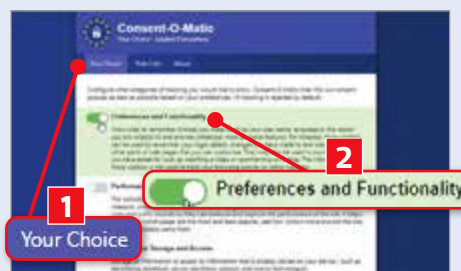
By default, Brave's New Tab page shows tiles for the websites you most frequently visit, but you can also add your favourite sites. Click 'Edit Cards' or 'Customize', select Top Sites and choose Favorites. To create a tile, click 'Add site' (see screenshot above), enter the name and URL of the website, then click Save.

To stop sites appearing on your New Tab page, either click the pencil icon in the top-right corner of their tiles and select Remove, or click the three-dot icon and choose 'Hide top sites' to remove them all.

## WORKSHOP Automatically hide cookie consent pop-ups



**1** Install Consent-O-Matic in your Chromium browser or Firefox. By default, the extension rejects all site cookies, but you can set your preferences by clicking its toolbar button **1** and choosing 'More Add-on Settings' **2**.



**2** On the Your Choice tab **1**, select the categories of cookies you're happy to allow. For example, 'Preferences and Functionality' **2** enables sites to store data such as your login details and personalisation settings.



**3** Consent-O-Matic uses a set of rules to detect and hide cookie pop-ups. Add another rule list by clicking the Rule Lists tab **1** then Add List **2**. Get the list used by I Don't Care About Cookies from [www.snipca.com/43419](http://www.snipca.com/43419).

## BEST EXTENSION FOR...

## Identifying fake Amazon reviews

### Fakespot

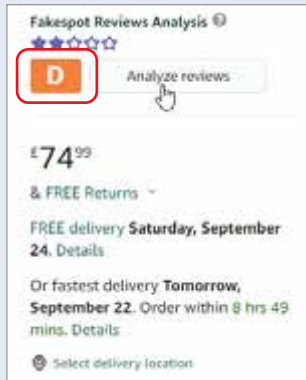
Chromium

[www.snipca.com/43421](http://www.snipca.com/43421)

Firefox

[www.snipca.com/43422](http://www.snipca.com/43422)

Customer reviews on Amazon are very helpful for deciding whether a product is worth buying, but they can't always be trusted. Some users are paid to give overly positive or negative reviews to specific items and, despite Amazon's best efforts to weed out fraudsters, it's still



a big problem.

Fakespot analyses the reviews on Amazon product pages to tell you if they can be trusted. As well as providing an overall 'authenticity' grade (see screenshot), it offers insights such as the percentage of reliable reviews, whether there are an anomalous number of opinions and the level

of deception involved. It also summarises the pros and cons of

an item, highlights the 'least authentic review' and includes a price history. Fakespot isn't always accurate, but it's good at spotting fake reviews of products from lesser-known brands.

### If you don't like that, try... ReviewMeta

Chromium & Firefox

[www.snipca.com/43424](http://www.snipca.com/43424)

This extension also analyses Amazon customer reviews and gives them an authenticity grade. However, it hasn't been updated for four years, so it doesn't always work.

## CHROMIUM

### Get instant answers to Google search queries



Although Google Search is renowned for its speed and accuracy, its tendency to promote certain sites over others means you often need to scroll through several results to get the answer to your query. A new extension called Suggesty ([www.snipca.com/43413](http://www.snipca.com/43413)) aims to speed up your searches by providing 'human-like' answers directly above your Google results.

Suggesty works using the AI technology GPT-3 (Generative Pre-trained Transformer 3), which specialises in performing natural-language tasks. Simply type a query into Google in the usual way and the extension will generate an instant answer, so you don't need to wade through irrelevant results. All queries are processed anonymously and answers are marked 'by Suggesty' (see screenshot below)

We were impressed by the concise and reliable information that Suggesty provided. For example, when we asked



'When is King Charles III's coronation?' it told us: "There is no set date for King Charles III's coronation, as it has not yet been announced", whereas Google just linked to news stories asking the same question. Other answers weren't as helpful – when we enquired 'How much is an iPhone 14?', the extension merely responded that it "costs more than an iPhone 13" – but Suggesty is definitely worth a try if you want to save some time using AI.

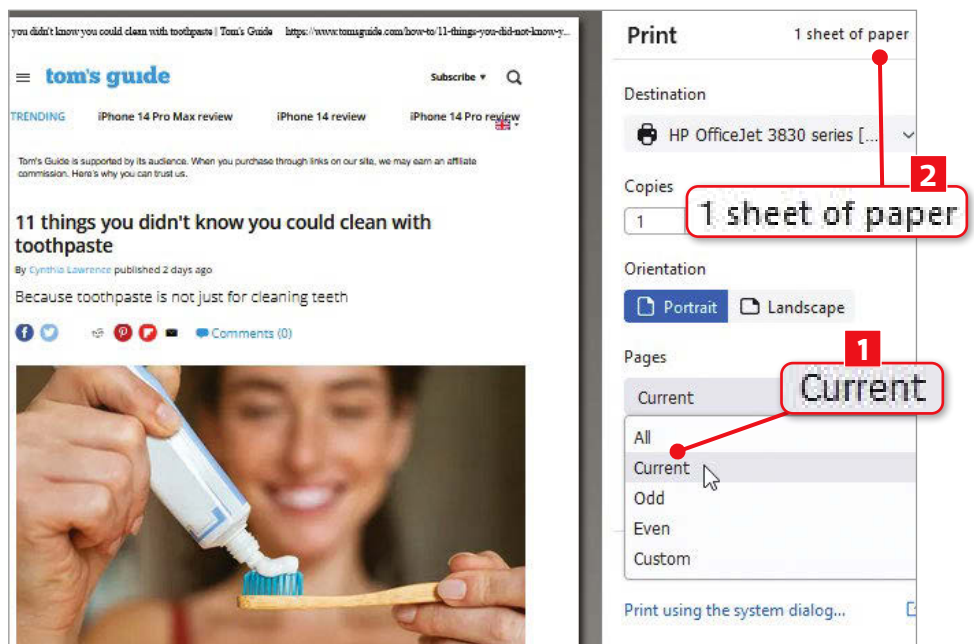
## FIREFOX

### Print only the current web page

As with the latest versions of Chrome and Edge, Firefox 105, which was released on 20 September, is rather light on new features, but it does

add a useful new option for printing web pages. Rather than print the whole page, which often requires several sheets of paper and includes irrelevant content below the main article, or choose Custom to specify which pages to print, you can now print only the current page shown in the browser.

Open Firefox's Print settings by clicking Print in its main menu or File menu, or by pressing Ctrl+P, and select Current in the dropdown Pages menu (1 in our screenshot below). The print preview image will adjust accordingly and Firefox will tell you that the print job requires only '1 sheet of paper' (2). You can then click Print to print the current page without wasting ink and paper.



# Phone and Tablet Tips

## ANDROID & iOS

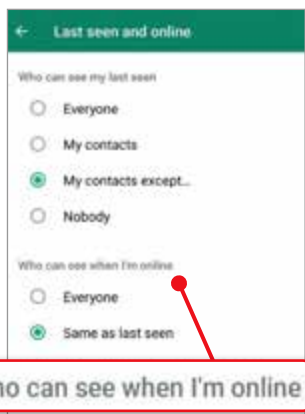
### Hide your online status in WhatsApp

 In Issue 635 (page 44), we explained how you can hide your 'Last seen' status in WhatsApp to stop people knowing when you last used the chat app. This privacy feature has now been expanded to let you conceal that you're online, allowing you to read, write and send messages without being drawn into unwanted conversations.

To access the new setting on your Android phone, tap the three-dot 'More options' icon and choose Settings, then Account and select Privacy. On your iPhone, tap Settings, Account then Privacy. Press 'Last seen and online' and choose either Nobody or 'My contacts except...' under 'Who can see my last seen'. With the second option, select the people you want to hide your online status from. Choose


'Same as last seen' under 'Who can see when I'm online' (see screenshot right) and you'll now be able to use WhatsApp more privately.

Note that when you exclude people from viewing your 'Last seen' and online status, you won't be able to see when they were or are online either, but that seems only fair.



## iOS

### View the battery percentage on your iPhone

 Android phones helpfully tell you how much battery life is remaining as both a percentage and an icon showing the relevant amount. Older iPhones also offered this feature, but Apple dropped it to save space when it introduced the 'notch' – the cutout section at the top of the screen where the front camera lens is located. So we're pleased that iOS 16, which was released last month, restores the battery-percentage indicator, giving you a more precise idea of how much charge your phone has left.

To activate the battery-percentage indicator, open Settings on your iPhone and tap Battery, then switch on the Battery Percentage option (1 in our screenshot above right). You'll now see the percentage of battery life remaining in a battery-shaped icon in the top-right corner of the screen (2). Annoyingly, you can't have both the percentage and a visual indicator of how much battery is remaining – it's one or the other – but this will reportedly be addressed in iOS 16.1.


Additionally, some iPhone models are unable to display the battery percentage, including the iPhone XR, iPhone 11,



iPhone 12 Mini and iPhone 13 Mini. However, you can still see the figure by swiping down from the top of the screen to open the Control Centre.

## ANDROID

### Lock your incognito tabs in Chrome

 When you want to browse the web privately on your phone or tablet, Chrome's **incognito mode** prevents details of the sites you visit from being stored. However, nosy parkers can still peek at your screen to see the private content you've been viewing. A new option in the Android browser stops this happening by letting you lock incognito tabs so they can only be unlocked using your fingerprint or screen-lock PIN.

To activate the new feature, type **chrome://flags** into Chrome's address bar and press Enter to access the Experiments page. Search for the entry **Enable device authentication for Incognito**, tap the dropdown menu below it and choose

## BEST NEW APPS

## What you should install this fortnight

### MJ PDF Reader

Free

Android [www.snipca.com/43476](http://www.snipca.com/43476)

Free to use and free of ads, this lightweight PDF reader is an excellent way to view PDFs on your phone or tablet. It



offers dark and full-screen modes, lets you copy text from a page and can print files over Wi-Fi. The app also remembers the last page you read, which is useful for PDF books.

### Opal

Free\*

iOS [www.snipca.com/43474](http://www.snipca.com/43474)

This digital-wellbeing app stops you being distracted by your iPhone when you need to get on with important tasks or go to sleep.



Opal blocks select apps and websites between specific hours or limits how much you can use them for. It has just been updated to work with the new Screen Time feature in iOS 16.

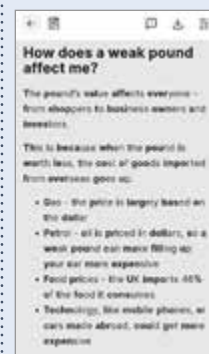
### Bionic Reading

Free

Android [www.snipca.com/43477](http://www.snipca.com/43477)

iOS [www.snipca.com/43478](http://www.snipca.com/43478)

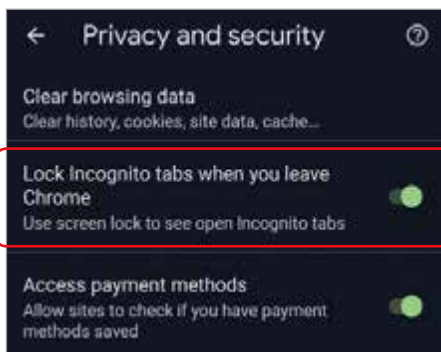
Bionic Reading helps you read text faster by highlighting the first letters of words in



bold and letting your brain complete the rest. Its official app applies this to content you write, and import from documents and web pages. You can download the result in EPUB or PDF format and send it to your Kindle.

\*Contains in-app purchases

# Brilliant things to do on your device



Enabled. Relaunch the browser, open the three-dot menu and select Settings, then tap 'Privacy and security'. Switch on the option 'Lock Incognito tabs when you leave Chrome' (see screenshot above). When you try to return to an incognito tab, you'll now be prompted to tap 'Unlock Incognito' and verify your identity using your fingerprint or PIN – nobody else will be able access the private page.

## ANDROID Test the signal strength around your home

In our 'Why your Wi-Fi is still slow' Cover Feature in Issue 635 (page 56), we looked at three apps for measuring the strength of your Wi-Fi signal. Net Signal ([www.snipca.com/43480](http://www.snipca.com/43480)) is a similar tool, which helps you identify wireless 'dead spots', and it has now been updated to also work with 3G, 4G and 5G signals.

Install Net Meter and grant it permission to access your phone's SIM card. When it opens, you'll see a colour-coded speedometer that shows the current strength of your signal in dBm (decibel milliwatts) – the higher the value, the weaker the signal. Move around your home while holding your phone, and see how the speed changes in different locations.

You can switch between Wi-Fi and SIM (see screenshot left) to compare the speeds of your wireless and mobile networks, and switch on the app's new **dark mode** to make it easier on your eyes.

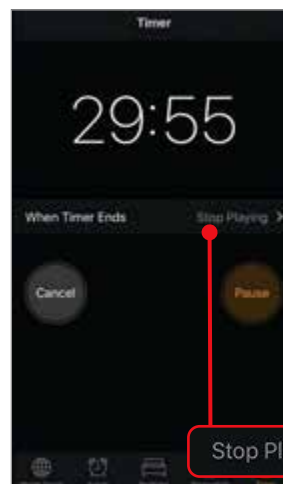
Net Meter is free to use, but you can remove its ads by upgrading to the Pro version for 49p ([www.snipca.com/43481](http://www.snipca.com/43481)).



## iOS Set a timer to stop music and video

If you often listen to music or watch videos on your iPhone or iPad just before you go to sleep, you can set a Stop Playing timer so you don't waste battery life when you drop off. This works with apps including Apple Music, Spotify, Netflix, YouTube and Prime Video.

To set a timer, open the Clock app and tap Timer



in the bottom-right corner of the screen. Select a length of time, press When Timer Ends, then tap Stop Playing (see screenshot left). Press 'Set' in the top-right corner and when the timer ends, whatever you're playing will stop, and your device will automatically lock.

Remember to change the setting from Stop Playing to a sound when you want to set a traditional timer.

## BEST APPS FOR...

### Tracking wildlife

#### Ocearch Shark Tracker

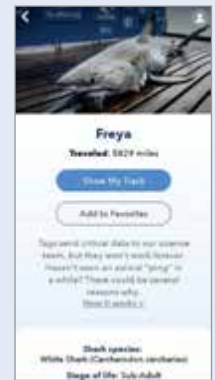
Free

Android [www.snipca.com/43484](http://www.snipca.com/43484)

iOS [www.snipca.com/43485](http://www.snipca.com/43485)

This app lets you track the whereabouts of dozens of sharks, whose dorsal fins have been tagged with sensors. Tap a marker to learn more about the shark it represents, including its name, weight, size, species and the date it was tagged. Add sharks to your favourites and view the distance and routes they swim.

**Best For** Tracking shark movements



#### BirdTrack

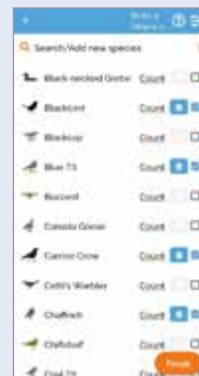
Free

Android [www.snipca.com/43487](http://www.snipca.com/43487)

iOS [www.snipca.com/43486](http://www.snipca.com/43486)

Recently redesigned and improved, this app lets you log sightings of birds you spot around the UK and view any recorded by other users, as a means of tracking migration movements and species distribution. Tick off birds as you see them and keep count of how many you spot.

**Best For** Recording bird sightings



#### iNaturalist

Free

Android [www.snipca.com/43488](http://www.snipca.com/43488)

iOS [www.snipca.com/43489](http://www.snipca.com/43489)

Although iNaturalist's primary purpose is to help you identify flora and fauna, it's also useful for tracking the location of different species. Choose 'Explore' in the app's main menu, then tap Species and select one of nearly 7,000 plants and animals to view the areas that species has recently been observed in.

**Best For** Viewing locations of species

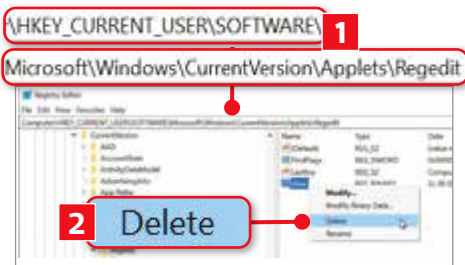


### WINDOWS 10 & 11

#### Reset your registry to reverse any changes

It's reasonably easy to reset your registry to its default state, reversing any changes you've made to its appearance, such as the font size or position of windows. First, press Windows key+R to open the Run box, then type **regedit** and press OK, then Yes.

