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#MONITORS **4** GAMERS

by **iiyama**

RED EAGLE™

**GO CURVED OR GO HOME**



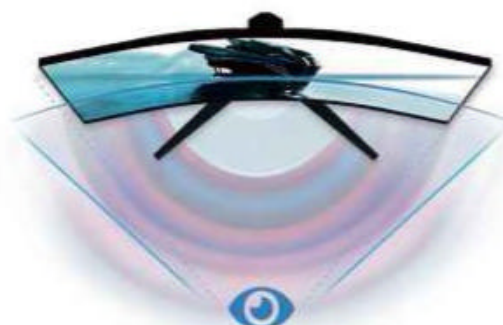
**G-Master  
GB3466WQSU**

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**G-Master  
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**BEST EVER PRINTER  
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Has pretty cheap ink too

Turn to page 24



**REPAIR ALL YOUR  
CORRUPTED FILES**

Images, videos, MP3s, docs & more

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**SPLIT YOUR  
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So you **NEVER**

bust your

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# STOP USING SOFTWARE

The 30 hidden **Windows** tools that work better

- ✓ Check your Wi-Fi strength
- ✓ Record your desktop screen
- ✓ Delete personal data
- ✓ Read & annotate PDFs
- ✓ Remove 'startup' junk
- + Ditch programs you don't need



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**PLUS**

# DON'T BUY THE WRONG USB STICK

Get the correct **size, shape, standard & more**

p60








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I came across Himalayan-sized mountains of junk when I moved house recently: books I don't remember reading, clothes I don't remember wearing, gadgets I don't remember using. It reminded me of the state of my desktop, which is crammed with software I don't remember installing. The result is a colourful mess of icons I don't recognise and never click. It's come to this because whenever I need to perform a task my first thought is always 'there must be a program for that', not 'I wonder if Windows can do it'.

I'll take Will Stapley's Cover Feature as a cue

to change my approach. He's unearthed 30 Windows features that do jobs you may have thought required third-party software (I did, anyway). I've since uninstalled seven programs that were surplus to requirements. Let me know which software you've purged from your PC.

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

**PS** I'm pleased to say we're selling **Windows 10 Pro** again at a huge discount (see page 54), plus **Adobe Photoshop Elements** for the first time (page 70).



## THIS ISSUE IN NUMBERS



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**24 & 25**

Maximum number items Office and Windows Clipboard can store respectively - [p69](#)

## 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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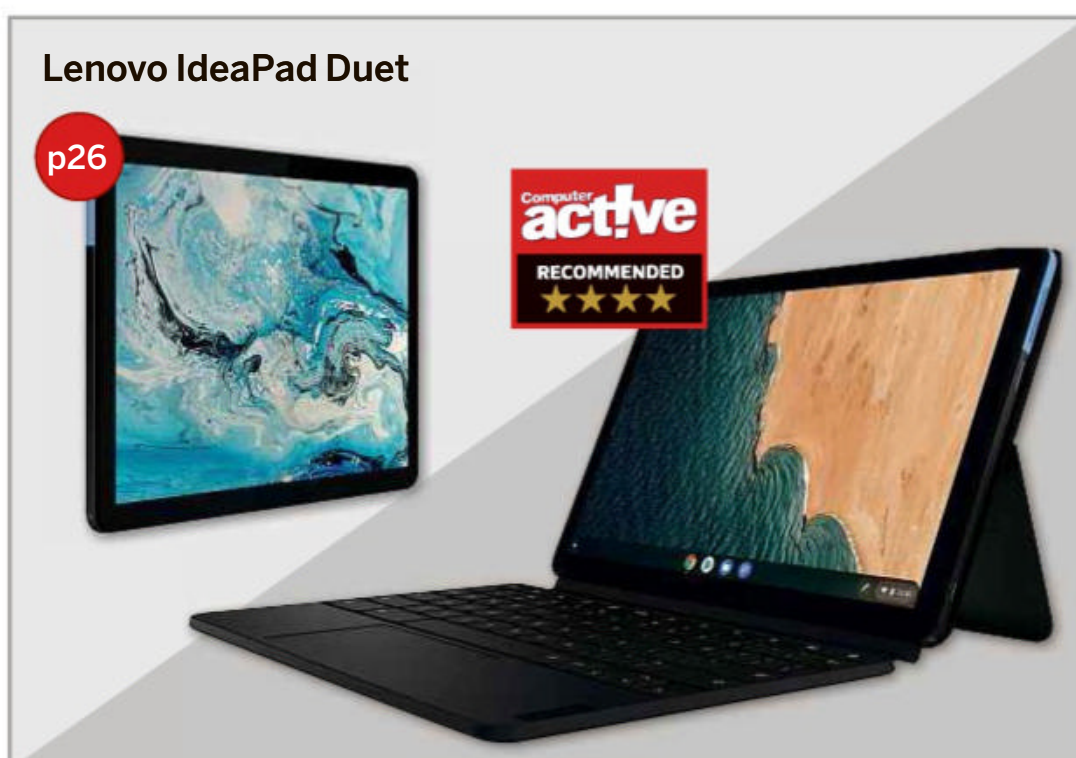
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PC Specialist Vortex Elite R



Lenovo IdeaPad Duet



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# STOP USING SOFTWARE

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The 30 hidden  
Windows tools  
that work better



Fix your broken files

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# Update Windows Defender to fix file-dumping bug

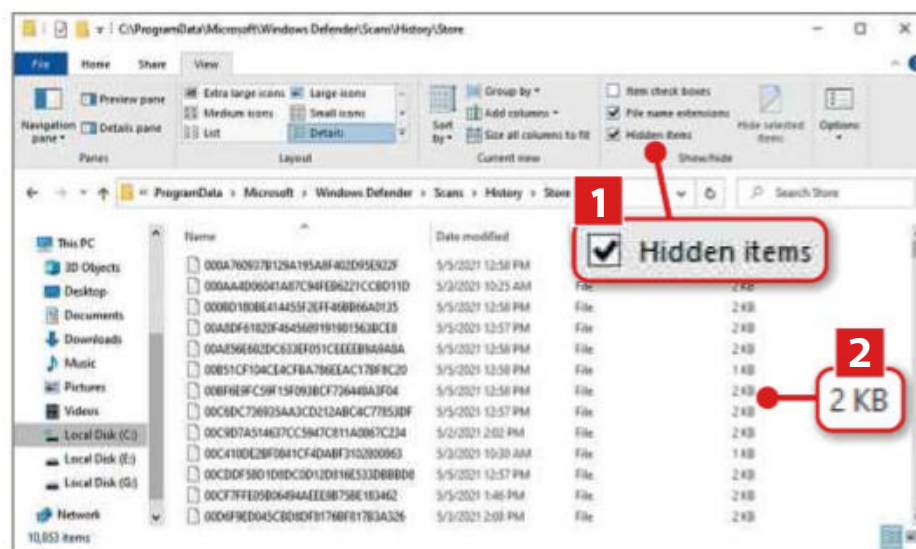
**Y**ou should check whether you have an update for Windows Defender to fix a bug that was dumping thousands of files on to Windows 10's system drive.

Each file is tiny, and they're all harmless, but together they can devour a large amount of storage space.

The problem, which began with the release in late April of version 1.1.18100.5 of Defender, causes files to clog up the **C:\ProgramData\Microsoft\WindowsDefender\Scans\History\Store** folder.

To check whether you've been affected, open File Explorer then click the View tab at the top and make sure the 'Hidden items' box is ticked (1 in main screenshot).

Next, type **C:\ProgramData\Microsoft\** into the address bar, then scroll down and click the Windows Defender folder. Click 'Continue' if the folder requests administrator privilege, then click Scans,



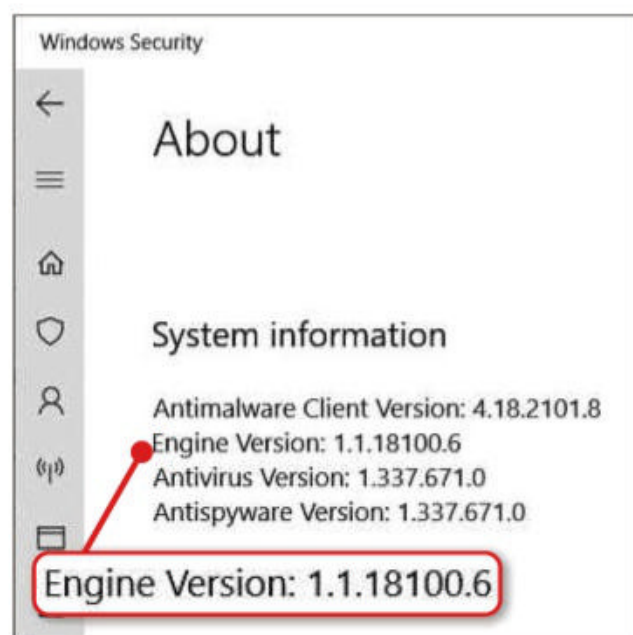
History, Store.

If you've been hit by the bug you'll see hundreds or possibly even thousands of files of less than one megabyte each (2).

You can safely remove them by right-clicking then selecting Delete, though Defender will continue to place files there until you install a new update that Microsoft released to fix the flaw.

You can see whether this update has been installed by checking which version of Windows Defender you have. Open the Settings menu (Windows key+I), then click 'Update & Security' followed by Windows Security on the left.

On the next screen click Open Windows



## WHAT WE THINK

Well, this is awkward. On page 55 we mention how Windows Defender has improved sharply in recent years, and now offers similar levels of protection as paid-for security suites. But here's a nasty glitch that will understandably dent many people's trust in the program. It doesn't alter our view that Defender is now robust enough to thwart most malware, but we still think the extra tools provided by anti-virus suites (VPNs, multi-device accounts, checking for stolen passwords etc) are worth paying for. Kaspersky, Norton and Bitdefender remain our top choices.

Security at the top, then the Settings cog bottom left. Now click About at the bottom in the middle, then look for your Engine Version. If it's 1.1.18100.6 (see screenshot below left) or a higher number, you're running an up-to-date version of Defender.

If it's 1.1.18100.5 or lower, you should manually check for updates. Open the Settings menu again, then click 'Update & Security', followed by Windows Update on the left. The update you're looking for is called 'Security

Intelligence Update for Microsoft Defender Antivirus'. If it's not there, click 'Check for updates' to make sure.

## FLASH TO BE FORCED OFF YOUR PC

Microsoft will soon start pushing an update that removes Adobe Flash from all Windows computers. The update, called KB4577586 ('Update for Removal of Adobe Flash Player'), has been available since January, but you've had to install it manually from



Microsoft's Update Catalog: [www.snipca.com/38208](http://www.snipca.com/38208). Microsoft has now said it will force the update on to computers in June or July, depending on which version of Windows 10 you run – read more at [www.snipca.com/38207](http://www.snipca.com/38207).



**You'll like this...**

Explore over a thousand World Heritage sites in Google ([www.snipca.com/38017](http://www.snipca.com/38017))



**but not this...**

Samsung has ceased security updates for its Galaxy S8 phones ([www.snipca.com/38206](http://www.snipca.com/38206))



# Dell to fix 12-year-old flaw: check if your PC is affected

Dell is to release an emergency security update to fix a flaw that dates back to 2009 and affects over 380 PC and laptop models.

The flaw was spotted by Kasif Dekel from Israeli firm SentinelLabs, who said hackers could have exploited the vulnerability to gain access to Dell laptops during the years it went undetected, but that there was no evidence they had.

Dekel discovered the flaw in the DBUtil BIOS driver that comes pre-installed on many Dell laptops and desktop PCs in order to install firmware updates via the Dell BIOS Utility.

It's thought that hundreds of millions of Dell computers have the flaw. It affects Windows computers only, not those running Linux.

To see if your computer is at risk, visit Dell's website ([www.snipca.com/38197](http://www.snipca.com/38197))



then scroll down to the table of models and check whether yours is listed in the left-hand column, under the Platform/Product heading.

If so, you should carry out one of three options suggested by Dell. Its recommended option is to visit [www.snipca.com/38201](http://www.snipca.com/38201) and download a new driver, though first you'll need to click the Enter Details box at the top right (see screenshot) and type your Service Tag or Model.

Another option is to check whether the 'dbutil\_2\_3.sys'

driver file is in your computer's C:\Users\<username>\AppData\Local\Temp or C:\Windows\Temp file path. If so, remove it by selecting it then clicking the Delete key on your keyboard while holding down Shift.

The third option is to run the Dell Security Advisory Update numbered DSA-2021-088, which the company was due to release on 10 May. You should have been notified about this if you run Dell SupportAssist on your computer.

## BT promises fix for Smart Home 2 router problems

BT will release a firmware update to fix problems with its Smart Hub 2 router that's frustrating thousands of users.

The Smart Hub 2 is a dual-band router, which means it transmits on both the 2.4GHz and 5GHz frequencies. Both frequencies have advantages: 5GHz is faster but has a smaller range, while 2.4GHz is much slower but reaches further.

However, numerous customers have complained on BT's forums that devices are able to communicate with each other only when they're connected to the same frequency.

The problem occurs most

frequently when users try to connect streaming devices, such as speakers, to their Wi-Fi network.

One forum member, called sl\_strachan, said he could only connect his iPhone 11 to his Sonos speakers by turning off 5GHz and using 2.4GHz. Other users have done the same thing, but say that their Wi-Fi grinds to a halt when several people try to use the slower frequency.

A Sonos spokesman writing on its forums ([www.snipca.com/38202](http://www.snipca.com/38202)) in early May said that BT has told the company it's "working towards pushing a fix to affected routers over the next 4-5 weeks".



BT claimed only a "small number" of customers have been affected, and confirmed that a fix will start to be released in stages from the end of May.

But it added that customers could contact it now to request the update remotely. Ring the company on 0800 800150 or talk to an assistant live online: [www.snipca.com/38203](http://www.snipca.com/38203).

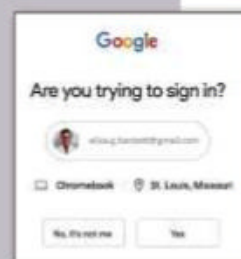
### IN BRIEF

#### DON'T TRUST CALLER ID ON YOUR PHONES

Ofcom has warned the public not to rely on Caller ID to avoid fraud because scammers are increasingly faking their phone numbers. Huw Saunders, an Ofcom director, told BBC Radio 4's *Money Box* that the UK is behind other countries in tackling the problem. He added that it will be easier to stop 'number spoofing' once VoIP replaces the old phone network (Public Switched Telephone Network), which is planned for the end of 2025.

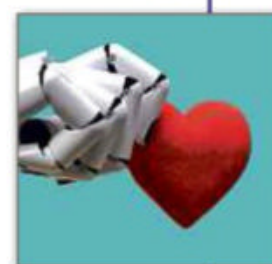
#### GOOGLE TURNS ON DEFAULT TWO-FACTOR

Google has said it will soon turn on two-factor authentication for all accounts by default. This means that you'll need to tap "a simple prompt" on your phone (pictured) whenever you try to sign into your account on another device, such as your computer. Read Google's blog to learn more about the system, which it calls two-step verification (2SV): [www.snipca.com/38204](http://www.snipca.com/38204).



### TOMORROW'S WORLD

"You look like a thing, and I love you". That's what you get when you train artificial intelligence (AI) to use chat-up lines. More direct is "Can I see your parts list?", while no robot would be able to resist "I can tell by your red power light that you're into me". These and many more were recorded by AI researcher Janelle Shane on [www.snipca.com/38196](http://www.snipca.com/38196).





## IN BRIEF

**CHECK IF EMOTET BOTNET STOLE YOUR EMAIL**

More than 4.3 million email addresses stolen by the Emotet **botnet** have been added to Have I Been Pwned? (<https://haveibeenpwned.com>), which lets you check whether your address has been part of a data breach. However, in this case you must register for a notification alert at [www.snipca.com/38104](http://www.snipca.com/38104) (read more at [www.snipca.com/38102](http://www.snipca.com/38102)). Emotet was removed from all infected computers in April after an international police operation.

**SPOTIFY INCREASES SUBSCRIPTION FEES**

Music-streaming service Spotify is increasing its subscription fees. Individual accounts will rise from £9.99 to £10.99, while Duo accounts will rise from £12.99 to £13.99. Family accounts (up to six people) will increase by £2 to £16.99. The £9.99 Premium subscription stays the same. These increases already apply for new subscribers, while Existing subscribers will start paying them from June.

**THE WORLD'S GONE MAD!**

Bob Beamon, 1968. Linford Christie, 1992. Steve Redgrave, 2000. Such priceless Olympic moments may soon be joined by some kid wagging a joystick. The International Olympic Committee (IOC) is currently hosting a virtual tournament of baseball, cycling, rowing, sailing and motor sport. The IOC tries (and fails) to justify these 'esports' at [www.snipca.com/38075](http://www.snipca.com/38075).



## New Amazon Fire HD 10 has more memory and brighter screen

**A**mazon has released the most powerful version yet of its cheapest Fire HD 10 tablet (pictured), increasing the **RAM** from 2GB to 3GB. The price stays the same (£149.99) for 32GB of storage, rising to £189.99 for 64GB.

There's also a new version of the more expensive model, called the Fire HD 10 Plus, which has 4GB RAM and is priced £179.99 for 32GB and £219.99 for 64GB. It can also be charged wirelessly, unlike the cheaper edition which has a **USB-C** 2.0 port for charging.

In most other respects the tablets are the same. Both are thinner than before, and have slimmer bezels on all four sides. Amazon says the **1080p** (Full HD) 10.1in screen is brighter than previous versions, with more than two million pixels.

Both versions let you add 1TB of storage using a **microSD card**, which you have to buy separately, and have a

fire



12-hour battery life. Also, as with previous Fire tablets, adverts (called "sponsored screensavers") will appear on the lock screen and in sleep mode unless you pay an extra £10 when buying it.

However, the cheaper Fire is available in four colours (Black, Denim, Lavender, and Olive), while the Plus comes in Slate only.

In addition, both tablets come in versions with 'productivity bundles', aimed at people using them for

work. These have a 12-month subscription to Microsoft 365 Personal, containing office tools including Outlook, Word, Excel and PowerPoint.

They also have 1TB of OneDrive online storage for up to five compatible devices at the same time.

All four devices are available to buy from 26 May. To buy the 3GB (RAM) Fire visit [www.snipca.com/38108](http://www.snipca.com/38108); for the 4GB Plus it's [www.snipca.com/38109](http://www.snipca.com/38109). We'll review them soon.

## Digital divide narrowed during lockdown, but 1.6m homes are still offline

**T**he UK's digital divide narrowed during lockdown, Ofcom says, as the proportion of homes without internet access fell from 11 per cent in March 2020 to six per cent 12 months later.

Its annual report on online habits shows that adults with "previously limited digital skills embraced online shopping, digital banking and video calling friends and family".

Younger people offered support, helping "older or less digitally confident friends and

relatives get connected".

However, it also says that remaining offline was likely to be "more disempowering than ever" because so much of modern life requires good internet skills. The six per cent of households that don't use the web amounts to 1.5 million homes. This group is more likely to include over-65s, lower income households, and the most "financially vulnerable".

Ofcom said that almost half of adults who remain offline say they're not interested in

the internet, or find it too difficult to use. A third of people said that a lack of equipment prevents them from going online.

However, six in ten of those who don't use the internet say they've asked someone to perform a task for them online in the past year. Ofcom calls these helpers 'proxy users', adding that the most common assistance needed was to buy something online.



How did your internet behaviour change during lockdown? Let us know: [letters@computeractive.co.uk](mailto:letters@computeractive.co.uk)



# Help Microsoft pick the next font for Office

Microsoft wants you to help it choose the new default font for its Office software.

Calibri has been Microsoft's default since 2007, when it replaced Times New Roman. It's what appears when you start typing in Word or Excel, unless you've set another font as your default. Calibri has subtly rounded stems and corners that are visible at larger sizes, but Microsoft says

**Bierstadt, Microsoft's *next* default font?**  
**Grandview, Microsoft's *next* default font?**  
**Seaford, Microsoft's *next* default font?**  
**Skeena, Microsoft's *next* default font?**  
**Tenorite, Microsoft's *next* default font?**

it's "time to evolve" and choose a replacement.

It named the five potential replacements in a blog post ([www.snipca.com/38135](http://www.snipca.com/38135)): Bierstadt, Grandview, Seaford, Skeena or Tenorite (pictured).

All five fonts are sans-serif, which means – unlike the serif fonts Times New Roman, and Acta Book used in *Computeractive* – they don't have extending features at the top or bottom. The simplicity of sans-serif fonts is widely considered to make them better for screens, while serif is preferred for printed publications.

Microsoft asked for feedback on Twitter ([www.snipca.com/38137](http://www.snipca.com/38137)), but added that whichever gets picked as the default, the other four will also be available. A decision is expected later this year.

Which is your favourite? And what do you currently use? Let us know: [letters@computeractive.co.uk](mailto:letters@computeractive.co.uk)

## HOW MICROSOFT DESCRIBES THE FONTS

**Bierstadt:** Versatile typeface that expresses simplicity and rationality in a highly readable form.

**Grandview:** Derived from classic German road and railway signage, which was designed to be legible at a distance and in poor conditions.

**Seaford:** Gently organic and asymmetric forms help

reading by emphasizing the differences between letters.

**Skeena:** Ideal for body text in long documents, as well as in shorter passages often found in presentations, brochures, tables and reports.

**Tenorite:** Crisp-looking shapes and wide characters create a generally open feeling.

## BT gives half-price broadband for people on benefits

BT is to offer fibre broadband at less than half price to people on benefits. Those eligible for the new BT Home Essentials package will pay £15 a month for speeds of around 36Mbps, much cheaper than the normal price of £32.99. It comes with 700 minutes of phone calls.

They can also choose the more expensive £20 package, giving average speeds of 67Mbps and unlimited calls. Both deals include the cost of a router, and come as rolling contracts, so there's no minimum term. You can choose to be billed monthly or quarterly.

The new tariffs, available

from the end of June, are available to people receiving universal credit, the guarantee credit element of pension credit, jobseeker's allowance, income support, and employment and support allowance.

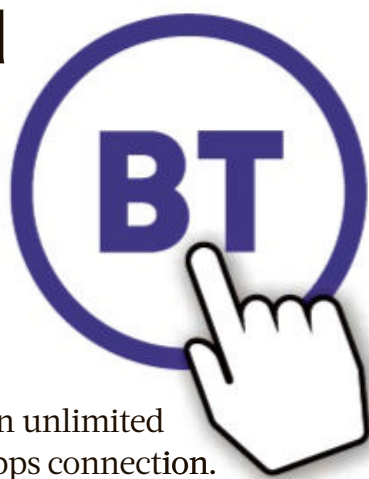
BT estimates that 4.6 million households in the UK will be eligible. Once a customer has signed up, the company will check 12 months later whether they're still eligible.

It added that Home Essentials is a "separate and improved" package compared with BT Basic, which launched in 2008 to provide broadband to people on benefits and currently costs £10.07 a month

for an unlimited 10Mbps connection. BT said that BT Basic will continue, but new and upgrading customers will be offered Home Essentials only.

The deals are similar to Virgin Media's Essential Broadband ([www.virginmedia.com/essential](http://www.virginmedia.com/essential)), which provides 15Mbps for £15 a month on a rolling contract.

Visit BT's site for more details: [www.snipca.com/38172](http://www.snipca.com/38172).



## IN BRIEF

### SAMSUNG TV PLUS ARRIVES ON GALAXY

Samsung's free TV-streaming service, called TV Plus, is now available on compatible Galaxy smartphones. It offers over 90 channels, including CNN and Euronews, plus plenty of drama, documentaries and comedies. It works on the Samsung Galaxy S10, S20, S21, Note 10 and Note 20. Read more on Samsung's site ([www.snipca.com/38113](http://www.snipca.com/38113)) and install it from Google's Play Store ([www.snipca.com/38117](http://www.snipca.com/38117)).

### GOOGLE ADDS VIDEO SETTINGS TO CHROMECAST

Google has added a new 'Advanced Video Controls' section to its 'Chromecast with Google TV', giving you more control over HDR settings, as well as resolution, refresh rate



and colour formats. It's part of a 166MB update being rolled out to the device (pictured). You'll find the section by clicking 'Display & Sound' in the menu.

### ROKU REMOVES YOUTUBE FROM STORE

Roku has pulled the YouTube TV app from its store after it said Google failed to meet four commitments: stop "manipulating" search results; stop asking for access to user data; stop using its "monopoly to force Roku to accept hardware requirements that would increase consumer costs"; and stop acting in an "discriminatory and anticompetitive manner". However, YouTube TV will remain on Roku devices if you've already installed it.



# Question of the Fortnight

## Why has Microsoft abandoned Windows 10X?

X no longer marks the spot as the pared-back operating system is ditched

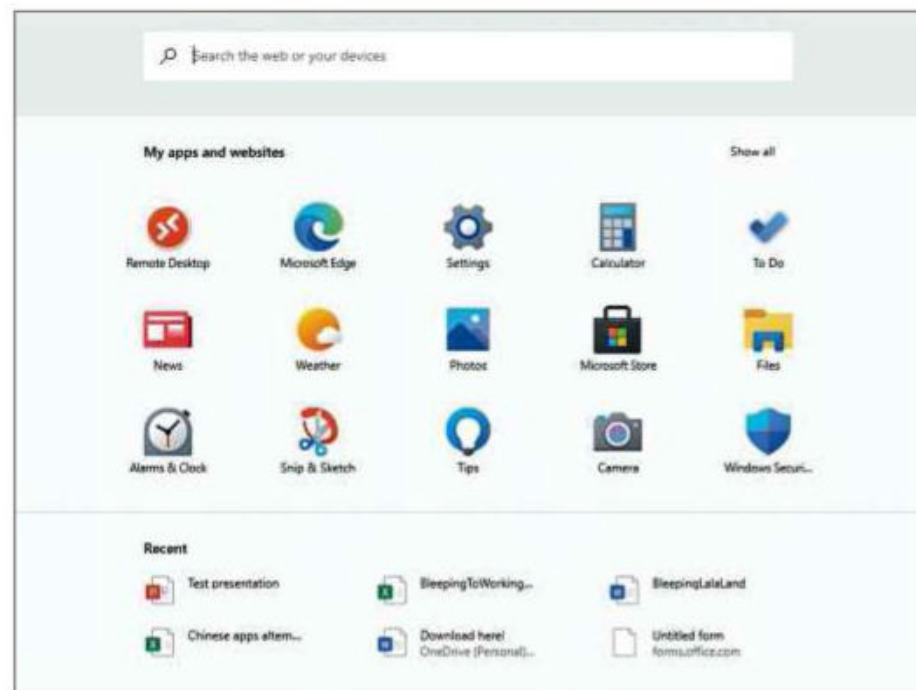
**N**ever underestimate the power of raising a sceptical eyebrow. As we wrote in January (Issue 596, page 6), that was our response to sources close to Microsoft claiming that Windows 10X would launch by June. We doubted why happy Chromebooks users would want to switch to a “half-baked version of Windows”, and argued that the “millions of people who use Windows do so because of its wide range of settings and features”.

There have been plenty of rumours since then about which tools Windows 10X would have and what it would look like, but nothing official from Microsoft. But now, with June almost here, those mysterious sources have spoken again – this time to tech site <https://petri.com> – and everything’s changed. Windows 10X will definitely not arrive in 2021, and probably won’t appear at all. Microsoft has dragged it to the great recycle bin in the sky.

Before we explain what went wrong with Windows 10X, let’s recall what Microsoft



The scrapped Surface Neo proves that two screens aren’t necessarily better than one



### THE FACTS

- Sources close to Microsoft say it has cancelled the proposed launch of Windows 10X
- The streamlined operating system was expected to be Microsoft’s equivalent of Google’s Chrome OS
- Insiders hint that some of Windows 10X’s elements will be added to Windows 10 in the forthcoming Sun Valley update

wanted it to be. The company had gazed enviously at the success of Chromebooks and in particular Chrome OS, which runs on them. This is Google’s lightweight, fast-booting operating system designed mostly for browsing the web rather than using software on your desktop.

Microsoft hoped that it would rival Chromebooks with the Surface Neo. Announced in 2019, this is a foldable tablet with two screens, one of which can hold a keyboard (pictured below left), and runs Windows 10X. It was meant to go on sale in late 2020, but work on the device was halted – first temporarily and now probably permanently.

With Neo mothballed, it looked like Windows 10X would become a homeless operating system. Microsoft then said it would switch its focus from dual-screen to single-screen devices, capitalising on the increased demand for traditional PCs

and laptops caused by working from home during the lockdowns.

That seemed to be a reprieve for Windows 10X. Instead of the Neo, it would appear on smaller, cheap laptops, much more like Chromebooks. Anticipation grew in the first few months of 2021, as more users signed up to try Windows 10X early.

Experts online raved about how the public was ready for a stripped-back version of Windows with a far simpler Start menu (pictured above), a floating Action Centre and no Control Panel.

Even we swallowed the hype, suspending our scepticism to explain how you could install the system on your computer using an **emulator** (Issue 601, page 35). We still thought it was a tough sell, but assumed it would appear nonetheless.

But then in late April Microsoft announced that Windows 10 was being used on 1.3 billion computers

worldwide, a huge jump of 300 million from March 2020.

Those in Microsoft who doubted Windows 10X must have wondered why so much attention was being placed on a cut-down version of an operating system that had grown by 30 per cent in just 12 months. Why baffle users with a slimmer Windows when the full-fat edition is doing so well?

That argument appears to have won the day, though elements from Windows 10X may yet be recycled in the main operating system (the cleaner Start menu, for example).

These will probably be added to this autumn’s feature update (21H2), codenamed Sun Valley, which promises to be the biggest redesign of Windows 10 since it launched in 2015. Expect new icons, more colour, floating menus and transparent backgrounds. Microsoft will hope it has the X factor missing from other revamps.



# Protect your tech

Scams and threats to avoid, plus new security tools

## WATCH OUT FOR...

## Fake chess, Spotify and PDF adverts

### What's the threat?

Criminals are tricking victims into installing malware by advertising a range of fake downloads, including a chess game, Spotify apps and a PDF-conversion tool.

The malware is spread through online adverts that look convincing. The chess game, for example, is promoted in a black banner, with a green Play Now button (see screenshot **1**). Clicking it takes you to a fake Microsoft Store page **2** that looks even more authentic, offering a game called 'xChess 3'.

The Spotify advert says you can sign up to the service and get YouTube Premium free for 90 days (see it at [www.snipca.com/38064](http://www.snipca.com/38064)), while the PDF tool markets itself as a "PDF, DOC, XLS, JPEG converter" (see [www.snipca.com/38065](http://www.snipca.com/38065)).

Installing any of the tools infects your computer with the Russian Ficker malware, which steals your documents and passwords.

**1**

### Ready to Play Chess?

- ✓ Play Online
- ✓ vs Computer
- ✓ Play Friends
- ✓ Tournaments

Play Now

### How can you stay safe?

Never clicking an online advert may feel like taking the precautionary principle too far, but it would certainly prevent you from being duped into installing malware masquerading as genuine tools.

To be safe, search for a specific tool on the maker's website, not on Google (so, for Microsoft Store apps, visit [www.microsoft.com/en-gb/store/apps](http://www.microsoft.com/en-gb/store/apps), then click the magnifying glass top right).

This particular attack appears to be targeting South American users at the moment, but it's highly likely to reach our shores because, as well as passwords and documents, it can steal **cryptocurrency**

**2**

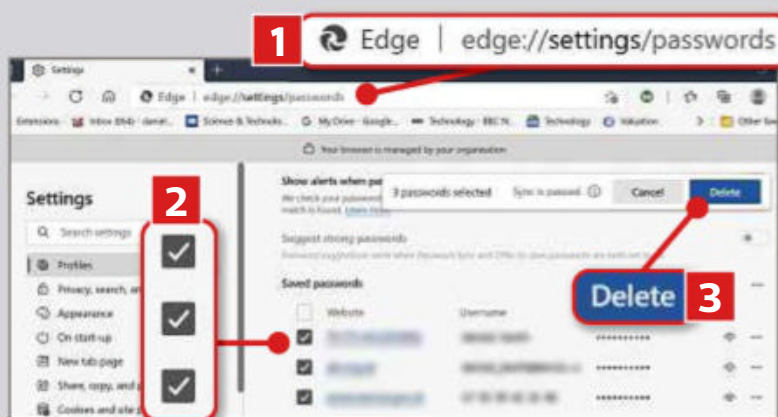


wallets. There's a lot of Bitcoin stored on UK computers. This digital stash is simply too lucrative for hackers to ignore.

## New tools | Batch-delete passwords in Edge

There are two ways to see all your passwords in Edge – by typing `edge://settings/passwords` into the address bar (**1** in our screenshot), or by clicking the top-right menu button (three dots), followed by Settings, then Passwords. That's pretty simple, but until recently you've not been able to delete more than one password simultaneously (in computer lingo, altering multiple files in one go is usually called a 'batch' or 'bulk' change).

Microsoft added this option to Edge 90, released in mid April. All you need to do is tick the box next to each password you want to erase **2**, then click the blue Delete button **3** in the box that appears.



Deciding whether to delete a password depends on you knowing what that password actually is. For security reasons, Edge shows you the website URL and the username, but the password remains hidden by dots. To reveal a password, click the eye icon to the right of the dots, then type the password for your Microsoft account. You'll see it appear in the Password column.

## ScamWatch

Readers warn readers

### 'Missing info' from 2021 Census

A couple of weeks after filling in the Census I received a text telling me there was information missing from it, and that I would be fined £1,000 unless I added these details. My first thought was a sarcastic "yeah, right", and a quick search online confirmed my suspicions. The Census is such a big operation that I guess it was always going to be exploited by scammers. I didn't click the link (which looked pretty dodgy anyway) and just deleted the message. You can see it for yourself at [www.snipca.com/38024](http://www.snipca.com/38024). Wouldn't surprise me if the scam persists all year.

Adam Jefferies



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



# Letters

Tell us what's on your mind

## Why are phones more interesting than tumble dryers?

✉ I'm delighted that the Government is introducing a law to force phone manufacturers to reveal upfront how long they'll provide security updates for their devices ('Question of the Fortnight', Issue 605, pictured right). I hope this will be the first step in a fightback against these companies.

Since the first iPhone came out, the likes of Apple and Samsung have carried out an astonishing marketing trick on us. Before smartphones, manufacturers in all industries would make a selling point out of how *long* a product would last. But smartphones seemed to change the laws of marketing by persuading consumers that there was a benefit in a product becoming obsolete after only a few years.

Phones seemed to have become a fashion item, like trainers or handbags. I can understand the desire to try new technology, but not when there's nothing wrong with the phone you're already using. Just imagine if you went around someone's house and they tried to interest you in the latest model of tumble dryer they'd recently bought. You might ask whether the old one was broken. No, they would reply - they just wanted to buy the latest model "because it has loads of new settings you can press". How absurd does that sound?

Yes, I know phones are meant to be cooler than tumble dryers, and I realise you can't take amusing selfies on the latter. But it boils down to the same thing: getting unnaturally excited about a bunch of wires and electronic circuits.

Liam Hughes

## Life's too short to move pics from Google Photos

✉ Following your article on switching from Google Photos (Issue 605, page 62), for me life is too short to go through the 5GB of images I've got stored on there. Will my children ever go through them when I've gone? I doubt it. It's not the same experience as finding a few old photos in the attic. I think every smartphone should take images that fade, decay, and disappear after, say, 300 days,



unless you take the time to review them and save them, but that's not likely to happen.

As alternative image-storage options charge similar rates to Google, I'm tempted to pay up to continue using Google Photos. The thought of having to transfer all my photos to a new online service is overwhelming, as

is trying to work out how Google stores images from my phone, tablet, and PC and, more annoyingly, from WhatsApp and any phone screen captures.

In my view you need to keep only a very few photos to pass on. Pictures of people are only meaningful to others if the names of the people in the image are identified, and then only if they are family or close friends. Just delete them now and make your children grateful they don't have to waste their lives going through them. Just a thought from a 77-year-old bloke.

John Beattie

**CA SAYS** We know where John's coming from - switching between services can feel like a hassle. But downloading your pics from Google Photos is actually fairly

easy. We explained how to do it in Issue 605's feature.

## Shops must stop demanding customers' phone numbers

✉ I totally sympathise with Tony Elgar's mother-in-law (Letters, Issue 604), who refused to complete her transaction at Currys PC World when it asked for her mobile number. Companies need to look into this more seriously. I *do* have a mobile-phone number (though it's not a smartphone), but we have virtually no signal at home. Texts sometimes arrive up to two days after sending, while voice calls are impossible. This means that orders get cancelled because companies were unable to contact me.

There's an easy way round it - and kudos to Tesco for taking this issue on board. I once had a credit card with them, and they needed to send me a code by mobile, which would be valid for 10 minutes. I made the nice man stay on the phone line until it showed up, 45 minutes later. Tesco now offers to send a code to your landline, instead of your mobile.

The more places that demand a mobile number, the more people are going to be disadvantaged. It now involves many government agencies, and is getting worse by the day. Just this morning the NHS

## Remembering the 32KB KDF9 computer

I was interested to read the letter from Michael Albin in Issue 604 about his recollections using a small cabinet computer based on the VAX 11/780. It reminded me of the KDF9 computer (pictured) I operated in 1970, when I worked for International Computers Limited (ICL) in Kidsgrove, Staffordshire. It was built by English Electric Computers, who developed the KDF9 computer. It was a mainframe housed in a large suite, running 24 hours a day, with a memory of just 32 kilobytes.

Progress was very slow, with one particular program taking around 36 hours. We ran many scientific jobs, as well as searching huge catalogues of information, in order to produce



reports. Some jobs required rapid changing of multiple reels of magnetic tape and with practice changing a tape could be done in about 4-5 seconds (with manual splicing too).

There are several websites containing plenty of information on the KDF9 computer, including [www.snipca.com/38132](http://www.snipca.com/38132) and [www.snipca.com/38134](http://www.snipca.com/38134) (where the photo is taken from).

Stephen Baker



prescription-renewal service nagged me yet again for a mobile number. I won't give it to them because they will instantly have the opportunity to block me from using the service because I haven't received a code! It has to stop.

Elspeth Christie

### Freesat gives me Welsh and Scottish channels

In Issue 604's How To (page 35) you asked us to describe how we use Freesat. The big plus for me is being able to watch 'out of region' channels. I'm Welsh, and by using a satellite dish I get access to programmes in Welsh such as on S4C, as well as the Wales editions of BBC 1 and BBC 2, together with the ITV equivalent.

Freesat also gives you access to other regions, including BBC Alba in Scotland. The ITV regions are also available, but to get them you have to use the same workaround for Channel 4 that you described in Step 6 of your feature. You may need to visit the 'King of Sat' site (<https://en.kingofsat.net>) to work out which channel is which, and see a list of what's available.

IM Williams

### I need to brush up on Bluetooth knowledge

May I suggest you produce an article exploring Bluetooth. I'm not a tech specialist, so I'm quite confused about what I see as a very obscure area. My particular problem seems to focus on the use and manipulation of pairing codes.

I have three phones, a Doro PhoneEasy 632 and two Xiaomi Redmi 8s, and they all recognise each other with Bluetooth. My other devices are PowerLocus Bluetooth headphones, an iPad, and my desktop PC (for which I have a USB dongle). I can't pair my headphones with my Redmi 8 phones. The Doro phone recognises my iPad (and still lists one of my old car phones), but not the headphones nor the Redmi 8 phones.

I'd be grateful for your advice. I've been taking your magazine for years, but don't recall seeing such an article, perhaps because one wasn't too relevant to me then!

Henry Christmas

**CA SAYS** Henry's right that we probably haven't covered Bluetooth as fully as we

## STAR LETTER

### Not fair that local councillor was forced out for lacking a PC

I can understand Jackie Weaver's desire to continue council meetings by video (News, Issue 605, page 7), but I wonder what she'd make of the case of a long-serving elderly councillor who was removed from his role because he was unable to use video.

It happened in Strensall Parish Council, which is six miles north of York, and not too far from a Yorkshire village where I live. One of the councillors, named Dennis Baxter, had served as a councillor for over 50 years. He's now 91, and according to newspaper reports ([www.snipca.com/38142](http://www.snipca.com/38142)) doesn't have a computer, so was unable to switch from physical to video when Covid struck. The rules state that councillors must be "disqualified" if they don't attend a meeting for six months "without a good reason".

I find this decision staggering and typical of the modern attitude that everyone is expected to be online. Surely a "good reason" for not participating in video chats is the lack of a computer? Normal life has been completely disrupted during the



lockdowns, so I don't see why exceptions couldn't have been made for this councillor, who has shown such dedication to his area.

The decision to disqualify him is astonishingly short-sighted. Mr Baxter was out of action for six months, in the most difficult circumstances, and therefore half a century's service has been flushed down the toilet.

I'm not against video meetings continuing, by the way. It seems like a sensible option, and there's no point pretending the technology doesn't exist. But what's *not* sensible is discriminating against people – even if they're councillors – because they don't want to be part of the Zoom generation.

James Whelan



The **Star Letter** writer wins a **Computeractive** mug!



should have, focusing instead on the benefits of Wi-Fi. We'll redress the balance in our next issue (out Weds 2 June) with a feature on the best things you didn't know you could do with Bluetooth.

