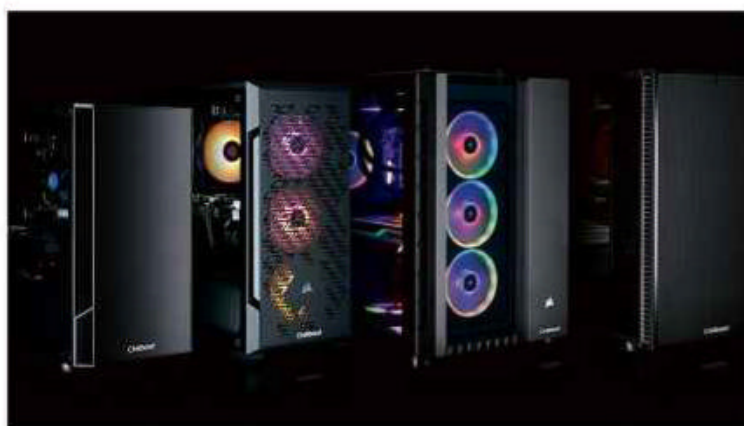


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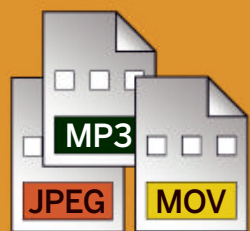


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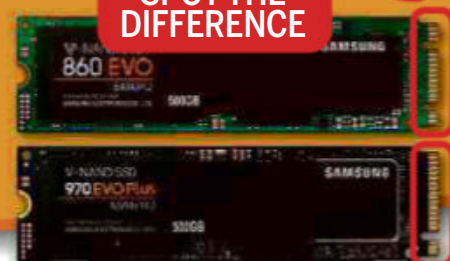
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- ✓ Don't let **Chrome** track you
- ✓ Ditch **Gmail** – go anonymous
- ✓ Move pics from **Photos**
- ✓ Stop **Maps** stalking you
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**PLUS**

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**Computeractive**  
Printed in the UK

Few things focus an editor's mind more than their boss asking "Have you gone mad?", particularly when you're explaining the next Cover Feature. "Doesn't everyone use Google?" he queried in a tone that suggested my answer should be "Yes, you're right, sorry – it was a stupid idea".

But actually, a growing number of users are fed up being tied to Google's services. They're beginning to question not just whether rival services are more private (short answer: yes), but also whether they're *better* than what Google offers. My boss raised an eyebrow,

admitted he'd like to know which tools trump Google, and gave me the thumbs up.

Now, we're not suggesting you'll never want to use Google again. I still use Gmail and Chrome every day, plus its search engine. But I also use ProtonMail, Brave and DuckDuckGo every day. As I hope we will prove, there's life beyond Google.

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

**PS** Our 2020 Back Issue CD will be on sale soon – pre-order it from [www.snipca.com/37026](http://www.snipca.com/37026)



## THIS ISSUE IN NUMBERS



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Monthly price of BT's 4G home broadband service – [p7](#)

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Number of identical passwords Will Stapley was using – [p20](#)

**£5bn**

How much Ofcom could fine Facebook for breaking new online rules – [p10](#)

## 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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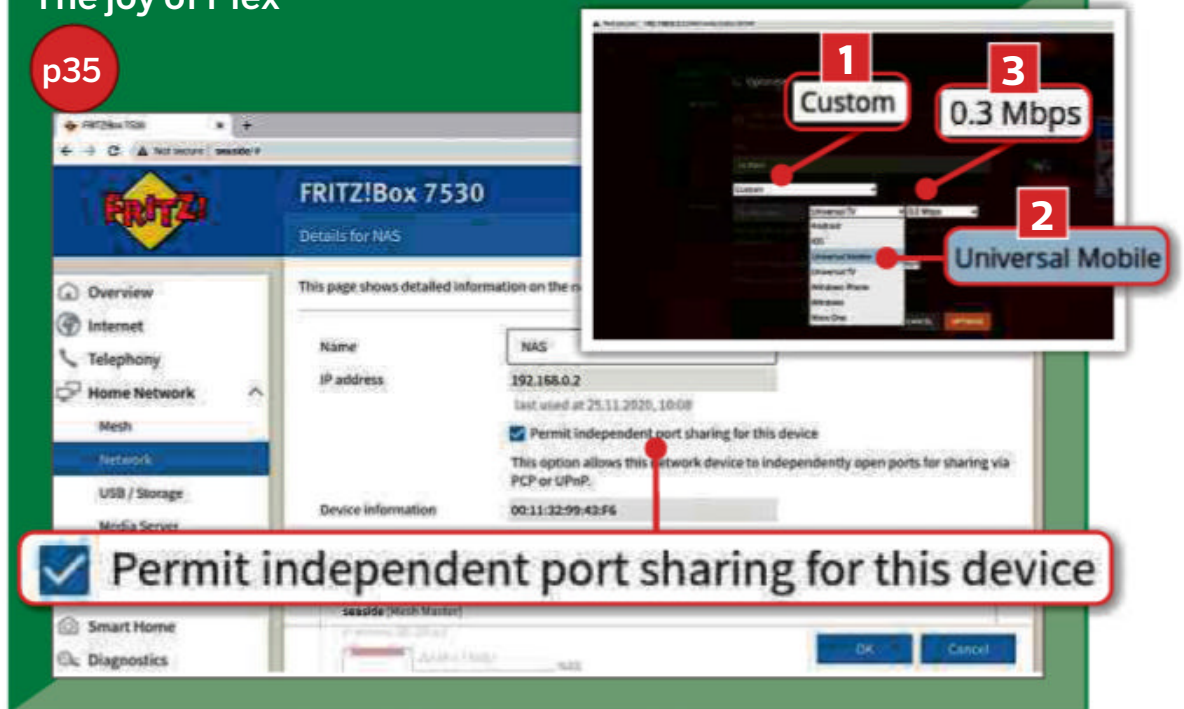


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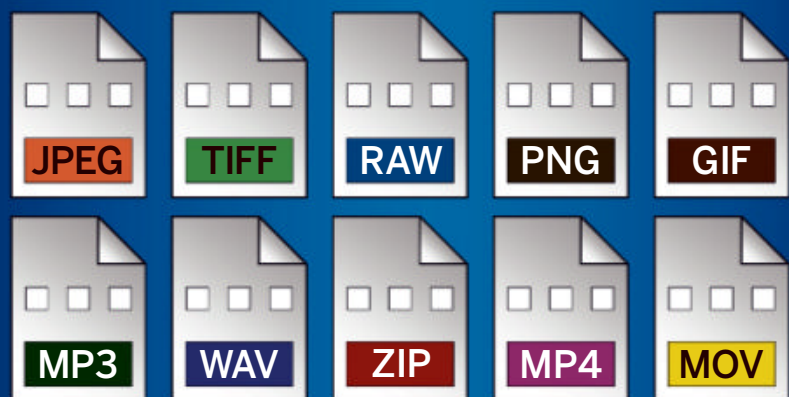


# STOP USING Google

COVER  
FEATURE  
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Switch NOW to tools that are better,  
100% private and won't rip you off

## Always Pick The Right File Format



p60



## Google fix stops AV locking files in Chrome & Edge

**G**oogle has fixed a problem that was allowing antivirus (AV) software to lock files you've created using Chrome or Microsoft Edge. The flaw meant that users couldn't

save bookmarks/favourites in either browser.

AV programs often lock new files until they've scanned them to check they're safe. While this can be a sensible precaution, it's typically overkill when all you're doing is adding a bookmark to your browser.

The flaw was a particular problem if you had saved your browser to your computer's system drive. Previously, the only solution was to turn off your antivirus while you were saving the file, leaving you at risk of attack.

Google's fix updates the Chromium [source code](#), on which Chrome and Edge are built. Developers updated it on 30 December, so the fix should be implemented in the next versions of the browsers, both numbered 88 and both scheduled for release on 21 January.

Edge 88 is expected to contain other tools to keep you safe online, including



alerts when it detects that passwords you're typing have been part of a security breach, and are therefore unsafe. At first, it will work only with Microsoft passwords you've synced to your account.

Google added its own password alerts to Chrome in December 2019, in version 79 of the browser.

Another change coming to Chromium will see browsers load the more secure [HTTPS](#)

versions of websites before HTTP.

Currently, Chrome and Edge will first open the HTTP version (for example, <http://www.examplesite.com>), before redirecting you to HTTPS if it's available.

The change will see browsers open the HTTPS version first by default. However, Google says it's not ready to be widely used, and is still in the experimental stage.

### WHAT WE THINK

Google's fix reinforces how sensible it was for Microsoft to rebuild Edge using the Chromium code that underpins Chrome. One tweak of the code updates *both* browsers, making life easier for users. Edge's forthcoming password tools are welcome also, serving as further proof that Microsoft's browser is a serious long-term rival to Chrome. Google's browser is still the world's most popular, with its market share of 65 per cent dwarfing Edge's 10 per cent. But don't be surprised if that gap narrows considerably during 2021.

## Microsoft Word uses AI to boost your grammar

**M**icrosoft is updating its grammar-checking tool for Word and Outlook so it can make more accurate suggestions to improve your writing.

Called Microsoft Editor, the tool already highlights grammatical errors, but it will soon also use artificial intelligence and [machine](#)

[learning](#) to suggest alternative words and phrases. This brings it in line with the online version of Word, which has used artificial intelligence since last April.

However, to use the new version you'll have to sign up to the Office Insider programme (<https://insider.office.com>).

Once you've done this, you can bring up a menu of suggestions, synonyms and definitions by selecting a word then pressing Shift+F10 or Alt+Down.

The revamped tool also checks other aspects of your writing, including clarity and formality, making it more of a rival to Grammarly.

In addition, it will highlight references to sensitive political issues around the world. It's likely to be released to all users eventually.

Other changes to Microsoft Editor include a "simplified" design to make it easier to see suggestions. Read more on Microsoft's blog: [www.snipca.com/37035](http://www.snipca.com/37035).



**You'll like this...** Phone networks say they don't plan to reintroduce roaming fees in the EU ([www.snipca.com/37036](http://www.snipca.com/37036))



**but not this...** Virgin Media is increasing prices by four per cent ([www.snipca.com/37037](http://www.snipca.com/37037))

# Amazon's plastic waste 'circles the Earth 500 times'

**A**mazon has denied claims that it's responsible for 465 million pounds of plastic packaging waste every year.

The figure comes from a report ([www.snipca.com/37009](http://www.snipca.com/37009)) by ocean-conservation charity Oceana, which said it had to estimate the amount of waste Amazon produces because the retailer doesn't reveal this information.

It came to the figure by calculating the number of air pillows and sheets of bubble wrap needed to wrap the approximately seven billion Amazon packages delivered in 2019. The number of air pillows alone is enough to circle Earth more than 500 times, it claims. The study also estimates that up to 22.44 million pounds of Amazon's plastic waste entered the world's freshwater and marine ecosystems in 2019, the equivalent of dumping a van of plastic into the oceans every 70 minutes.



Amazon hit back by saying Oceana "dramatically miscalculated" how much waste it produces, insisting the figure of 465 million pounds is too high by 350 per cent. If true, this would mean Amazon still produced more than 116 million pounds of plastic packaging in 2019.

Oceana stood by its estimation though, saying it had to devise its own system to work it out because Amazon keeps the information secret. Anne Schroeder, a director of strategic initiatives at Oceana,

said: "What you don't measure you cannot manage, so we had to estimate this".

The charity called on Amazon to listen to customers' concerns by offering a plastic-free packaging option at checkout, as well as being "fully transparent" about the amount of waste it produces.

It also wants the retailer to eliminate all plastic packaging, as it has already done in India, and increase the number of products shipped in reusable containers.

## Can't get fibre? Sign up to 4G instead, says BT

**B**T is now recommending its 4G home broadband service to more customers, not just those who can't get 10Mbps and are therefore eligible for faster speeds under the Universal Service Obligation (USO).

BT has previously recommended 4G mostly for USO customers, but the option now also appears when you use BT's broadband availability checker ([www.bt.com/broadband/availability](http://www.bt.com/broadband/availability)) and find that you can't get speeds higher than around 24Mbps, such as those offered by ADSL2+ broadband.

The company's 4G Home

Broadband service ([www.bt.com/broadband/4g-hub](http://www.bt.com/broadband/4g-hub)) comes with its 4G Home Hub to provide mobile broadband around your home.

There are two 24-month packages available, with maximum speeds of 15Mbps (£45 a month) and 30Mbps (£55 a month). There are no upfront costs, but prices will increase in March by the CPI rate of inflation published in January, plus 3.9 per cent. You can connect up to 32 devices at a time.

However, speeds provided by mobile networks can vary greatly, so BT may change its claim of "maximum speed" to



an average median speed, as the Advertising Standards Authority requests.

The website also claims that 4G can reach devices within 30 metres of the Home Hub, though this can be dramatically reduced by walls and floors.



Do you use 4G broadband? How good is it? Let us know: [letters@computeractive.co.uk](mailto:letters@computeractive.co.uk)

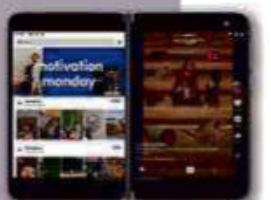
### IN BRIEF

#### LISTEN TO SPOTIFY PODCASTS ON ALEXA

You can now listen to Spotify podcasts on Amazon Echo smart speakers. To turn them on, open the Alexa app on your device, then tap Settings followed by 'Music & Podcasts'. You then need to link or manage new services. The service lets you pause an episode on one device, then pick it up on another, or on the Spotify app or website.

#### MICROSOFT'S TWO-SCREEN PHONE COMING

Microsoft will start selling its Surface Duo two-screen phone (pictured) in the UK in 2021, following its launch in the US last August. Writing online ([www.snipca.com/37013](http://www.snipca.com/37013)), it said the device, which runs Android, can show different programs on each screen to allow "true multi-tasking". Release dates and prices have yet to be confirmed.



### TOMORROW'S WORLD



Covid-19 may have put paid to any mass carol singing at Christmas, but Google came up with a solution. It created Blob Opera, letting you control tenor, bass, mezzo-soprano and soprano voices by dragging colourful blobs. It's both great fun *and* very clever because the voices have been recreated by software based on what real singers sound like. Give it a go at [www.snipca.com/37011](http://www.snipca.com/37011).





## IN BRIEF

### OPENREACH CREATES 5,000 BROADBAND JOBS

BT Openreach is creating 5,300 new jobs as it aims to deliver full-fibre broadband throughout the UK. It's recruiting 2,500 engineers, and estimates a further 2,800 will be hired by partner companies that build the cable infrastructure. At the moment, Openreach extends its full-fibre network to 40,000 new households every week, but would need to increase that to 50,000 to hit its target of reaching 20 million premises by the late 2020s.

### ANDROID MOBILE DEVICES TO LAST LONGER

Your Android phones and tablets should last longer after Google announced plans to keep devices updated with four years of security releases. It also guaranteed that your device will be able to receive four version updates of Android (the latest is version 11). The announcement was jointly made with Qualcomm, which makes processors for Android devices.

### THE WORLD'S GONE MAD!



There is now so much abuse and intolerance on Twitter that the site is reminding people that the person they're replying to is actually a human being (and there's us thinking they were newts),

and that you might have things in common.

Twitter is calling these reminders

'humanization

prompts'. Perhaps a contempt for such jargon is more likely to bring people together.



## Quarter of UK homes can now get 1Gbps broadband...

More than one in four UK homes – around eight million – can now get 1Gbps (1,000Mbps) broadband, Ofcom has said.

The figure comes from the regulator's Connected Nations report for 2020 ([www.snipca.com/37028](http://www.snipca.com/37028)), which examines broadband and mobile availability across the UK, focusing on the differences between England, Northern Ireland, Scotland and Wales.

Gigabit is most widespread in Northern Ireland, available to 56 per cent of households. Scotland comes second with 42 per cent, followed by England (25 per cent) and Wales (19 per cent).

Throughout the UK, 27 per cent of homes can get Gigabit broadband, while 96 per cent can get 'superfast' connections, which Ofcom defines as 30Mbps and over.

However, many people choose not to get the fastest package available to them,



partly because they cost too much (see below). Ofcom says the takeup of gigabit broadband remains "low", while 40 per cent of people who can get 30Mbps speeds choose a slower (and therefore cheaper) package.

Also, 190,000 homes and businesses remain stuck on speeds of less than 10Mbps, though Ofcom says they might be eligible for the Universal Service Broadband, which means they're legally entitled to request faster connections.

The report also found between 79 and 85 per cent of the UK's geographical area is

covered by 4G, a rise from 66 per cent in 2019. The four main networks – EE, O2, Three and Vodafone – claim they cover 98–99 per cent of all premises.

Ofcom didn't provide figures for 5G coverage, but it did note that the number of masts providing 5G has risen ten-fold, to around 3,000. Most of these (87 per cent) are in England, with seven per cent in Scotland and three per cent in both Northern Ireland and Wales.



Have you signed up to gigabit broadband? Let us know: [letters@computeractive.co.uk](mailto:letters@computeractive.co.uk)

## ...but nearly a fifth struggle to pay bills

Many people in the UK have cut back on clothes and food in order to afford their broadband and phone packages.

Research from Ofcom on the affordability of broadband and mobile ([www.snipca.com/37029](http://www.snipca.com/37029)) shows that 19 per cent of households – around 4.7 million – found it difficult to pay their bills during 2020.

Around one in 10 of those who struggle financially choose to switch to a cheaper package, while others simply miss payments.

The number of people being disconnected for non-payment fell between March and May last year, as broadband and



mobile providers and the Government agreed a set of commitments to protect vulnerable customers during the first lockdown. It increased sharply though between June and September, as restrictions were lifted.

Ofcom said that generally customers are getting "better services for less money", and supports "the efforts

companies are making to help make sure people stay connected at this difficult time".

However, it wants more companies to provide services for people on benefits, and called for those

who already offer such packages to promote them more heavily.

Examples cited by Ofcom include BT Basic ([www.snipca.com/37030](http://www.snipca.com/37030)) and Virgin Media Essential ([www.snipca.com/37031](http://www.snipca.com/37031)). It warned firms that it would take action against them if they stopped helping customers in financial difficulty.

# Apple apps to tell you who they share your data with

Apple is forcing all iPhone and iPad apps to reveal much more detail about the personal data they collect about you, and what it's used for.

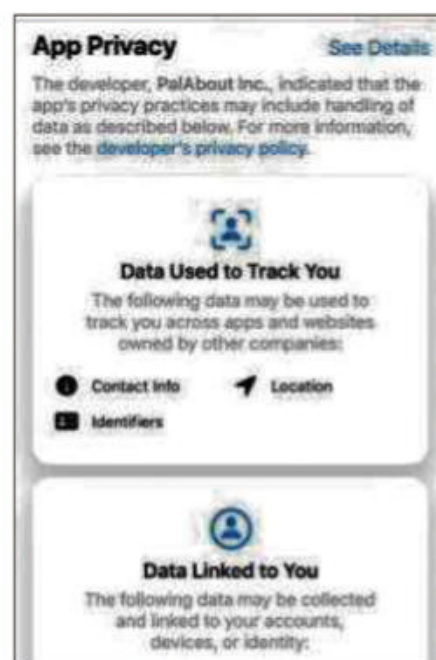
It has broken the information into three categories: data that tracks you; data linked to you; and data not linked to you. It means that apps will have to tell you what information they hold about you, including any financial details.

They'll also have to reveal

whether they share any personal information with other companies that can be used to target adverts at you.

In addition, they'll have to state whether they link your current location – gathered from your phone or tablet – with other companies. Data that's "not linked to you" includes information that can't be used to target adverts at you.

Apple includes its own apps in the new rules, which are part of the iOS 14.3 update.



The information will be shown in the 'App Privacy' section of the app's listing on the Apple App Store (see screenshot above).

However, you may not see this information straight away because Apple is asking developers to add it only when they next update their app.

The company said it hoped the rules would "focus the minds" of both app developers and users. It will carry out random checks to make sure developers' claims are true.

## ZOOM AND NHS APPS TOP 2020 CHART

The NHS Covid-19 contact-tracing app was 2020's second-most downloaded free app for iPhones and iPads, beaten by video-chat tool Zoom. Video-sharing tool TikTok was third, followed by messaging service WhatsApp and social network Houseparty.

- 1 Zoom [www.snipca.com/36988](http://www.snipca.com/36988)
- 2 NHS Covid-19 [www.snipca.com/36989](http://www.snipca.com/36989)
- 3 TikTok [www.snipca.com/36990](http://www.snipca.com/36990)
- 4 WhatsApp [www.snipca.com/36991](http://www.snipca.com/36991)
- 5 Houseparty [www.snipca.com/36992](http://www.snipca.com/36992)



# BT to fly drones that share airspace with planes

BT is leading a group of companies working to establish the UK's first commercial 'drone corridor', in which unmanned aerial vehicles will share the same airspace as aeroplanes.

Project Xcelerate, backed by £125m from the Government as part of its Fund Future Flight Challenge, will see drones flown along a five-mile flight path south of Reading, Berkshire. The aim is to fly drones out of sight of the person controlling them, something which is currently illegal.

If successful, the trial could

pave the way for drones to deliver urgent items such as medical and emergency equipment. These could help emergency services deal with road accidents, for example, because drones would be able to arrive at destinations faster than helicopters.

In future, drones may also lead to the mass delivery of items bought online. Amazon has been testing its Prime Air drones near Cambridge in recent years, though its plans have been held back by laws requiring the pilot to be able to see the drone at all times.

The drones will be



monitored by a system of masts, and controlled by software that can force them to land to avoid collisions.

Gerry McQuade, chief executive of BT's Enterprise unit, said: "In showing how drones can deliver improved, potentially life-saving services to the public, we're aiming to accelerate the adoption of fully automated drones in unrestricted UK airspace in a safe and responsible way."

## IN BRIEF



### RECORD YOUR SCREEN ON SAMSUNG LAPTOPS

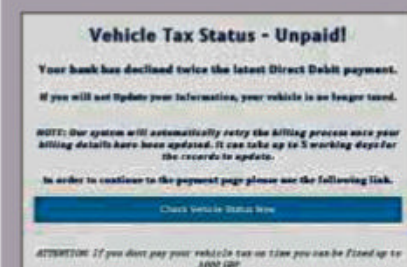
Samsung has released a screen-recording app for Windows 10, which works only on its own laptops. 'Samsung Screen Recorder' is available for free from the Microsoft Store ([www.snipca.com/36965](http://www.snipca.com/36965)). Once launched, a toolbar appears at the top of your screen (pictured) with options to start a recording, take a screenshot, launch a webcam window and open settings. It works only on 64bit laptops.

### WATCH AMAZON PRIME VIDEO ON SKY Q

Amazon Prime Video is available on Sky Q boxes for the first time, though you'll need a Prime subscription. The deal between the two companies also sees Sky's Now TV app appear on Fire TV devices, though again you'll need a Now TV subscription. Visit Sky's site for details: [www.snipca.com/36976](http://www.snipca.com/36976).

### LATEST DRIVING EMAIL SCAMS REVEALED

The DVLA has released images of the latest scams targeting motorists ([www.snipca.com/36978](http://www.snipca.com/36978)). The emails and messages ask drivers to verify their driving licence details, offer vehicle tax refunds, highlight a failed vehicle tax payment (pictured) and ask for bank details.





# Question of the Fortnight

## Why doesn't the Online Harms Bill protect scam victims?

Campaigners are angry that the new law won't cover online fraud

Ofcom will soon be able to block access to websites that fail to protect children online, as part of the Government's forthcoming Online Harms Bill. It also gives the regulator the power to fine companies up to 10 per cent of their global turnover, which in the case of Facebook would be over £5bn.

However, Ofcom won't be able to tackle what MoneySavingExpert.com founder Martin Lewis has called the "epidemic of scams" hitting the UK. He says it's "unthinkable" that fighting online fraud has been left out of the bill, which Culture Secretary Oliver Dowden hopes to introduce before the end of 2021.

**“The bill leaves in place ‘hopelessly inadequate’ laws that don’t protect vulnerable people”**

Ofcom's new powers come amid growing concern over the welfare of children online. In April 2019, then Home Secretary Sajid Javid pledged tough new rules to regulate what sites are allowed to show, prompted in part by the death of 14-year-old Molly Russell, who killed herself in 2017 after viewing images of self-harm on Instagram.

The new rules set out stricter guidelines to force sites to remove illegal content such as child sexual abuse, terrorist material and videos that encourage suicide.



One of the strongest measures available to Ofcom will be to force sites to block and remove images of child abuse shared on apps – including WhatsApp and

Apple's iMessage – that use end-to-end encryption (E2EE). This form of encryption usually means that the only people able to see images are those sending and receiving them, not the company providing the service.

But despite such tough new rules, Ofcom won't be able to penalise persistent online scammers, infuriating those worried about the growing risks. Lewis says this will leave in place "hopelessly inadequate" laws that don't protect vulnerable people.

In particular, Lewis wants

more attention placed on the large number of mental-health sufferers who fall victim to scams. Recent research from the Money and Mental Health Policy Institute ([www.moneyandmentalhealth.org](http://www.moneyandmentalhealth.org)), set up by Martin Lewis in 2016, found that 23 per cent of people with mental-health problems had been scammed, compared with eight per cent of the general population, making them three times more likely to fall victim to fraud.

The research also found that 61 per cent of scam victims have mental-health problems, even though they make up only 38 per cent of the population. The charity says some symptoms of mental illness, such as difficulties concentrating or making decisions, make it harder for people with mental difficulties to spot scams.

Lewis said that the problem has been made worse by the pandemic lockdowns: "These vicious criminals are exploiting the fact that more people are

### THE FACTS

- The Government's new Online Harms Bill lets Ofcom fine sites for not protecting children, but doesn't cover internet scams
- Ofcom will also have the power to force sites to access images sent by end-to-end encryption
- Charities say online scams have rocketed during the pandemic, with mental-health sufferers most at risk

stuck at home, spending more time online, and potentially struggling with their mental health – all of which increase the risk of falling victim to these schemes".

The NSPCC is also disappointed by the scope of the law because it wanted companies' senior managers to face criminal prosecution if their sites broke the law.

In response, the Government said it wanted to assess how well the initial powers worked before introducing criminal action. It also said including online scams in the bill would make the regulations less "clear and manageable", and that fighting fraud is more effective through other laws.

This cuts no ice with Lewis, who tweeted that the decision to omit scams was ludicrous ([www.snipca.com/36995](https://www.snipca.com/36995)). With over a million followers on Twitter and his own TV show, Lewis is one of the UK's most effective campaigners. He won't surrender this battle any time soon.



# Protect **your tech**

Scams and threats to avoid, plus new security tools

## WATCH OUT FOR...

## 'Jump the queue' vaccine emails

### What's the threat?

Interpol has warned people that scammers are likely to exploit the coronavirus vaccine by sending emails claiming to offer ways to sign up for one, potentially allowing you to get the jab before you're entitled to it.

It also called for law-enforcement bodies around the world to work together to shut down websites selling fake vaccines.

Jürgen Stock, Interpol's secretary general, said: "It is essential that law enforcement is as prepared as possible for what will be an onslaught of all types of criminal activity linked to the Covid-19 vaccine".

Its Cybercrime Unit added that sites selling fake cures aren't just scams; they can also contain malware.

In a study of 3,000 websites suspected of selling fake medicines and medical devices, around 1,700 contained threats including phishing links and malware.



### How can you stay safe?

Interpol gave its warning within hours of the Government announcing it was ready to roll out the Pfizer/BioNTech vaccination to the public. It pointed out that scammers have been exploiting every development in the pandemic, playing both on people's fears and hopes.

Visit the NHS's site ([www.snipca.com/36961](http://www.snipca.com/36961)) for the most reliable information on the vaccine. It says it will contact you when it's your turn to have the jab. You can't pay to jump the queue, so ignore any emails that claim otherwise.

Also visit [www.snipca.com/36960](http://www.snipca.com/36960) to read Interpol's advice on avoiding fake medicine online. In particular it advises you to remember the six Ps when verifying the authenticity of drugs: place, prescriptions, promises, price, privacy and

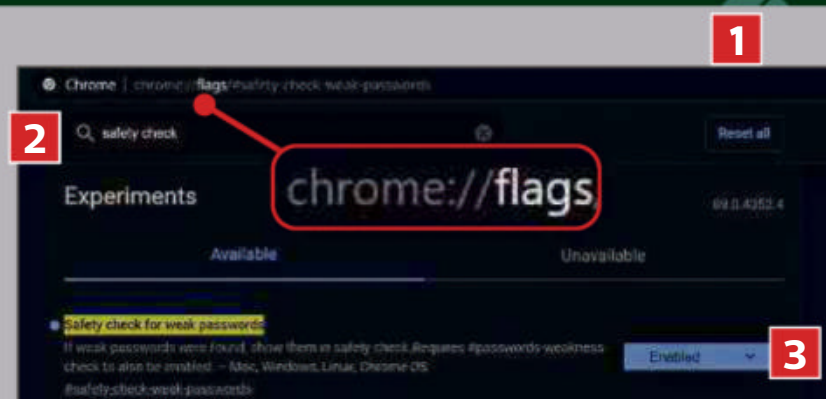
product. As well as sticking only to sites you trust, be sceptical about miraculous health claims and prices that are cheaper than normal.

In addition, always make sure the site you're buying from asks for your prescription, and doesn't simply ask you to fill out a questionnaire.

## New tools | Google's weak-password checker

Creating a strong password takes more than typing a zero instead of an O in 'password'. Chrome's 'Safety check' tool now tells you how many weak passwords you have, though for now it's available only in the Canary version of the browser, which is where Google tests new features.

Download Chrome Canary from [www.snipca.com/36962](http://www.snipca.com/36962), then open it and type `chrome://flags` into the browser bar at the top (1 in the screenshot) and press Enter. Next, type `safety check` in the search bar (2) to bring up the 'Safety check for weak passwords' option. Click the dropdown menu on the right so it shows Enabled



(3), then press Relaunch at the bottom right to restart Chrome.

You'll need to use Chrome Canary for a while, creating and saving passwords as you browse. When you want to check their strength, click the top-right menu button (three vertical dots), then Settings followed by 'Safety check' on the left. Click the blue 'Check now' button in the central pane. Chrome Canary will show a red warning triangle if it finds passwords that are weak.

## ScamWatch

Readers warn readers



### Press one for HMRC scam

As a self-employed accountant, I listened with interest to an automated call that claimed it was from HMRC. It said there was a lawsuit filed against me because I hadn't paid a tax bill on time, and should press one to proceed to speak to a "case manager". The call was quite threatening because it said I could be arrested for tax evasion. I'm in a fortunate position, though, because through my job I know that HMRC would never phone you to make such a claim. But I wanted to share it through your pages so that other people aren't caught out.

Ed Grayling



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

# Letters

Tell us what's on your mind

## Nero helps me bridge digital divide

✉ Thanks for a great magazine. I'm not sure I could survive without it, especially as I provide some IT support to a debt-advice charity.

As soon as I received Issue 596, I was attracted to the Cover Feature ('Software You Should Never Install', pictured above right), largely because I purchased Nero Platinum Suite last year, and it was one of the programs you said we shouldn't use! If I only used it to burn discs, then it would be a rip-off, but it does a bit more than that. In particular, I can use it to edit videos.

The Covid pandemic has emphasised the digital divide, which I have always been passionate about. Many people who live alone and who do not have access to the internet are at an even greater disadvantage than before. Many of these people have DVD players. I've therefore had to rediscover how to create DVDs and edit videos using Nero Video ([www.snipca.com/37032](http://www.snipca.com/37032)), which is part of the Platinum Suite. I've made videos not only of church services, which have been streamed live on YouTube, but also of two funerals (also streamed live), where it was impossible for friends and family members to attend.

I can find many alternatives online, but until I get your guidance on which ones are worth using to create DVDs, I shall carry on using Nero.

David Parish

## I get more done working from home

✉ Pat Clarke's letter in Issue 594 is the only one I've read saying that working from home rather than in the office has cut productivity. I thought he must be joking. But then he's the boss of a company, and historically bosses have always objected to working from home.

In my case I'm getting more done because I have fewer face-to-face chats. The peace and quiet is bliss! As for communication, we have Skype for Business, as well as instant messaging, email and Zoom. We also have a WhatsApp group if there are connection problems, or the good old-fashioned phone if all else fails.



Throw in that due to not having a 90-minute commute each way I can start earlier and finish later. Yes, I'm working 30 to 60 minutes more every day, but getting more done in that time. Also, not having to commute is saving me a fortune.

Fortunately, our bosses do not agree with Pat. Before the pandemic there was a plan to move to a new building. But because home working has been so successful they've decided to downsize. The new building can only accommodate two-thirds of the employees, so around two hundred will have to be on holiday or working from home. Or they'll have to sit on the floor. The move into the new building starts this month.

Rod Watson

## Don't give router hackers window of opportunity

✉ As a subscriber, I read Issue 595's Cover Feature ('Get Your Fastest Ever Wi-Fi in 2021') with interest. Will Stapley makes many helpful suggestions in the feature, though I would urge caution when placing a router against a

window to boost the signal. BT's Home Hub and many other routers have the Wi-Fi and Admin passwords fixed to the rear. This means that anyone seeing it in the window can join or completely hijack your home network. So if you must place a router at your window, please ensure all passwords are removed.

Ian Foster

## Are Windows' Live tiles now dead?

✉ I've just read your news story in Issue 596 (page 6) about the forthcoming arrival of Windows 10X, and am very disappointed. Unless I'm misunderstanding something, it seems the Start menu's Live tiles are disappearing. I find them very useful and easy to use. I miss them on my Windows Phone, which I eventually changed late in 2019 to an Android device.

Will Microsoft keep the full version of Windows? If not, why not, when that is what we have all paid for?

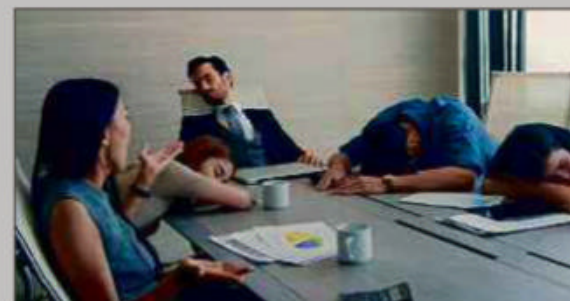
Jonathan Batt

**CA SAYS** It seems pretty certain that Windows 10X won't come with Live tiles, but that doesn't necessarily mean Microsoft will also remove them from the

## How Zoom can make video chats more realistic (and tedious)

✉ I read with some alarm that Zoom is planning to recreate the atmosphere of real-life meetings (News, Issue 596, page 7) in video chats. You mention 'virtual' handshakes, which just sounds like a gimmick that people will ignore. The reason I like Zoom is precisely because it's so different to the physical meetings I used to endure in the office.

If Zoom really wants to capture the mood of real meetings, they should also make it compulsory that the person who booked the meeting and said everyone must attend on pain of death turns up 10 minutes late. Once the meeting begins, Zoom should nominate one attendee to be the 'arrogant know-it-all', who's allowed to talk loudly over others while making



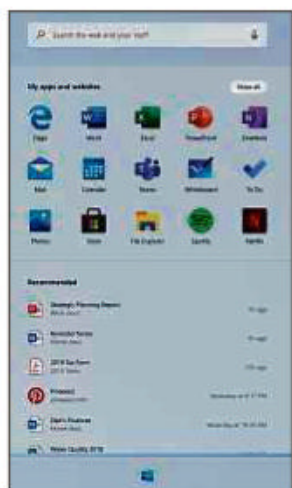
observations that are blindingly obvious. Another feature could be a plate of stale biscuits that never gets eaten, while for every 20 minutes the meeting drags on, Zoom could allow one person to fall asleep.

I shudder as I recall these memories from my old life in the office. I don't want to be reminded of them anymore, so I hope Zoom just sticks to the basics of simple video chats.

Paul Anderson



main Windows 10 Start menu. Indeed, Microsoft might keep them in Windows 10 in order to make Windows 10X (pictured right) seem like a more attractive and simplistic alternative.



## I crop my iPhone photos to 16:9 aspect ratio

Mike Roberts (Letters, Issue 595) deserves support in his defence of the 16:9 aspect ratio. I tend to look at our photos on an HD TV, initially via a portable hard drive, but now via Plex ([www.plex.tv](http://www.plex.tv)). We have always taken them in 16:9.

Personally, I don't see why Apple should dictate the shape of my photos. We do have iPads and iPhones, but when I use them for photos I crop them to 16:9 when transferring to my PC. Incidentally, our videos are all 16:9 too and we watch them through Plex.

Rod Turner

My Android phone was pre-programmed with the now-standard 16.9 photo format. It perfectly fits my TV and all modern PC screens, with results that are pleasing to the eye. All manufacturers (including Apple) changed from 4.3 to 16.9 on our TVs, phones, tablets, laptops and computers decades ago, so why is it that iPads continue to be sold with the defunct 4.3 ratio?

Even more puzzling is that when you take a photo on most iPhones, they are all pre-programmed to appear in 4.3. The results are an annoying black bar either side of the picture. And, with most iPhones, you can't change the settings to 16.9. Presumably, this is to entice an iPhone user to stay with Apple and purchase an iPad, which happens to be the only tablet with this obsolete screen size. This is something that is rarely mentioned in most iPad/iPhone reviews.

Roger Thomas

## BT's 4G no solution for poor rural broadband

Further to Bob Abercrombie's letter in Issue 586 about not using BT's 4G mobile for broadband, I live in

## STAR LETTER

### News from Netflix? Leave it to BBC and ITV

The prospect of Netflix and Amazon Prime providing news in the UK doesn't excite me ('Question of the Fortnight', Issue 596, pictured). I subscribe to both services and have found some decent things to watch, even if there is an awful lot of rubbish. But both services are about escapist entertainment, not factual information that you can rely on.

These are international services that aren't rooted in a particular country. When you flick through programmes, it feels like you could be anywhere. Contrast that to public-service broadcasters like the BBC or ITV, which are British institutions and have woven themselves into the fabric of our life.

They don't get everything right of course. I think the BBC is too obsessed with chasing a younger audience,



while ITV should cut down on the brain-numbing reality shows. But for better or worse, they understand and represent Britain. Our cultural history has been created and preserved by these channels. Netflix is just a rich upstart with expensive and often overrated programmes. I remember when it was

merely a DVD-rental service that posted you films to watch.

You only need to look at the pandemic to see how highly people value the news from public-service broadcasters. Viewing figures for news bulletins have shot up. It proves that while the streaming services have won a new generation of viewers, the public still turn to traditional broadcasters in moments of crisis.

Leonard Berry

The Star Letter writer wins a Computeractive mug!



rural Somerset without a hope of getting a wired or cabled high-speed service. I changed to BT mobile about a year ago, but I've found problems with it. I do historical research and find that BT's service won't let me access the Internet Archive (<https://archive.org>) to read its digitised books. I can access it when I switch to Kaspersky's VPN, to which I subscribe, but when I'm using this I can't send emails, and I get a message saying the server I'm using is blacklisted by BT. So I have to swap them round.

Despite an EE mobile mast being less than a quarter of a mile from my front door (BT owns EE remember), my modem rarely shows more than one bar signal strength. The service is adequate for email and the like, but I often have buffering when playing music on YouTube, while Zoom sometimes tells me I don't have enough bandwidth. I've just checked my signal speed and it's around 6Mbps, but more often it's 2Mbps or less. Mobile broadband is the obvious answer

for rural communities, but it can come with problems like these.

Tony Woolrich

The Universal Service Obligation (USO) continues to draw letters of complaint. I'd like to see BT remove the option to provide a 4G hub instead of broadband through the landline. It's no more than an excuse for BT to impose a significant cost increase for a substandard service.