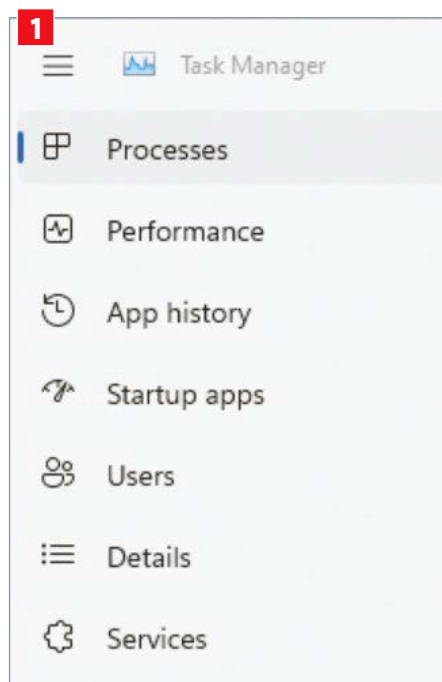
Next, navigate to **HKEY\_CURRENT\_USER\Software\Microsoft\Windows\CurrentVersion\Applets\Regedit**, or copy this path from [www.snipca.com/43535](http://www.snipca.com/43535) and paste it into the registry editor's address bar (1 in our screenshot below). Now right-click both LastKey and View on the right and select Delete (2). Click 'Yes' when asked to confirm, then close the registry editor and restart your PC.



### WINDOWS 11

#### Master the redesigned Task Manager

The tool that received the biggest redesign in version 22H2 of Windows 11 was Task Manager, with its tabbed options moving from



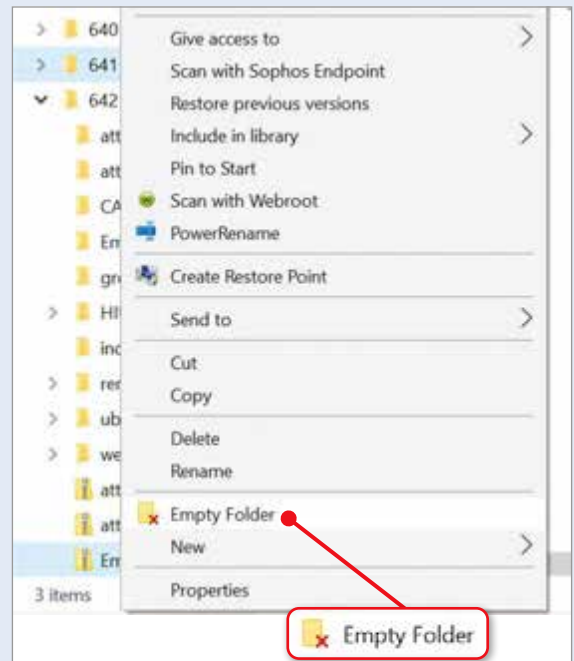
### WINDOWS 10 & 11

#### Add an 'Empty Folder' option to your right-click menu

You can add an 'Empty Folder' option to your right-click menu to make it faster to empty a folder's contents.

To do this, you'll need to install a tool from the site MajorGeeks.com. Visit [www.snipca.com/43538](http://www.snipca.com/43538) then click the Download Now button at the top (with the military insignia). Once it has downloaded, extract the files from the Empty Folder Context Menu folder, then double-click 'Empty Folder Context Menu - ADD.reg' to run the program.

You'll now see several messages asking you to confirm that the program can make changes to your PC - click Yes or OK to all of them. Now right-click a folder you want to empty, and you'll see the option to Empty Folder (see screenshot). Simply click



this and all the contents from the folder will be removed.

If you ever want to remove the program itself, run 'Empty Folder Context Menu - REMOVE.reg' from the Empty Folder Context Menu folder.

along the top to down the left-hand side, and icons being added to represent each one. If you're finding it hard to work out what each icon does, click the three-line menu (sometimes called the 'hamburger' menu) at the top and you'll reveal their names - Processes, Performance, 'App history' and so on (see screenshot 1).

Another change is that the functions End Task, Run New Task, Start and Stop have been moved to the top right (2).

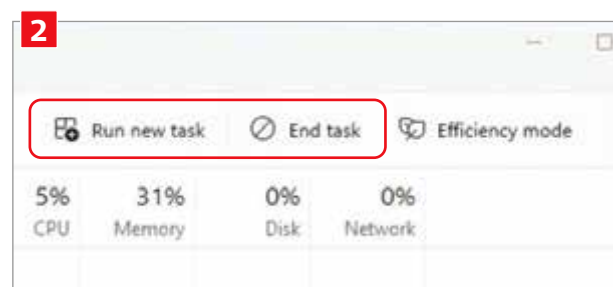
The options to configure Task Manager are now contained on one page, which you open by clicking the cog icon at the

bottom left. Settings include selecting whether the Task Manager window appears on top of your desktop or is minimised to the taskbar, and choosing which option is the default when you open the tool. These settings were previously available in the Options and View dropdown menus.

### WINDOWS 11


#### Copy and paste file paths

Among all the excellent features that have been added to Windows 11 recently, it's easy to overlook handy tweaks such as new keyboard shortcuts. One great example is Ctrl+Shift+C, which copies the file path of a file you've selected, so you can easily paste it in a document or program such as Notepad.

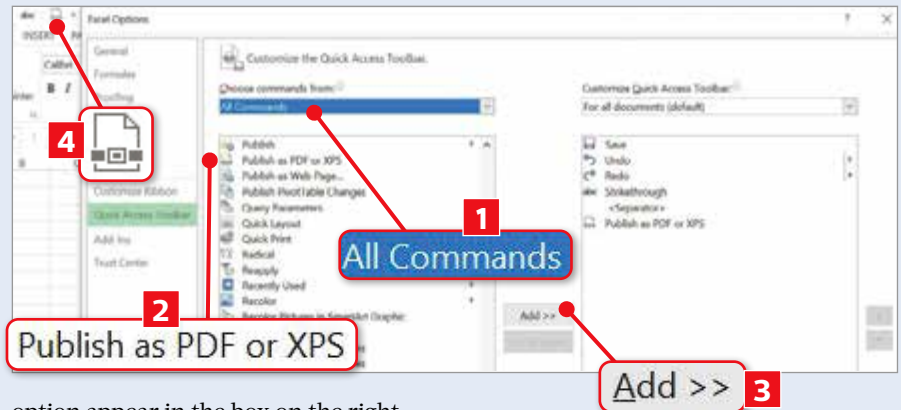


## MICROSOFT OFFICE

### Add 'Publish as PDF' option to toolbar

 If you often have to convert Word documents, Excel spreadsheets or PowerPoint presentations into PDFs, it might make sense to add this option to the Quick Access Toolbar, which sits above the ribbon at the very top.

To do this, click File in one of the three programs, then Options at the bottom. Now click Quick Access Toolbar in the left-hand menu, and in the 'Choose commands from' dropdown menu select All Commands (1 in our screenshot). Next, scroll down the list below to find and select 'Publish as PDF or XPS' (2), then click Add (3) in the middle and you'll see the




option appear in the box on the right. Click OK, then check the Quick Access Toolbar and you'll see the icon for 'Publish as PDF or XPS' (4). Now, simply

click this icon to save as a PDF, or as an XPS file, which is Microsoft's alternative to PDF.

## ONLYOFFICE

### Merge cells in a spreadsheet

 There are several ways to merge cells in an OnlyOffice spreadsheet, which is useful when you need to stretch text across a number of them – such as when adding a long name to the top of a table.


For each method explained here you need to click on the cell at the start of the range you need to merge, then hold down the left mouse button and drag across until you've reached where the merge ends. Now click the Home tab at the top, then the 'Merge and Center' icon (1 in our screenshot below) and you'll see four options. The simplest is Merge Cells (2), which does exactly that, but no more.

Two other options give you more control: 'Merge & Center' moves the text to the centre of the merged cells (3); Merge Across aligns the text to the left, which looks neat when you have several rows of cells you want to merge (4). The fourth option is Unmerge Cells, reversing any

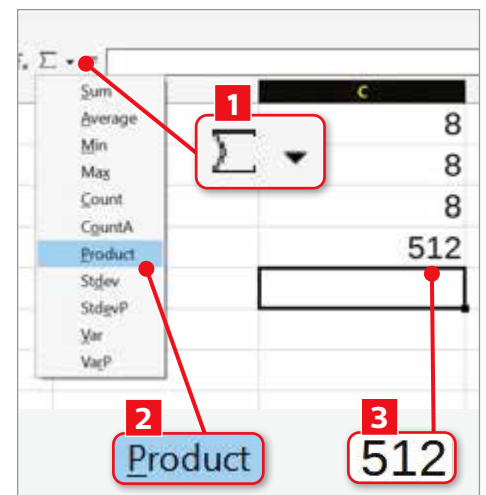
merging you've made.

## MICROSOFT WORD

### Make text automatically fit your table


 It can be fiddly getting text to fit neatly inside tables in Word, so let the AutoFit option do it for you. Select and right-click your table, then click AutoFit to see three options (see screenshot below). Clicking 'AutoFit to Contents' makes each column shrink or expand to fit what's inside. If you then add or remove data, the columns will automatically adjust according to the cell with the largest amount of content.

If you select 'AutoFit to Window', your table will expand to the right and left margins of your document, and the columns will be the same width by default. The third option, 'Fixed Column Width', keeps the columns at their new sizes after you've changed their sizes, preventing Word from changing them.

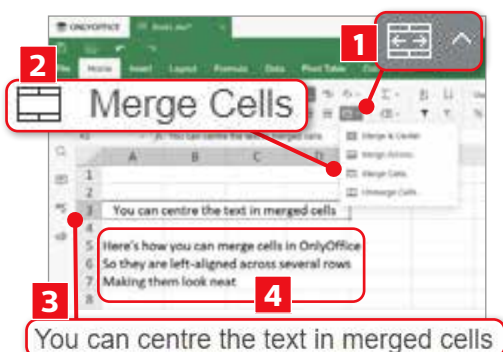
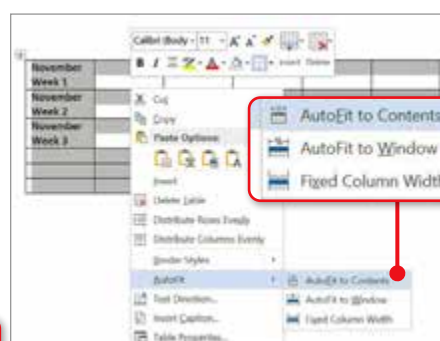


## LIBREOFFICE CALC

### See more options in the Autosum menu

 One new option in LibreOffice 7.4 that you may have missed is more functions when you click the Autosum button (1 in our screenshot above) in Calc. Previously you could choose Sum, Average, Min, Max and Count. You can now also choose CountA, Product, Stdev, StdevP, Var and VarP.

The most useful is probably Product (2), which multiplies the numbers and provides the answer – it's 8 x 8 x 8 in our screenshot, equalling 512 (3). The CountA function counts all cells that contain any information, whatever it is. Stdev and StdevP are used to calculate standard deviation, while Var and VarP work out the variance of a sample of data.



# In The Club



Run a club or society? Here's how your tech can make it easier

## Create an email signature for your club

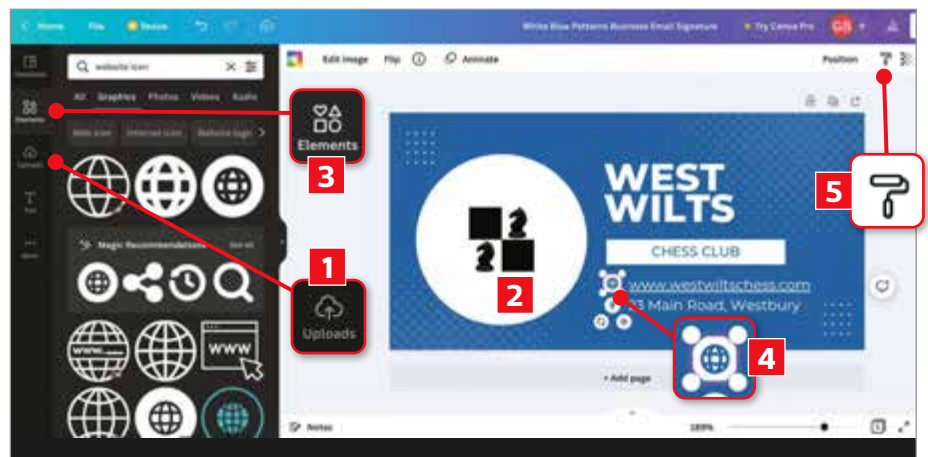
It's easy to create a **plain-text** signature in whichever email program you use, but spending the time to make a graphical signature gives your messages a professional touch and adds credibility to your club. It's also a great way for members to quickly identify official club messages among the deluge of messages they receive. Here, we'll explain how to do this using the free online design tool Canva.

### Select a signature template

First, create an account at [www.canva.com](http://www.canva.com). This is free, though some of the email templates require a paid-for Pro membership (these are indicated by a small crown icon in the template's thumbnail image). There are, however, enough free email templates to create an impressive signature. Canva also lets you log in with your existing Google or Facebook account, which means there will be one less set of login details for you to remember in the future.

You can create your own designs from scratch, but it's much easier to add your club's logo to one of Canva's existing templates. In the search box type **email signature** to see what's available and find one that most closely matches your club's style. Click the one you've chosen to be taken to the editing page.

Now click the Uploads button (1) in our



Drag your club's logo on to your signature, and add an internet icon next to your website's address

screenshot above) in the left-hand panel, then the 'Upload files' button. Find your logo on your computer (ours is for a chess club), then drag it over the template's existing logo or photo, making it pop into the existing frame (2). You can change every element in the template. For example, to edit the text simply click on it and start typing. If nothing happens when you click it the text might be below a graphic, so move this to the side of the page and try again.

We wanted to add an internet icon next to our email address, so we clicked Elements (3) in the side panel then typed **website icon** into the search bar and found one we liked - the globe icon (4).

We then dragged it over to our club's website address (URL). To make the globe icon match the style of the three icons that are already part of our signature, we clicked one of them, then clicked 'Copy style' (5) followed by the globe icon.

Once you've finished, download the signature by clicking Share in the top-right corner then Download, then select your preferred file type.

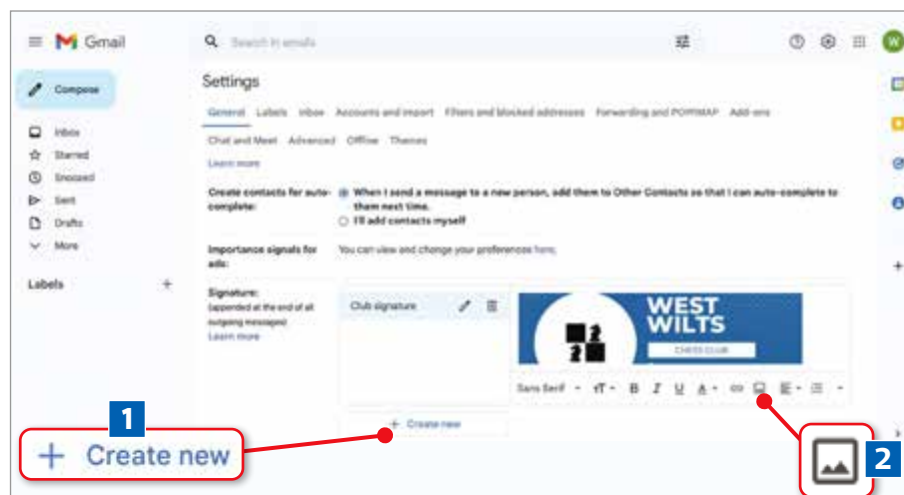
### Add your signature to your email

Now you just need to open your email program and add your signature to it. For versions of Outlook included with Office, follow Microsoft's instructions at [www.snipca.com/43411](http://www.snipca.com/43411), while for Outlook.com visit [www.snipca.com/43412](http://www.snipca.com/43412).

In Gmail, click the top-right Settings cog, then 'See all settings'. Now click the General tab, scroll down to the Signature section, then click 'Create new' (1 in our screenshot left) and give the signature a name. Finally, click 'Insert image' (2).

