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+ STOP GOOGLE AMAZON MICROSOFT SPYING ON YOU

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THE COMPLETE CHECKLIST **p35**

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WELCOME

From the Editor

Google, Facebook and their fellow tech giants can talk about strengthening privacy all they like, but it doesn't alter this blunt truth: how much money they make depends entirely on how closely they track you online.

They don't make cars, mine gold or run hotels. They sell advertising space to companies that want to know everything about you, from the last link you clicked online to the last item you bought. They'll never stop wanting more information because every lost piece of data means they make less money.

I don't mean this to be alarmist. Many people have made their peace with online tracking, accepting it as the price for free online services. But you have much more control over the *degree* of tracking than you think.

In our Cover Feature, Robert Irvine tells you how to expose the sites that track you and then how to block them. He also explains how to stop phone apps tracking your location. It's advice you can't afford to ignore.

Daniel Booth
editor@computeractive.co.uk

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HOW TO USE SNIPCA URLs

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

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BLOCK APPS THAT TRACK YOU

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Microsoft 'fixes' PC crashes caused by March update

Microsoft has suggested a temporary fix for a problem that was crashing computers when users tried to print from them.

It admitted that the problem – affecting a "subset of customers using certain printers" – was being caused by the Windows 10 update for version 2004 released on 9 March (codenamed KB5000802: www.snipca. com/37652).

This is the latest release in Microsoft's regular set of monthly updates known as 'Patch Tuesday', containing security fixes for Windows. The problem was also occurring in the March updates for versions 1909 (KB5000808), 1809 (KB5000822) and 1803 (KB5000809).

Within hours, users were complaining online that their computers were showing the Blue Screen of Death, with the error message 'APC_INDEX_ MISMATCH'.

Microsoft said the problem occurs in some Type 3 printer drivers, which are downloaded from the manufacturer's website, not Type 4 which come with Windows or are installed by Microsoft in updates.

To see your printer drivers, press Windows key+R to open
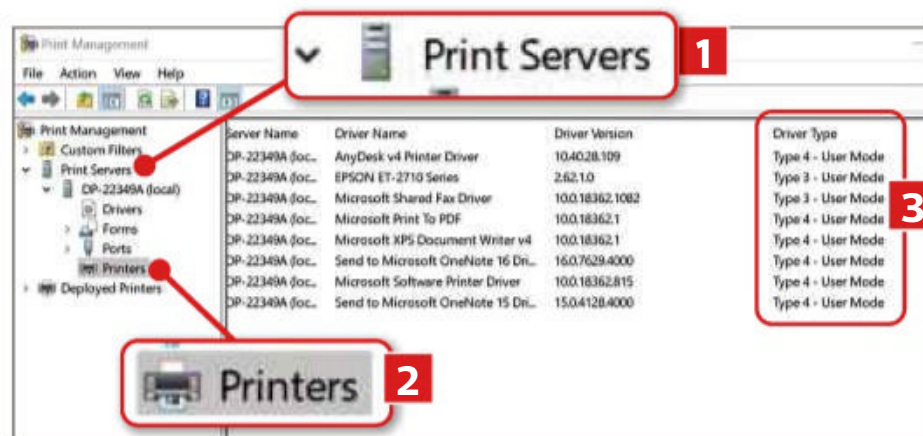
the Run box, then type printmanagement.msc and click OK.

You should now see the Print Management section. If instead you see the message 'Windows can not find printmanagement.msc', click Start and type manage optional features, then select it. Click 'Add a feature' at the top, then type print, tick the box next to Print Management Console and click Install. Now open the Print Management section as described above.

In this section, click Print Servers on the left (**1** in our screenshot), followed by your computer's name, then Printers **2**. Scroll to the far

right in the box that opens to see your driver types (**3** – you'll also see these instructions at www.snipca. com/37645).

If you have Type 3 drivers and you're having problems, watch Microsoft's video explaining the temporary solution: www.snipca. com/37650. You may need to type commands into Command Prompt – you can copy and paste these from our Pastebin account: www. snipca.com/37649.

You may also need to visit a Microsoft Docs page (www.snipca.com/37651) to download an Assessment and Deployment Kit (ADK).

WHAT WE THINK

'Windows update causes problems' belongs to the 'Dog bites man' realm of wholly predictable headlines. What's more surprising is that Microsoft's video outlining how to fix the problem is well explained and shows clear instructions. Incredibly, it sounds like it was made by an actual human being who knows how to help other human beings. We've always argued that Microsoft should be judged less on update problems (assuming they're not too severe), and more on how quickly and smoothly they're fixed.

Add new or missing roads to Google Maps

You can now add new or missing roads to Google Maps using a new editing tool.

Visit www.google.com/maps on your computer, then click the top-left menu (three horizontal lines). Scroll down the menu that appears, then click 'Edit the map' (see screenshot), followed by 'Missing road'.

You now need to draw the road on the map. Click where it should be, then give it a name in the box that appears and click 'Add a note' to add information, followed by Submit.

Google will send you an email confirming your suggestion. It will then review it to check that it's valid before emailing you its verdict. Read more on its blog: www. snipca.com/37644.
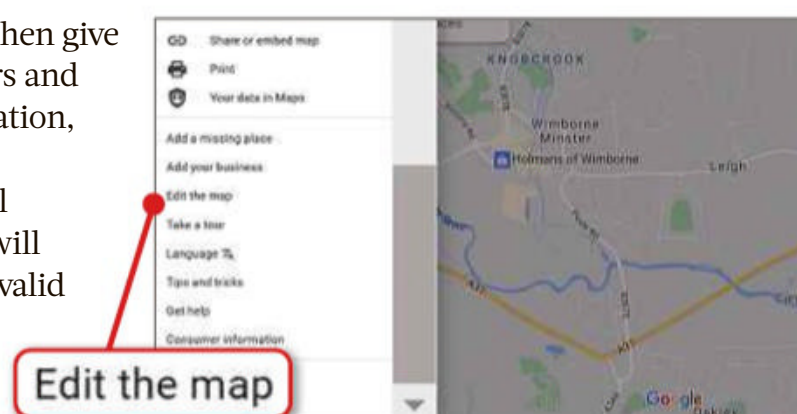
Edit the map

'Unbreakable' broadband combines 4G and fixed line

Vodafone has launched a package that automatically switches to its 4G network should its fixed-line broadband connection go down.

It says the Pro Broadband package provides "unbreakable" broadband by guaranteeing that you stay online, whether through home Wi-Fi or 4G. It uses a hybrid router that has a 4G dongle plugged in (pictured above right).

Customers will receive "dedicated support" from Vodafone's team of "WiFi Xperts", as well as Wi-Fi extenders to boost signals into

black spots. Customers who aren't satisfied with their home Wi-Fi coverage will be offered the opportunity to leave their contract without paying a fee. Prices range from £35 a month for 35Mbps to £60 for 900Mbps (read more at www.snipca.com/37626).

Vodafone's launch comes a month after BT announced a similar 'unbreakable' deal that combines broadband and 4G. The BT Halo 3+ bundle

contains a Hybrid Connect device (pictured left) that pairs with the Smart Hub 2 router, switching to EE's network should broadband connection fail. BT bought EE in January 2016.

BT says existing customers might be able to upgrade to Halo 3+ for an extra £1 a month. New customers will have to pay £65.99 a month. Visit www.bt.com/halo3plus for more details.

We got bits wrong: Microsoft retracts quantum-computing 'breakthrough'

A Microsoft-led team of scientists have backtracked on claims they found an elusive subatomic particle that could help develop more powerful computers.

In a 2018 paper in the scientific journal *Nature*, they said they'd found evidence of Majorana particles, which have long been theorised about but never detected.

The team hoped that the particles would lead to a breakthrough in quantum computing, in which 'qubits' of information can have a value of one and zero at the same time, based on the concept of quantum physics.

This would vastly increase computing power, making it possible to perform complex

calculations simultaneously.

But the researchers now admit that they made mistakes, including mislabelling a graph and changing data unnecessarily. They've apologised for using "insufficient scientific rigour" in the research.

The paper, which has now been retracted, came from a laboratory led by Microsoft physicist Leo Kouwenhoven at Delft University of Technology in the Netherlands.

Delft University released a report from four physicists not involved in the project. It concluded that the researchers didn't intend to mislead but were "caught up in the excitement of the moment", and chose data that suited their own desires for a
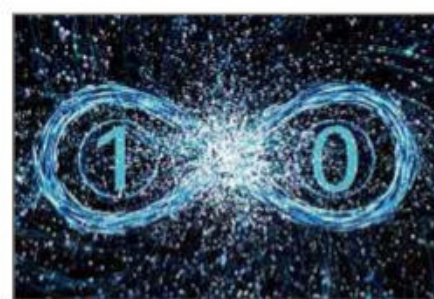
major discovery.

The retraction vindicates the scepticism of many experts who cast doubts on the claims. Professor John Morton of University College London said at the time: "It's one of those things that on paper look incredibly exciting, but physics has a habit of throwing up spanners in the works. Until we see the demonstration, we don't know how well these Majorana qubits developed by Microsoft will really behave."

News

IN BRIEF

TWITTER BANS USERS SPREADING VACCINE LIES

Twitter will ban users who repeatedly post misinformation about Covid vaccines. Its new "strike system" means users will be permanently suspended after tweeting misinformation five times. Before that, they'll be warned and given temporary suspensions of 12 hours followed by seven days. Read more at www.snipca.com/37569.

PLUSNET ENDS 'LINE RENTAL SAVER' DEAL

Plusnet has axed its 'line rental saver' option, which lets customers get a discount on their home phone line rental by paying £213.12 for the year upfront (equivalent to £17.76 a month). Existing customers will be switched to paying line rental monthly when their contract ends. This costs just over £30 more a year. Some Plusnet customers complained about the move on the company's forums: www.snipca.com/37596.

THE WORLD'S GONE MAD!

Social media has turned us all into lab rats. That's the conclusion of one US study that found people on Facebook, Twitter and Instagram space out their posts in order to get the highest number of 'likes', mimicking the behaviour of rats in experiments who perform tasks to get snacks as rewards. More cheese, please.

eBay launches new refurbished deals as lockdown sales rise

EBay has launched a new hub for refurbished products, as it says that demand for such items has shot up during the lockdowns.