I live in Bristol not far from a large BT digital exchange, but BT refuses to provide fibre to the cabinet about 200 metres from our house. As BT will be changing telephone services to VoIP within two miles, it will be interesting to see how it will be rolled out when our time comes.

John Knight

**CA SAYS** Despite our readers' concerns, BT now seems to be marketing its 4G home broadband as an alternative to fibre connections – see page 7.



We stand up for your legal rights

## Can I get a refund for electrician's fee to fix a faulty oven?

**Q** We ordered a new Hoover oven from Appliances Direct ([www.appliancesdirect.co.uk](http://www.appliancesdirect.co.uk)) in November, but it tripped the fuse box when we started to use it. We paid £194.40 for a visit by an electrician, who established the problem had been caused by the oven. Appliances Direct passed us on to Hoover, which said it would send out an engineer to fix the oven. But do we have to put up with a repair? And can we get a refund for the electrician's costs?

Richard Tait

**A** No, Richard doesn't have to put up with a repair. It's only after 30 days have passed from purchase that the seller is allowed to repair or replace defective goods. Before then you're entitled to a full refund.

As for the electrician's fee, we believe Richard's got a good chance of recovering that from Appliances Direct. Strictly speaking, he didn't have to prove the oven was faulty in order to claim a refund, but asking for an electrician's

opinion seems reasonable because a malfunctioning oven is a serious risk.

His case would be stronger had he told Appliances Direct that he was hiring an electrician, but it's long been a legal right that customers shouldn't be out of pocket because they bought faulty goods. This is stated in the explanatory notes to the Consumer Rights Act (note 89 concerning section 19, subsection 5): "If the consumer incurs costs or losses above this amount, they may be able to seek damages for breach of contract". You'll find this at [www.snipca.com/36861](http://www.snipca.com/36861).

Appliances Direct told us it would investigate the case, but there's little to investigate: it should immediately make plans to pick up this oven, inspect it and give Richard his refund, including the electrician's fee.

**CASE ONGOING**

## Why is eBay seller allowed to refuse refund?

**Q** I bought a Freesat box from eBay. It works fine, but I've changed my mind and no longer want it. However, the seller has refused to take it back, and eBay says he's allowed to do this because it wasn't faulty. But don't the distance-selling rules let me return items regardless of whether they're faulty?

William Whittaker

**A** William's right that the distance-selling rules (the Consumer Contract Regulations) let you reject an item for any reason, but they don't apply to private sellers on eBay. Individual sellers aren't bound by the same consumer laws that apply to retailers and sole traders, though that doesn't mean they have free reign to rip you off. They can still be charged with fraud if they try to con you.

The question here is whether William's seller counts as a private individual or sole trader. We've checked his page and from the type and number of items he's selling it's hard to classify him either way. He could argue he's just selling unwanted goods from his home, though buying items to sell on for a profit would make him a sole trader.

**CASE CLOSED**

### CASE UPDATE

## Currys gives cashback after Samsung says no



We hope Samsung got some common sense for Christmas because it sorely lacked it last year when it refused to honour a reader's cashback deal.

As explained in Issue 580, reader Neil Parkinson bought a Samsung TV from Currys, only to then be told that he would get money back if he also bought a Samsung soundbar. He did this, but Samsung refused his cashback claim because the two purchases were on different receipts.

We'd understand Samsung's decision if the receipts were for different days, but they were just minutes apart – Neil bought the soundbar as soon as the Currys assistant told him about the cashback. Yes, technically this might have broken Samsung's terms, but it's crazy that it couldn't override this rule given that it was obvious Neil bought the soundbar because of the cashback.

Samsung blamed Currys, saying the store's assistant should've told Neil that both the TV and soundbar had to be part of the same

transaction. That may be true, but we feel Samsung was being petty in passing the buck.

Currys didn't argue that it was responsible, and agreed to give Neil the money he was entitled to. It took them long enough though – he bought the items in March, but had to wait until November for the cash.

Had Currys refused, Neil could've had a case under the Unfair Trading Regulations, arguing that Currys had told him he would get the cashback despite the purchases counting as separate transactions.



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.

## Can Chinese firm ignore a warranty?

**Q** I bought a new Galaxy S10+ phone from TecoBuy ([www.tecobuy.co.uk](http://www.tecobuy.co.uk)), but there was a problem with the call volume. Samsung was going to fix it, but after giving it the IMEI, I found that TecoBuy's warranty was useless in this country because it's a Chinese company.

Samsung has now told me I'd have to pay for a repair. Is this right?

Andy Poulton



the case is that despite having a .co.uk website address, TecoBuy is a Chinese company, not British. This means its warranty is probably only applicable to China, and possibly some other Asian countries.

Andy can pursue a refund under the Consumer Rights Act, though. TecoBuy may be Chinese, but because it's selling

directly to UK customers it's bound by UK law. However, getting refunds from small Chinese retailers is notoriously difficult. Many firms simply ignore refund requests from UK customers, or ask that they return the item to China, at great expense.

Andy would be entitled to get postage costs back, but we'd understand if he didn't want to take the risk.

The odds are against Andy, but we'll still contact TecoBuy for him. We'll also explain the situation to Samsung, and ask whether it will consider repairing the phone for free.

**CASE ONGOING**

## Is screen warping an inherent fault?

**Q** The Microsoft Surface Book I bought in 2017 is causing me serious concern. The screen is bending and beginning to separate from the body. I consider this a design fault, and therefore inherent, though Microsoft told me it was a problem with the battery. I'm now concerned the screen could short out the laptop or, worse, catch fire. Should I claim a refund or replacement?

Keith Hardy

**A** Keith can ask for either, but because more than six months have passed since purchase he'll have to prove the fault is inherent. To do this, he'll have to pay to have the laptop examined by professionals. If they conclude that it's faulty, Microsoft will have to refund this cost (assuming it agrees with the verdict). We expect that Microsoft will want to examine the laptop itself before making a decision. It really should have done this



before telling Keith that the fault was being caused by the battery. It should also have warned him about the dangers of a malfunctioning battery.

As it stands, Keith is understandably nervous about using the laptop. Cases of

devices catching fire are more common than you might think. Every week London Fire Brigade investigates 24 fires caused by faulty chargers, batteries and cables. It has good advice on staying safe at [www.snipca.com/36863](http://www.snipca.com/36863).

**CASE ONGOING**

### CREDIT WHERE IT'S DUE

## Chillblast built me a replacement PC for free



Reading a five-star review of Chillblast's Fusion Onyx PC in *Computeractive* (Issue 572, page 22), I purchased one in

June. I was impressed with it, but in August the processor fan failed.

I got it working by changing how it was controlled in the BIOS but I still contacted Chillblast about the fault.

Chillblast said that if I returned the PC they would put it right. As a man of some years (77) who relies on his PC for all

sorts, I was reluctant to do this, not least because I had five hard drives in the machine with all sorts of family stuff on them.

To cut a long story short, Chillblast built me a replacement PC for free.

They upgraded the case and motherboard to better accommodate all my drives and installed a higher-rated power supply. Companies should not only be judged by their products, but also by how they react when things go wrong.

Chillblast could not have reacted better.

James A Beston



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

**Contact  
Chillblast**

- **Email** [support@chillblast.com](mailto:support@chillblast.com)
- **Phone** 01202 068333

# Grow Your Family Tree



If you want to know where your ancestors served during World War One, follow **Nick Peers'** advice to...

## Download regiments' unit diaries

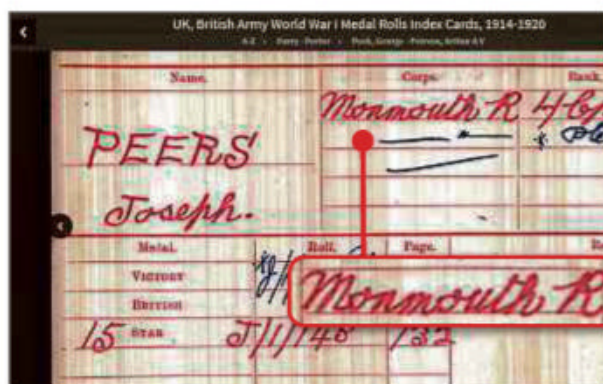
There are plenty of records chronicling the service of our ancestors during the two world wars, but one overlooked – and fascinating – resource is their regimental war diaries, which provide a detailed timeline of where (and when) they served.

Most World War One diaries have been digitised as online PDFs in The National Archives, so that's what we'll focus on here. Ordinarily they cost £3.50 per volume, but charges have been waived during the coronavirus pandemic, so there's never been a better time to investigate them.

Diaries from World War Two have yet to be digitised, so to read them you'll need to visit The National Archives in Kew. Before you do though, visit [www.snipca.com/36828](http://www.snipca.com/36828) to identify which unit your ancestor served in.

### Identify your ancestor's unit

Every unit kept a diary of its operations, movements, and other useful information, spread across multiple volumes. To start, you need to find out which unit your ancestor belonged to. This research involves visiting FamilySearch ([www.snipca.com/36830](http://www.snipca.com/36830)) and looking through its links to other



Nick used Ancestry to discover that his great-granduncle served in the Monmouthshire Regiment during World War One

sources online. Dive into the medal cards, pension records, casualty lists and – if it survived the Blitz – your ancestor's personal service record. You'll probably find multiple potential matches, so you'll need to do some detective work to identify the correct person.

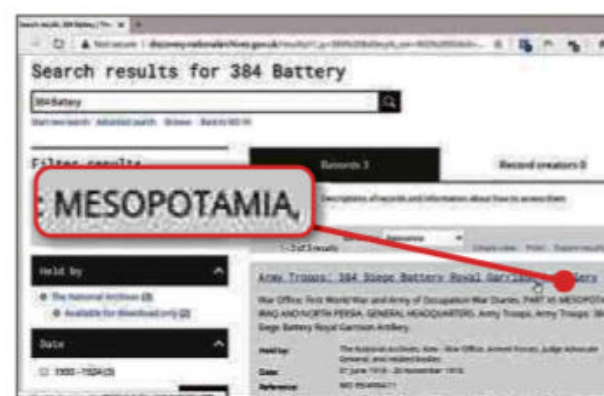
If you can find their personal service record (free to search at [www.snipca.com/36831](http://www.snipca.com/36831)), you'll find enough personal information to confirm the match. Otherwise, look for names that joined regiments local to where your ancestor lived in the 1911 census – for example, I identified my great-granduncle Joseph Peers from his medal record on Ancestry, which showed that served in the Monmouthshire Regiment (see screenshot above).

### Get diaries for Gallipoli and elsewhere

If your ancestor fought in Gallipoli (also called the Dardanelles campaign), their records are held in Ancestry (subscription required, search at [www.snipca.com/36833](http://www.snipca.com/36833)). To get diaries for units fighting elsewhere in Europe or further afield, go to <https://discovery.nationalarchives.gov.uk> and click 'Register' to sign up for a free account, or 'Sign in' if you already have one.

Once you've done that, go to [www.snipca.com/36832](http://www.snipca.com/36832) to search using a combination of your ancestor's regiment and their division number. For instance, my great-grandfather Percy Pink served in the 384th Siege Battery for the Royal Garrison Artillery. Typing **384 Battery** into the search box revealed two diaries covering its time in Mesopotamia from August 1917 to November 1918, as shown in our screenshot below.

Individual unit war diaries are relatively easy to find using The National Archives' search engine. Once you've found a match, click it to open a summary page, then click the 'Add to basket' button. Scroll back to the top of the page then click 'Your search results' to return to the results page and add further volumes if necessary. Once you've added your items, click 'Go to basket' followed by Checkout and make your payment.



Searching on the National Archives, Nick found out that his great-grandfather's regiment served in Mesopotamia

## Your Genealogy Problems Solved

I'm trying to flesh out the Welsh branch of my family tree, but I'm struggling for precise dates for births, marriages, and deaths. Can you suggest any useful sources?

Dave Barlow

Ancestry.co.uk has recently added a large collection of baptisms, marriages and burials for Anglican churches in Wales from 1560 to 1994 – visit [www.snipca.com/36820](http://www.snipca.com/36820).

Ancestors who worshipped in chapel rather than church may also appear in the Non-Conformist and Non-Parochial Registers ([www.snipca.com/36821](http://www.snipca.com/36821)). You can also search and view transcriptions of the non-conformist records for free at FamilySearch ([www.snipca.com/36822](http://www.snipca.com/36822)).

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.



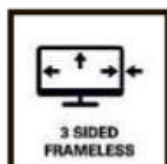
AOC



Q34E2A

# High resolution and bold colours

with a wider view  
& greater productivity



eu.aoc.com

Available at

amazon



laptopsdirect >



ebuyer.com





# Best Free Software

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

## IMAGE VIEWER

### ImageGlass 8

<https://imageglass.org>

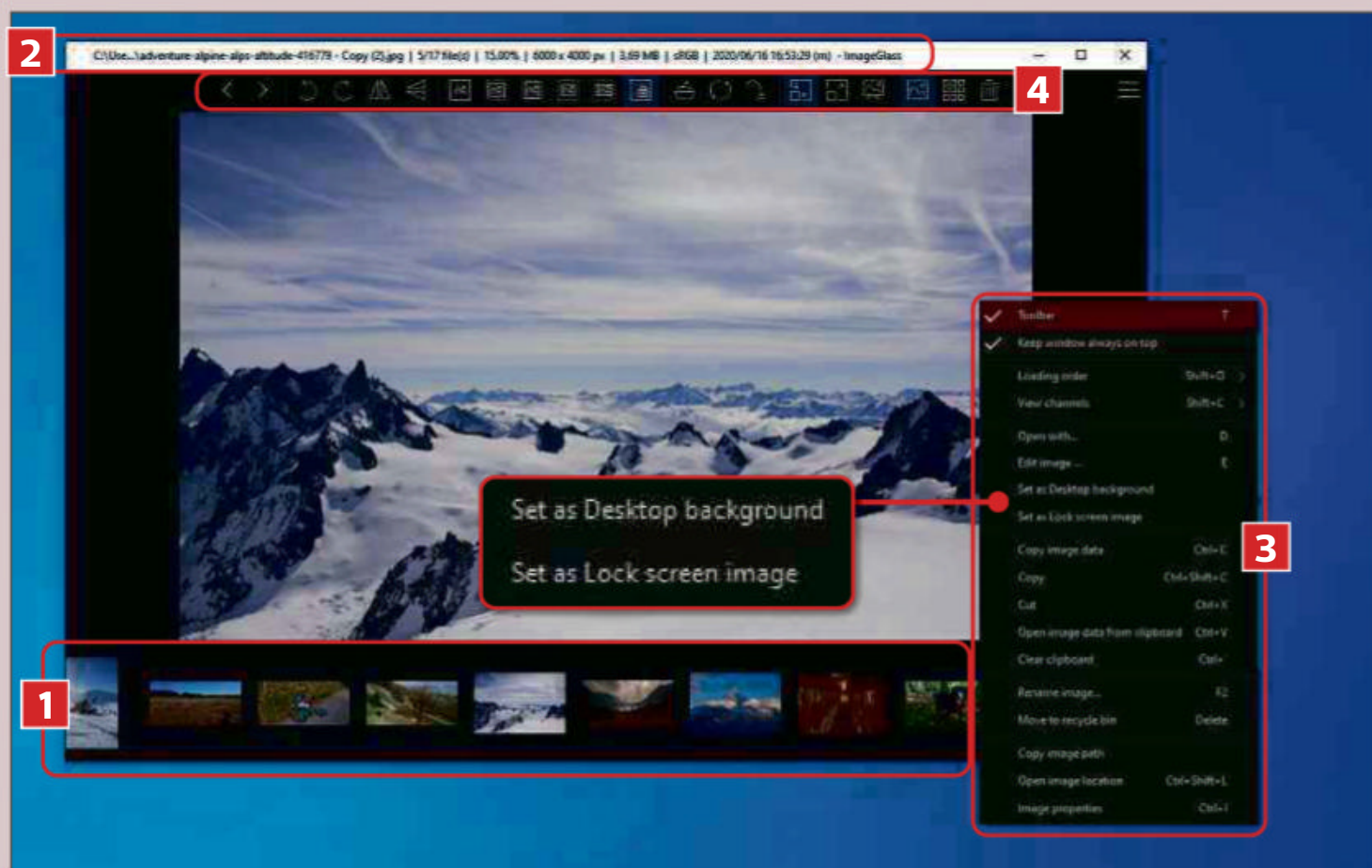
**What you need:** Windows 7, 8.1 or 10

Whereas tools such as GIMP ([www.gimp.org](http://www.gimp.org)) and Paint.NET ([www.getpaint.net](http://www.getpaint.net)) focus on improving your photos and other images, ImageGlass concentrates on letting you open and view them. The program is small (under 40MB) and responds quickly when opening photos and moving between them.

If you want your photos shown in all their glory you can view them in a borderless window by hiding the ImageGlass toolbars, or use the full-screen mode (as explained below). Format support is excellent, with ImageGlass able to open more than 70 formats, including the RAW formats used by most digital cameras (photos saved without any image processing, such as white balance). Version 8 not only adds support for CR3 images (Canon's latest raw format), but also speeds up the loading of raw files. It took us just two seconds to open a NEF image (Nikon's raw format); the

same file took more than twice this time in the previous release. Other newly supported formats include JP2 (also known as JPEG 2000) and the HEIF format used by the latest iPhones and iPads.

This version also adds a new feature that lets you view EXIF data embedded in your photos (the camera settings, location and so on) by pressing X. To display this ImageGlass uses ExifTool (as we recommended in Issue 595, page 20). Annoyingly, you have to download this separately from <https://exiftool.org>, then tell ImageGlass where to find it on your hard drive. We also found it took around 10 seconds for the EXIF data to appear. So while it's useful to be able to view EXIF data in ImageGlass, we'd like to see the process improved in a future release.



**1** To view images, drag them into the ImageGlass window. If you drag multiple images, you can see thumbnails along the bottom by pressing H or clicking the 'Thumbnail panel' button in the toolbar.

**2** The ImageGlass title bar displays information relating to the currently selected image, including its resolution, size, date and folder location. If you want to hide this, press F10.

**3** Right-click an image to see more options, including to set it as your desktop background or lock-screen image, send it to your favourite image-editing program, and open the folder in which it's located.

**4** The toolbar lets you flip the selected image, change the zoom level and adjust the ImageGlass window to fit. Press T to hide this toolbar.





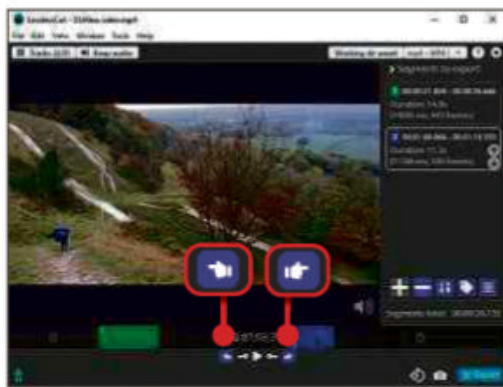
## VIDEO EDITOR

### LosslessCut 3.3

[www.snipca.com/37010](http://www.snipca.com/37010)

**What you need:** Windows 7, 8w.1 or 10

LosslessCut (download the 'LosslessCut-win.exe' file from the link above) lets you quickly trim a long video down to either a single clip or multiple clips. As its name suggests, the tool is lossless, which means the quality of your video won't be reduced during the trimming process. It's received a raft of updates over the past few months, with the most noticeable being a vastly improved design. The confusing array of buttons that blighted previous releases has been replaced with a more simple approach, letting you mark the sections you want to trim by selecting them on the timeline, then clicking the hand buttons (left button to mark the start of the clip, right for the end – see screenshot above). Your clips will then appear down the right-hand side of the window. To save them, click Export.



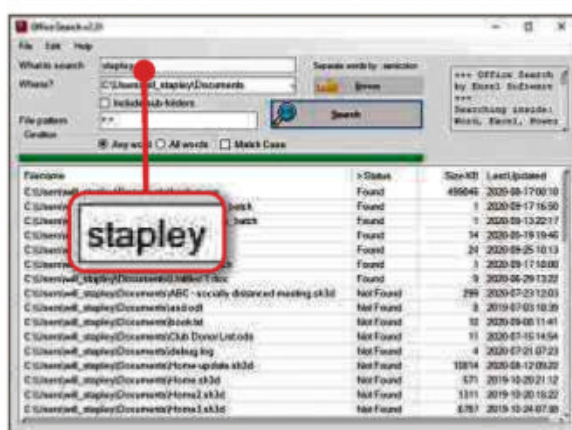
## FILE MANAGEMENT

### Office Search

[www.snipca.com/37020](http://www.snipca.com/37020)

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

When you want to search for a file based on its name, you can't get better than Everything ([www.voidtools.com](http://www.voidtools.com)). However, one thing Everything can't do is search the contents of your files, such as a word or phrase in a document. For this, use Office Search, which can search all office documents (including those in Microsoft Office and LibreOffice). Simply type your search term at the top (see screenshot), specify where you want to search and whether Office Search should also look in sub-folders, then click Search. After a few seconds, the results will appear in the bottom section. By default, Office Search returns results for all files in the location you specified, including those that don't match your search term. To narrow it down to matches only, press F9.



## WHAT SHOULD I DOWNLOAD?

We tell you what software & apps to use

### What can I use to scan CD and DVD barcodes?

**Q** I have a substantial collection of CDs and DVDs. Is there a program that will let me create a searchable database by scanning their barcodes, possibly even allowing me to then export it to Excel?

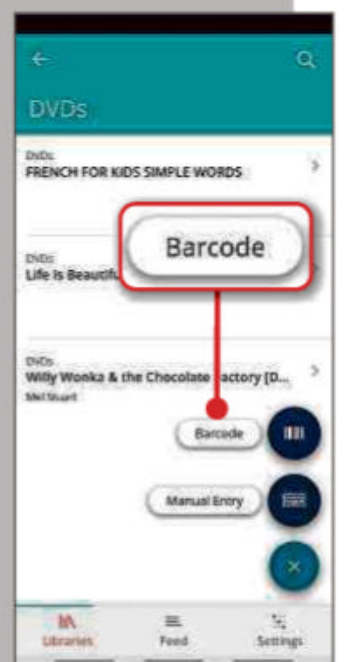
Ian Fradgley

**A** Libib is without doubt the best tool for this, letting you catalogue not only your CDs and DVDs, but also your book collection. The free version lets you create a database of up to 5,000 items. If you want to store more than this (and get extra features such as the ability to mark items as being loaned out), you'll need to pay £6.67 per month for the Pro version.

To get started, register for a free account at [www.libib.com](http://www.libib.com), then download the app (it's available for iOS and Android devices from [www.libib.com/apps](http://www.libib.com/apps)) and log in.

It's best to create individual libraries for each collection, so tap the circular Add button, give your library a name (such as 'DVDs'), then choose its type. Unless you want this library to be visible to other Libib users, make sure the Make Library Public box is unticked. Tap 'Submit' to create the library, then the circular '+' button followed by Barcode (see screenshot) to start adding your DVDs (if you haven't already, you'll be prompted to give the app permission to use your phone's camera). Now scan the first barcode. Libib will emit a beep, display the DVD the barcode relates to and add it to your library. Tap 'Scan Another Item' to move on to the next DVD. In our tests, it was impressively accurate, even recognising relatively obscure titles such as 'French for Kids'. You can search your collection by selecting the relevant library, then tapping the magnifying glass button.

To export your library to a spreadsheet, log into your account via your PC's browser, click Settings from the left sidebar, then select the Libraries tab followed by 'Export Library (.csv)'. Select the library you want to export, then click Export Library. Your library will now download as a CSV file, which you can open in any spreadsheet program.



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...

# Bitwarden



Will Stapley reveals how Bitwarden persuaded him to leave LastPass behind

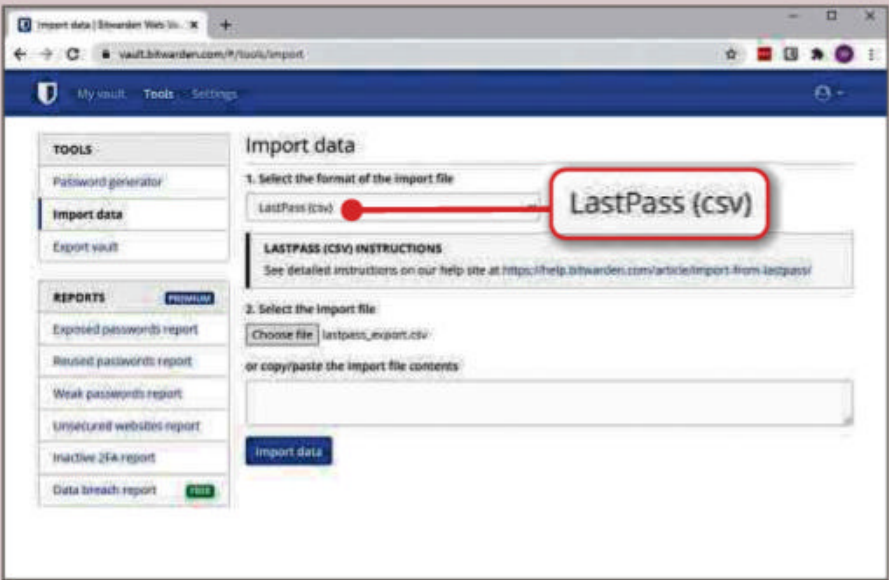
Sometimes switching is easy. I've lost count of the number of times I've changed utility provider - it's quick, saves me money and I appear to get the same gas and electricity no matter who I pay for it. Switching password managers requires a bit more thought.

On this page a little over two years ago (Issue 543 to be exact), I explained how I use LastPass ([www.lastpass.com](http://www.lastpass.com)) to securely store my passwords. Having recently grown frustrated at LastPass (particularly the mobile app, which repeatedly fails to fill in my passwords), I knew it was time to look elsewhere.

But choosing another company with which to entrust passwords for my entire digital life proved difficult. Eventually, I settled on Bitwarden ([www.bitwarden.com](http://www.bitwarden.com)). Its free version lets me store unlimited passwords and sync them to all my devices. Sounds perfect.

What appealed to me most about Bitwarden was that, unlike LastPass and most other online password managers, it's **open-source**, which means the **code** underpinning the service is open to inspection. I don't intend to sift through it line by line, but I'm confident that if the company was up to no good (such as inserting a **backdoor** that let its employees snoop on my passwords), it wouldn't take long for the open-source community to spot this.

After I'd evaluated Bitwarden by testing it out with a handful of my passwords, I decided to make the leap and transfer all passwords from



Bitwarden imported Will's LastPass database without a hitch

LastPass. This involved logging into my LastPass account, selecting More Options, Advanced, then Export. My entire database was then saved as a **CSV** file. LastPass had frequently warned me that some of my passwords were insecure or replicated, but it was only after seeing them all in a single spreadsheet that I realised how bad things were (shockingly, 64 of them were identical).

After making a mental note to change these, I imported the list into Bitwarden by selecting Tools, 'Import data', then choosing LastPass as the format (see screenshot above), telling it where to find the CSV file, then clicking 'Import data'.

Despite Bitwarden warning that errors can occur when importing LastPass databases (see [www.snipca.com/36943](http://www.snipca.com/36943)), I had no such problems - it even imported secure notes I'd created in LastPass. Better still, once I'd installed the app for my phone and tablet (

Bitwarden will enter your passwords into mobile apps, but you need to tell your phone to use it

[www.snipca.com/36944](http://www.snipca.com/36944)), I was delighted to discover it logged me into all my apps flawlessly. At least it did once I'd remembered to switch my Samsung S8 phone's Autofill option from LastPass to Bitwarden (by tapping Settings, 'Language and input', 'Autofill service', then selecting Bitwarden - see screenshot above).

Finally, if you're tempted to make a similar switch, be sure to securely delete the CSV file downloaded by your existing password manager once you've imported it to Bitwarden. Because deleted files can easily be recovered, I recommend obliterating it using a tool like Eraser (<https://eraser.heidi.ie> - see Issue 594, page 40).

WHAT I'D LIKE TO SEE IN BITWARDEN

The free version of Bitwarden doesn't let you share passwords with another person, which can be useful when storing a password for a joint shopping

account, for example. For this, you need to upgrade to a Family licence (£30 per year). I'd like to see Bitwarden allow sharing with one person in the free version.



# Named & Shamed



Jonathan Parkyn puts the boot into tech villains, jargon-spouting companies and software stuffed with junk

## WARNING: JUNK AHEAD

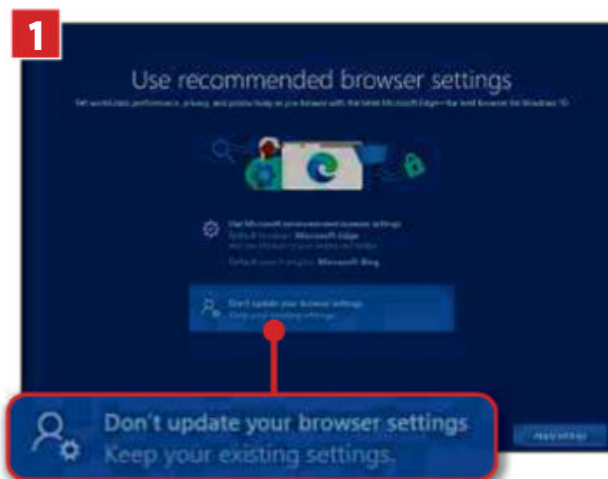
Junk offender: Windows 10 adverts

**W**indows 10 is a brilliant operating system, but if there's one thing that annoys me, it's the adverts. Just when I think I've blocked all the ads from the lock screen, Start menu, Action Centre, live tiles and so on, Microsoft finds new ways to hit me with the hard sell – this time, it's via the Settings app.



Since the October 2020 Update, you may have noticed a new banner in the Settings home page saying 'Get even more out of Windows'. Click the 'Let's Go!' button and you'll be taken to a full-screen prompt inviting you to finish setting up your computer.

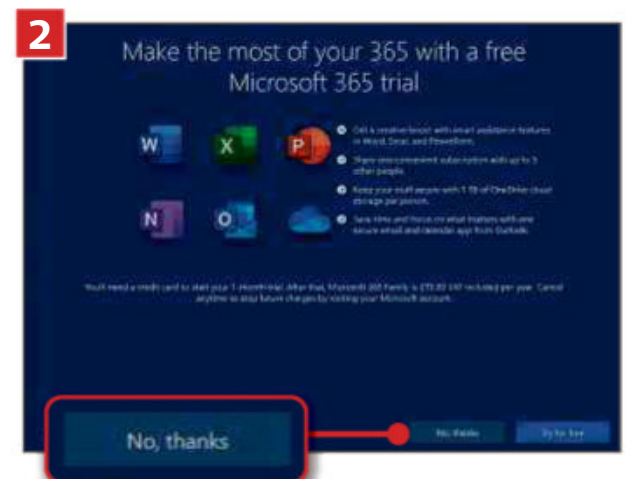
Similar screens often appear after Windows updates, but there are a couple of new things to watch out for this time. The first is a screen that tries to get you to set Edge as your default browser and Bing as your default search engine. These are Microsoft's "recommended" browser settings and they're pre-selected by default. You'll need to select 'Don't update your



**Click 'Don't update your browser settings' to stop Microsoft changing your default browser and search engine**

browser settings' (see screenshot **1**), then click 'Apply settings' if you want to keep your existing settings. It's easy to click the wrong thing here and end up with Microsoft's choices instead of your own.

Click through the prompts and you'll eventually come across a full-screen advert for the company's paid-for subscription service Microsoft 365, tempting you with a free trial. The ad is targeted, too – you'll only see this if you're not already a subscriber. Take



**No thanks Microsoft, we'd rather spend the £80 on something else**

care to click 'No, thanks' (see screenshot **2**) or you could inadvertently sign yourself up to paying Microsoft £80 a year for something you don't want.

If these tactics sound familiar, that's because they're precisely the sort of cheap tricks I regularly rebuke sneaky software developers for using in their dodgy installers: preselected options, unwanted browser changes and nag screens that attempt to sell unwanted tools and services. But Microsoft should know better.

### WHAT ARE THEY TALKING ABOUT?

**WHAT THEY SAY**  
Apple: [www.snipca.com/36947](http://www.snipca.com/36947)

"AirPods Max combine a custom acoustic design, H1 chips, and advanced software to power computational audio for a breakthrough listening experience with Adaptive EQ, Active Noise Cancellation, Transparency mode, and spatial audio."

### WHAT THEY MEAN

We will blind you with jargon to convince you these headphones are worth £549.



### JONATHAN'S VILLAIN OF THE FORTNIGHT

## PayPal



It seems that PayPal and I disagree on the definition of the word 'reward'. To me, a reward is something positive you're given in return for an achievement of some kind. But for PayPal it's a meaningless, empty promise you make to people in order to trick them into using your service.

At least, that's according to the Advertising Standards Authority (ASA), which recently upheld a complaint against PayPal for an email it sent to

customers in September 2020 boasting 'Here's a £10 reward for you!'. However, what the email didn't make clear (unless you scrolled down to the very small print) was that the offer was available only to the first 28,527 people to respond.

The ASA rightly ruled that this marketing trickery was "misleading" ([www.snipca.com/36945](http://www.snipca.com/36945)), and told PayPal not to misbehave again. We'll be watching.



**LAPTOP** | From £930 from HP [www.snipca.com/36941](http://www.snipca.com/36941)

## HP EliteBook 845 G7

### Hard case

We've got a double-whammy of HP PCs on review in this issue. If you're after a solid, powerful laptop, read on. However, we've also tested an interesting mini desktop PC on the page opposite, if you'd prefer a small compact computer that's permanently attached to a monitor.

Back to this EliteBook, which comes in a sturdy, all-metal chassis, so should be able to take a knock or two. It weighs 1.39kg, which is reasonably light considering its solidity. It has two **USB-C** ports (pictured below), both of which can be used for charging, and a pair of standard USB 3.1 ports on the other side. The only omission of note is an Ethernet port, should you want to connect to a wired network, though you can easily fix this with a USB-C adapter.

**“Impressive screen and performance levels combined with a brilliant battery life”**

The keyboard is quiet and backlit but unexceptional. While HP has given the keys plenty of **travel**, they don't have the tactile pushback of the best keyboards. The touchpad's smooth finish makes it pleasant to use, however.

We were impressed with the speakers that have been squeezed on to the keyboard's edges. Unusually for such a slim laptop, there's enough bass to make music easy to listen to and it can reach a decent volume level without distortion. We were disappointed with the microphone and webcam, though. There's an echo when recording through the mic, while video feeds are drab and fuzzy, far below what we'd expect now that video



chats have become such a key part of our lives.

HP produces the 845 with four different screen types. We tested the Sure View model, which narrows the viewing angle of the screen at the press of a button, so that only the person who's using the laptop can see what's on it. Despite this view-limiting technology, the screen performed well in our tests, producing 95.6 per cent of colours in the **sRGB** range, with a **Delta E** score of 0.85, which is impressive.

We have to put a word of warning in here, however. The cheapest model comes with a screen that isn't very bright (it's rated at 250cd/m<sup>2</sup> rather than 400cd/m<sup>2</sup>) and we suspect that won't be as good as this one, so make sure you're getting the specification you want when you buy.

We have no reservations about performance, however. It's powered by an eight-core AMD Ryzen 7 Pro 4750U processor and can be upgraded to 16GB of RAM (pushing the price up to £1,126). However, the results seem worth it. Compared with other laptops we've tested recently, it's fast, with a multi-core

**benchmark** test score of 6,449. This is faster than the Microsoft Surface Go Laptop (see our review, Issue 596), which only managed 3,302, but isn't as fast as the MacBook Pro 13 (also see Issue 596), which scored 7,343.

It powered through our video-playback battery test, lasting 12 hours 43 minutes, which is a brilliant result for a laptop, making this a particularly suitable model if you need to use it when you're away from power sockets.

### SPECIFICATIONS

Eight-core AMD Ryzen 7 Pro 4750U processor • 8 or 16GB memory • 256GB M.2 PCIe SSD or 256GB SSD • 2x USB-C ports • 2x USB-A 3.1 ports • HDMI port • 802.11ax Wi-Fi • Windows 10 Pro • 17.9x323x215mm (HxWxD) • One-year warranty [www.snipca.com/36941](http://www.snipca.com/36941)

**VERDICT** This is a sturdy and strong laptop with a powerful processor, but make sure you choose the model with the best screen

★★★★★

### ALTERNATIVE

Honor MagicBook 14 **£549** A more affordable laptop that's still a great little performer





**MINI PC** | £479 from TechnoWorld [www.snipca.com/36946](http://www.snipca.com/36946)

## HP EliteDesk 705

Make space



Most desktop PCs come in tower cases, but if you're short on space they can take up way too much room on or under your desk. You can still have a desktop PC, however, if you opt for a mini PC.

HP's EliteDesk 705 is an unobtrusive little box, sitting 34mm covering a surface area of 177x175mm. It can sit flat or on its side using the supplied stand. If you have a compatible monitor, it even has the option of screwing into a standard monitor mounting on the back (known as VESA, after the Video Electronics Standards Association that came up with the specification for it).

“Decent space-saving PC for everyday Windows tasks on the latest Wi-Fi standard”

It can be difficult to access the internals of some smaller PCs but HP keeps it nice and easy, with a single thumb screw securing a sliding cover. Inside it's neatly laid out with easy access to key components. This includes a spare 2.5in SATA drive bay ready for extra storage, which itself unscrews to reveal the M.2 slot used for the main SSD. In our review unit, this was a 256GB Western Digital PC SN720 NVMe SSD, which proved to be

nippy enough in our benchmark tests, though there are quicker SSDs around.

The fan module that keeps the PC cool also flips up to reveal two memory slots. Our review unit came with a single 8GB memory module, so there's room for upgrading later if you need to.

It comes with a quad-core Ryzen 5 Pro 3400GE processor, which includes integrated Radeon Vega 11 graphics. It achieved a capable result in our Windows tests, but it's best reserved for web browsing and standard Windows jobs rather than playing demanding games.

For such a small case it offers a decent range of ports. The front panel includes two USB 3.1 ports, a USB-C port and two 3.5mm sockets for headphones and microphone. On the back (pictured below) there's four more USB 3.1 ports, two DisplayPort outputs and an Ethernet port. It doesn't have an HDMI port as standard, though it is available as an option, but it's worth making sure your monitor can accommodate a DisplayPort connection before you buy.

There's also support for the latest Wi-Fi 6 standard – offering a handy bit of future-proofing – as well as Bluetooth 5 and Windows 10 Pro pre-installed.

### SPECIFICATIONS

AMD Ryzen 5 Pro 3400GE processor • 8GB memory • 256GB SSD • 802.11ax Wi-Fi • Bluetooth 5 • 2x DisplayPort outputs • 2x USB-C ports • 6x USB 3.1 ports • 34x177x175mm (HxWxD) • 1.3kg • Five-year warranty [www.snipca.com/36946](http://www.snipca.com/36946)



### HOW WE TEST

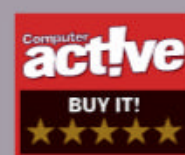
Computeractive is owned by Dennis Publishing, which employs a team of specialist technical reviewers. You'll often read references to our benchmark testing, which is a method of assessing products using the same criteria. For example, we test the speed of every PC and the battery life of every phone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

Dennis Publishing also owns the magazines *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** Small and affordable, this is a useful PC for anyone with limited space, but it's best with undemanding Windows software

★★★★★

**ALTERNATIVE** Asus Mini PC PN50 £320 A barebones alternative for those who prefer to choose their own memory and storage





PC MONITOR | £450 from Amazon [www.snipca.com/36993](http://www.snipca.com/36993)

## Philips 279C9

### Full screen ahead

We're used to seeing 4K resolution (3840x2160 pixels) in large TVs, but it's becoming increasingly common in PC monitors, too. This 27in display is a good example, with a generous screen size to cope with lots of open windows, without getting so big and bulky that it won't fit on the average desk. It also has a built-in USB-C hub, so you can easily connect laptops and additional peripherals. Taken together, this makes its significant £450 price look more reasonable.