You can also make your whole email signature a clickable link, so it takes people to your club's site - just click the hyperlink button (3) and type the URL.

In Gmail make sure you scroll all the way to the bottom of the Settings page, then click Save Changes. Now, when you create a new email for your club, you'll find the new signature is automatically added to the bottom of your message.



Click 'Create new', then name your signature and click 'Insert image'



# What's All the Fuss About...

## Kindle Scribe

The first Amazon e-reader with all the write stuff

### What is it?

Amazon's new ebook reader that you can write on.

### What - with a pen?

No, silly. It has a stylus that Amazon claims lets you "read and write as naturally as you do on paper". It's being released on 30 November, but you can pre-order now from [www.snipca.com/43510](http://www.snipca.com/43510).

### So you can scribble over ebooks?

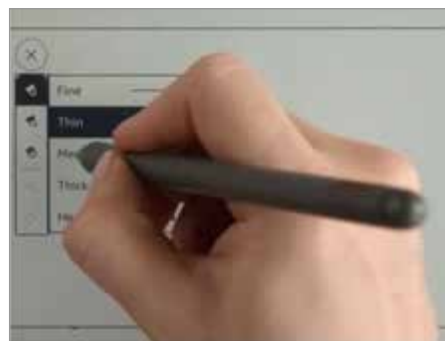
Well, no - you can't obscure what's written in them. But what you can do is take notes as you read. These are automatically organised by book, keeping them in one place so you can easily return to them, and send them by email over 2.4GHz or 5.0GHz Wi-Fi.

### Is that easy to do?

It certainly looks so on Amazon's video ([www.snipca.com/43512](http://www.snipca.com/43512), pictured below). You start taking notes by tapping the screen with the stylus, and choose the thickness of the written text (from Fine to Heavy). As well as notes, you can create diaries and lists, written on a variety of templates including lined paper, grid paper and checklists. It works with third-party software as well.

### Which ones?

Amazon gives the example of annotating PDFs and documents created in Microsoft Word. You send them to the device



You can choose the thickness of your text when you make notes



through your browser, or via the Kindle app using the Share button on your iOS or Android device. It supports most popular formats, including **TXT**, **HTML**, **PNG**, **GIF**, **JPEG** and **EPUB**.

### How big is the screen?

Very big. At 10 inches it's the largest Kindle yet, dwarfing the seven-inch Kindle Oasis, previously the biggest. The wide bezel one side makes the device even bigger. Just as important is the 300 pixels-per-inch (ppi) resolution, which Amazon says means there's "no compromise between the reading and writing experience".

In the past, bigger e-reader screens using **E Ink** have had a lower resolution, such as the Kobo Elipsa's 227 ppi ([£349 www.snipca.com/43517](http://www.snipca.com/43517) from Amazon). The adjustable light should make it ea comfortable to read and write at whatever time of the day.

### What about battery life?

Amazon claims that on a single charge (by **USB-C**) it lasts 12 weeks if reading 30 minutes every day, and three weeks for writing - with Wi-Fi off and the light setting at 13.

### Do you have to pay extra for the stylus?

No, but you must choose between the Basic and Premium Pen when ordering.

### Wait, so it does have a pen? Not so silly now, am I?

Well, Amazon brands them as Pens, but then Apple calls its stylus a Pencil ([www.snipca.com/43518](http://www.snipca.com/43518)), so what's in a name? Both versions attach magnetically to the Scribe, with the Premium model adding an eraser at the top and a Shortcut button for switching between modes, such as pen and highlighter.

### How much extra is the Premium Pen?

It adds £30 to the price of the cheapest Scribe, which is £329.99 for 16GB. There are 32GB (£379.99) and 64GB (£409.99) versions, but these come with the Premium Pen only. Both come with lots of tips.

### On how to use the device?

No, *physical* tips - five replacement ones for the stylus in case you press too hard on the screen. So, take notes, but also take care.

# Upgrade YOUR PC

# FOR FREE!

Don't pay for expensive new components to improve the performance of your PC. **Robert Irvine** explains how to tweak your system to make old hardware run as good as new



## WHAT YOU CAN DO

- Increase the amount of available memory on your PC
- Stop your browser hogging system resources
- Check if you can **overclock** your processor
- Boost the performance of your **graphics card**
- Free up space by compressing your hard drive
- Optimise your monitor's screen settings
- Improve the audio quality of your **sound card**

**W**hen your PC starts slowing down, hanging when performing everyday tasks or displaying distorted images, it's logical to conclude that you may need to upgrade its memory, processor or graphics card. Although replacing a failing component is cheaper than buying a new PC, it's still an expensive and confusing task.

First you need to ensure that any new kit you install is compatible with your existing hardware. This involves carefully inspecting specifications and shopping around for the best deal – expect to pay between £50 and £80 for an extra 8GB of **RAM**, from £100 for a new processor and at least that amount for a decent graphics card. You then need to go through the

hassle of removing your PC's case and fiddling with its insides – which may not even be possible with a laptop. Although some upgrades are straightforward – for example, memory modules can usually be slotted right in – others, such as replacing a **CPU** or motherboard, are more delicate and risk damaging rather than enhancing your computer.

Thankfully, you can fix many problems with your system without resorting to pricey and tricky physical upgrades. By tweaking default settings, unlocking hidden options and installing powerful third-party tools, you can effectively upgrade your PC for free. And while the hacks we suggest aren't a direct substitute for installing new components, they can make your old hardware run as good as new.

## FREE UP SYSTEM MEMORY

### Reclaim memory from background processes

Windows is supposed to manage memory usage on your PC automatically, by switching to **virtual memory** when you run out of physical RAM, and by freeing up memory from inactive programs. But if you open Task Manager (by pressing Ctrl+Shift+Esc) and look at the Memory column, you'll see there are plenty of processes currently using RAM in the background. Some of these are likely to be tools you recently closed, never opened or don't even recognise, but which are cumulatively consuming a significant amount of available memory.

Rather than let your PC slip into slower virtual memory, you can reclaim RAM using Wise Memory Optimizer ([www.snipca.com/43238](http://www.snipca.com/43238)). This free program displays a pie chart showing you how much memory is in use and how much is available. Click its Optimize button (1 in our screenshot above right) – or right-click its taskbar icon and choose Optimize – to free up as much RAM as possible from background processes.

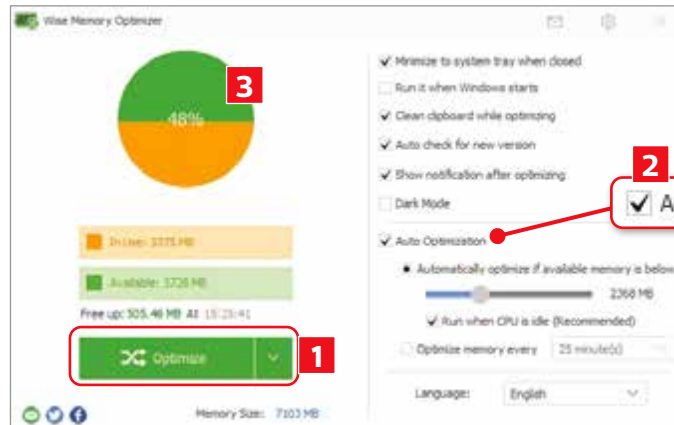
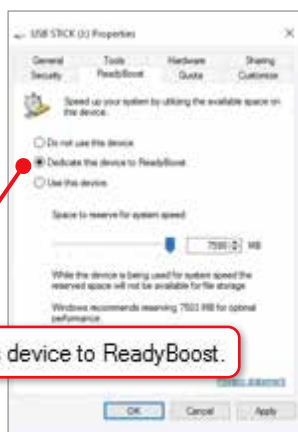
You can also optimise memory automatically by clicking the Settings cog and ticking Auto Optimization (2). Decide whether to release RAM when available memory falls below a certain threshold or to do so at regular intervals, and set the tool to run when Windows starts to prevent freezes and crashes.

Wise Memory Optimizer reduced our PC's memory usage from 95 per cent to 48 per cent (3), though this gradually crept back up to 66 per cent. We confirmed these figures by checking Task Manager.

### Increase your PC's memory with a USB stick

If your PC often struggles with resource-heavy activities such as gaming and video

ReadyBoost lets you use a spare USB stick to improve your PC's memory



Wise Memory Optimizer automatically frees up RAM to stop your PC hanging and crashing

editing, you can increase its memory (temporarily) using a Windows feature called ReadyBoost and a spare USB stick or SD card. Your system treats the removable storage as extra RAM, so it can perform intensive tasks more efficiently, though only if your main system drive is a traditional hard drive. ReadyBoost won't work with SSDs, which are fast enough to provide speedy virtual memory, but it can help improve the performance of older PCs (you can also use it in new computers running Windows 11).

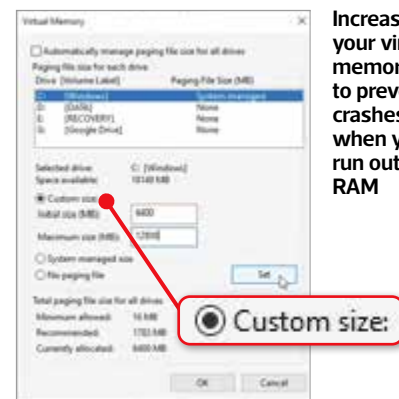
To use ReadyBoost, insert a USB stick or SD card in the relevant port or slot, then open This PC in File Explorer and right-click the card or stick's icon. Select 'Format', choose 'NTFS' in the 'File system' dropdown menu and click Start. Once formatting is complete, right-click the drive icon again, choose Properties and click the ReadyBoost tab. Select the option 'Dedicate this device to ReadyBoost' (see screenshot below left), specify how much space to allocate to the feature and click OK.

ReadyBoost relies on your USB stick or SD card remaining plugged in – as soon as you disconnect it, you'll lose the memory boost.

### Adjust your PC's virtual memory

As mentioned above, when insufficient RAM is available, Windows temporarily saves data to an area of your hard drive called virtual memory – also known as the 'paging file'. But if your PC runs out of both real and virtual memory, it will crash – which is something you obviously want to avoid. The paging file is also important for creating 'memory dumps' that tell you what caused the crash (see Issue 640, page 35 for more on this).

Windows should warn you when



Increase your virtual memory to prevent crashes when you run out of RAM

you're low on virtual memory, and adjust the paging file accordingly, but if you often run out of RAM it's worth increasing its size manually to prevent errors and crashes.

In Windows 10 or 11, press Windows key+I to open Settings. Choose 'System' then About and click 'Advanced system settings'. Click the Advanced tab, then the Settings button under Performance and click the Advanced tab there. Click 'Change' under 'Virtual memory' and untick 'Automatically manage paging file size for all drives'.

Select 'Custom size' (see screenshot above) to increase the paging-file size for your main hard drive (usually your C: drive). Enter the 'Initial size' (the same amount that Windows has currently allocated) and a 'Maximum size' – this can be up to three times your amount of physical RAM, but double should be enough. Click 'Set' then OK to confirm. If you have any problems, re-enable the 'Automatically manage' option.

### Reduce your browser's memory usage

Your web browser is almost certainly the biggest memory hog on your PC and, because you can't do without it, often the

main reason for upgrading your RAM. This is particularly true of Chrome, which uses a separate background process for every tab, **plug-in** and extension. Windows' Task Manager doesn't tell you which Chrome process relates to which element, so you can't simply close the one that's using the most memory, though you can get this information from the browser's own Task Manager – select 'More tools' in Chrome's main menu to access this.

In Microsoft Edge, you can reduce memory usage through a handy feature called Sleeping Tabs, which releases RAM from inactive tabs so it can be used by other processes. To activate it, click the browser's three-dot menu button and choose Settings then 'System and performance'. In the 'Optimise performance' section, switch on 'Save resources with sleeping tabs' (see screenshot above right), then click the dropdown menu next to 'Put inactive tabs to sleep after the specified amount of time' and choose a waiting time, from 30 seconds of inactivity



**Save resources with sleeping tabs**

**Edge's Sleeping Tabs feature automatically frees up memory from inactive tabs**

to 12 hours. Clicking a sleeping tab will wake it up again. Microsoft claims Sleeping Tabs reduces Edge's memory usage by an average of 32 per cent.

Firefox has a less sophisticated feature called Tab Unloading, which automatically puts tabs to sleep when system memory is slow to prevent the browser from crashing. You can manually unload your least recently used tabs by typing **about:unloads**, pressing Enter and clicking the Unload button. It's also worth typing **about:memory** and clicking the 'Minimize memory usage' button to



**Tab Suspender boosts your available RAM by suspending unused Chrome tabs**

free up RAM from Firefox.

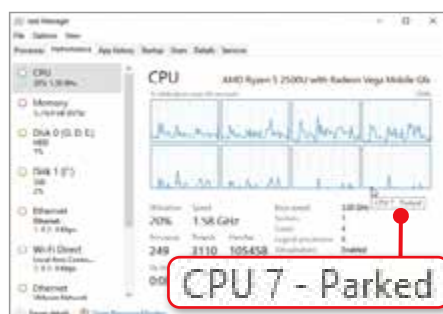
Chrome has yet to introduce a proper memory-saving feature, though you can unload and reload tabs by going to **chrome://discards**. A better option is to install the Tab Suspender extension ([www.snipca.com/43247](http://www.snipca.com/43247)), which automatically releases RAM from unused tabs after a specific period of inactivity – or manually when you click 'Suspend: Tab' (see screenshot above) – and lets you restore them with a single click. We use this tool on our own PC to reduce memory usage and prevent Chrome from freezing when we have multiple tabs open.

## SPEED UP YOUR PC'S PROCESSOR

### Stop programs hogging your processor

Your PC's processor has multiple **cores** – for example, a quad-core CPU has four – and Windows decides which processes are assigned to each one. Resource-hungry software such as video editors and web browsers often uses multiple cores, which leaves other tools competing for processing power and slows down the overall speed of your PC. Rather than upgrade your CPU, you can try to fix this by adjusting your processor's 'affinity'. This allows you to assign specific cores to demanding programs so they run as efficiently as possible without hogging system resources.

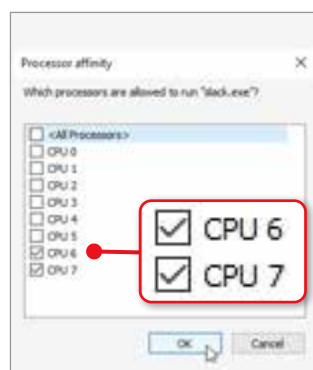
First, you should check which cores are currently underutilised. Open Task Manager in Windows 10 or 11 by pressing



**Task Manager will tell you which CPU cores currently have the least activity**

Ctrl+Shift+Esc and click the Performance tab. In the CPU section, right-click the graph and choose 'Change graph to' then 'Logical processes'. This will display separate graphs for each of your processor cores – hover your mouse over one to see its core number. Cores that currently have little activity – such as CPU 7 in our screenshot below left – are ideal for devoting to resource-hungry programs.

Next, click the Details tab in Task Manager, right-click a greedy process and choose 'Set affinity'. Untick the All Processors box and select one or two cores (see screenshot below) to assign the program to. Click 'OK' to confirm and the program will now only run on the selected CPU core(s), which should free up processing power for other tools.

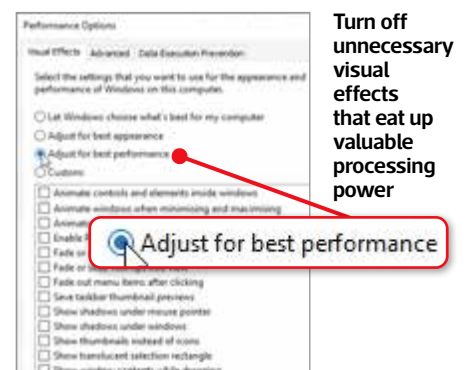


**Choose which processor cores to devote to resource-hungry programs**

### Disable unnecessary effects

Many features enabled by default in Windows 10 and 11 are supposed to enhance your user experience, but also require processing power that would be better dedicated to more important tasks, especially on older PCs. For example, are you really bothered about your desktop icons having shadows or whether window menus slide into view? If not, you can turn off unnecessary visual effects to improve system performance.