It has replaced the old label of 'Manufacturer Refurbished' with 'Certified Refurbished' to indicate items that are in a "pristine, like-new condition" and have been "inspected, cleaned and refurbished by either the manufacturer itself, or a manufacturer-approved seller".

Products from over 70 brands are available from the Certified Refurbished Hub (www.snipca.com/37587), including laptops from Dell and Asus, TVs from Panasonic and Apple iPhones. EBay claims the average saving is 30 per cent off the original retail price.
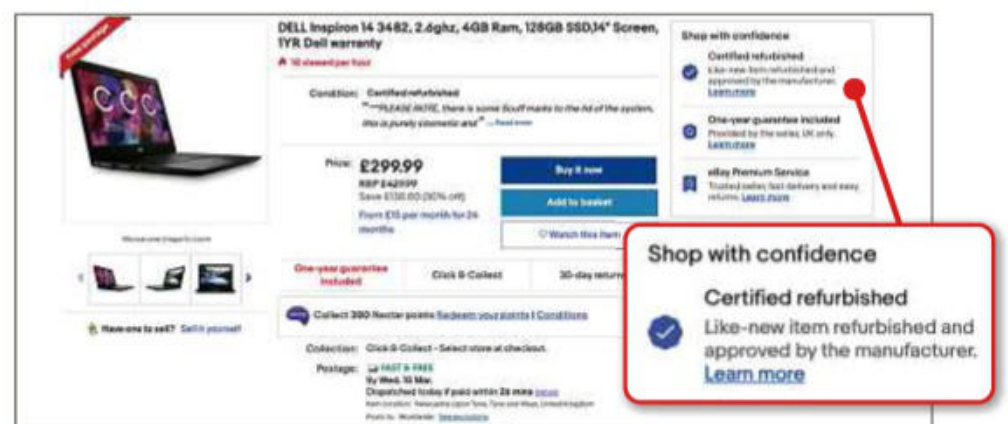
The Hub provides easy access to all Certified Refurbished products, but you can still identify them while searching by looking for the tick on the right (pictured).

EBay said that searches for refurbished laptops increased by 75 per cent in the past year as more people worked from home and taught their children while schools were closed.

You have 30 days to return a product if it's the wrong item, arrives damaged or doesn't match the listing description. There's also a 12-month guarantee to cover any technical faults (see box left).

The new category won't replace 'Seller Refurbished' items, which have been refurbished by a third party that hasn't been verified by the manufacturer. Visit eBay for more details: www.snipca.com/37588.

LIFECYCLE OF A REFURBISHED PRODUCT

1 Customer buys a brand new product
2 Product is returned with little or no damage
3 Product is expertly restored and vetted to work like new
4 Product is packaged in original or new packaging with accessories and new manuals
5 Product is sold with a 12-month warranty and protected by eBay Money Back Guarantee

Broadband and phone complaints fell during pandemic

Customer complaints to broadband providers and phone networks fell sharply during the first few months of the pandemic, according to research from one of the UK's leading consumer organisations.

Ombudsman Services, which helps to resolve customer complaints against broadband providers, phone networks and energy companies, said that 41 per cent of consumers became "more tolerant" of poor service between March and September last year, with only 10 per cent saying the opposite.

Almost a quarter of customers were unhappy with a product or service during lockdown, but chose not to complain because they were "more willing to be lenient during a uniquely challenging time".

The results, taken from more than 10,000 interviews with customers between March and September last year, appear in the organisation's Consumer Action Monitor report for 2020 (www.snipca.com/37594).

They show that the average number of complaints per customer fell from 3.7 in March to 0.86 by September. This figure had peaked in 2019 at 4.2 complaints per customer.

The survey also highlighted how little customers understand their rights when complaining. Only three per cent knew that if an energy or telecoms provider doesn't resolve a complaint in eight weeks, customers can escalate it to an ombudsman.

Move your tabs down the left in new version of Edge
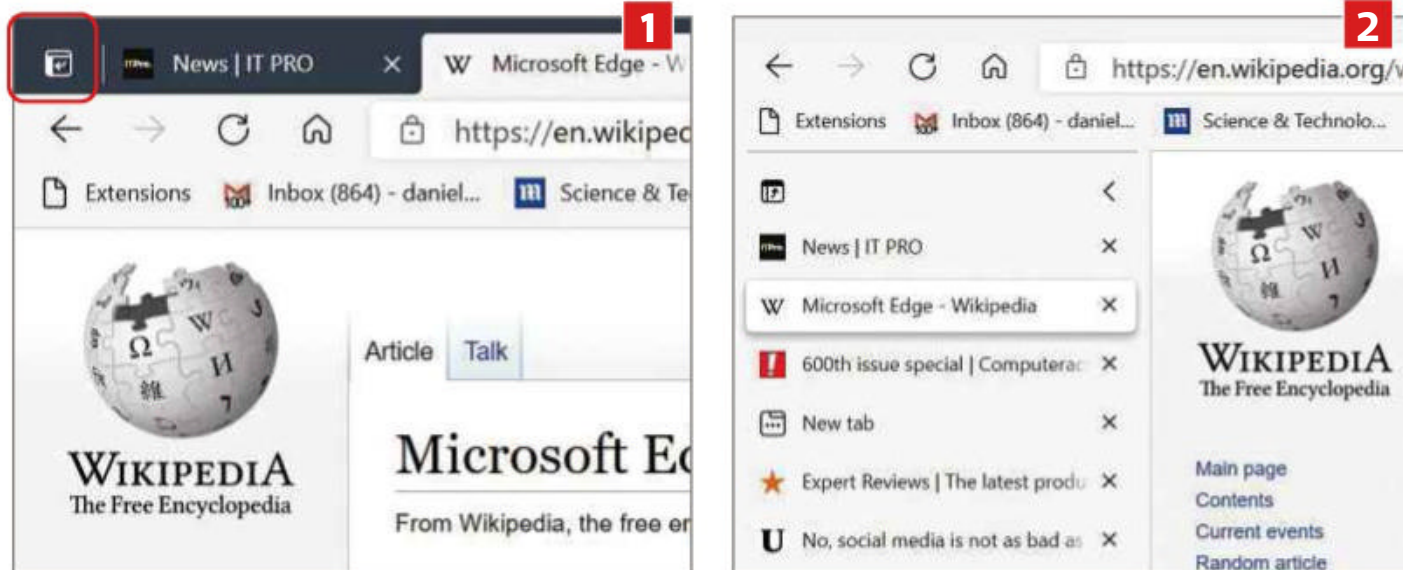
You can now move your browser tabs in Edge from the top to the left-hand side, which Microsoft says makes it easier to find and switch between them.

The feature, called 'Vertical tabs', is part of Edge 89, launched on 4 March. To try it, first make sure your browser has been updated to version 89. Click the three horizontal dots top right, followed by 'Help and feedback' at the bottom, then click About Microsoft Edge.

The browser will then automatically check for updates. If you're updated to 89 or higher, you're ready to use vertical tabs. You'll see a new icon at the top left of Edge (see screenshot **1**). Click this and the tabs you've got open will appear in a vertical menu down the left-hand side (see screenshot **2**).

You can click these to switch between them as you would using tabs along the top of your browser.

Edge 89 also contains a new-look History menu. Press Ctrl+H and your history will now appear as a menu on the right, rather than taking up a full page in Settings.

It means you can easily search your history and switch to a previously visited site.

Read Microsoft's blog for more changes to Edge: www.snipca.com/37576.

Licence fee 'could be scrapped' when broadband is faster

The TV licence might be scrapped when super-fast broadband is available in all homes, the media minister has said.

John Whittingdale said there would "come a time" when the BBC would instead be funded by a Netflix-style subscription, but only when every home has fast enough speeds to stream TV online.

He added that this may be the case by 2027, when the BBC's charter is up for renewal, but until then the licence fee remained the best way of funding the corporation.

Mr Whittingdale was responding in Parliament to a public petition, signed by 110,000 people, calling on the Government to "end the licence fee as soon as possible".

He said: "Young people are turning more and more to video-on-demand services. That does beg the question about whether or not the licence-fee model, which has been based on the fact that everybody used the BBC, can continue."

"The technology needs to be capable of delivering video on demand to everyone," he added. "The technology does not allow it now. We will in a few years reach universal coverage and then it will be possible to introduce subscription services as an element of the funding."

The licence fee is to increase by £1.50 to £159, from 1 April 2021.

✉ Should the licence fee be replaced by a subscription? Let us know: letters@computeractive.co.uk

Question of the Fortnight

Will broadband and mobile price rises be banned?

Campaigners say households are being clobbered at the worst time

As it stands, Sky tops 2021's broadband price-rise charts at an eye-watering 13 per cent. From 1 April, customers on its Broadband Essential package will pay £25 a month, up from £22. BT comes next with a rise of 4.5 per cent, followed by Virgin Media with an average of four, while TalkTalk customers on its 'Fast broadband' deal will soon pay £2 more a month.

> **What makes 2021's price rises so hard to take is that they're so much higher than inflation**

Mobile prices are going up by similar amounts. Most EE, Three and Vodafone customers will pay 4.5 per cent more from April. Only O2 customers will avoid a big increase, with bills rising by 1.4 per cent.

For Tesco Mobile, "there could not be a worse time for networks to implement their biggest price rises". Its boss Tom Denyard, Tesco Mobile CEO, said: "For a family of mobile users, the increased costs mean less items in the weekly shopping basket or additional pressure to pay a bill that was higher than expected".

Why is Tesco Mobile concerned? Well, it has teamed up with charity Money Advice Plus (www.moneyadviceplus.org.uk) to ask other providers to reverse 2021's price rises and pledge to keep prices frozen throughout a customer's contract.

You don't have to be cynical to see this as little more than a piece of clever marketing. After all, it highlights Tesco Mobile's unique appeal, which is capped contracts as standard and a Tariff Promise that guarantees no mid-contract price rises.

Visit its site (www.snipca.com/37562) and you'll see the angle it's taking: "We've never increased our customers' prices mid-contract and we're not going to start now. There's enough to worry about at the moment." As lockdown hammers your finances, it wants you to know that it's not one of those callous out-of-touch firms that raises prices whenever it feels like it.

Tesco Mobile can't lose with this kind of strategy because it knows its rivals won't reverse the price rises (tempted though they might be to call Tesco Mobile's bluff).

But this is more than just a marketing wheeze. There is real concern that not enough people realise providers – broadband and mobile – can increase their prices mid-contract. A YouGov survey commissioned by Tesco Mobile found that half of mobile-phone users didn't realise networks could do this.