### Remember that Chromebooks can run Linux apps

Issue 604's article 'Should you buy a Chromebook?' (page 60) provided a useful summary of the pros and cons of buying a Chromebook, but omitted one important feature. All new Chromebooks are able to run Linux apps, which means you can run programs such as LibreOffice, Audacity and Calibre. It's true that Paint.NET is not available in Linux, but there is no shortage of excellent alternatives, including GIMP.

It could be claimed that using Linux on a Chromebook would be too challenging for those without a technical background, but in practice it's very easy to install, and then you can get apps from sites like Flathub (<https://flathub.org>).

I bought a Chromebook to use instead of my Windows laptop. Apart from enjoying all the benefits of Chrome OS, I'm running various Linux apps including photo-management tool digiKam ([www.digikam.org](http://www.digikam.org)).

It makes sense to have a Chromebook with the appropriate specification for the tasks it will be given, but that's also the case with a Windows laptop. My Lenovo Chromebook has an Intel core i5 processor, and apart from delivering everything I could expect, it's also a pleasure to use.

Fred Brigham





We stand up for your legal rights

## Can retailer force me to pay return costs?

**Q** I ordered a coat from an online retailer for my wife, but it turned out to be too small. The site told me to return it using Royal Mail, and the postage cost me £29. However, when I bought the coat the site didn't tell me that returning it would cost so much. Can I get a refund for this delivery cost?

Allan Rae

**A** Allan's rights depend on *why* he's returning the coat. If goods are faulty, then no retailer is allowed to charge you for returning them. If the goods aren't faulty and you're simply rejecting them (which is your right within 30 days when bought online), then you *do* have to pay for postage.

Allan says he was advised to use Royal Mail, but retailers aren't allowed to force a courier on to customers. You're allowed to pick another if you wish. What's less clear is whether he has to pay a return cost that he claims wasn't clearly stated at the point of sale. The Consumer Contract Regulations (CCR) *does* say that retailers can't charge customers for return delivery if they don't explain what this would be,

but not all explanations are of equal clarity. What's clear to one customer might be ambiguous to another.

Most sellers put this information in the 'Returns' links on their website, which the law generally accepts as being reasonable. The onus is placed on the customer to read this. We've asked Allan whether he read this section, and will contact the retailer when we get a reply.

**CASE ONGOING**

## Can I get a refund for late express delivery?

**Q** I bought a desktop PC recently, and paid £15 for it to be delivered before 10.30am. It arrived after this time, so am I entitled to a refund, and should it come from the retailer or the courier?

Malcolm Grier

**A** Malcolm has a contract with the retailer only, not the courier, so it's responsible for refunding him. The Consumer Contract Regulations (CCR) allow sellers up to 30 days to deliver goods bought online. But if a customer pays extra for an item to be delivered on a specific date or at an agreed time, then it must reimburse the money if it breaks this deadline. If a retailer disputes this, point them towards Part 5 of the CCR (titled 'Time for delivery of goods'), sending them this link for good measure: [www.snipca.com/38071](http://www.snipca.com/38071).

Malcolm could've refused delivery when the PC arrived late, and demanded a refund for the entire order. Instead, by accepting, he's entitled only to a refund for the *extra* he paid for early delivery, not for the remainder of the delivery cost.

**CASE CLOSED**

### CASE UPDATE

## Hermes refunds reader after he emailed the boss



One of your secret weapons when complaining to a company is emailing

the CEO. No boss likes to hear about poor customer service. This tactic may have worked when reader Peter Inglis emailed the head of delivery giant Hermes.

As we reported in Issue 600, Peter had bought a stud finder wall scanner from a Chinese site, but it never arrived. He had no luck contacting the site for a refund, so



instead asked Hermes what had happened to the delivery. Hermes said it had a tracking number, and we advised Peter to send this to the website.

When the site failed to respond to his emails, Peter had no choice but to contact Hermes again. Now, it's important to point out that his contract was with the website, not Hermes. The courier didn't owe him anything, so Peter wasn't entitled to a refund from it. But that doesn't mean it can't be

persuaded to make goodwill gestures.

So that's what we did. We explained the situation to the company, while Peter emailed CEO Martijn De Lange (**Martijn.deLange@hermes-europe.co.uk**), having got his address from [www.ceoemail.com](http://www.ceoemail.com). Hermes has now apologised for losing the parcel and refunded Peter in full.

Peter contacting the CEO can't have harmed his case. It's something you should always consider if you're being thwarted by a firm's complaints department.



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.

## Why hasn't Currys extended my voucher?

**Q** My £249.99 fridge freezer from Currys PC World stopped working two years ago. I was given a voucher by Domestic & General (D&G), who I had insurance with, to buy a replacement from Currys, but for various reasons, including lockdown, I haven't been able to spend it. It has now expired. Currys did tell me it would extend the expiry date, but it hasn't done this yet. Can you help?

Annette Hudson



**A** We'll do our best because Currys needs to keep its promise to extend the voucher's expiry date. Although it didn't issue the voucher, it did know about it and has let Annette down by not keeping her informed. Annette is still happy to receive the voucher, and says she'll buy a new fridge freezer with it.

We'll give Currys a nudge to hurry up, but we're also puzzled why D&G sent Annette a voucher rather than a cheque, which is



what insurance companies normally send when they can't repair a product.

Annette said D&G didn't give her the option of a cheque, but we've not read the small print of her policy so can't say whether she had another option.

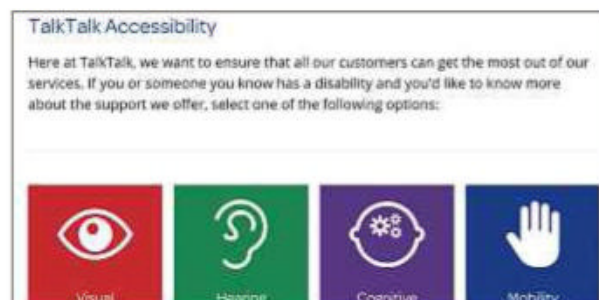
We suspect however that D&G believed the voucher represented a good deal for Annette because it covered the full cost of the fridge. Had it sent her a cheque, it would've been allowed to deduct some money to reflect how long she had used it for.

**CASE ONGOING**

## How private is TalkTalk's 'Advanced Care'?

**Q** My landline with TalkTalk failed the other day. TalkTalk has now fixed this, but the assistant I spoke to recommended I sign up to the company's 'Advanced Care' scheme, which offers help for people in need. It means TalkTalk can hand my data to third parties, with or without my consent. What privacy issues does this raise?

Edward Davis



**A** Privacy law is a minefield, but as long as TalkTalk is clear about what data it wants and why, it's probably doing nothing wrong. Its 'Advanced Care' service appears to actually be called TalkTalk Accessibility ([www.snipca.com/38100](http://www.snipca.com/38100)). It offers help to disabled people, dividing its assistance

into visual, hearing, cognitive and mobility (pictured left).


To check whether Edward is eligible, TalkTalk needs to ask his GP or another health professional whether he has any disabilities. That sounds fair, but more unsettling is that it may share your health data with third parties when it considers there to be a "legitimate reason". It doesn't need to ask your permission for this - by signing up you've given consent.

The key question is what is a legitimate reason to pass on your details, so we've asked TalkTalk for more information, as well as what kind of details it needs from your doctor.

**CASE ONGOING**

### CREDIT WHERE IT'S DUE

## Not poorer after Richer Sounds' great Humax service

 Here's a sad tale of my attempt to connect a Humax Aura Freeview box (pictured), which I bought from Richer Sounds, to a Samsung 55in 7400 TV. I got no automatic setup response, then complete failure following a **firmware** upgrade.

Richer Sounds told me the box was faulty, replacing it the next day. But the problem recurred. I had a long chat with Samsung, who checked everything - TV, **HDMI** leads, Freeview reception etc. Richer Sounds

suggested I replace it with the cheaper 5000T Humax box. This time it worked, though the interface is clunky compared with Sky Q, and the apps are useless.

I'd applaud Richer Sounds, whose service was excellent, plus the staff at Humax and Samsung. But I suspect Humax has simply pushed out a device that's just not ready.

Mike Gordon

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

aura



**Contact**  
Richer Sounds

• **Email** [www.snipca.com/38112](http://www.snipca.com/38112)  
• **Phone** 0333 900 0094



# Grow Your Family Tree



Want to find more about those who proudly wore the flying eagle? **Nick Peers** reveals how to...

## Discover your RAF ancestors

**R**eaders Les Barnes got in touch to ask about tracing ancestors who served in the RAF, as his late father did during World War II. He wondered whether he could use his father's service number to find out more about his life in the force without having to pay a subscription fee. The answer is yes and no. There's certainly plenty of information online, but not all of it is free.

### Obtain your ancestor's service record

The obvious place to start is with your ancestor's service record, which can be obtained from the Ministry of Defence (follow the guide at [www.snipca.com/37992](http://www.snipca.com/37992)). You'll find links to forms you can download, print and return by post, along with the required £30 administration fee.

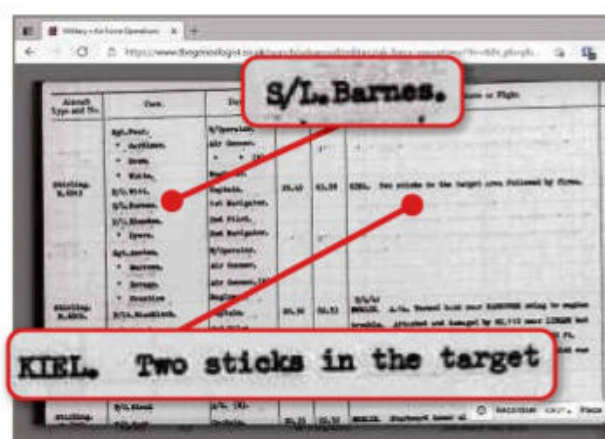
If your ancestor died less than 25 years ago, you'll need to prove you're their next of kin, or get permission from whoever is, to access their complete service record. Without this you won't be able to get information about the units they served in, the dates and location of that service, which ranks they held, and any campaign medals they were awarded.

If you don't know your ancestor's

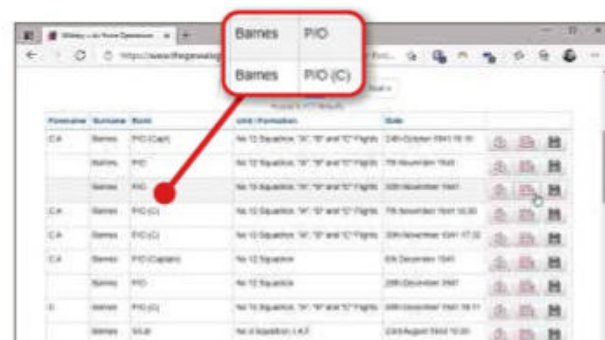
service number, search the Nominal Index of Airmen and Airwomen 1918-75 for free at The National Archives (TNA, [www.snipca.com/37994](http://www.snipca.com/37994)). However, there's not much information to help identify your ancestor if their surname and initials match other RAF personnel. Thankfully, the Forces War Records has collated this information – visit [www.snipca.com/38051](http://www.snipca.com/38051) – though you'll need to pay £8.95 for a single month's access. It cross-references the service numbers with how the numbers are distributed (by both location and date of issue).

### Search squadron records

Les should also look through squadron records. Downloads normally cost £3.50 on TNA's website ([www.snipca.com/38053](http://www.snipca.com/38053)),



World War 2 squadron operation books often refer to crew by name



The Genealogist subscribers can search RAF operation books by name

but they're free while access to its reading rooms remain limited (read the details at [www.snipca.com/38054](http://www.snipca.com/38054)). You can search by squadron number and date to marry up with the information contained on your ancestor's service record. Aircrew are named alongside operations – we found a Squadron Leader Barnes who took part in a raid over Kiel, in northern Germany (see screenshot left).

These records are also available to anyone with a Diamond subscription (£64.95 every four months) to The Genealogist ([www.snipca.com/38055](http://www.snipca.com/38055)). The advantage of these records is that you can search by name – we found several crewmen called 'Barnes' (see screenshot above).

TNA also holds online records for many combat reports filed by planes: [www.snipca.com/38056](http://www.snipca.com/38056). Note that only pilots or air gunners are named in combat records. The TNA also holds records on RAF support units, but these aren't online, so you'll need to visit in person (in Kew, London) when it's fully open.

Elsewhere, the RAF holds potted histories of each squadron on its website ([www.snipca.com/38057](http://www.snipca.com/38057)), while some have their own website run by volunteers. One such example is No 35 Squadron (<http://35squadron.wordpress.com>), which has short biographies of the crew and other personnel. Try searching for the name of your ancestor's squadron(s) on Google to see if they've also been honoured.

## Your Genealogy Problems Solved

I'm creating a 'reverse directory' for our area, compiling a list of buildings with details of the people who have occupied them as far back as I can go. I'd like to put it in an editable document. Can you suggest any program, or would basic Excel be adequate?

Susan Gardiner

Excel is fine for the task, but if you want to

explore alternatives, then look at Symphytum (<https://github.com/giowck/symphytum>) a free and easy tool for creating simple databases. It lets you export your data in the CSV format, which can then be imported into other databases or spreadsheets, including Excel.

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





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# Best Free Software

Will Stapley recommends new programs that won't cost you anything

## PASSWORD MANAGER

### KeePass 2.48

[www.snipca.com/38219](http://www.snipca.com/38219)

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

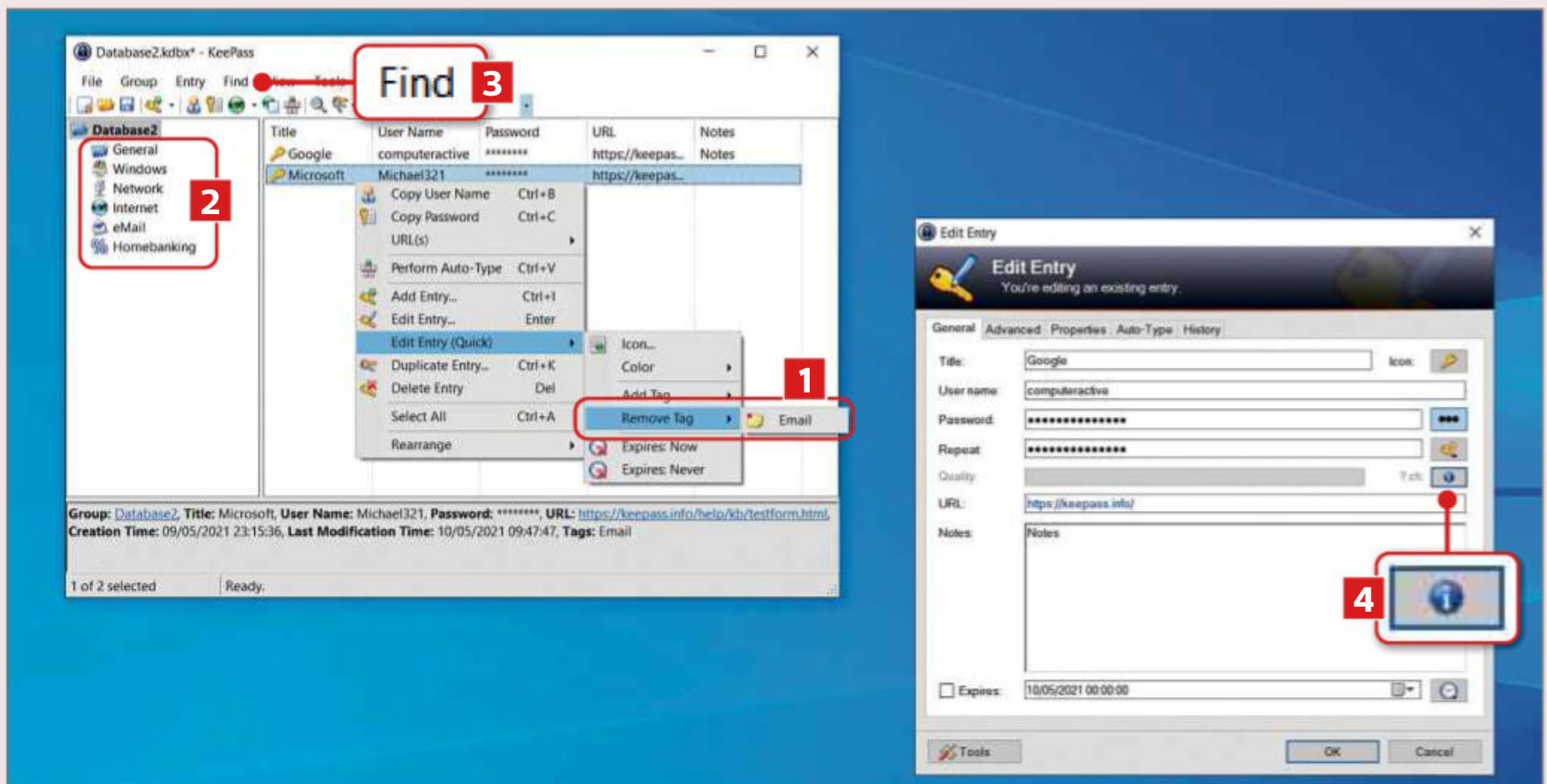
Our favourite password manager is Bitwarden ([www.bitwarden.com](http://www.bitwarden.com)) – it's free, **open source** and syncs your passwords across all your devices. However, not everyone is keen on entrusting their various account details to an online password manager. Like Bitwarden, KeePass is open source, but instead of storing your passwords online it saves them to a database on your PC, so you're in complete control of them.

When using KeePass for the first time, you need to create your password database – click File, New, choose where to save it, then secure it by creating a master password. KeePass will then prompt you to print an Emergency Sheet, on which you jot down where your database backups are stored and your master password. If you choose to do this, make sure you store the printout in a secure location.

Version 2.48 improves the importing process of passwords

from LastPass (previously KeePass often failed to import some data). This is good news if you've recently decided to switch from LastPass following its decision to restrict its free plan to only desktop PC or mobile devices (see Issue 601, page 62 for more). You can also now better organise your passwords by adding and removing **tags** via a new shortcut menu (see **1** below), as well as add tags to password groups (see **2**).

KeePass will warn you if it considers any of your passwords insecure – both when creating a new password and when running a password report (see **3**). Version 2.48 adds a new option that lets you instruct KeePass to ignore specific insecure passwords (see **4**), which is useful if you can't change a password it deems unsafe (for example, one for an online account someone else has shared with you).



**1** This version makes it easier to add and remove tags to individual passwords. Right-click the relevant password, click 'Edit Entry (Quick)', then Add Tag or Remove Tag.

**2** You can now add tags to new or existing groups of passwords. Right-click the group, click 'Edit Group...', then select the Properties tab and enter your chosen tags.

**3** You can generate a report on how secure KeePass rates your passwords by opening the Find menu, then selecting 'Password Quality...'.

**4** When creating or editing a password, you can tell KeePass to ignore an insecure password. Select the General tab, then click this button so that the Quality box is greyed out.





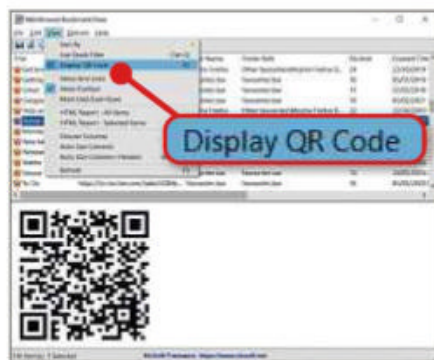
## BROWSER TOOL

# WebBrowser BookmarksView 1.00

[www.snipca.com/38223](http://www.snipca.com/38223)

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

This new tool from NirSoft (scroll to the bottom of the page at URL above for the download links) lets you view bookmarks from all your browsers in one place. It supports all Chromium-based browsers (including Chrome, Edge and Brave) as well as Firefox. Using the column headings, you can order your bookmarks by name, creation date, the browser they belong to and more. You can also display **QR codes** for each bookmark (click View, then 'Display QR code' – see screenshot), letting you quickly open them on your phone or tablet (see page 57 for more on QR codes). We'd like to see an option to open bookmarks in your PC's browser (instead, you have to press Ctrl+U to copy it, then paste it into your browser's address bar). Still, this is a brilliant tool for managing many bookmarks across multiple browsers.



## AUDIO TOOL

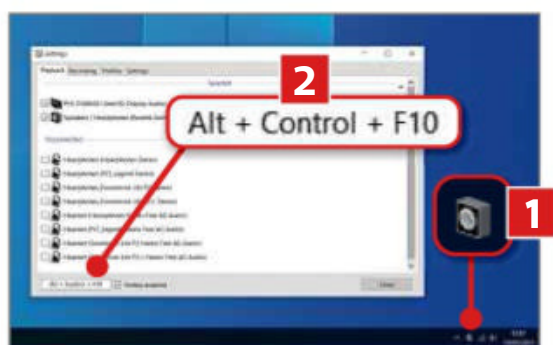
# SoundSwitch 5.9

[www.snipca.com/38225](http://www.snipca.com/38225)

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

SoundSwitch is a wonderfully simple tool that lets you switch between audio outputs on your PC – such as a set of headphones and a pair of speakers. Right-click the SoundSwitch icon in your system tray (see **1** in our screenshot), then select Settings, followed by the Playback tab. Tick the speakers you want to switch between, then choose a keyboard shortcut in the box at the bottom **2** that triggers the switch. Select the Recording tab to do the same for any microphones attached to your computer.

You can also create profiles that, for example, let you switch to a headset from your laptop's built-in speaker and microphone. Click the Profiles tab in the Settings window to create and edit your profiles. As well as ironing out bugs, this latest version lets you switch between profiles by left-clicking the SoundSwitch icon.



## WHAT SHOULD I DOWNLOAD?

We tell you what software & apps to use

### What can I use to get traffic alerts?

**Q**

I used to enjoy using the free INRIX traffic app, but it closed down on the 28 April. Can you please suggest a free replacement.

Mike Woolmington

**A**

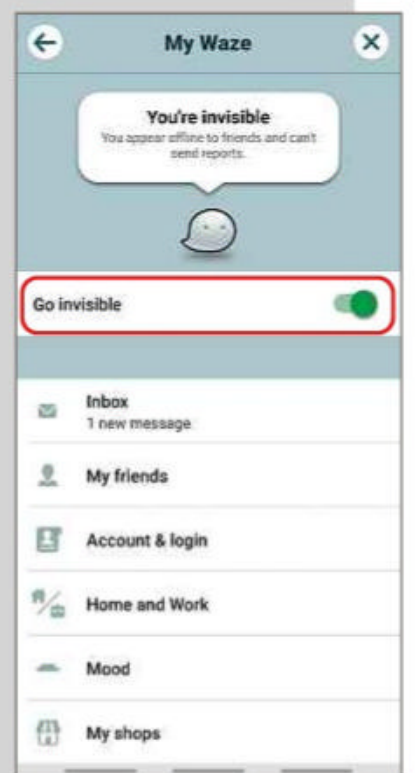
Our favourite traffic app is Waze (available for free on Android and iOS from [www.snipca.com/38226](http://www.snipca.com/38226) – click the 'Send this link to my phone' link in the blue box). Purchased by Google in 2013, Waze provides traffic updates using data supplied by its community of users – and with over 130 million users worldwide, that's a lot of data.

To plot a new route, enter your destination in the search box at the top, then tap Go. Waze will then map out the fastest route, avoiding any known troublespots and guiding you to your destination via the map and with voiced instructions.

You can also browse the map to view everything from traffic congestion to particularly big potholes in your area – tap the relevant icons to read more about these. While browsing the map, you'll notice **emojis** for other Waze users who are currently out driving – tap an icon to see their username and current speed. All usernames default to 'Wazer', so other users won't be able to identify you. However, if you prefer to hide your location you can do so by tapping the magnifying-glass button (bottom left), selecting your username, then tapping the 'Go invisible' slider (see screenshot).

If you spot a traffic-related problem while out and about, you can help other users by reporting it. Tap the orange circle (bottom right), choose the category and other details (such as the severity of the problem), then click Send. You can only send reports to others in your immediate area.

You can use Waze without registering for a free account, but you won't be able to save your routes, nor add your own traffic incidents.



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...

MuseScore

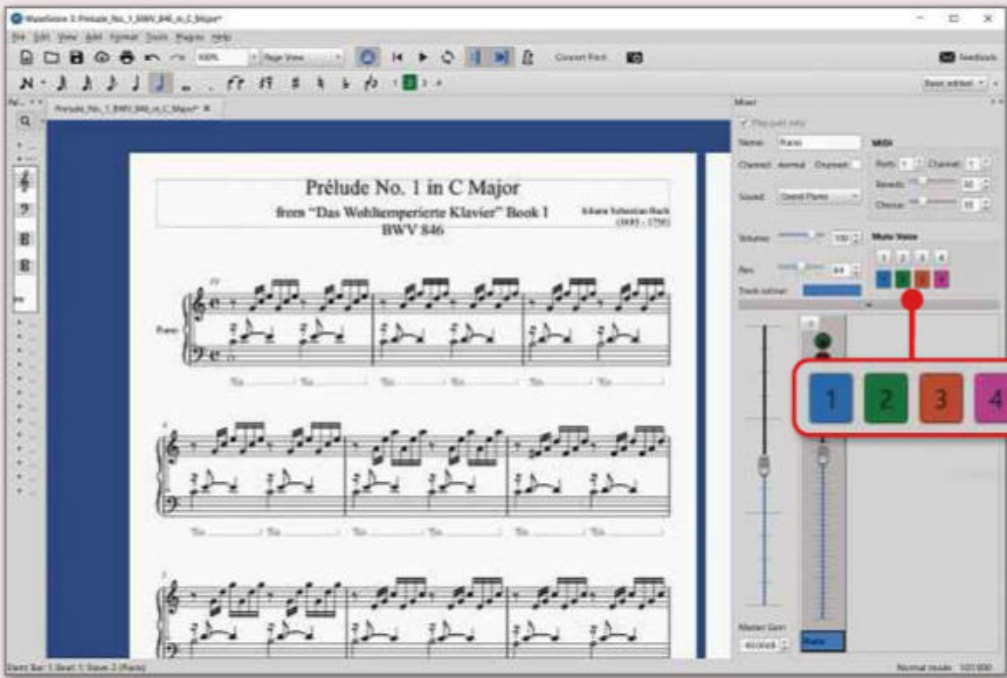


Will Stapley reveals how this free tool got him Bach into playing the piano

When I passed my grade 2 piano in 1992 (with merit, I'll have you know), I had high hopes of a glittering musical career. Shortly after, I got my first PC (a 486 SX25 – back then, a 25MHz processor was considered lightning fast) and my piano practice ground to a shuddering halt. I've tried to pick it up numerous times since – even purchasing a fancy Yamaha DGX-205 keyboard in 2006 – but it was only during the recent lockdowns that I found time to put in serious practice.

Having heard it played in *The Undoing* (the 2020 TV series starring Hugh Grant that, much like my piano skills, started well and went rapidly downhill), Bach's Prelude in C Major was to be my first challenge. Keen to involve my PC in the process, I enlisted the help of the free and **open-source** MuseScore ([www.snipca.com/38205](http://www.snipca.com/38205)).

Although MuseScore is primarily designed as a tool to compose music, I find it works well as a learning aid. Once I'd installed it, I headed to [www.musescore.com](http://www.musescore.com), which is home to sheet music for thousands of compositions. Some are copyrighted and require a MuseScore Pro licence (£35 per year), but there are plenty of free compositions uploaded by the MuseScore community along with classics no longer under copyright, including Prelude in C Major. After selecting it, I clicked 'Open in MuseScore' then started the long

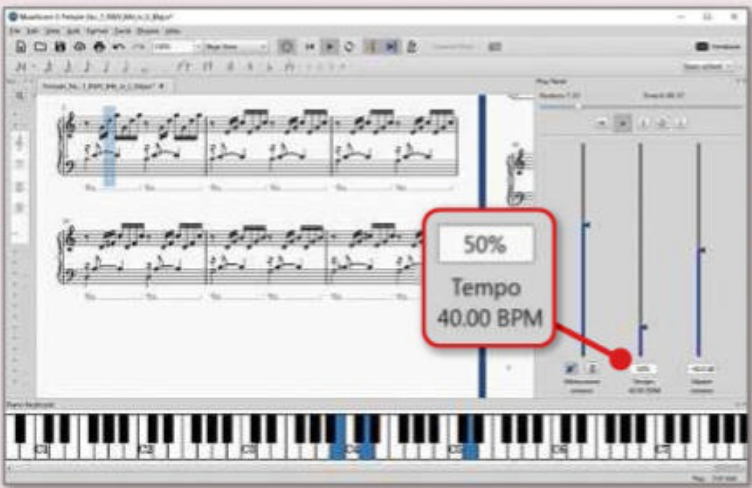


MuseScore lets you mute clefs, allowing you to learn a piece one hand at a time

process of learning it one section at a time, pressing the spacebar to pause and resume playback, then repeating it on my keyboard.

I find it easiest to learn one hand at a time, so I pressed F10 to open the Inspector window and clicked the four numbered buttons in the second row of the Mute Voice box (this mutes playback of all notes in the bass clef – see screenshot above).

I then opened the Play Panel window (press F11) and adjusted the Tempo slider to 50 per cent, which slowed it to a more manageable 40 beats per minute (see screenshot above right). Since my ability to sight-read music is



You can slow the tempo to 50 per cent in MuseScore to help with practising a piece

rusty, I also opened the Piano window (press P), which shows each note being played on a virtual keyboard at the bottom of the screen.

Then the hard part: reading the music, listening to it in MuseScore, then repeating it on my keyboard. Once I'd mastered the right hand (think days, not hours), I returned to the Inspector window, unmuted the bass clef, muted the treble clef, then started with the left hand. I can now play Prelude in C Major with only minimal slip-ups – surely grade 3 is within grasp.

WHAT I'D LIKE TO SEE IN MUESCORE

I'd like a tool that lets me play back a specific section of a composition on a loop, saving me having to pause and rewind tricky parts (there's a Loop option in the Play Panel window, but it loops the entire track, not a selection).

Additionally, since MuseScore can link up with my Yamaha keyboard via USB, I'd love a 'learning' mode that monitored what I was playing on the piano and moved the playback on only when I'd played the correct notes.



# Named & Shamed

Jonathan Parkyn puts the boot into tech villains, jargon-spouting organisations and companies peddling junk



## WARNING: JUNK AHEAD

### Junk offender: Mobee-K USB C earbuds

I'm well aware that certain tech companies are always seeking innovative ways to shovel unwanted software in our direction. Here's a startling example from music-streaming platform Deezer and South Korean manufacturer Mobee-K.

The two companies' 'exclusive partnership' will see Mobee-K's new earphones (the snappily named 'USB C



Earphones HiFi Stereo Wired Earbuds with Mic and Volume Control' – pictured right) come with Deezer's music-streaming software preinstalled on them, whether you want it or not.

Yes, you read that right: someone has actually found a way to pre-install junk on a pair of earphones.

Not only that, but if you plug Mobee-K's earbuds into a Samsung Galaxy device, they'll happily add piles of other potentially unwanted items, including Deezer-related themes, wallpapers, playlists, shortcuts and more (pictured left).

Mobee-K's junk-smuggling earbuds are already on sale in the US ([www.snipca.com/38160](http://www.snipca.com/38160)). It's currently unclear whether they'll arrive in the UK and, if so, whether they'll contain the same rubbish. But that's not really the point.

Manufacturers may have successfully



You won't believe your ears: Mobee-K's earphones come pre-installed with Deezer software

conditioned us to expect our PCs and smartphones to come packed with unwanted features, but Mobee-K's move sets a worrying precedent. What 'exclusive partnerships' could we expect next? Morphy Richards toasters pre-loaded with Netflix? Russell Hobbs kettles with Candy Crush pre-installed? No, thanks.



Connect the earphones to a Samsung Galaxy device and you'll get even more junk

### WHAT ARE THEY TALKING ABOUT?

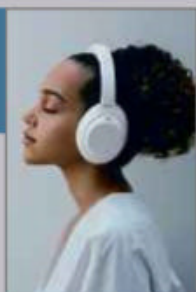
#### WHAT THEY SAY

**Sony on its new 'Silent White' WH-1000XM4 headphones**

"The new white colour has been developed to embody the concept of silence and serenity. They include a pearlescent finish to the topcoat of the headphones to create a sense of depth and a luxurious touch."

#### WHAT THEY MEAN

We have to come up with marketing drivel like this to persuade people these **active noise-cancelling** headphones are worth £400. Silence is golden!



### JONATHAN'S VILLAIN OF THE FORTNIGHT

## Brooke Reay

With a summer free of lockdowns ahead of us (touch wood!), you may be thinking of booking a holiday. If so, make sure you book through a

respectable travel company, or you could end up out of pocket – like one of Brooke Reay's victims. The 25-year-old from Newcastle tricked people into paying her for non-existent holidays by posing as a fake travel broker on Facebook.

She posted bogus ads for bargain



breaks in Mexico and Spain as well as destinations within the UK, pocketing more than £2,000 over a four-week period. Her crimes provide

a reminder that scammers don't just use emails and texts to hook their victims – they stalk social networks too.

Reay was recently convicted of three fraud offences and is due to be sentenced. It looks like she might well have ended up booking herself an all-expenses-paid trip to jail.





**DESKTOP PC** | £999 from PC Specialist [www.snipca.com/38131](http://www.snipca.com/38131)

## PC Specialist Vortex Elite R

Give it a whirl

We're not sure that Vortex is a suitable name for this PC because its performance is neither noisy nor chaotic. Instead, it's more statesmanlike, doing a solid, reliable job without any fuss. We're happy with that, especially since the chunky PC Specialist-branded cooling system that's built into the case ensures that its 11th-generation Intel Core i5-11400 processor stays cool without making a sound. With only one other near-silent fan for company, this is a quiet-running desktop PC.

“Quiet and fast, it's an excellent choice for Windows use and gaming”

The front-mounted fan is also the main generator of the PC's coloured lighting, which shines through the logo carved on the front of the case (pictured below). This case is plastic but has a convincing metal finish that complements the all-black innards, which you can see through the tempered glass side. The Asus TUF Gaming motherboard has similarly understated lighting, with two subtle underlights at the right edge. The effect is classy rather than tacky.

It's a compact motherboard, but there are still three PCIe slots available for expansion cards. However, the most obvious upgrades would be to add more memory.

This is because PC Specialist has chosen to include a single 16GB memory stick, leaving two empty slots.

There's a fourth on the motherboard, but it's blocked by the cooling system.

You may also want to add more storage, and there are three options. The first is to slip in up to two more M.2 SSDs to join the 512GB model provided. You'll need to remove a heatsink to access the empty slots, but that's a relatively simple task.

The alternatives involve removing the right-hand side of the chassis, which reveals two 3.5in hard-drive bays with caddies, and two mounting plates for 2.5in SSDs. To get to these you must undo the cabling, but all the power connectors and cables you might need are ready to use.

Performance-wise, the Core i5-11400 impressed us under the stresses of our benchmark tests. It's a smidgen faster than the similarly priced HP Omen 25L (Issue 599, [www.snipca.com/38136](http://www.snipca.com/38136)), and could be improved by adding more memory. The Nvidia GeForce GTX 1660

Super graphics card is a fine choice for gaming at resolutions up to 1080p, but is challenged if you want to crank this up to 1440p. At this latter resolution we found the latest games remained playable but were noticeably less smooth.

We also tested the performance of the 512GB SSD. It's a little on the small side for our tastes, but it performed well in our speed tests.

If you can afford to spend a few pounds more, we'd recommend asking PC Specialist about upgrading to a 1TB SSD, as



the 512GB model offered will soon fill up if you want to install much more than a couple of games.

### SPECIFICATIONS

Six-core Intel i5-11400 processor • 6GB Nvidia GeForce GTX 1660 Super graphics • 16GB memory • 512GB M.2 SSD • 4x USB-3 ports • 2x USB 2 ports • 1x Display Port • 1x HDMI port • Wi-Fi 6 • Windows 10 Home • 460x210x428mm (HxWxD) • Three-year warranty [www.snipca.com/38131](http://www.snipca.com/38131)

**VERDICT** A well-balanced desktop PC with good Windows performance and the ability to run games smoothly at 1080p

★★★★★

### ALTERNATIVE

HP Omen 25L £899  
HP's alternative has 2TB of storage and a lower price, but its AMD processor isn't as fast as Vortex's Intel chip





**LAPTOP** | £750 from Amazon [www.snipca.com/38066](http://www.snipca.com/38066)

## Acer Nitro 5 AN515-44

Well red



Acer's Nitro 5 series of gaming laptops is available in a wide range of models with both Intel and AMD processors. The model we've tested here is the AN515-44, which has an AMD Ryzen 5 4600H processor, 8GB of RAM and a GeForce GTX 1650Ti graphics card.

The black laptop has some red trim but otherwise looks fairly unimaginative for a gaming laptop. Although it's built entirely of plastic it feels reasonably solid. At 363x255x24mm and 2.2kg, it's neither light nor compact, but it does come with a generous 15.6in screen.

“A so-so screen, but impressive speeds and upgrade options”

The screen uses IPS technology and has a resolution of 1920x1080 pixels, an anti-glare finish and a maximum refresh rate of 144Hz. However, the screen's vital statistics were less than impressive when we put it to the test. It's bright enough and the contrast is decent, but its colour accuracy is poor, recreating only 59.3 per cent of the sRGB colour standard.

So far, so underwhelming. Thankfully, it gets better, with a much more impressive showing in our performance tests. When we tested gameplay, it produced decent frame rates across the board, indicating a good balance between the processor and the graphics hardware.

When it comes to general Windows performance, it compares well with

laptops that cost several hundred pounds more, with the powerful AMD processor competing well with more expensive Intel alternatives. Meanwhile, the battery kept going for nine hours 48 minutes in our video-playback test.

The port selection is more or less what we'd expect for this price. On the left edge there's a Gigabit Ethernet port, two USB 3.0 ports and a 3.5mm audio jack. On the right edge, there's a third USB 3.0, a data-only USB-C port (meaning it can't be used to charge the device) and an HDMI video output port. The power socket is around the back, out of the way. It also comes with Wi-Fi 6 and Bluetooth 5.0 connectivity.

The keyboard is solid, quiet and precise – although its backlight is limited to red, unlike many other gaming laptops which let you adapt colours to indicate key functionality. It does have a useful numeric keypad though.

It's also surprisingly upgradeable. Once you remove the 11 Phillips screws holding the base in place you can access the battery, the Wi-Fi card, two DDR4 slots for RAM, two M.2 slots for SSD storage and a 2.5in SATA hard-drive bay. These represent impressive opportunities for future-proofing.

### SPECIFICATIONS

AMD Ryzen 5 4600H processor • 8GB RAM • Nvidia GeForce GTX 1650Ti graphics card • 15.6in 144Hz 1920x1080-pixel screen • 512GB SSD • Wi-Fi 6 • Bluetooth 5.0 • 1x USB-C port • 3x USB 3.0 ports • 3.5mm audio jack • 1x HDMI port • Windows 10 Home • 24x363x255mm (HxWxD) • 2.2kg • One-year warranty [www.snipca.com/38066](http://www.snipca.com/38066)

### HOW WE TEST

Computeractive is owned by Dennis Publishing, 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.

Dennis Publishing also owns the magazine *PC Pro* and the websites Expert Reviews ([www.expertreviews.co.uk](http://www.expertreviews.co.uk)) and IT Pro ([www.itpro.com](http://www.itpro.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** The combination of a powerful AMD processor and decent graphics makes this a great-value laptop, even if the screen is a little off colour



**ALTERNATIVE** Medion Eraser Crawler £650 An even cheaper gaming laptop, but a disappointing 60Hz refresh rate limits gaming performance



## Best multifunction inkjet printers

If your home-printed photos look a bit grainy or off colour, or printing a handful of documents takes the best part of an evening, it might be time to buy a new printer. Here we take a look at five of the best new inkjets

**W**e all need to print things – boarding cards, vouchers, party invites – while the ability to copy a document or digitise it is invaluable. Here we review five of the latest multifunction inkjet printers that will print, copy and scan documents and photos. They're great for everyday home printing and cheaper than laser printers, which tend to be designed for busy offices.

The best printer for you depends on what you want to print and how often. If you print more than a handful of pages a week, it might be worth paying a little

more up front for an ink-tank printer, which can produce black text documents for as little as 0.2p per page. These are refilled from ink bottles, which contain enough ink to print thousands of pages. These bottles cost about the same price as cartridges for regular inkjets, which print only hundreds of pages at best. However, to print high-quality photos, a cartridge-based printer will offer the best results.

Bear in mind before you buy that printers have been in high demand since the lockdowns, as more people switched to home working, so many models were

not in stock. However, most retailers are now securing regular shipments.

All of the printers reviewed here were in stock as we went to press. However, we can't guarantee they'll be available at your choice of retailer. If that's the case, be patient, and check back a few days later to see if it's on sale again. Also, check the price isn't substantially higher than those we've quoted. Some unscrupulous Amazon sellers will hike prices to exploit low supply, but if you wait a while the printers should become available again elsewhere at their normal price.