The screen sits on a fully adjustable stand. It can swivel 350 degrees, tilt through 25 degrees, pivot 90 degrees into a portrait orientation, and raise horizontally by up to 130mm. The stand works well with the screen's slim bezels to give the whole package a sleek and stylish look.

“Impressive screen quality, stylish design and ample inputs make it worth the price”

The screen is an IPS panel that's certified to the HDR 400 standard, which essentially means it's guaranteed to produce a decent level of contrast when displaying images with particularly bright and dark sections. However, we couldn't get the monitor to launch its HDR mode from our test PCs despite having the Philips driver software installed, though it did kick in when we connected an Amazon Fire TV Stick 4K into one of its HDMI ports. Films looked great even without the HDR mode activated, but note that it doesn't have built-in speakers, so you'll need another speaker system connected if you

#### SPECIFICATIONS

27in IPS screen • 3840x2160-pixels resolution • 75Hz refresh rate • 5ms response time • 2x HDMI ports • 1x DisplayPort • 1x USB-C port • 4-port USB hub • AMD FreeSync • 527-655x612x218 (HxWxD) • 5.9kg • Two-year warranty [www.snipca.com/36993](http://www.snipca.com/36993)



want to hear anything.

It has AMD's FreeSync technology, so people with AMD graphics hardware will find their games look better, because the refresh rates of the monitor and graphics hardware are perfectly synchronised. Having said that, although the screen can refresh at up to 75Hz at lower resolutions, it's capped at 60Hz if you're using the full 4K resolution. Its five-millisecond response rate is fine for media and general Windows work, but if you're looking for a gaming monitor you should look for a model with a better lower response rate.

Quality-wise, the monitor sailed through our technical tests. In its sRGB preset we recorded a brightness of 312cd/m2 and it reproduced 96.2 per cent of the sRGB colour standard. With an average Delta E score of 0.3 you can be certain that the colours you're seeing on screen are the colours that your PC is trying to show you.

You can squeeze a wider palette of colours out of it by switching to one of Philips' Smart Image presets. These are based on the DCI-P3 colour standard, which has around 25 per cent more colours than sRGB, so makes images look even more realistic.

The back of the monitor has an ample supply of inputs, with a DisplayPort and two HDMI ports. It has a USB-C port that

can output 65W of power, so it's

capable of charging a laptop at the same time as providing it with a larger screen. There are also four standard USB ports connected to the USB-C port as a hub, so you can keep your keyboard, mouse and more permanently connected, as long as the monitor and the PC aren't connected by USB-C.

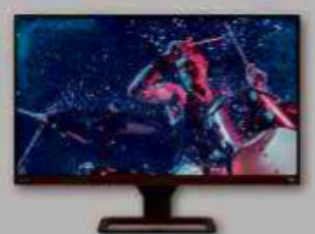
We weren't immediate fans of the onscreen settings, which are controlled using a mini joystick positioned underneath the bottom bezel. Once we'd adjusted to the logic of the control system, though, we found ourselves whizzing through the settings with only occasional missteps.

**VERDICT** This isn't the cheapest 27in monitor but it's worth it for the combination of good quality, 4K resolution and USB-C hub

★★★★★

**ALTERNATIVE** BenQ EW2780U

£450 A similar screen but this model lacks the adjustable stand and looks less stylish





**ROUTER** | £89 from Amazon [www.snipca.com/36927](http://www.snipca.com/36927)

## D-Link DIR-X1860

### Down to the wire

More and more smartphones and laptops are coming with Wi-Fi 6 (also known as **802.11ax**). The router your ISP supplied almost certainly doesn't support the standard, so if you want the fastest speeds from your newest devices, you're going to have to upgrade. One option is this D-Link DIR-X1860 router, which is an affordable and feature-packed alternative to the Honor Router 3 (see our review, Issue 594).

### “Feature-rich Wi-Fi 6 router performs well at close range”

The first thing to note is that there's no built-in modem on this model, so you'll have to wire it to your existing internet connection using an Ethernet cable. This doesn't have to be complicated – you simply shut down the Wi-Fi on your old router and use the new Wi-Fi network instead. The D-Link is 'backwards compatible' with older Wi-Fi networks, meaning you won't lose access to gadgets that don't have Wi-Fi 6 built in.

The case is modest, measuring 224x166mm with a moderate curved hump. On the front, four **LEDs** glow white to indicate that the power is on, the internet is connected and your **2.4GHz** and 5GHz networks are up and running. At the back, four Gigabit Ethernet sockets are joined by a bright yellow Gigabit **WAN** port (pictured below) that lets you connect to your existing network. Unfortunately, there's no USB port.



You control the device from its browser-based web portal. This offers a simple **firewall**, which you can use to impose blocks and filters for all connected devices, and tools for routing traffic through a compatible **VPN**. You can assign priorities to different devices by dragging and dropping, and use Alexa or Google Assistant to control the guest network and reboot the router. You can use the basic parental controls to block selected devices on a weekly schedule.

It performed well in our tests at home on the Wi-Fi 6 network, particularly at close range. It dropped off a little over distance compared with more expensive routers, but then so did the Honor Router 3. The D-Link also performed well when using the Wi-Fi 5 (**802.11ac**) network, making it a useful bridge between Wi-Fi 5 and 6 if you have a combination of devices.

#### SPECIFICATIONS

802.11ax Wi-Fi router • 5x Gigabit Ethernet ports (including 1x WAN) • 65x224x166mm HxDxW • 525g • Two-year warranty [www.snipca.com/36927](http://www.snipca.com/36927)

**VERDICT** An affordable Wi-Fi 6 router that's packed with options, but its networking strength drops at long range



#### ALTERNATIVE

Honor Router 3  
**£50** Cheaper but lacking the D-Link's impressive collection of tools and features



### CHOOSE THE RIGHT SPECS

#### Wired networking



##### What does it do?

Creates a wired network between your router and PCs using Ethernet cable. It's faster, more secure and less prone to interference from neighbouring networks than Wi-Fi.

##### How does it work?

Originally developed at US printer manufacturer Xerox in the 1970s, the Ethernet standard now uses fibre-optic cables to transfer data from one PC to another. This is efficient and can operate over long distances without problems. The downside is that you have to trail cables between connected devices.

##### What are the specs?

Ethernet originally transferred data at 10Mbps. Nowadays most modern devices come with Gigabit Ethernet, which can transfer data at a rate of 1Gbps (1,000Mbps). You won't get this rate of transfer, however, unless the hardware at both ends supports the standard, and you're using a Category 5e cable or better. Some older devices might be stuck with Fast Ethernet, sometimes called 100Base-T, which at 100Mbps is significantly slower. This needs a Category 5 ethernet cable.

If you want to future-proof yourself, it's worth considering the 10GbE standard, which operates at 10Gbps. Again, you need compatible hardware at both ends of your connection and you'll need to use a Category 6 cable.

##### Can I change it later?

You can't swap the ports on a router or a laptop – you'll need new equipment that's compatible with the standard you require. However, you could set up a super-fast 10GbE corner of your network with a switch, such as the Zyxel XGS1010-12 (£133 from [www.snipca.com/36931](http://www.snipca.com/36931)). If you have a desktop PC, you can fit a faster Ethernet network port with an expansion card, such as the Asus XG-C100C PCI-E Network Interface Card (£88 from [www.snipca.com/36932](http://www.snipca.com/36932), pictured).





**SMART SPEAKER** | £99 from Apple [www.snipca.com/36934](http://www.snipca.com/36934)

## Apple HomePod mini

Siri, it just isn't good enough

Apple usually charges a fortune for its products, so it was a pleasant surprise when it announced the £99 price tag of this smart speaker. It's clearly intended to compete with Amazon's £90 Echo (see our review, Issue 594) and Google's £90 Nest Audio (see Issue 593), as it performs a similar job.

It can play music, radio and podcasts; control smart home devices such as lights and smart plugs; and answer basic questions about the weather or traffic conditions. It integrates well with iOS, so you can do clever tricks such as transcribe voice notes straight to the Notes app.

The speaker punches well above its weight when it comes to sound quality, thanks to clever internal engineering (pictured below) that adapts the sound to



its surroundings. We played a variety of music and it performed admirably given its diminutive size.

Smart speakers aren't just about sound quality, though, and Apple's reliance on Siri stops this device from getting the better of Amazon and Google's alternatives. Siri just isn't as good at answering questions as Google is, and it doesn't have the breadth of features, such as two-way conversations, that Amazon's system offers.

Apple insists on pushing its own music services and, bewilderingly, this doesn't come with built-in Spotify support, or the ability to play audio directly from BBC Sounds or Audible. You could start them streaming on an iPhone or iPad and transfer the stream over to the speaker, but a *smart* speaker should do this without having to revert to your mobile device.

In typical Apple fashion, you can't connect to the device from anything other than an iPhone or iPad, as there's no open Bluetooth connection and no 3.5mm socket. In fact, you can't even set it up without an iOS device, but to its credit, Apple uses this to make this process gloriously smooth and simple.

It's wrapped in smart-looking white or grey textured fabric. You can tap the plus



and minus symbols on either side of its top button to adjust volume up and down, while a series of taps in the centre lets you perform various actions including pausing and skipping tracks.

### SPECIFICATIONS

802.11n Wi-Fi • Single speaker • 4x microphones • Mains adapter • Requires Wi-Fi, Apple device with latest version of iOS/iPadOS • 84x98x98mm • 345g • One-year warranty [www.snipca.com/36934](http://www.snipca.com/36934)

**VERDICT** This is a great sounding smart speaker but it's over-reliant on Apple's devices, audio services and voice assistant

★★★★★

### ALTERNATIVE

Google Nest Audio  
£90 Google's smart speaker is slightly cheaper and considerably more intelligent



### WHAT SHOULD I BUY?

We solve your buying dilemmas

## How do I replace my Roku remote control?

**Q**

My Roku controller (pictured) stopped working over Christmas. I'm not sure what happened to it but I suspect it had some drinks spilled on it. My grandchildren saved the day, introducing me to the phone app, but it would be far more convenient to have a physical remote control. What options are available to me?

Guy Roberts



**A**

The best place to explore Roku remote controls is ebay ([www.ebay.co.uk](http://www.ebay.co.uk)), where you'll find brand new remotes for around £6 including delivery.

If your Roku streaming device is one of the infra-red models, such as the Roku Express, it should work with any universal remote control. However, there are models specifically designed for this kind of device. Our favourite is the One For All Streamer Remote (£16 from [www.snipca.com/36936](http://www.snipca.com/36936)), which

you can also use to control your TV and one other device.

If money is less of a barrier and you'd like a universal controller for all streaming services, Sky, TV sets and smart devices in your living room, take a look at the Logitech Harmony Elite (£279 from [www.snipca.com/36935](http://www.snipca.com/36935)). The obvious downside is that you could buy nine new Roku devices for the same amount.



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





£499.99

**Impulse**

## AMD IMPULSE (RYZ7)

AMD Ryzen 5 2600 - 6 Cores (O.C 4Ghz)

ASUS PRIME B450M-A

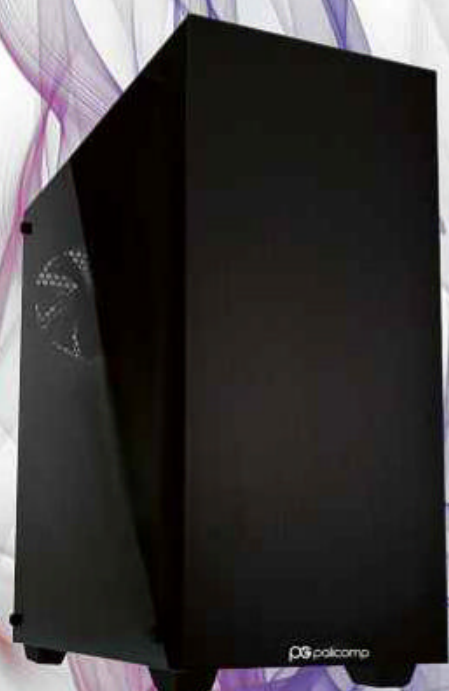
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# Reviews

**EARBUDS** | £165 from Amazon [www.snipca.com/36949](http://www.snipca.com/36949)

## Jabra Elite Active 75t

They fit right in

Jabra's Elite Active 75t wireless earbuds are designed for wearing during exercise. In the package you get the two earbuds, a charging case, three sets of silicone eartips and a **USB-C** charging cable, all in your choice of six colours.

The earbuds use Bluetooth 5 and can be connected to two devices simultaneously. They're capable of active noise cancellation (**ANC**), but it's been added as a last-minute software update, so needs setting up in the free Jabra app.

Battery life depends on whether you have ANC on or not. With it switched on, expect up to five-and-a-half hours of listening at moderate volume. Turn it off

### SPECIFICATIONS

In-ear headphones • 6mm speakers • Bluetooth 5  
• IP57 weather-proofing • Microphone • Wireless charging case with USB-C port • Two-year warranty [www.snipca.com/36949](http://www.snipca.com/36949)

and you should get an extra couple of hours. The charging case provides close to three full charges, so the whole collection provides 24 to 28 hours, depending on how often you use ANC.

The earbuds possess an IP57 rating, which means they're dust and sweat-proof, and can be immersed in freshwater up to one metre for half an hour. That's not enough for a swim but you could wear them for a run in the rain. We put its silicone eartips through a rigorous test of sit-ups, star jumps and sprints, and they were comfortably secure throughout.

Sonically, the buds favour power over finesse, as we'd expect during exercise. The bass hits with a thump and the buds are very loud at maximum volume. This is fine if you're after a powerful soundtrack for your workouts, but you need to drop the volume when listening casually.



**VERDICT** Comfortable, customisable and well-protected, these are a great set of wireless earbuds for fitness enthusiasts

★★★★★

### ALTERNATIVE Sennheiser

Momentum True

Wireless 2 **£279**

Brilliant noise-cancelling earbuds for audiophiles



**FITNESS TRACKER** | £80 from Amazon [www.snipca.com/36950](http://www.snipca.com/36950)

## Fitbit Inspire 2

First steps

The Fitbit Inspire 2 is the new basic Fitbit for adults. Forget about colour screens and built-in GPS – this is a device to track simple activities, with a battery life designed to last a week between charges.

It replaces the Fitbit Inspire and Inspire HR, and contains a heart-rate monitor (which previously was available only in the Inspire HR).

The Inspire 2 is a plastic lozenge that clips into two straps. The screen looks large but that's an illusion: only a small window of around 17x10mm is occupied by the monochrome **OLED** display. It's

### SPECIFICATIONS

Monochrome OLED touchscreen • Heart-rate monitor  
• Bluetooth LE • Water-resistant to 50m • One size (small and large bands supplied) • 37x17x13mm (HxWxD) • One-year warranty [www.snipca.com/36950](http://www.snipca.com/36950)

sharp, though, and bright enough in most conditions. You can have notifications sent to it from your phone but the screen is really too small to read them on, so it's best used for at-a-glance alerts.

It functions as a pedometer, estimating your steps so you can manage your fitness. It also measures your heart rate to reveal how active you are. This is essential for the Active Zone Minutes feature, which takes into account the quality of your movement, awarding you points if you make more of an effort. Power-walk to the shops and you'll earn points towards your 150-minute weekly target.

You can connect this to your phone to get GPS tracking, but it's really aimed at casual exercisers. It's the most affordable of Fitbits and a great way to kick-start a more active lifestyle.



**VERDICT** A Fitbit designed for people wanting gentle exercise reminders, rather than pavement-pounding fitness fanatics

★★★★★

### ALTERNATIVE Huawei

Band 4 Pro **£49** A more affordable fitness watch with built-in GPS for better route tracking





**TV RECORDER** | £249 from Amazon [www.snipca.com/36954](http://www.snipca.com/36954)

## Humax Aura

Record and stream in one

The most sought-after TV add-on device used to be a hard-drive recorder, but TV streaming has made recording less necessary for time-shifting programmes. However, if you've ever been disappointed to find that your favourite show has disappeared from BBC iPlayer, you might still value a device that can store programmes for as long as you like.



“Promises the best of both worlds, but falls at too many hurdles”

The Humax Aura isn't the first Humax box to link a recorder with a TV streamer, but it's the best attempt to date. It's smaller than the flat and wide set-top boxes you'll remember of old. It's an otherwise familiar proposition, though, fitted with a 1TB or 2TB hard drive (you can fit about 250 hours of HD video on a 1TB drive). Recording is set using the remote control and the seven-day Freeview programme guide, and will be familiar to anyone who's used a device like this in the past. You can't, unfortunately, use it to record from on-demand services.

On the streaming side, Humax has installed Android TV. This isn't the latest version that Google used in 2020's Chromecast ([www.snipca.com/36517](http://www.snipca.com/36517), see our review, Issue 594, page 26), but is a reasonably up-to-date Android 9 version. Humax hasn't mucked about with it, so it offers access to Google Assistant for voice control and, more importantly, the Google Play store, giving access to the wealth of apps

and services Google has available.

Unfortunately the Aura stumbles and falls at this tricky hurdle. For starters, there are a good handful of services that aren't installed by default. This shouldn't be a problem with access to the app store, but when we tried to install Netflix, for example, a message told us that it was incompatible with this device. Some services that encounter this problem can be worked around using Android TV's Chromecast feature and streamed from another device, but Netflix stubbornly refused to play.

It's a huge disappointment because this could be a fabulous device offering the best of all worlds. However, if you want to access paid-for streaming services as well as free terrestrial recording and catch-up, this just isn't good enough.

### SPECIFICATIONS

Supports 4K streaming • 1TB or 2TB hard drive • 3x Freeview tuners • Android TV 9 • 802.11ac Wi-Fi • 1x HDMI port • 1x USB 3 port • 1x USB 2 port • 1x Ethernet port • 43x258x200mm (HxWxD) • 760g • Two-year warranty [www.snipca.com/36954](http://www.snipca.com/36954)

**VERDICT** This could have been the perfect all-in-one device to plug into your TV, but it doesn't live up to its promise

★★★★★

**ALTERNATIVE** Roku Streaming Stick+ £50 Every streaming service you could want and more, but you can't record anything



### DO I REALLY NEED...

## A MicroLED TV?

### What is it?

Samsung's TV technology, which uses tiny light-emitting diodes (LEDs) to make slim TVs of almost any size.

### What does it do?

Each microLED pixel is an individual multi-coloured light. Older TV technology relies on shining a backlight through several colour-changing layers, which isn't as good at displaying detailed dark images because there's light being emitted from behind. A microLED can switch individual pixels off to create a perfect black and flawless contrast.



### What's the catch?

Samsung has struck out alone with microLED while LG and Sony are opting for variations on OLED screens, which have revolutionised smartphones using similar technology to microLED. OLED TVs are becoming more affordable with similar levels of contrast and quality.

### So can I do without it?

Yes. MicroLED screens are still too expensive for Samsung to even publish a price list, while a 48in OLED TV will set you back around £1,500.

### NEXT ISSUE

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

### LAPTOP

**Honor MagicBook 14**  
**£600** from [www.snipca.com/34688](http://www.snipca.com/34688)  
**Tested** Issue 580



Using an AMD Ryzen 3500U processor, this lightweight metal laptop beat Microsoft's Surface Laptop 3 with Intel's i7-1065G7 in our tests. The 14in Full HD screen lacks colour accuracy but looks decent. For the money, it's a great buy.

**ALTERNATIVE Dell XPS 13** New Intel CPUs and a taller screen make this a more powerful, all-round slim notebook, although prices now start at a steep £1,629 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. £1,490 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

**Samsung Galaxy Tab S6 Lite**  
**£299** 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**  
**£259** 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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Our pick of products that have won the **Buy It** award

## EBOOK READER

**Amazon Kindle (2019)**

**£70** 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 £26.99.

### 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**

**£49** 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. £42 from [www.snipca.com/26514](http://www.snipca.com/26514)

## PC MONITOR

**BenQ GL2780**

**£150** 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. £180 from [www.snipca.com/34869](http://www.snipca.com/34869)

## ROUTER

**D-Link DIR-1960**

**£100** 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. £226 from [www.snipca.com/30710](http://www.snipca.com/30710)

## PRINTER

**Epson Expression Premium XP-6105**

**£119** from [www.snipca.com/36630](http://www.snipca.com/36630)

**Tested** Issue 554



With many leading all-purpose printers having sold out during lockdown, this white version of the XP-6100 wireless six-ink printer/scanner/copier is a good choice for photos first and text second. It's easy to use and speeds aren't bad, but ink costs can work out high.

### ALTERNATIVE Epson EcoTank ET-2711

This inkjet printer/scanner/copier isn't cheap but will save you a lot on ink (1p for two colour pages). Photo quality isn't the best, but scans are good. £180 from [www.snipca.com/36183](http://www.snipca.com/36183)

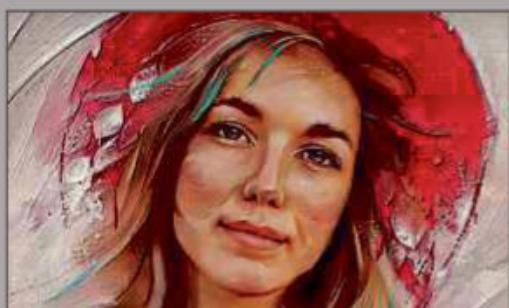


## COMPETITION

# Win 1 of 3 Corel Painter 2021

Painter 2021 is the latest version of the industry's most powerful and creative professional digital painting software on macOS and Windows. Take complete control of every element of your painting including detail and colour matching with 12 new AI-Based Art Styles.

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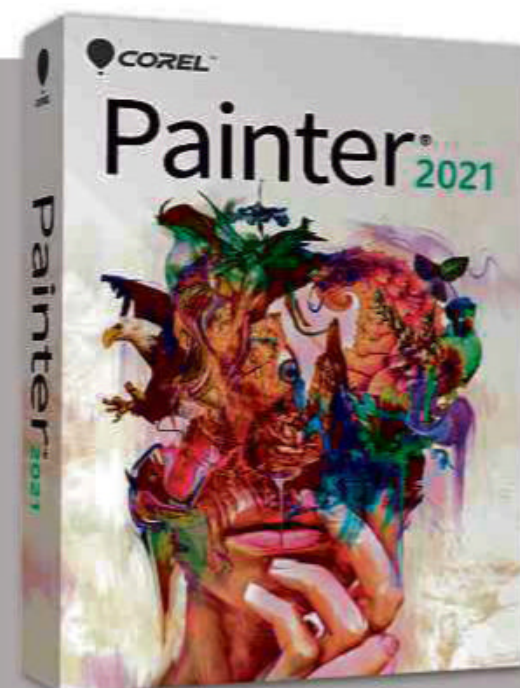


painting experience.

Additional performance optimisations include twice as many GPU-accelerated stamp brushes, up to four times faster drop and liquid brush technologies, and quicker brush and tool switching. Painter 2021 streamlines the creative workflow for today's professional and aspiring

digital artists across industries.

To enter this competition, email your address to [cacomp@dennis.co.uk](mailto:cacomp@dennis.co.uk) with 'Painter' in the subject line by



midnight Tuesday 26 January. Good luck!

You can buy **Painter 2021** for £359.99 from Corel's website: [www.snipca.com/36681](http://www.snipca.com/36681). For tutorials on using Painter 2021's new features visit [www.snipca.com/36682](http://www.snipca.com/36682). And to see a gallery of illustrations made using Painter 2021 visit [www.snipca.com/36683](http://www.snipca.com/36683).

## 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  
**£89** 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. £51 from [www.snipca.com/30188](http://www.snipca.com/30188)

## WEB DESIGN

PRICE  
DROP

**Xara** Web Designer  
Premium  
**£49** from [www.snipca.com/34150](http://www.snipca.com/34150)  
**Tested** Issue 453



This visual program makes creating sites more like laying out a document than writing HTML code, and sites can be responsive, meaning they look good on big and small screens. A cheaper, basic version is also available for £35.

**ALTERNATIVE** Incomedia WebSite X5  
v13 Evolution It may feel basic, but this program outputs efficient HTML code and responsive pages. £39 from [www.snipca.com/31179](http://www.snipca.com/31179)



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## HOW TO...

# Run Plex media server on your NAS drive

by Simon Handby



**PLEX**

**What you need:** Plex; Network attached storage (NAS) drive **Time required:** One hour

If you read Issue 590's Cover Feature, you'll probably already know that we're big fans of the Plex media server. Put simply, Plex is a wonderfully easy way for you to set up your own streaming service, letting you access all your photos, music and videos from any device, wherever you are.

But while you can install the Plex server on your PC, that might not actually be where you keep your media

files. Even if it is, you may not be too comfortable leaving your computer permanently switched on in order to get the most out of Plex.

Instead, if you have a network-attached storage (NAS) drive you might be able to run your Plex server on that. The software is available for several of the most popular ranges of NAS drives – you can check the full list at [www.snipca.com/36817](http://www.snipca.com/36817).

Plex will run on any NAS mentioned on this list, though some may struggle with transcoding (changing the format or quality of a video) to suit different devices. Here, we'll show you how to get Plex up and running on a NAS.

We'll be using a Synology DiskStation DS218j (from £349 on Amazon: [www.snipca.com/36818](http://www.snipca.com/36818), pictured above), but many of the steps will be relevant to other supported drives.

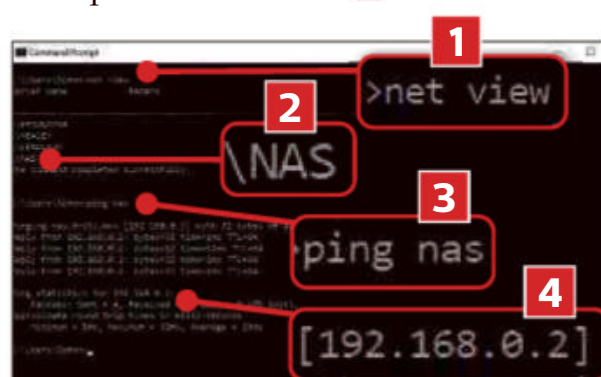
### 1 Prepare your media files

To run a Plex server on your NAS drive, you'll need to store your media files there. Before copying or moving your files to the NAS, it's wise to check that you've got plenty of space. The best way to establish this is to log into the administration interface on your NAS (you'll need to do this later anyway).

We're using the Synology DiskStation Manager (DSM) web interface, but all NAS drives have something similar. Open a web browser and in the address bar type <http://> followed by the NAS drive's network name – for example, <http://NAS>.

If you're not sure of your NAS's network name, click the Windows Start button, type **CMD** then click Command Prompt. When the Command Prompt

window opens, type **net view** (1 in our screenshot below) and press Enter. You should see 'NAS' listed (2). Now type **ping name** (3 (replace 'name' with the name of your NAS), then press Enter to see the NAS's IP address. This is the number in the format XXX.XXX.X.X – in our example it's 192.168.0.2 (4).



Type these commands to find your NAS's network name and address

Return to your web browser and try using the name to access the web interface (as above). If this doesn't work, try using the IP address in the form <http://XXX.XXX.X.X>. In our network, the NAS is accessible at <http://NAS> or <http://192.168.0.2>.

Type your username and password when prompted. If you've never changed these, the default on a Synology NAS is **admin** and a blank password. Once logged into DSM, click the menu icon with four squares at the top left of the screen, select Storage Manager, then click Volume in the left-hand pane to reveal the available space.

If you're using a different NAS, check the user manual for the default login details, and to find how much free space





We're creating our shared folder on Volume 2, which has 691GB of free space

it has. Make sure you have enough room to store your whole media collection, and still leave space for other uses such as backups. If your NAS contains more than one volume, create your shared folder on the one with the most free space (it's Volume 2 in our screenshot above, with 691GB spare **1**).

If you're not already doing so, we recommend storing media files in a dedicated shared folder. From the DSM menu run Control Panel, then click Shared Folder followed by Create. Name the folder ('Media' in our screenshot **2**), untick the recycle-bin option **3**, then click Next **4**.

Plex works best if you organise your files into one parent folder for each media type. In other words, within your shared Media folder you'll have a Music folder, Movies folder and Pictures folder as needed.

## 2 Install Plex on your NAS drive

To install Plex on a Synology NAS, log into DiskStation Manager as you did in Step 1. Click the menu icon and select Package Center. When it starts, type **plex** in the search box, press Enter, then click the Install button under Plex Media Server.

The installation will be similar on other manufacturers' devices. On a NAS made by QNAP, for example, you need to log into the company's QTS web interface, open App Center, click All, then search for **plex**.

Depending on the configuration of your NAS, you may be asked which **volume** you want to install the Plex server on – this doesn't have to be the same one as your media files. On a Synology NAS, once the install has finished, the Install button changes to Open. Click this to open the Plex server's web interface.

You'll be prompted to sign into a Plex account. Click one of the 'Continue with' buttons then follow the instructions. To use a conventional email/password login,

## How I Use Plex

These days my family and I stream the latest music, TV and films from online services like Spotify and Netflix. We've also got many gigabytes of photos, music and video files stored on our NAS drive. Plex lets us access this archive through one consistent app, whether it's running on a PC, smartphone or tablet. Our NAS is always on, and available online, so we can watch anywhere.



Simon Handby



How do you use Plex ?

Please let us know: [letters@computeractive.co.uk](mailto:letters@computeractive.co.uk)

click 'Continue with email', then either log into an existing Plex account, or click 'sign up with email' to create a new one.

Once you're logged in, dismiss the initial welcome screen and ignore the invitation to sign up for a Plex Pass. On the next screen, type a suitable name for your server. If you want to use your server away from home, leave 'Allow me to access my media outside my home' ticked. Click 'Next' to begin organising your library.

## 3 Configure libraries in Plex

Now click 'Add library', choose the type of content you're about to add, tweak the library name if you want to, then click Next. Click the browse button and navigate to the relevant folder – for example, your music folder if you're configuring your music library.

If you can't see your music, videos or photos inside the relevant shared folder, you may need to change Plex's access permissions. First, click Cancel in the Add Folder box in Plex. Next, return to Synology DiskStation Manager, open the

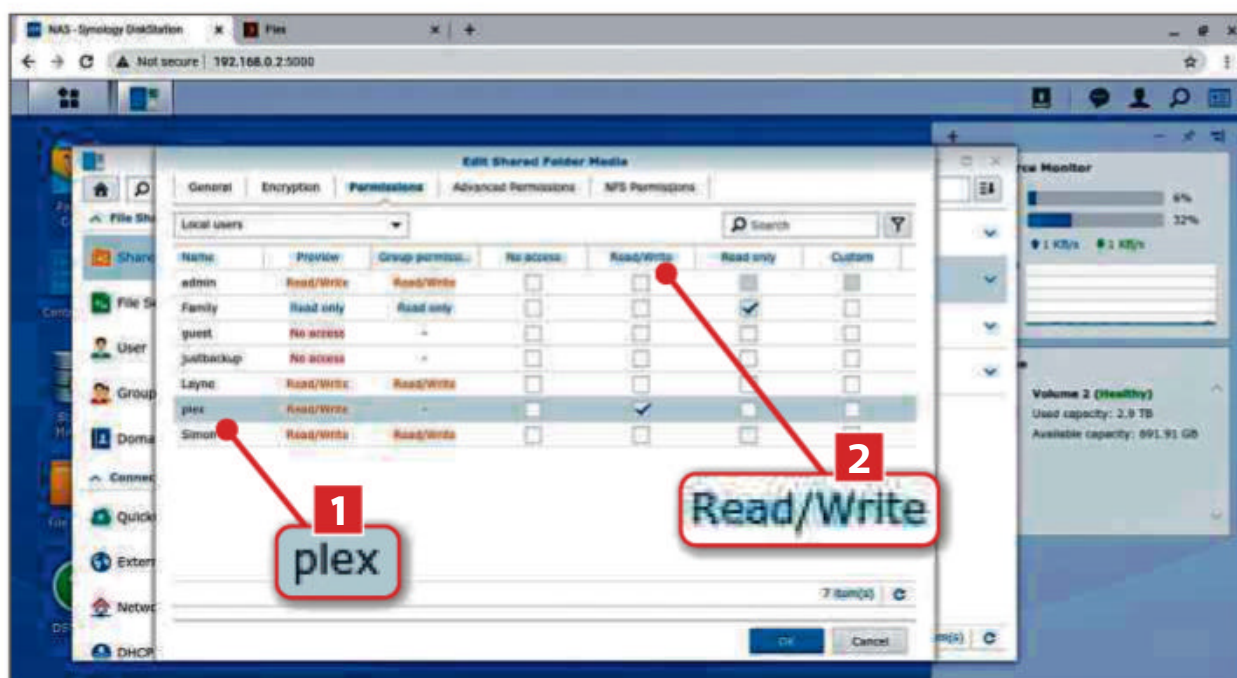
menu, select Control Panel then click Shared Folder. Select the folder that contains your media files and click Edit, then click the Permissions tab.

In this list on the left, you should see a user named 'plex' (**1** in our screenshot below). Tick the box for plex in the Read/Write column **2**, then click OK to apply the change. Now return to the Plex server's web interface and browse for folders again. Click 'Add' to add a folder to the library, then click the 'Add library' button to create the library. Now repeat the process to create libraries for any other types of media you want to set up. When you've finished, click Next, then click Done to finish setup.

## 4 Install Plex apps

You'll be directed to your Plex server's home page, which will begin to show your content. It's a good idea to bookmark this page so you can return easily to it in future. It may take several hours for Plex to show all your files, but you can use the server in the meantime.

It's easy to install the Plex app on all



Tick the Read/Write column alongside 'plex' to grant Plex permission to access your files



your devices. You'll find it on the Google Play Store and the Apple App Store, but it's also available for PCs, Macs, and a range of smart devices – check out the full list at [www.plex.tv/apps-devices](http://www.plex.tv/apps-devices).

You'll need to log into each app with the same account details you used in Step 2. While many Plex features are free, you'll need to pay to stream for longer than one minute (it's a one-off fee of between £3 to £4). Do this by activating the app – once only for each operating system (ie, Android or iOS).

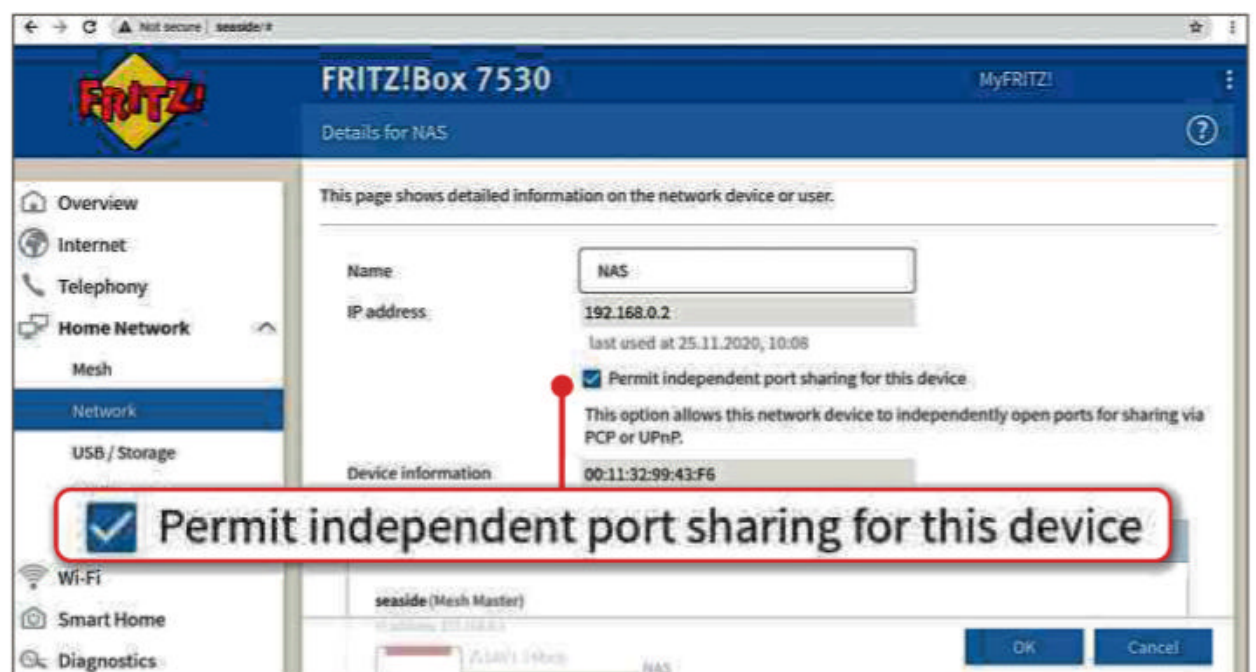
Alternatively you can subscribe to a Plex Pass (£3.99 a month or £31.99 a year). This enables unrestricted streaming on all operating systems, and adds benefits such as parental controls, enhanced audio, and offline playing on mobile devices. To buy either, click 'Activate' when prompted by the app, choose whether to activate or buy a pass, then complete the purchase.

For this feature to work seamlessly, your NAS needs to support transcoding in real time (as fast as, or faster, than playback speed). If everything works smoothly over Wi-Fi or a strong mobile signal, you're ready to enjoy Plex. However, if playback keeps pausing when you're not on Wi-Fi, or you can't access your files from outside your home, you'll need to make a couple of further changes, as we'll now explain.

### 5

#### Tweak Plex's settings to fix problems

If your libraries are unavailable from outside your home, you'll need to check the Plex server's settings. While at home, log into the Plex web interface, click the spanner icon and select Remote Access in the left-hand pane. Click 'Enable remote access' if it's showing: with luck, you'll soon see a green 'Fully available outside your network' message.



On our FritzBox router, we ticked 'Permit independent port sharing for this device' to set up Universal Plug 'n' Play

If you still see 'Not available outside your network', the most likely reason is that your router is blocking the necessary traffic. To fix it, you'll need to log into your router's admin interface. The details vary depending on which router you have – the best option is to check its manual.

As a general guide, you'll need to open a web browser and enter the name or IP address of your router – just as you did for your NAS in Step 1. On our network, we access the router at <http://192.168.0.1>. As with the NAS, you'll need to log in. The default address, username and password are often printed in the quick start guide or on the router itself. If you can't find them, try the username 'admin', with a password of 'admin' or 'password'.

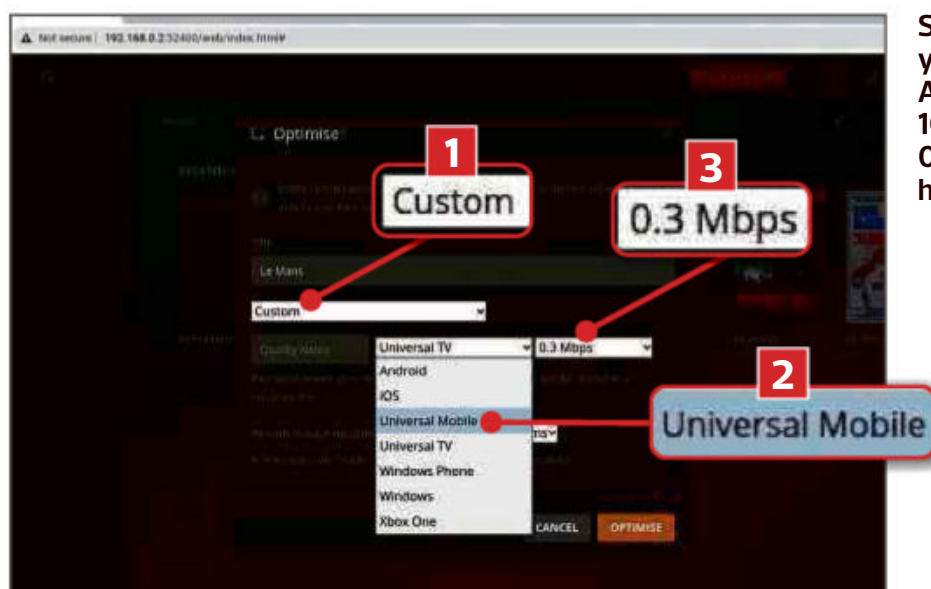
Once you're in the router's settings page, find the Network, Firewall or Forwarding settings page, and look for an option to enable Universal Plug 'n' Play (UPnP) – you may need your router's manual to help you find this option. On our FritzBox router, you need to tick 'Permit independent port sharing for this

device' (see screenshot above). Switch it on, save the settings, and return to your Plex server's remote access settings. If it doesn't already say 'Fully accessible outside your network', click to disable remote access, wait 10 seconds, then click this again to re-enable it.