It's not so much the extra money that hurts (though that's never welcome), but the unexpected nature of the increase. Such nasty shocks can disrupt carefully planned household budgets.

The survey also found that nine per cent of respondents have been unable to pay essential bills since the coronavirus pandemic began, while 38 per cent admit even a small increase to household or utility bills would cause them to worry financially.

What makes 2021's price rises so hard to take is that they're so much higher than inflation. BT's new policy is to add 3.9 per cent to what the CPI rate of inflation was the previous December (it was 0.6 per cent, hence the rise of 4.5 per cent). With many economists predicting inflation to rocket this year – as shops reopen and people start spending money again – we could face even higher bills in April 2022.

Tesco's rivals would argue that increases are necessary to improve services, and that they postponed rises when the pandemic hit last spring, making this year's increases seem steeper. They won't worry about Tesco's campaign, but they'll start sweating if Ofcom took an interest. The regulator said in 2013 that banning mid-contract increases wouldn't be consistent with European Union law. Now that we've left the EU, might it think again?

Protect your tech

Scams and threats to avoid, plus new security tools

Fake AOL account-verification emails

What's the threat?

Scammers are trying to steal details from AOL users by claiming that their account is about to be closed.

They're sending emails urging users to "verify" their account within 72 hours, warning that it will be terminated if they don't do so. Subject lines being used by the scammers include 'Mail Box will close in 3 days log in to re-activate'.

Slyly, the email mimics the friendly marketing lingo that many companies now adopt: "We don't want to say goodbye!". It then continues: "We noticed you haven't updated your account information recently, and since your security is our top priority, we plan to close this account as soon as possible."

If you click the link you're taken to a fake AOL sign-in page (pictured).
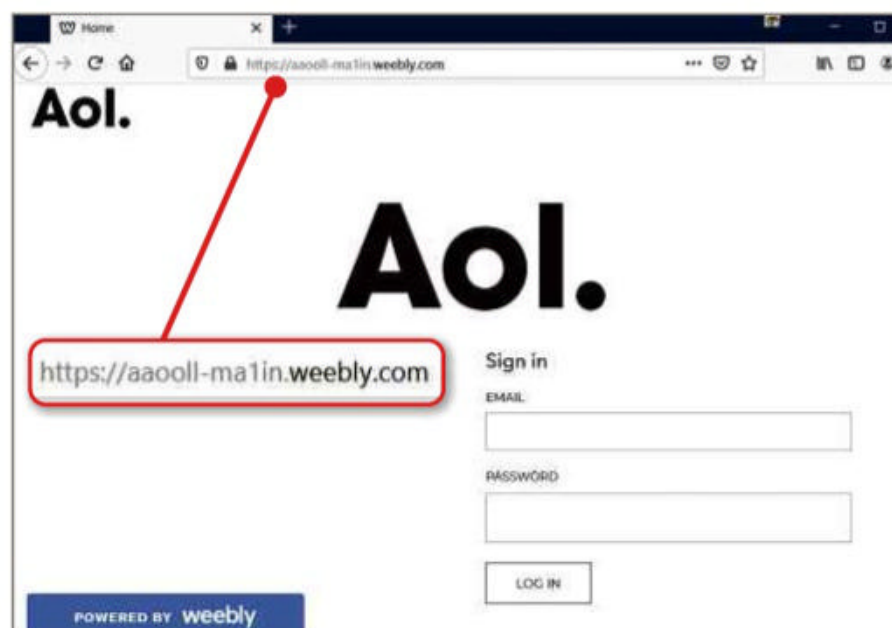
The logo is genuine, but a quick glance at the bizarre URL in the address bar ('https://aaooll-ma1in.weebly.com') shows that the site is bogus.

How can you stay safe?

If you still use an AOL email account, make a mental note that scammers are targeting you. You may wonder why, given that many more people use Outlook or Gmail. The reason is that scammers assume those who use AOL are predominantly older people who have stuck with the same account for the past 20 years or so. Their cynical assumption is that the older you are, the more likely you are to fall for a scam like this.

Also notice the devious language of this scam – in particular its claim that "your security is our top priority". Unlike many scams, this is trying to gently nudge you into action, rather than scaring you into panic measures. It's well-written, convincing and, we fear, will catch out many users.

Finally, visit www.snipca.com/37547 for AOL's explanation on how to spot genuine emails from the company.

New tools | Password Checkup on Android
www.snipca.com/37473

According to 'Have I Been Pwned?' (https://haveibeenpwned.com), the details of over 10 billion online accounts have been leaked online. That's an awful lot of email addresses, usernames and passwords waiting to be abused, but hackers will always want more. It's vital therefore to be warned when your passwords have been exposed in a data breach.

Chrome has been showing warnings for over a year, and now Google has added them to Android. Whenever you create a new password in the Autofill service, or sign into an account using Autofill (ie, you don't need to type your login details), Android will check whether the password has leaked online. If so, it will show a warning, with a link to 'Check passwords' (see screenshot). This takes you to the Password Manager page, where you can change your logins.
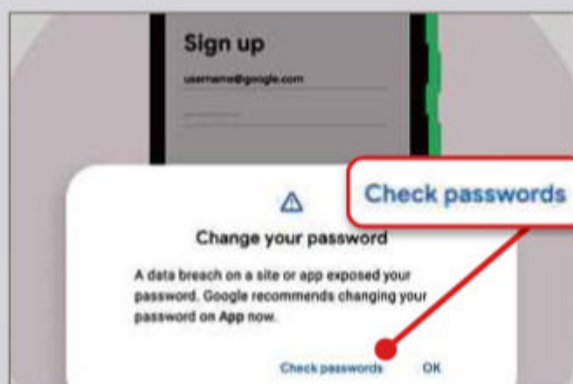
You'll need to turn on Autofill within Android's settings. Open your phone's Settings app, tap System, then 'Languages & input'. Next, tap Advanced, followed by Autofill. Finally, tap Google to make sure it's working. It works on devices running Android 9 (or later), released in August 2018. Read more on Google's blog: www.snipca.com/37473.

ScamWatch
Readers warn readers

NI number was "compromised"

Early one February morning I received an automated phone call telling me my National Insurance number had been "compromised". As scams go it was predictable and crude, though I was half asleep and almost pressed 1 on my handset as it asked me to. Had I done so, I would probably have been put through to someone who would no doubt claim to be helping me but would attempt to ransack my bank account. Action Fraud reported it in January (www.snipca.com/37463), and several people in my computing club were targeted in late February, so it's clearly still happening. You have been warned.

Bill Albiston

✉ Warn your fellow readers about scams at letters@computeractive.co.uk

Letters

Tell us what's on your mind

Many older people 'not confident' about using emails

I don't think we should be terribly shocked that email scammers go after older people more than younger ('Question of the Fortnight', Issue 601). It's important to remember that scams have existed for centuries, and that older people have probably always been considered more gullible than younger people. In the years before the internet, there were lots of warnings about fraudsters going door to door, picking out the elderly.

The big difference now of course is that scammers can 'knock' on millions of doors at once by sending an email. There's also a technological difference. It doesn't take any technical expertise to decide whether you should open the door to someone. Yes, you need your wits about you, but you're in familiar territory.

The same isn't true when dealing with emails. My 83-year-old father is still as sharp as a tack in most matters – woe betide anyone trying to con him on the doorstep. But he's only had an email account since about 2017, and like many of his generation he'll never feel completely confident sending emails. He often phones me to check whether he's just received a scam.

Many older people in similar situations lived the first 60 to 70 years of their life without ever opening an email. By contrast, anyone in their 20s has never known a time without email. Ironically, they're probably more likely to be conned on the doorstep.

Martin Armstrong

Google's business model has been exposed

Your 'Stop Using Google' Cover Feature (Issue 597) seemed to cause some controversy, with several readers asking why you had an agenda against Google. Well, your news story in Issue 601 ('Google 'scaring' people into paying for photo storage', page 6) felt like a timely riposte.

Google's business model has now been exposed. It dangles the promise of free this and free that (storage mostly), gets you hooked on it, then threatens to withdraw it unless you pay up. Somewhere in Sicily there's a criminal family that wishes it had thought of this ruse first!

It doesn't surprise me that it's now sending scaremongering emails to people. For years I've been saving photos at 'High' quality – as Google itself recommended time and again – and I've been perfectly happy with them. It's laughable and rather desperate that Google is now claiming that High isn't good enough. I won't trust another word the company says.

Arthur Logan

People will find ways around YouTube law

I can't believe the record industry is seriously going to waste time, money and effort in making it illegal to download videos from YouTube (News, Issue 600, page 9). Surely they realise that people will just seek a way to bypass the restrictions. It's not as if it'll be difficult. You could film your screen as the video records then download it, or just use screen-recording tools. The quality may suffer, but that won't deter people.

This reminds me of those warnings about recording songs off the radio in the 1980s. I did it, and all my friends did it. We realised it broke the law, but none of us thought it was a law that was justified in the first place. A law that nobody observes isn't a law at all; it's petty bureaucracy. Still, it does all benefit one group of people – the lawyers themselves. Every court case is another big fat fee for them.

Phil Conrad

Let's remember that musicians stand to lose a lot of money if downloading from YouTube continues uncontrolled. It's why the law should make a distinction between downloading commercial and non-commercial content.

If I upload a video of my dog skateboarding, I couldn't care less whether anyone downloads it (though I'd wonder why they'd bother). I wouldn't be seeking to make money from it, and my dog doesn't need the royalties.

But it would be a different story if I were a struggling singer-songwriter hoping to make my name on YouTube. I'd want my music to be played and listened to, so I could make money through adverts – though, granted, that's an absolute pittance.

I still use a Nokia phone from the last century

Further to your request for older phones, here's a photo of my Nokia 3210 (right). It still has the original clear plastic protection covering the screen, though it has needed a replacement battery. The screen, depending upon which transmitter it's connected to, still displays One2One (as you can see) or Orange! Lots of people usually sigh when seeing it, saying they also had or knew someone who owned one. Quite a talking point.

David K Birt

CA SAYS Nokia released the 3210 in March 1999 (so Wikipedia tells us: www. snipca.com/37584), when this magazine was barely one year old. David's phone is in remarkably good condition – you can still see the numbers! By our reckoning, it's the oldest phone still being used by a reader, though if you have an earlier claim please let us know. Thanks to everyone who emailed us photos of their ancient devices. It's fascinating to see how well many of them – particularly the Nokias – have survived.