**£120** from Amazon [www.snipca.com/38079](http://www.snipca.com/38079)

### Canon Pixma TS8350



The Canon Pixma TS8350 is a great all-round multifunction printer with a low price tag. No matter what you print, it comes out crisp and sharp, and it's really good at printing both text and pictures.

It comes into its own, however, when printing photos. For an affordable general-purpose printer, its photo prints are stunning. They come out in phenomenal detail, with rich, bold colours and deep blacks.

To get such great results the

TS8350 uses six cartridges, which may suggest high running costs. However, as long as you stick to buying Canon's XXL cartridges, these are reasonably priced, working out at around 3.4p per page for black and 6.2p per page for colour.

Easy to set up and use, and with a great-quality scanner, this is a fantastic buy.

**RATING**



**£250** from Amazon [www.snipca.com/38080](http://www.snipca.com/38080)

### Epson EcoTank ET-2750



If you're likely to print in bulk, a machine that stores ink in large tanks rather than tiny cartridges makes a lot of sense. While these tend to be more expensive to buy, the running costs are a fraction of cartridge-based machines. This Epson EcoTank ET-2750 prints at around 0.2p per page of black text and 0.4p for colour.

The downside is that prints aren't as sharp or colourful as those produced with cartridges, and the ET-2750's

photos can't match those produced by the Canon Pixma TS8350.

However, print quality is still impressive, particularly with photos and text. We found it struggled most when printing a high volume of colour on both sides of a sheet, with some bleed-through on cheaper copier paper.

**RATING**





£116 from Amazon [www.snipca.com/38096](http://www.snipca.com/38096)

## HP OfficeJet Pro 8022

If you print more office documents than photos, the HP OfficeJet Pro 8022 is a serious option. It churns out pages quicker than the other models we've reviewed here, and at an affordable cost of 2.2p per mono sheet or 5.5p

for a colour print. It has a 35-page document feeder on the top, which lets you scan multi-page documents automatically. However, the scanner itself is only good enough for documents – it struggles to recreate details

in photos.

High speeds and low running costs come at the cost of print quality. Viewed in isolation you may not notice the difference, but laid side by side, photo prints come out lighter and less richly



coloured than from the Canon Pixma TS8350.

**RATING**



£200 from Argos [www.snipca.com/38097](http://www.snipca.com/38097)

## Canon Pixma G3501

Canon's range of ink-tank printers are similar to Epson's, with the same low running costs (0.2p per page of black text, and 0.4p per page of colour). The G3501 sits at the lower end of Canon's price

range, but it lacks a few key features, such as automatic double-sided (duplex) printing, a choice of two paper trays and an information screen.

Print quality is good for an ink-tank model, but as with

Epson's ET-2750, it can't match the Canon Pixma TS8350 for photo quality. However, if you mostly print documents and you need to produce in bulk, this is a sensible, affordable option.



**RATING**



£77 from Amazon [www.snipca.com/38098](http://www.snipca.com/38098)

## Epson Expression Home XP-4100

You don't *have* to spend more than £80 up front to get a decent multifunction printer – a point proved by the Epson Expression Home XP-4100 – but it helps. What you save with a smaller initial outlay, you tend to spend in higher

printing costs (5.6p per black-text print, 12.8p for colour in this case).

However, if you sign up to Epson's print subscription service, which offers a constant supply of ink to your door in a pay-as-you-go

payment model, you can whittle colour and mono prints down to 3.4p per page.

Print quality isn't up to the more expensive printers here, but it's surprisingly decent for the price, and you can do double-sided printing.



**RATING**



### WHAT SHOULD I BUY?

We solve your buying dilemmas

## How can I improve my poor Freeview signal?

**Q** The Freeview signal in my area is weak and, as a result, the picture constantly breaks up. Are the internal signal amplifiers I've seen online any good? I can't find any professional and impartial reviews anywhere.

Robert Adam

**A** We've had similar problems with Freeview and have found One For All's signal amplifiers have done the trick. We've used a single port model (available from Amazon for

£9.99 at [www.snipca.com/38101](http://www.snipca.com/38101), pictured) to boost the signal to a single TV. You simply plug a cable from your TV into a socket underneath and connect your aerial's cable to the port on the front.

If you have more than one TV aerial point in your home, you'll often find these are connected to a single box hidden away in your loft. You could upgrade this to a multi-port amplifier if you need to improve the signal to all your aerial sockets. One For All makes these, too, which you can also buy for £9.99 from Amazon: [www.snipca.com/38103](http://www.snipca.com/38103).



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

**TABLET** | £270 from Amazon [www.snipca.com/38165](http://www.snipca.com/38165)

## Lenovo IdeaPad Duet

Two for one

The Lenovo IdeaPad Duet is a 10.1in tablet, but instead of running Android, it runs Google's Chrome OS, which is Google's browser-based operating system (OS) more usually found on Chromebooks. It's a stripped-back OS that relies on web apps you can run in the Chrome browser instead of installing software as you would on a Windows PC. However, it is compatible with the Chrome OS version of Google Play, so it can install and run Android apps.

“A Chrome OS tablet with a great screen and clip-on keyboard”

For the price, there's lots to like about it. It comes with a rear cover that doubles up as a fold-out stand. There's a magnetic clip-on keyboard, which is handy when you need to type longer emails or documents. It also has a 1920x1200-pixel IPS screen, which is incredibly bright and produced excellent colour accuracy in our tests.

It's a well-built tablet, in a fetching two-tone blue and grey design. The shell is plastic but feels reasonably robust, despite it being just over 7mm thick and weighing 450g. Clipping on the magnetic stand cover adds a few millimetres to the dimensions and a further 220g to the weight but gives the tablet a little more protection as well as the handy kickstand.

The keyboard, meanwhile, has a magnetic clip and hooked up flawlessly every time we snapped it on. It sits flat on the desk in use, so isn't as comfortable to type on as a laptop keyboard. However, it's still surprisingly good, with a small but usable touchpad for mouse control

### SPECIFICATIONS

Octa-core MediaTek Helio P60T processor • 4GB memory • 10.1in 1920x1200-pixel resolution IPS screen • 64GB or 128GB storage • 8-megapixel rear camera • 2-megapixel front camera • Wi-Fi 5 • Bluetooth 4.2 • Chrome OS • 7.4x240x160mm (HxWxD) • 450g • One-year warranty [www.snipca.com/38165](http://www.snipca.com/38165)



and a reasonable springy feel to the keys.

There are two cameras, with a standard 2-megapixel fixed-focus webcam on the front for video calls and meetings, and an 8-megapixel auto-focus camera on the back for photos. The webcam works well in most reasonably lit conditions, even coping with bright sunlight streaming in from a window. The rear camera is also better than you might expect, delivering relatively clear and well-exposed images.

Does Chrome OS make sense on a tablet? Well, a couple of years ago we had our doubts; it didn't work well on touchscreens, and neither did most web apps. These days, however, it has improved to make more use of gestures for navigation and app switching, while Android apps – especially the few that have been optimised for tablets – give you a little more software to work with. In practice, you still tend to switch between Android apps for music and video-streaming, and Chrome and web-based apps for productivity, but the choice is there.

The biggest compromise is on performance. It has a MediaTek Helio P60T processor and 4GB of RAM, but it's relatively slow at running Chrome OS. This isn't a problem if you're watching videos and writing documents, and the battery life is decent (16 hours 14 minutes in our tests), but it will slow down if used for more demanding tasks, such as editing photos or playing games.

**VERDICT** An impressive, affordable tablet that runs Chrome OS but can also open Android apps

★★★★★

**ALTERNATIVE** Microsoft Surface Go 2 £399 A Windows 10 tablet but you have to pay an extra £130 for the keyboard



### CHOOSE THE RIGHT SPECS

#### SSDs



##### What do they do?

An SSD (solid-state drive) replaces or sits alongside the mechanical hard drive in your computer. SSDs are significantly quicker than traditional drives because they use memory chips to store their data, rather than spinning disks.

##### How does they work?

Because they use these components, SSDs are more like RAM memory than traditional hard drives, except they can retain information even after you've switched off your PC. And as they don't need to rotate physical disks to the correct place to access information, the data stored on these chips can be found much faster.

##### What are the specs?

To find out what type of SSD you can install, check the hard-drive specification of your laptop or the motherboard in your desktop PC. There are two main types of SSD: 2.5in drives (like the Crucial model pictured above right) that fit in the slots that used to be reserved for standard hard drives; and M.2 drives (like the Corsair model pictured below right), which look more like RAM memory sticks and slot straight into your motherboard.



M.2 drives need an NVMe port, which is built into the motherboard and is the fastest type of connection available for a solid-state drive. Some SSDs still use SATA connections, just like traditional hard drives. These are slower, so always opt for NVMe M.2s, if you can.

##### Can I change it later?

You can usually upgrade the drive in a desktop PC, but you'll be restricted by the connections available on your motherboard. If it doesn't have NVMe ports for an M.2 SSD, you will have to stick with SATA. Laptops have similar limitations, but some are easier to upgrade than others, depending on its make, model, size and age.





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# Reviews

**PHONE** | £160 from Amazon [www.snipca.com/38154](http://www.snipca.com/38154)

## Motorola Moto G30

Get the Moto running

Eagle-eyed readers will remember that we reviewed the Moto G10 ([www.snipca.com/37980](http://www.snipca.com/37980)) in Issue 605. This G30 is another new Moto and a small step up the price ladder, with Amazon selling it for £160, £30 more than the G10. So what do you get for that extra money?

First, the processor has been upgraded from a Snapdragon 460 to a Snapdragon 662. This gives the G30 a small but significant speed advantage, scoring higher in all our **benchmark** tests. This

### SPECIFICATIONS

Octa-core Qualcomm Snapdragon 662 • 4GB RAM • 6.5in 1600x720-pixel IPS screen • 64-megapixel main rear camera • 8-megapixel wide camera • 2-megapixel macro camera • 2-megapixel depth camera • 3.5mm audio jack • MicroSD card slot • 9.1x165x76mm (HxDxW) • 175g • One-year warranty [www.snipca.com/38154](http://www.snipca.com/38154)

makes it feel smoother to use, which was our biggest gripe with the G10.

Second, its main camera has a higher resolution – 64 megapixels rather than 48 – and comes with twice the storage space at 128GB. And finally, although the phones look almost identical, the G30's 6.52in screen can be set to refresh at 90Hz instead of 60Hz. This makes everything feel even slicker, but it does use up the battery faster.

Battery life in the screen's default setting was a decent 22 hours 30 minutes in our video-playback test, which is 76 minutes longer than the G10.

If you can afford the extra £30 this is a significantly better smartphone than the G10, with far more enhancements than you might expect from the increase in price.



**VERDICT** The Moto G30 is a little more expensive than the G10, but it offers smoother performance and better camera

★★★★★

**ALTERNATIVE** Motorola Moto G10 £130 Save £30 and get a very similar smartphone, though it's noticeably slower to use



**SMART WATCH** | £179 from OnePlus [www.snipca.com/38166](http://www.snipca.com/38166)

## OnePlus Watch

Clock off

We're very familiar with OnePlus's attractive, top-quality, reasonably priced smartphones, but this is the company's first foray into watches. Unsurprisingly, then, its design and construction makes it among the most attractive and well made smartwatches that we've seen.

It has a large, sharp 1.39in 454x454 resolution **AMOLED** touchscreen, mounted in a chunky, polished stainless steel frame that's topped with hard, scratch-resistant glass. It has a thick silicone strap and is waterproof to 50m.

OnePlus has included all the features a

### SPECIFICATIONS

Corning Gorilla Glass 3 watch face • 1.39in 454x454-pixel AMOLED touchscreen • Waterproof to 5 atmospheres (50m) • Bluetooth • Compatible with Android devices • 46.4x10.9x46.4mm (HxDxW) • 76g • One-year warranty [www.snipca.com/38148](http://www.snipca.com/38148)

smart watch needs, with plenty of sensors packed in. There's a combined optical heart-rate and blood-oxygen monitor on the rear, GPS, an **accelerometer**, and a barometer. Perhaps most impressive, however, is the OnePlus Watch's battery life, which extends to a claimed 14 days for 'typical use'.

However, despite all the watch's features, its app fails to integrate properly with your phone. It shows the data it's collecting as you exercise, such as your step count and heart rate, but there's no easy way of collating it all to analyse your fitness trends over time. Unfortunately, you can't use other apps to fill the gaps, as it isn't compatible with other fitness systems such as the Strava or Google Fit. It's also currently only available on Android, so iPhone owners should steer clear.



**VERDICT** A great-looking smartwatch with a strong battery life, but its app is disappointing

★★★★★

**ALTERNATIVE** Samsung Galaxy Fit 2 £90 A more affordable smartwatch that doesn't look as good, but has better connections to more devices and apps.





VIDEO DOORBELL | £179 from Amazon [www.snipca.com/38174](http://www.snipca.com/38174)

## Ring Video Doorbell Pro 2

### Pressing the right buttons

You'd expect a video doorbell to let you see who's at the door, talk to visitors and record motion-triggered video clips. However, the new Ring Video Doorbell Pro 2 improves on previous models with a wider field of view, higher-resolution video and much more sophisticated motion detection.

However, there are a few things worth knowing before you consider buying one. Firstly, this model is only available as a wired doorbell, so needs to be connected to mains power. If you don't have wiring in place, Ring provides everything an electrician will need to install it for you. Alternatively, if you have an electric socket close to your front door, you can buy the Ring Plug-in adapter (an extra £20) to power it.

The extra costs don't stop there. If you don't already have a compatible wireless chime unit to let you hear your doorbell rather than just receive smartphone notifications, you need to buy one for £29. However, this simply plugs into a spare power socket and connects to the doorbell wirelessly. The basic Ring Protect plan costs £2.50 a month (or £25 for 12 months) and provides 30 days of video storage for a single doorbell. Alternatively, the Plus plan, which is £8 a month (or £80 a year), covers an unlimited number of Ring cameras.

Video quality is good, capturing 1536p (2048x1536-pixel) footage with a wide 150-degree field of view, and even works in colour at night (though this is more of a tint laid over a black-and-white image than the kind of colours you can expect in daylight).

Motion detection is a huge step up from previous models. Not only does it detect movement within the camera's field of

#### SPECIFICATIONS

1536p video resolution • 150°x150° field of view • 3D motion detection • Two-way audio • Wi-Fi 5 • Works with Amazon Alexa • 114x49x22mm (HxWxD) • 1-year warranty [www.snipca.com/38174](http://www.snipca.com/38174)



view, but it also lets you choose how close objects need to be before they set it off, eliminating false alarms generated by people walking past your house.

When motion is detected, you can access a live video and audio feed of what's happening, along with a bird's-eye view of your front garden (a satellite image set in a small inset screen). It also

records full-resolution video from a point six seconds prior to any motion being detected, so you can see from where visitors have approached. Most rival models only go back four seconds.

If you already have a wired video doorbell that's falling short of your expectations, this new model's technical advances tick all the right boxes.



**VERDICT** A brilliant video doorbell, but it's expensive, might require a raft of extras and needs professional installation

★★★★★

#### ALTERNATIVE

Eufy Security Video Doorbell **£129** If you don't already have the wiring, this wireless model is much easier to install



### DO I REALLY NEED...

## 4K lossless streaming?

#### What is it?

Sony has just announced a new lossless 4K streaming service for its TVs called Bravia Core, which can supply subscribers with 4K films rendered in much greater detail.

#### How does it work?

Services such as Netflix, Amazon Prime Video and BBC iPlayer all support some 4K content, but streams are digitally compressed, which reduces the quality to ensure you don't experience any buffering or jerkiness. Lossless streaming removes this compression to ensure a perfect high-quality stream.

#### What's the catch?

There are two. First, it's only available to customers with a Sony Bravia TV from the Bravia XR range (starting at around £1,250 for a 55in X90J, pictured). Second, while a 4K stream from Netflix only needs a 25Mbps internet connection, Bravia Core requires a minimum of 43Mbps, but recommends 115Mbps.



#### So can I do without it?

We hope so. Otherwise you'll need to upgrade your TV and broadband.

### NEXT ISSUE

## On Sale Wed 2 June

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#### Nokia 1.4

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## Our pick of products that have won the **Buy It** award

### LAPTOP

**Lenovo Yoga Slim 7**  
**£799** from [www.snipca.com/37348](http://www.snipca.com/37348)  
**Tested** Issue 601



Weighing just 1.16kg, this is an excellent lightweight laptop with a great screen and an AMD processor faster than many Intel rivals. It has two USB-C ports, two USB 3.0 ports and a microSD card reader. Battery lasts nearly 16 hours.

**ALTERNATIVE Dell XPS 13** New Intel CPUs and a taller screen make this a more powerful, all-round slim laptop. Prices start at £1,249 from [www.snipca.com/36642](http://www.snipca.com/36642)

### DESKTOP PC

**Palicomp Intel Mercury**  
**£600** from [www.snipca.com/34223](http://www.snipca.com/34223)  
**Tested** Issue 576



If you don't need advanced gaming, your money's well spent here on a six-core Intel i5-9600K processor overclocked to 5GHz. 16GB of memory and a full terabyte of fast SSD storage round off a powerful PC with good expansion potential.

**ALTERNATIVE Chillblast Photo Zen** Fast Ryzen 7 CPU plus adequate GPU makes a superb work PC. £1,820 from [www.snipca.com/35840](http://www.snipca.com/35840)

### APPLE IPAD

**Apple iPad 10.2in**  
**£329** 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 A12 processor and iPadOS 14. It includes Scribble handwriting recognition with the £89 Apple Pencil. Storage isn't expandable; consider 128GB at £429.

**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. £399 from [www.snipca.com/33050](http://www.snipca.com/33050)

### ANDROID TABLET

PRICE  
DROP

**Samsung Galaxy Tab S6 Lite**  
**£260** from [www.snipca.com/35795](http://www.snipca.com/35795)  
**Tested** Issue 582



Competing with Apple's cheapest 10.2in iPad, this slim aluminium tablet comes with an S Pen stylus and a generous 64GB of storage at a reasonable price. It's less powerful, but a great buy if you prefer Android.

**ALTERNATIVE Amazon Fire HD 8** Now with USB-C and 32GB of storage, this plastic-cased tablet is more limited, with no stylus option, but good for the money. £90 from [www.snipca.com/35336](http://www.snipca.com/35336)

### APPLE IPHONE

**Apple iPhone 12**  
**£799** from [www.snipca.com/36582](http://www.snipca.com/36582)  
**Tested** Issue 595



The latest iPhone has a modest increase in already exceptional processing power plus even better photos and videos from the front and twin rear cameras. It comes in a redesigned case with aluminium frame and even tougher glass. Consider paying the £50 extra for 128GB of storage.

**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. £399 from [www.snipca.com/34773](http://www.snipca.com/34773)

### ANDROID PHONE

**Realme X50 5G**  
**£269** from [www.snipca.com/36037](http://www.snipca.com/36037)  
**Tested** Issue 590




Amazing value for a big 5G phone with three rear cameras (including ultra-wide and macro), a pretty quick Snapdragon 765G processor and a decent IPS screen. There's a fingerprint reader, but no wireless charging or waterproofing.

**ALTERNATIVE Google Pixel 5** Cheaper than previous Pixels, this has great cameras, wireless charging and a superb screen. Battery life is 23 hours. £599 from [www.snipca.com/36586](http://www.snipca.com/36586)





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# Buy It

Our pick of products that have won the **Buy It** award

## EBOOK READER

PRICE  
DROP

### Amazon Kindle (2019)

**£60** from [www.snipca.com/31621](http://www.snipca.com/31621)

**Tested** Issue 555



Now with built-in light and audiobook support, this budget model is fine for most users, though limited by its 4GB of storage. The Paperwhite (£120) is even sharper, waterproof, and has bigger storage options as well as a cellular data option (£100 extra).

#### ALTERNATIVE Kobo Clara HD

Not waterproof, but has more lighting options to avoid blue light. £110 from [www.snipca.com/32586](http://www.snipca.com/32586)

## SECURITY SOFTWARE

### Kaspersky Internet Security 2021

**£14.99** from [www.snipca.com/21532](http://www.snipca.com/21532)

**Tested** Issue 564



Kaspersky Internet Security has won our past nine antivirus tests and the 2020 version is now available at an exclusive reader discount on our Software Store. Go to the link above for a one-year, one-device licence or buy a two-year, two-device licence for just £32.99.

#### ALTERNATIVE Norton 360 Deluxe

Almost as good as Kaspersky, but blocks more legitimate software. £15 from [www.snipca.com/32069](http://www.snipca.com/32069)

## PHOTO EDITING

### Serif Affinity Photo

**£24** from [www.snipca.com/23739](http://www.snipca.com/23739)

**Tested** Issue 498



Designed for both full-time professional image retouchers and the rest of us keen amateurs, this is a beautifully designed and comprehensive program for both Windows and Mac users, although so far it performs better on Macs.

#### ALTERNATIVE Xara Photo & Graphic Designer

For all-round design and drawing plus photo filters, this affordable app has a lot to offer. £45 from [www.snipca.com/26514](http://www.snipca.com/26514)

## PC MONITOR

### BenQ GL2780

**£160** from [www.snipca.com/34834](http://www.snipca.com/34834)

**Tested** Issue 581



This budget 27in screen offers accurate sRGB colour with good contrast, plus auto brightness and low blue light modes. Speakers are built in. Using TN LCD rather than IPS, it needs to be viewed straight on, but works well for games too.

#### ALTERNATIVE Philips Brilliance

**241B7QPIEB** With a great picture, stylish design and speakers, this 24in Full HD IPS is an excellent smaller screen. £190 from [www.snipca.com/37096](http://www.snipca.com/37096)

## ROUTER

### D-Link DIR-1960

**£103** from [www.snipca.com/32849](http://www.snipca.com/32849)

**Tested** Issue 564



Giving us download and upload speeds of 460Mbps and 375Mbps respectively, this is phenomenal value. Even two floors away we got 329Mbps and 284Mbps. It has four Ethernet ports for wired devices and a USB 3.0 socket to share storage via your network.

#### ALTERNATIVE Synology RT2600ac

Comprehensive sharing features, controls and plenty of add-on apps complement excellent long-range performance. £212 from [www.snipca.com/30710](http://www.snipca.com/30710)

## PRINTER

NEW  
ENTRY

### Canon Pixma TS8350

**£120** from [www.snipca.com/38079](http://www.snipca.com/38079)

**Tested** Issue 606



For an affordable general-purpose printer, its photo prints are stunning. They come out in phenomenal detail, with rich, bold colours and deep blacks. It uses six cartridges, so stick to Canon's own reasonably priced XXL cartridges to reduce running costs.

#### ALTERNATIVE Epson Expression

**Premium XP-6105** This six-ink printer/scanner/copier is a good choice for photos first and text second. It's easy to use, but ink costs can be high. £90 from [www.snipca.com/37995](http://www.snipca.com/37995)



## COMPETITION

# Win 1 of 4 MusicMan LED SoundBlaster Bluetooth speaker

Made by German firm Technaxx, the MusicMan LED SoundBlaster is a portable Bluetooth speaker with a unique feature called True Wireless Stereo that delivers pure stereo sound without needing cables or wires if you use two speakers.

It weighs just 1.7kg, so you can take it anywhere, while the two seven-watt speakers ensure punchy sound. It supports Google Assistant and Siri

voice control, making it easy and convenient to use.

The sound is excellent, with a strong bass that doesn't distort even at the highest volume, while the play time of four hours on 50 per cent volume and three hours on maximum volume means you won't get bored. The RGB lights on the sides help to create a party atmosphere, while its IPX6 splash-proof rating means it's suitable to play on the beach or near a swimming pool.

To enter this competition, email your home address to [cacomp@](mailto:cacomp@)



[dennis.co.uk](http://dennis.co.uk) with 'MusicMan' in the subject line by midnight 1 June.

You can buy the **Music Man LED SoundBlaster** from Amazon priced £51.99: [www.snipca.com/37938](http://www.snipca.com/37938). For more Technaxx products, including headphones, microphones and fitness tracker, visit [www.technaxx.de](http://www.technaxx.de).



### MESH ROUTER

**BT** Whole Home Wi-Fi  
**£200** 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 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. £255 from [www.snipca.com/27309](http://www.snipca.com/27309)

### SOLID-STATE DRIVE

**Samsung** 970 Evo Plus  
500GB  
**£70** from [www.snipca.com/31265](http://www.snipca.com/31265)  
**Tested** Issue 552



Although its price has fluctuated since we tested it at £99, this is a very fast (over 3GB per second) M.2 SSD unfazed by tests that make others slow to a crawl. Also consider the Adata XPG SX8200 Pro if you find it a bit cheaper.

**ALTERNATIVE** Crucial MX500 500GB  
As fast as an SSD can get in the traditional 2.5in SATA format, this is a great-value upgrade. £70 from [www.snipca.com/37304](http://www.snipca.com/37304)

### SMART SPEAKER

**Google** Nest Audio  
**£80** 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 £160). 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. £80 from [www.snipca.com/36602](http://www.snipca.com/36602)



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## HOW TO...

# Edit videos directly on your phone or tablet

by Will Stapley

**What you need** Phone or tablet; YouCut (Android) or iMovie (iOS) app  
**Time taken** One hour

**T**hanks to the high-quality cameras and generous storage space of modern smartphones, we no longer need camcorders to film home movies. But what about when it comes to editing and sharing your clips? One option is to transfer them to your PC, whip them into shape using a tool such as Shotcut (<https://shotcut.org>), then transfer the finished video back to your phone to share with friends



and family using apps like WhatsApp. Alternatively, save time and effort by editing the video directly on your phone or tablet. Don't be worried that your phone's small screen will make it impossible to edit video. The two video-editing apps we use here are designed to make even the most intricate edits easy.

### 1 Install your video-editing app

For Android phones or tablets, we recommend YouCut ([www.snipca.com/38175](http://www.snipca.com/38175) - requires Android 5.0 or above). Unlike most free video editors, YouCut won't plaster your videos with watermarks nor bombard you with ads (though it's not entirely ad-free, as we explain later). Certain features - such as a few special effects and filters - require an upgrade to the Pro version (£7.99 per year or a £17.99 one-off payment). However, most users will find the free version perfectly adequate.

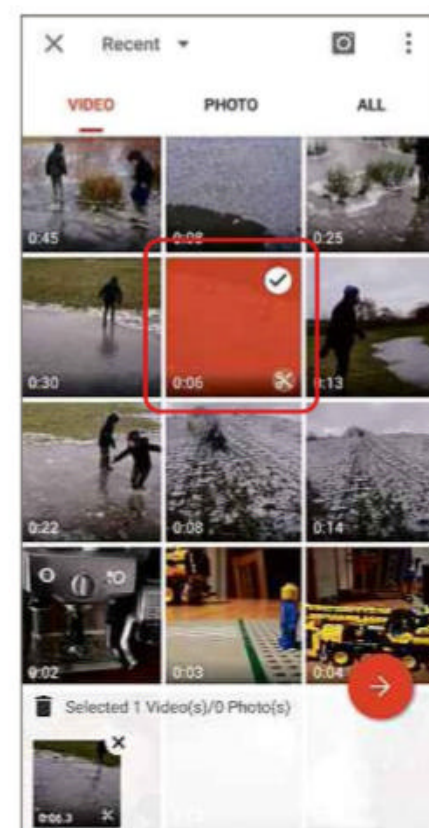
If you use an iPhone or iPad, download Apple's excellent iMovie app ([www.snipca.com/38176](http://www.snipca.com/38176)). It's free and has no adverts. It requires iOS/iPadOS 14, which is supported

on iPhone 6s and iPad mini 4 (both released in 2015) and above.

### 2 Import your video

Both YouCut and iMovie link up with your phone's photo gallery, making it easy to import your video clips. On Android, open the YouCut app, tap the '+' button at the bottom, select New Project, then browse your video thumbnails (you can preview a clip by long-pressing one). Once you've found your desired clip, tap it (it will turn orange - see screenshot right), then tap the right-pointing arrow button in the bottom-right corner.

On an iPhone/iPad, open iMovie, tap the '+' button, then Movie. This takes you directly to the import screen. To browse video clips stored on your device,



Tap a clip in YouCut to add it to your project, or long-press it to preview



tap the back button (top left), select Videos, then tap the clip you want to use. When selected, the clip will display a yellow border – tap the play (>) button to preview the clip, then the ‘+’ button (see screenshot below) to add it to your movie. Tap ‘Create Movie’ to continue.

Note that whichever app you use, you’ll need to grant it permission to access your phone’s storage – the apps need this to import video clips and save your finished projects.

**3**

### Trim unwanted footage

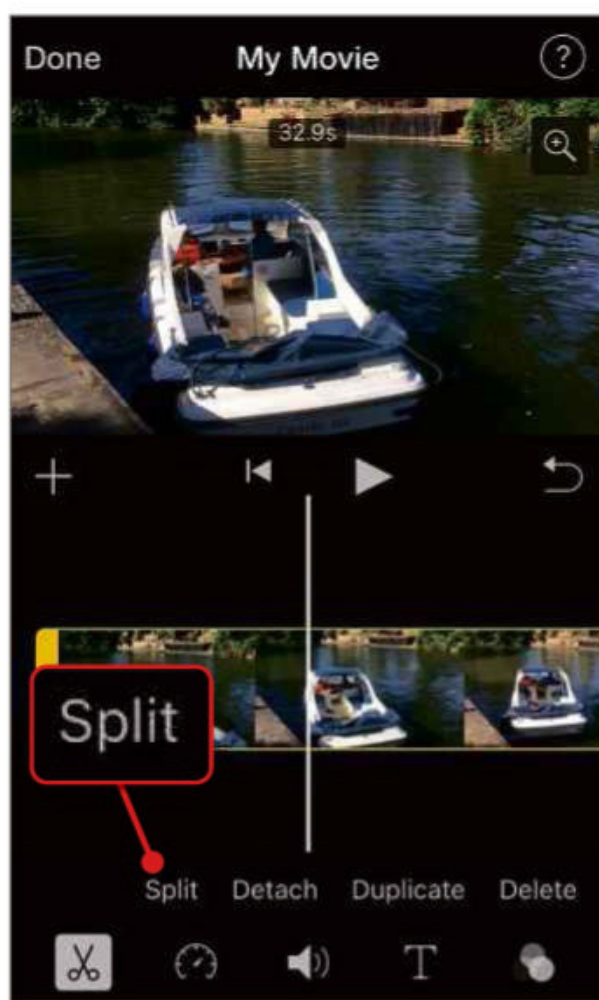
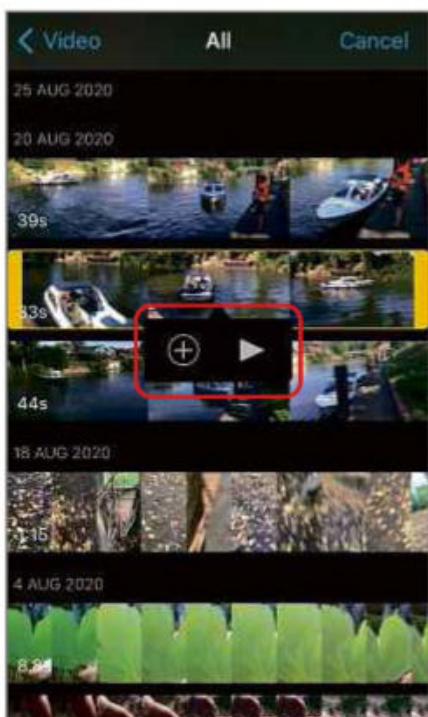
It’s likely that your chosen clip includes some unwanted footage. In most cases this will mean trimming off the start and end of the clip, but you may also want to extract several sections in the middle of a longer recording.

To do this in YouCut, tap your video in the timeline, then the Trim button (the scissors icon at the far left of the bottom toolbar). Next, tap and hold the orange dot to the left of the timeline at the bottom, then drag it to the right. As you do this, you’ll notice the video-preview window at the top updating, showing where your video will start. Repeat this process with the orange dot on the right, dragging it left to the end point you want. The clip’s total duration will adjust as you trim it, and you can preview it by tapping the Play button underneath.

To remove a section from the middle of your clip, select Cut then use the sliders to mark the section you want to remove. Alternatively, select Split to chop your clip in two. Tap the orange tick (on the right-hand side) when you’re finished.

In iMovie, tap your clip in the timeline, then drag the yellow border at either

**Preview clips before adding them to your iMovie project**



Split a clip in iMovie by moving the playhead to the appropriate position, then tapping Split

end to trim it. To split a clip, move the playhead position (indicated by a white line) to the appropriate point, then tap the scissor icon, followed by Split (see screenshot above).

**4**

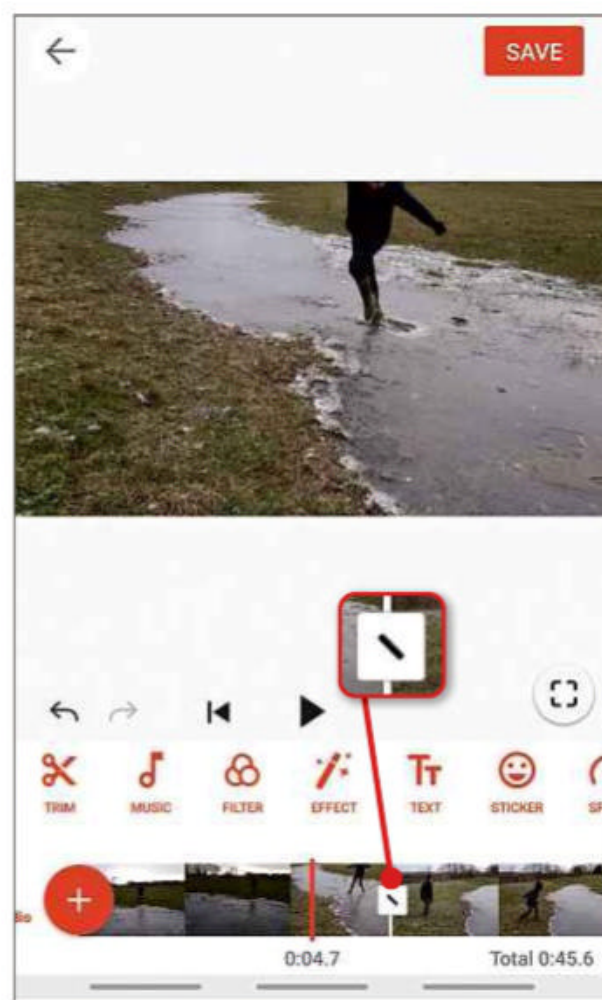
### Add more clips and photos to your movie

If you’ve created a series of videos, combining them into a single movie makes it easier to share.

The process is similar in YouCut and iMovie – simply tap the ‘+’ button (bottom-left corner in YouCut; middle-left in iMovie), then select your clip(s) as you did in Step 1. The clips will then be added to your project’s timeline alongside your original clip. You can also add photos to your project – by default, each photo will be displayed for four seconds in YouCut and five seconds in iMovie, but you can change this following the instructions for adjusting the length of your video clip in Step 2.

Once you’ve added multiple clips to your project, you can rearrange their order. To do this in YouCut and iMovie, long-press a clip, then drag it to the appropriate position. To delete a clip, tap it once, then tap Delete (YouCut) or the scissor button followed by the bin icon (iMovie).

You can also insert transitions between your clips. In YouCut, tap the ‘\’ button



Add transitions between video clips in YouCut by tapping this icon

between the two clips (see screenshot above – this is a particularly small button, so requires a precise touch), then select from the transition options. In iMovie, tap the ‘><’ button between the clips to view and add transitions.

**5**

### Apply filters and special effects

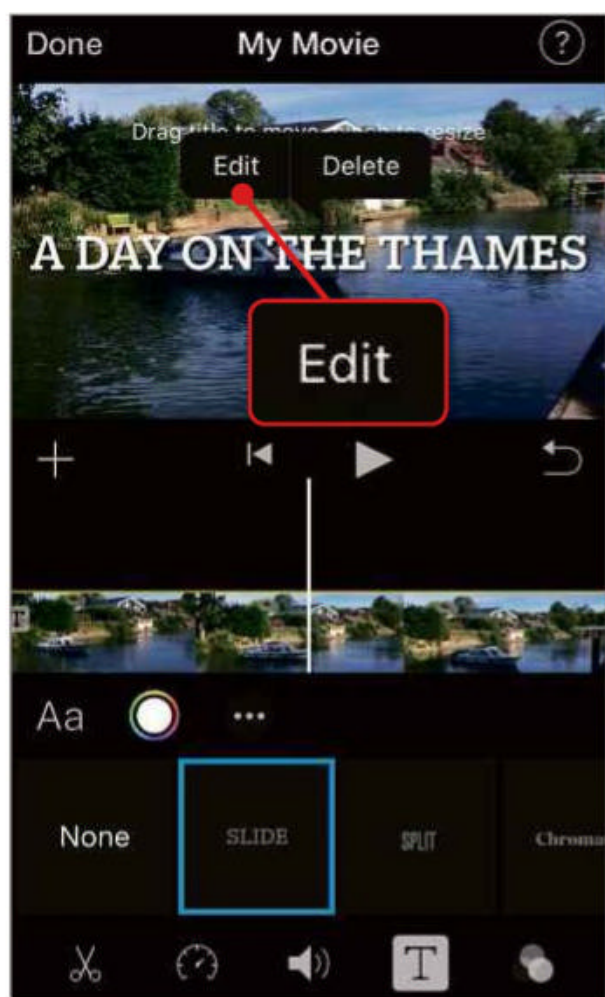
You may find your video could benefit from a bit of touching up. In YouCut, the Filter effect lets you quickly adjust the brightness and colour levels of your clip (there are plenty of free filters, but some are only available in the Pro version).

Once you’ve found a suitable filter, you can tweak it by tapping the Adjust button – simply select your option, then drag the slider to change its intensity. Other effects include Crop (which lets you zoom in on a specific object within a clip) and Speed (perfect for slowing down the moment a Jenga tower collapses, for example).

For more dramatic adjustments (such as distortion effects), tap the Effects button. Next, use the preview window to move to where you want the effect to be applied, then long-press your chosen effect, releasing it at the point you want the effect to stop.

The latest version of YouCut lets you boost the volume level in your clip to 200 per cent of its original level. To boost





In iMovie, add captions and titles by selecting a caption style, then tapping Edit

(or reduce) the volume of the entire clip, select Volume in the main toolbar. Alternatively, tap a clip in your timeline, then select Volume to apply the change to only that clip.

To apply effects in iMovie, tap your clip, then the icon of three interlocking circles (bottom right). We particularly like the Vintage effect, which gives clips a nostalgic feel. If you've added some photos to your project, iMovie automatically applies a 'Ken Burns' makeover to them (a pan-and-zoom effect named after the US filmmaker). To tweak or remove this effect, tap your photo in the timeline, then the scissor button followed by the icon of three overlapping boxes.

To add captions and titles in YouCut, tap the Text button, enter your text, then choose from the styling options. In iMovie, press the 'T' button, select a style, then tap Edit (see screenshot above). Thanks to an update to iMovie last October, it now mimics YouCut in that you can resize and move text boxes by pinching and dragging them (previously you couldn't change the size of text boxes nor drag them to specific positions).

## 6

### Add background music

No home movie is complete without a suitable soundtrack. In YouCut, tap the Music tab in the main toolbar, then My Music to browse the

## How I edit videos on my phone

I enjoy using YouCut to edit and enhance videos I've shot on my Samsung Galaxy S8 phone. Most recently, I used it to share a video of a Lego mosaic that I'd created with the kids (using the excellent Brickaizer tool [www.snipca.com/38180](http://www.snipca.com/38180), which lets you import a photo then provides instructions on how to build it using Lego).

To make the video more dramatic, I added the theme from the film *2001: A Space Odyssey* (an MP3 of which I found



on the Internet Archive at [www.snipca.com/38181](http://www.snipca.com/38181)).

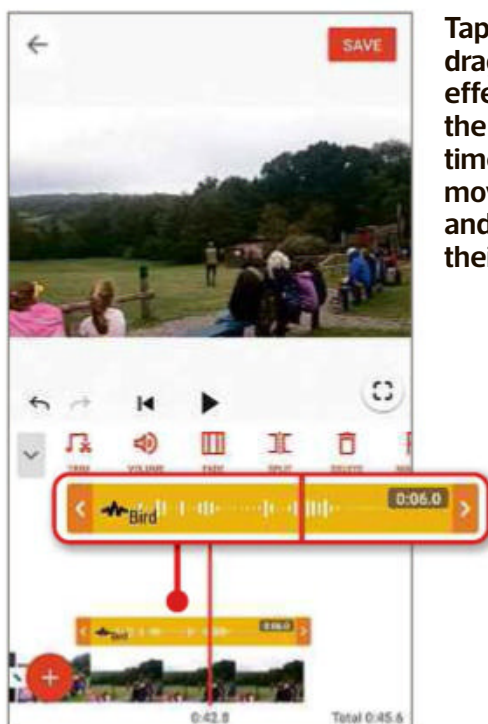
I also used YouCut to slow down the footage, timing it so the soundtrack's crescendo coincided with the mosaic coming into full view. It turned what was already an

interesting clip into a masterpiece worthy of an Oscar.