If you can see your libraries from a mobile connection, but you're experiencing pauses during playback – even with a strong signal – you may need to convert your content (and 'optimise' it) to a less data-intensive form. Enter the Plex server's settings as above, then click Transcoder in the left-hand pane. Ensure that 'Disable video stream transcoding' is unticked (this is very important), then click 'Save changes'. If you don't see the option, click the 'Show advanced' button.

Now click the Home icon in the top left, browse your film or TV libraries, and hover your mouse over a film or TV show you want to watch. Click the three-dot icon that appears on the thumbnail, select Optimise, click the settings dropdown menu and choose Custom (1 in our screenshot left). Select the platform you'll be watching on (it's Universal Mobile for us 2), then select a quality between 0.2Mbps and 20Mbps (we chose 0.3Mbps 3). The lower rates will use the smallest amount of data and display in the poorest quality.

Optimising each film/programme will take at least as long as watching it, so it's best to start with the content you most want to watch while out and about. Creating optimised versions won't affect your originals, but it will use up additional space on your NAS. To view an optimised version in the app, open the content, then choose 'Play version' from the menu.



Set a low data rate if you're using mobile data. At 8Mbps you'll use up 1GB in 17 minutes; at 0.3Mbps, it'll last 7.5 hours



# Workshop1

## Turn your PC into an Alexa smart speaker

**What you need:** Alexa app; Windows 10

**Time required:** 20 minutes

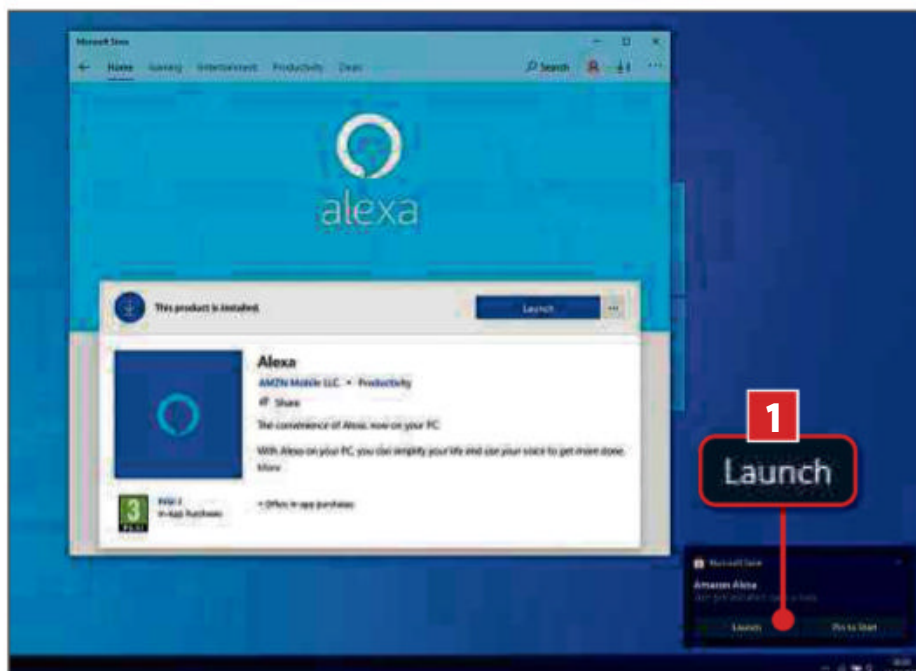
**W**indows comes with a built-in voice assistant (answering to the name Cortana), but it's not your only option – you can use Amazon's Alexa assistant instead. You don't need to be an Amazon Prime subscriber to use the Alexa app for Windows 10, but if you are you'll be

able to use voice commands to listen to Prime Music on your PC.

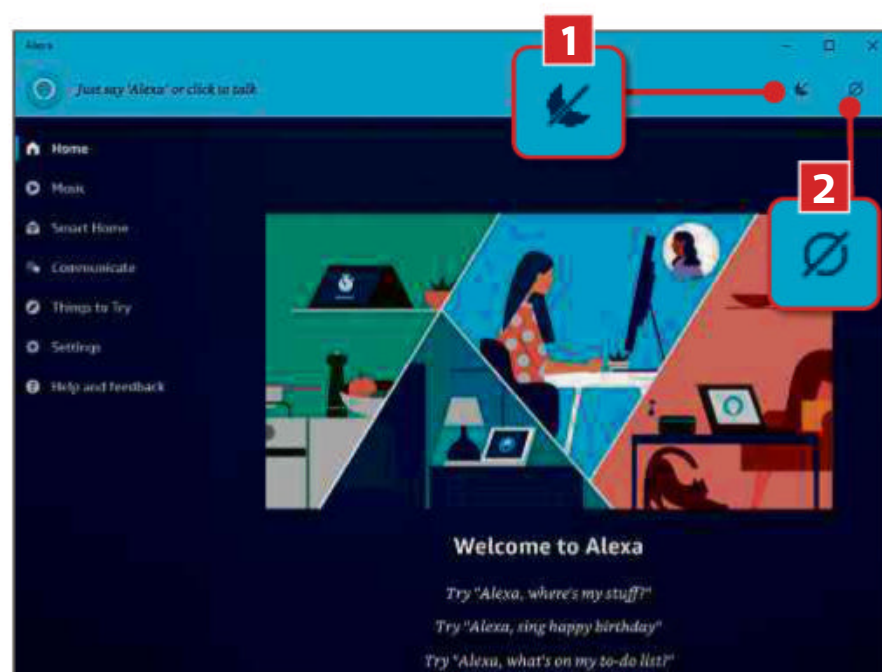
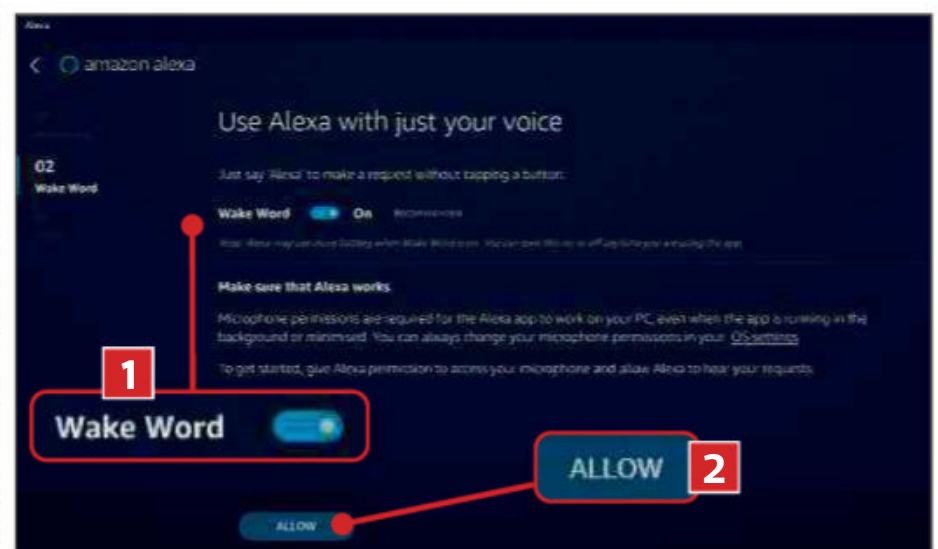
Additionally, thanks to an update late last year, the Alexa app now lets you make and receive calls with other Alexa devices. All you need is a Windows 10 computer with a microphone attached or built in.



**STEP 1** First, install the Alexa app from the Microsoft Store. To do this, open your browser, go to [www.snipca.com/36957](http://www.snipca.com/36957), then click Get (if a pop-up window appears, click Open). The Alexa page of the Microsoft Store will now open. Click Install – if you're not already signed into Windows with a Microsoft account, you'll be prompted to log in. When the installation process is complete, you'll see a notification in the bottom-right corner of the desktop. Click Launch **1** to continue or search for the app in your Start menu.

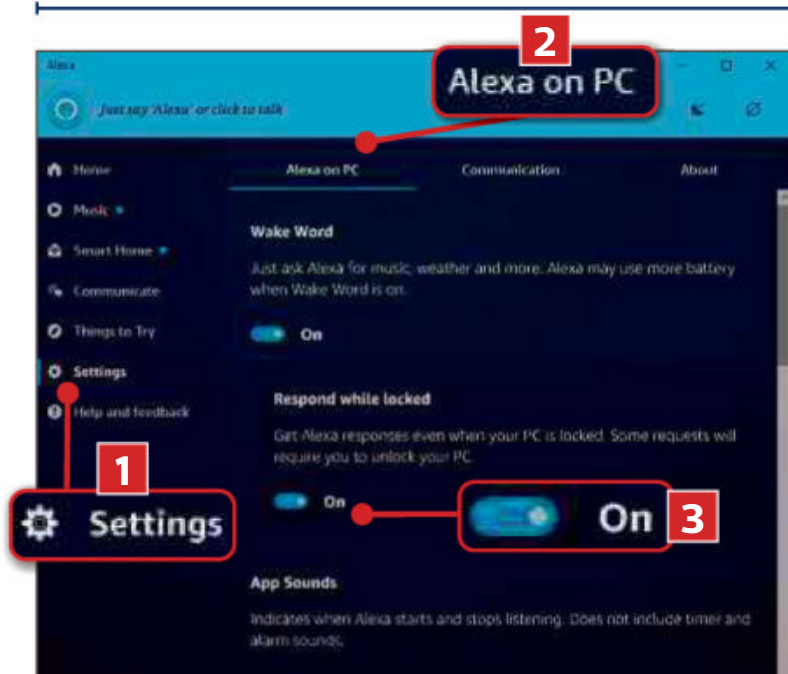


**STEP 2** When the Alexa app opens, click the blue Get Started button, then sign in with your Amazon account. If you don't have an account, they're free to create and you won't need to enter any payment details – just click 'Create a new Amazon account', then follow the prompts. Once signed in, read the terms and conditions, click Continue, then make sure the Wake Word option is set to On **1** (this means the app will respond to commands when you say "Alexa"). Click 'Allow' **2**, followed by Finish Setup. Windows will then ask whether you want Alexa to be ready the moment you log into your computer. Click 'Enable', then choose whether you want to pin the icon to the taskbar.

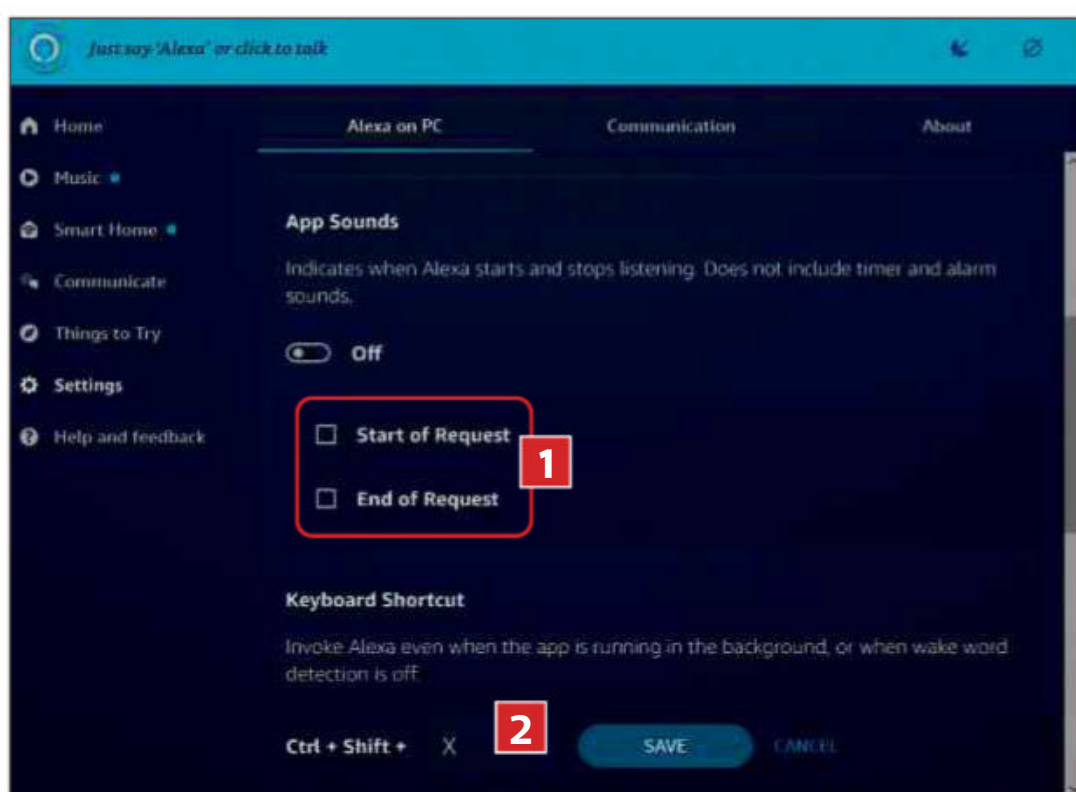


**STEP 3** The Alexa home screen will now appear. To test it, try saying, "Alexa, what's the time". After a short pause, Alexa should respond with the current time. If you don't hear anything, make sure your speakers are switched on and, if you're using a PC with an external microphone, that it's connected properly. If you want to stop the Alexa app listening for commands, click the Wake Word button **1** – click it a second time to get Alexa listening again. You can also temporarily prevent Alexa on your PC from broadcasting announcements, reminders and so on by clicking the Do Not Disturb button **2**.



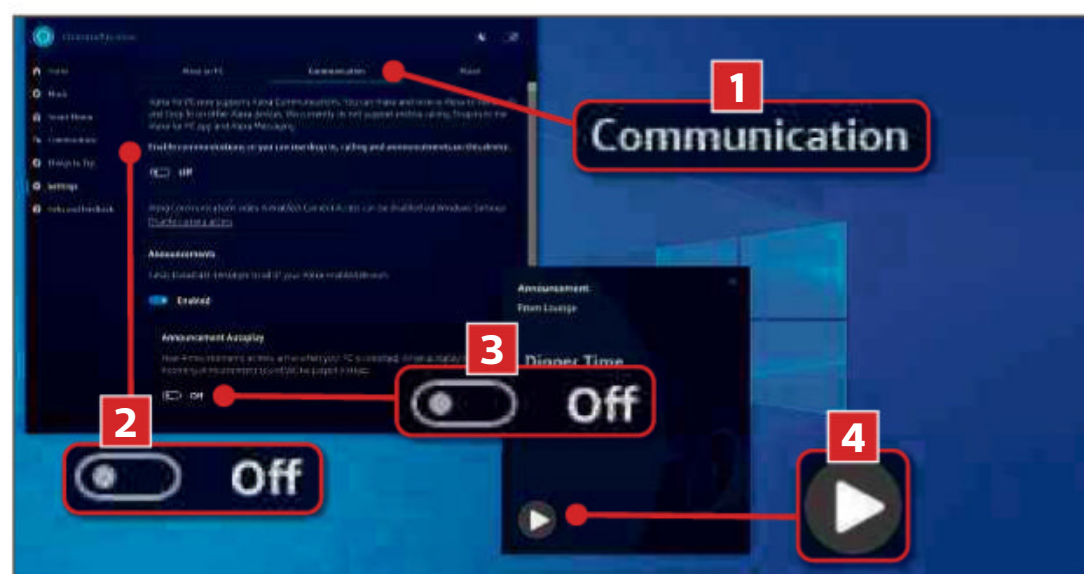
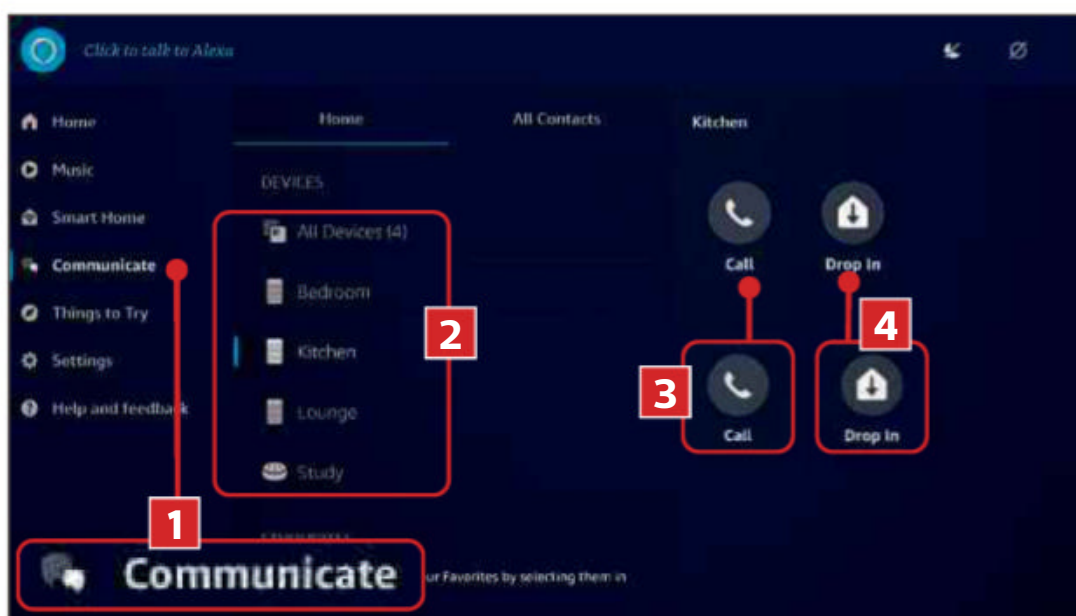


**STEP 4** To fine-tune how Alexa works on your PC, click Settings **1** and select the 'Alexa on PC' tab **2**. By default, Alexa will listen for voice commands only when your PC is unlocked. If you want it to also listen when the Windows lock screen is activated (press the Windows key+L), set the 'Respond while locked' option to On **3**. Bear in mind that running Alexa all the time will use up battery power, so you may want to leave this set to Off if you're using a laptop that has a short battery life.



**STEP 5** On dedicated Alexa smart speakers (such as the Amazon Echo), a blue ring lights up when it detects someone has said the wake word. Since your PC doesn't have a similar light function, Alexa will instead play a short sound when you say the wake word, followed by another when you finish the voice command. To turn these audio prompts off, untick one or both boxes in the App Sounds section **1**. You can also use the Ctrl+Shift+A keyboard shortcut instead of saying the wake word. If you want to change the last key of this shortcut, click Customise, then press whichever key you want to use **2**, followed by Save.

**STEP 6** You can use the Alexa app to make (and receive) calls to Echo smart speakers, PCs or mobile devices (you can download the Alexa app for Android [www.snipca.com/36958](http://www.snipca.com/36958) and iOS [www.snipca.com/36959](http://www.snipca.com/36959)). Click 'Communicate' **1**, select the device you want to call **2**, then click the Call button **3**. Alexa also supports Drop In calls, which is where you'll be instantly connected to another Alexa device in your home without anyone having to answer the call first. You'll need to enable this feature on your other devices. To do this, open the Alexa app on your phone, tap Devices, select the appropriate device, tap Communication, then set Drop In to On. You'll then see a Drop In **4** button for that device in the app on your PC.



**STEP 7** If you don't want other Echo devices to be able to call you via the Alexa app on your PC, return to the Settings section of the app, click the Communication tab **1**, then set 'Enable communications' to Off **2**. You can also broadcast announcements to your other smart speakers by preceding commands with the word 'announce' (for example, "Alexa, announce dinner time"). If you don't want announcements made from other Alexa devices in your home to play on your PC, set Announcement Autoplay to Off **3**. All announcements will then appear as a pop-up notification with a play button **4** – click this to hear the announcement.



# Workshop 2

## Use Windows' hidden tool to make photo slideshows

**What you need:** Windows 10 **Time required:** 30 minutes

**A**t first sight, the Photos app in Windows is a simple tool to view images stored on your PC. Dig a little deeper, however, and you'll find it's capable of much more.

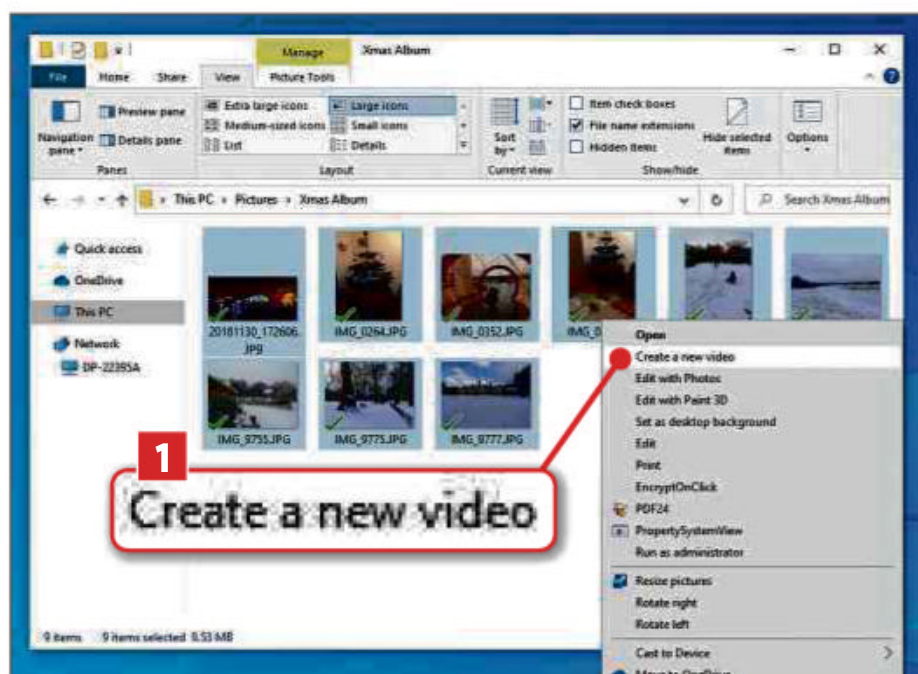
In this Workshop, we'll show you

how to use it to create an impressive slideshow of your favourite photos – complete with background music and special effects. You'll then be able to save it and send it to friends and family.



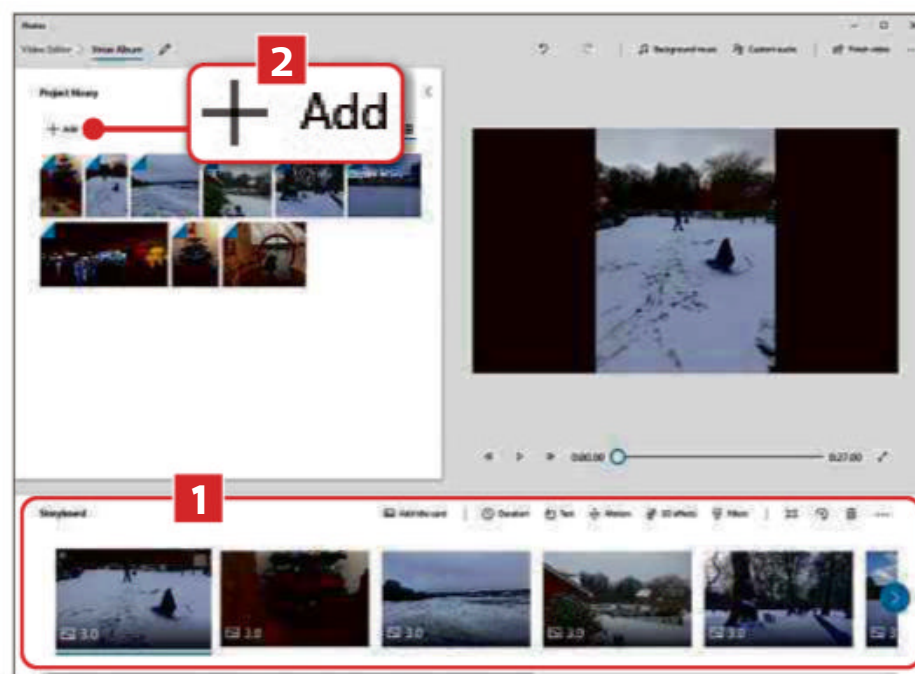
### STEP 1

Press the Windows key+E to open File Explorer, then navigate to the folder where your photos are stored. Select the one you want in your slideshow (hold down Ctrl while clicking, or press Ctrl+A to select them all), right-click it, then select 'Create a new video' **1**. Don't worry if your photos are in different folders – we'll show you how to add them later on. When the Photos app opens, give your video a name, then click OK.



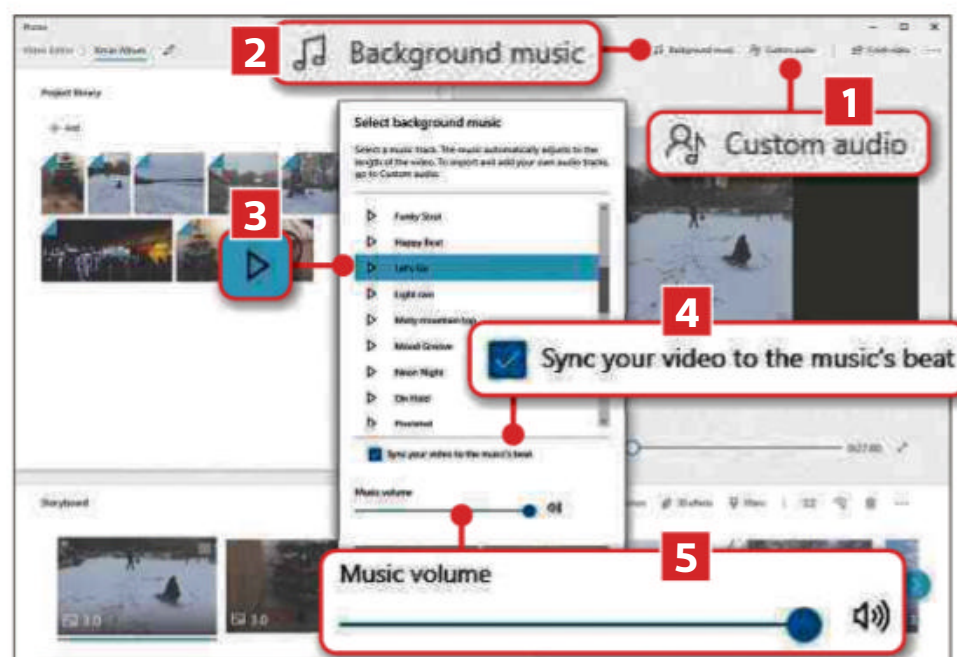
### STEP 2

You can now start arranging your photos by dragging them on to the Storyboard section at the bottom **1**. If you want to add all the photos in one go, click the first photo, hold Shift, then click the last one and drag them on to the Storyboard. If you need to add photos from another folder, click the '+ Add' button **2** at the top. Once you've placed your photos on the Storyboard, you can change their order by dragging and dropping them.

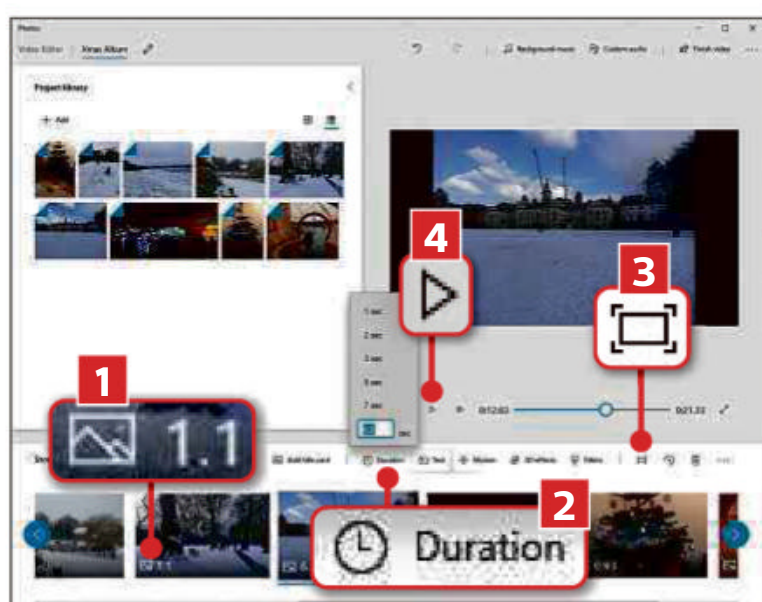


### STEP 3

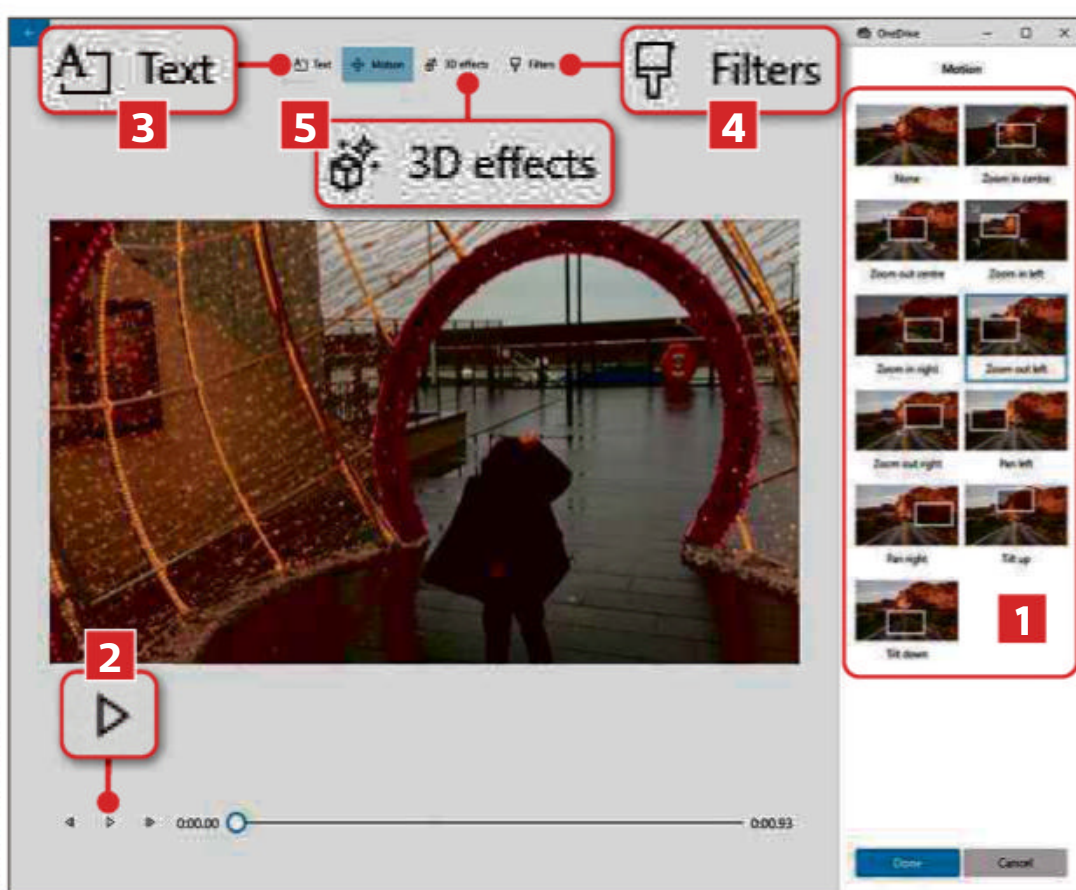
Once you've added all your photos, it's time to insert some background music. If you want to add your own music, click 'Custom audio' **1**, 'Add the audio file', then select the track you want to use (you can add more than one). Alternatively, you can pick from a selection of preset background tracks by clicking 'Background music' **2**, then selecting from the list (you can preview each one by clicking the Play button **3**). To have your video move in time with the beat of the music, tick the 'Sync your video...' box **4**. Set the volume for your music **5**, then click Done.







**STEP 4** The duration of each photo is shown in seconds at the bottom left-corner of each thumbnail **1**. To change this, select the relevant thumbnail (or group of thumbnails), then click Duration **2**. If you set the photos to change in time with your background music (as explained in Step 3), adjusting the duration in this way may mean the photos no longer match the beat. In this example, our photo has black bars either side. To remove these, click the Zoom button **3** (be aware that by doing this some of the photo won't be visible). Press the Play button in the preview window **4** to see how your slideshow is shaping up.



**STEP 5** You can add extra interest to your photos by having them pan or zoom during the video. To do this, select a thumbnail, then Motion **1**. Choose the motion style, then click the Play button **2** to see how it looks on your photo. You can also add text **3** to your images, apply a range of filters **4** and even apply 3D effects **5** such as overlays of bubbles, balloons and fireworks. Click 'Done' when you've finished tweaking them.

**STEP 6** To create a title card for your video, click 'Add title card'. Drag the title card to the start of the Storyboard, then click Text. In the window that opens, enter the text you want to use in the box at the top right **1**, then select from the list of styles **2**. Click the Play button **3** to preview how the text will be animated, then use the Layout **4** options to choose where it should appear. If you want to change the colour of the title card, click Background **5**. Click 'Done' when you're finished. You can repeat this process to add multiple title cards throughout the video.



**STEP 7** When you're happy with your video, click 'Finish video' **1**, choose what resolution you want to use **2** (if your video is a few minutes long and you want to email it to people, you may need to select Medium or Low to keep the file size down), then click Export and choose where to save it. Your video will now open in a separate window. To share it via the Windows Mail app, click the Share icon **3**, followed by Mail **4**. If it's too large to share by email, click 'Show in folder' **5**, then copy it to a USB stick or an online file-sharing tool such as OneDrive ([www.onedrive.com](http://www.onedrive.com)) or Google Drive ([www.google.com/drive](http://www.google.com/drive)).



# Readers' Tips

## TIP OF THE FORTNIGHT

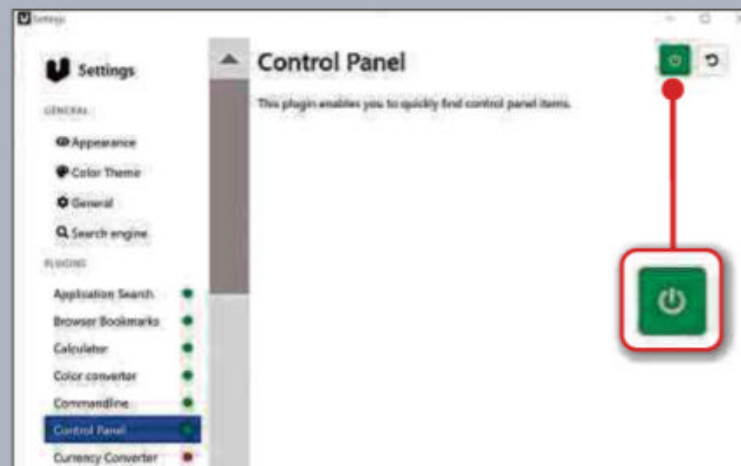
### Turn on Control Panel to include in searches

Thanks so much for recommending Ueli ([www.snipca.com/36726](http://www.snipca.com/36726)) in Issue 595 (page 61). I was sceptical at first, but I can't believe how easy and fast it makes searching your computer.

You mentioned that it searches the Control Panel, though that didn't seem to work for me. I discovered why while digging through Ueli's settings. To find these, you have to right-click Ueli's logo in the system tray, then click Settings. You'll see a list of **plug-ins** on the left, some with a green button (switched on), some red (switched off). Control Panel was red, so I clicked it, then

clicked the red power button at the top right so it turned green (see screenshot).

The other essential settings tweak is to create your own keyboard shortcut to launch the search bar, so you don't have to keep right-clicking the icon and choosing 'Show'. Click the 'General' heading in Settings then choose your shortcut combination in the Hot Key section. The default is Alt+Space, but that's too near my thumbs for quick activation. I find it



much more convenient to press Shift+Backspace.

Ryan Sutton



Ryan wins a copy of our 2019 Back Issue CD **Buy it on Amazon [www.snipca.com/33711](http://www.snipca.com/33711)**

## SOFTWARE

### Use BankTree for your financial accounts

✓ I enjoyed Issue 593's How To on exporting Microsoft Money data to HomeBank (<http://homebank.free.fr/en>). I was an early adopter of Money and still miss its comprehensive functions and ease of use. I tried a few of the alternatives available nine years ago and eventually settled on BankTree ([www.banktree.co.uk](http://www.banktree.co.uk), pictured below). I



downloaded it to my laptop and have used it ever since. It's definitely not as intuitive as Money, but does everything I need. There's also a useful series of YouTube tutorial videos to explain how to use the various functions.

As your article demonstrated, transferring to any new accounting system is not to be undertaken lightly, so I'll probably stick with BankTree for as long as it wants me.

Steve Graham

## SYNCING

### Change your Microsoft To Do account to @outlook.com

✓ I couldn't synchronise Microsoft To Do (<https://to-do.microsoft.com>) between my phone and computer until I unearthed some advice buried within the troubleshooting section. To sync, you

have to change your Microsoft ID to one with an @outlook.com, @hotmail.com, @live.com or @msn.com email address. I had been using @yahoo.com, which is why it wasn't working. I changed it, and now it all seems fine.

Mark Carroll

## NETWORKING

### Connect your Chromebook to a NAS drive

✓ Thanks for your How To article in Issue 594 on upgrading an old laptop to a Chromebook. It helped me transform my ageing Dell Inspiron laptop into a Chromebook. I wondered whether I could connect it to my **NAS** drive, and found I could do so by clicking the three-dot icon at the top right of the Files app, selecting 'Add new service', then choosing 'SMB file share'. In the box that

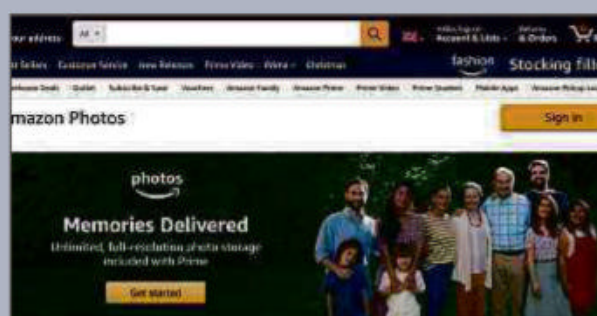
## Why I stopped using...

### Google Photos

✓ I predict an exodus from Google Photos following its announcement to axe free unlimited storage in June (News, Issue 594, page 9). I feel cheated, having expected it to remain free. How naive of me.

### And what I use instead...

If you're an Amazon Prime subscriber like me, the answer is obvious: switch



to **Amazon Photos** ([www.amazon.co.uk/photos](http://www.amazon.co.uk/photos), pictured). You get this service as part of the Prime package. It gives you

unlimited photo storage, and lets you share them with six family members. The only downside is that you get just 5GB of free video storage.

Beware, though: if you cancel Prime, you lose the photos. Looks like the monopolistic tech giants have us by the short and curlies!