Instead of trying to impose a blanket ban, lawyers should work with YouTube on a method of separating videos into these two groups.

Dan Thompson

Faster BT Broadband? You're having a laugh

✉ I had to laugh when I got this email this morning from BT! "Thanks for letting us know about the problems with your broadband speed. We've been keeping an eye on it to see if the download speed is 3Mbps, which we promised as part of your Stay Fast Guarantee. We're pleased to let you know that your broadband has been meeting this speed over the last three days".

With BT adverts promising speeds of 100Mbps, why do I feel let down? I live in Bradford, where fibre broadband has been around for years, yet our small residential estate has no prospect of it despite me contacting BT each year when renewal comes round. The engineers who come round to check my upload speed of less than 1Mbps say there's no chance of getting fibre to the cabinet, and I'm at the end of the line at the bottom of the estate. Backing up online? You must be joking. Just getting a couple of computers online is slow enough. And now my monthly charge is going up!

Mary Twentyman

Dr Google can give 'life-changing advice'

✉ I'm a recent convert to your magazine following the sad demise of *Computer Shopper*, and have been pleasantly surprised by the quality of your content. However, I'd like to question your opening assertion in Issue 600's 'Question of the Fortnight' ('Can Google searches help to predict Covid peaks?') that prior to Covid researching your ailments online was not to be advised.

My wife has suffered from irritable bowel syndrome for over 35 years. It has largely confined her to the house, meaning that much of her contact with the outside world has been online. Much of this time is spent searching for potential remedies and exploring the results of current research, as well as seeking and offering advice to others with the condition on health forums.

There are many similar debilitating conditions that have no readily available effective treatment, while GPs and conventional medical outlets often don't

STAR LETTER

Only get 100Mbps if you have gaming teenagers

✉ I've been fascinated by the debate in these pages about how fast you 'need' your broadband speed to be. The answer relies largely on how many people live in your home. My experience may help others decide what they should pay for.

Like many families, our household has expanded over the past year as our twin children – who should've been enjoying life as students – have been forced home. When they left for university in September 2019 I immediately cut our broadband speed (on TalkTalk) from around 140Mbps to 67Mbps. My children had insisted on 140Mbps so they could play games without buffering (and I made sure they helped me pay the bill every month!).

Neither I nor my wife play games, so we thought 67Mbps would be fast enough. But we only occasionally stream TV over the internet, so I wondered whether 67Mbps was too much. I experimented by going down to 38Mbps, and noticed no difference at all. I was saving a tenner a month on this lower speed.

Then Covid happened, campuses closed, and my kids found themselves unexpectedly living at home again. They weren't best pleased when I told

them that we were now living in the broadband dark ages.

The effect on their gaming was drastic. On 140Mbps both of them could play simultaneously. On 38Mbps only one of them could, and they often complained of delays (or "lagging" as I believe it's known). With the whole world in a pandemic, I can't say I had much sympathy for them. Maybe it helped them to learn about priorities.

So, what's my conclusion? That if you have teenagers who spend long evenings streaming games you'll need 100Mbps and above. But if it's just the two of you doing ordinary web browsing, you'll easily get by on under 40Mbps.

I can't ever see myself doubling my monthly bills in order to get Gigabit broadband.

Damien Bould

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

have the time or inclination to stay up to date with the latest research. On several occasions my wife's GP has referred her to hospital after she told him about a treatment he wasn't aware of. So for some, asking Dr Google for advice can be life-changing and should not be so readily dismissed.

Peter Setter

Thunderbird is FAB!

✉ After reading Issue 599's Cover Feature on removing Windows junk, I proceeded to do just that and replaced the apps with your suggestions.

One of the changes you recommended was switching from the Mail and Calendar apps in Windows 10 to Thunderbird (www. thunderbird.net). In my personal and work life I've always used browser-based tools for email. I never really liked Outlook, and assumed the Windows Mail app would be similar. But what a pleasant surprise Thunderbird has turned out to be! It makes everything I want to do so easy and fast, making my dream of having no emails left to read feel attainable after all.

Steven Pillay

Consumer**active**

We stand up for your legal rights

Can TalkTalk charge me for a visit I didn't request?

LEAD CASE 💼

Q TalkTalk wants to charge me £65 for an engineer's visit I never scheduled, and it also increased my monthly contract by over £10 without notice. TalkTalk acknowledged my complaint on 5 February, saying it would get back to me within three working days. I've heard nothing. What should I do now?

Dr Ronald Fearn

A Let's take the engineer's visit first. TalkTalk does charge for visits, but a maximum of £40, not the £65 it wants to charge Ronald. But that's irrelevant because Ronald *didn't* book this visit, and therefore he owes TalkTalk nothing. We'll try to get the company to refund him.

As for the price rise, Ronald should be able to cancel his contract and switch to another provider without paying an early-termination fee. By law, providers must tell you about a price rise. If TalkTalk failed to do so, then Ronald would be free to leave without penalty.

However, Ronald would still have avoided a fee even if TalkTalk *had* contacted him because the price rise is above the retail price index rate (RPI) of inflation. You can check the inflation rate on the Office for National Statistics' website (www.snipca.com/37268). The figure for January was 1.4 per cent, while February's figure will be announced on 24 March (after we went to print).

As a side note, while Ronald is confident that TalkTalk didn't contact him about the price rise, it's always possible the email went into his spam folder by mistake. It's worth checking this every week or so, particularly if you're hit by a monthly increase you weren't expecting.

CASE ONGOING

Can Logitech refuse a refund for non-delivery?

Q I bought a G Pro wireless mouse from Logitech's website more than four weeks ago and I'm still waiting on delivery from UPS. The last delivery date was meant to be 5 February. Logitech has refused to send out another mouse or give a refund. Can you help?

Thomas Azopardi

A We'll try. Online retailers must deliver goods to you within 30 days of purchase, unless you agreed to wait longer. Thomas didn't agree to this, so Logitech has some questions to answer.

If the goods don't arrive within that time, it's not your responsibility to chase up the courier. Yes, you can check the tracking number (if you have one), but that's more for your benefit. It doesn't alter the fact that it's always the retailer's responsibility to chase a parcel that's gone missing.

We've contacted Logitech to ask what's going on. Once it has confirmed with UPS that the mouse wasn't delivered, it must refund Thomas or – if he prefers – send him another one. Either way, it has to resolve this soon. Thomas has waited long enough.

CASE ONGOING

CASE UPDATE

PayPal finally refunds reader after six months

PayPal finally seems to be waking from its pandemic slumber by clearing a backlog of cases. It has recently refunded reader Clive Bonner the £21.47 he spent last August on what he thought was a laser-cutting tool from Chinese company Letvioe. When the package arrived, it actually contained a small camera tripod made of plastic.

After getting nowhere with the seller, Clive raised a complaint via PayPal's Buyer Protection scheme. He was shocked though when PayPal rejected his claim, saying the seller had provided proof the item had arrived.

We pointed out to PayPal that while Clive had received an item, it wasn't what he'd ordered. It was a completely different product, not just a slightly different model.

Clive's case seemed so straightforward to us that we can't believe PayPal even knocked it back initially. It then took another six months to process the refund. We realise that the pandemic has put an unprecedented strain on many companies, but PayPal isn't a small operation. It made $1.57 billion last year, as sales surged. Perhaps it needs to reinvest some of that into examining scams more urgently.

Interestingly, Clive tells us that when he took the case to the Financial Ombudsman (www.financial-ombudsman.org.uk) it told him to forward the message PayPal had sent him rejecting his case. So, if you have a complaint against PayPal, make sure you save the rejection email it sent you in case it proves useful in a later investigation.

Contact us so we can investigate your case

✉ **Email:** consumeractive@computeractive.co.uk
Please include your name, phone number and address.

Why hasn't Currys given me promised refund?

Q I bought a £399 Belling Electric Double Oven (pictured) from Currys PC World's website in June 2019, paying with gift cards. The door has been replaced, the hinges became faulty, and then the fan motor burned out, so last November Belling promised me a replacement. The cooker was picked up in December and I was then promised a refund, which has never arrived. Can you help me get one?

Ann Bond

A We were raring to go with this case because Ann has been treated appallingly. Because of this fiasco, she was forced to buy a new cooker. Thankfully, Currys saw sense after we contacted it, and has now refunded her in full.

This is a better result than she could have expected for two reasons. First, Currys could have deducted money from the refund to reflect the amount of time Ann had used the cooker. Second, it put the money back into her account, rather than giving her £399 to spend using gift cards. It would have been entitled to do that because the original purchase was made with gift cards.

The reason Ann was entitled to a refund was because Currys had already attempted one repair (fixing the door). Under the Consumer Rights Act, after one failed repair the retailer has to refund you.

CASE CLOSED

Has Microsoft breached UK data privacy laws?

Q I've discovered a file in OneDrive that I didn't save (I've only ever saved one document). It's the CV of a person with the same name as me and includes personal details. It appeared following a promotional email from Microsoft about organising OneDrive. Microsoft says it was simply an error, but won't explain how it happened and I want answers. What are my rights?

Alan O'Shea

A Alan's rights depend on whether there's been a security breach that put his privacy at risk. We've asked Microsoft for more details but in the meantime he could ask the Information Commissioner's Office to investigate (www.snipca.com/37451). It says you shouldn't wait longer than three months since your last contact with the company or organisation you think is responsible.

Anyone wanting to do likewise should first send a letter or email to the firm or organisation they believe has breached UK law. It has up to 40 days to respond.

We suspect Microsoft is right to say the CV was created in error and that nothing malicious has happened, but we understand Alan's concern. It's unquestionably disconcerting to open an email only to see it create a CV in your name, which is then saved in your OneDrive folder. He certainly deserves a better explanation from Microsoft.