Will Stapley



How do you edit videos on your phone or tablet? Please let us know: [letters@computeractive.co.uk](mailto:letters@computeractive.co.uk)



Tap and drag audio effects on the YouCut timeline to move them and adjust their length

audio files on your phone. If you need some inspiration, there's plenty of free non-commercial music available at [www.freemusicarchive.org](http://www.freemusicarchive.org), which you can download directly to your phone.

Once you select a track, it'll start playing – tap 'Use' when you've found the track you want. The music will appear in a yellow box on your timeline, which you can tap and drag to move and adjust the start/end points (see screenshot above). If you can live with a 30-second video advert (you'll need to watch it only once), you can access a range of free audio effects – tap Effects in the Music menu to browse these.

To add music or other audio in iMovie, tap the '+' button, followed by Audio. It includes a range of free audio tracks (tap Soundtracks) and effects (tap Sound Effects), but as with YouCut you can also add music stored on your device (tap My Music).

## 7

### Export and share your final video

In YouCut, tap the Save button (top-right corner), then choose the resolution you want for your video. The maximum resolution will be selected by default and the size of the resulting video file will be displayed next to this. You can further reduce this by selecting the quality level (see screenshot below) – Low is fine if you plan to share the video on phones, such as via WhatsApp, but we recommend Medium or High for devices with larger screens, such as your TV. You can save multiple versions with different quality settings by repeating the export process. Once you've chosen your settings, tap Save.

Your video clip will now be added to your phone's gallery. Note that although YouCut doesn't display ads while you're editing your clips, it shows a full-screen video ad each time you export (you can close this after five seconds).

To export your video in iMovie, tap Done (top right) to exit the editing screen. Next, tap your movie project to select it, then tap the share button (a box with an up arrow). To save your video to your phone's gallery, tap Save Video. The most recent version of iMovie includes new sharing options to export it directly to Facebook and YouTube.



Adjust the file size of your video by changing the quality setting



# Workshop1

## Split your VPN so you don't bust your data limit

**What you need:** Windscribe; Windows 7, 8.1 or 10

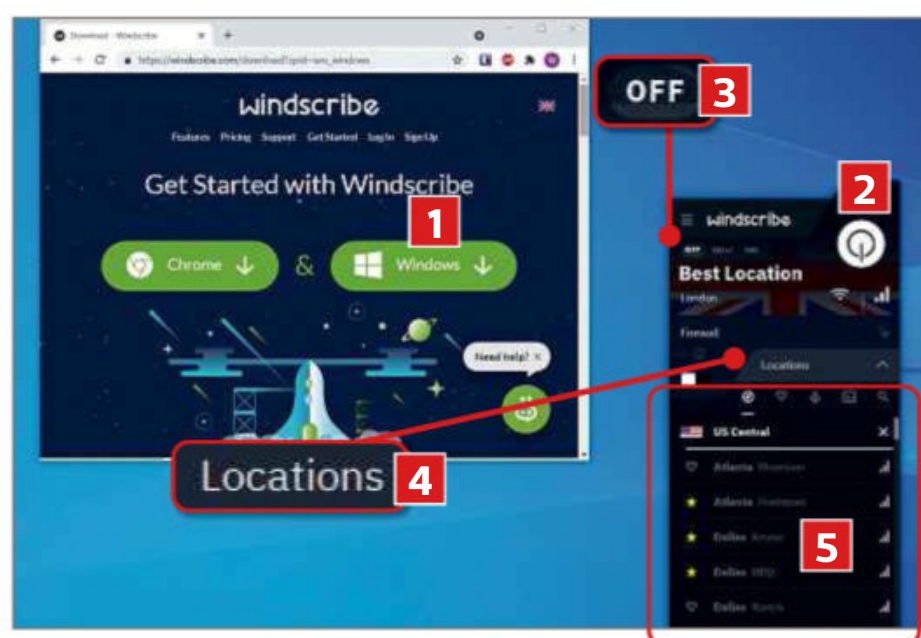
**Time required:** 20 minutes

A **VPN** lets you keep your online activity private and unblock restricted content. Most free VPNs come with a fairly restrictive data-usage cap. If you have your VPN switched on all the time, you'll soon exceed that limit. Windscribe, for example, has a 2GB

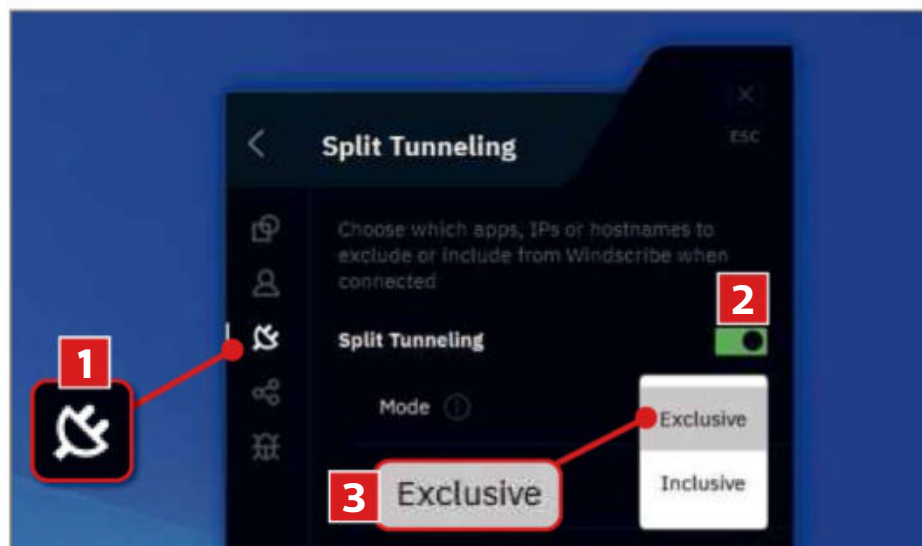
cap, increasing to 10GB if you sign up for a free account. Here, we'll explain how you can stay below those limits by using Windscribe's new split-tunneling feature, which lets you pick and choose which programs and websites can use your VPN.



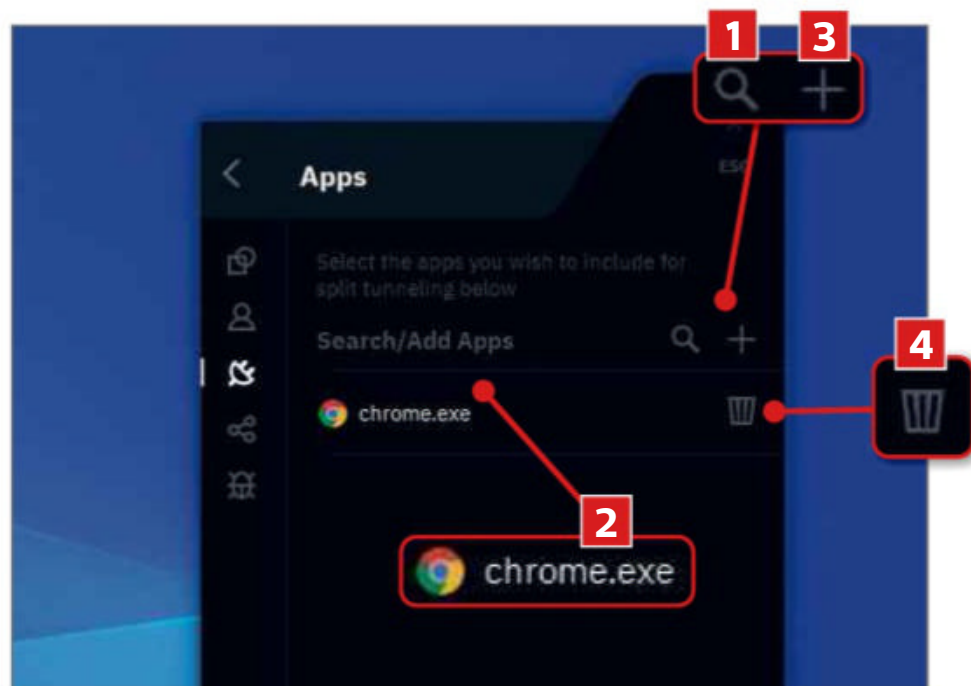
**STEP 1** Download and install the latest version of the Windscribe desktop program from [www.snipca.com/38067](http://www.snipca.com/38067) (click the green Windows button **1**). The main screen in Windscribe has a large power button **2** to turn the VPN on and off (the box on the left **3** indicates its current status). To browse available VPN servers, click Locations **4**, select a region, then choose one **5** (we chose one based in Canada). Those marked with a no-entry sign when you hover over them are only available with a Windscribe Pro account (£6.50 per month or £35 per year – <https://windscribe.com/upgrade>).



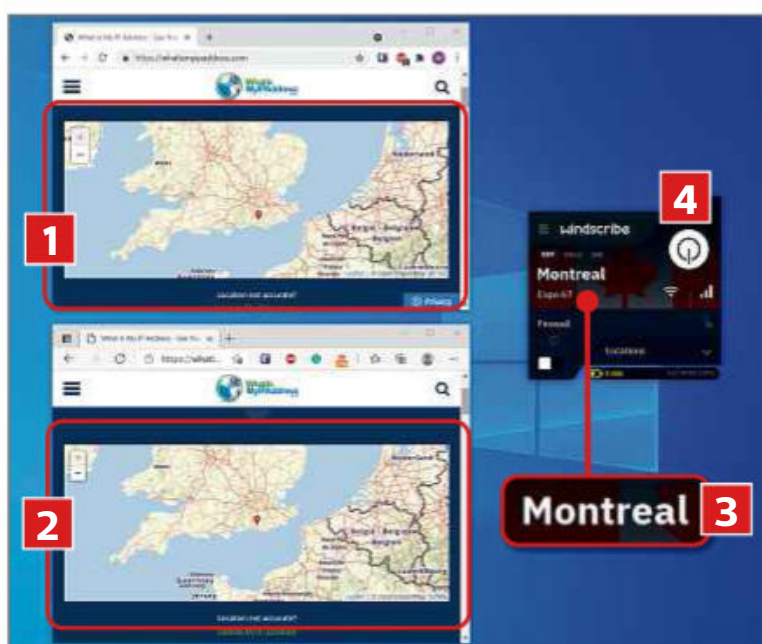
**STEP 2** In our example, we want to use our VPN for everything except Chrome. This will allow us to browse in Edge using the VPN, while using Chrome for downloading large files or streaming HD video from iPlayer without eating into our Windscribe data allowance. To do this, click the menu button in Windscribe (three horizontal lines, top left), select the Connection tab **1** followed by Split Tunneling, then click the slider to turn the feature on **2**. Next, choose Inclusive (you choose which programs will use the VPN) or Exclusive (you choose the programs that *won't* use it). Because we want to block only Chrome from using the VPN, we've chosen Exclusive **3**.



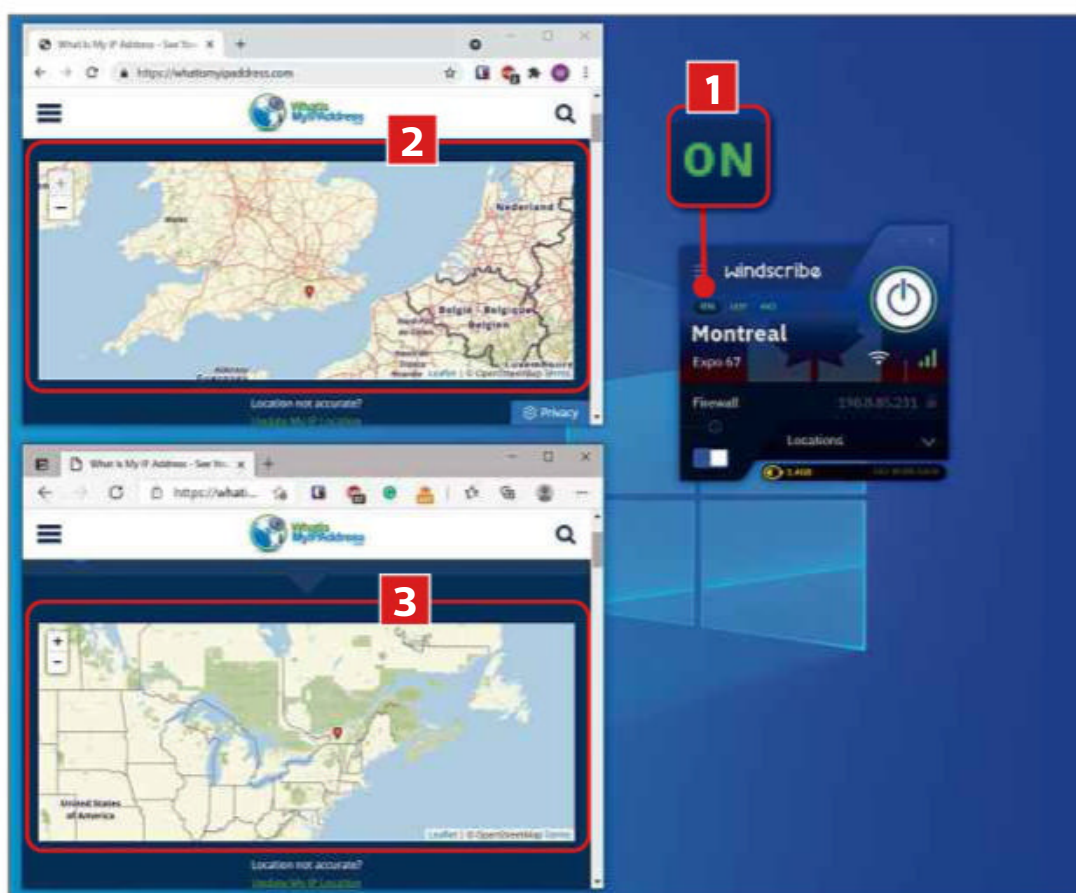
**STEP 3** Click the Apps option, then the magnifying glass at the top **1**. Next, type the name of the program you want to use with Windscribe and select it from the list (Chrome **2**, in our example). If the search doesn't return the program you're looking for, you'll need to locate it yourself. To do this, click the '+' button **3**, then navigate to your chosen program's folder and select its **EXE** file. You can add more than one program to the list, and remove any you no longer want by clicking the bin icon **4**.





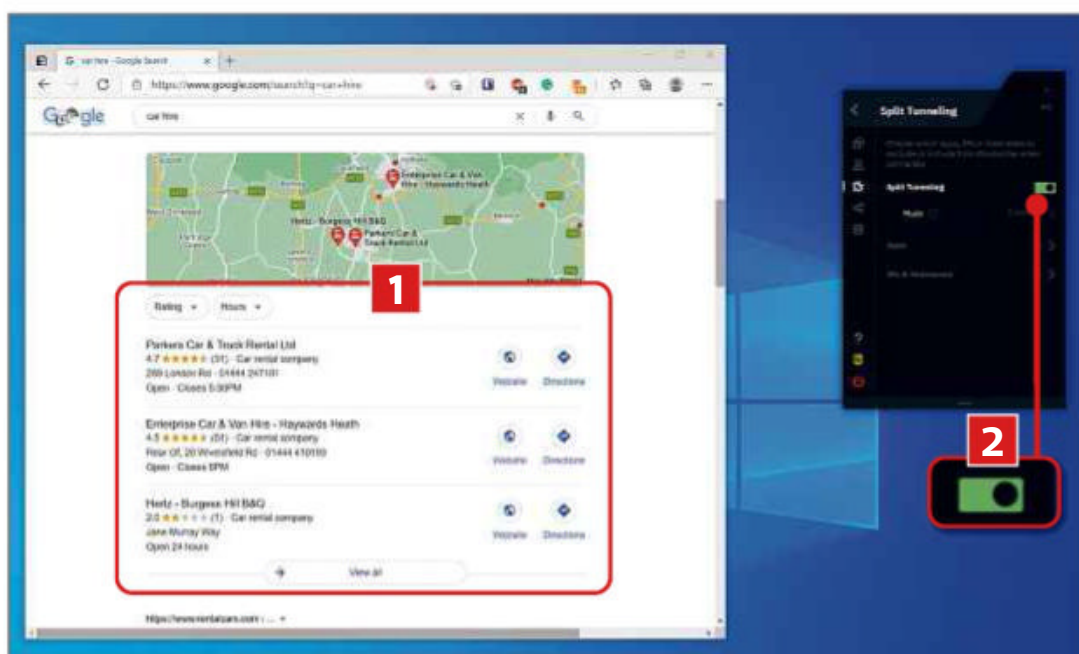
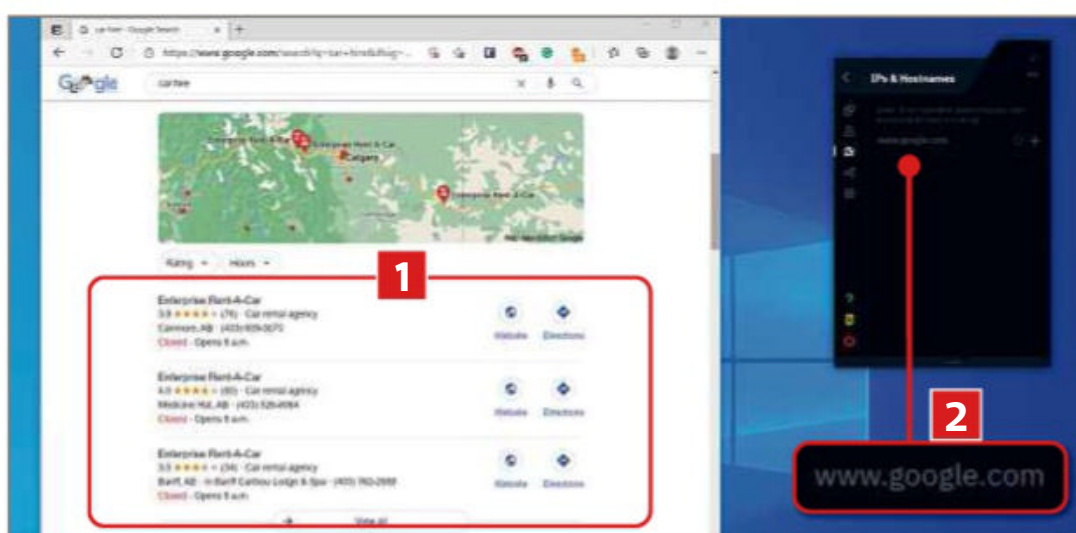


**STEP 4** To test things before turning on your VPN, open Chrome and Edge in separate windows, then visit [www.whatismyipaddress.com](https://www.whatismyipaddress.com) in both. Because you're not using a VPN, the website in Chrome **1** and Edge **2** will display the same approximate location for your current IP address – this is the one your broadband provider has assigned you. Next, return to the Windscribe window, select a VPN (we've chosen one in Canada **3**) then click the power button to turn on the VPN **4**. Windscribe will display a notification as soon as the VPN connection has been made (this can take up to one minute).



**STEP 5** Once the VPN is connected **1**, return to your Edge and Chrome windows, then press F5 on each to reload the [www.whatismyipaddress.com](https://www.whatismyipaddress.com) website. Because we've chosen to prevent Chrome from using the VPN, the website shows that it's using our provider's IP address in the UK **2**. In Edge, however, we're connected to the VPN, so its IP address location is shown as being in Canada **3**.

**STEP 6** You can also tell Windscribe to use/block the VPN on specific websites. With the VPN running and set to a Canadian server, for example, searching for 'hire cars' in Google returns rental companies based in Canada **1**. To avoid this we'll set Google to bypass the VPN. Return to the Split Tunneling menu as in Step 2, then select Exclusive mode. Next, click the 'IPs & Hostnames' option and type the web address you want to exclude from the VPN – for our example, we type [www.google.com](https://www.google.com) **2**. As before, you can enter multiple web addresses if required.



**STEP 7** Return to your Edge window and use the [www.whatismyipaddress.com](https://www.whatismyipaddress.com) site to confirm your VPN is still active. Now run the same Google search as in the previous step. When we tried this, Windscribe was set to bypass our VPN for Google searches even though we were still connected to a server in Canada. Therefore, our search for car-hire firms produced local results in Sussex **1** (based on the IP address of our broadband provider), which is what we wanted. If at any point you want all programs and all websites to use your VPN, go to the Connections tab then click the Split Tunneling slider **2** to turn it off.



# Workshop 2

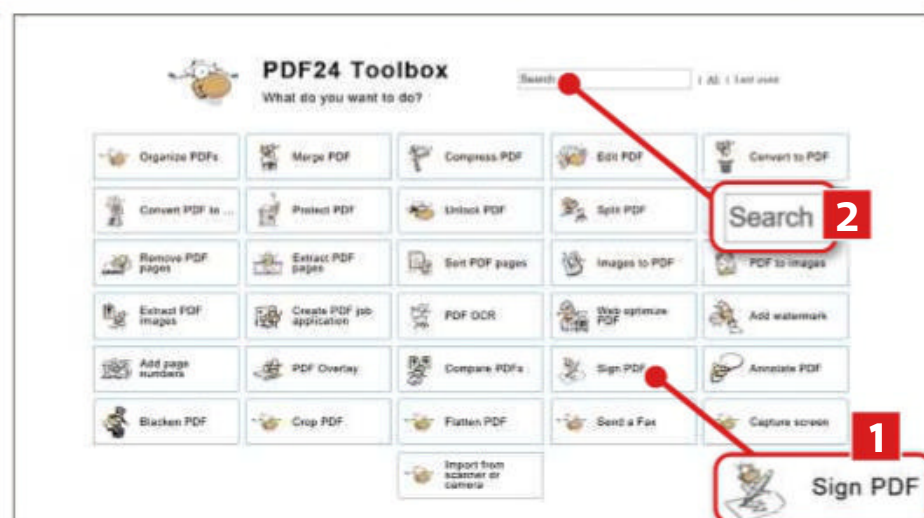
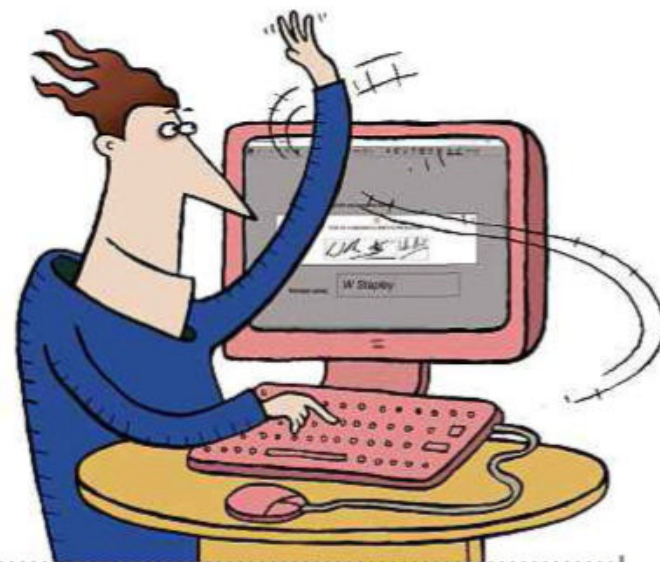
## Add your signature to PDFs for free

**What you need:** PDF24 Creator; Windows 10

**Time required:** 20 minutes

When you receive a form in PDF format that requires your signature, it often means having to print it, scribbling your signature on it, then scanning the form back via your PC. This not only wastes paper and printer

ink, it also takes time. PDF24 Creator lets you add your signature to any PDF. Once you've uploaded a scan or photo of your signature, it will be saved to your PC, letting you use it to sign any future forms in seconds.



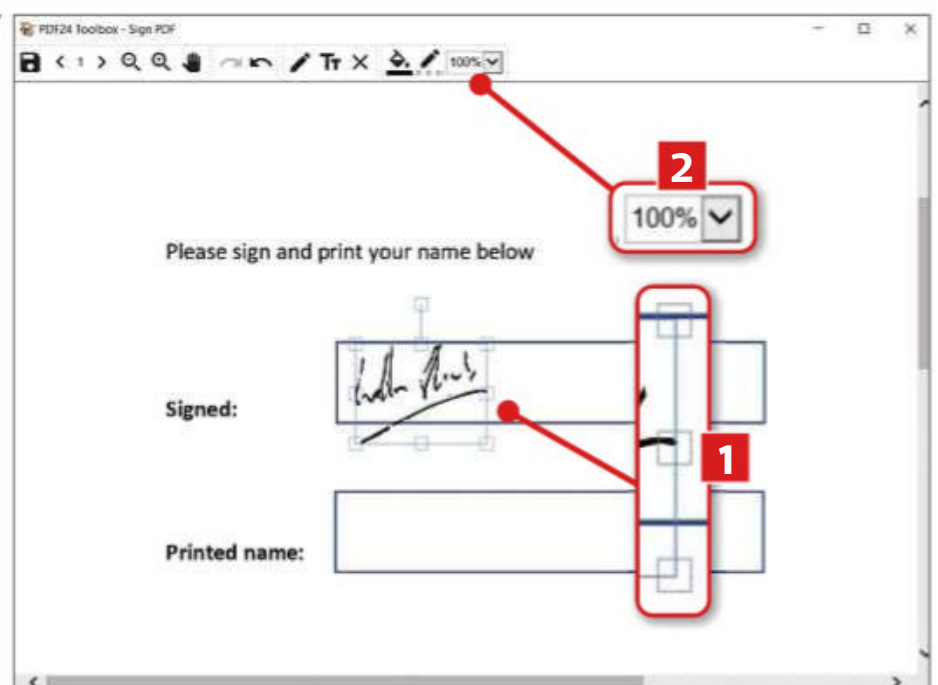
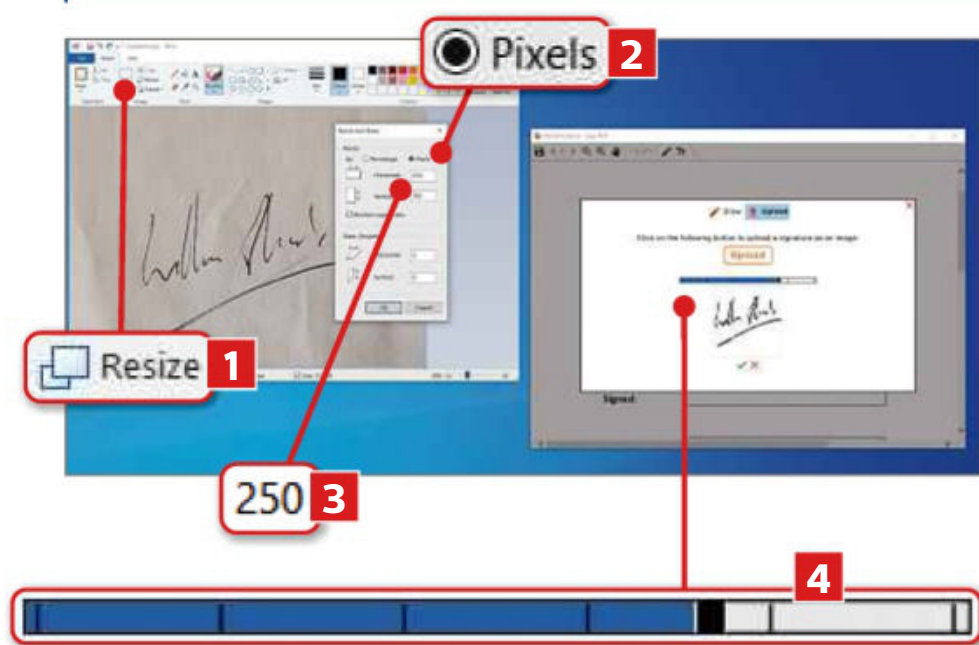
**STEP 1** Install PDF24 from [www.snipca.com/38073](http://www.snipca.com/38073) – click the orange Download button at the top, then the first link in the 'For Windows 10 only' section **1** (you can download older versions of PDF24 for Windows 7 and 8.1, but these don't include the PDF signing tool we're using here). During the installation, PDF24 will set itself as your default PDF reader on your PC. If you want to continue using your current PDF reader, such as your browser, untick the 'Set default PDF reader' box **2**. You'll also be prompted to set up a PDF24 account – this lets you access other features, including sending faxes, but it's not required to sign PDFs, so you can click Skip to continue.

**STEP 2** Once the installation is complete, run PDF24 Creator. Click the 'Sign PDF' tool **1** in the main menu (PDF24 has plenty of tools, so you may find it easier to search for this tool using the search box at the top **2**). To load your PDF, drag it directly into the yellow box within PDF24 or click 'Choose file' then navigate to the folder where your PDF is located and select it from there.

**STEP 3** Your PDF will now open in a separate window. Using the arrow buttons at the top **1**, navigate to the page on which your signature is required. You can zoom in and out of the PDF by holding down the Ctrl key and using your mouse's scroll wheel or by clicking the magnifying-glass buttons in the toolbar **2**. Once you've located the signature box, click the 'Add a signature' pencil icon **3**. If you're comfortable using your mouse to scribble your signature, select the Draw tab **4**, then draw it directly into the box (if you use this method, skip to Step 5 when you've finished). Alternatively, click Upload **5** to use a scan or photo of your signature.

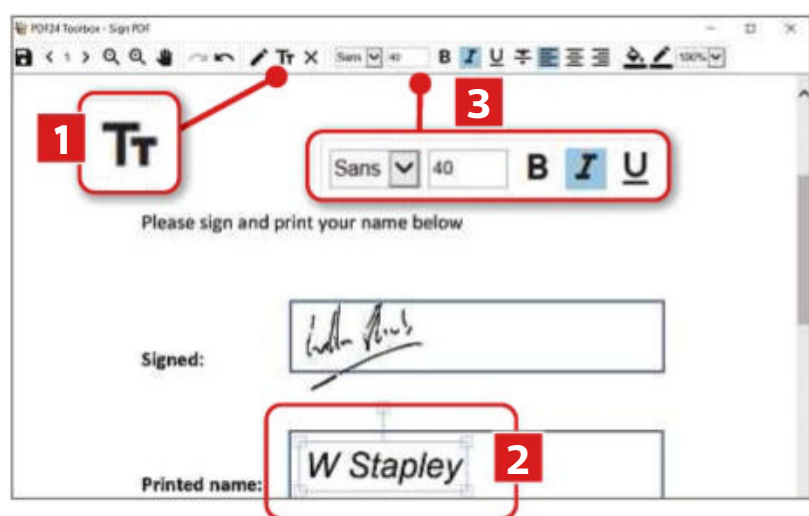






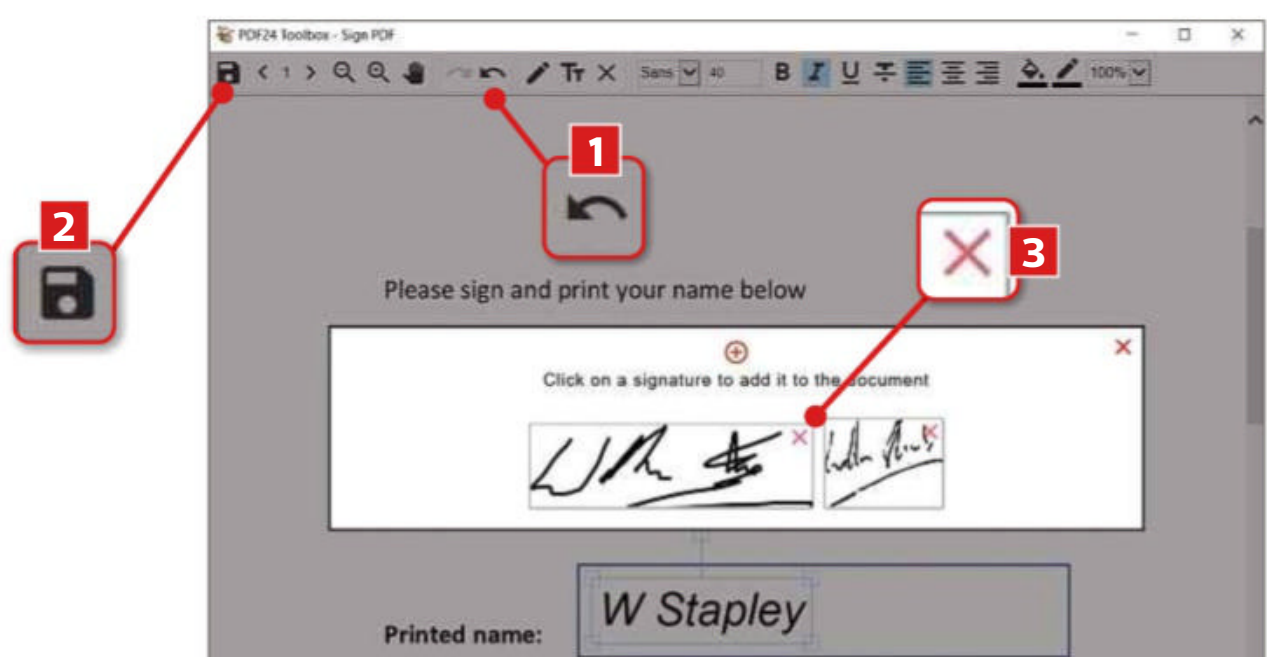
**STEP 4** Next, take a photo of your signature. We found PDF24 takes a while to load large image files (such as those captured by phones), so we recommend you first resize the photo of your signature. Click the Windows Start button, type **paint**, then press Enter. Drag your signature into the Paint window, then click the Home tab, Resize **1**, followed by the Pixels option **2**. Enter **250** in the Horizontal box **3** (the Vertical box will update automatically), then press Enter and save the image. Now return to PDF24 Creator, click the Upload button, then select your resized signature file. PDF24 automatically removes the background from the image – if necessary, use the slider **4** to adjust this so your signature is clear.

**STEP 5** Whether you chose to draw or upload a photo of your signature, click the green tick to add it to your PDF. Your signature will now appear in a box, which you can drag to the appropriate spot on the PDF. You can also resize it by clicking and dragging the corners of the box **1**, and adjust its opacity level **2** (useful if you don't want your signature to obscure what's underneath it on the PDF). If there are multiple boxes on the PDF that you need to sign, select your signature, press Ctrl+C to copy it, then Ctrl+V to paste it as many times as you need.



**STEP 6** If the form you're filling in also asks for you to print your name, click the 'Add text' (Tt) button **1** in the top toolbar. A new text box will now appear, into which you can type your name **2**. You can change the text size in the toolbar, along with its font, colour and style (such as bold and italic) **3**. As with the signature box, you can resize the text box by clicking and dragging its corners, and drag it to the required location on your PDF.

**STEP 7** You can use the Undo button **1** to reverse any changes. Once you've finished making your changes, click the Save button **2**, give your PDF a name (choose a different one to the original to avoid it being overwritten), then click Save. When you use PDF24 to add a signature in future, you can click 'Add a signature' as before, then choose one you've previously used. Click the red cross next to a signature to remove it from this list **3**.





# Readers' Tips

## TIP OF THE FORTNIGHT

### Stream your music using WD's My Cloud

In response to the letter by Delme Jones ('Boo to Google's music restrictions', Issue 603), I've used a method for several years to listen to my own music, using my iPhone anywhere that I have an internet connection.

I bought a WD My Cloud hard drive (pictured), then installed the WD app on my phone and loaded over 100



digitised albums on to the My Cloud drive. I can now stream from the My Cloud drive anywhere around my home and connect my phone to a Bluetooth speaker for a better experience. It works similarly in my car or in fact anywhere with an internet connection.

I sometimes also use an Amazon Echo Dot for

Amazon music, but connected to a much more reasonably priced Bluetooth speaker. I've almost never had a problem in at least five years using both methods.

It's great to be free of the blackmail that the likes of Google seem to be imposing over millions, all in the name of greed. How long before they make us pay for any version of YouTube?

Keith Holman



Keith wins a copy of our 2020 Back Issue CD

Buy it on Amazon [www.snipca.com/38164](http://www.snipca.com/38164)

## SOFTWARE

### Sort USB files into alphanumeric order

✓ In Issue 603 (page 65), you told Roger Currie why his CD files appeared to be out of order on the USB stick that he was plugging into his car. Your suggestions make perfect sense, but there might be an additional factor.

Standard operating systems such as Windows, MacOS and Linux know how to sort files correctly in directory listings. But an **embedded operating system**, such as those in cars, are not always as intelligent. The car's system might simply read the music files in the sequential order that they appear on the USB stick and will be unable to play the tracks in the logical order. That's what happens in my 2013 Volvo V40.

The solution is to first sort the folders

and files on the USB stick into alphanumeric order using a program such as FAT Sorter ([www.snipca.com/37947](http://www.snipca.com/37947)) or YAFS (Yet Another FAT Sorter, [www.snipca.com/37949](http://www.snipca.com/37949)). The trick is to avoid overfilling the USB stick with files prior to sorting. If there's insufficient free space, the files won't be sorted because the process is done by sequentially copying and deleting files until the order is correct.

Raymond Dalglish

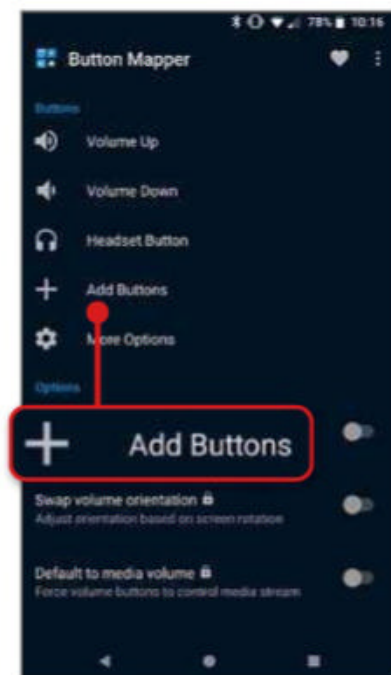
## TV STICKS

### Give the Netflix button a different purpose

✓ I found Issue 605's Cover Feature on tweaking your TV sticks very helpful, particularly the section on the 'Chromecast with Google TV' because I bought one just after Christmas. One

trick I've learned is how to give the Netflix button a different purpose, which is useful if you don't subscribe to Netflix.

You need to install an app called Button Mapper ([www.snipca.com/37936](http://www.snipca.com/37936)). When you first open the app you'll be asked to tweak your accessibility settings, so go to Settings, System, Accessibility and turn on Button Mapper. Back in the app, select Add Buttons from the menu, then choose '+Add Buttons' (see screenshot above).



## Why I stopped using...

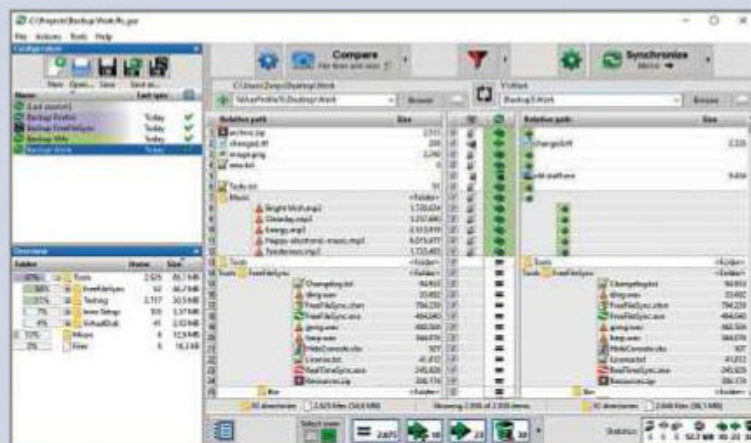
### SyncToy

✓ I've used Microsoft SyncToy for many years to back up my hard drive to portable USB drives. However, following a recent Windows update, the drive letters of folder pairs started to be randomly altered, rendering it unusable.

### And what I use instead...

I tried reinstalling SyncToy but it's no longer available

for download from Microsoft. I now use **FreeFileSync** (<https://freefilesync.org/download.php>, pictured) instead. This



free tool is faster, and lets you create folder pairs to sync drives, with options of Two-way, Mirror, Update or Custom.

After being shown a comparison of files in left and right folders, you're shown which files are about to be processed, with associated actions. This lets you check nothing untoward is going to happen before clicking 'Start synchronization now'.

David Bickell

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



## Handy hints and tips from your fellow readers

✉ Email us your tips: [letters@computeractive.co.uk](mailto:letters@computeractive.co.uk)

Now you need to press the Netflix button (if Netflix opens, close it and return to Button Mapper), then select the new button and switch on Customize. You can now choose a different function for the button to perform, including one-touch access to system settings, split-screen view or screenshot capture (that's what I've chosen).

By the way, if you see a message that you'll need to upgrade to the Pro version, select 'No Thanks'. This tip definitely works in the free version.