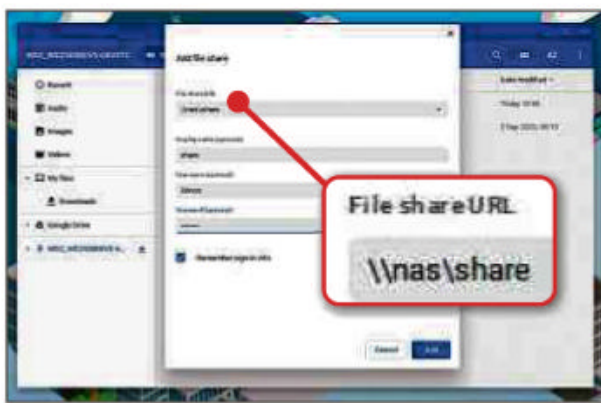
Brian Shawcross

✉ 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)



opens, you need to type the network share name (eg `\\nas\share`, see screenshot above), and a username and password if needed.

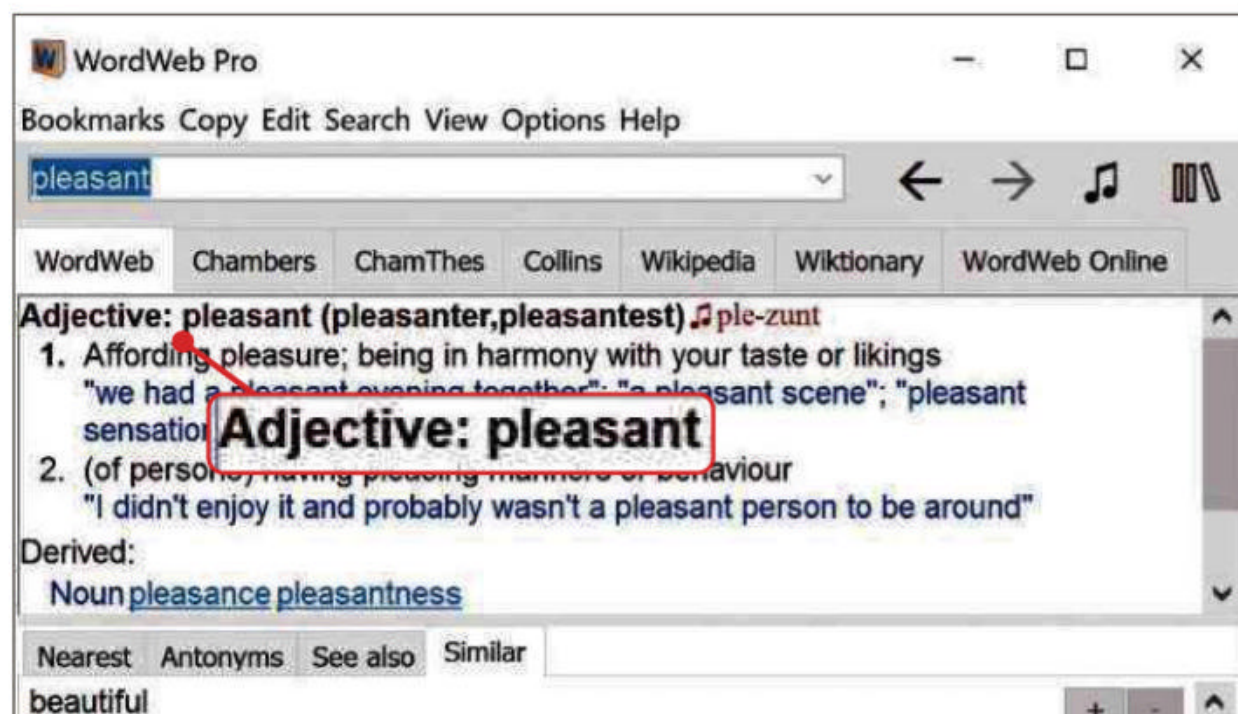
Nigel Bowers

### SOFTWARE

#### Improve your grammar using WordWeb's dictionary

✓ I have a suggestion in answer to Ian Fairclough's request (Letters, Issue 594) for online aids to improve grammar. For years I've been using WordWeb's free English dictionary software (<https://wordweb.info/free>) because it's both a dictionary and a thesaurus. I use it to help me avoid repeated use of common adjectives and verbs, making my writing more interesting.

Given a word, it will provide not only its meaning, but also its grammatical term (whether it's a verb, noun, adjective etc – see screenshot below) and pronunciation. Better still, if you're unsure of a word's spelling, highlight it to launch WordWeb. If your word is misspelled, it will suggest the right spelling and also **hyperlink** it. Click this link to replace the word automatically. You can highlight and click any word in your own files, or when online such as reading a news article or document, including PDFs (as long as you can click



### Reader recommends...

#### Logitech K780 Multi-Device Wireless Keyboard

£75 from Amazon [www.snipca.com/36823](http://www.snipca.com/36823)

✓ Fed up with rattly plastic keyboards, I decided to treat myself to something decent a few months ago. It's not cheap – I paid over £70 for mine – but I think it's worth every penny.

It's quite compact, so is good if you don't have much desk space – and yet Logitech still managed to fit in a numeric keypad, which I particularly like. It's also reassuringly heavy (feels like you're getting your money's worth), and doesn't slide about when in use. A bonus is the ability to link your phone or tablet to the keyboard by Bluetooth, and there's a handy ledge at the back where you can prop up your devices while you type.

I learnt to touch-type many years ago



on a manual typewriter and must have used dozens of different keyboards since then, but this is one of the best I've ever used. There's a great positive feel to the keys and my typing speeds have improved no end.

Kay Washbrook

✉ Want to recommend hardware or software to fellow readers?

Email [letters@computeractive.co.uk](mailto:letters@computeractive.co.uk)

the words in the file).

I used it five times just composing this email. It's so quick and simple, and will help those who wish to maintain a reasonable degree of grammar without the hassle (or cost) of using Grammarly (<https://app.grammarly.com>).

Bill Munns

### SOFTWARE

#### Tweak Kaspersky to show Outlook 2019 attachments

✓ My Outlook 2019 email account had started showing the wrong file-attachment extensions: .pd\_ and .jp\_ instead of .pdf and .jpg (so the f and



the g are missing). They would only open if I saved them and typed the correct file extension name. A relative pointed me to a solution online, which involved tweaking some settings in my Kaspersky antivirus. I did this, and now the problem has been fixed.

You have to open Kaspersky's application settings window, then click 'Anti-Virus protection' in the left-hand menu (see screenshot above), followed by 'Mail Anti-Virus'. You'll now see the Mail Anti-Virus tool on the right.

Click the Settings button in the 'Security level' section and the Mail Anti-Virus window will open. Select the 'Attachment filter' tab followed by the 'Rename specified attachment types' option. You then need to select the boxes next to the relevant types of file. Finally, click OK then the Save button. Kaspersky provides these instructions at [www.snipca.com/36898](http://www.snipca.com/36898).

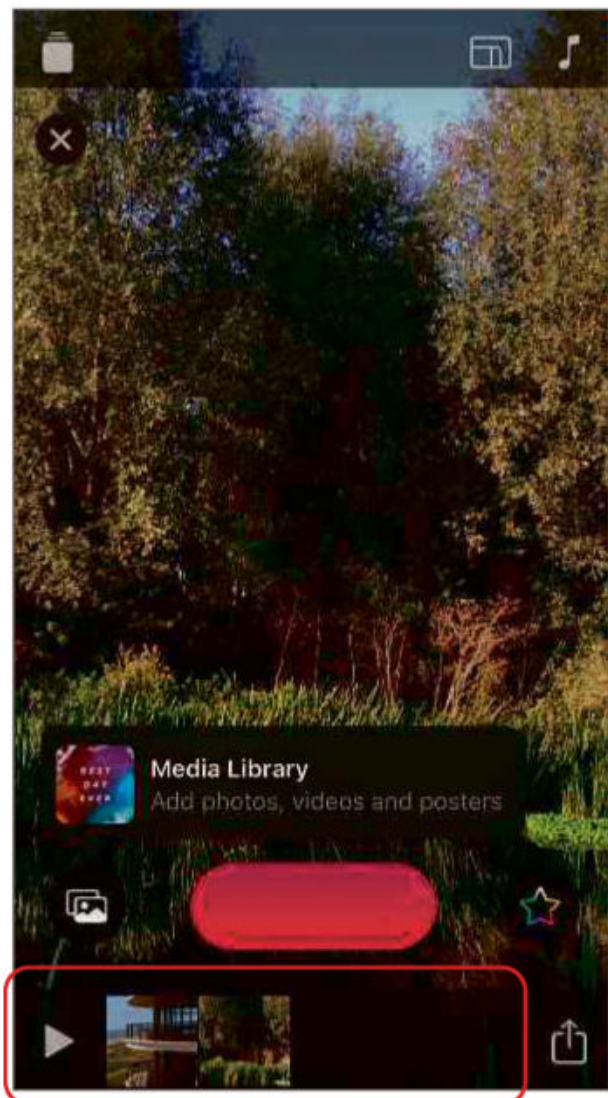
Trevor Anthony



# Phone and Tablet Tips

## iOS Create videos with just a few taps

Putting videos together can be fiddly – unless you're using Apple's free Clips app ([www.snipca.com/36875](http://www.snipca.com/36875)). It lets you assemble a sequence of photos from your camera roll, and videos you shoot on the go, with captions, stickers and effects. There are presets for square,



portrait and landscape orientation videos and, if you decide your shots are in the wrong order, you just need to tap, hold and drag them across the timeline (see screenshot below left). Trimming them down is just as easy: select the shot you want to shorten, then drag the handles on either end to isolate the section you want to keep.

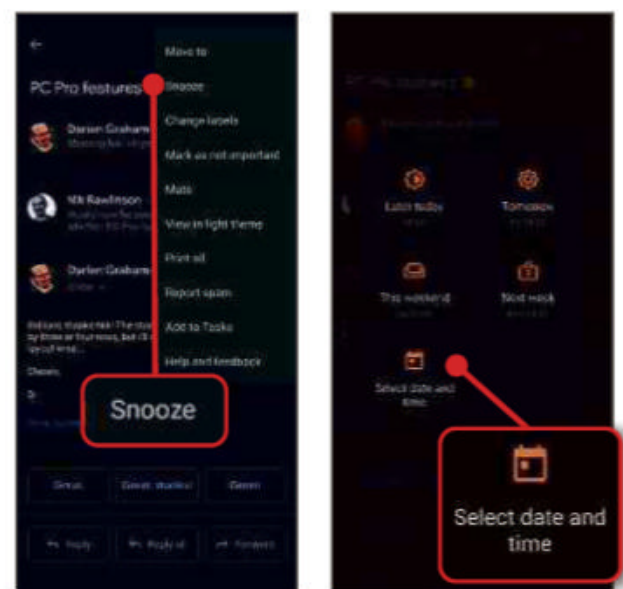
When you've finished, you can save the results to your phone or upload them to online storage, and you can share them directly using messaging apps or email. This is one of those simple apps that takes the pain out of what could be a chore, and actually makes video-editing fun.

## ANDROID & iOS Snooze non-urgent emails

Who doesn't love an empty inbox? The trouble is, if you can't deal with an email right away, the quickest solution is often to mark it as unread and come back to it later. Then it lingers... and lingers... and distracts you from new messages that need to be dealt with immediately. Eventually you're so sick of looking at it that you'll probably not reply at all.

Instead, if you use Gmail (Android [www.snipca.com/36871](http://www.snipca.com/36871); iOS [www.snipca.com/36872](http://www.snipca.com/36872)), you can snooze emails that need dealing with, but aren't particularly urgent.

With the relevant email open, tap the three dots at the top of the screen, followed by Snooze (see screenshot above



left). Now tap one of the pre-set times at which you want it to reappear in your inbox as though it had just been sent. If none of the presets suits your needs, tap 'Select date and time' (see screenshot above right) and choose a more appropriate option from the calendar and time dropdown menu.

## ANDROID Queue web pages when you have patchy phone signal

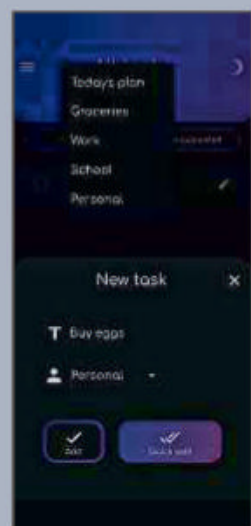
Browsing while travelling can be an annoying experience unless you're in an area with a good phone network. If you aren't, some of the pages you want to visit won't load exactly when you need them to. However, if you're using a Chromium-based browser on Android (including Chrome and Brave), you don't need to keep checking in to see when they might reappear or refresh.

## BEST NEW APPS

### What you should install this fortnight

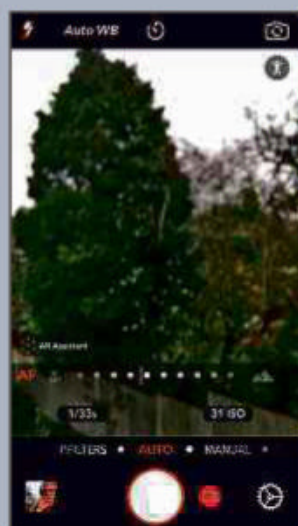
#### Task Air Free\*

Android [www.snipca.com/36874](http://www.snipca.com/36874)  
Some to-do lists try to do too much. Not Task Air. Its uncluttered interface makes it easy to see what you still need to do. Tap the button beside each listed task to mark it as done, and clear your completed jobs in a batch. Jobs can be organised into groups for personal, groceries and so on. Removing adverts costs 99p.



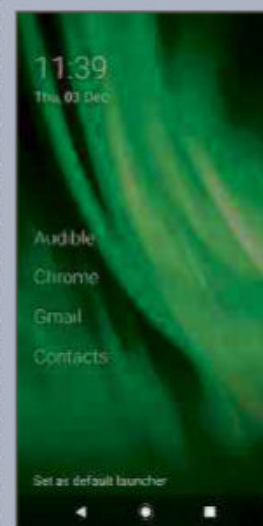
#### DSLR Camera 79p\*

iOS [www.snipca.com/36873](http://www.snipca.com/36873)  
Take your phone camera further with a raft of manual controls, like shutter speed, focus and sensitivity. You can preview the results in real time to gauge the effect before you take the shot. You can shoot both RAW and JPEG photos, overlay the screen with a grid to help keep things straight and shoot bursts of photos for fast-moving subjects.



#### Olauncher Free

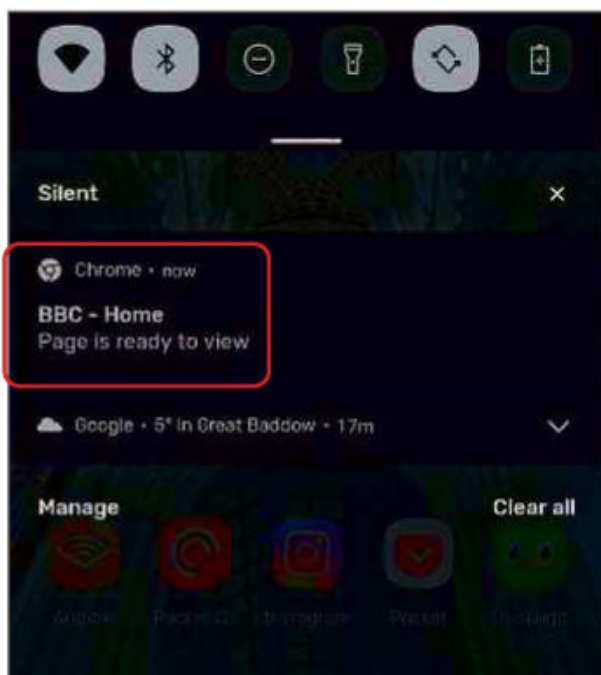
Android [www.snipca.com/36879](http://www.snipca.com/36879)  
If you ever feel overwhelmed by your phone's busy, app-filled home screen, switch to Olauncher, which strips it down to the essentials. You can set up to eight favourite apps on the home screen, which are displayed by name, rather than an icon, and swipe up to access everything else – again without a single icon in view.



\*Contains in-app purchases



## Brilliant things to do on your device



Instead, simply leave the problematic tab active in the browser and head off to do something else. Your phone will monitor your mobile connection in the background and, when it gets back online, re-load the page for you. You'll know it's reloaded because you'll see a new notification (see screenshot above). Tap it to return to the browser and carry on where you left off.

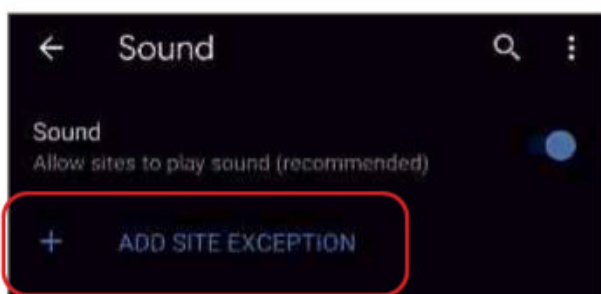
### ANDROID & iOS Block auto-playing audio and videos



One of the most irritating things you'll come across online is an auto-playing video or audio stream. Not only are they noisy and distracting, they also eat into your data allowance. So, if you're anything like us, you'll be scrambling for the stop button before you've even started reading the page. There is an alternative, though: block them from the outset.

You can block audio directly in Chrome by tapping the three dots beside the address bar, then Settings. Tap 'Site Settings', then Sound, and turn the slider off beside 'Allow sites to play sound'. This blocks sound from every site on the web. If only a handful of sites are causing you problems, you can target them specifically by instead tapping '+ Add site exception' (see screenshot below) and typing their address.

The option to block auto-playing videos

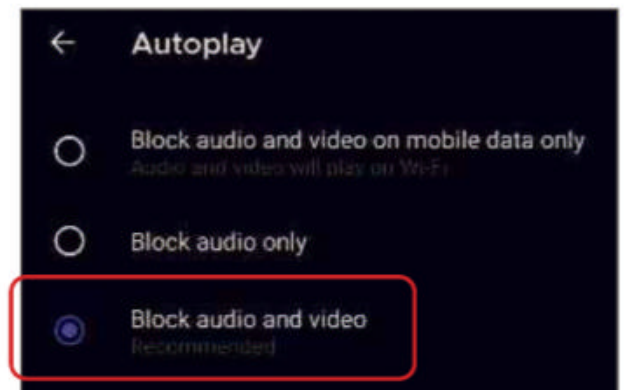


in Chrome no longer exists, but you can enable it in Firefox ([www.snipca.com/36866](http://www.snipca.com/36866)). Tap the three dots beside the address bar, followed by Settings. Now tap 'Site permissions', Autoplay, and select 'Block audio and video' (see screenshot below right). Or, if you're happy for audio and video to play over Wi-Fi (when it won't eat into your mobile allowance), select 'Block audio and video on mobile data only'.

If you prefer to stick with a Chrome-based browser, then Kiwi, which is free on Android from [www.snipca.com/36867](http://www.snipca.com/36867), lets you use Chrome extensions like AutoplayStopper. To install it, open Kiwi and visit [www.snipca.com/36868](http://www.snipca.com/36868), then tap 'Add to Chrome'. You can then

manage its settings by tapping the three dots beside the Kiwi address bar, followed by Extensions.

On iOS, you can block auto-playing on Apple's built-in apps by opening Settings and tapping Accessibility, followed by Motion. Turn off the slider beside Auto-Play Video Previews.



### BEST APPS FOR...

### Diary keeping

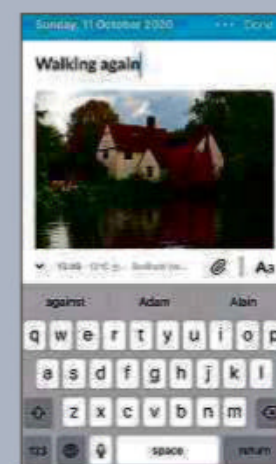
#### Day One

Free\*

iOS [www.snipca.com/36880](http://www.snipca.com/36880)

This app provides daily prompts that help you think of something to write if not much is happening. Otherwise, this is a great way to collect photos, audio clips, thoughts and more so that you can roll back through them in years to come. The free app lets you write as many entries as you want in a single journal.

**Best for** Versatile diary keeping



#### Journey

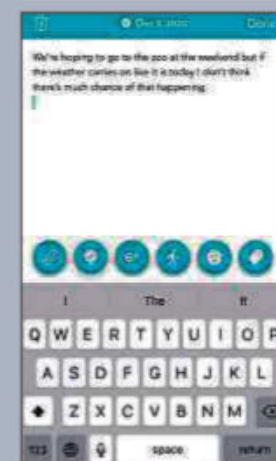
Free\*

Android [www.snipca.com/36881](http://www.snipca.com/36881)

iOS [www.snipca.com/36882](http://www.snipca.com/36882)

As well as giving you space to write traditional diary entries, Journey can note the weather (which it downloads from the web), lets you add locations (which it detects), tag entries, record your mood, attach photos and drawings and more.

**Best for** Logging every aspect of your life



#### Daylio

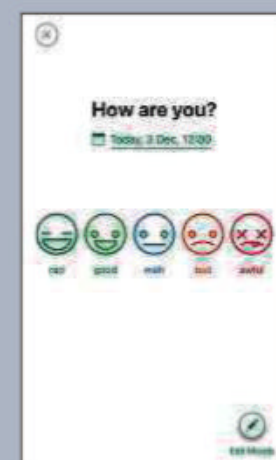
Free\*

Android [www.snipca.com/36883](http://www.snipca.com/36883)

iOS [www.snipca.com/36884](http://www.snipca.com/36884)

This is a diary-keeping app that doesn't rely on you writing long entries. It's more focused on tracking your mood, food, mental health, fitness and more. Logging an entry is as simple as tapping icons in the various categories you've chosen to track and adding a written note. You can then monitor your changing stats over time.

**Best for** Tracking personal changes



\*Contains in-app purchases

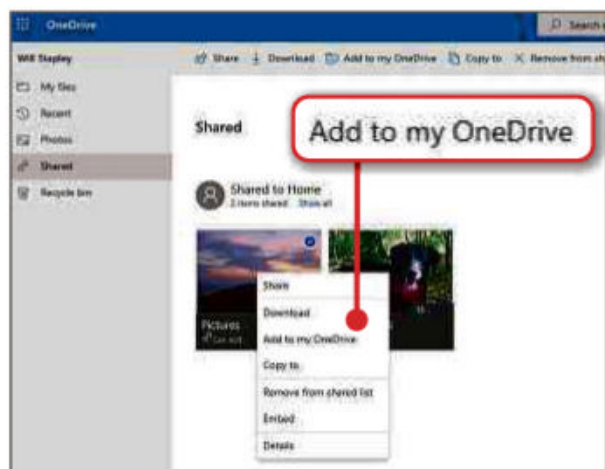


### WINDOWS 10

#### Create shortcuts to shared folders in OneDrive



In Issue 595 (page 38) we showed you how to use OneDrive's new family-sharing tool. Now Microsoft has added another new tool to its online-storage service, this time letting you create desktop shortcuts to folders that others have shared with you. To use it, log into OneDrive at [www.microsoft.com/onedrive](http://www.microsoft.com/onedrive), then select Shared from the list on the left. Now right-click the shared folder you want a shortcut to and select 'Add to my OneDrive' (see screenshot below) followed by 'Add folder'.



A shortcut to that folder will now be added to the 'My files' section of your OneDrive account. This means any PC that you sync your OneDrive account to will have the same shortcut when you open File Explorer (press the Windows key+E). Open the OneDrive folder in File Explorer. You can then add this shortcut to your desktop by right-clicking it, then selecting 'Send to' followed by 'Desktop (create shortcut)'.

To remove a shortcut for a shared folder, return to your OneDrive account in your browser, select 'My files', right-click the shared folder and select 'Remove from my OneDrive'.

### WINDOWS 10

#### Check your Bluetooth devices' battery level



Wireless headphones and headsets are incredibly convenient, but if their battery suddenly dies you'll be left in the lurch. Windows includes a hidden feature that lets you keep an eye on the battery level of your headphones, as well as other Bluetooth devices like wireless speakers. First, open Settings by pressing the Windows key+I, then select Devices. The 'Bluetooth & other devices' section will now open, showing all Bluetooth devices currently paired with

### WINDOWS 10

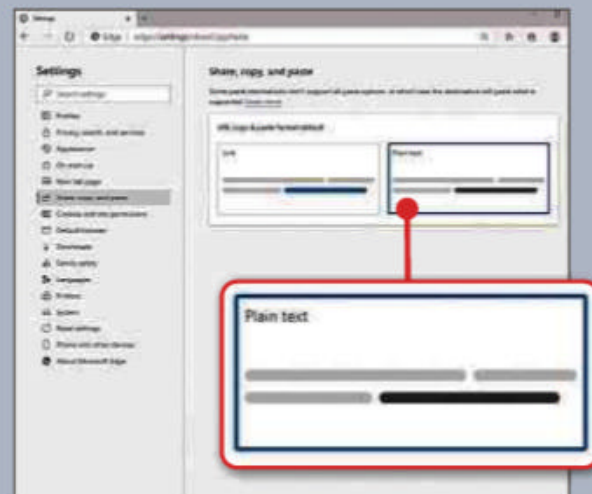
#### Use links that display web-page name



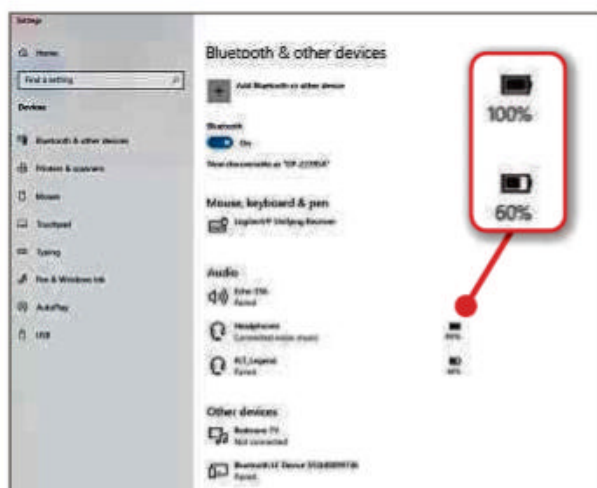
The URLs for some web pages can stretch to well over 100 characters. If you copy then paste one of these sprawling URLs into an email or other browser-based tool they'll take up a huge amount of space, making it harder for the recipient to read your email and work out what the web link relates to.

However, if you copy and paste a link using the latest version (87) of Microsoft Edge, it will now display with the full title of that web page, **hyperlinked** to the relevant address. This makes the links shorter and easier to read. You don't need to do anything to make use of the new feature – simply copy and paste as you normally would. However, it only works if you copy the link in Edge then paste it into another Edge tab or a Windows app such as Mail.

If you'd rather paste the full link text,



press Ctrl+Shift+V (or right-click it, click 'Paste as', then 'Plain text'). Alternatively, you can switch the default option back to pasting links as plain text. To do this, click the menu button in Edge (three horizontal dots, top right), Settings, 'Share, copy, and paste', then select the 'Plain text' option (see screenshot).



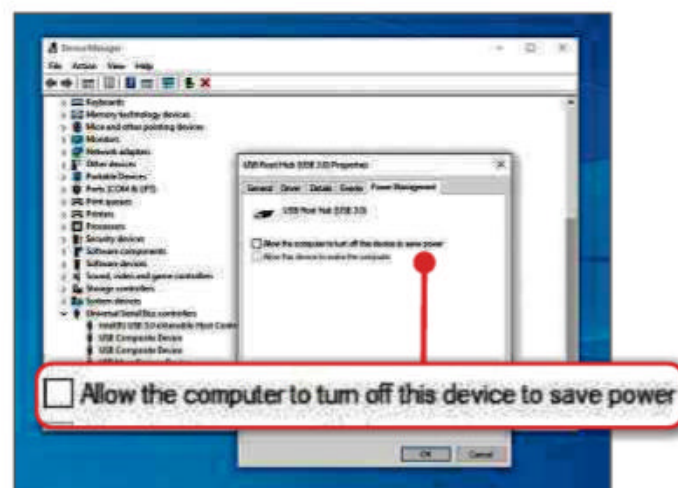
your computer. For those that support this feature (most wireless headphones and headsets do), you'll see the current battery level (see screenshot above). If a device isn't currently connected to your PC, Windows will display its battery level when it was last connected, then update it once it reconnects.

### WINDOWS 7, 8.1 & 10

#### Stop connected USB devices going to sleep



If a USB device attached to your laptop isn't being used, Windows can suspend it by cutting its power supply. It does this to extend battery life and, in most cases, it's a great benefit. However, it can sometimes stop certain devices, such as external hard drives,



from working properly.

If a USB device connected to your laptop keeps disconnecting, turning this feature off may fix the problem. To do so, click the Start button, then type **device manager** and press Enter. In the Device Manager window that opens, scroll down to the 'Universal Serial Bus controllers' entry, then expand it by clicking the small arrow to the left. Next, right-click the USB Root Hub (or similar) entry, select Properties, then the Power Management tab. Finally, untick the 'Allow the computer to turn off this device to save power' box (see screenshot above).

Windows will no longer attempt to power down USB devices it thinks aren't being used. However, be aware that this may mean your laptop's battery life won't last as long between charges.

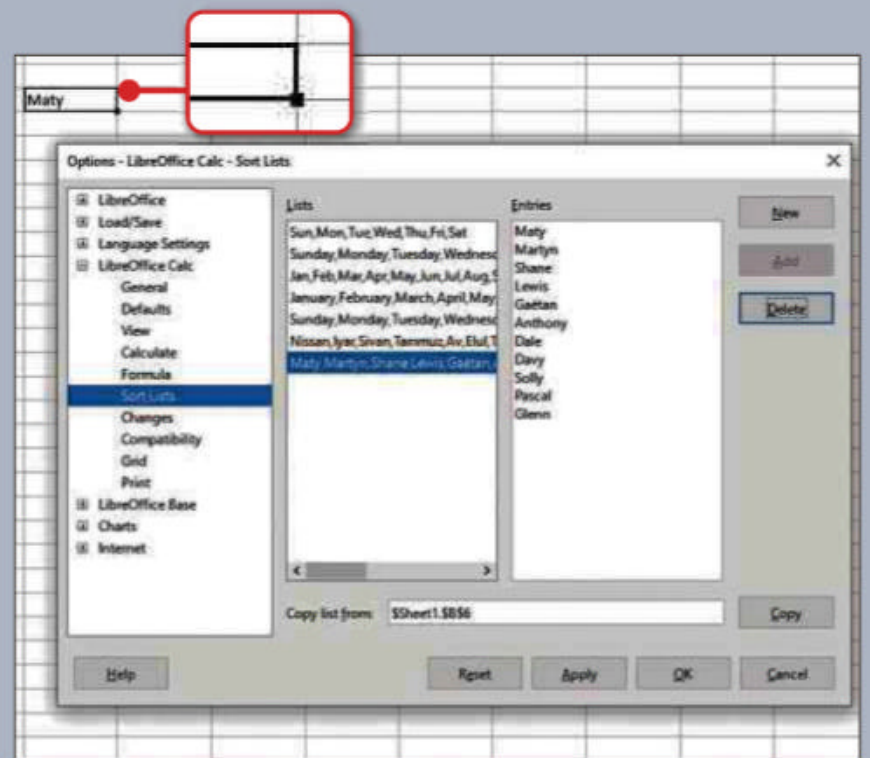


### LIBREOFFICE CALC

## Create your own auto-fill lists



If you type **Monday** into a cell within Calc, then click and drag the small square box in the bottom-right corner of the cell, the rest of the cells will automatically fill with days of the week. You can improve on this by adding your own auto-fill lists. Press Alt+F12, then select LibreOffice Calc on the left followed by Sort Lists. In the Lists box you'll see Calc's preset lists – select one and the words in that list will be displayed in the Entries box. To add your own, click New on the right, then type your additional words (this can be anything from names of people in your family to colours of the rainbow), pressing Enter after each one. Click 'OK' to save the list. Now return to your spreadsheet, type one of the words from your list into a cell, then drag the small black box as before (see screenshot). Calc will now fill the selected cells with the words from your custom list. If you select more cells than words in your list, Calc will simply repeat them.



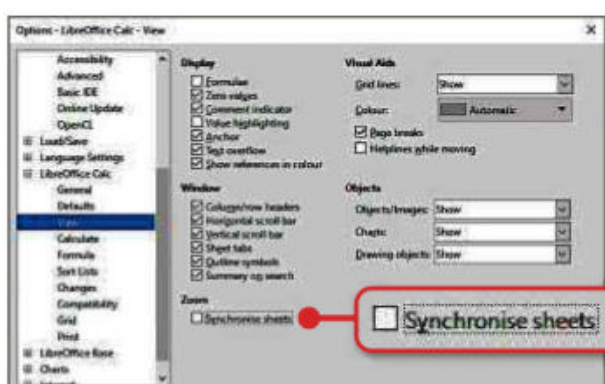
### LIBREOFFICE CALC & MICROSOFT EXCEL

## Control tab zoom levels



In LibreOffice Calc, you can zoom in or out of a spreadsheet by holding down the Ctrl key and using your mouse's scroll wheel or using the zoom controls in the bottom-right corner of the window. However, doing this will zoom *all* tabs in your spreadsheet. If you want to set each tab to a different zoom level, press Alt+F12 to open the LibreOffice options window, expand the LibreOffice Calc section on the left by double-clicking it, then select View. On the right of the window, untick the 'Synchronise sheets' box in the Zoom section (see screenshot below), then click OK. Any adjustments you make to the zoom level will now only apply to the tab you have currently selected.

Excel works slightly differently. By default, zoom levels in tabs aren't linked, so you can adjust them individually. However, if you want to apply the same zoom level to multiple tabs, hold down Ctrl, select the tabs you want to zoom, then adjust the zoom level.



### LIBREOFFICE CALC & MICROSOFT EXCEL

## Generate random numbers

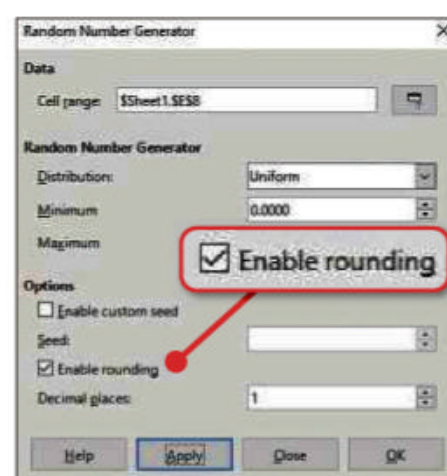


Calc has a useful tool that lets you quickly enter random numbers into a series of cells.

First, select the cells you want to insert the random numbers into, then open the Sheet menu and select Fill Cell, followed by 'Fill Random Number...'. In the Random Number Generator window that opens, you can fine-tune how the process works. The 'Distribution' box lets you choose the function used to generate the numbers. The simplest is Uniform, which lets you specify minimum and maximum numbers – Calc will then generate random numbers between these two.

If you're feeling adventurous, you could switch to the Bernoulli, Cauchy or the classic Negative Binomial random function – the complex definitions of which are beyond the scope of this tip. At the bottom of the window, tick the 'Enable rounding' box (see screenshot above right) and you can choose how many decimal places to display.

Excel doesn't have a similar tool, but you can use the RANDBETWEEN formula to generate a random number between two values – type **=RANDBETWEEN(1,100)** to generate numbers between 1 and 100, for example. You can use the same formula in Calc, but note that in both



programs the random numbers will change every time you open the spreadsheet or edit a cell.

### MICROSOFT WORD

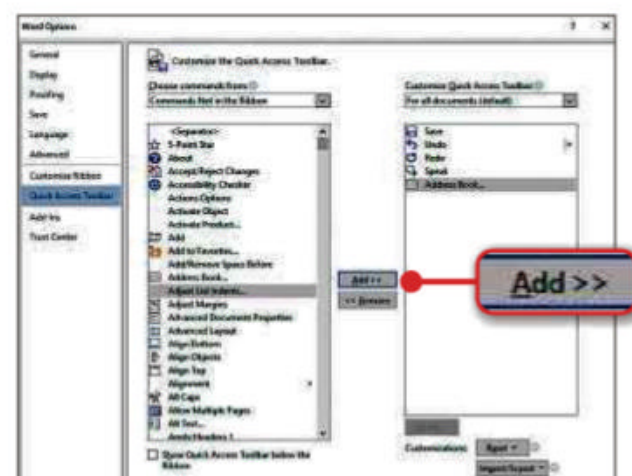
## Add a Contacts button to Word



If you store your address book in Outlook, Word lets you quickly access it

when you want to add contact information. To set this up, click File, Options, then select Quick Access Toolbar from the list on the left. Next, click the 'Choose commands from' box, then select 'Commands Not in the Ribbon'. Scroll down and select 'Address Book...', then click the Add button (see screenshot below), followed by OK. You'll now see a small contact icon on the left side of the title bar of the Word window.

When you next want to enter someone's contact information into a document, click this button, select the contact, then click OK.





# In The Club



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

## Raise money through a silent auction

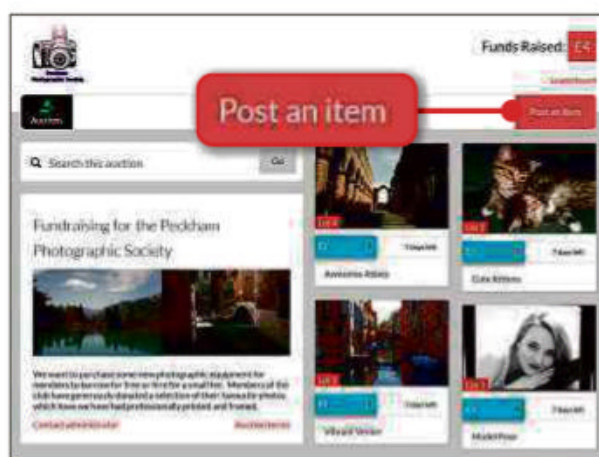
One of the best ways to raise money for your club or for charity is by selling items that have been created – or donated – via silent auctions online. They're quick and easy to set up, and you can choose when to run them, and how many lots to offer.

Jumblebee ([www.jumblebee.co.uk](http://www.jumblebee.co.uk)) is our favourite silent auction site. It doesn't charge a fee to set up an auction page, but it does take five per cent of any proceeds once the auction has closed. The site can either collect the payments for you, or you can use PayPal if you prefer.

### Set up your auction page

Click the 'Set up an auction now' button on Jumblebee's home page. Create a new account by entering your name, email address, mobile-phone number and a password. Agree to the terms, tick the box to prove you're not a robot, then click Register. The 'Your Event' page will open. From here you'll need to enter a name for and description of your auction.

In our example we're running a photography club, and will be selling members' photographs to raise money for equipment. Jumblebee offers a choice of



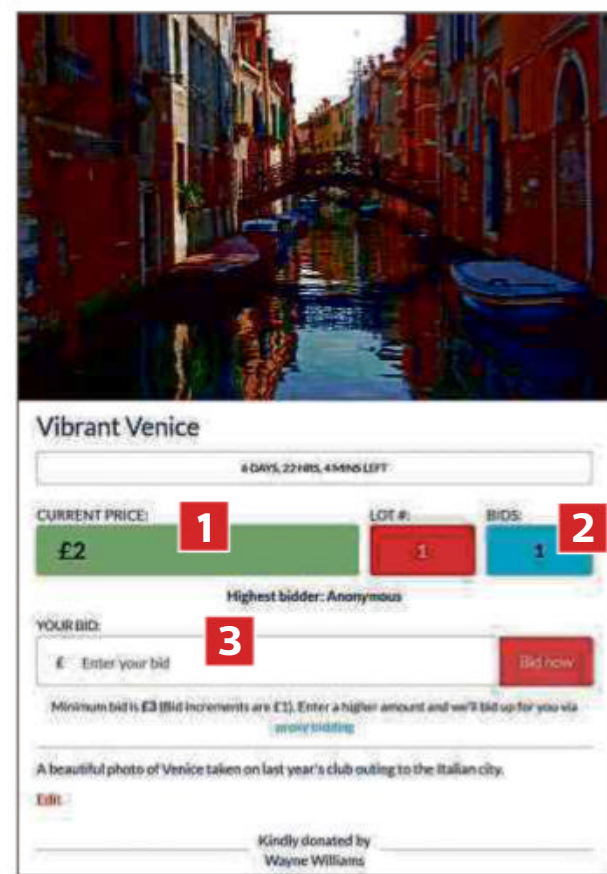
Click the 'Post an item' button to add a new lot for people to bid on

six description layouts (see screenshot below left), which let you add images – such as examples of items you make or activities you carry out – alongside the text. Click the design you want, and if it includes a photo, click the grey 'Select an image' button to upload your own image.