CASE ONGOING

CREDIT WHERE IT'S DUE

HP Assistant saved me fixing my daughter's laptop

✓ My daughter, in her first year at university, bought an HP Envy laptop that you recommended a few years ago. Sadly, one of the hinges failed. Normally, she would have phoned me for advice, and I would have had to drive over to help fix the problem. But thankfully the HP Assistant service (www.snipca.com/37435, pictured), which was included for three years in the purchase price, has proved its worth and beyond.
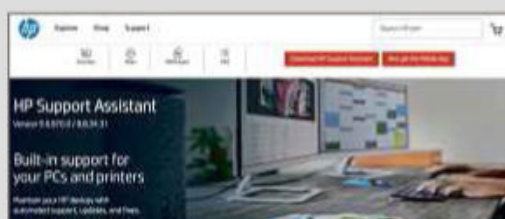
She managed the whole process online. HP sent a courier to her university residence with a transport box for returning it. She received a fully repaired laptop by the same courier five days later, with no fuss or nonsense. The first I heard was the conclusion of her story by phone. Thanks HP for providing support that was unexpectedly efficient and making for a happy student and a relieved Dad.

Alistair Hamilton

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

Contact
HP
- **Live chat** www.snipca.com/37436
- **Phone** 0207 660 0596

Grow Your Family Tree

If you had relatives who worked on the beat in London, follow **Nick Peers'** tips on how to…

Research Met Police ancestors

Reader Peter Terry knows that ancestor William Leonard Gue served in the Met Police between 1902 and 1928, but he doesn't have any photographs of him in uniform. He's also looking for a photo of his warrant cards, and details of cases he worked on. We were happy to help him find this information.

Search Met Police pension records

We started by searching the records held on Ancestry (www.ancestry.co.uk) and Find My Past (www.findmypast.co.uk). This proved surprisingly simple, thanks largely to 'Gue' being a rare surname in the UK (32,731st out of about 45,000 in England – as revealed at www.snipca.com/37455).

Both websites contain lots of useful information to paint a pretty complete picture of William's life. He was born in Romford, Essex, in January 1881, was baptised in 1890, and died in Welling, Kent in 1954. He married twice – in August 1911, and again in 1936 – and from 1918 to 1931 lived at the same address in St Pancras, London, with his first wife.

There are plenty of references to his career, such as the 1911 Census which revealed he was a police sergeant, while
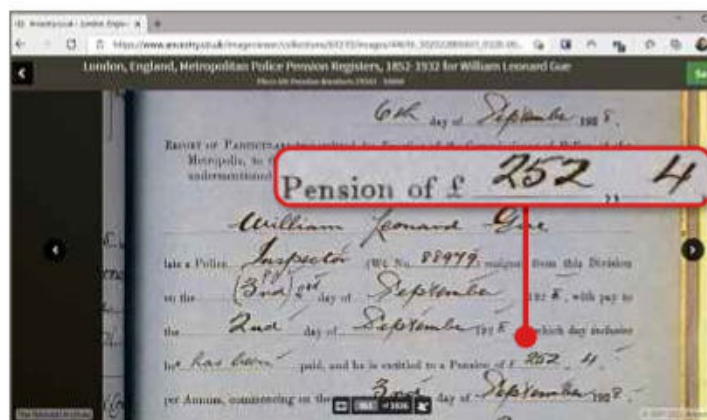
Ancestry provides pension details for Metropolitan police officers who retired before 1932

his entry from the electoral register of the same year saw him working in Bow Street police station. He listed his occupation as "police inspector (retired)" in the 1939 register.

Ancestry holds the Metropolitan Police Pension Registers (1852-1932), which revealed William's discharge date (2 September 1928), along with his warrant number and annual pension (£252 per year – see screenshot above). We suspect this is where Peter got the information he already knows about William.

Browse Old Bailey records

We then looked in the National Archives, which has a page dedicated to helping you track down information (www.snipca.com/37439). Most records are held

in a series of books and papers catalogued under MEPO (Metropolitan Police Office): browse them at www.snipca.com/37440. We found just one record on William, confirming he had joined the force on 1 September 1902 and that his final role was as Inspector in E Division.

None of this told us anything Peter didn't already know, so we dug deeper. Luckily, William appeared twice in Find My Past's 'Middlesex, London, Old Bailey Court Records 1674-1913' records (view these for free at www.snipca.com/37453). Type a name into the Keyword(s) search box, making sure you've selected 'phrase' in the options below, then click Search. This reveals that William testified as a witness in two trials in 1903 and 1905 (see screenshot below).

William testified twice in trials – you'll find this information in the Old Bailey Court Records

We also tried searching for William in the British Newspaper Archive (www.britishnewspaperarchive.co.uk, £12.95 for one month's unlimited access), but drew a blank. However, the poor quality of the transcriptions means that his name may have slipped through the cracks. For a final effort, Peter should try Friends of the Metropolitan Police Heritage Charity (https://fomphc.com/research), which stores a lot of historical material. The page includes an email address Peter can use to make first contact.

Your **Genealogy** Problems Solved ☑

I've now completed my tree using MyHeritage and Family Tree Maker, and I would like to send family members a copy on a CD that they can print. However, all I can find are options to export the tree as a GEDCOM file.
Paul Rayner

You could generate a tree in PDF format using the tools in FTM's Publish section,

but if you'd like to make the tree interactive, export it as a GEDCOM file and then use Ged2Web (free from www.snipca.com/37430) to convert it into a series of linked web pages, all housed in a single folder that can be burned to CD and shared with your family.

✉ Have a genealogy question for Nick? Email letters@computeractive.co.uk with 'Grow Your Family Tree' in the subject line.

AMD IMPULSE [RYZ7]

AMD Ryzen 5 2600 - 6 Cores (O.C 4Ghz)
ASUS PRIME B450M-A
CORSAIR 8GB DDR4 3000Mhz
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Best Free **Software**

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

HWiNFO 7.00

www.snipca.com/37637
What you need: Windows 7, 8.1 or 10

Whether you want to find out more about specific hardware inside your PC or get a complete picture of *all* its components, HWiNFO is the tool to use (click the green Download button under Installer at the link above). Business users now need to pay to use HWiNFO (starting at £26.84), but it remains free for home users.

The main screen divides your hardware into eleven categories. Open the Drives category, for example, and you'll see all hard drives attached to your PC – select one to view information including its SMART status (this shows whether your drive is healthy or at risk of failure – see below).

Click the Sensors button for real-time information, such as how fast your PC's components are running as well as their individual temperature levels (you'll see Current, Minimum, Maximum and Average readings for each). The huge array of sensors in this window can seem confusing,

even for experienced PC users. The good news is that HWiNFO now makes life easier by providing a brief description of what each sensor refers to when you hover over them.

Along with improved support for the latest hardware, version 7.00 also now reports temperature readings from the HotSpot sensor on Nvidia graphics cards. Unlike the GPU Temp sensor, which provides an average value based on the levels reported by *all* sensors on the graphics card, HotSpot shows the peak temperature. This is particularly useful if you're overclocking your graphics card and want to keep an eye on how hot it's getting.

Finally, although HWiNFO has a Driver Update option in the main window, we don't recommend using it (instead see our feature on page 60 for the *right* way to update your drivers).
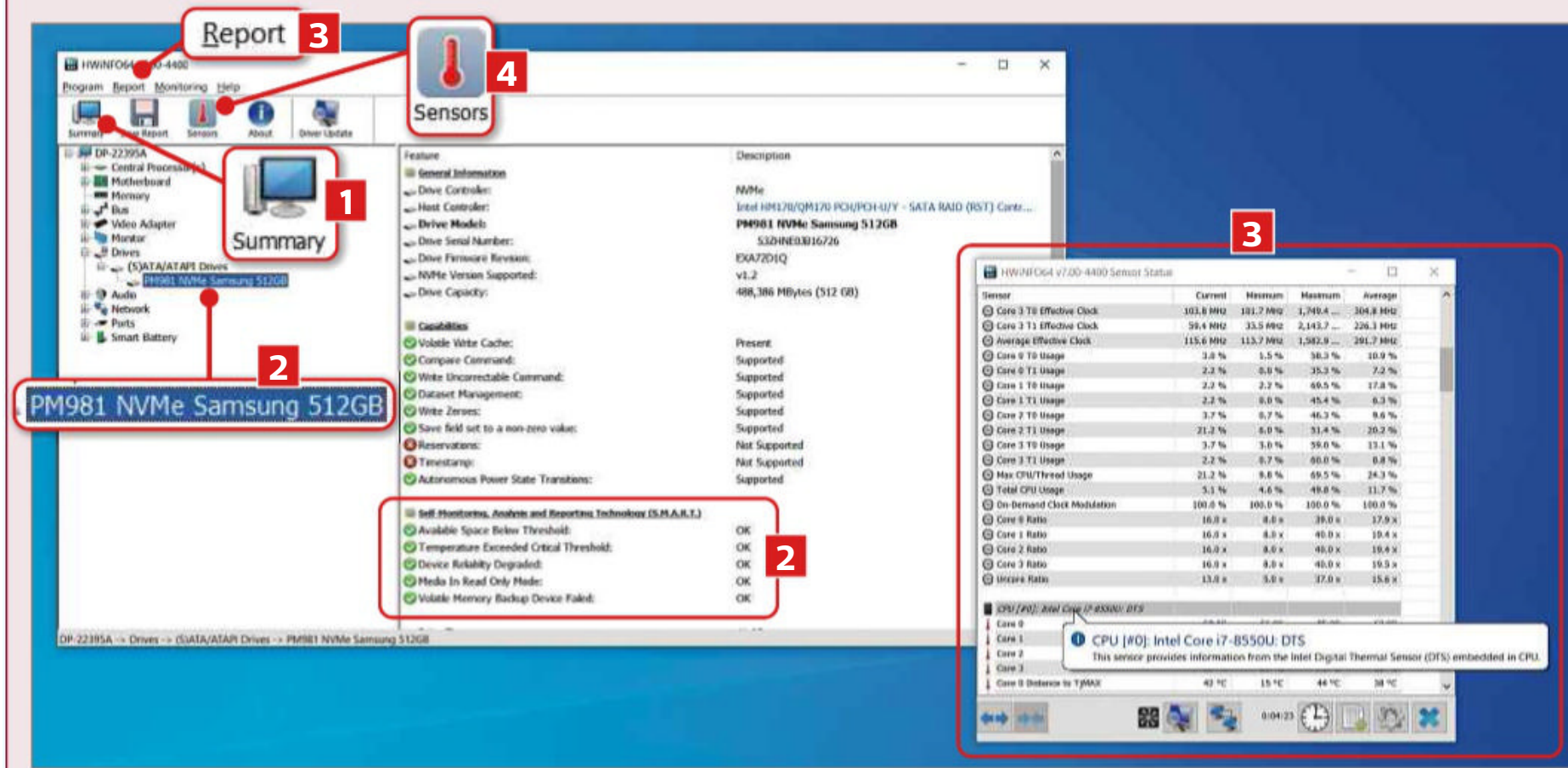
1 Click the Summary button to get a brief overview of your PC's hardware, including details for your processor, motherboard, memory and hard drive.