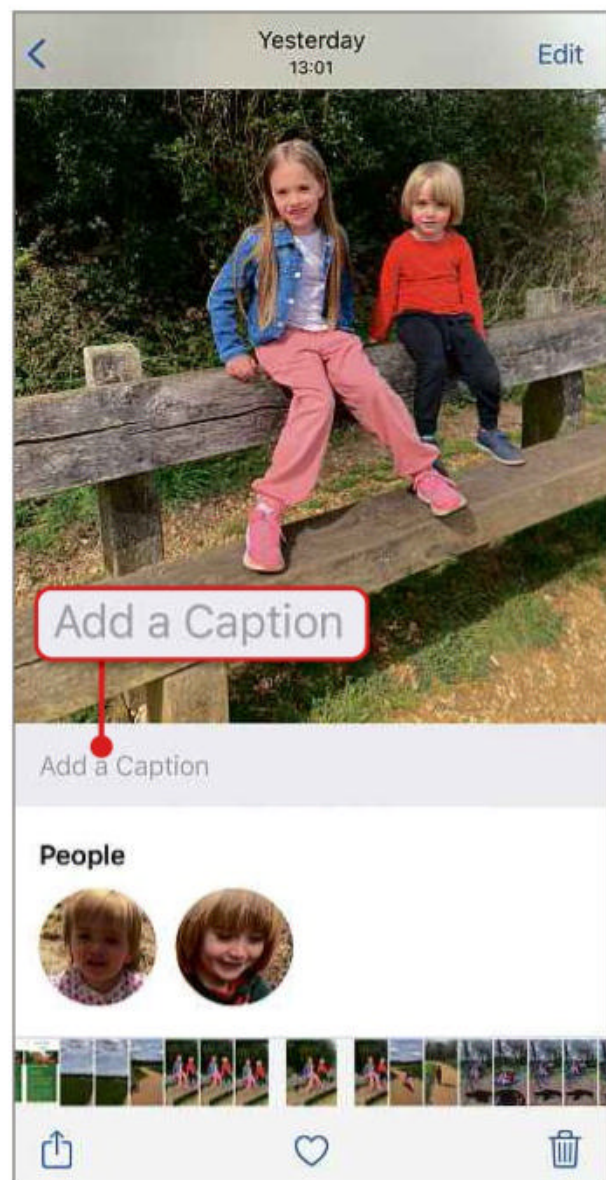
Julian Reynolds

### IPHONE

#### Add captions to your photos

✓ I enjoyed your Workshop on adding captions to videos using VLC and Windows 10 (Issue 603, page 40), so I wondered whether I could do the same within iOS on my iPhone. Turns out that it's fairly easy. Open the Photos app then select a photo. Now swipe up on the photo and type where it says 'Add a Caption' (see screenshot below), then tap Done at the top right to save it. Make sure you swipe up while pressing the photo, not from the bottom of the phone screen. I did this a few times before realising my mistake.

Dawn Reardon



## Reader recommends...

### LG 43LM6300 smart TV

£299 from [www.snipca.com/38023](http://www.snipca.com/38023)

✓ I read Will Stapley's How To on using Freesat in Issue 604 (page 35) and was surprised he didn't mention that some TVs now have a satellite receiver built in, such as the LG 43LM6300, which I bought in February. It works with Freeview and Freesat, and cost £279 - similar to other TVs - though I notice it has now gone up to £299.

I've connected a hard drive (removed from an old laptop) and installed it in an enclosure, which cost less than £5 on eBay. This lets me record programmes while watching previously recorded shows or catch-up TV. It's



a great set-up that I recommend to anyone. I've also now cancelled my Sky subscription.

Malcolm France

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

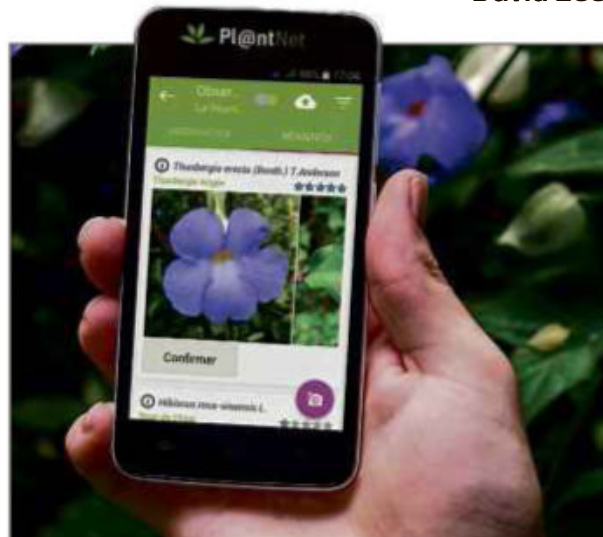
### APPS

#### Upload photos to identify plants

✓ In his 'From the Editor' notes in Issue 604, Daniel Booth asked us which apps we find useful. I was recently recommended the fantastic app PlantNet (pictured below) by a professional ecologist. Upload a photo and it will attempt to recognise any plant or tree (even weeds!). It's very accurate. You can get both the Android and iOS version from <https://plantnet.org/en>.

Also, I know it's not an app, but there's a very handy website called UK Grid Reference Finder (<https://gridreferencefinder.com>), which shows a satellite photo of an area you have a reference for, or will give a reference if you right-click the image. Again, it's incredibly accurate.

David Lee



### AUDIO

#### Set separate volumes for headphones and TV

✓ In Letters, Issue 604, Chris Innes asked how he could set up independent volume controls for his TV and headphones. This can be achieved by using a cheap stereo amplifier or a headphone amplifier (such as this £24 model from Amazon: [www.snipca.com/38030](http://www.snipca.com/38030), pictured above).

He just needs to connect the phono-audio outputs on the rear of the TV to the corresponding inputs on the amplifier. Then he should plug the headphones into the amp's socket (a 3.5/6.3mm adapter may be needed), then use its volume control to adjust the audio going to the headphones, regardless of what volume the TV is at.

Robert Finch



# Phone and Tablet Tips

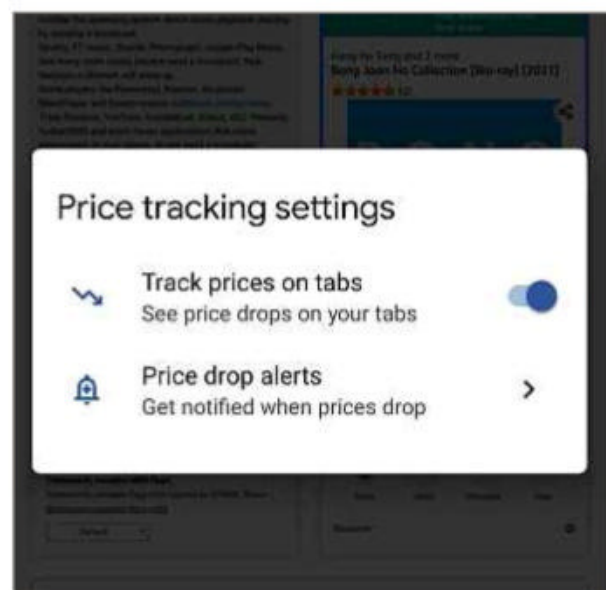
## ANDROID

### Get price-drop notifications on items you're interested in



Ever bought something online only to kick yourself a day or so later, when the same item suddenly drops in price? Well, a new feature in Google's Chrome browser for Android could help to make sure you never pay over the odds. You'll need to be running Chrome version 90 to take advantage of this new tool (update Chrome via Google Play if necessary). It tracks prices for items you have open in tabs and sends you an alert whenever it notices a price drop.

Launch Chrome and tap the number in the box at the top of the screen to open the tab view. Next, tap the menu button (three dots). If you don't see a 'Track prices' option here, the feature may not have been rolled out to your device yet.



Don't worry, there's a way to enable it via a hidden hack. In Chrome's address bar, type <chrome://flags/#enable-tab-grid-layout> and tap Enter. Next, tap the dropdown menu under Tab Grid Layout and select 'Enable Price notifications'. To apply the change, close and relaunch Chrome twice.

Next, browse to an item that's for sale in an online shop in one of your open tabs, then open the tab view as described earlier and tap the menu button followed by 'Track prices'. Tap the slider to enable 'Track prices on tabs' and tap 'Price drop alerts' to configure how your price-drop notifications are shown (see screenshot left).

## ANDROID

### Measure objects using augmented reality



Google has a habit of releasing occasional tech experiments on the public – some of which are useful, others less so. Measure Up falls into the former category. It harnesses the power of **augmented reality** (AR) to measure spaces and objects around you in three dimensions.

To use it, you need to be using an Android device running Chrome 83 or newer. Type <https://experiments.withgoogle.com/measureup> into the address bar, tap Enter, then tap Launch Experiment. Tap the Launch button, then



tap Allow to give the tool permission to make a 3D map of your surroundings.

Put the item you want to measure on the floor and calibrate Measure Up by pointing the camera at the floor and moving it slowly around. When it's ready, you'll see a large white target symbol in the middle of the screen and a smaller green target button at the bottom (see screenshot above left).

Line up the larger target with the lower left-hand corner on the front of the item you're measuring and tap the green button. Move the target along the bottom of the item to its lower front, right-hand corner and tap the green button again. This will give you the item's length (measurements are displayed at the top left of the screen).

Now move the target to the lower rear right-hand corner and tap the green button. This will give you the item's area. Next, move the target to the top rear right-hand corner and tap the green button. Your entire item should now be surrounded by a green box and the total volume will be displayed in the top left. If you misjudge one of your target points during the process, tap Undo and try again.

## BEST NEW APPS

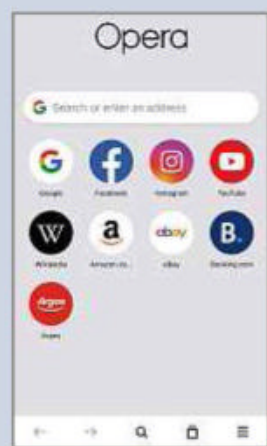
### What you should install this fortnight

#### Opera Browser

Free

iOS [www.snipca.com/38082](http://www.snipca.com/38082)

Opera has relaunched its browser for iOS. Now known simply as Opera (dropping the 'Mini' from its previous name), the app retains its privacy features and one-handed approach to browsing, but introduces a cleaner, more modern design. Opera has promised that further layout and tool improvements are on their way in the coming weeks.



#### Time Rise

Free

Android [www.snipca.com/38091](http://www.snipca.com/38091)

Sometimes the simplest ideas are the best. Time Rise basically turns your device into a digital hourglass. Tap to set a timer, then flip your device 180 degrees to start the countdown, as your screen slowly fills up with colour. The app is currently in development, but it was very stable when we tested it.



#### Phocus

Free\*

Android [www.snipca.com/38083](http://www.snipca.com/38083)

iOS [www.snipca.com/38084](http://www.snipca.com/38084)

Recent smartphone cameras feature a portrait mode that produces pleasingly blurred backgrounds. Even if your model doesn't, Phocus uses **AI** to detect the foreground and lets you apply and adjust a background-blurring effect. More advanced features, such as replacing background images and applying lighting effects, require a £2.79 monthly subscription.



\*Contains in-app purchases



## ANDROID & iOS View Pac-Man in augmented reality



You can now bring Pac-Man (and other animated characters) to life, straight from a Google search. Note that you need a device that supports Google's ARCore or Apple's ARKit – most recent Android and iOS phones do. You'll also need the Google app installed – get it from [www.snipca.com/38094](http://www.snipca.com/38094) (Android) or [www.snipca.com/38094](http://www.snipca.com/38094) (iOS).



Type **Pac-Man** into [www.google.co.uk](http://www.google.co.uk) on your phone or tablet and tap Enter. Scroll down – towards the top of the results you should see an option to 'See PAC-MAN in your space'. Tap the 'View in 3D' button (see screenshot above), then tap 'View in your space' – you may be prompted to allow Google access to your camera, microphone and storage.

When you've done this, you'll need to move your camera around your space slowly to calibrate it. Once this process is complete, an augmented-reality Pac-Man should appear in your home, accompanied by his ghostly counterparts and those classic arcade game sound effects (as in this video [www.snipca.com/38099](http://www.snipca.com/38099)).

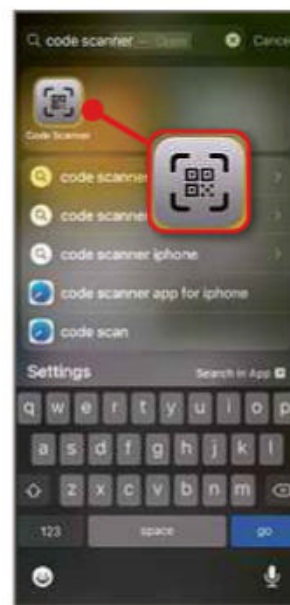
Tap the circle button to record a video of Pac-Man chomping his way around your room. See Google's recent blog entry ([www.snipca.com/38081](http://www.snipca.com/38081)) for a full list of AR characters available.

## iOS Use your iPhone's hidden barcode scanner



Apple's mobile devices come with plenty of apps preinstalled, but there's one you've probably never used – not because it isn't any good but because Apple has, for some reason, opted to hide it. Apple's Code Scanner app effectively negates the need to install a third-party barcode reader app.

You can launch the Code Scanner app by opening iOS's Spotlight search tool (swipe down in the middle of your device's screen), then typing **code scanner** into the search box. The Code Scanner app icon will appear below (see screenshot above right). Tap it to launch, then point your device at a barcode or **QR code** to read it. Tap the torch icon to illuminate the code in low light.



If you often find yourself scanning codes, there's a much quicker way to reach the Code Scanner app – by adding a shortcut to the Control Centre. Tap Settings, Control Centre and scroll down to More Controls. Tap the + icon next to Code Scanner to add it.

Now you can access the app by tapping the icon that appears among the other shortcuts in the Control Centre when you swipe up from the bottom of the screen (on older models) or down from the top right (on newer iPhones that support Face ID).

## BEST APPS FOR...

## Sounds to fall asleep to

### Environments

£2.79 (Android) £2.99 (iOS)

Android [www.snipca.com/38105](http://www.snipca.com/38105)

iOS [www.snipca.com/38086](http://www.snipca.com/38086)

This app is a digital collection of relaxing analogue field recordings from the 1960s and 70s. It contains 23 recordings, including titles like 'Wood-Masted Sailboat', 'Alpine Blizzard' and more. You can listen offline and recordings are long-form (around 30 minutes each), rather than short, repetitive loops.

**Best For** Those who need longer to nod off

### White Noise Lite

Free

Android [www.snipca.com/38087](http://www.snipca.com/38087)

iOS [www.snipca.com/38088](http://www.snipca.com/38088)

If natural noises don't get you off to sleep, you could try this app's selection of low mechanical droning sounds, including a wide variety of fan noises, dishwashers, tumble dryers, vacuum cleaners, trains and more. White noise can be particularly effective for tuning out tinnitus.

**Best For** Those who suffer from tinnitus

### Atmosphere

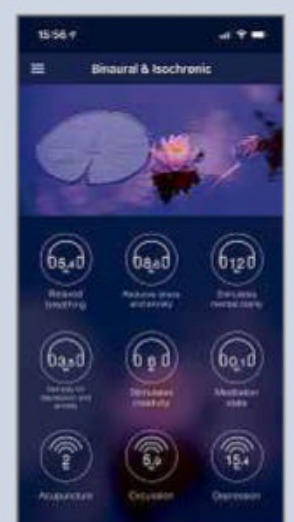
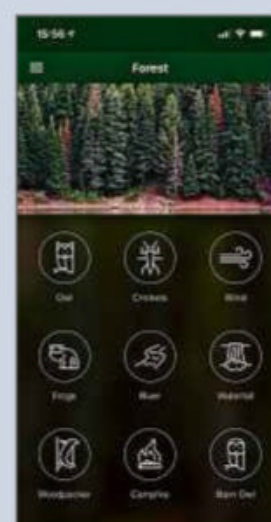
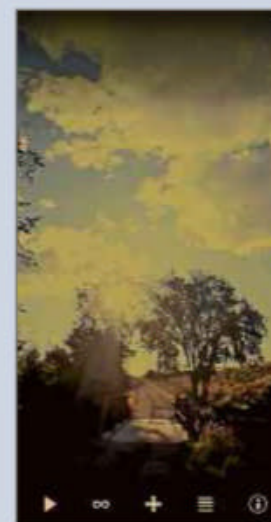
Free\*

Android [www.snipca.com/38089](http://www.snipca.com/38089)

iOS [www.snipca.com/38090](http://www.snipca.com/38090)

This app lets you combine looped sounds – crickets chirping plus campfire crackling, for example – for the ultimate relaxation mix. It also includes a selection of 3D stereo beats, which are said to aid anxiety, stress, and related disorders. There's also a handy timer that lets you nod off to noises without wasting battery life.

**Best For** Those who who need to de-stress



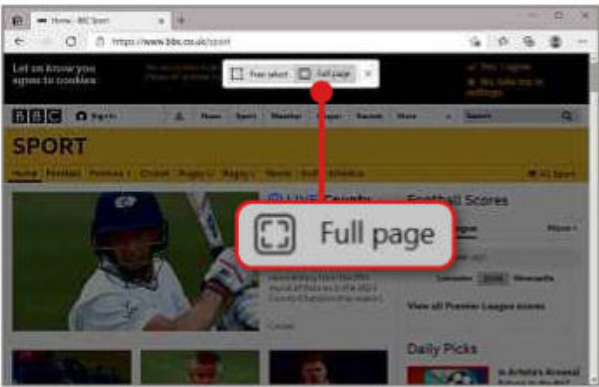
\*Contains in-app purchases



WINDOWS 10  
Take screenshots in Edge

When you want to take a screenshot of a website (such as to keep a record of a transaction or copy an image to a Word document), don't waste time installing a separate screenshot-capture tool. Instead, use the one built into Edge.

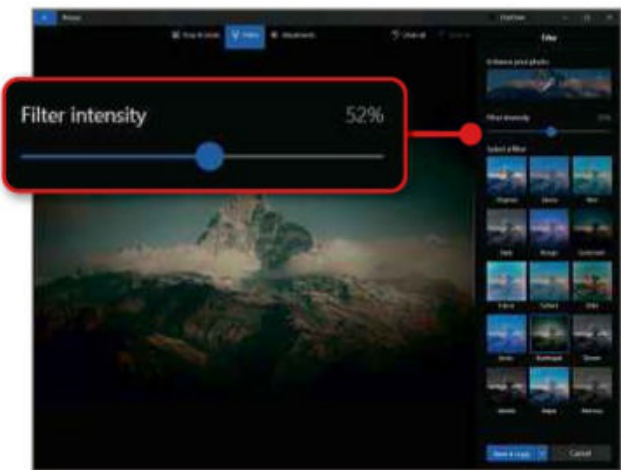
To launch it, click the menu button (top-right corner), then 'Web capture' (or press Ctrl+Shift+S). You can then use your mouse to select a specific part of the web page. To save the capture to your Windows clipboard, select Copy. Alternatively, to save it as a file, click 'Add notes', apply annotations as you see fit, then click the Save button (floppy-disk icon, top right). You can also save entire pages, no matter how long they are. Capture the page as explained above, then click 'Full page' in the window at the top (see screenshot below).



WINDOWS 10  
Enhance your photos

Before sharing a photo with friends or family, why not try to enhance it using Windows first?

Open File Explorer (press the Windows key+E), then navigate to the folder containing your photo and double-click it. If you've chosen a different default image viewer, right-click the photo, select 'Open with', then Photos. Next, click 'Edit & Create' in the top-right corner, followed by Edit. In the window that opens, click Filters (top-centre). You'll now see a selection of filters in the



WINDOWS 10

Trim your voice recordings

Don't let those moments of inspiration go to waste – record them as voice memos using Windows' built-in voice recorder.

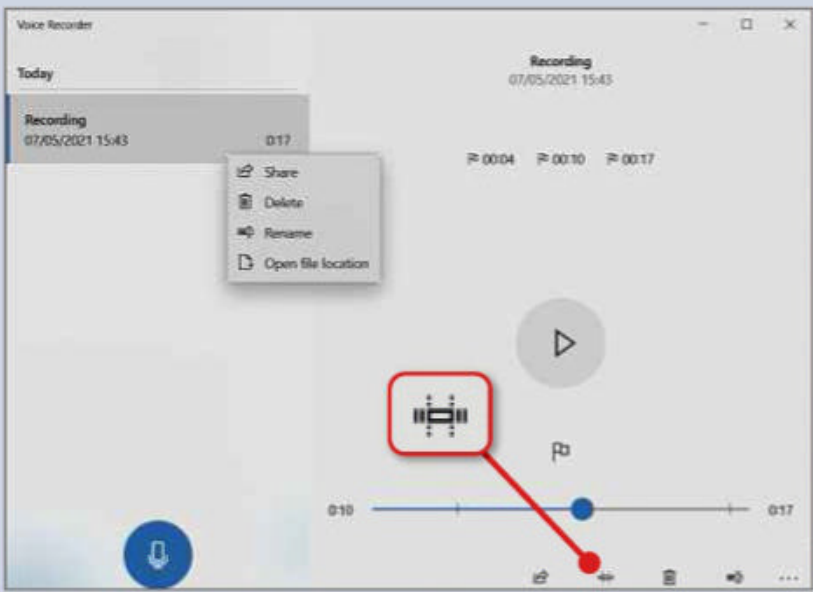
To load the tool, click the Start button, type **voice recorder**, then press Enter. Make sure your microphone is connected to your computer, then click the large, blue microphone button to start your recording.

While you're recording, you can mark specific sections by clicking the flag button (or pressing Ctrl+M). If you need to take a break, press the Pause button, then press it a second time to continue the recording. When you've finished, press the Stop button.

You can now listen back to the recording by pressing the Play button. Any flags you added will be shown with a vertical line on

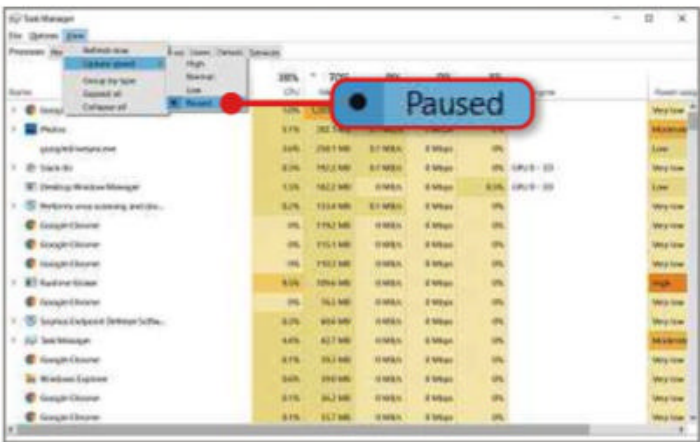
the timeline at the bottom, and you can jump directly to them by clicking the **timestamps** buttons at the top. To trim unwanted sections, click the Trim button (see screenshot below), then drag the sliders at either end of the recording.

Right-click your recording in the left-hand section to reveal additional options, including renaming your clip, sharing it and opening the folder containing the saved recording.



pane on the right. Select one to see how it affects your photo – you can adjust the strength of the effect by moving the 'Filter intensity' slider (see screenshot below left). If you like what you see, click 'Save a copy' in the bottom-left corner and your enhanced photo will now be saved in the same folder as the original.

To overwrite the original, click the down arrow next to the 'Save a copy' button, then click Save.



WINDOWS 10  
Identify problem programs more easily

Task Manager (press Ctrl+Shift+Escape to launch it) lets you quickly view all programs currently running on your computer. It's particularly useful when your computer has slowed down because it shows processor and memory usage for each program, letting you identify which one is hogging your resources. You can also use it to close a

program that's crashed (select it in the Processes tab, then press Delete). However, because it updates in real time, the constant shuffling of items within each tab can make it hard to figure out what's happening.

To temporarily pause updates, click the View menu, then select 'Update speed' followed by Paused (see screenshot above). Task Manager will now stop updating, giving you the chance to review the data without being interrupted.

To restart monitoring, return to the 'Update speed' menu and select High (updates twice every second), Medium (every second) or Low (every four seconds).



### MICROSOFT POWERPOINT

## Animate your slides

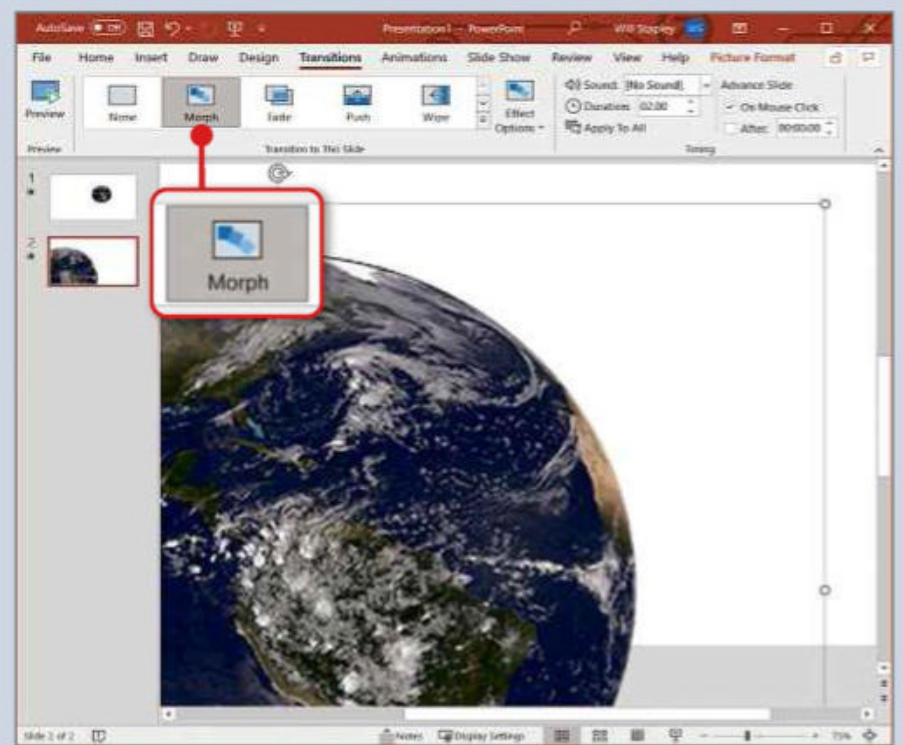


In Issue 600 (page 18) we explained how to use the new physics-based animations feature in Impress, LibreOffice's presentation tool. While PowerPoint doesn't have the same feature, the 2019 version does let you create simple yet effective animations between two slides with its Morph transition.

First, select the slide you want to animate in the slide thumbnail section on the left, then press Ctrl+C to copy it, followed by Ctrl+V to paste. A duplicate of your slide will now appear. Select this duplicate, then move the items within it – you can make as many adjustments to as many items as you like. In our example, we have an image of Earth, which we want to zoom into

and move to one corner of the slide. To do this, we expand the image by clicking and dragging one of its corners, then drag the entire image down and to the left.

Once you've made your changes, keep the same slide selected, then click the Transitions tab in the toolbar at the top and select Morph (see screenshot). To check how the animation looks, click the Preview button in the top-left corner. If you added



or removed any items in the duplicate slide, these will fade in or out accordingly during the animation.

### LIBREOFFICE CALC

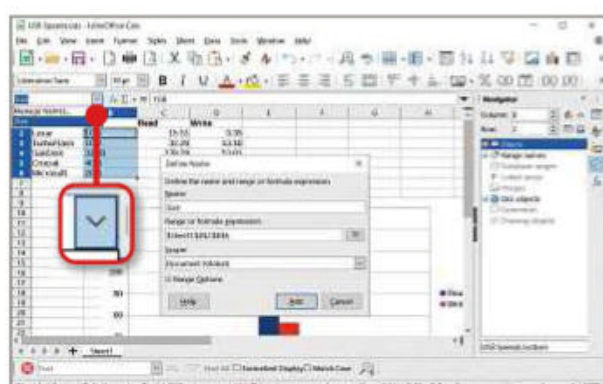
## Save selected data



When you're working with a large spreadsheet, you may find yourself repeatedly selecting the same group of cells. LibreOffice Calc makes this easier by letting you save your selections, then quickly access them in a dropdown menu.

First, click the down arrow in the cell-selection box (to the left of the formula box – see screenshot below), then click 'Manage Names...'. In the window that opens, click the Add button at the bottom, then give a name to the selection you want to save. Now click and drag your mouse to select the cells you want, then click Add. By default, the saved selection will be accessible across the entire spreadsheet, regardless of which sheet you're viewing. If you want to only make it available in one sheet, click the Scope box and select the relevant sheet. Click OK to save your changes.

When you next want to select that



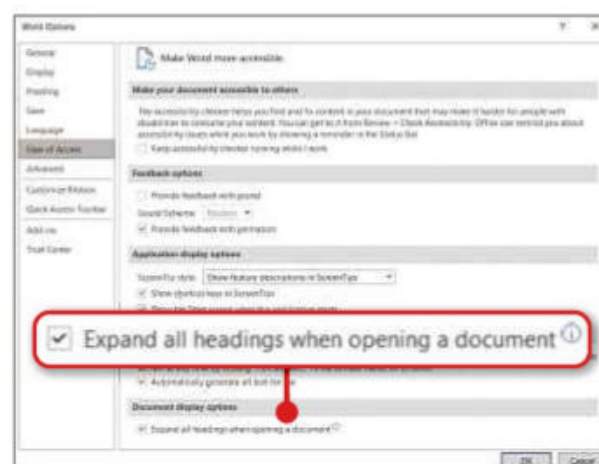
group of cells, click the down arrow in the cell-selection box as before, then click the name you gave your selection. Your cells will now be selected.

### MICROSOFT WORD

## Expand all headed sections when you open a document



In order to make longer documents easier to read Word collapses content within each heading – you can then view the section you're interested in only by clicking the small arrow next to the relevant heading. If you open a document that has all its headed sections collapsed, you can quickly expand them all by right-clicking one of the headings, selecting 'Expand/Collapse', then Expand All Headings. In Word 2019 you can set sections to be expanded automatically in all documents that you open. To set this, click File, Options, then the 'Ease of Access' tab.



Next, tick the 'Expand all headings...' box (see screenshot below left), then click OK to save your changes.

### MICROSOFT EXCEL

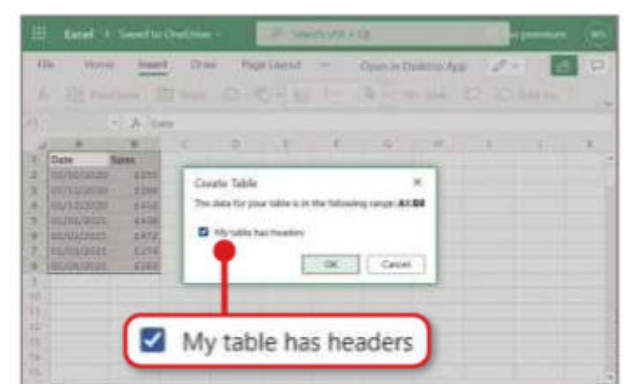
## Format cells in web version



Microsoft recently added new formatting features to its online version of Excel, known as 'Excel for the web', bringing it more in line with the downloadable program. When you right-click a cell (or a selection of cells), you'll now see a mini toolbar providing quick access to formatting settings including font style, size and colour. You can also now create a table from specific cells.

To do this, select the relevant cells, then click the Insert menu, followed by Table. If your table has header rows, make sure the 'My table has headers' box is ticked (see screenshot below), then click OK.

To use these new features, log into your Microsoft account at [www.office.com](http://www.office.com), then create a new Excel spreadsheet or open an existing one.





# In The Club

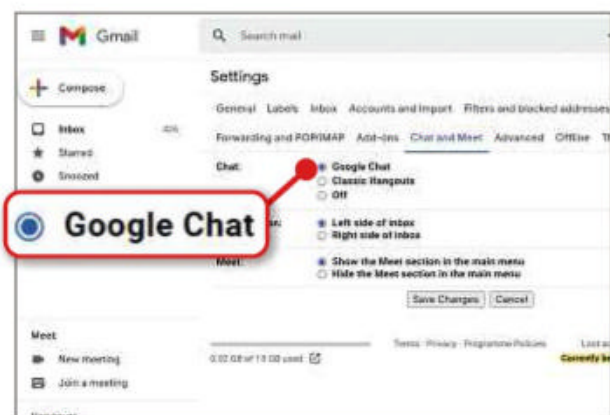


Run a club or society? Here's how your tech can make it easier

## Hold online meetings using Chat and Rooms

Last year, Google added two new instant-messaging tools – Chat and Rooms – to the paid-for version of Gmail. Thanks to an update last month, both tools are now free to *all* Gmail users, and they're perfect for sending club communications and hosting online meetings.

To use the new features, you first need to change a setting in your club's Gmail account. Log in at [www.gmail.com](http://www.gmail.com), then click the Settings button (cog icon, top right), followed by 'See all settings'. In the Settings window that opens, click the 'Chat and Meet' tab at the top, then select Google Chat in the Chat section (see screenshot below). Click 'Save Changes' to return to your inbox.



The Chat and Rooms tools are now available to all Gmail users, but you need to change this setting to use them

Click the menu button (three horizontal bars, top left) and you'll notice the new Chat and Rooms sections just below your email folders. Each section can be expanded and collapsed by clicking the arrow next to their name.

### Chat with individuals

The 'Chat' tool lets you start an instant-messaging conversation with one or more people. Click the '+' button in the Chat section, then enter the email addresses of the people you want to talk to (you can only add people who have Gmail addresses). Your chat window will appear at the bottom corner of the Gmail window; click the two-headed-arrow button at the top-right of the box to expand it.

### Create a room for larger groups

Whereas the Chat tool is good for brief conversations with specific members, Rooms is better suited to contacting larger groups. As well as letting you send and receive messages to and from your club's members, a room also lets you share files and assign specific tasks.

To create a new room, click the '+' button in the Rooms section, then select 'Create a room'. Give your room a suitable name, then enter the email address of the club members you want to invite. If you've set up a Google Group for your club (as we explained on this page in Issue 600), you can enter the group's email address here to invite all its members to the room.

Click 'Create' when you've finished (you can add more people later if necessary) and your room will open within the Gmail window. To return to it in future, select it from the Rooms section in the left-hand menu.

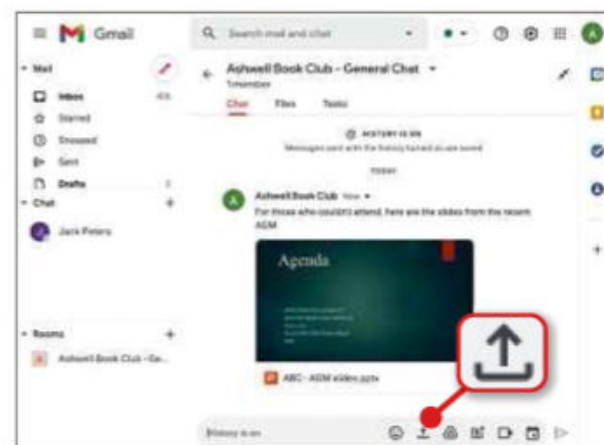
In the box at the bottom you can send messages to the group and carry out other actions, including starting a video call (click the camera icon to the right of the message box). Unlike in Skype or WhatsApp, the group won't be notified of your call by a ringing tone. Instead, they can join the call by clicking the link that appears in the message history.

### Share files with your group

Your Google Room is also a great place to share club documents. To upload a file from your Google Drive account, select the Files tab at the top, then click 'Add file'. Alternatively, to upload a file from your computer, click the 'Upload file' button (see screenshot above right) then select the file you want. This will then appear in the message history, as well as in the Files tab.

### Assign tasks to individuals

Another benefit of Google Rooms is the ability to assign tasks to members. Click the Tasks tab at the top of the Room

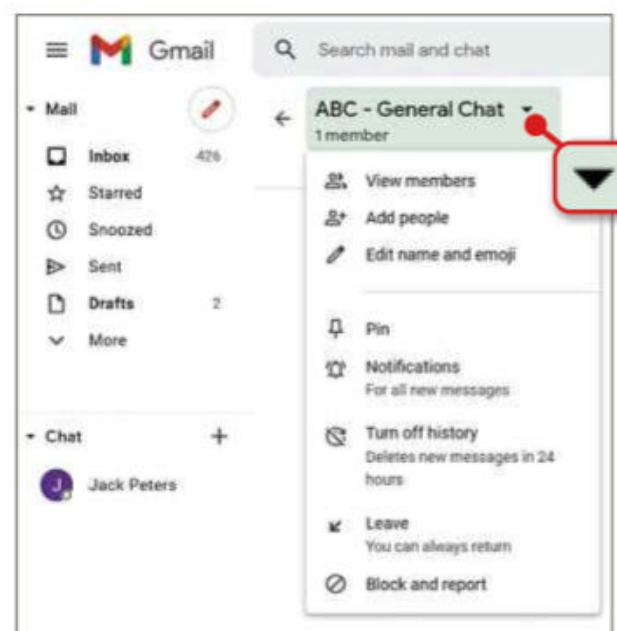


Attach files to a message so members can view it in the chat history and the Files tab

window, then 'Add room task'. Give your task a name and add any further information in the Details section, then click Assign on the right and choose who to assign the task to. If it involves a deadline, click 'Add date/time'. Click 'Add' to save the task and the person you assigned it to will receive a notification.

### Manage your room's members and messages

To change your room's settings and manage its members, open it then click the small down arrow next to its name at the top (see screenshot below). To remove someone, select 'View members', click the three vertical dots next to their name, then 'Remove from room'. By default, the room's message history is saved, but you can set them to delete after 24 hours by clicking 'Turn off history'.



You can change your room's settings, including how long your messages are saved



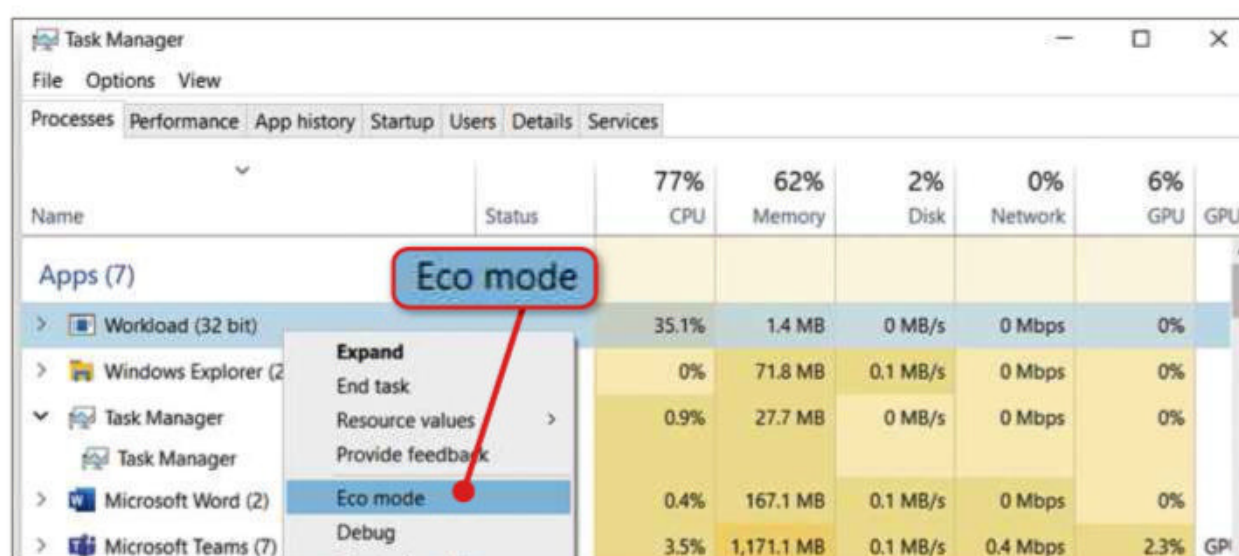
# Boost your PC's performance by giving greedy resource hogs the chop

Eco Mode is a new feature in Windows 10's Task Manager. It makes your PC more energy efficient by preventing programs and apps from consuming excessive system resources.

## Blimey. So how do I use it?

It's actually very simple, and isn't tucked away like some Windows 'modes'. First, open Task Manager by right-clicking the taskbar and choosing Task Manager or by pressing Ctrl+Shift+Esc. Check which programs and processes are needlessly hogging your PC's CPU, memory and power, then right-click the biggest offenders and choose 'Eco mode' (see screenshot above right). This will reduce their usage of system resources, without you needing to disable them by selecting 'End task'. Software that's already running in Eco Mode will be highlighted in Task Manager's 'Status' column.

It uses a new 'Quality of Service' level called EcoQoS to ensure that processes run in the most power-efficient manner. It saves 'thermal headroom' for important



programs by stopping your processor working too hard in the background, and sets the processes you switch to Eco Mode as 'low priority'. This is similar to browser add-ons such as OneTab ([www.one-tab.com](http://www.one-tab.com)) that free up memory by suspending idle tabs until you need them.

Speaking of browsers, Chrome and Edge are notorious resource hogs, so their developers have been testing their own 'eco modes', which will be identified by Task Manager. Microsoft is encouraging other software developers to opt into EcoQoS.

It's basically the amount of available resources before your PC reaches maximum power – or is 'fully clocked', as the experts tend to say. Eco Mode's superior management of thermal headroom will mean fewer system crashes, longer battery life on laptops and a much quieter computer, because internal fans won't be spinning so often to cool down overworked components.

As Microsoft explains: “Higher **clock speeds** provide higher performance, but with exponentially higher power consumption. Not all tasks require the absolute highest performance, so [EcoQoS] reconfigures the processor to provide the proper balance of performance and power efficiency” ([www.snipca.com/38076](http://www.snipca.com/38076)). It sounds great, but you’ll have to wait a while to use it.

Because it's still being tested. It was introduced last month as an 'experiment' in the latest preview build of Windows 10 (Insider Preview Build 21364), but initially only to selected members. Microsoft said the slow rollout was to "identify issues that may impact performance and reliability", which we assume means it didn't want Eco Mode to cause crashes rather than stop them.