Next, use the dropdown menus to set the start and end time for your auction. Specify if your auction page should be public – you can promote it via Jumblebee's site and social media, and have it indexed by search engines like Google – or remain private. In the latter case it will be up to you to attract people to the page.

Click the Continue button at the bottom, and you'll now be able to add your club logo to the page. Click the 'Select an image' button then find and upload your logo. Jumblebee's preferred sizing is 250x120 pixels, but it will accept other sizes. A preview of the logo will be displayed and you can drag it to reposition it and adjust its size. If you don't want to use a logo, you can select one of Jumblebee's own images.

Next, create a unique web address for your auction page to make it easier to find. Type the name of your club into the box to receive an address, which will be something like [www.jumblebee.co.uk/myclub](http://www.jumblebee.co.uk/myclub). Click 'Continue'. On the next page you can choose whether to allow proxy bidding (whereby bidders enter a maximum amount they are prepared to pay, and the site will make incremental bids on their behalf up to this figure).



If someone wants to bid on an item they need to enter the amount and click 'Bid now'

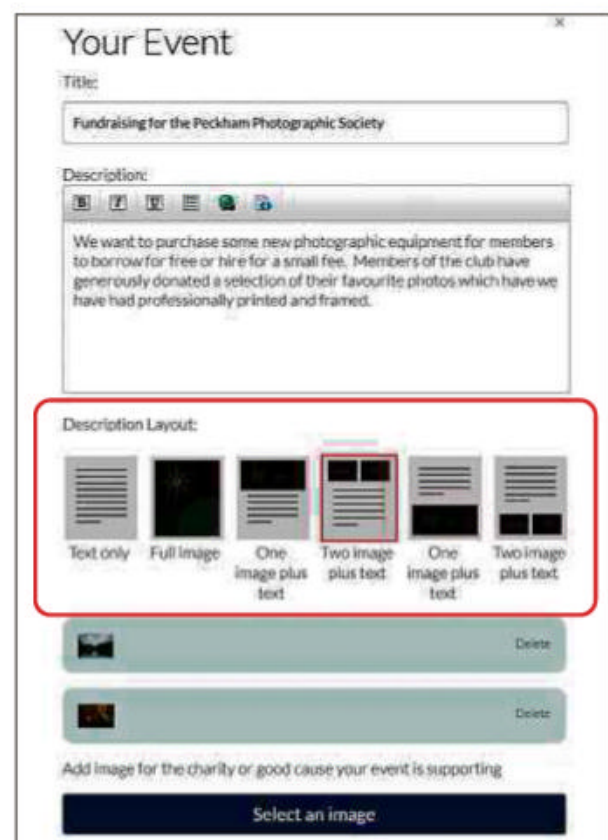
Click 'Continue' and then choose if you want to use Jumblebee's own payment collection system or PayPal. You can also accept cash, cheques or bank transfers.

Enter the message that winning bidders will see, click Continue, and complete the final steps, which includes adding a sponsor if you have one. When finished, click 'Complete your auction'.

### Add items to your auction

On your auction page, click the red 'Post an item' button at the top (see screenshot above left) and fill in the item name and description. If it was donated you can give details of the donor. Set your starting bid, what the bid increments should be and whether there's a reserve price. Finally, set the start and end date and time for the item and upload an image for it. Click the 'Post it' button to add it.

Once your auction is live, people can start bidding on items they want. They just need to click an item to see its current price (1 in our screenshot above) and number of bids (2) and, provided they have a Jumblebee account, can then make a bid themselves (3).



Choose from one of six layouts when creating your event page



# What's All the Fuss About...

## Sun Valley

Don't be alarmed – it's only a major redesign of Windows 10

### Where's that?

You mean, *what* is that.

### OK, what is that?

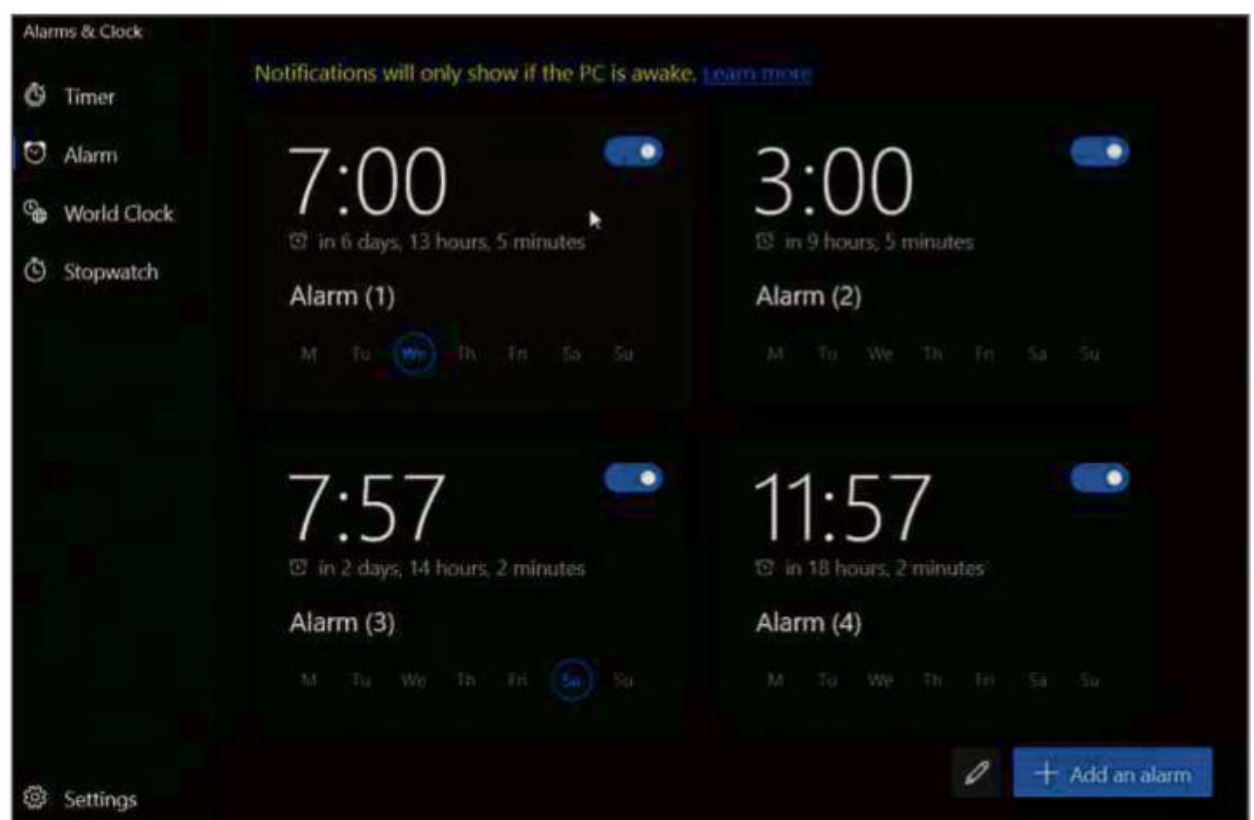
It's the codename of a major redesign of Windows 10 that will make it look more modern, with new icons, splashes of colour and boxes getting rounded corners. Leaked documents from Microsoft call the design “reinvigorating”, making it sound more like an overpriced shower gel smelling of exotic fruit than a revamped user interface.

### Can I see what it looks like?

Yes, if you're signed up to the Windows Insider Program (<https://insider.windows.com>). Click the Start menu, type **alarms**, then open the 'Alarms & Clock' desktop app that appears. This is the first tool Microsoft has redesigned as part of the Sun Valley project. If you're not a Windows Insider, take a look at the app being demonstrated at [www.snipca.com/37021](http://www.snipca.com/37021) (pictured above right).

### So, what's new about it?

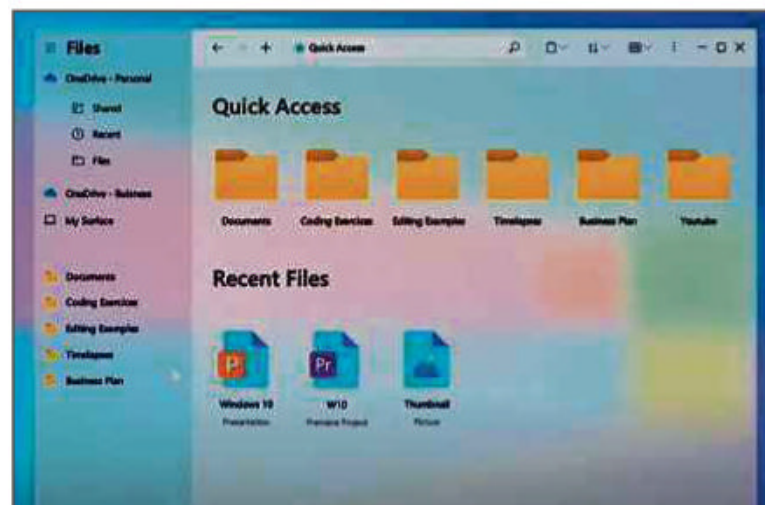
The alarm boxes do have rounded corners – or at least, they're not as sharp as the 'New Alarms' box in the current app. More noticeable are the pleasing touches of blue, such as the 'Add an alarm' button at the bottom right and the sliders in each box. Again, this looks much nicer than the harsh black-and-white design of the existing app. We also like the way the boxes illuminate when the cursor moves



over them. It's a perfect example of 'light', one of the five principles behind Microsoft's Fluent Design style, which it unveiled in 2017.

### What are the other four?

Depth, motion, scale and material. The idea behind depth is to give boxes subtle shadows, making it easier to see what you're clicking (this is particularly apparent in Office 2019's tools). With motion, Microsoft gives tools a sense of movement to indicate how they're working, such as fading boxes in and out. Scale means the overall design should apply across all devices, regardless of screen size. Finally, material refers to the 'acrylic' effect, which places translucent windows over solid ones – the opposite of the flat, solid blocks of colour central to Windows 8's design. That screenshot to your left gives an example of acrylic design.



An amateur version of acrylic design – coming to a desktop near you soon?

### Is it an official Microsoft screenshot?

No, it's taken from a video ([www.snipca.com/37025](http://www.snipca.com/37025)) made by an amateur designer ('theHacker34') who played around with Microsoft's new

style to create a new-look version of Windows 10. It looks pretty good, too: what you can see in the image is how File Explorer would appear as a transparent box over the desktop background.

### Will File Explorer be one of the tools redesigned?

Yes, according to Microsoft sources so excited they can't help but blab to the press, along with the Start menu, Action Centre and taskbar. Rumours suggest the changes will be part of the feature update due in the autumn, codenamed 21H2 (and yes, that does make it sound like a *Star Wars* robot), though we'll probably get more glimpses before then in preview versions. There might even be some small tweaks in the spring update (that's called 21H1).

### Can I now ask where Sun Valley is?

Yes, though there are several: two in Australia, one in Canada, one in the Philippines, one in the Solomon Islands and eight in the US. We reckon the name comes from the most famous Sun Valley – a ski resort in Idaho, home to the world's first chairlifts when it opened in 1936. Microsoft will hope its redesign reaches similar heights.



# STOP USING Google

Google makes billions by guzzling your personal data in order to show you targeted adverts. Loads of people are now switching to more private tools that also work better, smarter and faster.

**Jonathan Parkyn** tells you what to do

**G**oogle's unofficial motto 'don't be evil' became the company's mission statement in 2000.

Those well-intentioned words appeared prominently in the company's official code of conduct (which you can still read on the Wayback Machine site at [www.snipca.com/37022](http://www.snipca.com/37022)). Tellingly, from around 2018 Google started erasing all reference to the phrase. Perhaps it

belatedly realised it could no longer get away with this sort of hypocrisy given some of its dubious practices.

To be clear, we think the tech giant has produced a number of genuinely brilliant products and services – most of which are available for free – and the company continues to push technology into new and exciting areas, such as advanced robotics and artificial intelligence. However, Google's business model is increasingly leaving a sour taste.

While other companies have been struggling with the economic impact of the pandemic, Google casually raked in a staggering \$37.10bn (around £27bn) in revenue between July and September 2020 – a rise of more than £2bn from 2019. And how does it generate these vast sums of cash? Mostly by tracking your

activities across the web and in the real world to build a comprehensive profile of you then using your personal information to sell targeted advertising.

Google is constantly being challenged for its flagrant disregard for users' privacy. In December, it was fined a whopping €100m (£90m) by French watchdog CNIL for breaking the country's regulations on how it uses trackers. But Google seems reluctant to change its data-gathering ways, while at the same time forcing users to pay for services they said would be free forever (see Google Photos, page 53).

So, over the next few pages, we'll explain why you may want to ditch some of these Google services, and suggest alternative tools and services that won't play fast and loose with your privacy.

## GOOGLE TOOLS YOU CAN DITCH

- Ditch Google Search for DuckDuckGo
- Switch from Chrome to Brave
- Replace Gmail with ProtonMail
- Move from Maps to OSM



## STOP USING GOOGLE SEARCH

Google started as a search engine and is still easily the most popular search tool on the planet, taking a whopping 92 per cent of the global market share from November 2019 to November 2020 (for proof, visit <https://gs.statcounter.com> and click Search Market Share). Its nearest competitor, Microsoft's Bing, accounts for a paltry three per cent.

Biggest doesn't always mean best, of course. And, while Google does a great job of scouring the web for websites, it's also adept at collecting data about you every time you carry out a search. It tracks not only what you search for, but also any links you click and images or videos you view. It analyses your search patterns and keeps track of any adverts you show interest in.

One reason Google collects this data is to help it deliver more relevant results whenever you carry out a search. But the company also stores all this information along with your search history and uses it to build a detailed advertising profile of you, so that it can target you with personalised ads. This is how it makes most of its money.

### Switch to a private search engine

One way to minimise the amount you're being tracked when you use Google Search is to make sure you're not logged in with a Google account. Bear in mind this will also make your search results less relevant, and Google may still be able to track you via other identifying factors, such as your **IP address**.

A more effective way to avoid Google's tracking is to use a different search engine. We'd avoid switching to Bing, because this would just mean Microsoft is gathering your data rather than Google. The best alternative from a privacy point of view is DuckDuckGo ([www.duckduckgo.com](http://www.duckduckgo.com)), which won't track your activity, store your search history or share any of your personal information. Better yet, the service routes any links you click in a way that prevents your search terms being shared with other websites.

DuckDuckGo includes many of the handy features you find in Google Search – type a maths calculation or a currency conversion and it will instantly provide an answer, for example. But some features, such as instant translation to and from English, are absent.

And, because DuckDuckGo doesn't

gather data about you, your search results aren't always as relevant. On the upside, you won't ever be targeted by adverts.

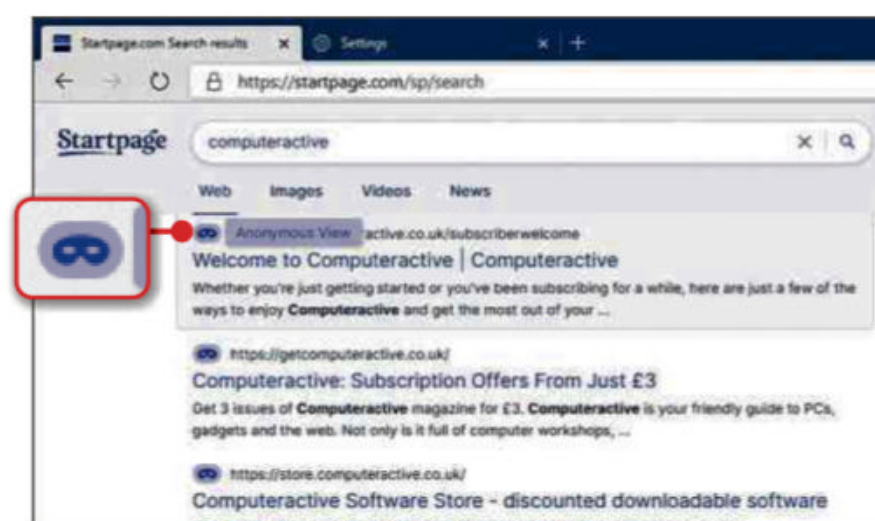
If you want the benefit of Google's high-quality search results without all that tracking and profiling, then you could try Startpage ([www.startpage.com](http://www.startpage.com)) – a search engine that pays Google a small fee to use its search technology, but doesn't record your search queries or use tracking and **cookies** that can identify you.

Like many free services, Startpage makes its money via advertising and sponsored links, but these adverts aren't generated by analysing your personal data. The result is a good balance between accuracy and privacy. Clicking the mask icon (see screenshot above) next to a link in the search results will take you to that site anonymously.

### Set your preferred search engine

Switching your search engine means setting an alternative provider as your browser's default. For example, if you're happy to stick with Google's web browser Chrome (see page 53, if you're not), you can replace Chrome's default search engine (Google) by clicking the menu button (three dots, top right), then Settings. Here you can select another search provider of your choice from the dropdown menu under 'Search engine' – DuckDuckGo is listed here, for instance.

If the search engine you want isn't listed, click 'Manage search engines', then Add. Type the name of the search engine you



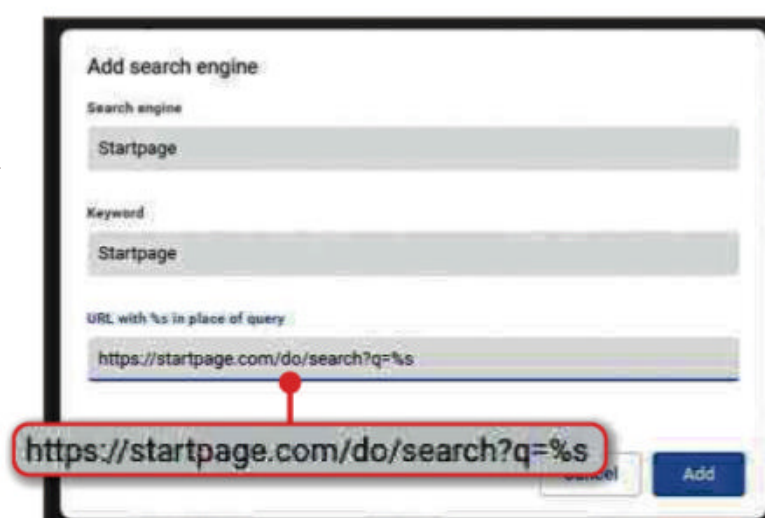
Startpage lets you view websites anonymously by clicking the mask icon next to a search result

want under both 'Search engine' and Keyword. Next, under URL, enter the search-results web address for the search engine you want, followed by **%s** – <https://www.startpage.com/do/search?q=%s>, for example. (for most search engines, their results URL ends after the equals sign, so **%s** after that, see screenshot below left). Click 'Add', then look for your new search engine in the list of 'Other search engines' – click the three-dots button next to it and select 'Make default'.

Microsoft's browser Edge has settings that work in much the same way, but to find them you need to click the menu button (three dots), Settings, 'Privacy, search, and services', then 'Address bar and search'. Some privacy-first browsers, such as Brave ([www.brave.com](http://www.brave.com), see page 52), let you select either DuckDuckGo or Startpage as your default search engine during the initial setup.

On a phone or tablet, changing your search engine works in a similar way. In Chrome for iOS and Android, for example, tap the menu button (three dots), tap Settings, then 'Search engine'. Here, you'll be able to select DuckDuckGo. Tap the Back button when you've finished. Similarly, in Edge, tap the three dots, Settings, then 'Advanced settings'. Tap 'Search engine', then Others to select DuckDuckGo. Finally, tap Done.

Other than Edge and Chrome, there aren't many mobile browsers that let you add more alternative search engines, meaning you may not be able to set Startpage as your default search engine. There is, however, a free, Startpage app ([www.snipca.com/36963](http://www.snipca.com/36963) for Android, [www.snipca.com/36964](http://www.snipca.com/36964) for iOS).



You can add search engines to Chrome by typing their search-results URL, followed by **%s**





# STOP USING GOOGLE CHROME

Chrome has been the world's most popular web browser since 2012, but there are two big reasons why you should consider ditching it: privacy and performance. Chrome provides Google with more ways to gather data about you by storing cookies, and if you sign into the browser with your Google account, the company records every site you visit. Chrome's privacy policy even admits "we use your browsing data to improve and personalise your experience within Chrome" – see [www.snipca.com/36977](http://www.snipca.com/36977).

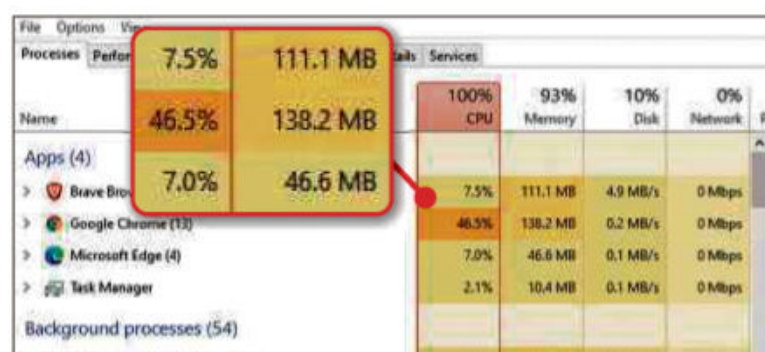
Chrome also offers little protection against third-party trackers – cookies placed on your computer by other websites that lets them track your movements around the web and, potentially, sell your browsing data to other organisations. Chrome allows these trackers by default and in a blog post in 2019 ([www.snipca.com/36979](http://www.snipca.com/36979)) Google admitted that it has no intention of blocking them.

You can disable third-party trackers in Chrome, but that brings us to another problem with Google's browser – its privacy settings (click the menu button, Settings, then 'Privacy and security') are unnecessarily complicated compared with many of its rivals, making it hard to know what to switch off.

We also don't like the way Chrome signs you up to send usage data back to Google before you've even downloaded it. It's easy enough to click the Download Chrome button on the [www.google.co.uk/chrome](http://www.google.co.uk/chrome) homepage without noticing the pre-ticked box that grants Google the power to gather even more information about you.

## Memory hog

One reason Chrome became so popular was that it was much faster than Internet Explorer, Opera and Firefox. These days, Chrome still feels fast, but it has a habit of putting an undue strain on your PC in the process. Our screenshot below shows



Google's Chrome browser tends to use more of your PC's memory than its rivals

Windows Task Manager with three different browsers – Chrome, Brave and Edge – running at the same time. All three have the same four tabs open, but you can see that Chrome is using up significantly more CPU (46.5%) and memory (138.2MB) resources than the other two.

This is partly due to how Chrome handles each tab as a separate process. Microsoft actually released a fix for the excessive memory usage in Chromium-based browsers – via the Windows 10 May 2020 Update ([www.snipca.com/36980](http://www.snipca.com/36980)).

Annoyingly, Google is yet to make use of this fix for Chrome, so it remains a memory hog.

## Switch to a more private browser

If privacy is your overriding concern, consider switching to Mozilla's [open-source](http://www.snipca.com/36983) browser Firefox ([www.snipca.com/36983](http://www.snipca.com/36983)), which by default stops websites gathering data on you by blocking third-party tracking cookies.

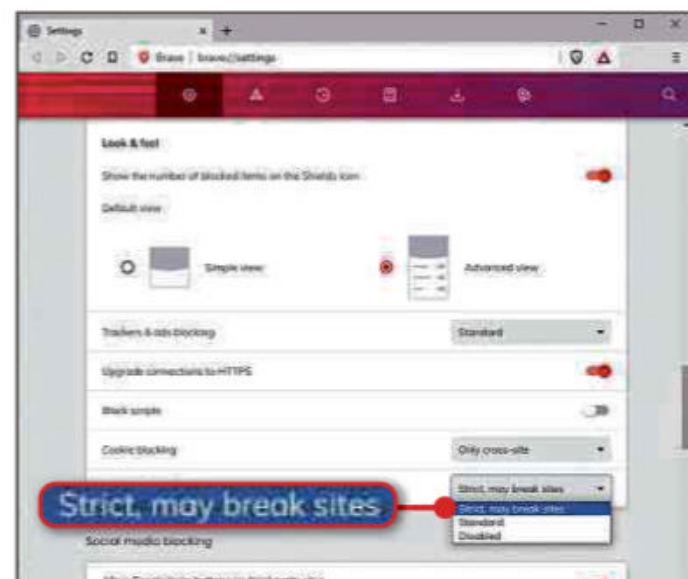
The Brave browser (<https://brave.com>) goes even further by preventing what's known as 'fingerprinting' – a process whereby sites build up a detailed profile of you based on 'semi-identifying' factors revealed by your browser, such as your PC's language setting, its hardware and so on.

Cleverly, Brave won't block websites that have a genuine reason to get this information (banking websites use it to detect suspicious login attempts, for example), however if you prefer you can enforce it on *all* sites by clicking the menu button, Settings, scrolling to the Shields section and selecting Strict from the 'Fingerprinting blocking' box (see screenshot above right).

## Get better performance

If a faster browser is your priority, Microsoft Edge is a safe bet (just make sure you're using the newer Chromium-based version: [www.snipca.com/36985](http://www.snipca.com/36985)). As explained earlier, Edge benefits from the memory-handling fix that Chrome lacks, meaning it takes up fewer system resources.

We also like Edge's privacy settings, which are much more straightforward than Chrome's. Under Settings,



Brave lets you block fingerprinting on all sites, but it may result in some sites not working properly

'Privacy, search, and services', there's a simple, three-tiered tracking prevention option. Balanced mode is selected by default, which blocks most trackers, but you can easily opt for Strict mode to maximise your privacy.

Chrome's slower performance is less of a problem on mobile devices but privacy remains a worry. Brave, Firefox and Edge all offer mobile apps you can try. We also recommend trying DuckDuckGo's Privacy Browser (Android [www.snipca.com/36981](http://www.snipca.com/36981); iOS [www.snipca.com/36982](http://www.snipca.com/36982)). As well as letting you run private searches, DuckDuckGo's browser automatically blocks third-party trackers, enforces **HTTPS** encryption on all websites, and lets you clean up all your browsing data instantly with one tap.

## Move to a new browser

Most rival web browsers let you import your bookmarks and other data from Chrome. Brave prompts you to do so during its setup process – simply select Chrome in the 'Import from' menu. In Edge, click the menu button, Settings, Profile, then select the 'Import browser data' option and select Google Chrome in the dropdown menu. Choose your profile, select the items you want to import, then click the Import button.

Mobile browsers don't always offer an easy way to import bookmarks and browser data from Chrome, but most are able to sync user data between mobile and desktop versions of the same browser. So, the simplest way to get your data on to your device is to import it from Chrome to the browser of your choice on your PC first, then sign into the mobile version of your new browser using the same account as your PC.





## STOP USING GOOGLE PHOTOS

Until recently, Google Photos offered free, unlimited online storage for all your photos and videos. You needed to use the ‘High quality’ option rather than Original (this compressed your photos to reduce their size, without noticeably affecting their quality), but this basically allowed you to back up your photos for free and sync them across all your devices, without using any of your 15GB Google storage allowance.

The service proved particularly popular with Android and iOS users, letting them automatically back up photos taken on their phones. Millions of PC users have also relied on the service, uploading the photos on their computers to Google’s storage for free using the Backup and Sync tool ([www.snipca.com/36996](http://www.snipca.com/36996)).

In November last year, however, Google announced that it was making big changes to its Photos app ([www.snipca.com/36997](http://www.snipca.com/36997)). From 1 June 2021, any new photos or videos that you upload to Google Photos or Google Drive will count towards your free 15GB of storage, even if you opt for the ‘High quality’ setting.

Should you need more space (and you probably will, because the 15GB is shared across all Google services, including Gmail and Docs), you’ll have to start paying a subscription, starting at £1.59 a month for 100GB storage. Photos you’ve already uploaded in ‘High quality’ are currently exempt from these changes and therefore won’t count towards your quota.

However, Google has repeatedly shown

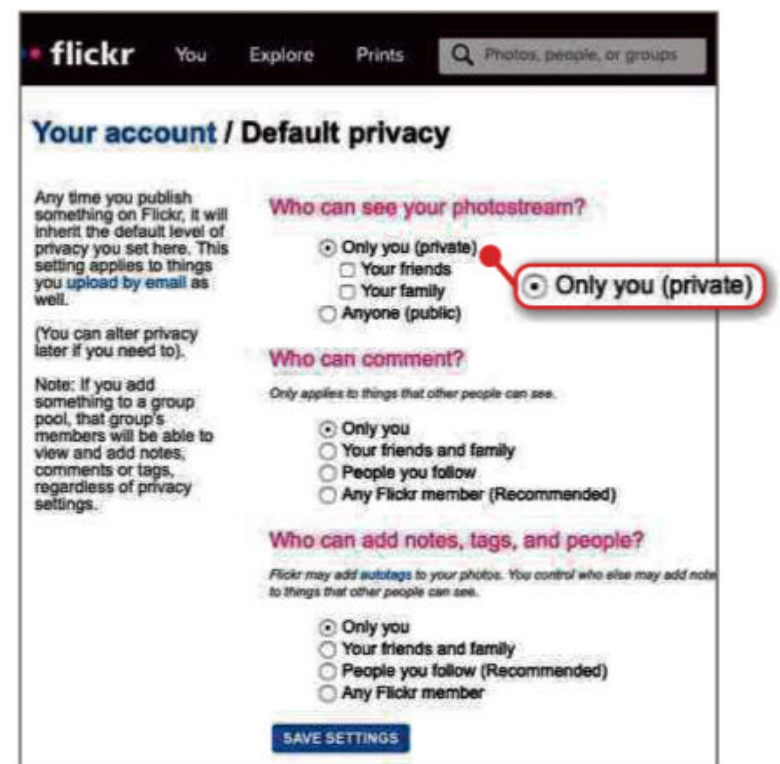
that it’s willing to change its terms at relatively short notice. For this reason, we recommend you don’t rely on the service as a long-term backup solution. Even more concerning is the fact that Google recently sent an email to users, threatening that if they exceed their online storage limit or leave their account inactive for two years, the company “may delete your content across Gmail, Drive and Photos”.

If you have one of Google’s Pixel phones, you won’t have to worry about these changes. The company is allowing Pixel users to carry on using Google Photos with unlimited storage, as before. But it’s also worth bearing in mind that photos you store in Google’s online storage services fall under the company’s Terms of Service (<https://policies.google.com/terms>), which state that Google has the right to “host, reproduce, distribute, communicate and use your content”, including publicly displaying or modifying it. While that sounds terrifying, these permissions are required for many of the features within Google Photos (such as when you choose to create a sharing link for one of your images). However, if it still leaves you feeling uneasy, there are alternatives.

### Get unlimited storage elsewhere

Unfortunately, there isn’t an obvious like-for-like alternative to Google Photos. There are other online storage services (see page 56), but none offer free unlimited photo storage and most lack the advanced features of Google Photos, such as photo editing, filters, scanning images for text or creating and sharing photo albums.

The next best thing is Amazon Photos ([www.snipca.com/36998](http://www.snipca.com/36998)), which offers some of Google Photos’ capabilities, including family photo sharing and syncing across devices (see screenshot left). Indeed, some readers have already switched to it (see ‘Why I stopped using’, page 42). If you’re an Amazon Prime subscriber, you also currently get unlimited full-resolution photo storage. Bear in mind that if you end your Prime subscription, you’ll need to move your photos elsewhere or pay separately for the service (you get 5GB free, but beyond



**If you use Flickr to store photos and don’t want to share them, make sure you set them to be private**

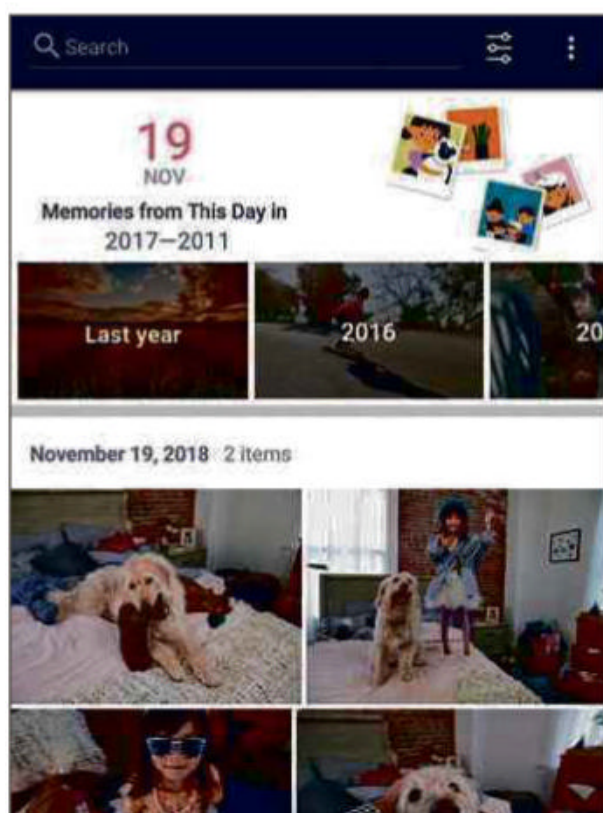
that prices start at £1.49 per month for 100GB).

Flickr ([www.flickr.com](http://www.flickr.com)) is another possibility. Although it drastically reduced its free storage from 1TB to just 1,000 photos late in 2018, its paid-for Flickr Pro plan is good value if you have thousands of photos. For £56 per year, you get unlimited storage – plus Flickr won’t apply any compression to your photos. In comparison, Google charges £79.99 for 2TB of storage.

If you do decide to switch to Flickr, make sure you check your privacy settings, otherwise your photos may be visible publicly. Click your account icon, Settings, ‘Privacy & Permissions’, then click Edit next to ‘Who will be able to see, comment on, add notes, or add people’ and change the defaults to ‘Only you (private)’ – see screenshot above – or friends and family if you want to share with people you know.

### Move your photos offline

If privacy and preserving your photos are your main concerns, there’s an argument for bypassing online-based services altogether and backing up via an external hard drive instead. It’s not ideal, though, as hard drives are susceptible to damage and theft. We therefore recommend creating multiple backups and storing one somewhere other than your home. The good news is that you won’t have to pay an ongoing subscription as you can just use the backup tools that are built into Windows 10 (found under Settings, ‘Update & Security’, then Backup).



**Amazon Prime customers can store unlimited photos for no extra charge and enjoy similar features to Google Photos**



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### JUST SO YOU KNOW...

We have a limited number of **Windows 10 Pro** codes for this offer, but we should have enough to satisfy the high demand we anticipate from readers

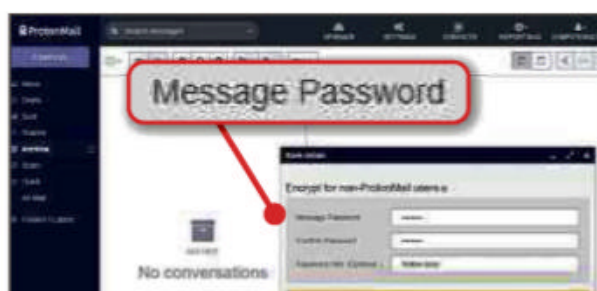




## STOP USING GMAIL

Google has repeatedly come under fire for the way it handles Gmail users' data. It used to scan emails so it could add targeted advertising next to email messages. Google announced an end to this practice in 2017, but only a year later the *Wall Street Journal* revealed that the company had been allowing developers of third-party apps access to users' emails ([www.snipca.com/36999](http://www.snipca.com/36999)) and – worse still – that some messages had been read by staff members, not just automated software.

In addition, some of Gmail's features (such as Smart Compose, which suggests words when you're writing an email) rely on algorithms to scan the contents of your emails. Google used to opt you into these features automatically, but you may have recently seen a notice when logging into Gmail, asking you whether you want to continue using what it calls 'smart features' (essentially an admission by Google that it probably shouldn't have



**ProtonMail lets you send password-protected messages to non-ProtonMail users**

opted you in without consent in the first place – see page 11, Issue 596).

### End-to-end encrypted mail

If security and privacy concerns are turning you away from Gmail, ProtonMail (<https://protonmail.com>) could be the ideal solution. Like Gmail, ProtonMail can be accessed via a web browser or via Android ([www.snipca.com/37001](http://www.snipca.com/37001)) and iOS ([www.snipca.com/37002](http://www.snipca.com/37002)) apps.

Unlike Gmail, however, the company's servers are based in Switzerland, meaning that all user data is protected by

strict Swiss privacy laws. ProtonMail will never track your IP address and you can even sign up for an account anonymously.

In addition, when you email other ProtonMail users your messages are end-to-end encrypted (E2EE), meaning no other person or program can read them except you and the recipient (though read 'Question of the Fortnight', page 10, for how this might change). You can also send encrypted emails to non-ProtonMail users by securing them with a password (see screenshot). It's a bit complicated as you need to send them the password separately (such as via a WhatsApp message), but useful for occasional use – for example, if you need to email banking details to someone.

There are some downsides to ProtonMail. The free service limits you to 500MB of storage and 150 messages a day (which might not be enough for businesses). For £3.60 a month you get 5GB of storage and 1,000 messages a day.



## STOP USING GOOGLE MAPS

It's one thing having Google following you around the web, but stalking you wherever you go in real life is just downright creepy. If you have the Google Maps app installed on your phone or tablet, however, you are effectively allowing Google to track your every move.

Google says it collects your location data so that it can improve its services and provide you with personalised content, such as the location of nearby restaurants. And it's certainly true that, without access to your location data, much of what makes Google Maps so useful just wouldn't work.

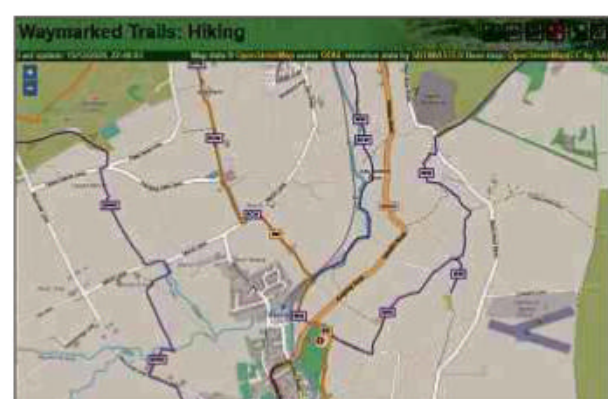
However, dig into Google's Privacy & Terms document ([www.snipca.com/37003](http://www.snipca.com/37003)), and you'll discover that the

company also uses your location to send you targeted adverts. On top of that, by default, Google Maps saves a record of everywhere you go with your devices, even when you're not actively using a Google service.

You can view a record of precisely when and where you've been tracked by logging into [www.snipca.com/37004](http://www.snipca.com/37004) with your Google account. Click the dustbin icon at the bottom-right of the map to delete your location history.