2 Browse the categories section to view detailed information about your hardware, including your hard drive's SMART status.

3 To download a full report on your PC, open the Report menu, then select Create. Choose how you want the report formatted (HTML, text file, etc), then select the type of information you want.

4 Click the Sensors button to view real-time readings as reported by various sensors on your PC's hardware. Click the cog icon to change sensor settings, including to show only those you're interested in.

IMAGE TOOL

Office.Files.Images 1.04

www.snipca.com/37635
What you need: Windows 7, 8.1 or 10

Office.Files.Images is a terrific new tool that lets you scan a folder full of office documents (it supports all LibreOffice and Microsoft Office file formats), then export the images contained within each file. You can drag and drop folders (or individual files) directly into the tool or click the Options tab to select them from there. The tool will immediately scan all documents, then display all images in the preview pane at the bottom. It worked impressively well in our tests, scanning even large folders in a matter of seconds. To save all images in one go, click Export. Alternatively, hold down the Ctrl key while clicking the ones you want, then right-click one and select 'Export selected' (see screenshot).

FILE CONVERTER

ImBatch 7.2

www.snipca.com/37636
What you need: Windows 7, 8.1 or 10

ImBatch is primarily for batch-converting images (for example, rotating or resizing). However, the best new feature in this version has nothing to do with converting. Instead, it lets you export selected metadata contained within your images to a CSV file, which you can then import into a spreadsheet program. To use it, select your images by dragging them into the window, then click Add Task, Save, then Save To CSV. In the section on the right, give your CSV file a name (if you leave it as the default, ImBatch will create a separate CSV file for each image). Next, click the '+' button in the Columns section to choose what metadata you want to save (see screenshot). Click the blue triangle (top left) to run the process. Our only complaint is that ImBatch doesn't add a header row to the CSV file, so you'll need to add that separately after importing to your spreadsheet program.
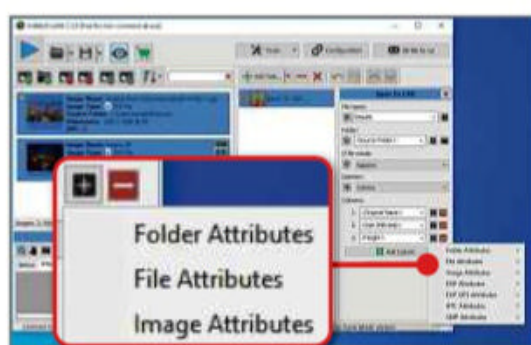
What can I use to scan videos for movement?

Q Could you recommend a program that scans for movement in video footage taken by security cameras? I've seen DVR-Scan mentioned online, but can't get it to work.

Geoff Burgess

A DVR-Scan (www.snipca.com/37639) is actually the best tool for doing this, but it's fiddly and the website is packed with jargon, so it's no surprise that you're struggling with it. The developer released a new version earlier this month, so this might fix any problems you've been experiencing with the previous release. Note that Chrome flags the new release as potentially dangerous because it's not a commonly downloaded file, but VirusTotal (www.virustotal.com) confirms DVR-Scan is safe.

Once installed, open File Explorer (press the Windows key+E) and navigate to the folder containing your videos. Next, press Alt+D to select the address bar in File Explorer, then type cmd and press Enter. In the Command Prompt window that opens, type dvr-scan -i video.mp4 (change 'video.mp4' to match the name of the video file you want to scan), then press Enter. DVR-Scan will now scan the video – this took just over 30 seconds on our one-minute video file, so you might want to put the kettle on if you're scanning a long video. Once complete, DVR-Scan saves clips in which it detects movement in the same folder as the original file.

For a faster scan, you can set DVR-Scan to show only the times at which it detects movement in your video. To do this, type dvr-scan -i video.mp4 -so (see **1** in our screenshot, again, replace 'video.mp4' with your file name). For each detected event, DVR-Scan shows the start time, end time and duration **2**, which you can then use to skip to the relevant points in your video.

If DVR-Scan detects small movements that are of no interest, adjust the threshold by adding -0.3 to the end of the command (the default threshold is 0.15, so anything above this will detect less movement).
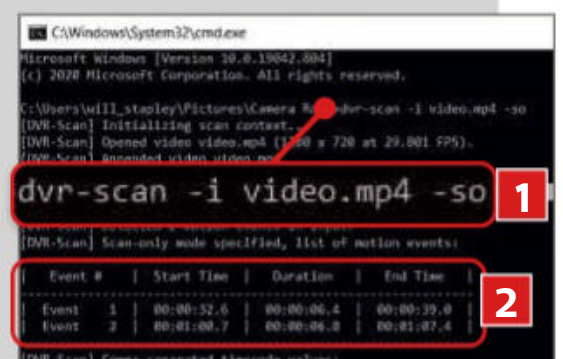
✉ Do you need our advice on what software to use? Just email us at letters@computeractive.co.uk

Best Free **Software**

QTTabBar

Fed up waiting for Microsoft to add tabs to File Explorer, **Will Stapley** turned to this small, powerful add-on

Remember Sets? No, not the interlocking circles you used to draw at school. We're talking about the Windows feature Microsoft proudly announced in 2018. Among other things, Sets was to revolutionise File Explorer by letting you have multiple folder tabs open in the same window, then quickly flick between them like websites on a browser. Things then went suspiciously quiet, before Microsoft effectively said it could no longer be bothered to finish developing the feature (you can check out what it would have looked like on YouTube at www.snipca.com/37617).

The good news is that there are other ways to get tabs in File Explorer. My favourite is QTTabBar (www.snipca. com/37613 – click the 'QTTabBar ver 1043 for 64bit' link at the top). Unlike other File Explorer alternatives, such as Q-Dir (see box below), QTTabBar isn't a standalone tool. Instead, it's effectively an add-on for File Explorer. Once installed, you can turn on its
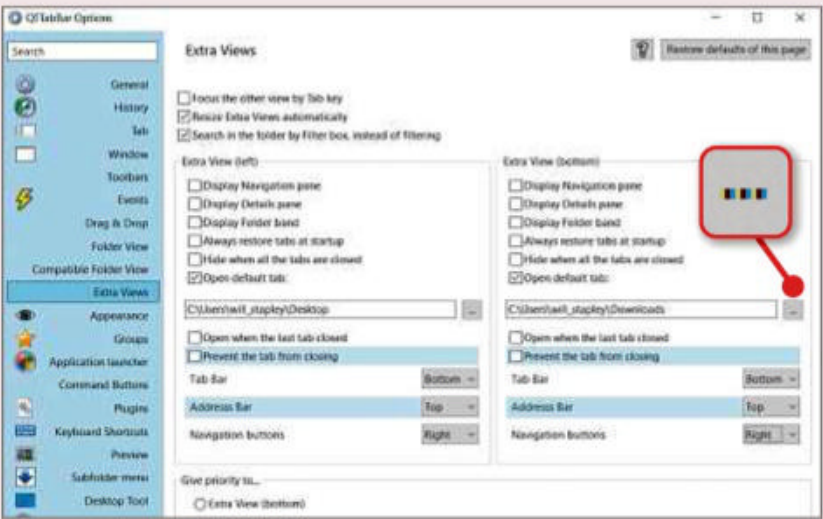
Set your favourite folder to appear in one of QTTabBar's two Extra View panes

QTTabBar's handy features can be accessed within File Explorer by clicking Options

features by selecting the View tab in File Explorer, then the small down arrow under the Options button (see screenshot below left).

To apply the tabbing feature, I've enabled the QTTabBar option listed here. This lets me open any folder in a new tab either by holding down the Ctrl key while double-clicking it, or with a single click of the middle mouse button. I can then flick between the tabs by pressing Ctrl+Shift.

I've also enabled the QT Command Bar option, which adds a selection of shortcut buttons along the top (these are very large by default, so I recommend you resize them by hovering your mouse over them, then holding Ctrl while moving the scroll wheel). While most are useful – particularly the buttons on the left that show my recently accessed folders and files – I've ditched those I never use (such as close and duplicate the window) by right-clicking them,

then selecting 'Remove from bar'.

QTTabBar also has a nifty Extra View feature, which lets me browse folders in two panes simultaneously. I've tweaked this so that it shows my Downloads folder (easily my most-used folder) by default. To do this, I opened QTTabBar's settings by clicking the cog icon, then selected Extra Views in the left-hand sidebar. There are two Extra View panes – one opens on the left of the window, the other at the bottom. I've set the latter to default to my Downloads folder - click the three dots to choose the folder you want to display (see screenshot above).

To make things even easier, I've assigned a shortcut to open and close this pane by selecting the Keyboard Shortcut option in the sidebar, ticking the 'Show and hide Extra View (bottom)' option, then pressing my chosen shortcut (Ctrl+Shift+D).

This really is just scratching the surface of what QTTabBar is capable of (give it a whirl for yourself and you'll discover it has a raft of useful tools, including letting you preview videos within File Explorer). In fact, it works so well, Microsoft should swallow its pride by acquiring the tool then renaming it Sets 2.
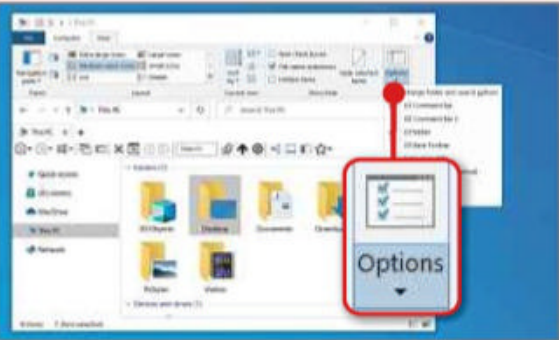
WHAT I'D LIKE TO SEE IN QTTabBar

As much as I enjoy using the Extra View feature of QTTabBar, it's not as flexible as alternatives such as Q-Dir (www. snipca.com/37611 – see Issue 600, page 19), which lets me quickly view up to four folder panes in the same window, then easily rearrange and resize them to suit my needs.