Although it's still early days, the fact Microsoft has been widely touting its benefits and nudging developers to make their software compatible suggests the feature is definitely coming to Task Manager. The next big Windows 10 update (21H1, due any time now) is probably too soon, so we predict that Eco Mode will appear in the Sun Valley redesign of Windows 10 (covered in this section in Issue 597), which is likely to be released this autumn.

Go on then. Install Microsoft's excellent free (albeit rather ugly) tool Process Explorer ([www.snipca.com/38078](http://www.snipca.com/38078)) and you can monitor all running processes on your PC and see how much power and memory they're using. Right-click a greedy process and choose Background or Idle (see screenshot left) in the Set Priority menu.



# STOP USING SOFTWARE

Fed up with the hassle of installing new programs? You might have a better option already on your computer. **Will Stapley** reveals 30 excellent hidden Windows 10 tools that you can use instead of software



**R**emember the days of dial-up internet? Every minute spent online cost money, so you had to carefully consider which software to download, when and how often. These days, super-fast broadband, unlimited usage and a seemingly endless supply of

## WHAT YOU CAN DO

- Get a more accurate indication of your Wi-Fi signal strength
- Partition your hard disk into separate drives
- Check the health of your hard drive, memory and laptop battery
- Share your clipboard across multiple computers

free software – all available at the click of a button – means we download with much greater abandon.

However, each new download remains a leap of faith to some extent. Your antivirus may block malware, but it won't stop you installing junk with features you'll never use and that slows Windows to a crawl. So why take the risk, when so many tasks can be carried out without needing to download anything at all? Over the next few pages, we reveal the amazing tools in Windows 10 that can get the job done just as well (and often better).

Of course, we're not suggesting you stop installing software completely – in fact, we're big fans of some of the downloadable programs we mention here. But if you want to perform a

relatively simple task (such as tweaking a video or checking whether your hard drive is about to fail), there's little point cluttering up your computer with more programs when Windows has everything you need. Better still, if you use several computers, there's no need to waste time installing the same programs on each one.

Most of the Windows tools we recommend are quick and easy to use, and all work with both the Home and Pro editions of Windows 10. Some of the more powerful tools require you to tinker with Command Prompt, but we'll explain how to use them, step by step and jargon free.

We'd also love to hear which software you've ditched in favour of Windows' built-in tools. Drop us a line at [letters@computeractive.co.uk](mailto:letters@computeractive.co.uk) and we'll publish the best recommendations.



## TOOLS TO MANAGE & FIX YOUR WI-FI

### Check your Wi-Fi signal

You realise how much you rely on Wi-Fi when it starts playing up – and a poor signal is often the cause of slow-downs. The tiny Wi-Fi symbol by your PC's clock gives you an indication of current signal strength, but trying to count the bars it has requires sharp eyesight. Tools such as Wi-Fi Analyzer ([www.snipca.com/38118](http://www.snipca.com/38118)) give you a more accurate signal strength and will illustrate it on a fancy chart, but you could just as easily use Command Prompt.

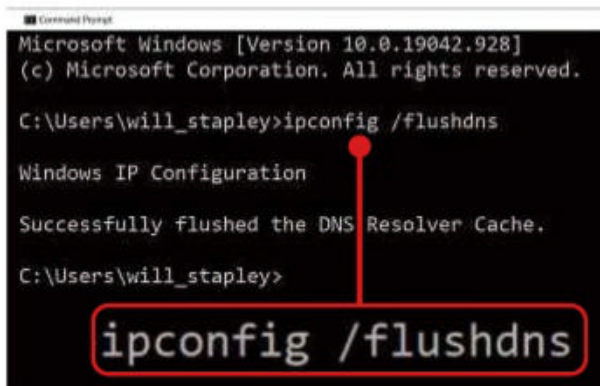
Click the Windows Start button, type **cmd**, then press Enter to launch a new Command Prompt window. Next, type **netsh wlan show interfaces**, followed by Enter. After a pause, you'll see a variety of details relating to your Wi-Fi – look towards the bottom and you'll see an entry labelled Signal, which indicates your Wi-Fi's precise signal strength. If it's less than 50 per cent, try moving your computer closer to your router or boosting your Wi-Fi using an extender (such as TP-Link's RE300 – £25.99 from [www.snipca.com/38120](http://www.snipca.com/38120)).

### Repair your Wi-Fi

If the signal isn't the cause of your Wi-Fi problems, you may be tempted to install a tool such as Complete Internet Repair ([www.snipca.com/38147](http://www.snipca.com/38147)), which promises to 'fix the internet'. Our advice is to use four simple Command Prompt tricks instead.

In a Command Prompt window run the command **netsh winsock reset**. Short for 'Windows sockets', Winsock settings define how your PC – or more specifically the programs installed on it – connect to both the internet and your local network. If the Winsock settings get corrupted (such as by malware), your PC will lose access to your network. This 'reset' command returns your Winsock settings to their original state.

Next, reset your PC's **IP address** with



```
Microsoft Windows [Version 10.0.19042.928]
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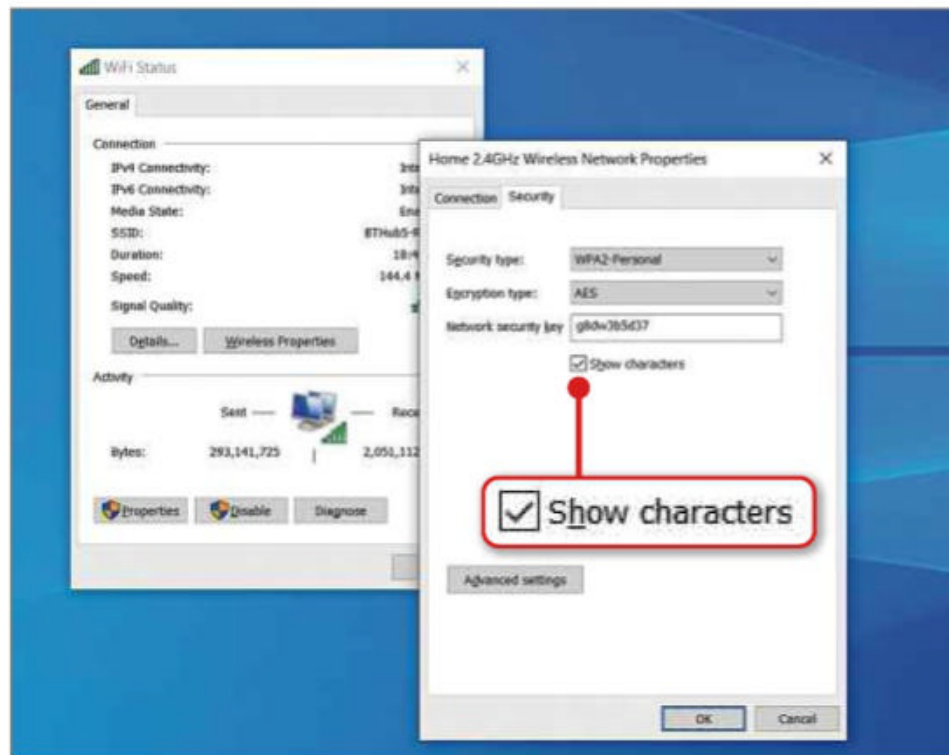
C:\Users\will_stapley>ipconfig /flushdns

Windows IP Configuration

Successfully flushed the DNS Resolver Cache.

C:\Users\will_stapley>
```

If you can't connect to a particular website, try flushing your PC's DNS cache



You can find your Wi-Fi network's password without installing software

the command **ipconfig /release**. Your router gives every device on your home network an IP address, allowing them to talk to each other and connect to the internet. If two devices end up having the same IP address, both will fail to connect to your router properly. This 'release' command tells your router that your PC no longer needs its IP address. To get a new IP address that's not being used by another device, use the command **ipconfig /renew**.

Finally, it's worth 'flushing' your PC's DNS (domain name system) history with the command **ipconfig /flushdns** (see screenshot below left). When you type a web address into your browser, you're actually asking your browser to find out the IP address of that site (every website has a unique IP address). To do this, your browser refers to a DNS based online, often one provided by your ISP. Much like a BT Phone Book links phone numbers with names, the DNS reveals the IP address for each web address.

To avoid having to constantly refer to this DNS, your PC stores your previously visited sites and their IP addresses, allowing it to connect to websites faster. Although this works well most of the time, if a website you're trying to visit has changed its IP address since your last visit, your browser won't be able to connect to it. Flushing (in other words, resetting) your PC's DNS with this command usually fixes this problem.

### Stop Windows updates slowing your Wi-Fi

Microsoft is due to release the latest Feature update for Windows 10 (21H1)

any day now, and when it does you may notice your internet connection slows as the update downloads. To avoid this happening, you can restrict how much of your internet connection the update uses with tools such as NetLimiter ([www.netlimiter.com](http://www.netlimiter.com) – pricing starts at £14). However, you can just as easily do it in Windows.

Press the Windows key+I to open Settings, then go to 'Update & Security', followed by Delivery Optimisation, then click the 'Percentage of...' option. Now tick the two boxes below and use the sliders to set **bandwidth** limits for background updates (those that Windows downloads automatically) and foreground updates (those you ask Windows to download). We recommend 25 per cent and 40 per cent respectively.

### Find your Wi-Fi password

Someone asks for your Wi-Fi password, but you haven't the foggiest. You could log into your router, but that will require you to remember your router's password. Another option is to install NirSoft's WirelessKeyView tool ([www.snipca.com/38121](http://www.snipca.com/38121)), which shows the password for the network your PC is currently using, along with others you've connected to previously. But why bother when you can find out without installing anything? Click the Start button, type **ncpa.cpl** and press Enter. In the window that appears, right-click your Wi-Fi connection, select Status, then Wireless Properties. Finally, click the Security tab, then tick the 'Show characters' box (see screenshot above right). Your Wi-Fi password will be displayed in the 'Network security key' box.



# WINDOWS TOOLS FOR EDITING PHOTOS & VIDEOS

## Trim your videos

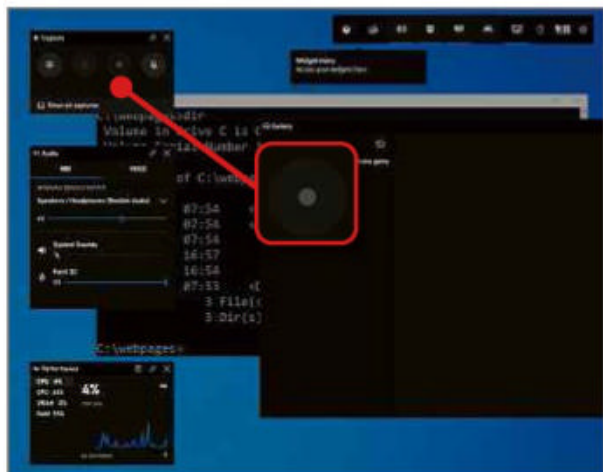
It's rare to capture a video on your phone or camera without unwanted sections (such as cries at the start of "Is it recording yet?"). As we reveal on page 35, you can trim your videos directly on your phone, but what if the video file is on your PC? LosslessCut ([www.snipca.com/38115](http://www.snipca.com/38115)) does a great job of trimming videos, including letting you remove multiple sections from a clip, but despite being updated last year its design is still confusing.

Save yourself the hassle and instead use the video editor built into Windows. Locate your video in File Explorer, right-click it, then select 'Open with', followed by Photos. Next, click 'Edit & Create' (top-right), Trim, then use the sliders at either end of the timeline at the bottom to narrow the clip to what you want. Click 'Save a copy' when you're done. Your cut-down clip will be saved in the folder with the original, with '\_ Trim' added to the end of the file name.

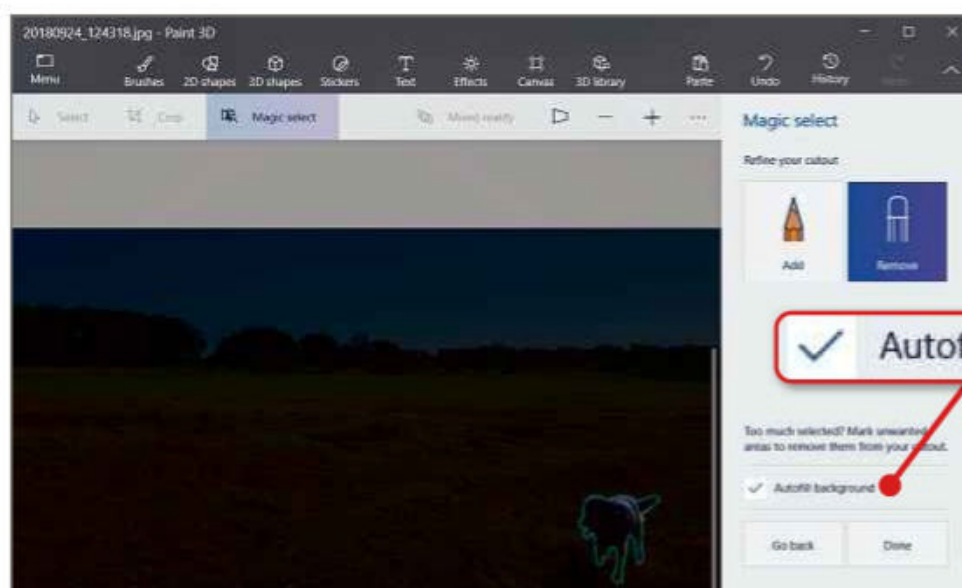
## Record your screen

When you want to capture a window on your desktop a simple screenshot will often do, but sometimes you'll need to capture a video of what's going on – such as when showing a friend how to use a specific program.

The latest version of MiniTool Video Converter ([www.snipca.com/38116](http://www.snipca.com/38116)) includes a new and capable screen-capture tool that lets you highlight mouse clicks and change the video resolution. Before installing it, though, try Xbox Game Bar, which comes pre-installed with Windows 10 (even if you don't have an Xbox). Although primarily aimed at gamers, it includes a simple but effective video-capture tool that works with *all* programs. Open the window you want to capture, then launch Xbox Game Bar by pressing the Windows key+G. Click the



Xbox Game Bar includes a screen-capture tool that works with any program, not just games



Paint 3D's 'Magic select' tool lets you erase unwanted items from your photos

Record button in the Capture box (a white circle – see screenshot below left), then return to your window to start the capture. To end it, click the Stop button. Your video will be saved in your Videos/Captures folder.

The only caveat is that this tool will capture what's going on in only a single window, not your entire desktop.

## Hide blemishes in your photos

You've taken a photo of a glorious sunrise, but then notice it's blighted by an empty crisp packet drifting in the wind. Image-editing programs such as GIMP ([www.gimp.org](http://www.gimp.org)) and Paint.NET ([www.getpaint.net](http://www.getpaint.net)) let you remove such blemishes, but only by using a mix of tools that aren't especially easy to master.

Our advice is to use Paint 3D instead, which comes pre-installed with Windows 10 (you'll find it by searching in the Start menu). Open your photo in Paint 3D, click 'Magic select' in the top toolbar, then drag the corners of the selection box so that it sits over the unwanted object (for the best results, crop in as tightly as possible).

In the right-hand menu, click Next, make sure the 'Autofill background' box is ticked (see screenshot above), then click Remove. Paint 3D will then remove the object and fill the background in.

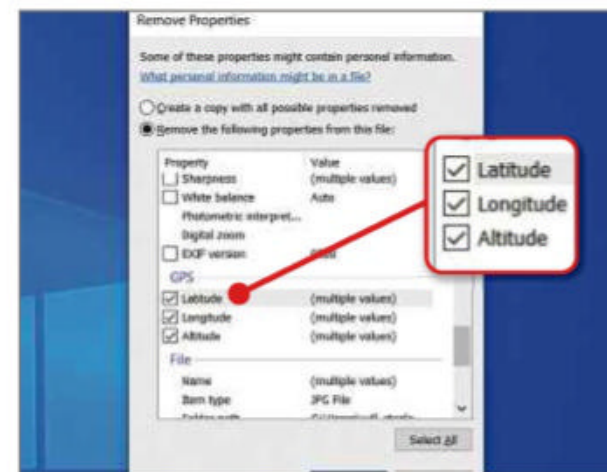
Paint 3D could be on borrowed time, however. In March, Microsoft said it will no longer pre-install the tool on Insider releases of Windows (these are preview versions that Microsoft uses to test new features) – an indication that it's planning to drop it from Windows altogether. Don't fret, though – if Paint 3D does get the chop, it will be removed from your PC only if you perform a **clean install** of Windows (and even then it'll still be available via the Microsoft Store).

## Erase personal data from your photos

When you take a photo, all manner of extra data is saved along with it. Known as **metadata**, this includes information such as the make and model of your camera, the shutter speed used and whether the flash fired. If you captured the photo using your phone, it might also include the GPS coordinates of where you took it. Share that photo online, and you'll also be sharing all this data.

You can use ExifTool (<https://exiftool.org>) to remove all metadata from your photos, but, as we know from bitter experience, one small mistake can wreak havoc with your photo collection. A quicker (and safer) option is to use File Explorer (press the Windows key+E). Select your photo (hold Ctrl if you want to select multiple photos), then right-click, select Properties, then the Details tab. To remove all metadata, select the 'Create a copy...' option (this saves a copy of your photo GPS without metadata).

Alternatively, select 'Remove the following properties...', then scroll to the GPS section, tick the Latitude, Longitude and Altitude boxes (see screenshot below) and click OK.



Wipe all location information from your photos using File Explorer



## MANAGE YOUR DRIVES & FILES

### Partition your hard drive

If you've never done it before, partitioning (the process of splitting a hard drive into multiple drives) might seem like a daunting task and one that requires a specialist tool such as Partition Wizard ([www.snipca.com/38126](http://www.snipca.com/38126)). But in most cases, the Disk Management tool in Windows will suffice (it's a powerful tool, so we recommend performing a complete backup of your personal files before using it). Load the tool by searching for it in the Start menu.

The top section shows your physical hard drives, the bottom shows how each drive is partitioned (don't be surprised if your drive already has partitions – these are often created by PC manufacturers to store recovery images that let you reset Windows). In the top section, right-click the drive you want to partition and select 'Shrink Volume...'. Windows will check how much free space is on the drive, after which you can select how much you want to shrink it by (this will be the size of your new partition – we've chosen 500MB, see screenshot top right **1**). Click 'Shrink'.

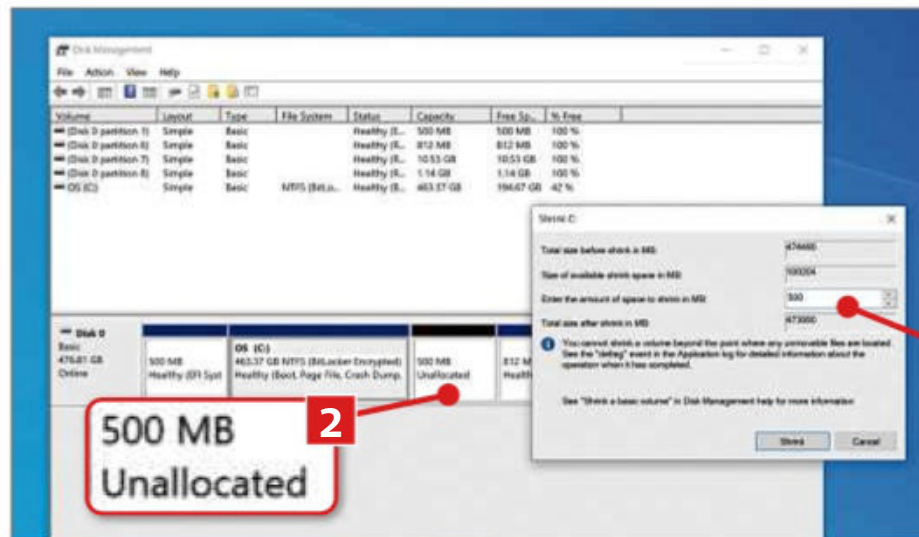
After a short delay, your new partition will appear in the bottom section, with a label of Unallocated **2**. Right-click this, select 'New Simple Volume...', then go through the menu options, leaving the settings at their default and selecting a drive letter for your new partition when prompted.

### Free up drive space

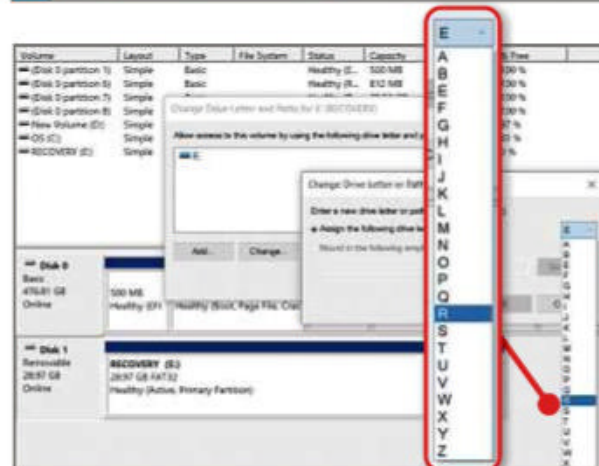
When Windows tells you that your hard drive is running out of space, it's tempting to install something like CCleaner ([www.ccleaner.com](http://www.ccleaner.com)), which promises to delete junk. What was once one of our favourite programs, however, has since fallen from grace (two years ago, it was found to be collecting users' data without asking). Instead, use Windows' Disk Clean-up tool to free up space. Search for it in the Start menu. Simply tick what you want to remove, then click OK. For extra-thorough cleaning, click 'Clean up system files', which hunts down and deletes old Windows update files.

### Assign drive letters to your USB sticks

USB Drive Letter Manager ([www.snipca.com/38127](http://www.snipca.com/38127)) lets you permanently assign drive letters to your USB sticks, so no matter which PC you plug them into they'll always have the same letter. The



Windows lets you partition your hard drive without having to install a separate tool



You can quickly change a USB stick's drive letter in Windows

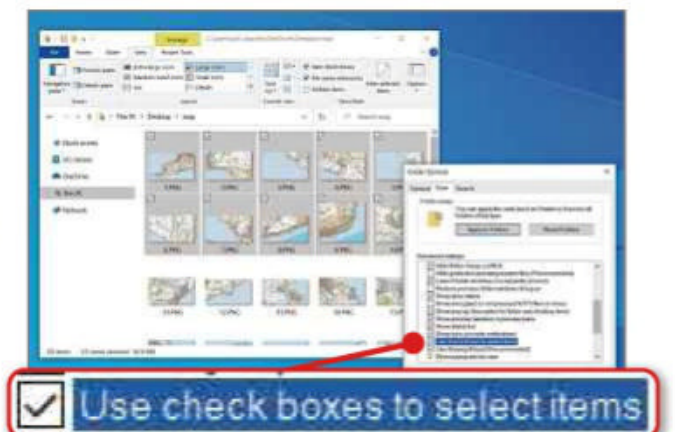
problem? It's difficult to use (the manual being in German doesn't help). Our advice is to use Windows' built-in tool. To get started, insert your USB stick, then return to the Disk Management tool from the previous partitioning tip. Right-click your USB stick, select 'Change drive letter and paths...', then click 'Change...' and choose a drive letter from the list (see screenshot above). However, your USB sticks will keep their drive letter only on the PC you ran Disk Management on.

### Compress files in seconds

PeaZip ([www.snipca.com/38129](http://www.snipca.com/38129)) is great if you want to password-protect your ZIP files, and the latest version lets you drag files from ZIPs directly into other programs. But if you simply want to compress some files (for example, to email them), don't bother installing extra software and instead use File Explorer. Select your files, right-click them, select 'Send to', then 'Compressed (zipped) folder'. Your ZIP file will then appear in the same folder as the originals.

### Make browsing files easier

There's no shortage of replacements for File Explorer, from Q-Dir (which provides up to four individual panes – [www.snipca.com/38123](http://www.snipca.com/38123)) to Files (similar to File Explorer but with larger buttons and tabs



Tick this box so you can select multiple items in File Explorer

– [www.snipca.com/38124](http://www.snipca.com/38124)). Before you rush to install them, it's worth first exploring the hidden features of File Explorer. They might just persuade you to stick with what you've got.

To see them, open File Explorer, click the View tab, then Options. In the General tab, you can change settings such as to open a new window every time you open a folder (select 'Open each folder in its own window' – useful when copying files between two folders). Or you can opt to ditch double-clicking in favour of opening files with a single click (select 'Single-click to open...').

You'll find yet more options in the View tab, including 'Show hidden files' (giving you a more accurate picture of what's in each folder) and, our favourite, 'Use check boxes to select items' (see screenshot above).

### Make your folders easier to spot

If you want to give your files and folders a complete makeover, Folder Painter ([www.snipca.com/38125](http://www.snipca.com/38125) – the download button is at the bottom of the page) is the tool to use. But if your aim is to simply make certain folders easier to recognise, use File Explorer's built-in tool. Right-click a folder, select Properties, then the Customise tab. From here, click 'Change icon', then select from the available icons.



# READER OFFER!



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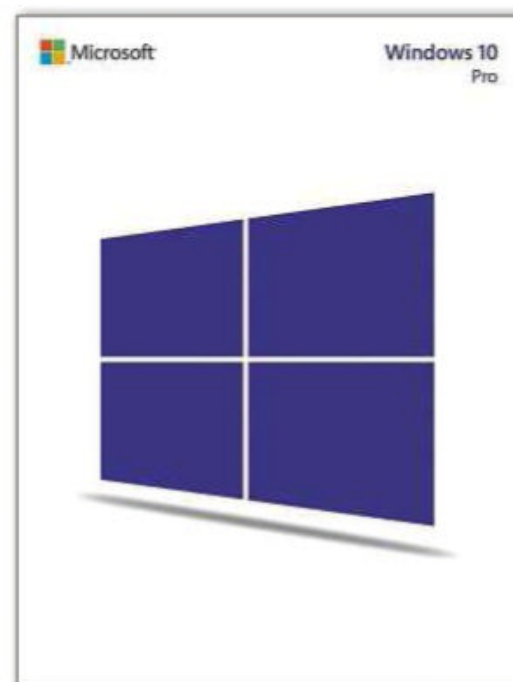
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### JUST SO YOU KNOW...

This offer can be used by one person only, and expires at midnight on **1 June, 2021**. It's a lifetime licence for one computer.



# TOOLS TO KEEP YOUR PC RUNNING SMOOTHLY

## Remove unwanted startup items

Nobody likes turning their PC on then having to wait an age for Windows to launch. IObit Advanced SystemCare ([www.snipca.com/38150](http://www.snipca.com/38150)) promises to speed up your start times, but it sneakily tries to get you to install other IObit tools. Try using Task Manager instead. Press Ctrl+Shift+Escape to launch it, then select the Start-up tab. You'll now see all programs that are set to load when Windows starts. In the 'Start-up impact' column, Task Manager helpfully indicates by how much each one affects your launch times. If you spot ones you don't need, right-click them and select Disable.

## Protect your PC from viruses

There was a time when the antivirus tool built into Windows simply wasn't up to the job, meaning to stay protected you had to install some form of third-party tool instead, such as Kaspersky Internet Security. However, Microsoft Defender (the antivirus tool built into Windows 10) has improved greatly in recent years and it's now on a par with paid-for antivirus tools. The latest results from testing website AV-Labs (covering February this year) show Defender blocked 100 per cent of viruses ([www.snipca.com/38156](http://www.snipca.com/38156)).

Of course, what Defender doesn't give you is the added extras that Kaspersky and other paid-for suites provide, including a VPN, the ability to turn your webcam off and parental controls. If you decide you want this added protection, grab yourself a two-year licence for three computers for the discounted price of £29.95 from the Computeractive Software Store ([www.snipca.com/38157](http://www.snipca.com/38157)).

## Update your drivers

All hardware inside or attached to your computer needs a driver – a small piece of software that tells your PC what the device is. Over time, manufacturers release updates to these drivers to fix

bugs and security flaws, as well as add new features. IObit Driver Booster ([www.snipca.com/38151](http://www.snipca.com/38151)) says it will scan your PC and update drivers for you, but why bother when Windows can do this instead? Make sure you're signed into Windows with an administrator account, then click Start, type **advanced system settings**, then press Enter. Select the Hardware tab, click Device Installation Settings, then make sure Yes is selected and click Save Changes.

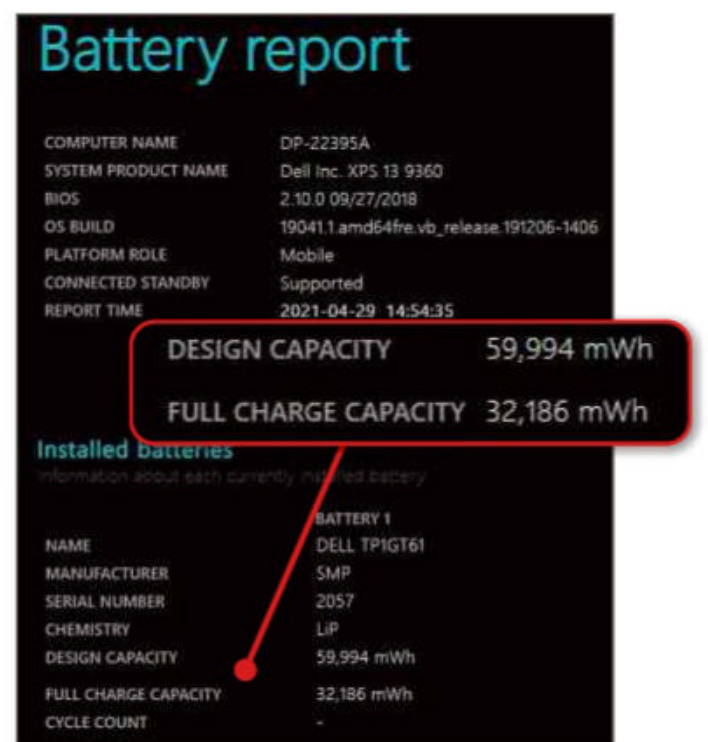
When Windows performs its regular scans for system updates, it will now also search for and download driver updates for your hardware.

## Check your hard drive's SMART status

Having your hard drive fail can be a gut-wrenching experience. Even if you've sensibly been keeping regular backups of your personal files, you'll still need to go through the process of buying a new drive, then reinstalling Windows.

It therefore pays to keep an eye on your hard drive's SMART status. Best thought of as an MOT for your drive, this will warn you if your drive is at risk of imminent failure. You can install a tool such as CrystalDiskInfo (<https://crystalmark.info/en/download>) to view the SMART status, but it's much quicker to open a Command Prompt window, type **wmic diskdrive get status, size, model** (you can copy this from our Pastebin account at [www.snipca.com/38140](http://www.snipca.com/38140)), then press Enter.

You'll now see all your hard drives along with a column at the end indicating their SMART status (see screenshot below). A status of 'OK' means all's good, but anything else (such as 'Warning') means the drive needs replacing. In fairness to CrystalDiskInfo, it's a great tool (and shows other details such as your hard drive's temperature and how long it's been whirring away), but you don't need to install it if you just want to check your drive's SMART status.



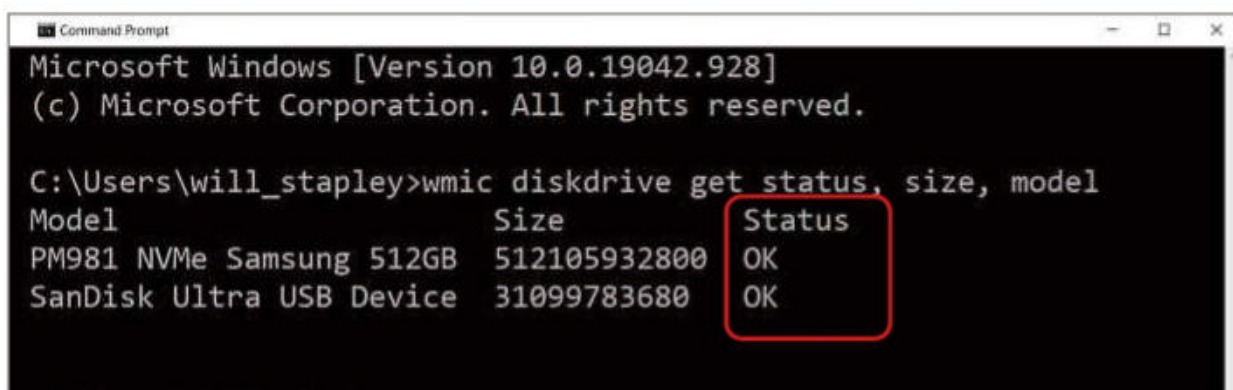
See how much your battery has deteriorated

## Monitor your laptop's battery

It's a sad fact, but your laptop's battery starts deteriorating from the moment you buy it. NirSoft's BatteryInfoView ([www.snipca.com/38162](http://www.snipca.com/38162)) tells you the state of your battery, but you can get the same information by running a report in Command Prompt. Open a Command Prompt window, then type **powercfg /batteryreport**. Next, copy the full path of the generated report and paste it into your browser. You'll now see details including your battery's make and model, along with its complete charging history. Pay close attention to the Design Capacity (what your battery was originally capable of) and Full Charge Capacity (what it's capable of now) – as you can see in the screenshot above our laptop's battery has lost nearly half of its original charge capacity, which explains why it now lasts only about two hours compared with four when it was new.

## Test your memory

Your computer uses memory (also known as RAM) to store data temporarily. If that memory is faulty, you can expect frequent crashes. MemTest86 ([www.memtest86.com](http://www.memtest86.com)) will gladly check your memory for free, but you need a spare USB stick on which to install it. A better alternative is to use the Windows Memory Diagnostic tool (search for it in the Start menu). Click the 'Restart now...' option, then let the tests run and keep an eye out for any warnings. Sadly there isn't much you can do to fix faulty memory, so if the tool delivers bad news you'll need to purchase new memory. Crucial's



Use Command Prompt to quickly check the SMART status of your hard drives



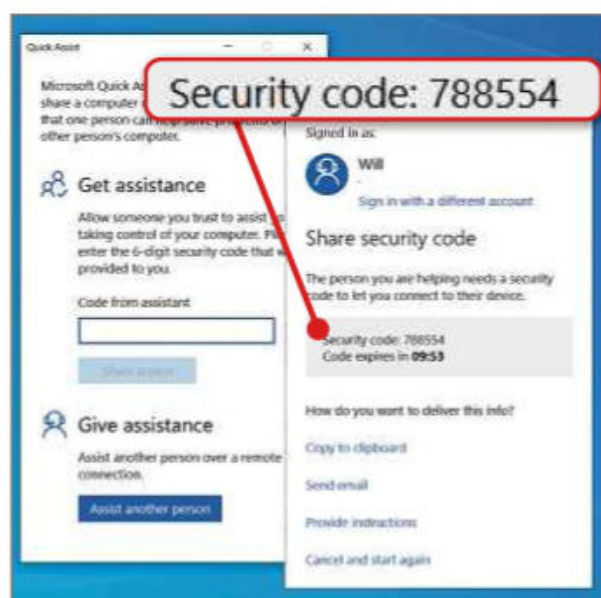
System Advisor tool helps identify what type of memory your PC needs – [www.snipca.com/38141](http://www.snipca.com/38141).

## Identify your PC's hardware

If you enjoy poring over every detail of the hardware inside your computer, HWINFO ([www.hwinfo.com](http://www.hwinfo.com)) is the tool for you. Version 7 introduced a paid-for level for business use, but for personal use it's still free. However, the sheer amount of data it provides can make it difficult to find what you're looking for. Although not as detailed, the Windows System Information tool (search for it in the Start menu) is easier to use and provides all the information you're likely to need, including the make and model of your processor, motherboard and **graphics card**. Select the System Summary option for basic details (for example, the make and model of your motherboard and processor), then dig into the details of the rest of your hardware via the Components section.

## Provide (and receive) help more easily

When you need to help someone with their PC from afar, avoid the hassle of getting them to install remote-access software such as TeamViewer ([www.teamviewer.com](http://www.teamviewer.com)). Instead, run Quick Assist from the Start menu and ask your friend to do the same. On your PC, click 'Assist another person', select your



**Quick Assist lets you remotely access another PC without having to install anything**

Microsoft account, then give the six-digit code (see screenshot above) to your friend and tell them to enter it in the 'Code from assistant' box (yes, you're taking the role of an unpaid assistant here).

They will then need to click 'Share screen' and choose whether to let you view only their desktop or take full control of their PC. Once connected, you can use the toolbar at the top to open a chat window, annotate the screen and pause or end the session.

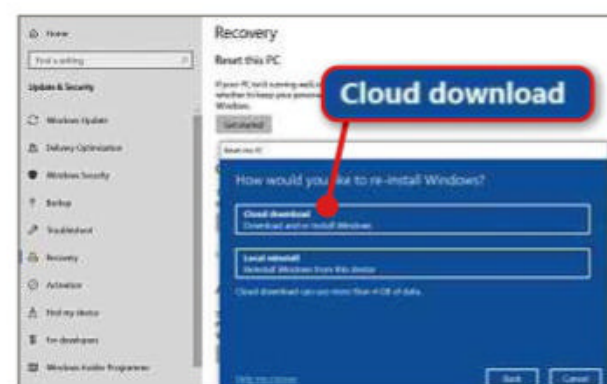
## Reinstall Windows from the cloud

One of the perils of installing lots of software is that Windows will eventually start to slow down. The only way to get your PC back up to speed may be to

reinstall Windows from scratch. Previously, we've recommended downloading a Windows 10 **ISO file** from [www.snipca.com/38149](http://www.snipca.com/38149) and then installing Rufus (<https://rufus.ie>) to copy it to a USB stick. However, thanks to the new 'Cloud download' feature (released in the May 2020 Feature Update), you can perform a clean install of Windows without having to download any third-party software.

Better still, because it downloads the latest version of Windows with all available updates, you won't have to wait for them to download and install once Windows restarts.

To use it, go to Settings, 'Update & Security', Recovery and click 'Get started' under 'Reset your PC'. Next, choose whether you want to keep your personal files, then on the next screen select 'Cloud download' (see screenshot below). This downloads the whole of Windows, so can take a couple of hours to complete.



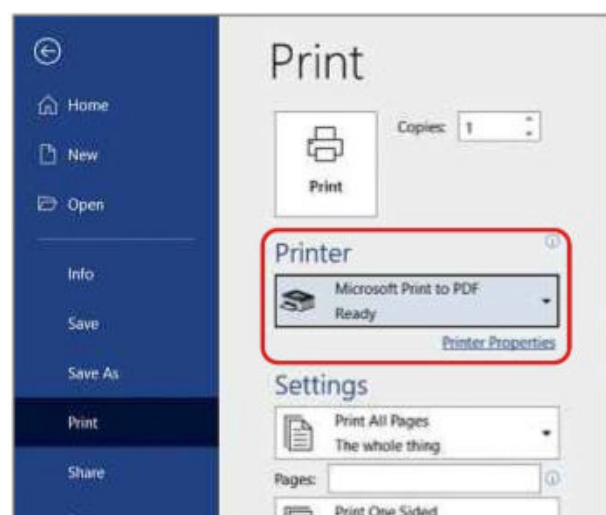
**When reinstalling Windows, select 'Cloud download' to get the very latest version**

# TOOLS TO IMPROVE YOUR OFFICE TASKS

## Convert documents to PDF

We love PDF24 ([www.snipca.com/38146](http://www.snipca.com/38146) – see our Workshop on page 40 to see how it lets you sign PDFs), but it's overkill if you just want to convert a document into a PDF because Windows includes a built-in PDF creator.

To use it, open the document you want



**Convert documents to PDF in Windows without having to install additional software**

to convert, then open the Print menu (how you do this depends on the program you're using, but Ctrl+P usually works). Next, click the Printer (or Destination) box and select 'Microsoft Print to PDF' (see screenshot left). Finally, click Print, then choose where to save your PDF.

## Read and annotate your PDFs

In September last year, Foxit added a feature to its free PDF reader ([www.snipca.com/38169](http://www.snipca.com/38169)) that lets you view and edit 3D content in PDFs. If, like us, you've never actually received a PDF with 3D content (and aren't likely to), stick with the PDF reader built into Windows via Microsoft Edge. Simply drag and drop your PDF into Edge to view it, then use Draw and Highlight options in the toolbar at the top to annotate. Edge can also read your PDFs back to you (click 'Read aloud'), and thanks to a recent update in version 88 (released in January)

it also lets you view two pages at a time (click 'Page view', then select 'Two page').

## Access your webmail outside of your browser

One advantage of webmail (such as Gmail and Microsoft's Outlook.com) is that you can access your inbox on any computer. However, when you're using your PC you may prefer to use a traditional email program. Thunderbird ([www.getthunderbird.com](http://www.getthunderbird.com)) is a popular option and includes lots of features such as advanced filters to sort your email, but if you're happy with a simpler program you could just use the Mail app that comes with Windows 10. Setting it up to access your webmail is simple. Click 'Accounts' from the main menu, 'Add account', then select your webmail provider. Once you've provided your login details, you'll be able to send and receive emails without having to open your browser.