Press the Windows key+R to open the Run box, type **sysdm.cpl** then press Enter. When the System Properties box opens, click the Advanced tab then the Settings button under Performance. On the Visual Effects tab, select 'Adjust for best performance' (see screenshot below) to disable all visual effects, then click



**Turn off unnecessary visual effects that eat up valuable processing power**

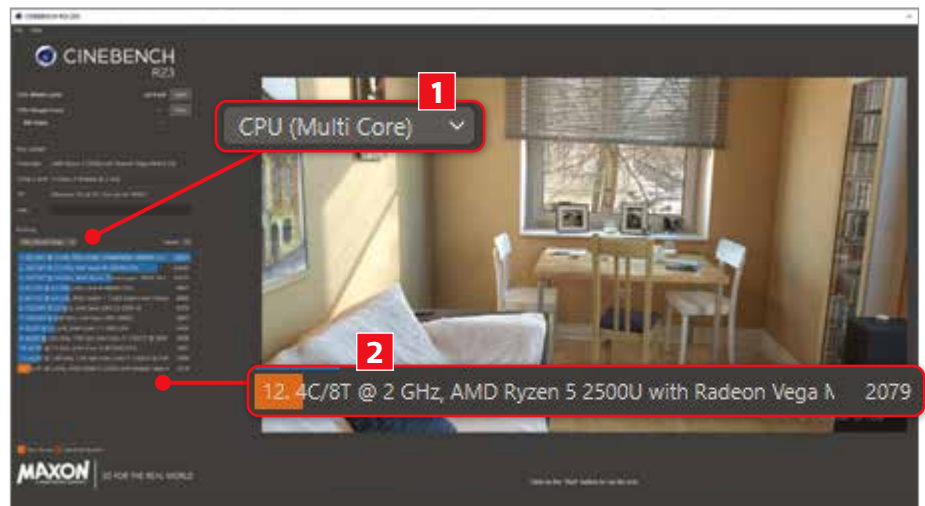
Apply or OK. You can always re-enable specific effects if you miss them.

It's also worth turning off the transparency effects Windows applies to your Start menu, taskbar and Action Centre – as well as folder and program windows in Windows 11 – as these use a small but significant amount of CPU power. Right-click your desktop, choose Personalise then Colours, and disable the 'Transparency effects' option.

## Check if you can overclock your processor

The most drastic way to boost your processor's speed without upgrading is to 'overclock' it, which means to increase its **clock rate** and/or voltage to exceed that set by the manufacturer. The benefit is that you get a faster CPU that can perform more operations per second, but overclocking can also cause your processor to overheat and damage your hardware, as well as void your warranty. You may not even be able to overclock, if your motherboard or CPU has been locked by the manufacturer. But if you're determined to try, there are precautions you can take to ensure your PC doesn't malfunction.

First, you should check your processor's current temperature to make sure it isn't already too hot. As recommended in our 'Stop your PC overheating' feature (Issue 638, page 60), download HWINFO from [www.snipca.com/42747](http://www.snipca.com/42747), launch the tool and click 'Sensors only'. Click 'Start' then scroll down the table of results to the Core Temperatures entry. Ideally your CPU cores should be between 40 and 65



Test your processor using Cinebench to see how it compares with others

degrees Celsius – if they're hotter than 75°C, you shouldn't risk overclocking.

Next, perform a 'stress test' to check that your processor is stable and not prone to overheating at its default clock speed. Download the free tool Prime95 from [www.snipca.com/43272](http://www.snipca.com/43272), extract the contents of the ZIP file and double-click the 'prime95.exe' file – click 'More info' then 'Run anyway' if you see a Microsoft Defender SmartScreen warning. When Prime95 opens, click Just Stress Testing then OK to run a 'torture test'.

This pushes your processor to its limit by performing an intensive stream of complex mathematical computations until an error occurs, at which point the tool will stop. Leave Prime95 running for a few hours to perform a thorough test, but be warned that your PC may get noisy as its fans spin faster to keep it cool –

click Test then Stop to end the test. If Prime95 fails to detect any errors, then your processor should be stable enough for overclocking.

It's also useful to **benchmark** test your CPU before and after you overclock it, to see if the tweaks you make improve or impair its performance. Download Cinebench from [www.snipca.com/43274](http://www.snipca.com/43274) and run its CPU (Multi-Core) test (1 in our screenshot above). This evaluates how well your processor copes with rendering a detailed 3D image, then gives it an overall score. Look at the chart in the bottom-left corner to find out how your CPU compares with processors in similar systems – ours scored 2,079 points, which ranked last in the comparison 2, so we have plenty of room for improvement.

Once you've performed these checks, you can try overclocking your processor. Although you can overclock manually by tweaking settings in your PC's BIOS or UEFI – press F2 or F10 while booting to access this – the safest method is to use a tool from your CPU's manufacturer.

For AMD processors, download Ryzen Master ([www.snipca.com/43277](http://www.snipca.com/43277)), which offers both Auto Overclocking (1 in our screenshot left) and Manual options 2. For Intel processors, install the manufacturer's Extreme Tuning Utility ([www.snipca.com/43276](http://www.snipca.com/43276)) and change settings in the Advanced Tuning section.

Our sister title PC Gamer provides a detailed guide to overclocking an AMD Ryzen processor, both manually and automatically ([www.snipca.com/43278](http://www.snipca.com/43278)) as well as one for Intel CPUs ([www.snipca.com/43279](http://www.snipca.com/43279)). Note that if your processor doesn't support overclocking, you won't be able to install the official manufacturer's tool.



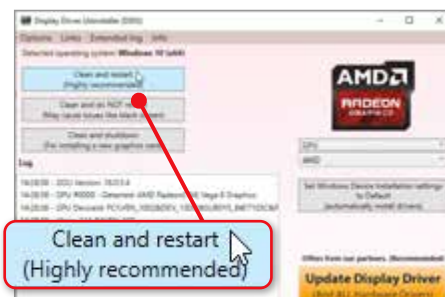
AMD's Ryzen Master tool provides an Auto Overclocking option for your CPU

## OPTIMISE YOUR GRAPHICS CARD

### Perform a clean install of graphics drivers

As we explained in our Cover Feature in Issue 639 (page 50), it's essential to have the latest **drivers** installed for your graphics card, and to ensure they're sourced from the manufacturer rather than generic drivers. Instead of using Windows Update, you can download Nvidia drivers from [www.snipca.com/42961](http://www.snipca.com/42961), AMD drivers from [www.snipca.com/42962](http://www.snipca.com/42962) and Intel drivers from [www.snipca.com/43283](http://www.snipca.com/43283), but for optimum performance it's wise to perform a **clean install** rather than just upgrade from the previous drivers.

A free tool called Display Driver Uninstaller will thoroughly remove old Nvidia, AMD and Intel graphics drivers from your system, including **registry keys**, driver store packages and redundant files. Download it from [www.snipca.com/43281](http://www.snipca.com/43281), extract the contents of the ZIP file and open the DDU folder. Drag the Display Driver Uninstaller **EXE** file to your desktop and reboot your PC into



**Display Driver Uninstaller removes old graphics drivers so you can cleanly install new ones**

**Safe mode** – you can use the tool in normal mode but it may not work as effectively. Double-click the EXE file to launch the program and select GPU in the 'Select device type' dropdown menu. Display Driver Uninstaller will automatically detect which graphics drivers you have installed. Click the Options button and ensure 'Create a system restore point' is selected, then click 'Clean and restart' (see screenshot).

Display Driver Uninstaller will now remove all traces of your current graphics

drivers, which means your screen resolution may change. Once your PC restarts, you can cleanly install your graphics card's new drivers from the manufacturer.

If a clean install sounds too drastic, you can try rebooting your graphics drivers instead by pressing Windows key+Ctrl+Shift+B. Your screen will flicker and go black for a few seconds, and you'll hear a beep, after which your drivers will be restarted.

### Tweak your graphics card's performance settings

Your graphics card's default settings will balance picture quality, performance and power consumption, but if you're using a desktop PC or mains-connected laptop you can sacrifice the latter to improve how quickly and reliably it displays games and videos.

You can access your GPU settings via the Start menu or by right-clicking your desktop and choosing Nvidia Control Panel, AMD Radeon Settings or Intel

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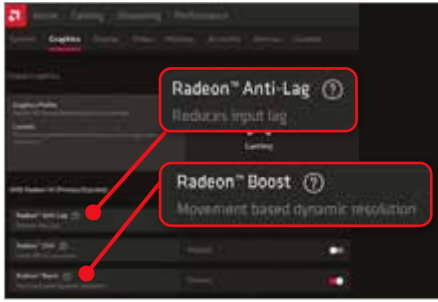
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Tweak your graphics card's performance settings to make it faster and smoother

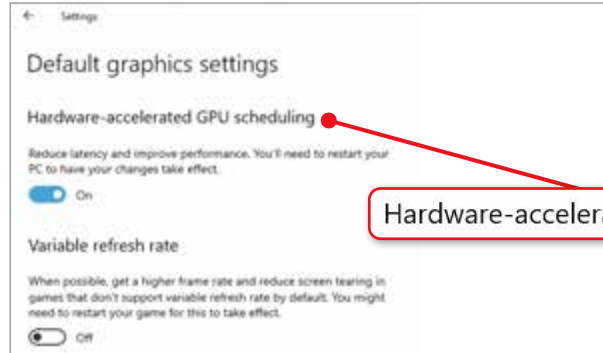
Graphics Settings. If you have an Nvidia graphics card, select Manage 3D Settings and click the Global Settings tab. Click the 'Power management mode' dropdown menu and select 'Prefer maximum performance'. Next, set 'Texture filtering - Quality' to 'High performance'. Click 'Apply' to save the new settings.

With an AMD graphics card, click the Gaming tab and choose Graphics, then Standard. Switch on the options Radeon Anti-Lag and Radeon Boost (if available - see screenshot above), then click Advanced and set the Texture Filtering Quality option to Performance.

Intel only lets you adjust performance settings for specific games - select a game in its Graphics Command Centre then click Performance.

### Switch on hardware-accelerated GPU scheduling

Windows 10 and 11 offer a feature called hardware-accelerated GPU scheduling, which instructs your graphics card to use



Check if your graphics card supports hardware-accelerated GPU scheduling to improve its performance

Hardware-accelerated GPU scheduling

the optimum amount of power depending on what you're doing. It moves visual and graphics-intensive data from your CPU to the GPU and is particularly useful when playing games and streaming videos. However, the option is disabled by default and only available if your graphics card is an Nvidia GTX (1000 or later) or AMD (5600 series or later) model.

If your GPU qualifies, press the Windows key+I to open Settings and click System, then Display. In Windows 10, choose 'Graphics settings' under 'Multiple displays'; in Windows 11, select Graphics then 'Change default graphics settings'. Switch on 'Hardware-accelerated GPU scheduling' (see screenshot above), restart your PC and you should notice an improvement in your graphics performance.

### Overclock your graphics card

Overclocking your graphics card can improve its performance by as much as 15 per cent and provide smoother,

sharper graphics. It's safer than overclocking your CPU (see page 53) because GPUs have failsafe mechanisms that kick in before they overheat. It's also much easier to do by either tweaking settings in your graphics card's software or using an excellent free tool called MSI Afterburner, which works with all makes of GPU.

Download the program from [www.snipca.com/43284](http://www.snipca.com/43284), then extract, install and launch it. MSI Afterburner will instantly display information about your graphics card's speed, voltage, temperature and more. To overclock your GPU, simply click the OC Scanner button on the left - this looks like a magnifying glass and a C (see screenshot below), but if you can't see it then your graphics card may not be compatible with the program. Click 'Scan' and the program will automatically detect, test and apply what it considers the best possible settings for your graphics card.

Alternatively, you can use the sliders to manually increase GPU settings such as clock speed. You can unlock greyed-out options by clicking the Settings button and selecting, for example, 'Unlock voltage control'. When you've finished tweaking, click Apply then Save, or choose Reset to restore your default settings.

MSI Afterburner also lets you customise how it looks - choose Settings, then User Interface and select a different skin from the dropdown menu.



MSI Afterburner's OC Scanner lets you overclock your graphics card with one click

## Clean the inside of your PC without damaging it

When dust, dirt and hair get into your PC, it's forced to work harder, which means its overall performance will suffer. At least once a year, it's a good idea to give the



insides of your machine a thorough clean, which may save you needing to upgrade individual components. Always perform the following tasks with your PC switched off and unplugged from the mains.

First make sure all your PC's fans are working properly and that the ventilation holes in the case aren't clogged with muck. Use a can of compressed air - you can buy one from Amazon for £3 ([www.snipca.com/43288](http://www.snipca.com/43288)) to remove any grime. Use a stiff paint brush or old toothbrush

to clean the fan blades and the inside of your case. Take care because the components are fragile and expensive to replace. Spray the

inside of the case with the compressed air, but be warned that this can generate a lot of dust so you may want to do it outside or in a well-ventilated area. Make sure you blow the dust out of your case and not further into it - if provided, insert the extension straw into the can's nozzle (as pictured) to get into nooks and crannies. Use a soft cloth to wipe your graphics card and the floor of the case, but be careful not to damage delicate components such as your motherboard.

# FREE UP SPACE ON YOUR HARD DRIVE

## Remove junk files from your hard drive

The Storage Sense feature in Windows 10 and 11 automatically removes junk files that are taking up space on your hard drive, but you can also run it manually.

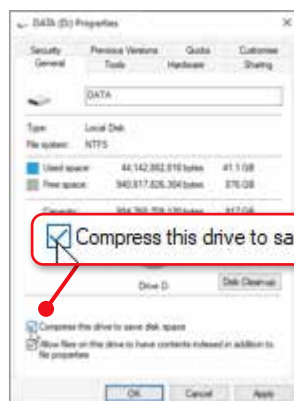
Open Settings and click System followed by Storage. Here you'll see a breakdown of what's taking up space on your PC. Switch on Storage Sense if it isn't already active then click 'Configure Storage Sense or run it now' in Windows 10 (see screenshot right), or just Storage Sense in Windows 11. Specify how frequently you want to purge your PC of **temporary files** and old files in your recycle bin and Downloads folder. For an instant clean-up, click 'Clean now' in Windows 10 or Run Storage Sense Now in Windows 11. Specify how frequently you want to purge your PC of **temporary files** and old files in your recycle bin and Downloads folder. For an instant clean-up, click 'Clean now' in Windows 10 or Run Storage Sense Now in Windows 11.

Click back to the Storage screen and select 'Temporary files'. This section goes further than Storage Sense by letting you delete space-hogging junk such as old Windows Updates and driver packages, memory dump files and thumbnails for photos, videos and documents. Select the items to delete and click 'Remove files'.

Back on the Storage Screen, explore the other categories such as 'Apps & features' (called 'Installed apps' in Windows 11), Documents and Other to identify and remove further space hogs. Windows 11 helpfully provides 'Cleanup recommendations' based on large apps and files you don't use, which can save you a bit of time. Once you've deleted all unwanted junk, you should have several gigabytes of extra storage – we increased our free drive space from 9.2GB to 36.7GB (see screenshots above right) through manual removal, gaining 27.5GB.

## Compress large drives and partitions

Windows lets you compress drives (including SSDs) and **partitions** on your



Compressing a drive or partition frees up space but also makes it slower

## BEFORE



## AFTER



We freed up 27.5GB of drive space by deleting files through Windows 10's Storage screen

PC to shrink their size and free up space – often many gigabytes worth. Unlike ZIP files, compressed drives don't require you to extract their contents to access files, because the **NTFS** compression – and decompression – process is handled in the background. This means you can browse compressed drives in File Explorer in the usual manner, though files may take longer to open.

To compress a drive or partition, right-click it in the This PC section of File Explorer and choose Properties. On the General tab, select 'Compress this drive to save disk space' (see screenshot below left) then click Apply. Choose 'Apply changes to drive, subfolders and files' and click OK. Click 'Continue' if prompted to provide **administrator** permission and the drive or partition will be compressed. This can take a while, depending on its size and contents.

If you find the compressed drive or partition too slow – especially if it's your main system drive – untick the 'Compress this drive...' option then click Apply.