Named & Shamed

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

WARNING: JUNK AHEAD

Junk offender: PDFsam

It seems there's a plague of junk afflicting PDF tools these days. Two programs I tested last year – PDF Creator and PDF Shaper Free – attempted to flood my hard drive with junk, and now there's PDFsam Basic (https://pdfsam.org), which pre-ticks as many boxes as it can during installation in the hope that you'll accidentally agree to all kinds of unwanted software and settings.

The installer's initial screen includes an easy-to-overlook pre-ticked 'Install PDFsam Enhanced…' option, which gives the green light to install not only the Basic tool you asked for, but also a ton of stuff you didn't.

PDFsam Enhanced is a suite of tools that allegedly includes a PDF reader, editor and more. I say 'allegedly' because, as it happens, PDFsam Enhanced failed to run on my PC after installing itself and just sat there taking up almost 300MB of hard-drive space, while adding zero value.

And that's not all. Just below the 'Install PDFsam Enhanced…' option, there's an even easier-to-miss Advanced
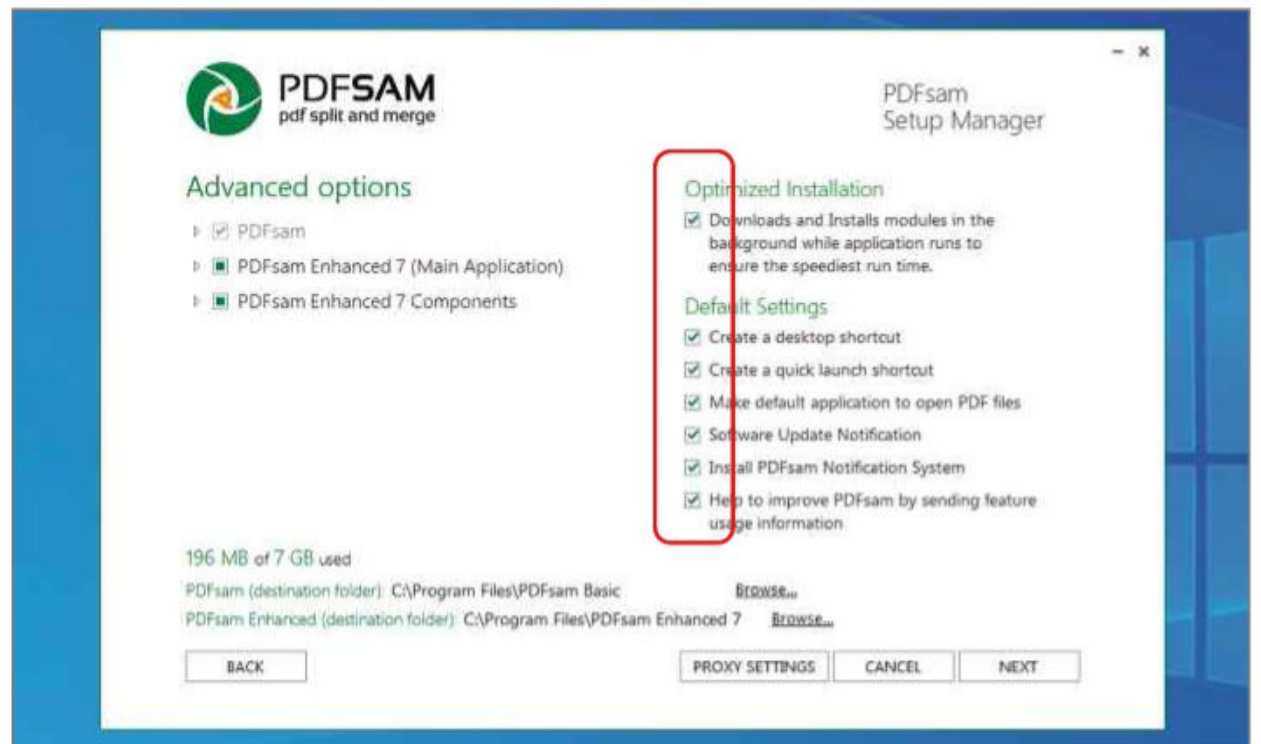
PDFsam offers no fewer than seven pre-ticked boxes in its installer

Options button – and it's not until you click this that the true extent of PDFsam's junk-peddling intentions is revealed. Here you'll not only find that multiple components of PDFsam Enhanced have been pre-selected for you, but a further slew of pre-ticked boxes also sign you up for tons of other unwanted options (seven in total – see screenshot). These include setting PDFsam as your default PDF tool and giving it permission to perform tasks in the background.

You could painstakingly untick all of these but, if I'm honest, my advice would be to avoid PDFsam (and tools like it) altogether. You can read and annotate PDFs in Windows 10 without installing any extra software – just open them in Edge. And if you need to edit a PDF, just open it in Google Docs.

JONATHAN'S VILLAIN OF THE FORTNIGHT

Emil Apreda

For months we've been told to protect the NHS, but it turns out coronavirus isn't the only threat we need to defend the UK's health service from. Emil Apreda attempted to blackmail the NHS last year in the middle of the pandemic, sending anonymous emails threatening to detonate bombs in UK hospitals unless he was paid $14m (around £10m) in bitcoin.

The 33-year-old Italian-born Berlin resident sent his first threat in April last year, timed precisely to coincide with Covid's first peak. He had previously targeted MPs on the anniversary of Jo Cox's murder and threatened to bomb Black Lives Matter protests. Last month, he was found guilty of attempted extortion by Berlin's District Criminal Court and sentenced to three years in prison.

New products tested by our experts

LAPTOP | **£829** from PC Specialist www.snipca.com/37563

PCSpecialist 15.6in Lafité Pro

Star of the big screen

PC Specialist is a UK PC-builder that lets you configure the computer you want without having to put it together yourself. As a result, you'll sometimes see their PCs built with cases you might also find on other manufacturers' devices and the 15.6in Lafité Pro is a typical example of this. It comes with a chassis from Clevo, a Taiwanese company that supplies a number of British manufacturers with bare-bones laptops, to which PC Specialist then adds its own components and finish. So, don't be surprised if you see similar laptops from other manufacturers.

> **" A powerful machine with a big screen, full-size keyboard and plenty of ports "**

The laptop weighs a hefty 1.7kg, so it isn't something you'll want to be lugging around in a shoulder bag too often. It's 357mm wide – enough to accommodate the 15.6in IPS screen. Its bulky size also means there's room for plenty of ports (pictured below).

On the left edge you'll find two USB-C ports (one of which is Thunderbolt 4 standard), one USB 3.0, one HDMI port and a DC input for the charger, though you can also recharge the laptop and connect it to a monitor via the USB-C Thunderbolt port. On the right edge, you'll find a Gigabit Ethernet port, a 3.5mm headphone jack, a USB 2.0 port and a microSD card slot.

The wide expanse also means you get a full keyboard with a number pad. Not everyone is a fan of this arrangement because it means your hands don't sit centrally when you type. But it does mean you get full-size cursor keys and are less reliant on function keys. If your computing work involves number-crunching, it makes life much easier.

We didn't particularly like the feel of the laptop's keys, though, which lack the feedback found on many rival keyboards. This isn't the most stylish design either, and while there's backlighting (controllable via installed software), it's too garish.

The touchpad design is, however, spot on – thanks mainly to its sheer size. A square centimetre of the touchpad has been appropriated by a fingerprint reader, which works effectively. The surprise inclusion is an infrared webcam to support facial recognition. Given the low quality of the webcam's resolution – think soft and fuzzy – we were relieved to find that this worked well.

In terms of performance, this is a fast and responsive PC. Its 16GB of RAM is plenty, and a 512GB SSD provides enough storage for videos, music and games. Be aware that, you'll hear the fans whirring if you push the laptop to its maximum, such as by playing advanced games. However, this won't happen if you're simply typing in Word or browsing the internet, and there is software that lets you quieten the fans if necessary.

It has an Intel Core i7-1165G7 processor – the 'G7' at the end indicates that the chip benefits from Intel's best integrated graphics yet: Iris Xe. Here, it proved to be a winning combination, with good scores in our benchmark tests across Windows and gaming, as long as you keep the latter down to 1080p resolution settings. This shouldn't be a problem because the built-in screen is 1080p, but it does mean the laptop isn't powerful enough to run games at higher resolution on a separate monitor.

The screen is a little disappointing, with a below-average sRGB coverage of 79 per cent, but the colours do have punch. It's also very bright, up to a maximum of 349cd/m2, and we like the matte finish, which helps keep the screen's contents visible even when the ambient light is dazzling.

SPECIFICATIONS

Intel Core i7-1165G7 processor • 16GB memory • Intel Iris Xe graphics • 15in 1920x1,080-pixel screen • 512GB SSD • Wi-Fi 6 • Bluetooth 5.0 • 2x USB-C ports • 1x USB 3.0 port • 1x USB 2.0 port • 1x HDMI port • MicroSD card slot • Windows 10 Home • 20x357x221mm (HxWxD) • 1.7kg • Three-year warranty www.snipca.com/37563

VERDICT Powerful specs built into an off-the-shelf chassis help make this a very reasonably priced laptop

★★★★☆

ALTERNATIVE Lenovo Yoga Slim 7 £849 A smaller, lighter, more versatile laptop, that's better suited to being carried around
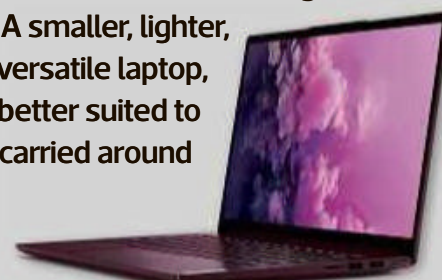
LEFT EDGE
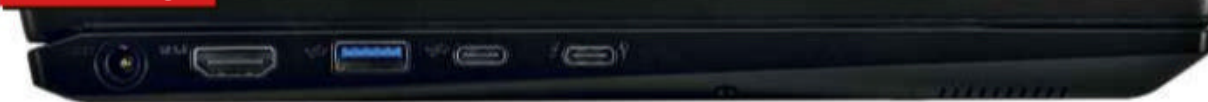
RIGHT EDGE

PC | **£699** from Currys PC World www.snipca.com/37514

HP Pavilion Pro TP01

Affordable all-rounder

HP's Pavilion Pro TP01 comes in a choice of specifications, but the model we reviewed has an Intel Core i5-10400F processor and is available for £699. Every model in this series comes in the same case, so check the price and specs of any alternative configurations you explore, to make sure it's the right model for you.