### Open-source mapping

Most map and navigation services require access to your location in order to function, but there are some that respect your privacy and don't constantly record your movements. OpenStreetMap (OSM, [www.openstreetmap.org](http://www.openstreetmap.org)) doesn't use your location data to target you with ads, nor will it share your information with third parties. Instead, it's an open-source mapping service that includes data collected by volunteers the world over. It's also used by other services to provide all sorts of mapping information, such as Waymarked Trails ([www.waymarkedtrails.org](http://www.waymarkedtrails.org)), which overlays OSM maps with walking, cycling and other routes created by users (see screenshot left).

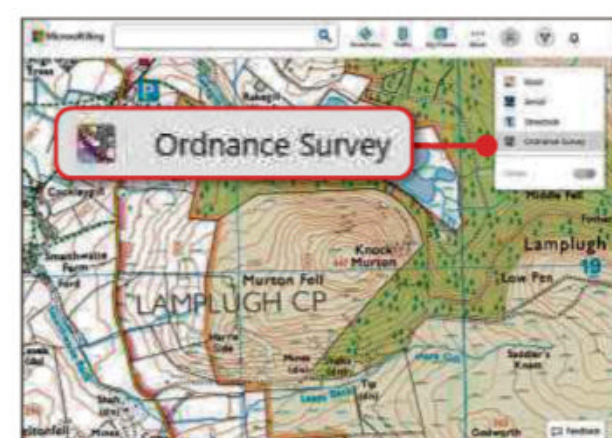


**Waymarked Trails uses OSM maps to display walking routes (shown here in purple and orange) and more**

On your phone or tablet, you can try OsmAnd (Android [www.snipca.com/37006](http://www.snipca.com/37006); iOS [www.snipca.com/37007](http://www.snipca.com/37007)), which uses OSM's map data and adds useful extras such as GPS navigation, spoken instructions and offline maps.

### Get OS maps for free

If you want something with more detail, go to Microsoft's Bing Maps ([www.bing.com/maps](http://www.bing.com/maps)) to find some fabulous Ordnance Survey maps – simply click the Road box at the top right of the map, then select Ordnance Survey (see screenshot below). As you zoom into the map, the view will change from the Landranger (1:50k scale) to Explorer (1:25k) maps, letting you plan everything from a short country stroll to a weekend hike.



**Bing Maps gives you full access to OS Landranger and Explorer maps**





## STOP USING YOUTUBE

Did you know that YouTube is owned by Google? And did you also know that if you don't tighten up your settings, you could be letting total strangers know what you watch online? Sadly, YouTube shares the same lax attitude to personal privacy as Google's other services.

### Stop strangers seeing your favourite channels

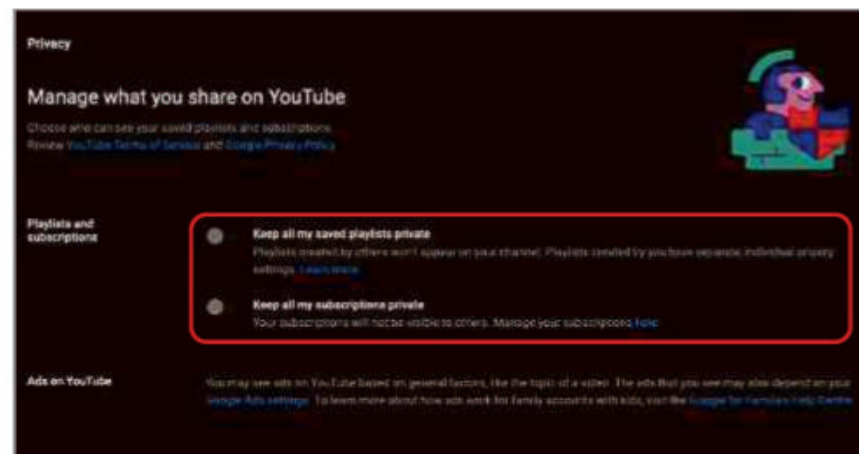
Until December 2019, for example, a list of your 'liked' videos (those you've clicked the thumbs-up icon for) was publicly viewable, meaning anyone could see them. Thankfully, YouTube now keeps that information private. But it's still possible for anyone to see which videos you've shown an interest in because YouTube allows visitors on to your channel to see which other channels you've subscribed to and which playlists you've added.

To disable this, you need to log into [www.youtube.com](http://www.youtube.com) then click your account icon (top right), select Settings, then click Privacy. Next to 'Playlists and

subscriptions', make sure both sliders are turned off (see screenshot right). Even if you disable these settings, YouTube will continue to target you with adverts, either based on your Google Ads settings or the content of the videos you're watching. And, of course, Google tracks your activity on YouTube, as it does with the company's other services.

### Sign out of Google when watching videos

It's tricky to recommend an alternative given that YouTube has the free video-streaming market virtually to itself. You could try Vimeo (<https://vimeo.com>), which doesn't sell your data to third parties. However, it *will* serve up targeted ads based on data it's collected about you,



Turn off these options to stop strangers seeing your favourite channels and playlists on YouTube

and its content is too niche for most tastes in any case. Sadly, there just isn't another service that offers the same variety as YouTube and it's probably unrealistic to stop using it altogether.

However, you can stop Google gathering data on you by not signing into your account when watching videos. To do this, click your account icon and select 'Sign out'. Bear in mind this will turn off many of YouTube's features, including saving videos for later and posting comments.



## STOP USING GOOGLE DRIVE AND DOCS

Google Drive remains one of the more generous online-storage services, offering 15GB for free, compared with 5GB for Microsoft OneDrive and just 2GB for Dropbox. But, as we've already seen (on page 53), Google is changing its online-storage policy and it could conceivably end up reducing its free allowance, as Microsoft did in 2015.

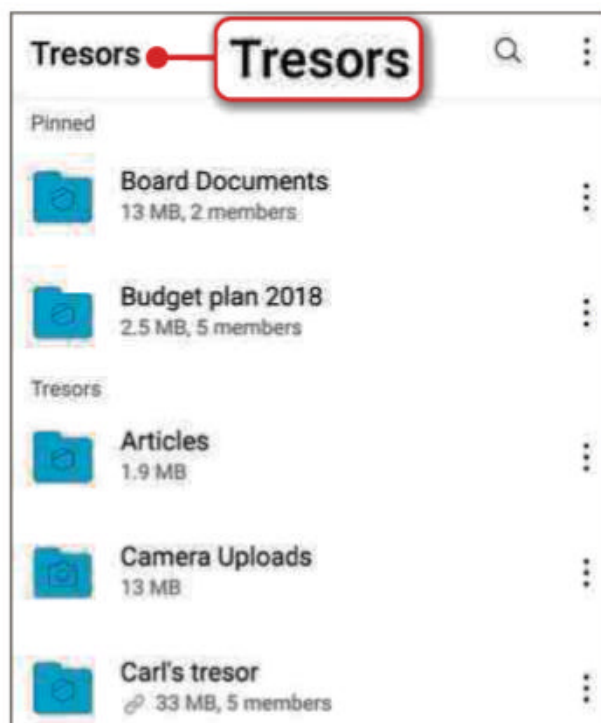
There's a popular myth that claims Google takes legal ownership of anything you store on Google Drive, but that's actually not true. As stated in Google's Terms of Service, you "retain ownership of any intellectual property rights that you hold in that content".

However, as we mentioned on page 53, Google's Terms of Service (<https://policies.google.com/terms>) lets it effectively do what it likes with any files you store online. And, in Google Drive's Additional Terms of Service ([www.snipca.com/37015](http://www.snipca.com/37015)), you'll see that Google retains the right to review and remove content, should it see fit, which essentially means it can open your files and read or scan your documents if it wants to, and delete anything it doesn't like.

Google Drive is inextricably linked to Google's online office suite, which

includes **web apps** such as Google Docs and Sheets, as well as tools for collaboration. You might therefore assume the most obvious alternative is Microsoft's OneDrive (<https://onedrive.live.com>), which provides access to Microsoft's online versions of Word, Excel and so on, as let you collaborate online with others.

However, as we pointed out earlier, you get less free storage than Google, and its



Tresorit lets you save your files in encrypted folders that it's unable to access

privacy policy ([www.snipca.com/37016](http://www.snipca.com/37016)) isn't much more reassuring than Google's, giving Microsoft the right to "collect data about your usage of the service, as well as the content you store".

### Switch to encrypted file storage

For files that you don't want anyone seeing or analysing for data, we'd suggest using an online storage service that offers end-to-end encryption, such as Tresorit, available for Windows, Android and iOS (<https://tresorit.com/download>). Tresorit is another Swiss firm that provides **zero-knowledge authentication**, meaning it's unable to access your content. Once you sign up, you can store your files in encrypted folders called Tresors (see screenshot left).

There are some drawbacks. Firstly, Tresorit's free storage is capped at just 3GB – it costs £6.67 per month to expand this to 500GB. Also, Tresorit doesn't include a built-in office suite, so you'll need to provide your own word processor, spreadsheet tools and so on. Using an offline office suite in this case, such as LibreOffice (free from [www.libreoffice.org](http://www.libreoffice.org)), will help to keep your files private and secure.





## STOP USING GOOGLE CALENDAR

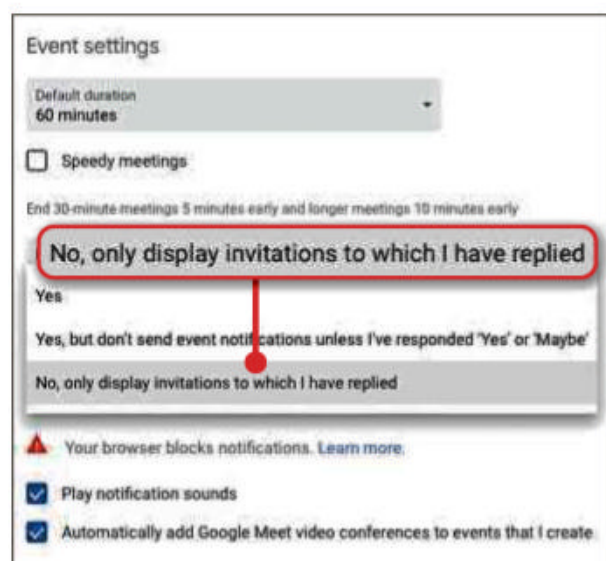
There's nothing particularly insidious about Google Calendar, but it is closely connected to Gmail – to the extent that Gmail will automatically add events to your calendar if it detects emails confirming events like upcoming flights or hotel reservations. Some find this clever and convenient; others creepy and intrusive. It also has the unwanted side effect of letting spam show up in your calendar – including invitations from strangers for video chats.

You can plug these holes by logging in at <https://calendar.google.com>, then clicking the cog icon and selecting Settings. Next, on the left, click 'Event settings' and select 'No, only display invitations to which I have replied' (see screenshot below) from the 'Automatically add invitations' dropdown menu.

Next, untick 'Show declined events' under 'View options' and untick 'Automatically add events from Gmail to my calendar' below 'Events from Google'. However, if you're giving up Gmail and other Google services, it makes sense to also switch from Google Calendar.

### Switch to Microsoft Calendar or ProtonCalendar

There are plenty of alternative calendar tools, but probably the most convenient is Windows 10's built-in Calendar app.



Select this option so Calendar only shows invitations for events that you've responded to

## Download & delete your Google data

As we've explained, Google stores a huge amount of your personal data. Google Takeout provides a way to get this information back, whether you're moving to a different service or simply want to download and keep a copy of it.

Sign in with your Google account at <https://takeout.google.com> and browse the categories. By default, all 50-plus categories are pre-ticked, meaning they'll all be included in your data download, but you can untick any you don't want.

Click the 'Next step' button when you're ready, then select your delivery method – 'Send download link via email' is probably the easiest for most people. Under 'Frequency', select 'Export once' (alternatively, choose a recurring download every two months). Leave the file type as .zip and select the file size for your download file – you can opt to split the ZIP file into chunks of between 1GB and 50GB in size, if that's more



Select 'Delete activity by' to remove all your data from Google's servers

convenient. Click the 'Create export' button to finish.

If you want to delete all the data Google has stored on you, sign in at <https://myactivity.google.com> and either scroll through and choose what to erase, or click the three dots to the right of the search box and select 'Delete activity by' (see screenshot). Finally, click Always and follow the remaining steps.

While many other calendar apps are aimed at business users, Microsoft's Calendar is firmly geared towards home users and is fully integrated into Windows 10, meaning you can see events in Live Tiles in the Start menu, receive notifications and more. Better still, if you're signed into Windows with a Microsoft account, your calendar is automatically synced across all Windows 10 devices you're signed into, as well as in Outlook.com and through the Outlook app on mobile devices.

For greater privacy, consider ProtonCalendar. It's created by the same developers as ProtonMail and offers similar levels of protection, including end-to-end encryption, no trackers, and no data sharing with third parties. The only caveat is that it's still in beta ([www.snipca.com/37017](http://www.snipca.com/37017)) and currently

available only to paying ProtonMail users. However, Proton has promised to make it free soon.

First, you need to export your data from Google Calendar. To do this, log in at <https://calendar.google.com>, click the cog icon, Settings, then 'Import & export' on the left. Click the Export button and save the ZIP file to your PC. Extract its contents and you should see an '.ics' file for each calendar you've been using in Google Calendar. If you're switching to Windows 10's calendar, double-click each '.ics' file in turn – the Calendar app will now launch. Select the Windows calendar you want to add your Google Calendar events to, then click 'Add to calendar'. If you opt for another calendar, you should be able to import the '.ics' file – just check for import options in the tool's settings. **ca**

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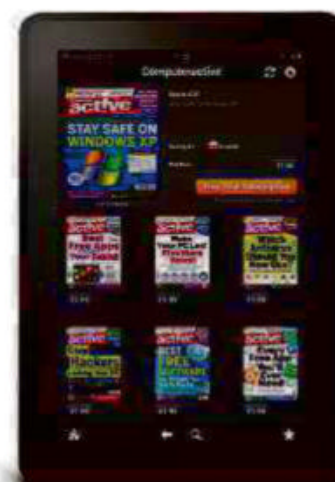
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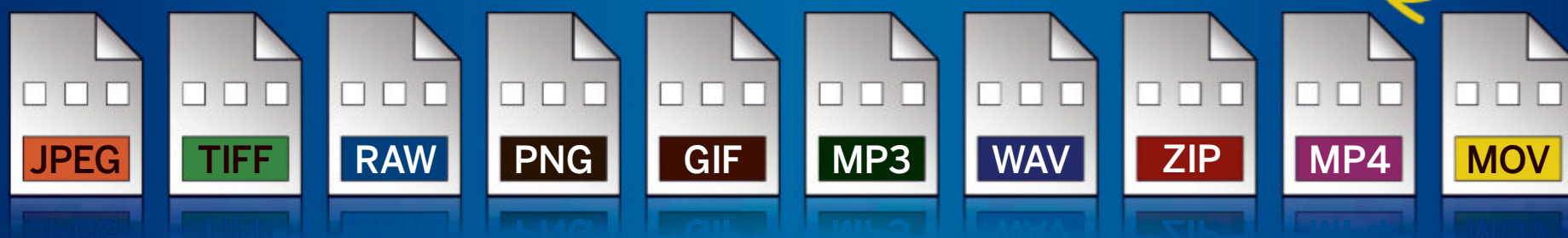
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# Always Pick The Right File Format

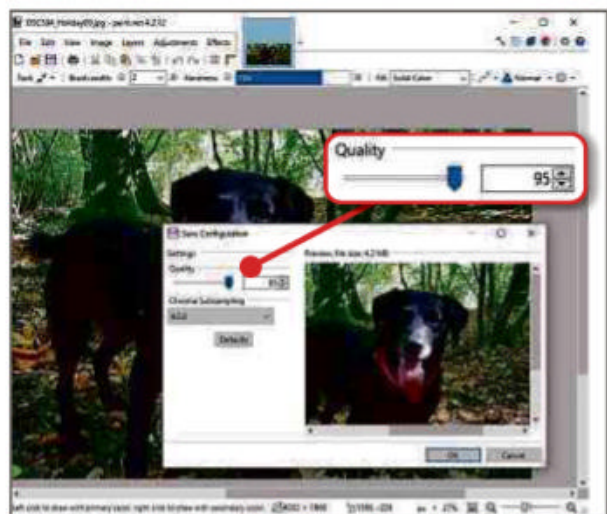


The format you choose for your music, photo and video files can have a big impact on their size, quality and compatibility. Nik Rawlinson explains your best options and which to avoid

There's a bewildering array of file types to choose from. Some are self-evident, like Word and Excel files (although even these have variants) – but what about audio, video and image formats? Which format does what, and does it really make any difference which one you choose? In short, yes it does, and if you choose the wrong format you may end up reducing the quality of your file or making it harder to access on certain computers.

## Image formats

Developed by the Joint Photographic Experts Group in 1992, the **JPEG** format can be opened by just about anything, so it's a great choice for storing and sharing photos. Another plus point is their size: JPEGs use compression to reduce their file size. They do this by discarding data from your images that isn't usually visible



Like most image-editing tools, Paint.NET lets you compress JPEG files when you save them

to the naked eye. Many image-editing tools give you control over the JPEG compression level using a simple slider.

In Paint.NET ([www.getpaint.net](http://www.getpaint.net)), for example, click 'Save As...', choose JPEG under 'Save as type' and you can adjust the compression using the Quality slider (see screenshot below left – 100 is the highest quality, 0 the lowest). As you move the slider, the Preview window shows how the compression impacts the quality of your image and its file size. Take care not to apply too much compression – go lower than a Quality setting of 60 and you'll start to notice blockiness and jagged edges that are hard or impossible to correct unless you have access to the originals.

The **TIFF** format is a favourite of graphic designers because it lets them attach a lot of supplementary information to their images such as colour profiles, which professional print presses use when mixing their inks.

TIFFs also support layering, which means you can create a single image by combining lots of smaller images (or layers). Again, this is favoured by designers because it lets them apply effects to one layer without it affecting the rest. Most digital cameras will offer to save in the TIFF format (see screenshot above right), but they tend to be much bigger than equivalent JPEGs (around five times the size) and you're unlikely to spot the difference in quality. Most home users are therefore better off sticking with



Most cameras let you save photos as TIFFs, but you'll fit fewer on your memory card

photos in the JPEG format.

Another file format available in many digital cameras, and some phones, is **RAW**. As its name suggests, this format stores an unaltered copy of the data generated by the sensor in your camera. Its major drawback is that you'll need to use an image-editor such as GIMP ([www.gimp.org](http://www.gimp.org)) to process your RAW images. This involves choosing settings such as the white balance, which helps ensure your photos don't have odd colour casts. With JPEGs, your camera will do all this processing for you.

RAW files can also be considerably larger than the equivalent JPEGs (most RAW files exceed 20MB). So although RAW gives you greater control over how your photos are processed and the freedom to finesse them later, having to process them yourself is a hassle and they're really only for photography enthusiasts.

The **PNG** format can also be used for photos, but they're better suited to graphics





PNGs support transparent backgrounds, as indicated by the chequered section of this image

and screenshots because they do a good job of preserving crisp lines. PNGs also support transparency, allowing them to be placed on coloured backgrounds – particularly useful for logos (see screenshot above).

Finally, there's the **GIF** format, which was launched over 30 years ago and is still going strong. Like PNG, it can handle photos, graphics and transparency – but it has one other trick up its sleeve: animation. It's now the most popular format for short, repeating video clips used in messaging apps – in WhatsApp, tap the smiley face (Android) or sticker icon (iOS) while writing a message, followed by GIF to see a selection.

## Audio formats

A popular audio format for many years now, **MP3** offers a good compromise between audio quality and file size. However, like JPEG does for photos, it achieves this by chopping some data from the recording. Although you're unlikely

to notice the drop in quality on a standard set of speakers, if you have a high-end set of speakers or headphones, you may find your music doesn't sound as crisp or as detailed as other formats (we'll look at these in a moment).

If you are saving an MP3 file or converting to it from another format, look for a variable **bit rate** (or VBR) option – such as when using Audacity ([www.audacityteam.org](http://www.audacityteam.org)). This tells your audio software to apply less compression to complex parts of the audio wave, and more compression to simple parts to reduce the file size while compromising the audio itself as little as possible.

Before MP3s, **WAV** was the most popular audio format for home users. Unlike MP3, WAV is a lossless format, meaning it won't strip any data from your audio files, nor will it compress them. However, this also means WAV files are large (around 10 times the size of MP3s), so we don't recommend it when sending audio by email or sharing online. Despite

this, they're still widely used and supported – the BBC uses WAV for a lot of its online audio.

If you want high-quality audio without the large file sizes, consider **FLAC**. This format uses what's known as lossless compression. Similar to **ZIP** files, FLAC files are compressed when not in use, then decompressed to their original size when played. The downside is that you'll need a media player that's capable of decompressing the files in order to play them. And while most Windows programs can do this (including Windows Media Player and Audacity), other devices such as portable music players and DVD players may not. In this case you'll need to first convert them to WAV files yourself in a media player (see box below left). Importantly, FLAC is an **open-source** format, which means it's beyond the control of any single organisation and should therefore be accessible for many years to come.

## Video formats

Video formats are more complicated as they usually combine video *and* audio. Both are compressed using a **codec**, before being wrapped up along with other information (such as subtitles) in what's known as a container format.

The **AVI** container format first appeared 30 years ago. Despite its age, if you need to share a video with someone using an old version of Windows it remains a good choice because it's supported by all major video players. It's also an excellent option for storing video that you want to outlast you, as it's been selected by the US National Archives and Records Administration as its official format for preserving digital video.

**MP4** is similarly well supported, but it also has the benefit of offering greater compression (and therefore smaller file sizes) without noticeably affecting video quality. The MP4 format also supports the H.264 codec, which is ideal for high-resolution video because it supports standards up to **8K**.

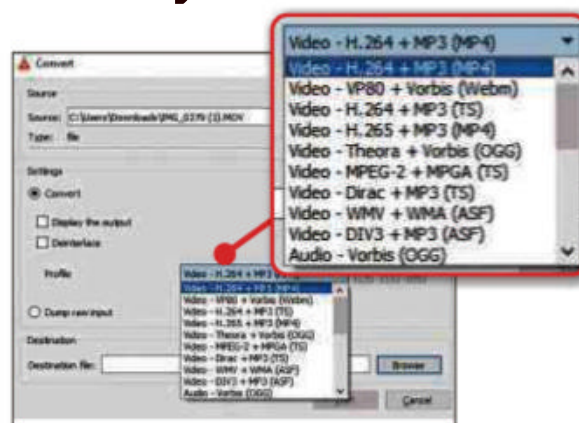
Developed by Apple, the **MOV** format is used by Macs as well as iPhones and iPads, but you may have trouble playing it on other devices. Windows' built-in media player, for example, doesn't support MOV, although you can get around this by installing other media players such as VLC ([www.videolan.org](http://www.videolan.org)). On other devices, such as portable media players, you may have to convert MOV to another format, such as MP4 or AVI (see box left). **ca**

## Only convert files if you really have to

If we've made you reconsider which format is the best option for your images, audio and video, pause before immediately converting all your existing files. Every time you switch from one format to another, your PC and software have to do some very complex digital maths which can reduce the quality of the resulting file.

Our advice: leave your photos, graphics, films and music as they are unless whatever you're using to play them back – or whoever needs to access them – can't use their current format, or you want to store a copy in a format that's more likely to work in the years to come. And even then, keep a copy of your originals.

Converting between formats is usually as simple as opening it in your favourite editor, such as Paint.NET, then selecting



Save As or Export As and choosing the appropriate format.

You can also batch-convert files. For images, use ImBatch ([www.snipca.com/36910](http://www.snipca.com/36910) – see Issue 592, page 18 for more); for video we recommend VLC – press Ctrl+R, select the files you want to convert, click 'Convert/Save', then choose the format in the Profile box (see screenshot).



Upgrading from a traditional hard drive to an **SSD** (solid-state drive) is a quick and easy way to speed up your computer. Windows will boot faster, programs will load quicker and – if you’re using a laptop – its battery will last longer. But if you’re not careful, you could end up buying an SSD that’s incompatible with your PC or laptop.

## SSD types explained

First, we’ll explain the various types of SSDs. The 2.5in **SATA** SSDs (like the Crucial model pictured below) are the most common because their physical size means they’ll work with almost all desktop PCs and laptops. To communicate with your PC’s processor, they use the SATA interface, which has a maximum speed of around 560MB/s – much faster than the 150MB/s of most traditional hard drives, but not as nippy as the more modern **NVMe** SSDs, as we’ll explain.



2.5in **SATA** SSDs can replace the traditional 2.5in hard drives found in most laptops

Another type of SSD that uses the SATA interface is **mSATA**. Around the same size as a pair of stacked business cards (see the Kingston unit pictured below), these plug directly into a socket on compatible motherboards. However, mSATA was never very common, and was superseded by M.2 in 2015, so you’ll find them only in a few laptops built in the three years before then.

Newer PCs use **M.2** SSDs. Like mSATA, these plug directly into your motherboard, but they are longer and thinner (roughly the dimensions of a stick of chewing gum). To confuse matters, there are two types of M.2 SSD – SATA and NVMe. You can tell them apart by the notches on the



mSATA use the same **SATA** interface as 2.5in SSDs, but takes up less room

# Don't buy the wrong type of SSD

Upgrading to an SSD is one of the best decisions you’ll ever make, but it’s not easy to know which type is right for your computer. **Will Stapley** explains the different formats and reveals how to check which will run in your machine

connectors (SATA versions have two notches, NVMe have just one – pictured below). NVMe SSDs use the faster **PCIe** interface, which lets them reach speeds in excess of 3,000MB/s (that’s around five times faster than SATA SSDs and 20 times faster than traditional hard drives).

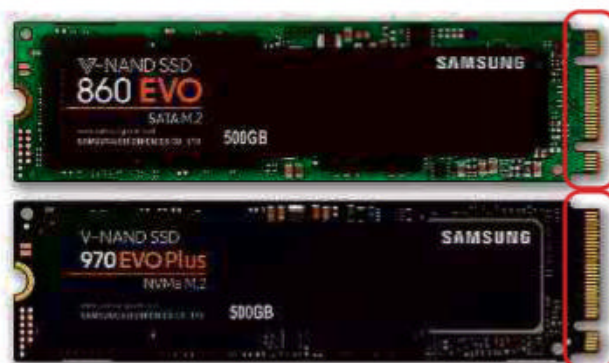
Although this sounds impressive, they’re able to achieve these speeds only when copying multiple large files or carrying out demanding tasks such as video editing. You won’t notice much difference between the two types when it

comes to Windows boot times or how fast programs run.

## Install an SSD in your desktop PC

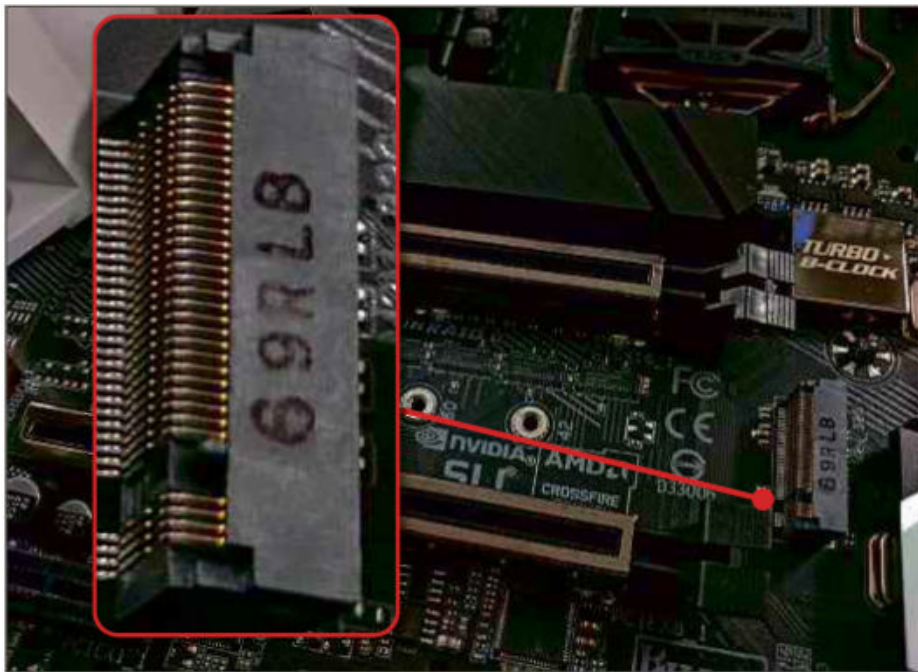
In most cases you can find out which SSDs are compatible with your PC or laptop by referring to your computer’s manual or its manufacturer’s website. Alternatively, you can simply open up your PC and take a look inside.

Desktop PCs usually offer more opportunities than laptops for upgrading to an SSD, so we’ll start with them. Shut down your PC and turn it off at the mains. Next, remove the side panel, earth yourself (such as by touching a nearby radiator), then inspect the motherboard to see if it has any mSATA or M.2 sockets. These will usually be labelled as such and located next to the slot your **graphics card** sits in. If you find an M.2 slot, it’s vital to check whether it’s SATA or NVMe. You can do this by looking inside the slot. If it



SATA M.2 SSDs have two notches (top), while NVMe versions have one (bottom)





This motherboard has one notch, so it's compatible with an NVMe M.2 SSD. Two notches are for SATA M.2 SSDs



When upgrading a desktop PC, you may need to attach your SSD to a cradle like this £5 Valuegist model

has two notches on either side, it's a SATA slot; if it has a single notch on the right-hand side, it's NVMe (as ours is in the photo above).

The design of NVMe SSDs mean they won't fit into a SATA M.2 slot, and although you can insert a SATA M.2 SSD into an NVMe slot there's little point doing so as NVMe SSDs are much faster and are roughly the same price. In addition, some motherboards will only accept NVMe SSDs, so even if you can insert a SATA one, it might not work. When inserting an mSATA or M.2 SSD, hold it at a 30-degree angle to the slot, slide it in, then push down and secure using the screw on your motherboard.

If your PC's motherboard doesn't have any M.2 or mSATA slots, don't panic – you can still upgrade to an SSD. Your best option is to buy a 2.5in SATA SSD. You'll simply need to connect the SSD to your motherboard using a SATA cable, in the same way as traditional hard drives. If your PC doesn't have any 2.5in drive bays, you'll also need to buy a cradle. We recently used this £5 cradle from Valuegist when upgrading a desktop PC ([www.snipca.com/36966](http://www.snipca.com/36966), pictured above right). Insert

the SSD into the cradle, then attach it to a spare 3.5in drive bay inside your PC.

If you have a *really* old PC (15 years or more), it may use IDE connections instead of SATA (these use grey, ribbon-style cables to connect the hard drive to the motherboard). Although it's possible to find IDE-compatible SSD drives, we don't recommend buying one as you're unlikely to see any benefit (the IDE interface will limit the SSD to around 100MB/s).

### Install an SSD in your laptop

If you're upgrading your laptop's existing hard drive to an SSD, your options will be more limited. It's highly likely that the laptop's 2.5in hard drive occupies the only available drive bay (few laptops have both M.2 and 2.5in drive bays).

This means you'll need to remove your laptop's existing drive and replace it with a 2.5in SSD. Precisely how you access the drive bay can vary. Some laptops have a dedicated panel on the rear (this usually has a small hard-drive symbol next to it), while others require you to unscrew the entire back of the laptop's chassis. If you're unsure, we recommend contacting the laptop manufacturer to check.

Earth yourself (as explained earlier), then make sure your laptop is powered down and the battery removed (if it's removable) before removing any screws or panels. If you're upgrading a laptop that already has an M.2 SSD, check whether it's a SATA or NVMe type – either in its manual or by using the same process we described earlier for desktop PCs – before buying your SSD.

### Which SSD is best?

Your choice of SSD will be determined by what your computer is compatible with. If you're upgrading to an NVMe SSD, you should consider our current Buy It recommendation, which is Samsung's Evo 970 Plus – available in sizes from 250GB (£58) to 2TB (£340) – [www.snipca.com/36967](http://www.snipca.com/36967). When we reviewed it (see Issue 552, page 26), we achieved **read speeds** up to 3,568MB/s. If you're happy to sacrifice around 200MB/s, consider Crucial's P5 (see Issue 595, page 26), which is roughly 10 per cent cheaper than Samsung's ([www.snipca.com/36968](http://www.snipca.com/36968) – again, from 250GB to 2TB).

If your PC has the older M.2 SATA slot, consider Kingston's UV500 SSD – the 250GB version costs just £32 from [www.snipca.com/36973](http://www.snipca.com/36973). Our sister site, Expert Reviews, achieved read speeds of 537MB/s with the UV500 (read the full review at [www.snipca.com/36974](http://www.snipca.com/36974)).

Finally, if your PC doesn't have any M2 slots, we recommend Crucial's excellent MX500 – a 2.5in SATA SSD. In our tests (see Issue 545, page 24), it recorded read speeds of 564MB/s. Prices start at £43 for the 250GB version, up to £172 for 2TB. We recommend checking out Amazon ([www.snipca.com/36969](http://www.snipca.com/36969)) and Crucial's own store ([www.snipca.com/36970](http://www.snipca.com/36970)) as both sites frequently offer discounts. **ca**

## Get a hard drive and SSD in one

In case there weren't enough SSD types already, we've got one more for you: an SSHD. Also known as a hybrid drive, this combines a large traditional hard drive with a small amount of SSD memory (usually 8GB). The SSD portion stores frequently accessed files, speeding up Windows boot times and your favourite programs, while the rest of the drive stores everything else.

You won't get the same performance boost as you would with a dedicated SSD, but you'll get more storage for a fraction of the price. Seagate's 2.5in SSHD is a standard 1TB hard drive with 8GB of SSD memory and costs just £58 ([www.snipca.com/36972](http://www.snipca.com/36972)) – a 1TB SSD is around double that price. However, they aren't available in mSATA or M.2 formats, meaning you can't use them with most modern laptops.



# Problems Solved

Our experts solve all your tech problems

## PROBLEM OF THE FORTNIGHT

### Why won't 64bit Firefox load?

**Q** I have the 64bit Firefox Portable Edition working just fine on my PC that runs 64bit Windows 7. When I double-click Firefox.exe in the prepared folder, it opens in 64bit mode with all my add-ons. However, if the browser is closed but I click on a web link in an email, for example, Firefox launches in 32bit mode. Moreover, my add-ons aren't available. My question is, how can I force Firefox to always open in 64bit mode when I click on links? I've checked in Default Programs and there's only one instance of Firefox. I've followed various tips and tricks that I found online but nothing seems to stop it happening. I'd welcome any advice on any settings that I can change.

Colin Culpitt-Smith

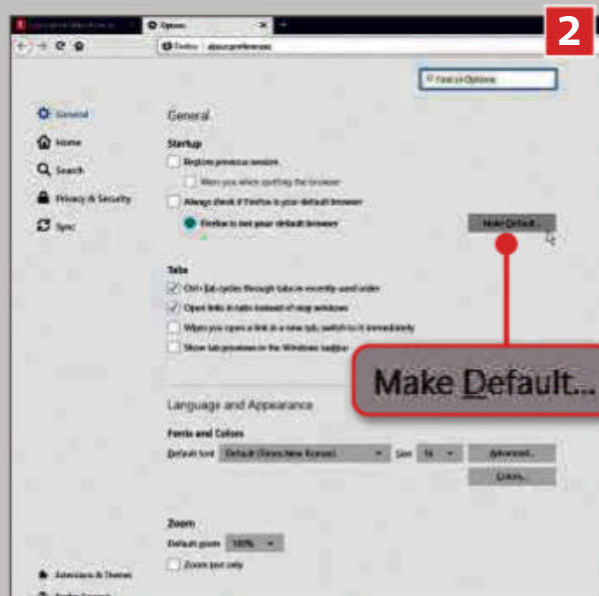
**A** Before we explain what's going on, it's important that you (or other readers) understand that portable apps are not installed in the traditional sense of the word. So, even though you've copied Firefox Portable Edition into a folder on your PC's hard drive so it's permanently available – as opposed to truly portable, on a USB stick or other removable drive – it's not actually 'installed' so far as Windows is concerned. It's just that the program file is there to be launched manually, by you, whenever you want.

With that clear, we're confident that this perplexing problem has a really simple explanation – which is that you also have a standard 'desktop' edition of Firefox installed, in the traditional sense. For whatever reason, this edition of Firefox was installed as the 32bit version. This could be because at the time your PC was running a 32bit edition of Windows, or you simply didn't realise that you were installing the 32bit version.

But the bottom line is that it's this installed (32bit) edition of Firefox that's running when you click links, because



Register Firefox Portable Edition as the default browser by selecting Options in the Firefox menu (1). Then select Make Default (2) next to 'Firefox is not your default browser', and in Default apps pick Firefox (3)



it is registered in Windows as the default browser. You don't see two entries for Firefox in your Default Programs screen (or 'Default apps' in Windows 10) because Firefox Portable Edition has not been (and has never been) registered as the default browser. It doesn't do this by default, precisely because it's designed as a portable app.

Doing that, though, is the route to fixing your problem. The easiest way to apply this change is from within Firefox Portable Edition, so begin by launching that from your prepared folder.

Next, click to open the Firefox menu (three horizontal lines, top right) then choose Options (see screenshot 1). Then, in the right-hand pane, under General, next to 'Firefox is not your default

browser', click the Make Default button 2.

Windows 7's Default Programs ('Default apps' in Windows 10) panel will now appear. Click 'Default apps' on the left and you should see two entries for Firefox. Those using Windows 10 should click 'Web browser'. Either way, two Firefox entries will be listed because, annoyingly, there's no distinction between the installed and portable editions. In Windows 7 click 'Set this program as default' (Windows 10 users just need to click one or other Firefox entry 3). If clicking links still open the installed version of Firefox, then simply repeat this last bit, selecting the other Firefox entry – and that's that.



## How do I print a list of files?

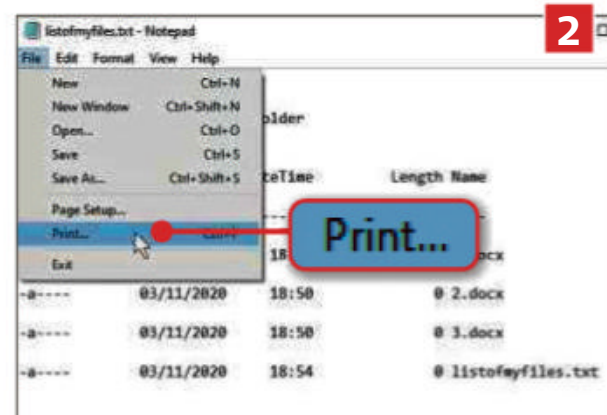
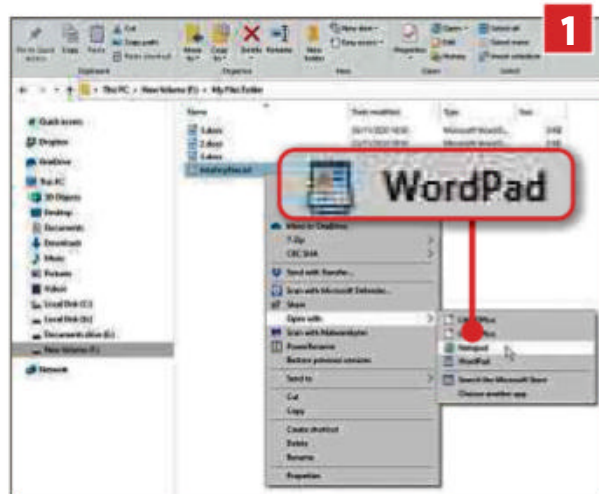
**Q** I have been unable to print a list of files in any of my folders on my Windows 10 PC. I've tried using a Command Prompt window but without success. I'm told that there are several ways of achieving my aim. Your solution would be most welcome!