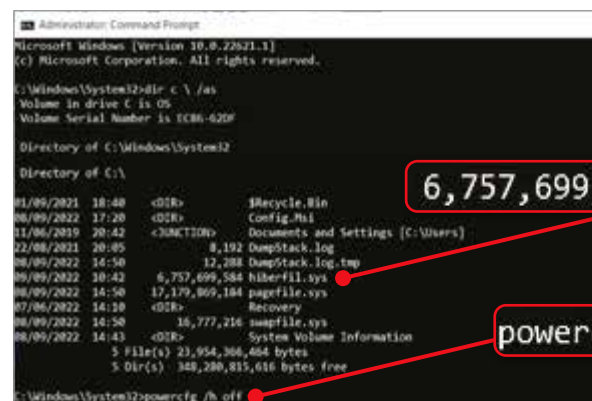
## Switch off Hibernate to free up space

The Hibernate feature in Windows conserves power when your PC is idle by

copying everything in its memory to a file called 'Hiberfil.sys', then powering down your system. When you turn your PC back on, Windows quickly loads all the data from the saved file. However, if you don't leave your PC constantly running when you're not using it, you have an SSD (which uses less power than a mechanical drive) or you're happy to rely on Sleep mode instead, the 'Hiberfil.sys' file simply wastes valuable space.

To find out how much space Hibernate uses, type **cmd** in the Windows search box and choose 'Run as administrator' under Command Prompt. When Command Prompt opens, type the following command and press Enter: **dir c:\ /as** (replace 'c:' with your main drive's letter if different). Look at the 'hiberfil.sys' line to see the amount of storage the file consumes – nearly 6.8GB on our PC (1 in our screenshot below).

To switch off Hibernate and free up space, type **powercfg /h off** into Command Prompt (2) and press Enter. You won't see confirmation that Hibernate is disabled, but you can check by typing **powercfg /a** and pressing Enter. You can turn it back on again by typing **powercfg /h on** into Command Prompt.



You can reclaim drive space by disabling the Hibernate feature in Windows



## FIX PROBLEMS WITH YOUR MONITOR

### Calibrate your monitor

Windows includes a Display Colour Calibration tool you can use to improve your monitor's display quality and potentially fix problems.

To use it, type **calibrate** into the Windows search box and select 'Calibrate display colour'. If you have more than one monitor attached to your PC, drag the calibration window to the one you want to adjust. Click 'Next' and follow the on-screen instructions.

The tool lets you tweak your monitor's gamma (the relationship between red, green and blue colour values), brightness and contrast (see screenshot above right), and colour balance, as well as turning on ClearType to make text easier to read.

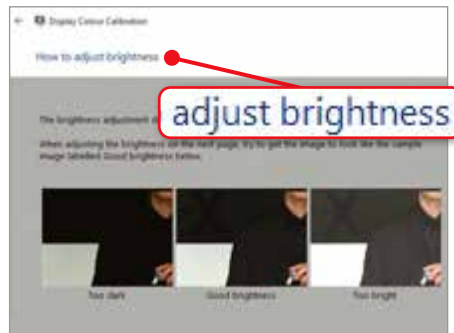
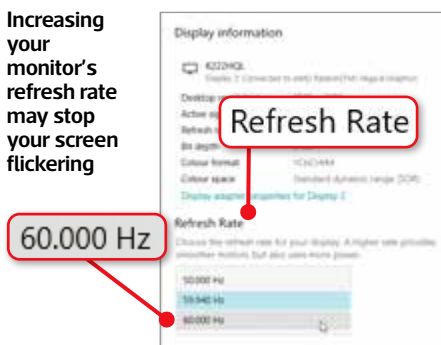
Updating the drivers for your monitor and graphics card – see our Cover Feature in Issue 639 (page 50) – can also solve problems with colour and vertical or horizontal lines across your screen.

### Adjust your refresh rate

Increasing the refresh rate of your monitor can result in much smoother visuals, and stop your screen flickering. In Windows 10 or 11, open Settings and choose System, then Display. Click the 'Advanced display settings' link and select a different refresh rate in the dropdown menu (see screenshot below).

The options available will depend on the make and model of your screen (it's possible you won't be able to change from the default), but try increasing the refresh

Increasing your monitor's refresh rate may stop your screen flickering



Calibrate your monitor to fix problems with colour, brightness and contrast

rate, which is measured in hertz (Hz) – how many times per second your monitor is able to draw a new image – to see if it fixes your display problem.

Flickering and stuttering (when your screen goes black) can also be caused by a faulty monitor cable so make sure yours is connected securely. If you have a spare **VGA/HDMI** cable, try using that instead.

### Fix stuck pixels

As we explained in Issue 640's Best Free Software section (page 19), stuck pixels – which look like red, green or blue dots – needn't mean you need to upgrade your monitor. Visit the website JScreenFix ([www.snipca.com/43176](http://www.snipca.com/43176)) and click the Launch JScreenFix button to run its free pixel fixer. Drag the square containing what looks like TV distortion over a stuck pixel and leave the tool running for at least 10 minutes. It uses **HTML5** and **JavaScript** to try and unstick your frozen pixel so that it works again. You may need to run the tool a few times. JScreenFix may also solve problems with 'image persistence' – when graphics linger on your screen after you've closed the related program.

Another option is to press the stuck pixel with a soft cloth, but don't apply too much pressure or you could damage your screen. Dead pixels, which are black, can't usually be fixed. **ca**

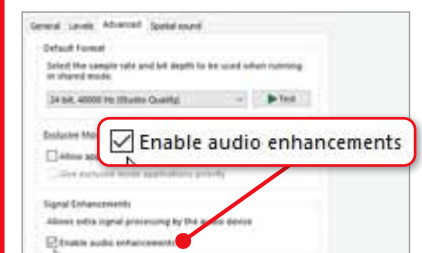
### Enhance your sound quality

If the audio that comes through your PC's speakers or headphones is weak or distorted, there are several tricks to try before upgrading your sound card.

First, open 'Audio inputs and outputs' in Device Manager, right-click Speaker/Headphones and choose 'Update driver'. Click 'Search automatically for drivers' to find and install the latest drivers, then repeat this for your other audio devices. If no new drivers are available, right-click the speaker icon in your system tray and choose 'Troubleshoot sound problems'. Select the audio device that's causing you trouble and Windows will (hopefully) suggest how to fix it.

One option is to apply audio enhancements. In Windows 10, right-click the speaker icon and choose Sounds then click the Playback tab. Select 'Speaker/Headphones', click Properties and choose Advanced. Tick the 'Enable audio enhancements' option (see screenshot below) and, on the Enhancements tab, tick the boxes for Bass Boost, Loudness Equalisation and other available options.

In Windows 11, right-click the speaker icon and choose 'Sound settings', then select 'All sound devices' under Advanced. Click 'Speakers/Headphones' and switch on 'Enhance audio'. This will remove – or at least reduce – distortion, boost the bass and apply other tricks to produce superior sound quality.



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# EXTEND YOUR PRINTER'S LIFE

When your printer stops working, it may be the manufacturer's fault – not yours. **Robert Irvine** explains how to fix common errors and make your printer last longer



As we reported in Issue 639 (page 9), Epson recently updated its support page ([www.snipca.com/43034](http://www.snipca.com/43034)) to explain why its printers suddenly stop working. Officially, this is because the waste ink pads can no longer absorb ink, which means “satisfactory print quality cannot be maintained”. But it's really to encourage you to buy another Epson printer or pay the company to fix your current device (if it's out of warranty). Your ink pads are probably still fully functional, but because you've printed a certain number of times, Epson suspects they might not be.

In this feature, we reveal how to extend your printer's life by tweaking its settings, replacing your ink pads and performing simple maintenance – not just Epson models but also Canon and HP.

## Reset your printer's waste-ink counter

Epson suggests that users who see its 'Service required' error download its Maintenance Reset Utility, which resets the cycle count of your printer's waste ink pads. This means that, rather than warn you that the pads are at the end of their service life, Epson lets you keep using them – along with the rest of your printer – until you reach the cycle limit again. The problem is that Maintenance Reset Utility can only be used once, by clicking a link in the 'Service required' message and is restricted to “North American customers”.

Fortunately, there is a solution for Epson's UK customers and anyone who wants to keep extending their printer's lifespan. A free program called SSC Service Utility works in a similar way to Maintenance Reset Utility, by letting you reset the counter that monitors how many times you've used your printer – regardless of the state of your ink pads.

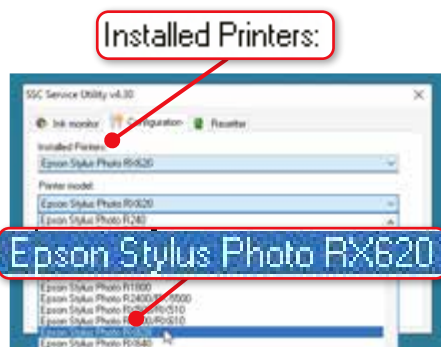
SSC Service Utility hasn't been updated for eight years, but it still works with many old Epson printer models and all versions of Windows. Download it from [www.snipca.com/43425](http://www.snipca.com/43425), install and launch the program, then click the Configuration tab. Select your printer in both the Installed Printers and 'Printer model' dropdown menus (see screenshot below), then close the main window. Right-click the SSC Service Utility icon that now appears in your system tray and choose 'Protection counter' then 'Reset

protection counter' (see screenshot below).

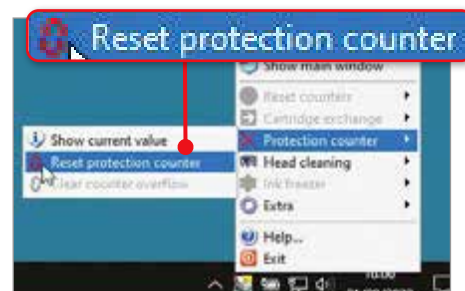
If your printer is locked, select 'Clear counter overflow' in the 'Protection counter' menu, then choose 'Soft reset' in the Extra menu. Wait a few minutes for the printer to reset before clicking 'Reset protection counter' again. When the program asks 'Has the ink pad been replaced?', click Yes or OK.

Another option is to download WIC Reset Utility ([www.snipca.com/43427](http://www.snipca.com/43427)), which can also reset your waste ink counter. This works with “almost all” Epson printers and some Canon models – see the full list of compatible devices at [www.snipca.com/43430](http://www.snipca.com/43430).

To perform a full reset of the counter, you need to buy a licence key for \$9.99 (£8.82), but there is a workaround that squeezes a little more life from your printer for free. When you click 'Reset waste counters' in the program, type **trial** as the trial key then click OK. This reduces your printer's cycle count to 80 per cent, but will only work once (and



Install SSC Service Utility and select your printer in its Configuration tab



Reset your printer counter to fool Epson that your ink pads are unused



You can buy replacement waste ink pads for your Epson printer for as little as £2

not with Canon printers) – visit [www.snipca.com/43426](http://www.snipca.com/43426) for more information.

### Replace your printer's ink pads

If the ink pads in your printer are saturated to the point of uselessness, you'll need to replace them to extend its life. Epson advises you to contact its Service & Support team ([www.snipca.com/43429](http://www.snipca.com/43429)) about its "low-cost ink pad replacement service" or use a "local certified technician". Either way, it's going to cost you a disproportionate amount of money to change just a few bits of sponge, so you might want to replace the pads yourself.

You can buy waste ink pads that are compatible with Epson printers for a few pounds from Amazon and eBay, such as these Oklili pads (pictured above), which cost £1.99: [www.snipca.com/43431](http://www.snipca.com/43431). Or, if you're willing to spend more for official Epson parts, OctoInkjet sells replacement ink pads and trays from £10: [www.snipca.com/43432](http://www.snipca.com/43432).

Once you've got your new pads, unplug your printer and place it on some newspaper or an old cloth in case things get messy. Unscrew the back panel and remove the ink-pad holder – this usually slides out from under the printer, though older devices may vary. For an example,



There are plenty of videos on YouTube that demonstrate how to replace ink pads

watch this how-to video for the Epson L386, which also works for other L-series models: [www.snipca.com/43440](http://www.snipca.com/43440) (see screenshot above).

Remove the old ink pads – you can use tweezers or gloves to stop your hands getting inky – and place them on the newspaper or cloth. Insert the new ink pads in the tray, but ensure they're in the same positions as the original pads, because the sponges will be different shapes and sizes. Replace the tray in your printer and screw it back in. You'll now need to reset your waste-ink counter, as explained in the previous tip, because Epson's 'end of service life' limit won't differentiate between the old and new sponges.

Canon printers also display an error message when their waste-ink absorber pads are full and advise you to seek technical support. You can buy replacement pads for Canon G-model printers from Amazon for £12.80 ([www.snipca.com/43437](http://www.snipca.com/43437)) and insert them yourself after removing the old sponges – watch a how-to video on YouTube at [www.snipca.com/43438](http://www.snipca.com/43438).

Once this is done, you'll need to reset your printer. The method varies according to the model but on many older Canon printers, you can try the following steps.

Turn off your printer, then press the Power and Stop buttons simultaneously. Release the Stop button, while continuing to hold down the Power button, then press Stop five times. After 30 seconds, a '0' should be displayed on your printer's screen. Press the Power button again to restart and reset your printer.

### Maintain your printer's print heads


Most of us decide to upgrade our printer when the print heads start malfunctioning. Over time, ink mixes with dust and grease to clog the print heads, which can lead to poor print quality, slow performance and paper jams. Regular maintenance can fix and prevent problems, and significantly extend the life of your printer.

Your printer will offer its own method for cleaning its print heads, which you should perform at least once a month to stop ink and dust building up. This may prompt you to print a test page, so ensure you have enough ink to spare.



Use your printer's software to regularly clean its print heads and extend its life

With Canon devices, open the printer software, click the Maintenance tab and choose Cleaning. When the Print Head Cleaning box opens, select the ink group that needs cleaning and click Execute. Once cleaning is complete, click Print Test Pattern. If the results aren't any better, select Deep Cleaning on the Maintenance tab and try again. Epson print heads can be cleared by either choosing Head Cleaning in the printer's software or by holding down the ink button on the device for three seconds. And for HP printers, select Printer Settings, then Print Quality Tools and click Clean Printheads (see screenshot above).

If this doesn't help, try physically cleaning the print heads by removing your ink cartridges and wiping them with a lint-free cloth or moist cotton bud. You should also clean the print-head contacts (the shiny gold bits) on the cartridges themselves. 

## Stop HP disabling your printer's ink cartridges

Last month, HP settled a legal dispute regarding a controversial printer feature called Dynamic Security ([www.snipca.com/43441](http://www.snipca.com/43441)). This stopped some of its printers working when they were using third-party ink cartridges with non-HP chips. The company said Dynamic Security was intended to "protect HP's intellectual property, as well as reduce illegal counterfeiting of HP cartridges", but users found that it caused their printers to reject all non-HP cartridges, and HP has now ditched the feature.

As part of the settlement, HP is compensating customers in Belgium, Italy, Spain and Portugal, but there's currently no mention of the UK. If you get a 'Cartridge Problem' error after installing a non-HP cartridge, your printer may be restricted by Dynamic Security. You can fix the problem by going to HP's 'Software and Drivers Downloads' page for your printer ([www.snipca.com/43442](http://www.snipca.com/43442)) and installing the latest firmware version. Visit HP's support page for details of all affected printers ([www.snipca.com/43443](http://www.snipca.com/43443)).

# Don't overpay for broadband

How much internet speed do you actually need?

**Robert Irvine** outlines the five questions you must ask to get a broadband deal that's fast and cheap enough for you



**R**ecent research suggests that the average internet speed in the UK is now 72Mbps – up from 51Mbps last year – which places us as the 35th fastest country in the world ([www.snipca.com/43467](http://www.snipca.com/43467)). But that figure is skewed by including data for businesses and heavy internet users who have ‘ultra-fast’ connections, such as online gamers. Although 66 per cent of the UK now has access to 1Gbps broadband, most of us don't require anywhere near that speed, and in the current economic climate it can be needlessly expensive.

Here we suggest the five questions you should ask yourself to ensure you're not overpaying for broadband and don't get ripped off when you switch provider.

## Do you stream video at the highest quality?

Watching films and TV shows on streaming services such as BBC iPlayer, Netflix and Amazon Prime Video requires a lot more **bandwidth** than simple tasks such as browsing the web, sending emails and using online office tools, and the faster your broadband the lower the risk of videos **buffering** and **pixelating**. But that doesn't mean you need an expensive 200Mbps connection to enjoy streaming content, and there are other factors that will determine your optimum speed.

One of these is the quality at which you stream. If you mainly watch films and TV series in standard definition (SD), which means a resolution lower than **720p**, a connection of 10Mbps will suffice. BBC

iPlayer requires only 1.5Mbps of bandwidth for SD content, while Netflix, YouTube and Prime Video need just 1Mbps.

For high-definition (HD) video of up to **1080p** resolution, this increases to 2.8Mbps for iPlayer and 5Mbps for Netflix (see screenshot below), YouTube and Prime Video, so broadband of at least 15Mbps is advisable – so you can comfortably use other internet devices while you're watching.