## TOOLS TO MAKE WINDOWS WORK BETTER

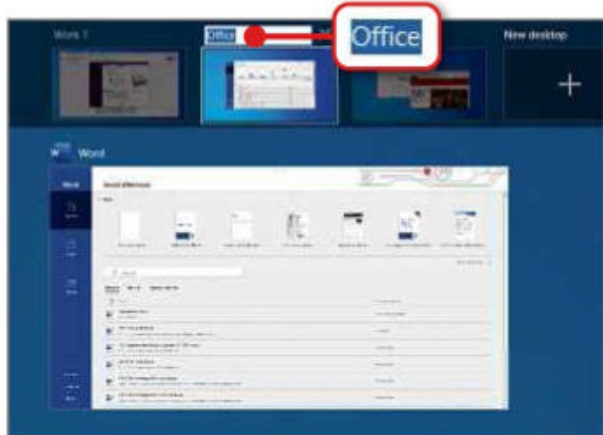
### Add extra desktops

Adding a second monitor to your PC is a great way to extend your desktop (letting you keep your office applications on one monitor and your web browsing on the other, for example), but it's also expensive and requires lots of physical desk space. Stardock Tiles (£8.99 from [www.stardock.com/products/tiles](http://www.stardock.com/products/tiles)) lets you create multiple virtual desktops on a single monitor, then switch between them using keyboard shortcuts. The latest version (released in March) adds a dark mode and an option to only display windows that are maximised (hiding those you've minimised).

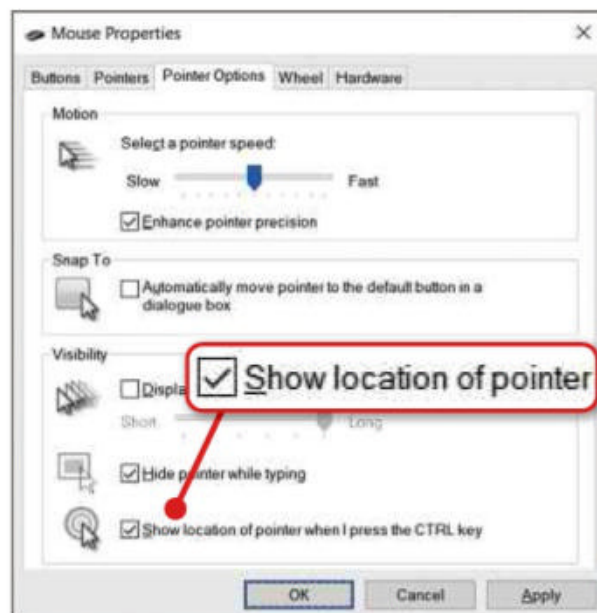
It doesn't have as many features as Tiles, but the virtual-desktop tool in Windows does a similar job for free. To create a virtual desktop, press the Windows key+Tab, then '+ New desktop' at the top. Following the May 2020 Feature Update, you can now rename your virtual desktops. Just click their name in the Windows+Tab screen (see screenshot below). You can create as many virtual desktops as you like, then switch between them by holding Windows+Ctrl and pressing the left and right arrow keys.

### Train your mouse

X-Button Mouse Control ([www.snipca.com/38158](http://www.snipca.com/38158)) lets you teach your mouse new tricks, including configuring what each button does, changing the pointer



Windows lets you create virtual desktops and give them names



Windows includes hidden settings to customise your mouse

speed, creating profiles and much more. However, you may find that the mouse settings built into Windows suffice. To see them, open Settings (press Windows+I), select Devices, Mouse, then click the 'Additional mouse options' link.

In the Buttons tab you can switch your mouse's primary button (useful if you're left-handed), adjust the double-click speed and turn on ClickLock, which lets you drag items without having to hold the mouse button. There are many more settings to try in the other tabs. Our favourite is the 'Show location...' option (find it in the Pointer Options tab – see screenshot above), which flashes a circle around your mouse pointer when you press the Ctrl key,

letting you locate it on even the most cluttered of desktops.


### Share websites between your PC and phone

When you're browsing a website on your computer but then need to head out, having to copy the web address into your phone's browser is a hassle. Save time by generating a QR code for the website instead, which you can then point your phone at to continue browsing.

SimpleCodeGenerator (a new NirSoft tool – [www.snipca.com/38122](http://www.snipca.com/38122)) lets you do this, as does Microsoft Edge (thanks to a recent update, this feature is now enabled by default). Go to the website you want to share, then click the address bar. A small QR code icon will appear there (see screenshot below left). Click this to reveal a QR code. Most phones have a QR code reader in their Camera app, so you can simply point it at the code to visit the website. If your phone doesn't have one, get Kaspersky's from [www.snipca.com/38171](http://www.snipca.com/38171) (free for Android and iOS).

### Store and share your clipboard history

We love the clipboard manager Ditto (<https://ditto-cp.sourceforge.io>), which lets you store unlimited clipboard items. However, although it comes with a tool that lets you share your clipboard across multiple computers, it's fiddly to set up and you need to install Ditto on each one.

If sharing your clipboard is your main aim, use Windows' Clipboard History tool. Go to Settings, System, Clipboard, then turn the 'Clipboard history' slider to On. Next, click 'Sign in' under 'Sync across devices' and log into your Microsoft account. You'll now be able to access your clipboard items on any computer that you're signed into with the same account. Better still, the 21H2 Feature Update (due in the autumn) is set to add new features, including a 'Paste as plain text' option and sharing with Android devices. 



Create a QR code for a website on your PC, then continue reading it on your phone

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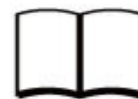
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# Don't buy the **WRONG** USB stick

These pocket-sized devices are so useful that it's vital you buy the right type for your needs. **Daniel Booth** explains the different sizes, shapes and standards, and recommends which sticks to buy right now

**T**here's an argument that USB sticks (or flash drives, thumb drives or memory sticks – they have more names than an Austrian aristocrat) are the best bargains in storage today. But buying the right one isn't easy. Sane people have gone mad trying to understand the different standards, while it's easy to overspend on a capacity that you'll never fill up. We'll make things easy for you, suggesting specific models depending on your needs.

Before you read on, a note about the prices we've quoted [here](#). Our links take you to Amazon, where prices are almost always much lower than the RRP. We've quoted the price you'll actually pay (which is the larger price in red on any Amazon page) not the 'Was' price that's crossed out. Also, prices are particularly volatile at the moment, so don't be surprised if they've changed a little since we went to press.

## PICK THE RIGHT CAPACITY

Balancing price with capacity is the most important decision. Not too long ago, 8GB and 16GB were the sensible choices because they gave you a decent amount of storage at an affordable price. But these days you won't pay much more for 32GB, as illustrated by the **SanDisk Ultra Luxe**, which is the cheapest stick we'd recommend you buy (£7.49 for 32GB; £10 for 64GB; £16 for 128GB; £28 for 256GB from [www.snipca.com/38186](http://www.snipca.com/38186),



At £7.49 for 32GB, SanDisk's Ultra Luxe is the cheapest stick we recommend you buy

pictured above).

It's robust and metal, yet costs the same as those plastic drives of old. SanDisk throws in password protection and file-recovery software.

Naturally, it's not as fast as some sticks we'll come on to mention, with sequential speeds for reading (opening files) and writing (saving files) at 151.5MB/s and 43.44MB/s respectively, while the random speeds (see below) are poor. But for moving files between home and work, backing up photos or just keeping installation files handy, it's just the job.

By the way, sequential tests involve single files that aren't fragmented, such as a large video. These are read and written in a logical sequence, and are faster than random tests which transfer

lots of individual files that are scattered across a device, such as those that make up a program.

As with all devices, you need to find your sweet spot – that point where you're paying for specific features you'll use, not overpaying for those you'll never need. A few years ago that spot may have been 8GB or 16GB, but as files have become bigger, transfer speeds faster and prices cheaper, we'd say it's now 32GB or 64GB. That should be enough for most people.

When it *won't* be enough is when you're transferring large files, such as videos or games, or if you're adding storage to a laptop. In this case, we'd recommend a 128GB stick, such as the **Integral Metal Fusion** (£24 from [www.snipca.com/38193](http://www.snipca.com/38193), pictured below – yes,



Use the 128GB Integral Metal Fusion stick to add storage to your laptop



it's smaller than the average stick), or even a 256GB stick which we're increasingly seeing priced under £50.

We're also seeing some 512GB sticks now, though at this capacity you'd probably be better off getting a USB SSD because it'll give you more performance for around the same price.

### USB-A or USB-C?

A stick's speed is determined by three things: which USB connector it has, which standard it uses, and the quality of the NAND flash memory chip inside. Let's start with the connector – the bit you stick into the computer port. Almost every computer made in the past 20 years has a USB-A port, which is the rectangular shape you're most familiar with, so it follows that most sticks have the USB-A connector to match.

But that's beginning to change as more computers leave factories with USB-C ports. The most obvious difference with USB-C is the shape of the connector: it's an elongated oval. It's also symmetrical, unlike USB-A, which means you can plug it in upside down (making it less fiddly). That in itself may be reason enough to buy a USB-C stick, though check first that all the computers you want to plug it into (those belonging to friends and family for example) have USB-C ports.

### GET THE RIGHT STANDARD

USB-C can also charge devices and transfer files much faster than USB-A, but that's not down to its shape. Rather, it's because it has been designed to take full advantage of more powerful modern USB standards, in particular anything beginning with 'USB 3.2', which can charge devices 20 times faster than previous standards and has theoretical file-transfer speeds of between 5Gbps and 20Gbps (though real-life speeds will

be much slower).

So, if you're looking for a USB-C stick, it makes sense to choose one that's compatible with USB 3.2. A great choice is the **Kingston DataTraveler 80** (£8 for 32GB; £13 for 64GB; £21 for 128GB; £39 for 256GB from [www.snipca.com/38189](http://www.snipca.com/38189), pictured left), which supports USB 3.2 Gen 1, and is only a fraction more expensive than typical USB-A sticks.



Kingston's DataTraveler 80 is a fast and affordable USB-C stick

In our sequential speed tests, it read files at 206MB/s and wrote speeds of 89MB/s. It was also extremely fast in our random tests.

But while USB-C sticks are built for more modern standards, it doesn't mean they're automatically faster than USB-A sticks. Kingston's own USB-A **DataTraveler Kyson** (£6 for 32GB; £12 for 64GB; £17 for 128GB; £28 for 256GB from [www.snipca.com/38187](http://www.snipca.com/38187)) is faster than its

USB-C stablemate, with sequential read speeds of 221MB/s and write speeds of 94.3MB/s (though its random speeds are more erratic). You'll struggle to find a better balance between speed and price.

That's a lot of USB standards we've just raced through, and yet they're a bit of red herring. For the moment, if you choose USB-C it should be because you prefer the shape, not because they're supposed to be faster (the speed difference isn't always that great).

That will change when sticks with the USB 3.2 Gen 2 standard start appearing.

## The Usain Bolt of USB sticks

Named as though it really wants to be an Arnold Schwarzenegger movie, the **Patriot Rage Elite** (£30 for 128GB; £48 for 256GB; £82 for £512GB from [www.snipca.com/38195](http://www.snipca.com/38195), pictured) is the fastest stick we've tested. It hit sequential read/write speeds of 358MB/s and 235MB/s, almost as fast as an SSD. It will save you precious minutes if you're moving 4K video or game files between computers.



Only USB-C sticks will be able to hit its maximum transfer speed of 10Gbps, double its predecessor. We've not seen any yet though.

Your other option is to hedge your bets and buy a dual-interface stick that has both a USB-A and USB-C connector. We recommend the **Samsung Duo Plus** (£17.64 for 32GB; £27 for 64GB; £50 for 128GB; £52 for 256GB from [www.snipca.com/38190](http://www.snipca.com/38190), pictured below left).

Pull off the protective cap and there's a USB-C connector, ready for your laptop, tablet or phone. Pull off the base, however, and this contains a neat USB-C-to-USB-A adapter, ready for an older laptop or desktop PC. It's ideal if you need to regularly move large files between a new laptop with a USB-C port and a desktop PC without one. The USB-C connector is fast, with a sequential read time of 280MB/s, and 82MB/s for writing. Speeds fall when using USB-A, but not dramatically.

### CLAIMED SPEEDS v REAL

We've not yet mentioned the speed of the actual flash memory inside the stick. SanDisk and Samsung sticks, say, with the same connector and standards will have different flash chips inside, determining the exact file-transfer speed. Each stick will have a 'claimed' speed, but they're just a guide – you need to read impartial tests like ours for credible results. Also remember that while sticks are getting faster all the time, the limitations of the controller mean they can't beat USB 3.1 external SSDs, which are now hitting speeds of 950MB/s. **ca**



Samsung's Duo Plus has a USB-C connector on one end **1** and USB-A on the other **2**

## Subscribe and get a 32GB stick!

We always try to offer subscription gifts that you'll find useful in your everyday computing. Top of the list is a 32GB stick, which just happens to be our most popular subscription gift. Turn to page 58 to learn how to get it.



# Repair **ALL** your corrupted files



Don't despair when important documents, photos and videos won't open or display correctly. **Robert Irvine** explains how to fix your damaged files without paying for expensive repairs

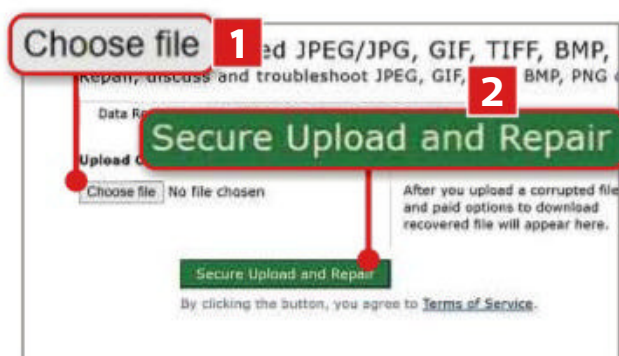
**D**igital files are just as susceptible to damage as physical ones. Their data can become corrupted when a program suffers a problem while saving the file, when your hard drive develops bad sectors (clusters of storage space) and through malware infection, but this usually isn't obvious until you try to investigate further.

When you see an error message that an important file can't be opened or find that a precious photo is now distorted, you should first check for a backup copy, perhaps in your online storage service or on your camera's **SD card**. But if you don't have another version, you can often fix the corrupted file without paying for professional repairs. Here, we explain the best methods for six different file types.

## Photos



Changing the name or format of an image file you can't open or is distorted can sometimes fix the corruption. Right-click the photo, choose Rename and enter a new name, then try opening it using a different image editor – a good choice is the



Upload your pic to OfficeRecovery.com then click 'Secure Upload and Repair'

versatile free program IrfanView ([www.irfanview.com](http://www.irfanview.com)). If it still looks corrupted, go to File, 'Save as' and save the picture as a different file type, such as **PNG**, to see if that helps. You can change the format of files that can't be opened by uploading them to the free online conversion tool Online Convert ([www.online-convert.com](http://www.online-convert.com)).

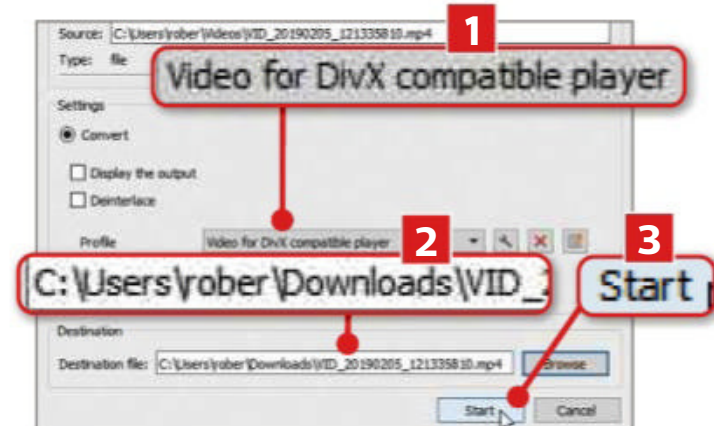
To fix serious photo corruption, you'll need a dedicated repair tool such as 'Stellar Repair for Photo' (£23 from [www.snipca.com/38046](http://www.snipca.com/38046)). You can generally try these programs for free, but unless you pay they'll show you tiny, watermarked previews of your repaired image, making them expensive for a single corrupted image.

A cheaper option is to upload your damaged picture to OfficeRecovery.com ([www.snipca.com/38047](http://www.snipca.com/38047)), which supports **JPEG**, **PNG**, **BMP**, **TIFF** and other common image formats. Click 'Choose file' (1 in our screenshot below left) to upload an image, followed by the green 'Secure Upload and Repair' button (2). Next, choose 'Get the repaired file' and download a free demo of the result. If the repair was successful, pay the one-off fee of \$9.99 (£7.18) to get the full picture.

## Videos



As with corrupted photos, most video-repair tools charge you to save fixed videos at their full quality (and length) and without watermarks. The cheapest we found was Fix.video (<https://fix.video>), which quickly repairs videos online, in **MP4**, **MOV**, **M4A** or **3GP** format, and lets you



VLC can repair corrupted videos for free by converting them to a playable file format

preview the result in your browser. You can then pay to download the full version, with the price depending on the file size: we were quoted \$9 (£6.47) for a 30-second clip.

However, it's first worth trying a completely free method using a tool you may have already installed on your PC: VLC Media Player ([www.videolan.org](http://www.videolan.org)). One of VLC's many useful features is converting corrupted videos to a working file format. Open the Media menu, select Convert/Save then click the Add button. Choose the damaged video file from your PC, then click the Convert/Save button and choose a **codec** from the dropdown Profile menu (1 in our screenshot above). Select a destination folder to save the file to (2), then click Start (3) to convert and hopefully repair the video.

## MP3s



Whether it's an unplayable MP3 you've downloaded or a recording you've made yourself, you can repair a corrupted audio file without having to pay. Download and extract the



free program MP3val ([www.snipca.com/38049](http://www.snipca.com/38049)), double-click the 'mp3val-frontend' file to open it, then click the File menu and choose 'Add file' (or 'Add folder' to fix several MP3s). Select the corrupted audio file, then right-click it and choose 'Scan selected files for errors'. Next, click 'Repair selected files' and MP3val will make your MP3 playable again.

Another option is the free online tool mp3Repair ([www.snipca.com/38050](http://www.snipca.com/38050)). Ignore any misleading adverts you may see on the home page and instead drag your file into the darkened box (where it says 'Choose here an MP3 file'), or upload it from an online source by clicking the orange link. Next, select 'Repair audio length', then play and download the result. You can also trim the beginning of the MP3, which is usually where corruption occurs.

## Documents



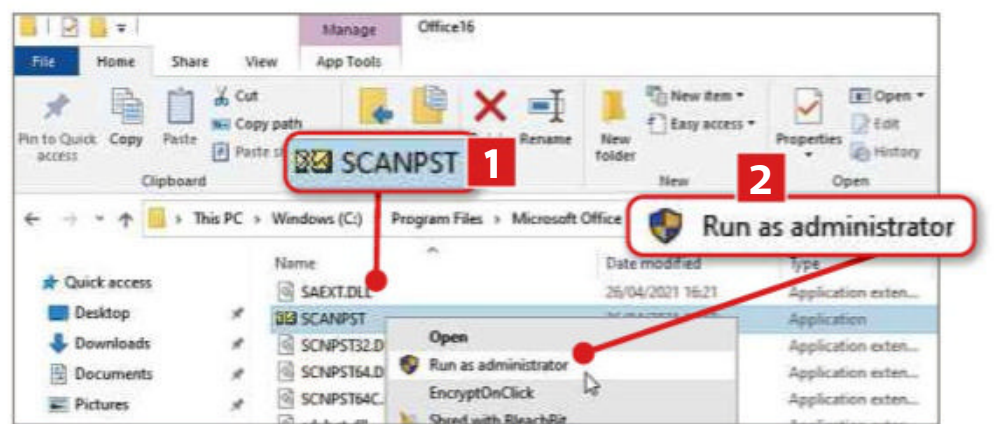
Discovering that an important document won't open or shows a load of gobbledegook can cause panic, but there are several potential fixes for corrupted office files.

In Microsoft Word, click the File menu, choose Open, then click Browse to find the damaged document. Click the down arrow next to the Open button, then choose 'Open and Repair'. Word should now fix any problems and display the file correctly.

If not, you can insert the content of the corrupted file into a new document. Click File, New, Create and select 'Blank document', then click the Insert tab. Choose 'Text from File' in the Object menu, select the damaged document then click Insert. LibreOffice Writer has a similar feature: just click the Insert menu and choose 'Text from File'.

If that doesn't work, try saving the file as 'Rich Text Format (\*.rtf)' rather than an office format, and uploading it to Google Docs to see if that service shows

## Run SCANPST in Windows to fix corrupted PST files



the content. It's also worth checking if Windows 10 has stored an older, uncorrupted version of the document through its File History feature or **System Restore**. Find out by right-clicking the file and choosing 'Restore previous versions'.

## Zipped files



It's very frustrating when a **ZIP** file becomes corrupted and you can't extract its contents. However, you can fix the problem using the free program DiskInternals ZIP Repair ([www.snipca.com/38052](http://www.snipca.com/38052)). Simply run this tool and select the damaged ZIP file to repair its structure. The contents of the archive will be moved to a new folder, where you can open them as usual.

Another commonly corrupted type of zipped file is PST (personal storage table), which is used by Microsoft Outlook to store copies of your emails. If you're unable to access one or more of your folders in Outlook, you can run Microsoft's Inbox Repair tool to fix the problem.

First though, you need to know whether you're running the **32bit** or **64bit** version of Office. Do this in the 'About' section of Word, Excel or PowerPoint (follow Microsoft's instructions at [www.snipca.com/38077](http://www.snipca.com/38077)).

Next, open File Explorer and navigate to **C:\Program Files (x86)\Microsoft Office\root\Office16** (for 32bit Office) or **C:\Program Files\Microsoft Office\root\Office16** (for 64bit Office). Note that 'Office16' refers to Office 2016 and 2019.

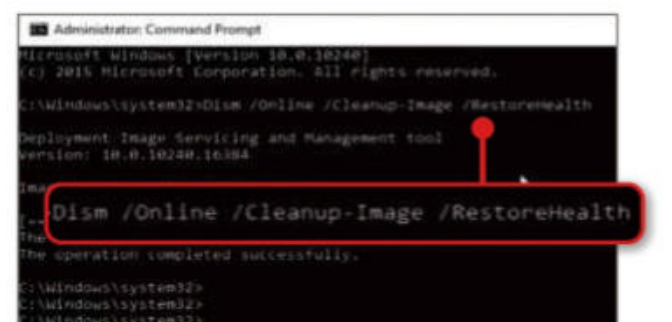
If you have a different version, check on Microsoft's site ([www.snipca.com/38058](http://www.snipca.com/38058)) what you should look for. 'Office 2015', for example, refers to Office 2013, while 'Office14' is Office 2010. You now need to look for SCANPST (1 in our screenshot above), then right-click it and choose 'Run as administrator' (2). Now browse to the damaged PST file, click Start to scan it, select 'Make backup of scanned file before repairing' then click Repair.

## System files



Corrupted system files in Windows can cause all kinds of PC problems, including error messages, crashes and even the ominous **Blue Screen of Death**. Thankfully, they're usually easy to fix using a built-in Windows tool called System File Checker (SFC).

To run SFC, type **cmd** in the Windows search box and run Command Prompt as an administrator. Type **sfc /scannow**, press Enter and System File Checker will perform a full scan of your system. When it detects that a file has been corrupted or modified, SFC automatically replaces that file with the correct version.



If SFC can't replace your corrupted files, try DISM instead

If SFC tells you that it can't repair certain files because it can't find a replacement, try running another Windows tool called DISM (Deployment Image Servicing and Management). Type **Dism /Online /Cleanup-Image /RestoreHealth** into the Command Prompt window (see screenshot above), press Enter and DISM will download the missing files. Run SFC again to complete the repair process. **ca**

## Rescue files from a corrupted USB stick

When you plug a USB stick into your PC to transfer files, the last thing you want is an error message saying 'Access is denied' or 'The file or directory is corrupted and unreadable'. Don't panic, though, because it's usually possible to repair the corruption without reformatting.

Open 'This PC' in File Explorer, then right-click your USB stick and choose Properties. Select the Tools tab, then

click the Check button to scan your USB stick for errors. Click 'Repair drive' when prompted to fix these problems and gain access to your files.

If you can't see the files on your drive, you may need to use a recovery tool to find them (they're not deleted, just hidden). Install and run the free version of Recuva ([www.snipca.com/38059](http://www.snipca.com/38059)), select your USB stick and scan it to recover your files.



# Problems Solved

Our experts solve all your tech problems

## PROBLEM OF THE FORTNIGHT

### Do I need to worry about my printer's Maintenance Box?

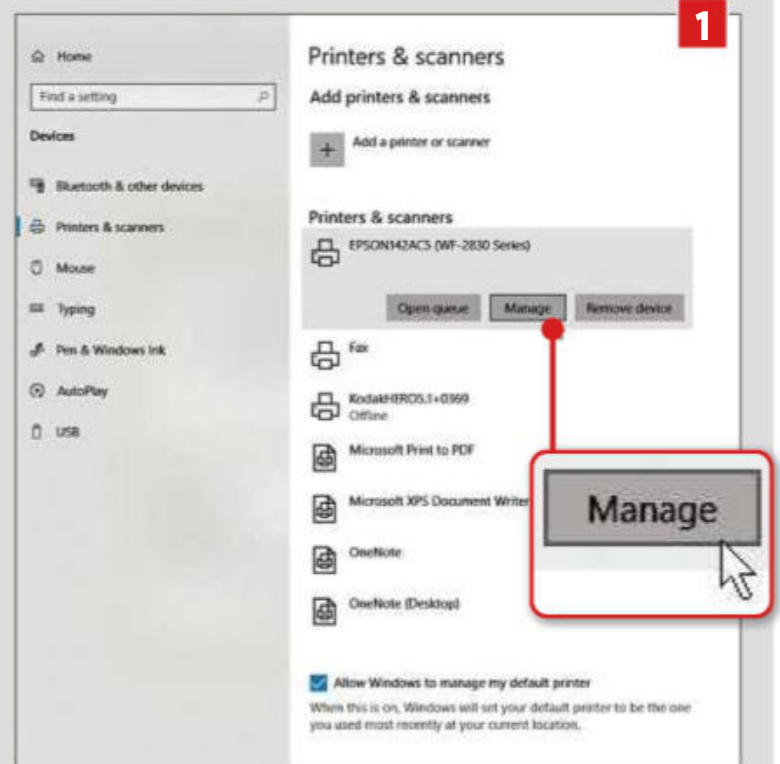
**Q** I rely heavily on your recommendations when it comes to buying tech and for this I'm ever grateful. Back in November 2020 I bought an Epson Premium XP-6100. I was very happy with it, until I got a warning message saying that the Maintenance Box was about 25 per cent used. I've had various home printers over three decades and have never come across one of these. I found online that the printer is unusable without it. I've searched your magazine for help but have only seen a Maintenance Box mentioned in passing, in Issue 589's Problems Solved pages. So, could you tell me what a Maintenance Box is? How can I check my usage? How often will it need replacing? Are there alternatives to buying a new one? Maybe in your recommendation you could mention ongoing costs like this.

Cheryl Burton

**A** The term Maintenance Box is Epson's own branding for what is simply a collection tank for waste ink. When the printer cleans itself, or you start a self-cleaning procedure, excess ink is produced that



To start the process of checking the state of your Maintenance Box (above), select Manage (right)



has to go somewhere – so it's channelled into the Maintenance Box. The same is also true if you engage in borderless printing, where a photo goes right to the edge of the paper: a little ink will always end up squirting over the sides.

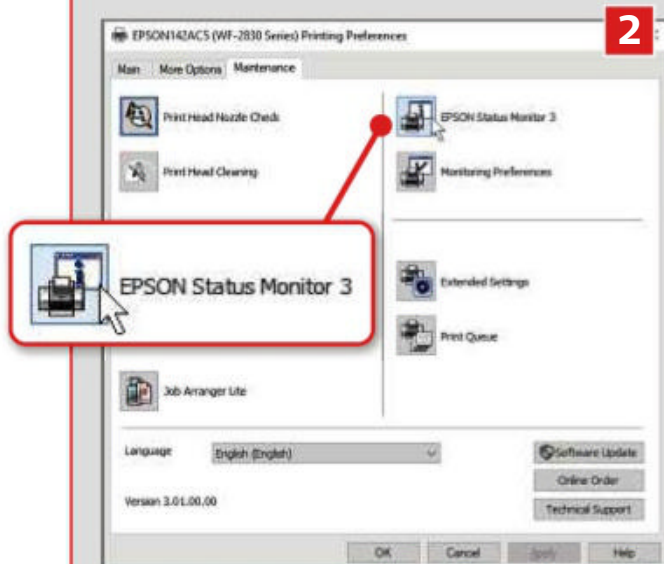
Epson printers are not unusual in having these waste-ink traps, though such parts aren't always replaceable. That said, they're typically small foam pads that often with just a little bit of effort can be accessed, washed and then left to dry before being put back in place.

But that's not the case with your Epson printer. The Maintenance Box is a sealed unit that can't really be accessed without breaking it. Fortunately, replacements are pretty affordable, at about £18 ([www.snipca.com/38004](http://www.snipca.com/38004)), and should last for tens of thousands of pages.

To check usage, first click Start followed by the Settings cog, and then Devices followed by 'Printers & scanners'. Now click to select your printer and then click the Manage button (see screenshot **1**). Next, click the 'Printing preferences' link and then click to select the Maintenance tab. Then, click the Epson Status Monitor 3 icon **2**, followed by the Details button. There, in the Maintenance Box Service Life area at the bottom, you'll

see a little bar chart representing the current capacity of the one in your printer **3**.

We'd say that 25 per cent full after just a few months' use feels a little on the high side, but it's not completely unreasonable – especially if you do a lot of printing. Equally, printing infrequently could lead to your printer executing a self-cleaning cycle each time you do print, which is another way for a lot of ink to end up in the Maintenance Box.



Under the Maintenance tab, select Epson Status Monitor 3



In the Maintenance Box Service Life area you can see the box's capacity



## Why don't I get PDF previews in Adobe Reader?

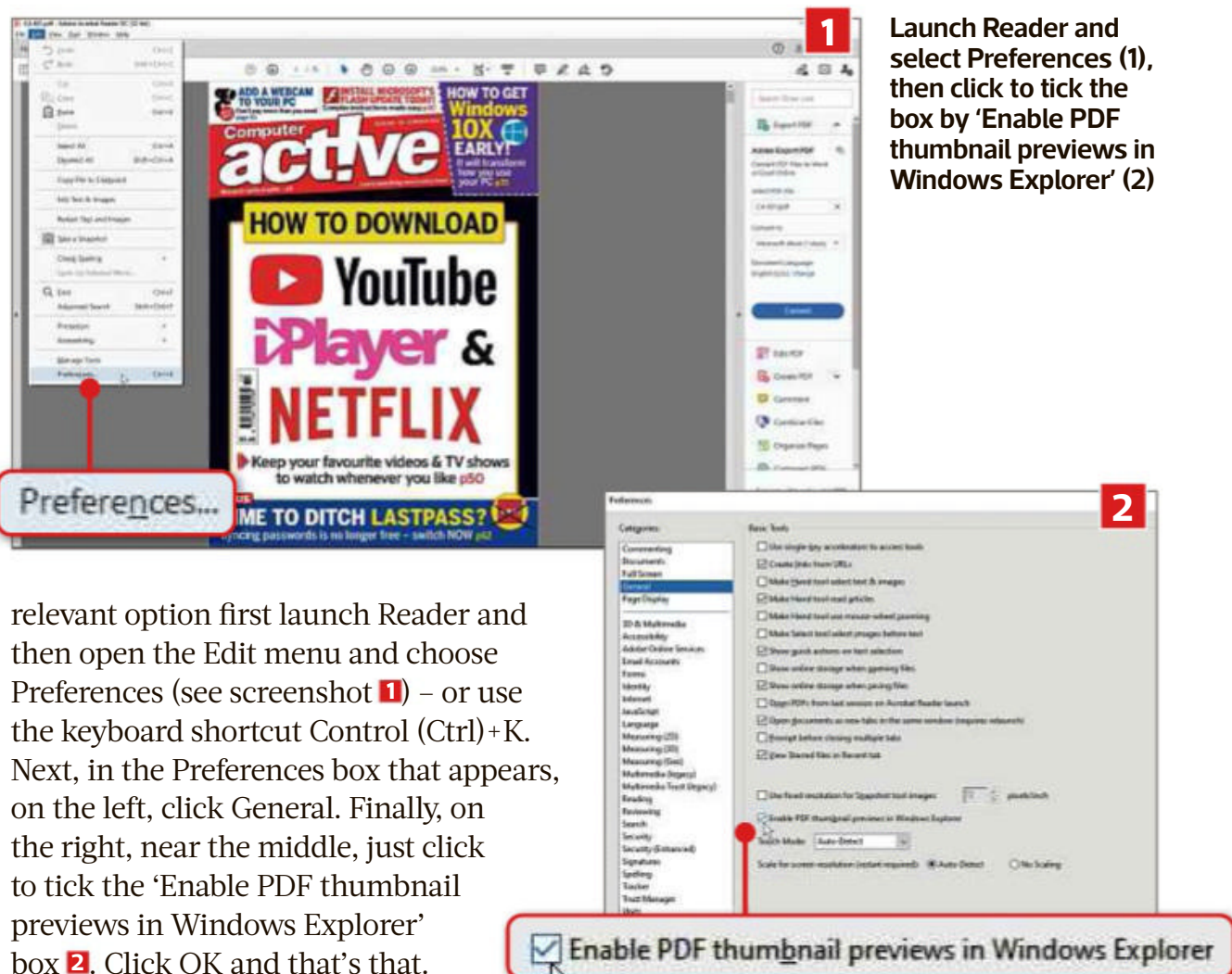
**Q** In Issue 604's Problems Solved pages you answered Philippe Martin's question about whether it was possible to get PDF previous in File Explorer without Adobe Reader installed. You told him that it wasn't, and that's fair enough. However, I have what is in effect the exact opposite problem – in that I do have Reader installed but don't get any previews. I get previews for other files, including photos, but not for PDFs. Do you know why this might be? And is there a fix?

Douglas North

**A** We do know why and yes, there is a fix. For the PDF previews to appear in File Explorer there needs to be a particular option box ticked in Reader's settings. This is usually ticked by default, but it could've been disabled by yourself accidentally, or by some other PDF-viewer app that you might previously have experimented with.

Still, that's all there is to it so to find the

relevant option first launch Reader and then open the Edit menu and choose Preferences (see screenshot 1) – or use the keyboard shortcut Control (Ctrl)+K. Next, in the Preferences box that appears, on the left, click General. Finally, on the right, near the middle, just click to tick the 'Enable PDF thumbnail previews in Windows Explorer' box 2. Click OK and that's that.



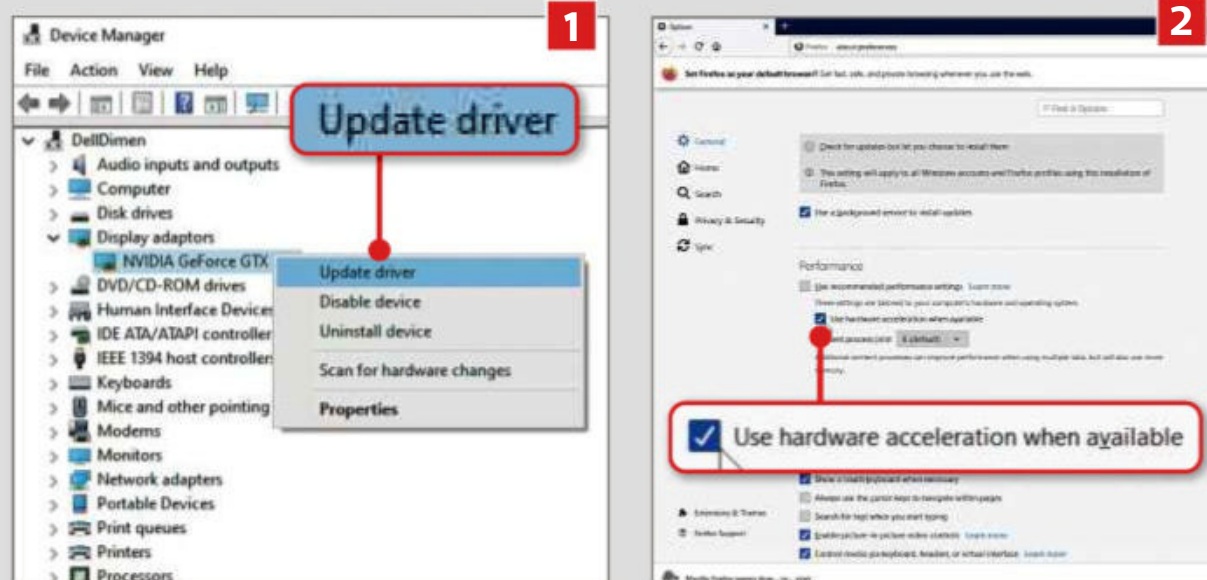
## Why are my videos green?

**Q** I've used AOL for many years. However, recently, trying to play videos on the main AOL home screen results in a block of green. I can hear the dialogue but cannot see the video. I've had a similar problems using Skype. YouTube videos work fine. I'd be very grateful for any advice you can give to solve this problem.

Richard Daniel

**A** This problem is usually caused by out-of-date graphics drivers. To ensure you've got the latest, first press Windows key+R then type `devmgmt.msc` and press Enter. Next, in Device Manager, click to expand the 'Display adaptors' category, then right-click your graphics card and then click 'Update driver' (see screenshot 1), followed by 'Search automatically for drivers' – then follow the prompts.

If this doesn't help, disabling a particular feature in your web browser



You can update the graphics driver (1), or try switching off hardware acceleration (2)

should help you play videos, albeit possibly at a cost to performance (playback might sometimes be less smooth). To do this in Chrome, first click the menu button (three dots, top right). Now scroll down, click Advanced, scroll down some more and then, under System, click to flip the 'Use hardware acceleration when available' to its Off

position. In Edge, open the menu (same way), then click System before flipping the same switch. In Firefox, click the menu (three horizontal lines), then scroll down to the Performance section, untick the 'Use recommended performance settings' box, then also untick the 'Use hardware acceleration when available' box 2.



## Why does my iPhone clock go blue?

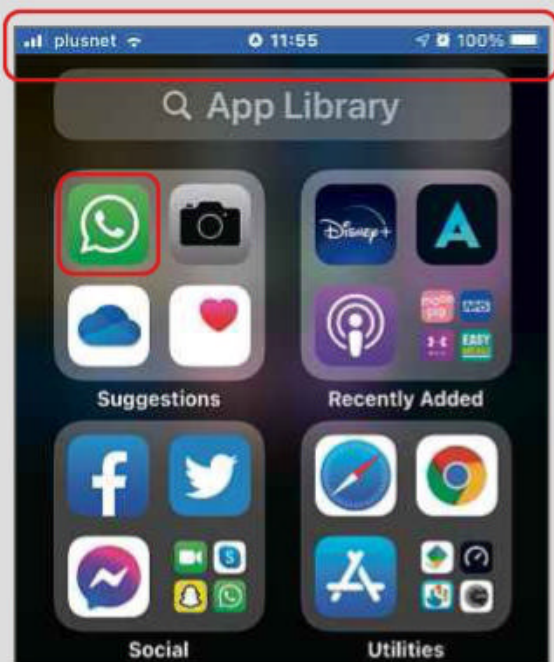
**Q** I've got an iPhone 8, which I know is getting on a bit but I keep it fully up to date. Recently, I've noticed that the clock area at the top sometimes turns blue. It seems to happen randomly and, just as randomly, the colour will go back to normal (so white text on a black background). My iPhone seems to otherwise be in working order.

Do you know what might be causing this?

Max Gray

**A** Yes, this is intended to serve as a visual notification (and reminder) that another app is currently using your iPhone's location information. So, for example, if you've recently shared your location in a chat tool like WhatsApp, then the clock area will turn blue (see screenshot below) to let you know that your location is still being broadcast.

Alternatively, the blue bar can also signify that your iPhone's personal hotspot feature is in use, meaning you're sharing its internet connection with another nearby device. On the iPhone 8 and earlier, that's additionally notified with a symbol of interlocking chain links.