Bill Smith

**A** We've mentioned free programs that can do this before, such as Karen's Directory Printer ([www.snipca.com/36534](http://www.snipca.com/36534)). This is a good tool that, once installed, puts an option to print folders on the right-click menu in File Explorer. However, it sounds to us that you're the adventurous sort who'd like to figure out how to do this yourself – and we're happy to help.

We don't know what instructions you've tried in Command Prompt. What you want to achieve can be achieved that way, but it is slightly easier to do it in PowerShell – if only because it's a little more tightly integrated with Windows 10.

First, press Windows key+E to fire up File Explorer. Next, find and right-click a



In File Explorer, find the list of files, then 'Open with' Notepad (1) and finally File, Print (2)

folder containing the list of files you'd like to print.

From the pop-up menu, choose 'Open a PowerShell window here' – this will open PowerShell with the prompt already targeted to the relevant folder.

Incidentally, to achieve the same in a Command Prompt window, you'd need to type `cd x:\FullPath\FolderName` and press Enter – where x is the relevant drive letter and FullPath and FolderName are the full path and folder name. This, by the way, is why using the File Explorer/PowerShell method is a bit easier.

Next, type `dir > listofmyfiles.txt` and press Enter. The important bit there is `dir >`, because the rest is just the name of the destination text file that your computer will create to save the list of files. Unless the list of files is enormous, the process is more or less instant.

Now return to File Explorer, where you'll see a file called listofmyfiles.txt (or whatever name you chose). Right-click this, then point to 'Open with' followed by Notepad (see screenshot 1). Finally, click File followed by Print 2 and your file list should appear on paper.

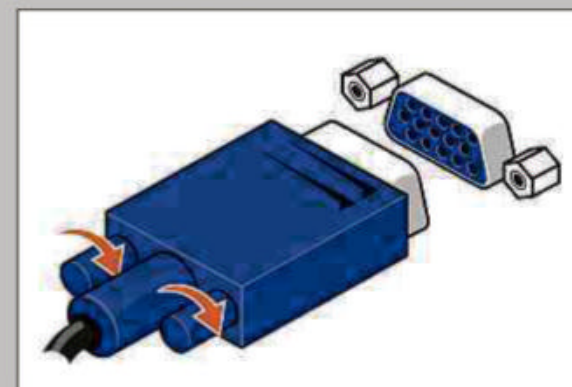
## Why is my Dell monitor sometimes blank?

**Q** I have a Dell Inspiron XPS 8900 connected by an analogue cable to an elderly Dell SE198WFP monitor. When I turn on the power the monitor fires up, then I press the computer's power button and it whirrs and clicks through its startup process until Windows 10 appears. Occasionally, though, nothing shows on the screen. All I can do is turn off the power to the computer, which I know is a bad idea. Then, it usually works OK again. Any idea what's wrong?

Jim Benn

**A** We think your computer is actually fine and completes its startup process – it's just that you can't see it. And that, we reckon, is down to one of two things.

The most likely cause is a simple loose connection.



Check the thumb screws on the cable connecting your PC and its monitor

There's no rocket science behind diagnosing or fixing this: just check that both ends of the cable are fully home and use the thumb screws to ensure tight mating (pictured above right). This is particularly important on the monitor end, as on your model the cable hangs down – so over time both gravity and

everyday bustle will cause it to drop.

The other possibility is that the display is switching to its digital input as the source. This too could happen because of a loose connection, or because you're also inadvertently pressing the Source button when switching on. On your monitor model, the Source button is the one on the far left, so try pressing that to flip back to the analogue input.



## Is it safe to use FB Purity to view Facebook?

**Q** I am thinking of using FB Purity ([www.fbpurity.com](http://www.fbpurity.com)) because I don't like the new changes to Facebook. Is it safe?

John S Biggam

**A** This comes down to your personal definition of 'safe'. The tool is a decade-old Chrome extension that's been downloaded hundreds of thousands of times, and is available from the Chrome Web Store.

Google will remove extensions from the Web Store if it considers them to be malicious, or if they break its rules.

FB Purity has been removed in the past, but that was down to a copyright spat because Facebook objected to the extension's original name (the tool was originally called Facebook Purity).

To that extent, then, FB Purity is a legitimate tool. However, its very nature means that it has access to pretty much everything you do on Facebook (see screenshot below), though not your username and password.

It's upfront about that fact during installation, but you must entrust the privacy of your Facebook activities to a one-man, one-product company. How you feel about that is up to you.



FB Purity may not be malicious, but you do have to trust it with your privacy

## Has our Facebook email been hijacked?

**Q** My wife wishes to change her Facebook email address. We couldn't see how to change the primary address but thought adding a new address would let us remove the first one. However, when we tried we received a message saying the new address was already associated with another Facebook account. This is worrying. Has someone used my wife's email address without her knowledge? There seems to be no obvious way to communicate with anyone at Facebook.

Roger Lewry

**A** You were certainly following the necessary procedure for changing a primary Facebook email address. Once a new one is added, a verification email will be sent to the fresh address. Open this message, note

the confirmation code and then click the Confirm button. Now return to Facebook, click Confirm, type in the confirmation code and then click Make Primary.

However, something is clearly awry if Facebook is telling you that your wife's email address is already in use. We obviously can have no more idea why that might be than you. Are you sure she didn't once sign up years ago using this alternative email address? Perhaps search the related email inbox for verification emails from Facebook, as that might help you figure out what's happened.

Otherwise, you'll need to ask Facebook. Its contact pages aren't easy to use but many of its help pages (at [www.facebook.com/help](http://www.facebook.com/help)) result in a contact form. The particular one you want for this problem is at [www.snipca.com/36736](http://www.snipca.com/36736) (see screenshot below).

You can contact Facebook and ask them why your email account appears to be in use already

**Q:** What's the difference between Windows 10 Home and Pro?

**A:** Issue 560, page 69 – find it on our 2019 Back Issue CD

Buy it from  
[www.snipca.com/33711](http://www.snipca.com/33711)





## Why is Chrome opening extra tabs?

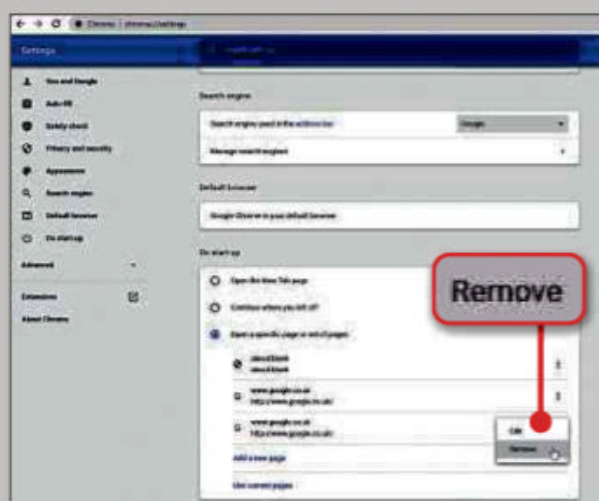
**Q** Could you tell me why I've got an 'About Blank' tab and two Google tabs when I launch Chrome? Being an oldie, I don't know how to go back to the way my pages used to open.

Tony Shuttleworth

**A** We can tell you why it's happening and how to stop it, but not necessarily how it came to be – though our answer might jog a memory or two.

Chrome can be set to launch with a single new tab (that by default displays the Google home page), whatever tabs were open when it was last closed. Or it can be set to launch with specific pages that you choose.

We suspect that you've somehow picked the last of these options and then, without realising it, set extra



**To keep a blank tab but delete the Google ones, click the dots next to each unwanted entry and choose Remove**

Google tabs to open.

We say that because in the past we've certainly explained how to set Chrome to launch with a blank tab, rather than the Google home page that's displayed with the standard new tab. That would explain

the 'About Blank' tab you're seeing. We've also explained how to show a Google tab to the right of an 'About Blank' tab. So, perhaps you've followed these instructions and ended up where you are now?

Regardless, first click Chrome's menu button (three dots, top right) then click Settings. Next, in the right-hand pane, scroll down to the 'On start-up' section. There, we suspect you'll see that the 'Open a specific page or set of pages' is selected, with three entries below it.

If you're happy to go back to a single new tab that displays the Google home page, then just click to select 'Open the New Tab page'. Alternatively, to keep the blank tab but delete the two Google ones, click the three dots next to each superfluous entry and then choose Remove (see screenshot above left).

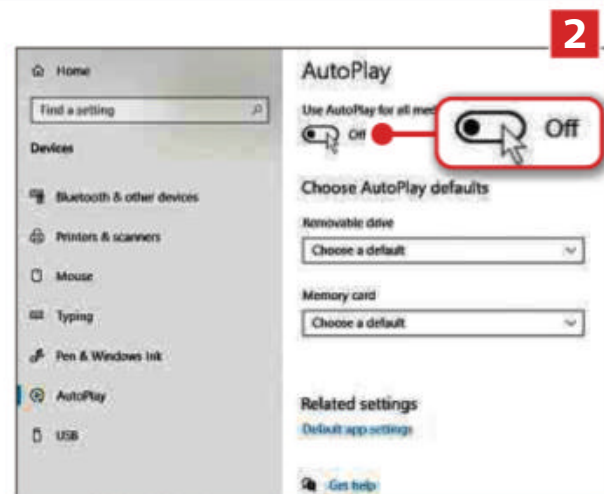
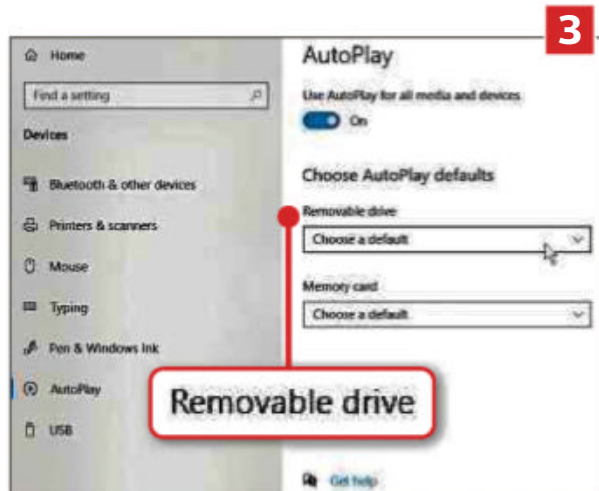
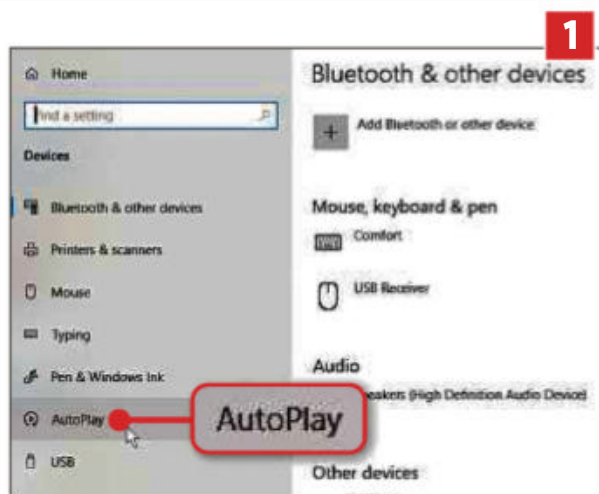
## Why is File Explorer opening by itself?

**Q** I have a problem that started to appear a couple of months ago. I have a Dell Inspiron 5675 desktop computer, running Windows 10. Recently, File Explorer has been popping up on my screen while I have been working on different stuff – anything from Microsoft Office apps to games. It happens unexpectedly, at any time. I can close it with no problem and my screen returns to the program I was in, and otherwise causes no problems. However, it is frustrating! Any ideas?

Tony Hunt

**A** One strong possibility is that a connection for an external drive is loose or, similarly, you have a memory card or USB stick that's not pushed fully home into its slot. A small bit of movement could cause Windows 10 to 'detect' the device and then, according to what is likely your default AutoPlay setting, open File Explorer. So, first check that all the drives/cards/sticks are properly connected.

If that doesn't solve the problem, it



**Switch off AutoPlay (1 & 2), or choose 'Take no action' if an external drive is suspected (3 & 4)**

could be that a particular connected device is periodically waking up from an interval of inactivity, thus triggering detection by Windows – and then AutoPlay.

To stop this, first click Start followed by the Settings cog, and then Devices followed by AutoPlay (see screenshot 1).

Then, in the right-hand pane, either turn the 'Use AutoPlay for all media and devices' switch to its Off position 2. Alternatively, if you suspect it's an external hard drive, say, then under the 'Removable drive' heading 3, click to open the dropdown menu and then choose 'Take no action' 4.



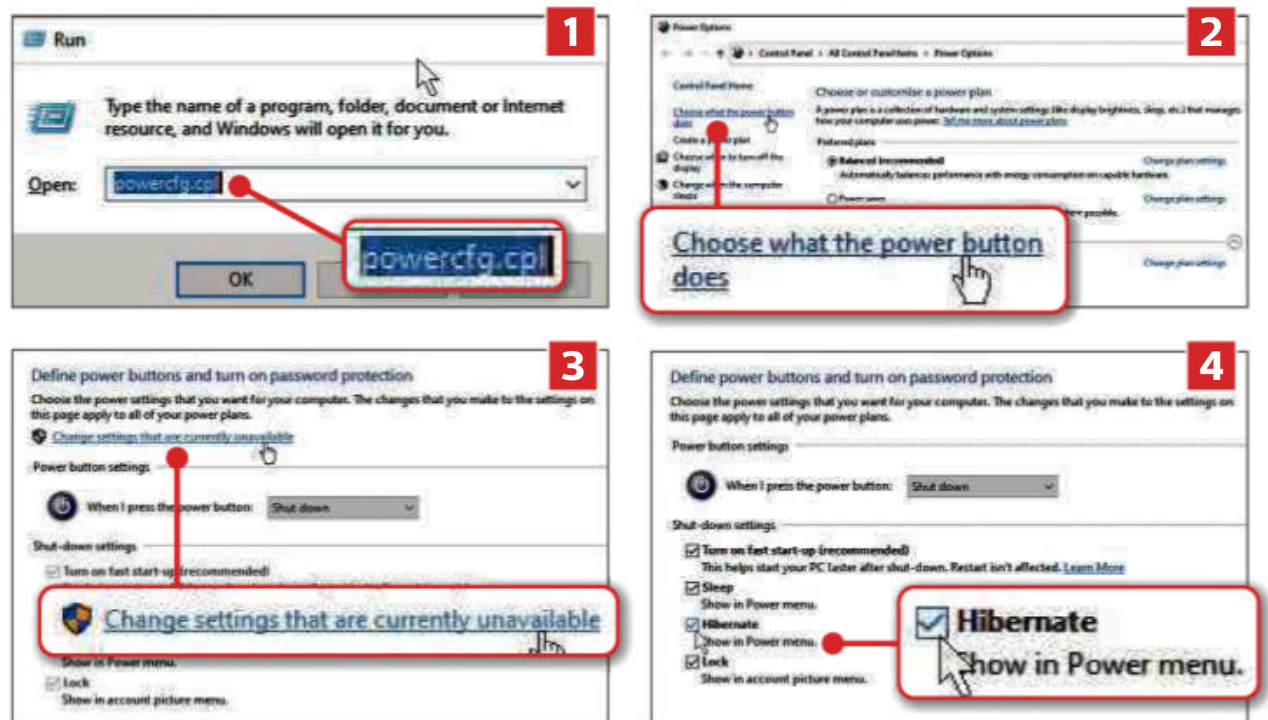
# Problems Solved

## Why can't I hibernate my laptop?

**Q** I've fitted an SSD and more memory to my Windows 10 Pro laptop, giving it new life. However, my Hibernate option is no longer available. I cannot understand why as it's the perfect option for me and probably many others. Do you know what has happened and can it be restored?

John Morton

**A** Windows 10 has a habit of disabling the Hibernate option if it detects that the boot drive is an SSD. The logic is that SSDs in effect have a limited number of read/write cycles and, given the rapid startup speed afforded by an SSD, hibernation therefore subjects the drive to added wear and tear. While that's true, Hibernate does have particular benefits – and regular use of the option is unlikely to knock more than a few days off an SSD's life, which will



To re-enable Hibernate you should first summon a Run box, then follow these steps

typically be many years. If you're OK with this – and it's not something that would bother us terribly – then you can re-enable Hibernate.

First, you need to ensure the option is available to be enabled. To do this, first press Windows key+X, then click 'PowerShell (Admin)'. Next, in the PowerShell window, type `powercfg /h on`

and press Enter. Now close the PowerShell window. Next, press Windows key+R to summon a Run box, then type `powercfg.cpl` (see screenshot 1) and press Enter. In the Power Options box, click 'Choose what the power button does' 2, followed by 'Change settings that are currently unavailable' 3. Finally, tick Hibernate 4 and then click 'Save changes'.

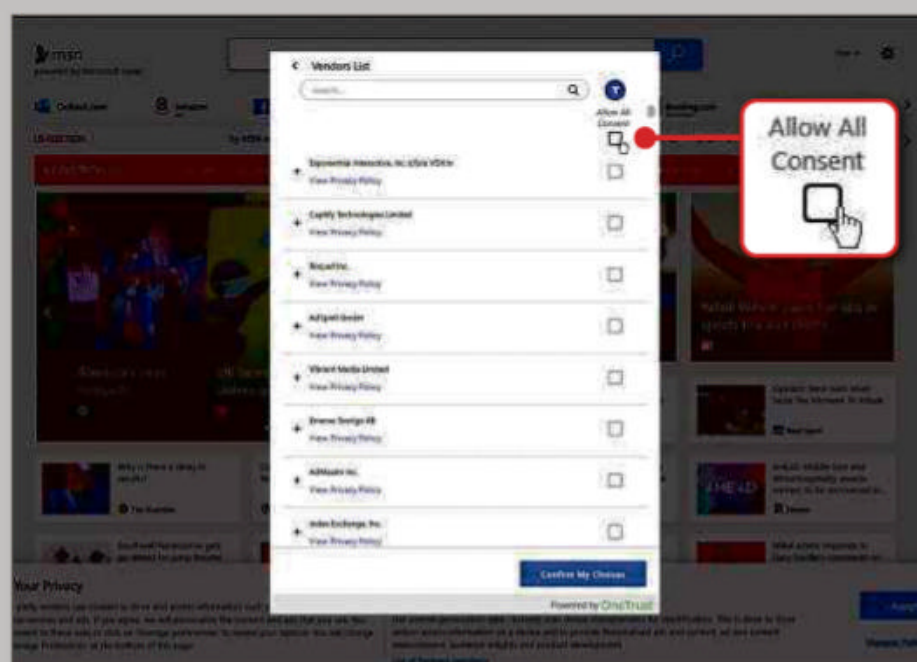
## How do I stop MSN sharing my information?

**Q** It seems everywhere I go online nowadays forces me into accepting cookies and so on before I can see anything. The latest is Microsoft's MSN website ([www.msn.co.uk](http://www.msn.co.uk)). When I visit now there's a permanent bar at the bottom of my screen. It has a Manage Preferences option to deny some things, but says it still passes information to third-party companies. Is there a way I can remove it without accepting? I use several tools that I run regularly to find and remove trackers, incidentally.

A Martin

**A** This is a perennial problem, but it has got worse in recent years because of companies being wary of breaking the General Data Protection Regulation (GDPR) – effectively forcing their collective hands to ask your permissions for all sorts of things they might want to do with your data or identity.

That much is probably sadly all too familiar to many readers.



Click on the 'List of partners (vendors)' link and remove the tick from the top Allow All Consent box

We agree that this MSN banner does seem particularly shocking, in that there are many aspects you can't opt out of, but Microsoft could still use to infer your identity (such as by linking different devices that you might use).

However, if you wish to continue using the MSN website then there is one trick you can use to stop Microsoft sharing any details.

You've already clicked the Manage Preferences link and turned all the switches to Off.

That's sensible, but you can also click the 'List of partners (vendors)' link and, there, click to remove the tick from the top Allow All Consent box (thus clearing them all, see screenshot above) and then click Confirm My Choices.





## WHAT'S THE DIFFERENCE BETWEEN...

### JPEG and JPG?

**Q**

I've noticed only recently that my photos folder contains images that variously have JPEG or JPG file extensions. I have no idea why this would be. Is there any difference between the two? Is there a time when I should use one over the other? Windows 10's Photos app seems happy to open either, so I don't have a problem as such – but I am curious.

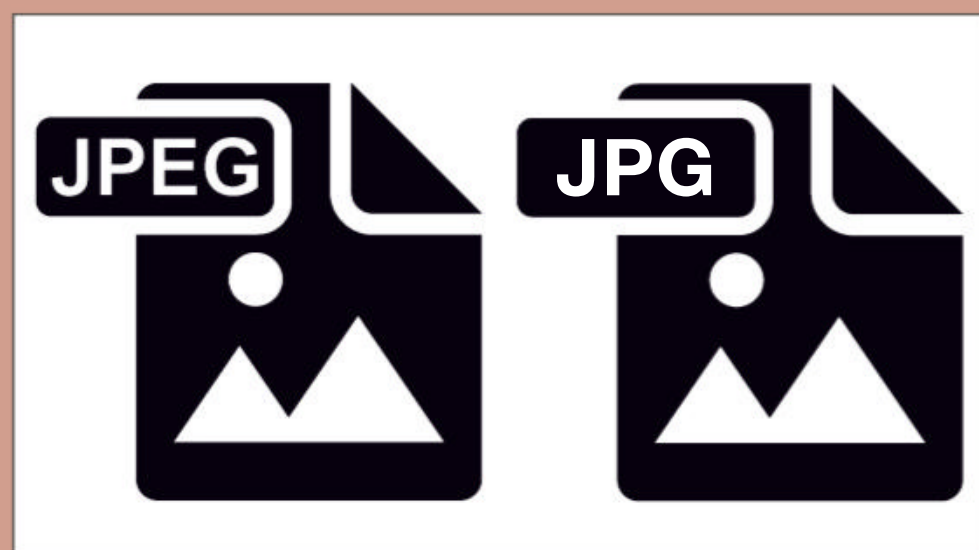
Thomas Barrett

**A**

For perhaps the first time in this panel we can say that there's literally no difference, other than a single letter in the spelling: a JPEG is a JPG, and a JPG is a JPEG.

The 'correct' abbreviation is JPEG, as it stands for Joint Photographic Experts Group ([www.jpeg.org](http://www.jpeg.org)), which is the name of the industry body that began work on the format in the 1980s. However, the shorter JPG variant is also incredibly common, and with good reason.

Back when the JPEG folks were formulating the file type, one of the



The Joint Photographic Experts Group might prefer JPEG, but there is no difference between JPEG and JPG in file names and extensions

most popular operating systems for home computers was **MS-DOS**. You might or might not know that this imposed a limit on file names, requiring them to follow an 8.3 format – meaning no more than eight characters followed by a full stop and then up to three more characters as the extension.

We should say that MS-DOS wasn't alone in enforcing this particular restriction, but it's academic: Microsoft's early operating system was enormously successful and so three-letter filename extensions became commonplace.

At least in relation to PCs, Windows 95 ended this restriction – allowing longer file names and extensions – but old habits die hard. As such, even today, many apps will save JPEG images with a JPG extension. It doesn't really matter because almost all programs that deal with images are happy with either JPEG or JPG extensions. That explains why your hard drive has a mix of these extensions: some programs default to the former, while others the latter.



Want to know the difference between technical terms? Email [noproblem@computeractive.co.uk](mailto:noproblem@computeractive.co.uk)

## How do I power my USB drive?

**Q**

I have a Panasonic smart TV through which I want to record shows on to an external hard drive. The manual states that any external drive must have its own power source to work with the television.

However, the vast majority of compact hard drives are powered through their USB socket. Can I use a USB splitter? Or what is the answer?

Terry Strickland

**A**

You might find that your TV will actually power an external hard drive just fine. However, it's likely that the set's USB port isn't able to maintain a steady enough supply of power for

reliable operation in all situations – hence the reason Panasonic says a powered drive should be used.

That aside, the easiest fix here would be to buy a mains-powered USB hub, like the pictured RSHTECH model (around

£19 on Amazon, [www.snipca.com/36737](http://www.snipca.com/36737)).

Then, all you'd need to do is plug the hub into a mains socket, the hub's USB input into your TV's output, and then a USB-powered hard drive into one of the mains-powered sockets on the hub.



The mains-powered RSHTECH USB Hub with four ports

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# Reader Support

Having a problem with our recommended software or expert tips? Email [editor@computeractive.co.uk](mailto:editor@computeractive.co.uk) and we'll do our best to help

## Why can't I install PowerToys?

**Q** I tried to install PowerToys, as recommended in Issue 591's Cover Feature, but it says my PC isn't compatible. It runs a **32bit** edition of Windows 10 but I think PowerToys requires a **64bit** system? Can you advise me? Also I'm guessing the Windows 10 Pro special offer on the *Computeractive* Software Store (<https://store.computeractive.co.uk>) is the 64bit edition?

Mike lillis

**A** The new version of PowerToys only works on 64bit editions of Windows 10 (as stated by Microsoft in the screenshot below). There's no solution, at least while your PC remains running a 32bit Windows 10.

However, your PC could be capable of running a 64bit version of Windows 10. The *Computeractive* Software Store does indeed sell 64bit editions, which include the option to install 32bit Windows 10 if required – but that's true of any edition of Windows 10. In other words, if your PC can handle 64bit Windows 10 then you won't need to buy a new copy: your existing licence will suffice. To check, first click the Settings cog, then System. Next, on the left, click About and then, on the right, check the entry next to 'System type' (see screenshot below). If it says 'x64-based processor' then your PC should be able to run 64bit Windows 10.

The downside is that there's no way to upgrade from 32bit to 64bit Windows 10 without performing a **clean install**, meaning you'll have to wipe everything

on your system and start afresh. If you can live with that then download Microsoft's free media-creation tool by visiting [www.snipca.com/36739](http://www.snipca.com/36739) and clicking the 'Download tool now' button.

The instructions are straightforward, but when you reach the 'Use the recommended options for this PC' option, untick it, then choose '64-bit (x64)' in the Architecture dropdown menu.

## Where's my free version of Acrobat Reader DC?

**Q** Having reached the grand old age of 80, I still find your magazine very interesting. However, I was frustrated to find that when I tried to follow your answer to Jose Maurel's question (Problems Solved, Issue 592, page 69), while the download of Acrobat Reader DC was free the Edit option was not available without paying £15.17 per month. One never gets to the Advanced Search screen without payment.

John A Llewellyn

**A** It sounds like you're selecting the 'Edit Text & Images' option, which is indeed a paid-for feature – and will therefore lead you to a payment page for Adobe Acrobat Pro DC.

However, we told Jose to open the Edit menu, which is different. You must've got that far because it is on the Edit menu that you'll find the 'Edit Text & Images' option. But it's also on that same Edit menu – albeit slightly lower down – where the Advanced Search option is located, just below Find.

Alternatively, perhaps you accidentally downloaded and installed Acrobat Pro DC rather than Reader DC? Both are available at the download page, at [www.snipca.com/36749](http://www.snipca.com/36749) (see screenshot above right). If so, return there to grab Reader DC.

## Is open-source software safe?

**Q** You often say that **open-source** software is a good thing, because anyone can update it – including



Make sure you download the free Acrobat Reader DC [1], not the paid-for Pro DC [2]

in Issue 591's Windows PowerToys Cover Feature. Is it not also vulnerable to being altered to infect PCs with malware and so on? Shouldn't you point these dangers out?

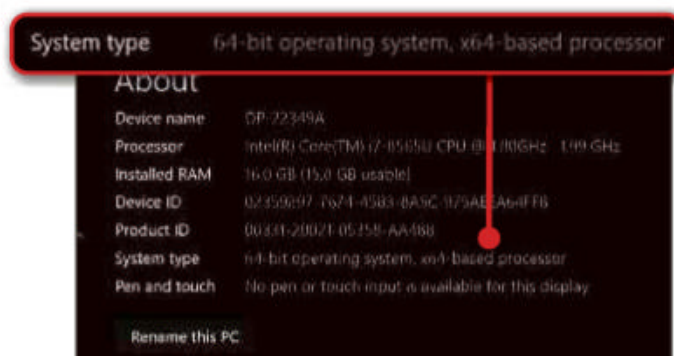
Mike Humphreys

**A** Both fair questions. However, a program developed using an open-source method is not inherently unsafe. Indeed, sometimes they are *more* reliable – as we'll explain.

The key to understanding why is that it is the **source code** that is open source, not the program that you download. So, while the code for PowerToys is open source – and thus free for anyone to read or modify – the products that are released for download by Microsoft are largely the company's own work. Microsoft may have accepted some changes by other developers, but it will have rejected many more. So, there are checks and balances before you download the latest version.

Moreover, precisely because it's an open-source project, Microsoft will be alerted to problems that its own coders may not have identified: that's why open-source software can sometimes be more reliable than closed code.

Of course, any random coder is free to take the PowerToys source code and make their own malware-littered version. They might even post it on the internet for download. However, you certainly wouldn't find that malicious version on Microsoft's GitHub page (where the company hosts its version of PowerToys). Microsoft's PowerToys download is the work of Microsoft, and no one else.



Click Settings, System then About to check whether your system is 32bit or 64bit



# 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.

**3G/4G/5G** A set of technologies that delivers faster mobile broadband, so called because they are the third, fourth and fifth generations of mobile data networking standards.

**4K** Video with a resolution of at least 3840x2160 pixels.

**720p** A common resolution of high-definition video: 1280x720 pixels.

**802.11ac** A standard for wireless networks that allows for much higher transfer speeds than **802.11n**.

**802.11ax** Wi-Fi standard with speeds up to 10 times faster than 802.11ac. Also called Wi-Fi 6.

**8K** Video with a resolution of 7680x4320 pixels. Currently the highest resolution available.

**ADSL** Asymmetric Digital Subscriber Line. A technology that converts a standard phone line into a broadband internet connection.

**ANC** Active noise cancelling. Method for reducing unwanted sound by adding a second sound specifically designed to cancel the first.

**Aspect ratio** A measurement of the shape of a display.

**Backdoor** A way of bypassing the normal security procedures in a piece of software. Backdoors are often deliberately left in by programmers as a shortcut and then later exploited by hackers.

**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.

**Beta** A version of software that's being tested. Beta versions are often released so problems can be ironed out.

**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.

**Bit rate** A measure of data transfer speed, or of the quality of digital video or audio files.

**Boot drive** When it starts the computer looks on one disk for instructions. This is normally the hard drive, but in case of problems other boot drives can be used.

**cd/m<sup>2</sup>** Candela per square metre. Standard unit of brightness.

**Code** Programming language used to create programs.

**Codec** Short for Compressor/Decompressor. A file that tells a computer how to record or play a type of media file.

**Cookie** A small text file stored on your computer by a website. Used to store browsing preferences, website log-in details and so on.

**Core** Units on a processor that carry out program instructions.

**CSV** Comma Separated Value. A standard file format, used for storing tabulated information, that can be opened by most spreadsheet programs.

**DCI-P3** A colour space that has a wider spectrum than sRGB. Used by US film industry.

**Delta E** A measurement that shows how the human eye perceives different colours.

**DisplayPort** A new socket for connecting monitors.

**Driver** A file that tells Windows how to work with an external device.

**EXIF** Exchangable Image File Format. A method for storing extra information, such as the date, time and camera model, inside digital photo files.

**Firewall** A piece of software or hardware that prevents unauthorised access to a computer over a network, such as the internet.

**FreeSync** AMD's technology for varying the screen's refresh rate to avoid two frames being shown at the same time.

**Function key** The F1 to F12 keys on a keyboard. They can be programmed to perform specific tasks.

**GHz** Gigahertz. A measure of how many instructions a chip can process per second. 1GHz is equal to 1,000MHz.

**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.

**HTTPS** Hyper Text Transfer Protocol Secure. The secure version of HTTP, the technology that sends data between your browser and the web.

**Hyperlink** A clickable link that takes you to a new document or website.

**IDE** Integrated Drive Electronics. An interface used to connect some hard drives and optical disc drives.

**IMEI** Integrated Mobile Equipment Identity. A unique number used to identify each mobile phone.

**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.

**JPEG** Joint Photograph Experts Group. A common type of image file created by most digital cameras. Some image quality is lost with each save.

**LED** Light-emitting diode. An electronic device that emits light. Used on almost all electronic devices, and to provide the backlight for some LCDs.

**M.2** A standard specification for internal PC expansion cards and connectors.

**Machine learning** The science of teaching computers how to learn by themselves, without further human input.

**Mesh Wi-Fi** Wireless network system that uses multiple, connected routers to stretch Wi-Fi further than a traditional router.

**MicroUSB** A miniature version of USB, often found on smartphones, tablets and portable hard drives.

**Mini DisplayPort** A type of port for connecting a monitor, TV or projector to a computer.

**mSATA** A smaller version of the SATA interface (see right), used for connecting SSDs in laptops and some PCs.

**MS-DOS** Microsoft Disk Operating System. The standard PC operating system before Windows. DOS managed how files were stored on a PC. It was controlled through typed commands.

**NAS** Network-attached storage. A hard drive attached to a network that can be shared with other PCs.

**Network traffic** Data moving across a network.

**NVMe** Non-Volatile Memory Express. An interface that lets solid-state drives work faster.

**OLED** Organic light-emitting diode. A thin-film organic light-emitting diode used in computer displays and television screens.

**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.



**Plug-in** A small program that adds extra features to software or to your web browser.

**POP3** Post Office Protocol 3. A system for remotely accessing and retrieving email from an ISP. Most email programs and ISPs use POP3.

**RAM** Random-access memory. The computer's working area, used for data storage while the PC is switched on. Its capacity is measured in megabytes (MB): the more memory your PC has, the more things it can process simultaneously and the faster it will seem.

**RAW** A format for digital photos that stores the image exactly as the camera captured it, without compression or optimisation, but which is not compatible with all image editors.

**Read speed** How long it takes a hard drive to 'read' data, and respond to it.

**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.

**Response time** How fast a coloured pixel turns to white and back again.

**SATA** Serial ATA. An interface for connecting hard drives and optical discs to a computer.

**Source code** Program instructions written in a high-level language that are readable by people but not computers.

**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.

**Tag** A keyword used to describe a file or web page. Many programs use tags to organise related information quickly.

**Travel** The distance the keys of a keyboard have to be pressed before the keystroke is recognised.

**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, which is cheaper than the telephone network.

**Volume** An alternative term for drive or disk.

**VPN** Virtual private network. Keeps all internet communication safe and private.

**WAN** Wide area network. Exists over a large geographical area.

**Web apps** Programs that aren't stored on your computer, but on a web server instead and run through your web browser.

**White balance** Adjusts the balance of colours in the image to produce natural-looking images.

**Widget** A small program that runs on the Windows desktop.

**Wi-Fi 6** Wi-Fi standard with speeds up to 10 times faster than 802.11ac. Also called 802.11ax.

**Woofer** A speaker designed to produce low-frequency bass sounds.





**Write speed** How long it takes a hard drive to save data.

**Zero-knowledge authentication** A form of encryption that means the company providing a service is unable to access your data.

**ZIP file** A file that contains compressed documents or files.

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# Easy when you **Know How**

Driven to distraction by a cacophonous computer,  
**Robert Irvine** rolls up his sleeves and tries to...

## Fix a noisy laptop

I've had terrible trouble this winter with the sound of pipes. Although I spent Christmas in Glasgow, I don't mean the skirl of bagpipes, but the clangorous plumbing in my ancient block of flats. Every time my neighbour runs the tap or flushes the toilet, the pipes rattle and hum at a volume U2 could only dream of, denying me my much needed beauty sleep.

“

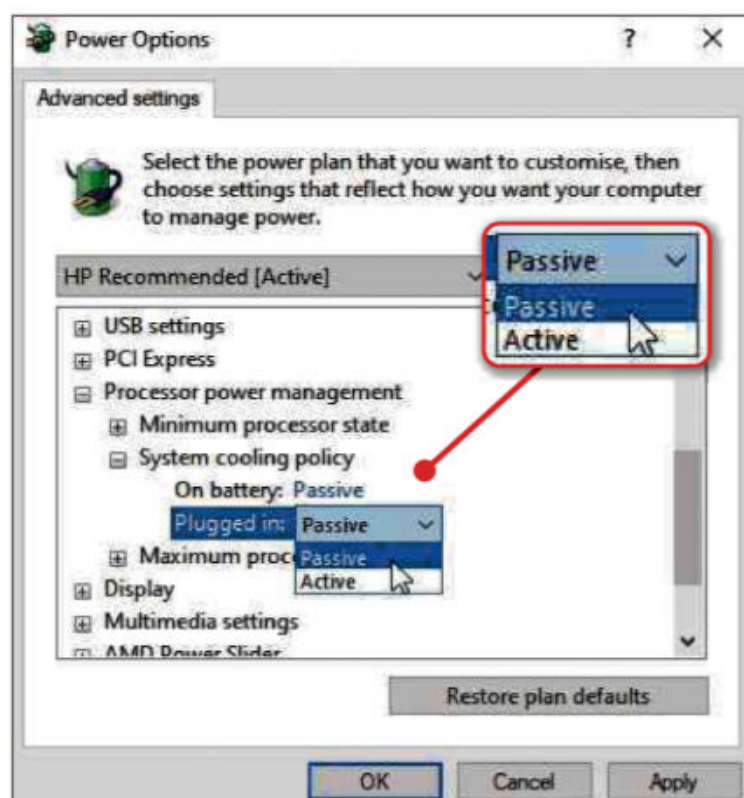
The last thing I needed  
was my laptop making  
a noise like a plane  
taking off

”

My landlord eventually arranged for a plumber to investigate a suspected airlock, but he arrived unexpectedly early while I was out shopping. After establishing with my neighbour that my complaint was “a lot of fuss over nothing”, the plumber departed and won't be returning for a while because the landlord said it's too expensive, “especially at this time of year”.

So the last thing I needed was for my new laptop to start making a noise like a plane taking off. A whirring sound began just after I booted up, then grew louder and more violent to the extent I feared the device was going to explode, before settling into a medley of grumbling, grinding and more whirring.

Like my neighbour, you may think I'm exaggerating, but the noise was very distracting and not what you'd expect from a new laptop, especially one with an SSD. The fact it didn't rely on a creaky,



**Pipe down! Robert changed his 'System cooling policy' from Active to Passive in order to silence a noisy laptop fan**

were talking (quietly, of course)! I promptly downloaded and ran SpeedFan, and let it scan my laptop for temperature and fan-speed information. I noted that my system was hovering around 35°C, which is apparently about average. Not wanting to fiddle with advanced settings, I ticked the 'Automatic fan speed' box, then restarted my laptop.

As promised, SpeedFan had (slightly) reduced the noise, but there was still an unpleasant

churning sound. Fortunately, I had another fix left to try. This involved tweaking my power settings to stop the fan spinning unnecessarily. To get there, I opened the Windows Settings app and chose System, 'Power & sleep', 'Additional power settings'. In the 'Choose or customise a power plan' section, I clicked 'Change plan settings', then 'Change advanced power settings'.

When the Power Options box opened, I scrolled down to 'Processor power management', clicked 'System cooling policy' and switched the 'Plugged in' setting from Active to Passive. This (imperceptibly) slows your processor before increasing the fan speed, so the fan isn't forever whirring away in the background.

So I hoped, at least, as I restarted my laptop and listened carefully. My heart sank when I heard it groaning, but lifted again when this sound quickly dropped to a healthy hum.

Now, if I can only find a way to tweak my neighbour's plumbing options, I can start 2021 in relative peace.

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Need help with reducing the noise made by your laptop or PC?  
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