It's only when regularly streaming at Ultra HD/4K quality – which is four times the resolution of Full HD – on a compatible TV or monitor that a really fast connection is necessary. BBC iPlayer recommends a broadband speed of at least 24Mbps for a smooth 4K experience, and the same applies to other streaming services offering that option.

It's also important to consider how often other people in your household stream and perform other bandwidth-consuming tasks at the same time as you. Large households will undoubtedly

benefit from a speedier and pricier connection, but couples and single dwellers will be fine with a slower and cheaper plan.

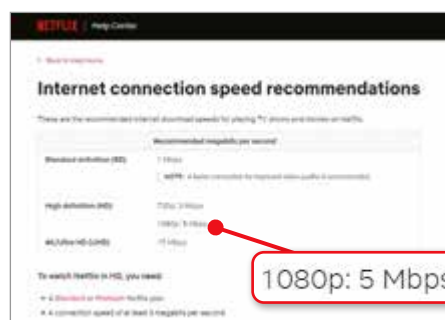
## How many devices are on your home network?

Now that most of us live in ‘connected homes’ – or ‘smart homes’ if you're really fancy – it's easy to forget how many of our devices now rely on the internet. Computers, phones and tablets are the obvious ones, but also competing for bandwidth are our smart TVs, streaming sticks, games consoles, speakers, security cameras, thermostats and even doorbells.

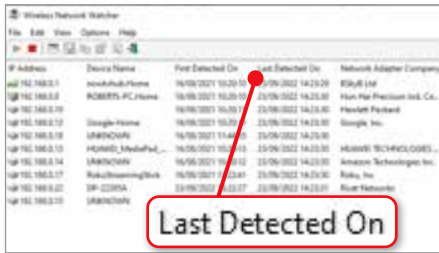
However, having a lot of gadgets connected to your home network doesn't mean you should overcompensate by paying for faster broadband than you need. As a rule of thumb, for every 10 smart devices, your internet plan should have an extra 5Mbps above the speed you require for everyday online activities on your PC.

There are more demanding exceptions to this rule, such as streaming devices (see previous section) and security cameras – Amazon's Ring video doorbells “function best” with around 2Mbps of bandwidth ([www.snipca.com/43446](http://www.snipca.com/43446)) – but it's unlikely that all your smart kit will be consuming lots of data at the same time.

You may be able to see how much data each device on your network is using by logging into your router's settings in your browser – see [www.snipca.com/43468](http://www.snipca.com/43468) for information on how to do this – and



To stream 1080p HD content on Netflix your broadband must be at least 5Mbps



Wireless Network Watcher shows you which devices are connected to your network

looking for a Devices or Activity section.

If not, you can at least see which devices are currently connected to your network using the free program Wireless Network Watcher ([www.snipca.com/42076](http://www.snipca.com/42076)). This lists device names, IP addresses and when they were first and last detected (see screenshot above).

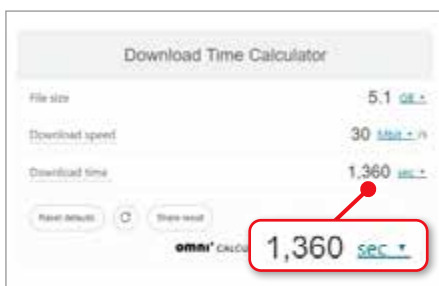
### Do you download a lot of large files from the web?

Virgin Media boasts that its average download speed of 213Mbps lets you download an HD film (which can be up to 5GB in size) in “about three minutes” ([www.snipca.com/43452](http://www.snipca.com/43452)). That’s very impressive if you’re an impatient movie buff and much quicker than waiting for two hours on a 5Mbps connection.

But if you rarely download more than the occasional YouTube video or basic software, the ability to get large files in seconds probably isn’t worth paying upwards of £50 a month.

Some programs are huge these days, and higher resolutions mean bigger video files, but you’re unlikely to download them every day. For example, the ISO file for Windows 11 is a whopping 5.1GB, which even 30Mbps broadband will take 23 minutes (1,360 seconds – see screenshot below) to download. However, upgrading your operating system is hardly a regular activity.

Broadband Genie’s handy Download Time Calculator ([www.snipca.com/43453](http://www.snipca.com/43453)) tells you how long it takes to download specific file sizes on different speed connections, so you can see whether it’s worth upgrading your current plan.



Discover how long it takes to download files on faster and slower broadband

## Test your internet speed

Before you can make an informed decision about your internet speed – and whether it really is too slow or just feels like it – it’s important to check the download and upload speeds you’re currently getting.



Our favourite free speed-testing tool is Speedtest by Ookla ([www.speedtest.net](http://www.speedtest.net)), which also has apps for Android ([www.snipca.com/43463](http://www.snipca.com/43463)) and iOS ([www.snipca.com/43464](http://www.snipca.com/43464)), and an

extension for Chromium browsers ([www.snipca.com/43465](http://www.snipca.com/43465)). Click or tap the Go button and the tool will test your download and upload speeds (see screenshot), and ping rate. This will tell you if you’re getting the broadband speeds you pay for, and

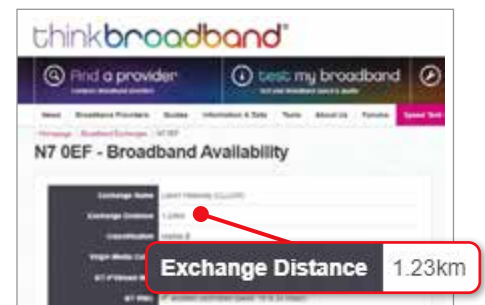
help you decide whether you need to upgrade. Try running Speedtest at different times of the day in case network congestion affects your initial results.

### Do you upload a large amount of content to the web?

Broadband adverts used to focus on promoting download speeds, but now that we spend more time and data sharing photos and videos online, and streaming ourselves on video calls, upload speeds are increasingly important. High-definition chats on Zoom and Skype require an upload speed of at least 1.2Mbps (3.8Mbps for Zoom’s 1080p option – see [www.snipca.com/43455](http://www.snipca.com/43455)), which significantly increases when streaming to several people during group calls.

That said, unless you’re a particularly heavy uploader or regularly engage in high-quality group video calls, you shouldn’t be swayed by an expensive broadband package just because it offers speedy uploads.

For example, Sky Broadband’s Gigafast plan ([www.snipca.com/43491](http://www.snipca.com/43491)), which initially costs £52 a month, offers an average upload speed of 90Mbps (see screenshot below) to complement its download speed of 900Mbps, but it’s doubtful you’ll need anywhere near either of those figures.



Think Broadband tells you how far you are from your nearest telephone exchange

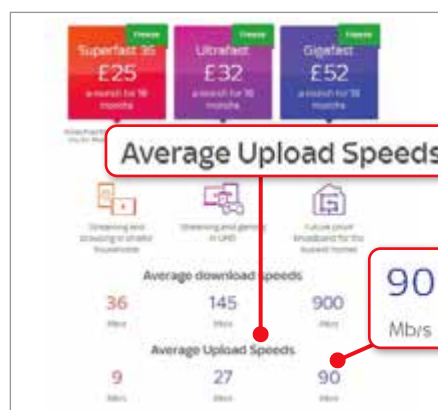
### Should you switch your internet provider?

If you live a long way from the nearest telephone exchange, upgrading to a speedier and pricier ADSL package with your internet provider may not give you the performance boost you expect.

Fibre-to-the-cabinet (FTTC) broadband is a more reliable option, if available in your area, but will also be more expensive, so consider whether the cheapest deal will suffice. For example, BT’s Fibre Essential, broadband-only deal ([www.snipca.com/43490](http://www.snipca.com/43490)), which offers a guaranteed download speed of 32Mbps, is now priced at £25 a month for the first two years, while Sky’s similar Superfast 35 costs the same amount for the first 18 months.

Also factor in extra costs such as the exit fee from your current ISP, if you’re still in contract, and any setup fee with the new ISP, which may be at least £30. It’s prudent to wait until your internet needs justify the cost of switching.

You can find out how far your home is from your local exchange (see screenshot above), and the broadband services available to you, by entering your postcode in Think Broadband’s Find Your Telephone Exchange tool ([www.snipca.com/43462](http://www.snipca.com/43462) – see screenshot above).



Upload speeds are increasingly important, but you probably don’t need 90Mbps

# Problems Solved

Our experts solve all your tech problems

## PROBLEM OF THE FORTNIGHT

### Can I upgrade my main SSD?

**Q** I have a Dell 17 3000 laptop with a 256GB SSD and a 1TB hard drive. The SSD is the main drive, and it contains Windows 10 and all the programs that I use. My personal files are on the hard disk. On the current SSD I only have around 5GB of unused space left. Is it possible to install a higher-capacity SSD and transfer everything from the current one? If this is possible then is it a difficult job, or best left to an expert? What might be the cost? Thank you for producing a really good computer magazine!

David Childs

**A** There are numerous models in the Dell 17 3000 series, so we don't know exactly which one you have. In broad terms, though, yes, this is possible.

You'd need to buy a compatible SSD and then **clone** your old drive on to the new one, using a free cloning tool such as Macrium Reflect Free ([www.macrium.com/reflectfree](http://www.macrium.com/reflectfree)). The SSD might be a stick-like M.2 model, but on a machine that's a couple or more years old it's more likely to be a 2.5in drive



Next to 'Sort by', click the dropdown menu and select Size

that uses a SATA connection. You'd also need a USB-to-SATA cable (one from Sabrent costs around £10 on Amazon, [www.snipca.com/43290](http://www.snipca.com/43290)). This will connect the new drive externally at first, in order to carry out the cloning process. With that done, you'd then need to open up your machine and swap the new drive for old.

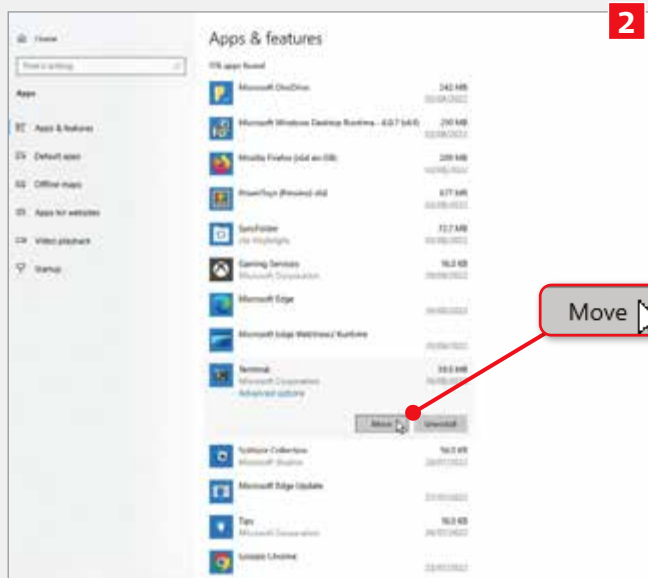
None of this is particularly difficult, though you need to remember to research the right SSD type for your exact laptop model. If you decide to get an expert to do it, we'd expect you'd have to pay for no more than a couple of hours'

labour, on top of the cost of the SSD.

However, we have an alternative idea that could help. It's both quicker and easier than replacing an SSD, and is free. If you like the sound of that then the trick is to use tools built into Windows 10 to move some of your programs to your hard drive. This will mean they'll launch more slowly, and not all apps can be moved, but it's something you can try right away, and without any expert knowledge.

First, click Start followed by the Settings cog, and then click Apps followed by, on the left, 'Apps & features'. Then, on the right, next to 'Sort by', click the dropdown menu and choose Size (see screenshot **1**). This will list installed apps with the largest at the top. Now click an app that you'd be happy to move to and run from the hard drive, and, if it appears, click the Move button **2**. Next, click to open the 'Select a drive to move this app to' dropdown menu and choose your hard drive (typically labelled D). Click 'Move', then wait for a few seconds and that's that.

Note that only apps downloaded and installed via the Microsoft Store can be moved in this way. Other apps can be manually uninstalled (via the Uninstall button) and then reinstalled on to your hard drive – just be sure to select its drive letter when installing afresh.



Click an app you want to move to the hard drive, and, if present, click the Move button



## Why can't I open my old Word documents?

**Q** I've been pootling along with a Windows 7 PC for a very long time now, quite happily I might add. However, with that system out of support and my old computer not really fit for some modern software, I finally bit the bullet and purchased a new laptop with Windows 11.

I had a local technician transfer all my stuff and it was fine for several months. Recently, though, I tried to open some very old documents but was met with a message that said this process was prevented by my File Block settings in Trust Center, whatever all that means.

I looked in Windows for either of these things but couldn't find them. These documents aren't terribly important, but I would like to be able to get into them – and it was never a problem on my old machine. Do you know what's causing this and how to fix it?

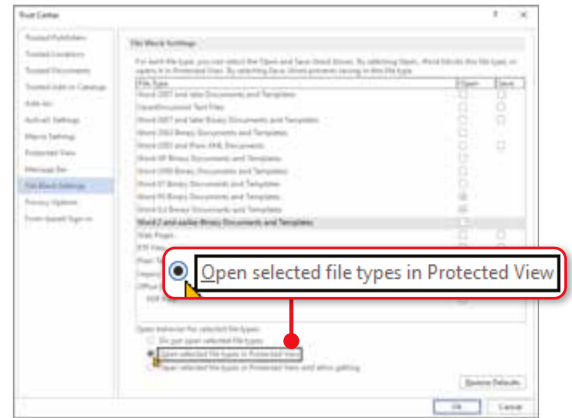
Ron Kelly

**A** We do and we can. You didn't say specifically but from your description of the problem we think that you're using Microsoft Word.

Modern versions of this tool by default block certain older file types created by older versions. This is because security flaws in the previous format means contents of these documents could be unsafe. It's therefore a good idea to keep these blocks in place. However, if these are documents you've created yourself and you're confident they're free from security threats, then Word's barricades can be removed, temporarily or permanently.

The error message displayed when attempting to open such documents actually refers to settings in Word itself, not Windows (though the mildly cryptic nature of the warning is typically Microsoft!). So, in Word, first click to open the File page and then, at the bottom left, click Options. Next, in the Word Options box, on the left, click Trust Center and then, on the right, click the Trust Center Settings button.

Next, on the left, click File Block Settings. The options you need are on the



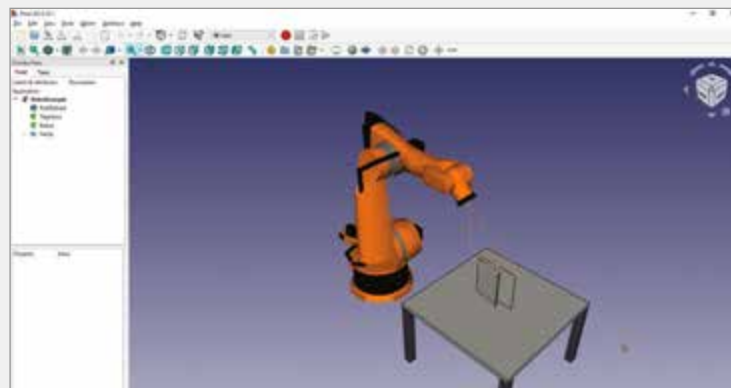
In File Block Settings, click the 'Open selected file types in Protected View' option

right. They are also a little cryptic but, essentially, you need to remove ticks from the document types you'd like to open. Alternatively, keep those Open boxes ticked but choose the 'Open selected file types in Protected View' option (see screenshot above). This will let you view the documents only, disabling most editing functions (which is where the theoretical risk lies in these old files).

## Is my £900 software worthless?

**Q** I had to reinstall Windows 10, keeping the files but reinstalling apps when needed. As a retired architect I wanted to access my garden designs using the software AutoCAD LT 2008, which I bought for more than £900. Developer Autodesk refuses to reactivate this, giving the spurious reason that it cannot be supported. Nevertheless, I'd previously been using this app without trouble. Can I make this program work again without reactivation? Autodesk insists all I can do is pay a ridiculously high annual subscription to update the software. This is not an option for me. Could I recover files buried under the Windows 10 reinstallation?

Mark Savege



FreeCAD is compatible with the DWG files produced by AutoCAD

**A** When you 'buy' software, in almost all cases you're actually purchasing a licence to use it, and that might not mean forever. Here, Autodesk has decided that because of this, along with older versions of its other tools no longer working reliably, it has disabled activation.