Your clock area may turn blue if you're sharing your location via an app like WhatsApp

## How do I stop websites from knowing my personal details?

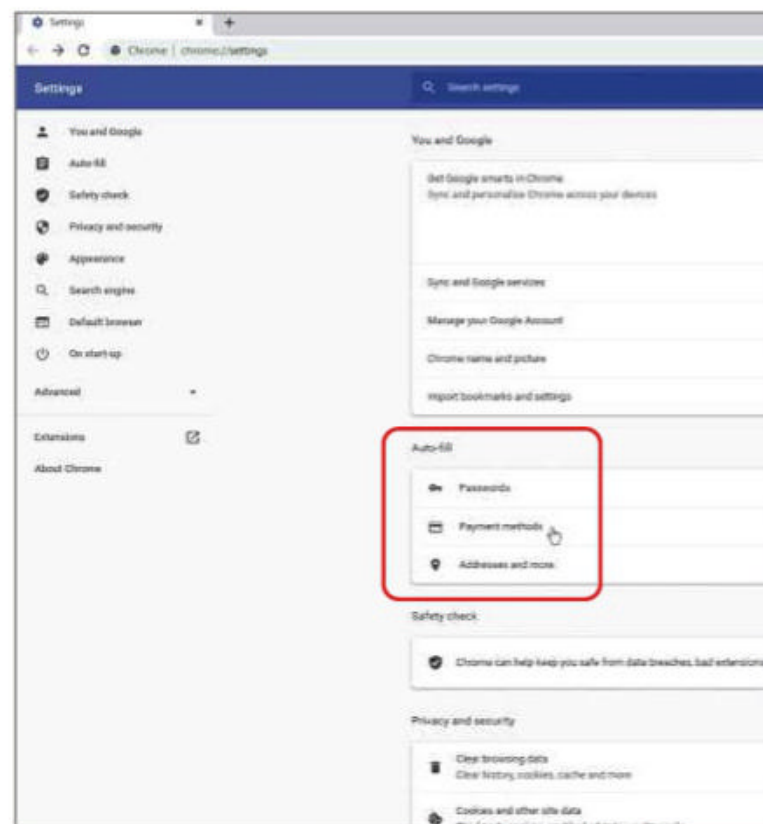
**Q** Sometimes when I sign up for something or buy something online I find details like my name, phone number, address, credit card number and other details are already known by the websites, as they already have the information in the boxes on their forms. Is there a way of getting my details permanently removed from the internet?

Mike Humphreys

**A** While some websites will, usually with your permission, store a few personal details, what you're describing here is actually more likely to be the work of your web browser's autofill function. This records information you've entered online and saves it within the browser. The next time you encounter a form with fields that appear to match, then those boxes may be automatically filled in, or you'll be offered to agree for them to be filled in.

This information is actually stored locally by your web browser, on your PC, so it's not in the possession of the websites you visit until such time as you submit an autofilled form. We should point out that if you sync, say, your Chrome browser settings to multiple computers via Google, then the information will exist somewhere on Google's servers – but it's still effectively private, within the confines of your Google account.

As such, there's nothing to 'worry' about here: this behaviour is normal, frequently quite helpful and is not itself an indication that third-party websites are storing your personal information.



Look for the Autofill section in Chrome then choose which personal information you don't want saved

However, if you don't like it, it's easily disabled. In either Chrome or Edge, for example, first click the menu button (three dots, top right) and then choose Settings. Then, in Chrome, under 'Auto-fill', click a heading and then use the switches to disable what you don't want saved. In Edge, click Profiles followed by 'Personal info' and then flip the 'Save and fill personal info' switch to its Off position.

If it's Firefox you're using then first open the menu by clicking the three horizontal lines, at the top right, and then, on the left, click 'Privacy & Security'. Finally, on the right, under 'Logins and Passwords', use the tick boxes to indicate your preferences. If you'd like to totally disable this behaviour in Firefox, just untick the 'Ask to save logins and passwords for web sites' box (see screenshot above).

**Q: Can I watch Freesat online?**

**A: Issue 583, page 68 – find it on our 2020 Back Issue CD**

Buy it from  
[www.snipca.com/38164](http://www.snipca.com/38164)





## How do I screenshot a tall website?

**Q** I'm putting together a booklet and want to include an image of a website. However, the particular website is taller than a single screen. What I really want to do is capture a screenshot of the whole page, but I only seem to be able to get one screen at a time. I could probably paste these together in some paint program, but I just want the simple life – not least because I actually need to do this for a few websites. I use Chrome and Windows 10 Pro, incidentally.

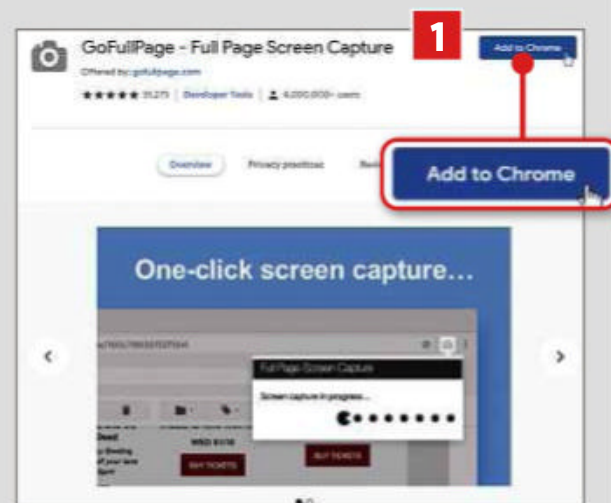
Victoria Moss

**A** There's no way to do this in Windows 10, but there are extensions for Chrome designed to do just this job. A favourite is GoFullPage, which is a free download from [www.snipca.com/38005](http://www.snipca.com/38005). Just click the 'Add to Chrome' button (see screenshot 1), and then confirm by clicking 'Add extension'.

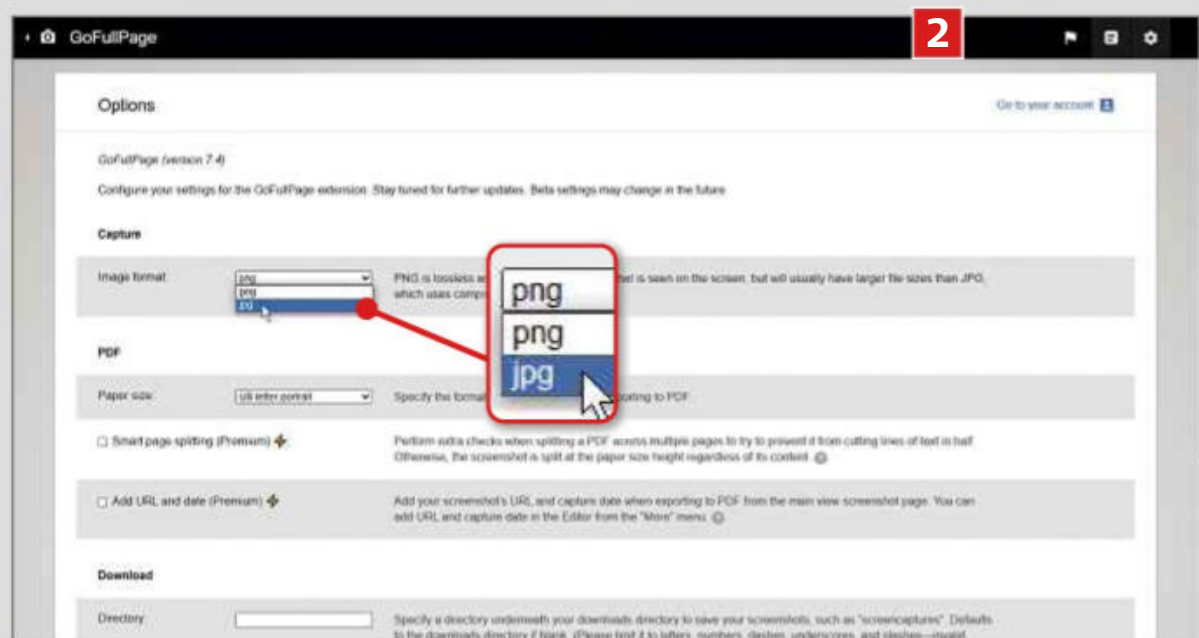
Whenever you wish to capture a 'tall' screenshot, all you need is to visit the website in question and then click the GoFullPage camera icon at the top right of the Chrome browser window. Then sit back for a moment and enjoy the

Pac-Man-style animation as the extension 'gobbles' up the length of the website.

To save the screenshot, click the 'Download image' icon (a down-pointing arrow). The only minor point to note is that the default image format is PNG (with a .png file extension). This is a 'lossless' format, which means the screenshot will exactly match how the website looks. If you'd instead prefer to use JPEG (with a .jpg extension), then first click GoFullPage's Options icon (a cog) and then open the 'Image format' dropdown menu and choose 'jpg' 2.



Add GoFullPage to Chrome (1), and then select the image format in Options (2)



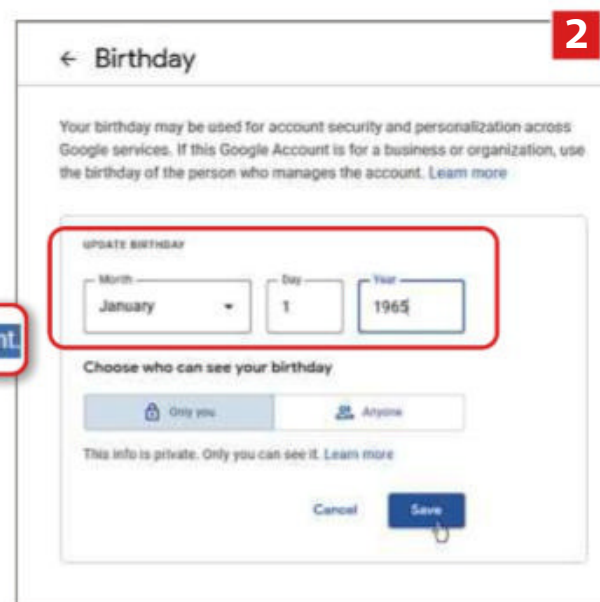
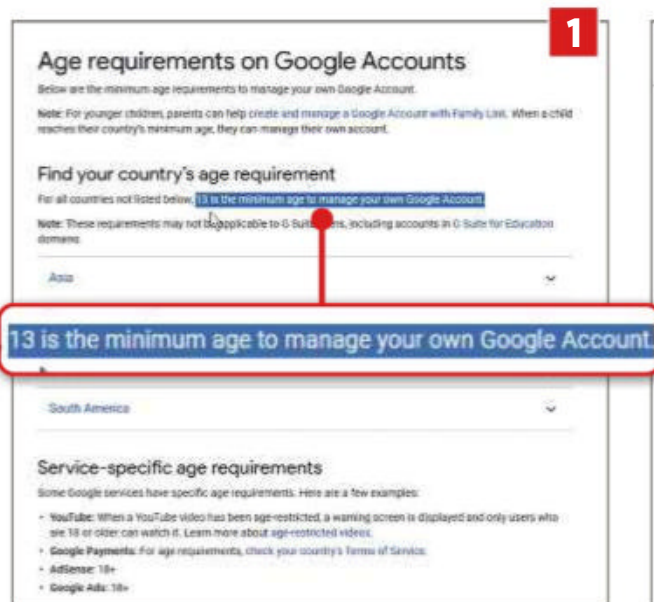
## Do I have to give Google my age?

**Q** Is it mandatory to provide Google with my date of birth? Gmail keeps asking every time I sign in. What would happen if I did not provide my date of birth, or provided a fictitious one instead?

Charles Lowe

**A** It's not mandatory, in that Google cannot force you to reveal your age. Equally, as a private company, Google is under no obligation to continue providing you with services. If you refuse to adhere to its terms and conditions, the company could terminate access to particular services or even your whole account.

With that clear, a requirement of Gmail in the UK is that you must be at least 13 to have a 'self-managed' (ie, an adult) account. The age varies around the world, as



You must be 13 to have a Google account (1). Add your birth date on your account page (2)

detailed at [www.snipca.com/38006](http://www.snipca.com/38006) (see screenshot 1). If, in the words of Google, it has "learned that you may not be old enough to manage your own account", then the company will ask you to verify your age. You can do this with some form of official ID, or by adding a credit card to your account. As such, while it might once have worked, supplying a false date

of birth is likely to soon be found out. You can add your date of birth via your Google Account page, at <https://myaccount.google.com/birthday> 2.

If you don't verify your age within 14 days of Google's request then your account will first be disabled and, if no verification is supplied within 30 days, subsequently deleted.

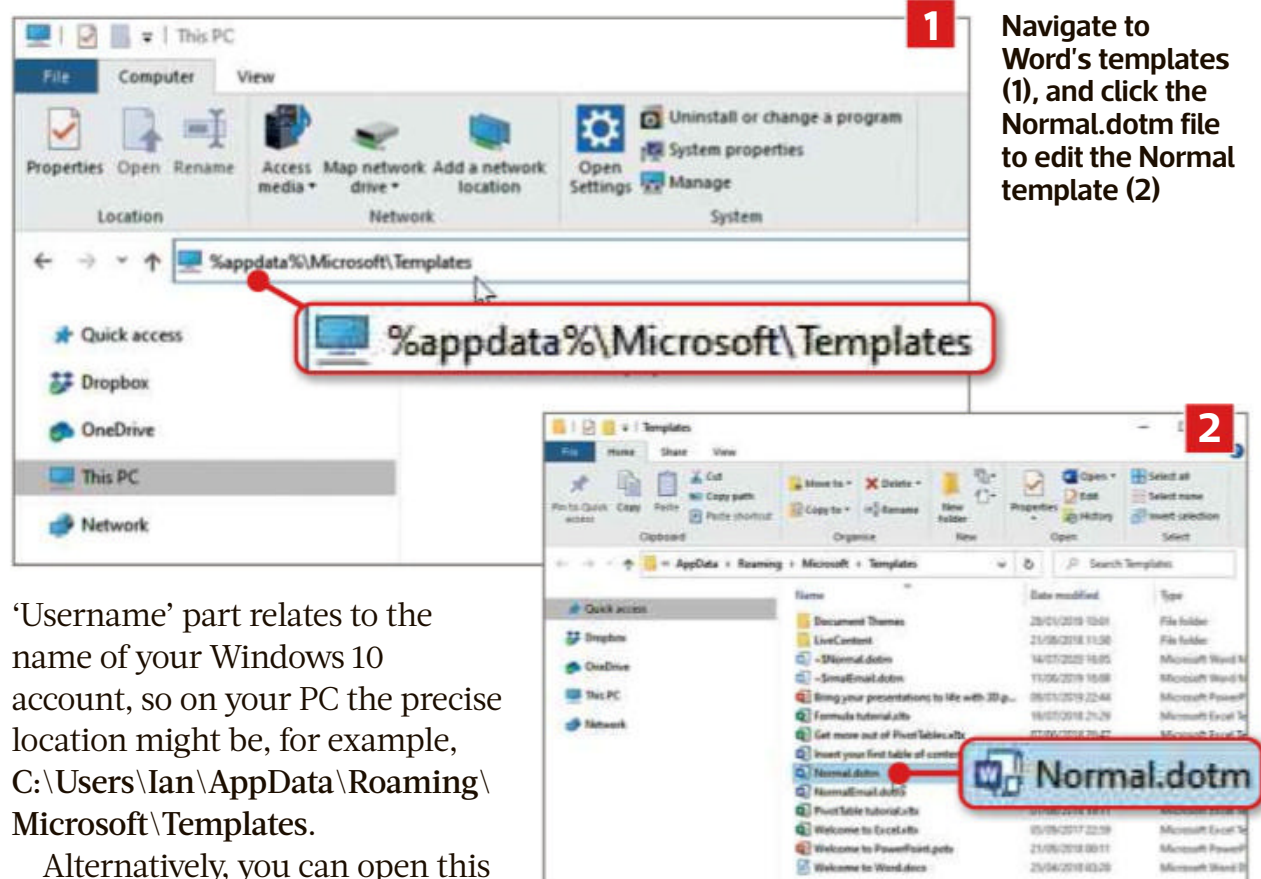


## How do I edit Word's Normal template?

**Q** I run Word 2013 under Windows 10 (version 20H2). I'm seeking advice on how to access the Normal template. It used to be easy to access and change the font, size and other parameters. On web searches there are several defined methods, but I can't find one that works with the current version of Windows 10. So, could you please tell me and your many other readers how to gain access to modify the template?

Ian Watkins

**A** The location of Word's templates hasn't changed in years, and nor has the method – or methods, for there are indeed a few ways – for reaching them. We don't know what you've tried but for all recent editions of Word, including 2013, the location default storage location is C:\Users\Username\AppData\Roaming\Microsoft\Templates. You can navigate to this manually using File Explorer, launched by pressing Windows key+E. Note, that you should not take this location literally: the



Navigate to Word's templates (1), and click the Normal.dotm file to edit the Normal template (2)

'Username' part relates to the name of your Windows 10 account, so on your PC the precise location might be, for example, C:\Users\Ian\AppData\Roaming\Microsoft\Templates.

Alternatively, you can open this folder by executing a shortcut command. First, press Windows key+R to summon a Run box and, into that, type `%appdata%\Microsoft\Templates` (see screenshot 1) and press Enter.

Finally, to edit the Normal template, just double-click the Normal.dotm file 2, make your changes and then save the amended file in the usual way.

## Can I watch old videos in a wider format?

**Q** In Issue 602's Problems Solved pages you answered Neil Howells' question about aspect ratios, telling him that Windows 10 is good at handling displays of all shapes and sizes. That reminded me of a frustration of mine. I like to watch old TV shows and clips on YouTube, many of which were recorded in the 4:3 aspect ratio. I accept that to be the

case, but sometimes I'd like to adjust the aspect ratio to reduce the black bars on either side – to better fill the screen. Is there a way to make YouTube do this?

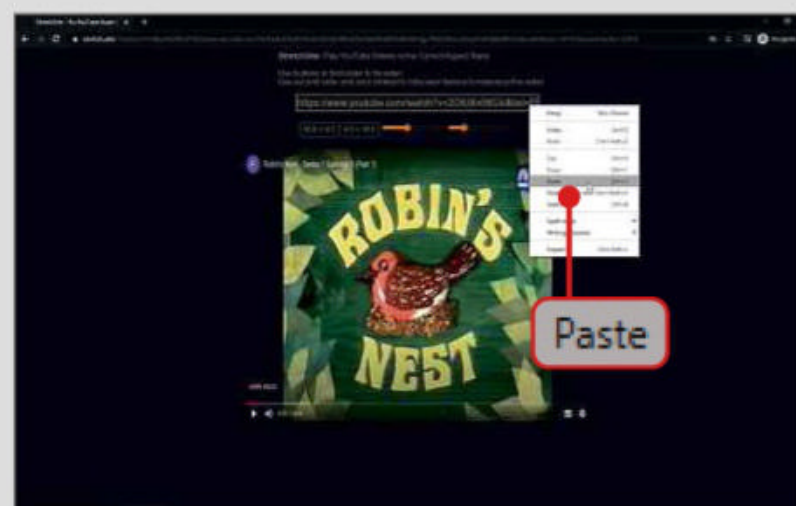
Alan Archer

**A** YouTube itself defaults to the common 16:9 standard. It does actually automatically adjust both the size and the shape of the playback window based on a variety of factors, include the type of device and the screen size. However, what it does not do is offer any simple control over the aspect ratio of videos.

However, there is a clever little website

that can help out here. It's called StretchSite, and you'll find it at [www.stretch.site](http://www.stretch.site). To begin, find a video on YouTube that you want to watch, and then click in the address bar at the top before pressing Control (Ctrl)+A to select the whole URL and then Ctrl+C to copy it to the Windows clipboard.

Now switch to StretchSite, then click in the URL bar in the middle before pressing Ctrl+V to paste in the YouTube link just copied. Finally, you can either press the '4:3 – 16:9' button for a quick ratio change, or use the slider controls to the right of this to fine-tune the dimensions to your liking.



The website StretchSite allows you to paste in the URL of a YouTube video and adjust its aspect ratio





## WHAT'S THE DIFFERENCE BETWEEN...

### Windows and Office Clipboards?

**Q**

In most Windows programs I can copy stuff by using the keyboard shortcut Control (Ctrl)+C. However, in Word 365 I have to press that same shortcut twice to put something into the Clipboard pane. Could you explain why this one Microsoft program seems to work differently to many other Microsoft programs, not to mention from Windows 10 itself?

Derek Millen

**A**

Let's start with the basics. Once, Windows Clipboard and Office Clipboard were distinct tools, albeit with some overlap. The Office Clipboard could store 24 items, the most recent of which was also held in the Windows Clipboard – as the latter could store only the one item.

Today, there's considerably more overlap. Indeed, they're largely interchangeable. However, while the Office Clipboard stores a maximum of 24 items, the Windows Clipboard goes one further – and will hold up to 25 items. Otherwise, the contents are the same, and both operate on a first-in,



Switch on Windows Clipboard history under the Clipboard heading in Settings

first-out basis. So, if you're in Word and copy a 25th item, then the first one you copied would fall out of the list. In Windows 10 itself (or some other, non-Office app), copying a 26th item would push the earliest out of the Windows Clipboard history.

So, why do you have to press Ctrl+C twice in Word? Actually, you don't. In fact, you've probably fooled yourself into thinking this is the case as the double-Ctrl+C shortcut is used in Word to summon the Office Clipboard pane. Before it appears, or after, a single Ctrl+C shortcut is sufficient to copy an item into the list. To see the Windows Clipboard

history, press Windows key+V.

Remember, save for one extra item, the contents will be the same as that displayed by the Office Clipboard pane.

Incidentally, if the Windows key+V shortcut draws a blank then you'll need to enable the feature. To do this, first click the Start button followed by the Settings cog, and then click System followed by Clipboard. Finally, under the 'Clipboard history' heading, click to flip the switch to its On position (see screenshot above).

Want to know the difference between technical terms? Email [noproblem@computeractive.co.uk](mailto:noproblem@computeractive.co.uk)

## What's my IP address?

**Q**

Recently, I've lost my Windows 10's IP address, although I still have a Wi-Fi internet connection. I need the IP address for use in the Spacedesk app (<https://spacedesk.net>) I use with my Samsung tablet. However, the app is saying it cannot find the IP address and nor can I when I look. I am not sure but I think it disappeared after I installed Oculus Rift S virtual-reality headset. Could this be part of the problem?

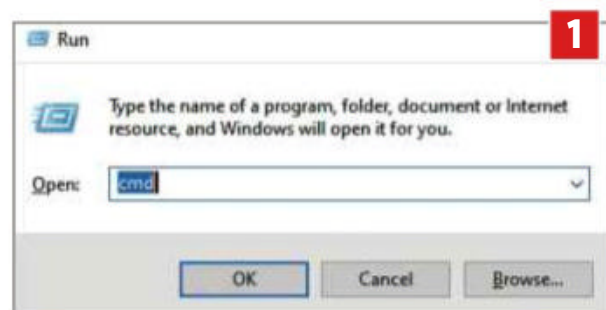
John Howard

**A**

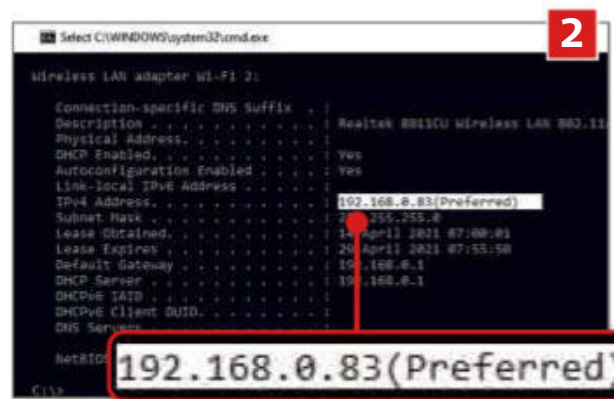
We're not entirely sure what you mean by having 'lost' the IP address, but we suppose an IP address you were using that was once assigned to the PC's Wi-Fi adapter could've changed – and that can indeed be a result of adding new stuff to your network.

Regardless, a quick way to find your PC's current IP address is via a Command Prompt window. Press Windows key+R to open a Run box, then type `cmd` (see

screenshot 1) and press Enter. Next, at the Command Prompt, type `ipconfig /all` and press Enter. Now scroll through to find your Wi-Fi adapter and there, alongside the IPv4 Address heading, you'll see the IP address that's currently assigned 2.



Launch Command Prompt (1) to find your Wi-Fi adapter and current IP address (2)



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- What's causing my email text to shrink?
- Should I use my old graphics card?
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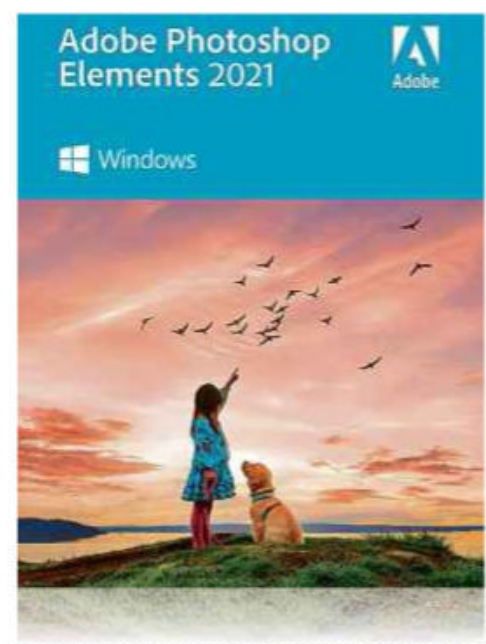
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### How do I launch OSK without typing?

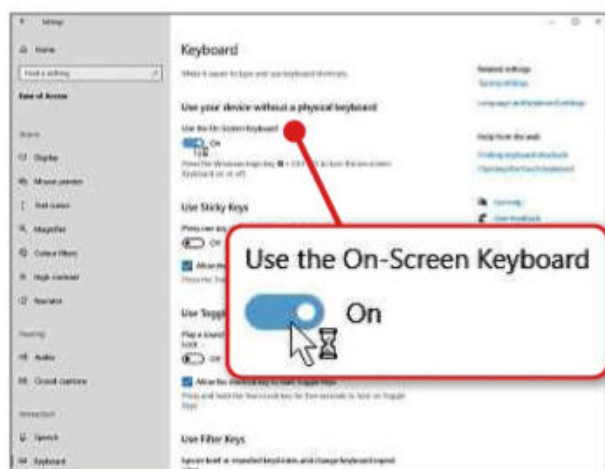
**Q** I was intrigued by your advice on using the Windows On-Screen Keyboard (OSK) app, as mentioned on Issue 604's Make Windows Better page. In your instructions you state: "If your keyboard fails or its batteries get drained, you won't be able to type anything". That's obviously correct. However, you then go on to say that OSK can be launched by clicking the Start button, typing **osk** and pressing Enter. Please could you explain how, if the keyboard has failed, one would be able to type this and then press 'Enter'?

Brian Windsor

**A** Well, it's easy. You just have to... ah, um. Okay, there's no escaping it: we messed up here. We blame our excitement over the gradual easing of lockdown for making us momentarily giddy.

Anyway, the good news is that there is a way to summon the OSK app without having to type – and obviously that's the information we intended to publish originally. To do this, click Start followed by the Settings cog, and then 'Ease of Access' followed by Keyboard.

Finally, in the right-hand pane, under 'Use your device without a physical keyboard' click to flip the 'Use the On-Screen Keyboard' switch to its On position (see screenshot below).



In Settings, go to 'Ease of Access' and switch on 'Use the On-Screen Keyboard'

### What is this developer-mode warning?

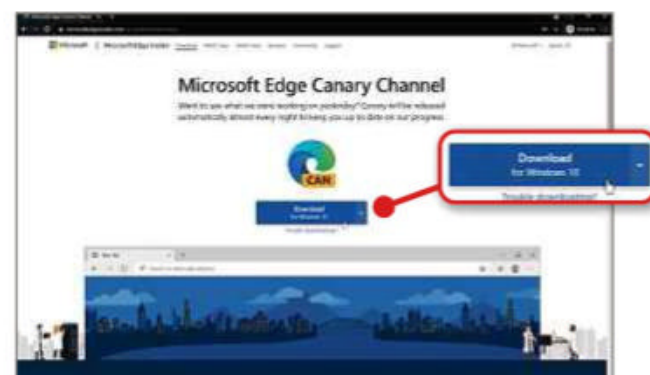
**Q** Thanks for your article on how to install ClearURLs in Issue 604's Workshops section. I couldn't find the tool in the Edge Add-ons website, at [www.snipca.com/37802](http://www.snipca.com/37802), as per Step 1, so I followed the instructions in Steps 6 and 7. I know it's working because every time I launch Edge I get a threatening message telling me that I should disable developer-mode extensions. If I click the Disable button it disables ClearURLs, but that of course defeats the purpose. Step 7 says we have to turn on developer mode to install the download, but it doesn't say we should turn it off again afterwards. Well, I did, but I still get this error message. It is annoying having to clear the warning, by clicking the cross at the top right. Am I doing something wrong? If not, how can I get rid of the error message?

David Huskisson

**A** You're not doing anything wrong. This is a consequence of running extensions that use developer mode. We should've mentioned this side effect, but as many people re-launch their web browser only occasionally we didn't think it would be a big annoyance.

Unfortunately, there is no easy way to disable this warning, because it alerts users to that fact that potentially dodgy extensions are running. ClearURLs is not dodgy, but it does use developer mode – so if you keep it installed, this message will appear when Edge is launched.

The only workaround would be to switch to the Canary build of Edge, which is a free download from [www.snipca.com/38008](http://www.snipca.com/38008) (see screenshot above right). This is a version of the browser aimed at developers and experienced users, so it does away with warning messages. However, Canary builds are considered unfinished test versions of Edge, so use of them carries risks. We'd suggest putting up with the warning.



The Canary version of Edge is aimed at developers and experienced users

### Where are my Export and Transform options in Word?

**Q** I read the News story in Issue 603 (page 9) about being able to turn documents into PowerPoint presentations, visiting [www.snipca.com/37719](http://www.snipca.com/37719) for Microsoft's instructions – as advised. However, I found that both your guide and Microsoft's own words differed from the options on my screen. Instead of 'Transform to Web Page' and 'Export to PowerPoint presentation' I see only 'Create PDF/XPS Document' and 'Change File Type'. I have Microsoft Office, which has become Microsoft 365. What's going on?

Malcolm Haynes.

**A** What's going on is that the features we (and Microsoft) refer to are currently available only in the online version of Word, not the desktop apps that you run directly on a Windows 10 PC. We did state this in our News piece but it's a small detail that's easy to overlook.

However, that's both the reason and the solution: if you want to make use of this feature then you'll need to log into the online version of Office (Microsoft 365). With a subscription to Office 365, now Microsoft 365, you have access to both online and offline versions.

To use the online version of Word, visit [www.office.com](http://www.office.com) and log in using your Microsoft credentials. Launch Word from here and you'll see both features mentioned in our article.



# Jargon Buster

**32bit/64bit** A measure of how much data a PC can process at once. Most older computers are 32bit, more modern ones are 64bit.

**3GP** A type of video file recorded by many mobile phones.

**4K** Video with a resolution of at least 3840x2160 pixels.

**802.11ax** Wi-Fi standard with speeds up to 10 times faster than 802.11ac. Also called Wi-Fi 6.

**Accelerometer** A sensor that detects movement. Used in smartphones to decide whether or not to display a portrait or landscape screen, control games or even work as a spirit level.

**Active noise cancelling** Method for reducing unwanted sound by adding a second sound specifically designed to cancel the first.

**720p/1080p/1440p** Common types of high-definition video of 1280x720, 1920x1080 and 2560x1440 pixels respectively.

**Administrator** Someone who can make changes to a computer that will affect others who also use it.

**AI** Artificial Intelligence. A computer program designed to mimic the behaviour of humans or animals.

**AMOLED** Active-Matrix Organic Light-Emitting Diode. An alternative technology to LCD for creating flat-panel displays. Most commonly used in smartphones, tablets and smartwatches.

**Aspect ratio** A measurement of the shape of a screen. Traditional PC screens are 4:3. Widescreen displays are 16:9 or 16:10.

**Augmented reality** Lets you view the real world on a screen and add elements from the digital world.

**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. It's visible for a few seconds when the PC starts.

**Blue screen of death** Technically called a 'Stop error', this is shown when your PC crashes.

**BMP** Bitmap. A type of image file.

**Botnet** A group of infected computers connected together via the internet, and used to infect other PCs, send junk email and perform other criminal tasks.

**Buffering** Downloading a certain amount of data before starting to play a video. Can cause delays to your streaming.

**Clean install** An operating system installation that overwrites all other content on the hard drive.

**Clock speed** The speed at which a computer processor can perform operations. Measured in Gigahertz (GHz).

**Codec** Short for Compressor/Decompressor. A file that tells a computer how to record or play a type of media file.

**CPU** Central Processing Unit. Another term for a computer processor.

**Cryptocurrency** An online currency not backed by any country. The most popular is Bitcoin.

**CSV** Comma Separated Value. A standard file format, used for storing tabulated information, that can be opened by most spreadsheet applications.

**DDR4** The newest, fastest commonly used type of computer memory.

**DOC** The file extension of a document created in Microsoft Word 2003 or earlier.

**Driver** A file that tells Windows how to work with an external device.

**Embedded operating system** A specialised operating system designed to perform a specific task for a device that is not a computer.

**Emoji** A small graphic that can be inserted into a text message or email.

**Emulator** A program that makes one computer act like another, allowing it to run that computer's software.

**EXE** A program file designed to run in Windows. Has the file extension .exe.

**File path** Shows the location of a file within Windows.

**Firewall** A piece of software or hardware that prevents unauthorised access to a computer over a network, such as the internet.

**Firmware** Basic software stored on hardware, such as a processor, to control its operation.

**Frame rate** The number of still images, or frames, shown per second to create a moving image. Higher frame rates make games appear smoother and more realistic.

**Gadget** A small program such as a calendar that runs on the Windows desktop.

**Gesture** Finger movements on a screen that perform an action, such as pinching to zoom.

**Gigabit Ethernet** A very fast networking standard that can transfer data at up to 1,000Mbps.

**GPU** Graphics Processor Unit. A chip designed to create 3D graphics, but which can also be used for other computing tasks.

**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.

**Heatsink** A block of metal used to help dissipate the heat from a computer chip.

**Hotspot** A public area covered by a Wi-Fi network that allows you to access the internet.

**HTML** Hypertext Markup Language. The language used to write most web pages.

**Hz** Hertz. Measures the frequency something happens: 1Hz equals once a second.

**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-looking colours compared with monitors that do not use this technology.

**ISO file** A type of image file that contains all the data from a CD or DVD.

**JPEG** Joint Photograph Experts Group. A common type of image file created by most digital cameras. Some image quality is lost with each save.

**M.2** A standard specification for internal PC expansion cards and connectors.

**M4A** An audio format often used on mobile devices.

**Metadata** A set of data that gives information about a file.

**MicroSD card** A small type of memory card. Can be converted to SD size using an adapter.

**MOV** A type of video file that can be played using Apple's QuickTime software.

**MP4** A common video format used for downloading and streaming videos from the internet.

**NAND** Memory that doesn't need a power source to retain data.

**NVMe** Non-Volatile Memory Express. An interface that lets solid-state drives work faster.



**Open source** Software that can be modified by anyone, rather than just by the employees of the company that created it.

**PCIe** Peripheral Component Interconnect Express. A faster version of PCI – a slot on the motherboard for expansion cards, such as for sound and memory.

**PNG** Portable Network Graphics. A format for images that shrinks file sizes using compression but without discarding any data.

**QR code** Quick Response code. A barcode that can be read using smartphones and dedicated QR-reading devices.

**RAM** Random-access memory. The computer’s working area, used for data storage while the PC is switched on. Its capacity is measured in gigabytes (GB): the more memory your PC has, the more things it can process simultaneously and the faster it will seem.

**Refresh rate** Measured in Hertz (Hz), the number of times per second that the image on your monitor is redrawn. Slight changes in the image each time it is updated combine to give the illusion of movement. For a steady image, the higher the refresh rate, the less flicker you will see.

**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.

**Server** A computer on a network, such as the internet, that distributes information to other PCs.

**Service Tag** A unique code made up of seven letters and numbers that identifies your Dell laptop. It’s found on the bottom panel of the laptop.

**sRGB** A standard RGB colour space for use on monitors, printers and the internet.

**SSD** Solid-state drive. Storage that, unlike a hard drive, uses no moving parts. Faster but more expensive than conventional hard drives.

**Super AMOLED** Samsung’s marketing term for describing a screen that has the layer which detects touch built into the screen, rather on top of it. Samsung claims it reflects one-fifth as much sunlight as the first-generation AMOLED.

**System Restore** A Windows feature that reverts your computer’s system files to an earlier point in time.

**Tag** A keyword used to describe a file or web page. Many programs use tags to organise related information quickly.

**TF card** TransFlash card. Very similar to microSD card.

**TIFF** Tagged Image File Format. A standard file format used to store graphics images.

**Timestamp** The time which an event is recorded by a computer.

**Two-factor authentication** A system that uses two different means to identify the user. For example, a PIN in addition to a password.

**USB 2.0/3.0/3.1** Faster successors to USB.

**USB-C** A new connector that’s reversible, letting you plug it in upside down.

**VoIP** Voice over IP. The routing of voice conversations over the internet.





**VPN** Virtual private network. Keeps all internet communication safe and private.

**Wi-Fi 6** Wi-Fi standard with speeds up to 10 times faster than 802.11ac. Also called 802.11ax.

**ZIP file** A file that contains compressed documents or files.

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# Easy when you **Know How**

Desperate to squeeze the remaining ink from his HP printer, **Robert Irvine** tries to...

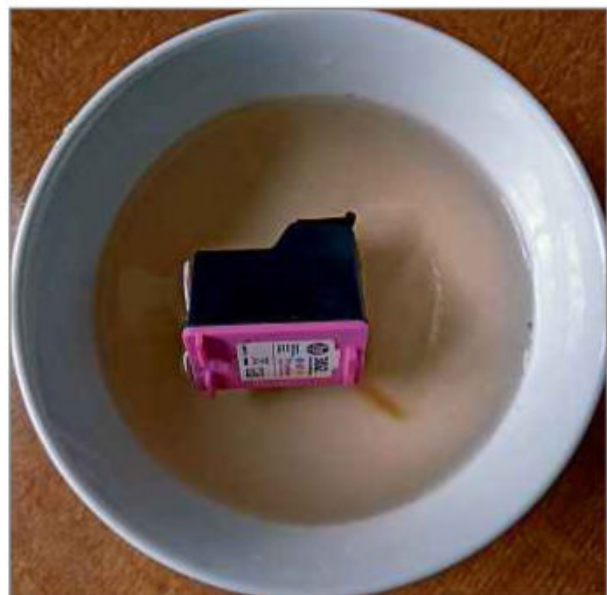


## Unclog an ink cartridge

**S**ince I lost my 'proper' job last December and boarded the freelance rail-replacement bus (as opposed to riding the gravy train), I've become acutely aware of the true value of things in life. Potatoes, for example, are a tremendous bargain: buy a 2kg bag for £1.50 and you've got chips, mash, roasties and other tasty meal staples for a week.

Overpriced items, on the other hand, include razor blades, train tickets and wine in restaurants, but none are as disproportionately expensive as printer ink. It's said to cost more per volume than the finest caviar or champagne (neither of which is much use for printing your snaps), a fact I recalled with great dismay when my HP colour cartridge appeared to have run dry.

The Google map I'd printed out was washed out, streaky and unreadable, and although I was able to fix this by printing again in boring old monochrome, I was curious as to why the colour version had failed. I got an even worse result with a graphic-intensive PDF, but as I don't print many photos, I was certain I hadn't used up all my colour ink already. This was confirmed when I ran the HP Smart printer software on my PC and it showed that, while the current colour ink level was low, I did have enough to produce decent quality printouts.



Can soaking a printer cartridge in warm water really unclog its trapped ink?



Robert still has enough colour ink for printing, but his printer says 'no'

“  
**Printer ink costs more  
per volume than  
the finest caviar and  
champagne**  
”

Something was clearly amiss, so I checked HP's support site ([www.snipca.com/38029](http://www.snipca.com/38029)), which advised me to print a 'quality diagnostic' page and see if the test colours were streaked or missing. They were entirely absent, so I followed the advice to select 'Clean Cartridges' on my printer's Setup, Tools screen. After 30 seconds of grinding and beeping, the cleaning process completed and I printed the diagnostic page again, but there were still no colours.

The next step was to remove the troublesome cartridge and clean it manually with a damp cloth, paying particular attention to the 'printhead contacts' (the shiny gold bits that connect with the printer). While doing this, I got a bit of ink on my fingers, so there was clearly something in there. I then cleaned the printhead itself by using a moist cotton bud to delicately wipe its contact points. Once everything had dried, I reinserted the cartridge and tried

printing another test page. Again, the colours stubbornly failed to materialise.

HP's final tip (other than buying a new cartridge, which I was trying to avoid) was to "clean the printhead and ink cartridge four or five more times". This brought to mind the definition of insanity as doing the same thing over and over again and expecting a different result, so I instead searched Google for alternative advice. I discovered that infrequent use may have caused my cartridge to become 'clogged', much like my sink gets clogged with potato peel, but that it might be possible to 'unclog' the ink.

The most commonly suggested solution was to soak the clogged cartridge in warm water, so I found a small bowl and ran the hot tap to a temperature "similar to a drinkable cup of tea". I then filled the bowl with a couple of inches of water and immersed the colour cartridge, placing an old tea towel nearby to avoid staining my worktop. Yellowy brown ink (with a hint of cyan and magenta) began to seep out, and it seemed that the unclogging had been successful.

Not wanting to waste the remaining ink, I removed the cartridge from the bowl, gently dried it with a cloth, let it dry a bit longer and then returned it to the printer. I printed the test page again and this time, miraculously, the colours were all present and correct. Ink unclogged, HP thwarted and £25 saved!



Need help with making the most of your printer-ink supplies?

Let us know: [noproblem@computeractive.co.uk](mailto:noproblem@computeractive.co.uk)





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