We think this is appalling, but there's nothing that can be done about it. There's no way to resurrect an old installation

from a PC that's had Windows reinstalled.

Short of downloading an illegal 'cracked' version of your old software – which we certainly cannot recommend – your best bet is to try a free alternative, such as FreeCAD ([www.freecadweb.org](http://www.freecadweb.org), pictured above). It's compatible with the DWG files produced by AutoCAD, so you should be able to open your designs.

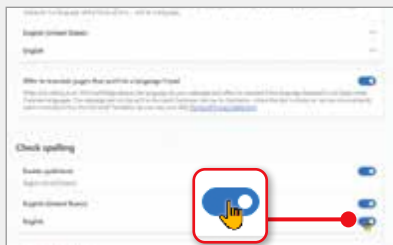
## Why does Google Calendar think I'm American?

**Q** I use Google Calendar and in Settings have set the language to English (UK). When I create an appointment, such as 'Buy new tyres', the word 'tyres' is underlined with a red squiggly line and the suggestion I meant 'tires'. Can this be remedied? I'm using Windows 10 and Google Calendar in Microsoft Edge, incidentally.

Geoff Long

**A** Yes, you can fix this. Google Calendar's language setting doesn't control the spell-checker, only the language displayed by the service's interface. To control the dialect used for underlining words with questionable spelling, you need to explore the web browser's settings – Edge, in your case.

First, click the menu button (three dots, top right) and then, on the left, click Languages. Next, in the right-hand pane, under 'Check spelling', first click to flip the English switch to its On position. Then, assuming you're not interested in US spellings, click to flip the 'English (United States)' switch to Off (see screenshots below).



Click to flip the 'English (United States)' switch to its Off position on the left

## Can I right-click to scroll up?

**Q** My first computer was an Acorn, with a mouse. With that, I could left-click the little down-arrow icon to scroll down a document but also right-click that same icon to scroll up. On the little up-arrow icon, the reverse was true. Is there any way that one can obtain this function in Windows?

Alan Beasley

**A** That sounds like a nifty trick. We think it relates to the Acorn Archimedes (pictured right) – and specifically to that computer's RISC operating system. This particular shortcut is not available in Windows and, to our collective knowledge, nobody has ever replicated it.

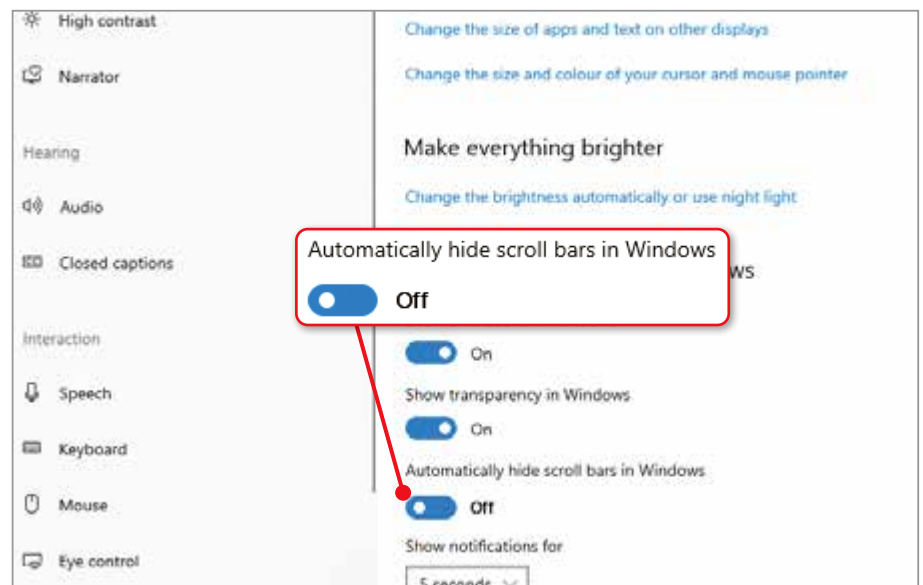
We suppose one reason for that is technology has moved on since the Archimedes appeared in 1987, and almost all modern mice now feature a scroll wheel – greatly reducing the need to click on scroll buttons. Indeed, Windows now even hides scrollbars by default. For the benefit of curious readers, the switch that



Acorn Archimedes allowed users to click arrows to scroll up and down documents

controls this can be found by clicking Start followed by Settings and then 'Ease of Access' followed by Display. Flip the 'Automatically hide scroll bars in Windows' option (see screenshot below) to Off if you'd like them permanently visible.

But really, we're publishing your email because it's an interesting idea and it's just possible that one of our readers will know of a little tool that will bring this behaviour to Windows.



Flip the 'Automatically hide scroll bars in Windows' to its Off position

**Q:** What do different USB stick colours mean?

**A:** Issue 612, page 65 – find it on our 2021 Back Issue CD

Buy it from [www.snipca.com/42077](http://www.snipca.com/42077)



## How do I deal with being 'pwned'?

**Q** I've been a subscriber more or less from the start and always found *Computeractive* very informative and helpful. Over the years, you've regularly directed readers to the Have I Been Pwned? (HIBP?) website, at <https://haveibeenpwned.com> (pictured right), to check for possible data breaches. It informs me my email address has been the subject of one data breach (see screenshot). However, it gives no indication as to whether this includes my passwords and, if so, which ones. So, other than changing my email address on every service that I use – not a realistic option – it's not much help. Am I missing something?

Sean Garden

**A** We've changed your name to protect your identity. We agree that, on the surface at least, results from Have I Been Pwned? do not seem all that useful. However, you might have missed the context they provide, which can be very useful.



Have I Been Pwned? reveals whether you have suffered email or phone data breaches

You sent us a screenshot of a breach involving your details. It relates to the 2017 Onliner Spambot leak ([www.snipca.com/43293](http://www.snipca.com/43293)). This shows your email address was in a data leak affecting millions of others. Alongside some email addresses, passwords were affected. There are links in the HIBP? summary to a blog post by the website developer, Troy Hunt, which is at [www.snipca.com/43294](http://www.snipca.com/43294). Hunt also explains why he never reveals affected passwords, at [www.snipca.com/43295](http://www.snipca.com/43295).

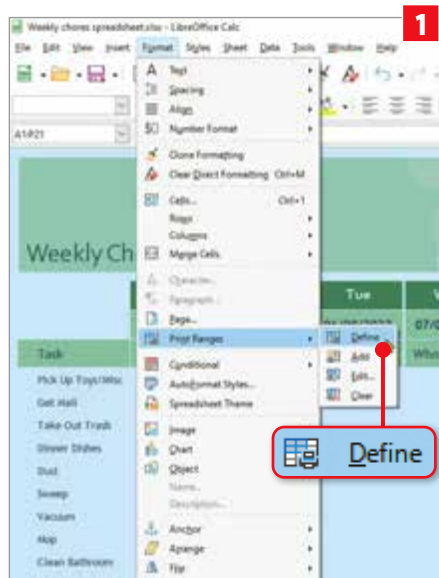
These posts explain that if HIBP? identified an email in a security breach, and that breach included passwords alongside the email addresses (as with Onliner Spambot), then you should consider that email and password combination compromised. There's no need to change your email address, but you should set new (and different) passwords on every service with which it is registered.

## How do I print my spreadsheets in Calc?

**Q** I hope you can help me with a problem I have printing spreadsheets in LibreOffice Calc. I've tried page breaks and defining print ranges, but all I seem to achieve is a date printed on the top left or one column on the left. There doesn't seem to be a way to print a selection, as I could in Excel.

Barbara Batty

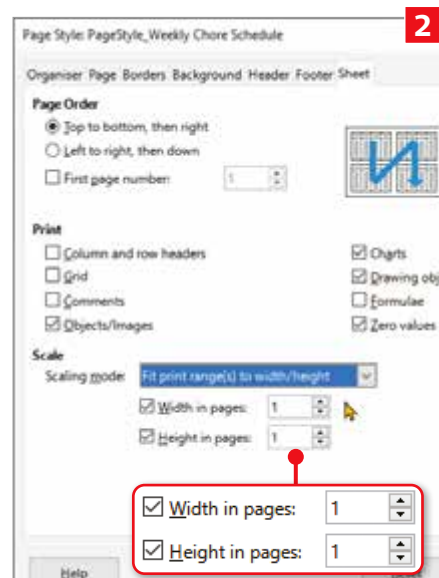
**A** Printing spreadsheets just how you want always seems more difficult than it should be. Fortunately, it's as possible in Calc as it is in Excel, but the method isn't necessarily obvious the first (or 50th) time you do it. To begin, first use the mouse in the usual way to click and drag to select what you want to print: this is a key step. Next, open the Format menu, then point to Print Ranges before clicking Define (see screenshot 1). Calc will now apply



Open the Format menu, then select Print Ranges before clicking Define

dotted marker lines around the selected cells.

Next, open the Format menu again, but this time choose Page. On the Page Style box that appears, click to select the Sheet tab and then, under Scale, use the options to define how to print. For example, if



Choose 'Fit print range(s) to width/height', and set the Width and Height boxes to '1'

you have only a small selection, then you could choose 'Fit print range(s) to width/height', and then set each of the Width and Height boxes below to '1' 2.

Finally, from the File menu, choose Print Preview to check all is as expected, and then just click the Print icon.

## Is my old scanner obsolete?

**Q** I have a Canon CanoScan 5700F scanner that works fine with my old Windows XP PC. However, I wish to use it with my Windows 10 laptop, but I cannot find a **driver** to allow it to work. I hope you can help and that this is just another example of planned obsolescence.

John Southwood

**A** We're a little confused because we can't find any mention of there ever having been a CanoScan 5700F model. There is a CanoScan 5600F (pictured above right), so perhaps this is what you have? If so, this is supported by Windows 10, and you can download the drivers directly from Canon, at [www.snipca.com/43296](http://www.snipca.com/43296).

Alternatively, there are Canon devices with a 5700 code, but these are Pixma MG models, rather than the CanoScan brand. Unlike CanoScan models, which are dedicated scanners, Pixma MG5700



**CanoScan 5600F is supported by Windows 10**

devices are multifunction machines that can both print and scan. If this is what you mean then, again, these models are supported by Windows 10. Canon offers drivers for download, at [www.snipca.com/43297](http://www.snipca.com/43297).

Otherwise, pretty much any scanner from the past decade or more should work using the default drivers built into Windows and basic scanning tools from Microsoft and others.

Download Microsoft's free Windows



**You can also download Microsoft's free Scan tool**

Scan tool from [www.snipca.com/43298](http://www.snipca.com/43298) (see screenshot above), hook up your scanner and you should be good to go.

## How do I stop this power-on message?

**Q** When I turn on my PC, I get a load of text following the power-on message, starting with 'ASUS ROG STRIX Z390-F' and asking me if I want to set up the **BIOS**. It also mentions **RAID** configurations. At the moment, I press F1 and then exit the setup. My computer then works perfectly, as it did before I started getting this message. How can I stop it?

Patrick Howlett

**A** Assuming you haven't actually made any hardware changes or created a RAID setup with your machine's drives – and you'd surely remember if you had – then this most likely indicates a dead **CMOS** battery. The upshot is that the BIOS settings aren't being saved when you power off.

To fix that, you'll need to open the machine, pop out the CR2032 button cell (see photo) and replace it with a fresh one (they're just a couple of quid from [www.snipca.com/43291](http://www.snipca.com/43291), pictured far right).



**Open the computer and replace the little CR2032 button cell**

When done, press F1 to enter the BIOS and then exit, and answer Yes when asked to save 'changes' (not that you'll

have made any – but the action will save the current working setup, eliminating the startup message).

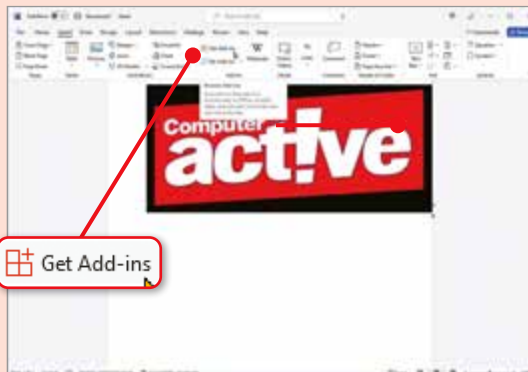


## WHAT'S THE DIFFERENCE BETWEEN...

### Apps and extensions?

**Q** As a 57-year-old subscriber, I find your magazine very helpful, although some of the articles are too advanced for my needs. Something I am unsure of probably seems pretty basic – the difference between an app and an extension. I understand what an app does, but I'm unsure what extensions are, what their function is and how they differ from apps. Could you explain please?

Byron Morris



Click 'Get Add-ins' in Microsoft Office to add new functionality to Word, Excel, PowerPoint and Outlook

com/43299, hosts millions of extensions. As Edge is built on the same foundations as Chrome, almost all of these are compatible with Microsoft's browser. Firefox extensions can be found at [www.snipca.com/43300](http://www.snipca.com/43300).

**A** We'll start with apps, which is simply a shortening of applications. This usage came about as a way to describe applications for smartphones and tablets, conveying their more compact designs and ambitions. However, these days apps are everywhere, with the Microsoft Store, for example, hosting thousands for Windows PCs. In some publications, apps, software and programs are interchangeable terms. However, we tend to use 'apps' only for phone and

tablets, or for tools from the Microsoft Store. For tools downloaded to computers, we use 'software' or 'programs'.

Extensions are different because they are bits of code that add features to an existing application, which is why they're also known as add-ons. The apps most commonly associated with extensions are web browsers, like Chrome and Edge.

If your browser doesn't have a feature you'd like, you can be pretty sure there'll be an extension that'll bolt it on. The Chrome Web Store, at [www.snipca.com](http://www.snipca.com).

Availability of extensions for tools other than browsers depends on the app. With Microsoft Office, for example, you can search for them by first selecting the Insert tab and then clicking 'Get Add-ins' in the Add-ins category (see screenshot above). This is because Microsoft, just to be different, calls them 'add-ins', rather than extensions or add-ons.

Want to know the difference between technical terms? Email [noproblem@computeractive.co.uk](mailto:noproblem@computeractive.co.uk)

## Why is modern laptop storage so low?

**Q** Perhaps you can help me with advice rather than a technical problem. Eight years ago, I bought a Lenovo G500 laptop with a 930GB hard drive. I'm now looking to buy a new laptop, but none of the laptops on, say, Amazon seem to offer storage above 512GB. I've been using computers since the late 1990s, but I wonder if I've missed something? Storage capacity in most laptops seems smaller than my eight-year-old Lenovo! My current hard drive is about half-full, so I'm nervous that even 512GB would be full pretty soon. Can you advise?

Frank Downs



Search for laptops that are '1TB & above'

**A** There are many factors at play here. But first, we're compelled to say that there are plenty of modern laptops with storage greater than 1TB, but they don't typically appear near

the top of Amazon searches.

That's mainly down to price and popularity but also reflects a shift in technology and usage patterns. Modern laptops tend to have SSDs and – gigabyte for gigabyte – these are still more expensive than hard drives. So, to make laptops affordable, manufacturers plump for lower-capacity SSDs.

Moreover, higher-capacity SSDs are proportionately more expensive. There's also the fact that many people now rely on online storage or even online apps for

day-to-day usage, so local storage capacity isn't perhaps the concern it once was. All this makes 512GB the current SSD sweet spot.

That will in time change, but if you want a laptop with storage in excess of 512GB then just adjust your search term (see [www.snipca.com/43292](http://www.snipca.com/43292), pictured left) – and your pricing expectations.

## Next Issue

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- Why is my iPhone connecting to public Wi-Fi?
- Can I rescue my Humax recordings?
- How do I bin this search box? ...And many more

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## Reader Support

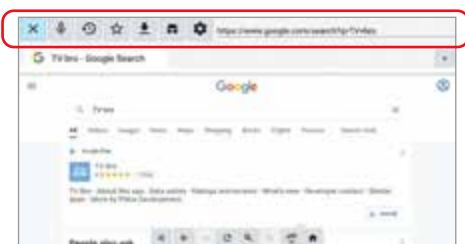
Having a problem with our recommended software or expert tips? Email [editor@computeractive.co.uk](mailto:editor@computeractive.co.uk) and we'll do our best to help

### How can I open TV Bro app?

**Q** I wanted to use the TV Bro app ([www.snipca.com/42469](http://www.snipca.com/42469)) after reading about it in your Cover Feature on the best apps for smart TVs (Issue 636, page 56). I installed it on my Samsung tablet, running Android 6, but all it does is launch Sky News on YouTube. I can't watch anything else on it. What's going wrong?

Christopher Clayton

**A** TV Bro is a web browser for smart TVs running the Google TV operating system (OS), rather than for tablets. The reason you might want to install it on your TV is because (as we mentioned in our Cover Feature) Google's smart TV OS doesn't come with a web browser, meaning you won't be able to view web pages or browse sites on the big screen without downloading a third-party browser – such as TV Bro. Press the 'Back' button on your remote to reveal TV Bro's address bar, toolbar and other controls (see screenshot below).



Press 'Back' on your remote to display TV Bro's address bar and other controls

When installed on an Android tablet or phone, TV Bro is merely a basic browser showing built-in links – including one for YouTube, which explains the options you're seeing. But there are plenty of better options for tablets, so there's little point using it on yours.

### Why are my clipboard options greyed out?

**Q** After reading David Ludlow's 'How I Use' on clipboards (Issue 640, page 20), I opened the

Clipboards setting in Windows, but all the options were greyed out. I'm the administrator of the PC, so I thought I'd be able to see these. Can you help?

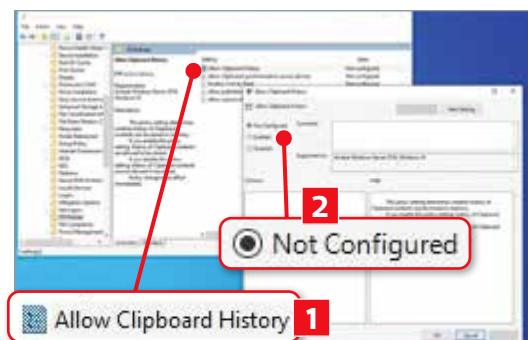
Eamonn Colley

**A** Windows' clipboard options can sometimes end up being disabled by third-party

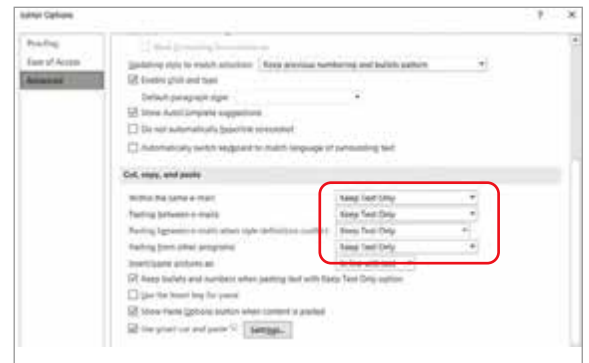
privacy tools, including Spybot Anti-Beacon. There is an easy way to fix this, but only if you have access to the Windows Group Policy editor – and for that you need Windows Pro (10 or 11).

Type **gpedit** into the Start menu, then press Enter. Using the folders in the left-hand pane or the window that opens, navigate through Computer Configuration, Administrative Templates, System, OS Policies, then double-click Allow Clipboard History on the right (1 in our screenshot below). Counter-intuitively, this should be set to Not Configured. If it's not, click the button next to Not Configured to select it (2, then click OK and restart your PC.

If you're running Windows 10 or 11 Home, try disabling any third-party privacy tools you have installed. If this doesn't work, read the privacy tool's options to see whether it affects any clipboard settings.



In Windows 10 or 11 Pro use the Group Policy editor to re-enable the Allow Clipboard History settings



If you don't see the Match Destination Formatting in Outlook, use the Keep Text Only option instead

### Why are my email-formatting options different?

**Q** I was interested in your tip on keeping email formatting when pasting text in Outlook (Issue 639, page 47). However, the steps you gave don't apply to my version, which is Outlook 2016. I couldn't find the Match Destination Formatting option you mention, though there's one called Merge Formatting. Will this have the same effect?

Paul Davies

**A** The Merge Formatting option isn't quite the same as Match Destination Formatting because it retains some formatting elements, including emphases such as bold and italics. The option you probably want to go with in Outlook 2016 is Keep Text

Only (see screenshot above). It's very similar to Match Destination Formatting, because it does have the effect of retaining the text on its own without any formatting or style applied. When you paste it into another email, the raw text will take on the style and formatting of the paragraph where it is pasted.

Bear in mind, however, that this option will also remove any non-text items – images, photos, tables and so on.

# Jargon Buster

**1080p** High-definition video of 1920x1080 pixels.

**4K** Video with a resolution of at least 3840x2160 pixels.

**720p** A resolution of high-definition video: 1280x720 pixels.

**Administrator** Someone who can make changes to a computer that will affect others who also use it.

**ADSL** Asymmetric Digital Subscriber Line. A technology that converts a standard phone line into a broadband internet connection.

**AI** Artificial Intelligence. Intelligence demonstrated by a machine rather than a human being.

**Aluminosilicate glass** Chemically strengthened glass to protect against impact and scratches.

**Bandwidth** A measure of how much data can be transferred through a connection at one time.

**Benchmarking** Comparing software and products with an accepted standard.

**BIOS** Basic Input-Output System. Software built into every PC that connects the vital components.

**Bloatware** Unwanted software built into a new device.

**Buffering** Downloading a certain amount of data before starting to play a video. Can cause delays to your streaming.

**cd/m<sup>2</sup>** Candela per square metre. Standard unit of brightness.

**Clean install** An operating system installation that overwrites all other content on the hard drive.

**Clock rate** The speed at which a processor can perform operations. Measured in Gigahertz (GHz).

**Clone** In image-editing software the clone tool allows you to copy one area and paint it over another.

**CMOS** Complementary metal-oxide semiconductor. A type of image sensor chip used in digital cameras and a chip on PC motherboards that stores the date and time.

**Cookie** A small text file stored on your computer by a website.

**Core** Units on a processor that carry out program instructions.

**CPU** Central Processing Unit. Another term for a computer processor.

**Dark mode** Showing white text on a black background.

**DisplayPort** A new socket for connecting monitors.

**Dolby Vision** Dolby's HDR (High Dynamic Range) screen technology.

**Driver** A file that tells Windows how to work with an external device

**DSLR** Digital single-lens reflex. A digital camera that uses a moving mirror so its viewfinder looks out through the lens.

**Dual-band** A Wi-Fi router that operates on two bands: 2.4 and 5GHz. Wireless networks working at 2.4GHz have longer range, but are more prone to interference. 5GHz have shorter range, but are less prone to interference.

**DWG** A file format for saving 2D and 3D drawings.

**E-ink** Electrophoretic ink. A special type of ink used to display content in electronic devices.

**Emoji** A small graphic that can be inserted into a text message or email.

**EPUB** A file format used by many popular ebook readers.

**EXE** A program file designed to run in Windows.

**Extension** A program that adds extra features to your browser.

**File path** Shows the location of a file within Windows.

**Firmware** Basic software stored on hardware to control its operation.

**FTTC** Fibre to the Cabinet. Broadband tech that uses fibre-optic cable between a telephone exchange and residential streets before transferring to the normal telephone wires.

**GIF** Graphics Interchange Format. A type of image file often used on the web, but now largely superseded by PNG.

**Gigabit Ethernet** A very fast networking standard that can transfer data at up to 1,000Mbps.

**Graphics card** A component in a computer that produces the image shown on the monitor.

**HDMI** High-definition media interface. A type of connection that transmits high-definition video and audio signals.

**HDR** High-dynamic range. A camera that takes more than one photo with different levels of colour and contrast. These images are then combined to create a better-quality image.

**HDR10+** High-dynamic range 10. Current industry standard for TVs.

**HLG** A new high-definition TV format jointly developed by the BBC and Japanese broadcaster NHK.

**HTML** Hypertext Markup Language. The language used to write most web pages.

**Hyperlink** A clickable link that takes you to a new document or website.

**HTML5** The latest version of the Hypertext Markup Language used to create most web pages.

**Hz** Hertz. Measures the frequency something happens: 1Hz equals once a second.

**Incognito mode** A browser mode that doesn't save your internet history, so other people using your computer can't see which sites you've visited.

**IP address** Internet Protocol address. A unique set of numbers used to identify computers and websites on the internet.

**IPS** A screen technology. Monitors that use it have wider viewing angles and better, more accurate colours than monitors that do not use this technology.

**ISO file** A type of image file that contains data from a CD or DVD.

**JavaScript** An older programming language developers use to make web pages interactive.

**JPEG** Joint Photograph Experts Group. A common type of image file created by most digital cameras.

**M.2** A standard specification for PC expansion cards and connectors.

**Mesh Wi-Fi** Wireless network system that uses multiple, connected routers to stretch Wi-Fi further than a traditional router.

**MicroSD card** A small type of memory card.

**NAS** Network-attached storage. A hard drive attached to a network that can be shared with other PCs.

**NTFS** New Technology File System. A file system used by all recent versions of Windows.

**OLED** Organic light-emitting diode. A thin-film organic light-emitting diode used in PC screens.

**Open source** Software that can be modified by anyone.

**Overclock** Make a processor work faster to boost performance at the cost of it getting hotter and requiring more power.

**Partition** A large hard drive can be split into two or more partitions or 'virtual' drives.

**Phishing** A form of internet fraud that tries to trick you into revealing personal details.

**Ping** A way to measure how quickly your device gets a response after sending a request for information via the internet.

**Pixelate** When an image on screen is divided into large pixels, typically because packets of data were lost due to a poor connection.

**Plain text** Text in a document that doesn't contain any formatting.

**Plug-in** A small program that adds extra features to software.

**QR code** Quick Response code. A barcode that can be read using smartphones.



**RAID** Redundant array of independent disks. System for storing data efficiently and automatically backing up computer hard drives.

**RAM** Random-access memory. Computer's working area, used for data storage while the PC is switched on.

**Ransomware** Malware run by hackers who lock files on your PC and demand a payment to release them.

**Refresh rate** Measured in Hertz (Hz), the number of times per second that the image on your monitor is redrawn.

**Registry keys** The Windows registry equivalent of a folder.

**RISC processor** Reduced Instruction Set Computer processors are designed using a very limited number of simple instructions. They can combine these instructions at high speed to perform much more complex calculations.

**S Mode** A version of Windows that allows from the Microsoft Store only.

**Safe Mode** A way of starting Windows so that various programs and peripherals are prevented from working.

**SATA** Serial ATA. An interface for connecting hard drives and optical discs to a computer.

**SD card** Secure Digital card. A popular type of memory card.

**SIM** Subscriber Identity Module. The smart card used by all digital mobile phones.

**Sound card** An expansion card that lets a PC create game sound effects, music, and so on.

**Spyware** Software installed (usually surreptitiously) to monitor and report back on a computer's use. Spyware can also be used to record keyboard strokes.

**Steam** A service for streaming computer games.

**SSD** Solid-state drive. Storage that uses no moving parts.

**Temporary file** A file created by a browser to store website data.

**TXT** A basic file format that contains nothing but text

**UEFI** Unified Extensible Firmware Interface. A modern replacement for the BIOS.

**Ultrawide** Offering a field of view that's wider than traditional digital cameras.

**USB 2.0/3.0/3.1** Faster successors to USB.

**USB-C** A new connector that's reversible.

**VA** Vertical Alignment. LCDs in which the liquid crystals align vertically between the panes of glass.

**VGA** Video Graphics Array. An older standard socket for connecting a monitor to a computer.

**Virtual memory** Data that is temporarily moved from RAM to hard drive to make up for shortages in memory.

**Whitelist** A list of allowed websites, email addresses and applications used by security software to ensure you only visit safe websites and download safe programs.





**Wi-Fi 6** Wi-Fi standard with speeds up to 10 times faster than 802.11ac. Also called 802.11ax.

**Zero-day attack** A malware or security exploit that depends on a previously unknown software flaw.

**ZIP file** A file that contains compressed documents or files.

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# Easy when you **Know How**



Worried that his laptop is contributing to eye-wateringly high electricity bills, **Robert Irvine** tries to...

## Reduce PC energy use

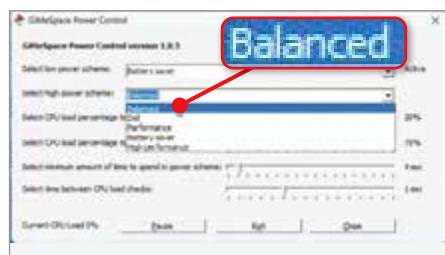
**A**s the weather gets colder and energy bills more expensive (though thankfully not as high as they could have got), like many people in the UK, I've become obsessed with my power consumption. Does leaving my TV on standby use more electricity than switching it off and on again? Will turning the fridge down a couple of notches conserve power without spoiling the cheese? And should I remove the plug from my convection heater lest I be tempted to use it when winter bites?

“

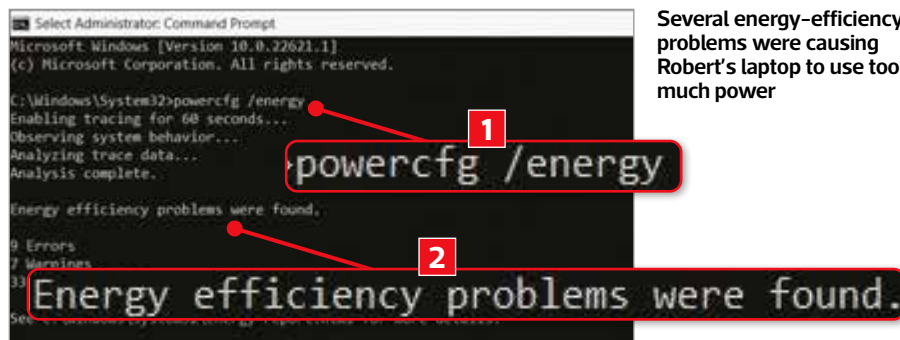
Although I felt like I was being told off, this was useful information

”

Particularly concerning is my laptop, which is active and connected to the mains for at least 10 hours a day. That may seem silly on my part, but its battery rapidly runs down when disconnected, suggesting it may be using a lot more power than it should. Determined to diagnose the reason for the laptop's excessive consumption, and put an end to



GiMeSpace Power Control automatically switches between high and lower power schemes



Several energy-efficiency problems were causing Robert's laptop to use too much power

its misbehaviour, I decided to generate an energy-efficiency report using a hidden option in Windows 10 and 11.

I typed `cmd` into the Windows search box, selected 'Run as administrator' under Command Prompt and granted the app permission to make changes to my device. When the Command Prompt window opened, I typed `powercfg /energy` (1 in our screenshot above) and pressed Enter to generate the energy report. By default this takes 60 seconds, but for a more thorough report you can type, for example, `powercfg /energy /duration 180` for a three-minute (180 seconds) check.

The results told me – unsurprisingly but still worryingly – that 'Energy efficiency problems were found' 2. These consisted of '9 Errors, 7 Warnings and 33 Informational' and referred me to an [HTML file](#) to read the full report. I copied this link into my browser, pressed Enter and reviewed the full horror of my laptop's energy problems.

In the Errors section, I discovered that my power plan's 'personality' was High Performance, my processor was running at a *minimum* of 100 per cent and my Wi-Fi adapter was not configured to use low-power mode. I also saw that my laptop's battery was only retaining 40 per cent of its charge. The Warnings section highlighted that my laptop was waiting more than 30 minutes to go into sleep mode and 10 minutes to switch off its display when not in use.

Although I felt like I was being told off, this was useful information and, while I


couldn't do much about my laptop's battery retention, I could tweak my power plan to use less energy.

Rather than manually go through the hassle of trying different settings, I used a free tool with the forthright name GiMeSpace Power Control ([www.snipca.com/43384](http://www.snipca.com/43384)). This switches automatically between low- and high-energy plans depending on the load of your processor, so you save power when you don't need it and don't sacrifice performance when you do.

I downloaded GiMeSpace from [www.snipca.com/43385](http://www.snipca.com/43385) and installed it – making sure to untick the box for an 80-per-cent discount on unrelated software. When the program opened, I selected Battery Optimizer as my low power scheme and Balanced for the high power scheme (see screenshot below left).

These options are based on your existing Windows power plans, so may differ on your PC and can be customised as required. I didn't touch the sensibly set sliders for selecting the 'CPU load percentage' at which to switch to either power scheme, but clicked Close to minimise the tool to my system tray.

I then ran another energy report and was pleased to see that there were now only 4 Errors and 3 Warnings. Hopefully, this reduction in power usage will be reflected in my next electricity bill.

 Need help with improving the energy efficiency of your computer?  
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