> " A powerful desktop PC with plenty of connections but little room for upgrades "

This model has a generous 512GB SSD but it's not as fast as we'd like. It's still significantly faster than a traditional hard drive, but some speed has been sacrificed in favour of increased storage capacity. It also comes with a DVD writer, which is a rarity these days, but will come in handy if you use discs for backing up or installing software.

There's enough muscle for gaming due to the GeForce GTX 1650 Super graphics card, which is a solid choice that delivers playable frame rates at 1080p – even up to 1440p at a stretch – in most games. In our tests it didn't provide a high enough frame rate for smooth gaming at 4K resolution, but that's a big ask for a PC

that costs less than £700.

The overall build quality is excellent. The PC stayed cool enough under pressure to keep fan noise to a minimum. We also liked the generous number of ports on the front: a 3.5mm jack, four USB 2.0 ports, a full-size SD card slot and a USB-C port. This is backed up by four USB 3.0 ports and an Ethernet port on the rear. It also comes with a wireless keyboard and mouse, so the only other thing you need is a monitor.

The case is smaller than regular tower PCs, which is good if you're short on space. The downside, however, is that when you remove the lid and have a look inside (pictured below left), there doesn't appear to be much room for future upgrades. However, if you remove two further screws you reach a 3.5in drive bay and get easy access to the single spare DIMM socket. It's odd that HP fits only one spare socket because having two would take advantage of Intel's support for dual-channel memory, which can improve the performance of a PC.

If we were thinking of upgrading this PC in the near future, adding memory would be at the top of our list.

SPECIFICATIONS
Hexa-core Intel i5-10400F processor • 16GB memory • 512GB SSD • 1x USB-C port • 4x USB-3 ports • 4x USB-2 ports • DisplayPort/DVI-D/HDMI ports • 3.5mm headphone jack • SD card slot • Gigabit Ethernet • 802.11ac Wi-Fi • Windows 10 Home • 337x155x303mm (HxWxD) • One-year warranty www.snipca.com/37514

VERDICT A classy, versatile PC that won't take up much space and comes with wireless peripherals

★★★★★

ALTERNATIVE
HP Omen 25L
£999 This PC is more expensive, but performs even better in everyday Windows tasks and games

Reviews
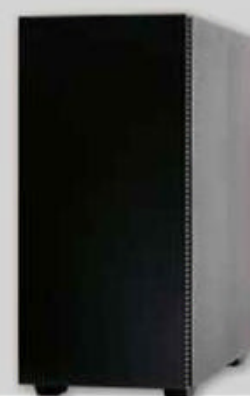
Amazon Show 10

A moving experience

The latest addition to Amazon's range of smart speakers has a 10in, 1200x800-pixel screen built on a motorised base, which can automatically rotate the screen by 350 degrees. It uses clever computer-vision technology to follow you around the room, so you can be on a video call while making dinner in your kitchen, without disappearing off the edge of the screen as you move around.

Video communications are clearly the focus of this device. Amazon has already added group calling to its other Echo devices, along with support for Skype. Zoom compatibility has been promised in the US but hasn't been confirmed for the UK yet.

> **"Amazon's improved smart speaker and screen will follow your every move"**

Aside from this, the Echo Show 10 works similarly to Amazon's other screen-based smart speakers. It's able to answer queries, and play music, radio and podcasts through its speaker, and can help you control smart-home devices such as light bulbs and plugs. It can also play video, display your photos and show you your video doorbell and security camera feeds, among other things.

The screen is attached to its motorised, pivoting base via a slim, curved bracket. This lets you angle the screen anywhere between vertical and 45-degrees, as well as giving it a more elegant overall look. The display adapts its colour temperature to the ambient light, which gives it a more natural tone than previous models. The speaker unit is shaped like a small barrel, wrapped in textured fabric (available in white or charcoal grey) and other than the power cable, it's pleasingly minimalist.

The physical controls are all mounted on the top edge of the screen. Here, you'll find volume and mute buttons, along with a privacy slider for the camera. Slide the latter into place and the 13-megapixel camera is physically blocked and electrically disabled. Most of the time, however, you'll be tapping and swiping the touchscreen or using your voice to take control of other devices.

Amazon has done a lot of work on the visuals, squeezing multiple panels of information on to screens (pictured below left), making better use of the available space than before. These are welcome developments, but there are still problems: Amazon doesn't provide the option to display the time permanently and, when you're listening to some radio stations, including BBC ones, you're given nothing to look at on-screen except an oversized logo.

However, it's the motion technology that's the star of the Show. The screen turns to face you whenever you say the wake word ("Alexa" by default, but it can be changed) and it's scarily good at locking on to your location in the room and tracking your movement.

The motion element proved handy in video calls during our testing. Not only can the camera turn and track you around the room physically, its object-tracking technology is also able to recognise how far you are from the camera. It then digitally reframes and zooms the view to keep you centred.

It's also worth noting that the camera quality is excellent; certainly better than most laptop and standalone webcams. It's crisp, with balanced colours, and copes well in low light without getting too grainy or mushy.

It sounds great, too, with better audio quality than any other screen-based smart speaker we've reviewed.

SPECIFICATIONS
10.1in touchscreen • Wi-Fi 5 • 2x stereo 1in tweeters • 1x 3in woofer • Mains adapter • Alexa voice assistant • Built-in Zigbee smart home hub • 230x251x172mm (HxWxD) • 2.56kg • One-year warranty
www.snipca.com/37545

VERDICT A great screen attached to a brilliant-sounding speaker makes this Amazon's most advanced smart speaker to date, but it's also expensive

★★★★★

ALTERNATIVE Google Nest Hub Max £219 Google's version of the 10in smart speaker is £20 cheaper and uses Google Assistant instead of Alexa, but sound quality isn't as good

Xiaomi Mi 11

The magic Snapdragon

Xiaomi's Mi 11 is the first phone we've seen with Qualcomm's new Snapdragon 888 processor installed, which uses the same miniaturisation techniques that we'd previously seen only in Apple's A14 Bionic and Samsung's Exynos 2100 mobile processors. This makes everything on the chip smaller, so you can fit more on the same sized piece of silicon or make existing components smaller.

In our Geekbench 5 tests, designed to push a processor to its limits, the Snapdragon 888 doesn't quite match the performance of the iPhone 12's A14, but it's five per cent faster than the Samsung Galaxy S21, which uses the Exynos 2100. Considering both are more expensive, it's an impressive achievement for Xiaomi.

To further keep its rivals on their toes, there's improved graphics performance, too. In the GFXBench Manhattan 3 benchmark test the Mi 11 matched the performance of the iPhone 12 and was 36 per cent faster than the Galaxy S21.

The power demands do take its toll on the battery. It lasted 16 hours 38 minutes in our video-playback test, which matches the iPhone 12 but trails the Galaxy S21 by two hours. You'll definitely need to charge it at the end of a busy day.

The AMOLED screen performs exceptionally, with good brightness and brilliant colours. The screen curves around the left and right edges and stretches out to all four corners, with a 20-megapixel selfie camera embedded in a hole in the top-left corner.

This gives it a premium look, with the rear coated in frosted glass, which not only looks great but also doesn't collect fingerprints. Here you'll also find the Mi 11's other cameras. It shares the same 108-megapixel camera as the £1,329 Samsung Galaxy S21 Ultra, backed up by a secondary 13-megapixel ultrawide camera and a 5-megapixel macro lens.

Despite the huge amount of pixels on offer, the default shooting mode takes just 16-megapixel images, though each pixel is selected from a higher resolution original using a process called 'pixel-binning', which chooses the best colour for every pixel in the image by analysing those around it. This helps reduce common phone-camera problems such as grainy images in low light. This is easy to get wrong, but the test photos we took were exceptional, in all lighting conditions.

It's great to see Android 11 installed from the get-go, but be aware there's no microSD card slot, so you're stuck with your initial choice of either 128GB or 256GB of storage. At the time of writing, the UK version of the Mi 11 hadn't been finalised but we believe it's coming soon and will cost around £660. When it arrives, it's going to be well worth considering.

VERDICT As long as the price doesn't go up when it finally hits the UK, this Android phone is set to knock its more expensive rivals off their perches

★★★★★

ALTERNATIVE iPhone 12 **£999** This is the only phone around that's faster, but it's significantly more expensive

SPECIFICATIONS
Octa-core Qualcomm Snapdragon 888 • 8GB memory • 6.81in 120Hz 1440x3200 resolution AMOLED screen • 128GB or 256GB storage • 108-megapixel rear camera • 20-megapixel front camera • Wi-Fi 6 • Bluetooth 5.0 • Android 11 • 8.1x75x164mm (HxWxD) • 196g • One-year warranty www.mi.com

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CHOOSE THE RIGHT SPECS

Bluetooth

What does it do?
Bluetooth is the popular standard for wirelessly connecting devices to one another. It was invented as a way to connect mobile phones to computers without needing a cable, but has found its way into a vast range of devices from headphones to smart watches. The unusual name comes from King Harald Bluetooth, a Viking King who famously united a number of Norwegian and Danish kingdoms into a single nation.

How does it work?
Data is carried over short-range radio waves. It's similar to Wi-Fi, except it uses different frequencies. The range and bandwidth aren't as great as Wi-Fi, so it's not as fast and has a weaker signal. However, its huge benefit is that it requires less power. Bluetooth devices are usually powered by a battery, not plugged into the mains.

What are the specs?
There have been five main versions of Bluetooth so far but we can skip past the first three. Bluetooth 4.0 revolutionised the system for most purposes, providing a lower-powered connection that has enough bandwidth to stream music reasonably well, without being a big drain on the battery. Bluetooth 5.0 took this a step further, doubling the maximum bandwidth available and more than doubling the range to a theoretical 120m (without obstructions). Since then it's gone through subtle but key changes. Bluetooth 5.1 lets you permanently connect a device to two others, so you don't have to keep pairing them if you switch from one to another. Bluetooth 5.2 takes this a step further, letting a device communicate with multiple other units at the same time. This means that two users can listen to music streamed from a single smartphone through their own headphones.

Can I change it later?
Not without buying a new device.

Reviews

Anker Soundcore Life Q30

Wraparound sound

This pair of active noise-cancelling (ANC) headphones are among the cheapest around. What's more, they're surprisingly impressive, providing three levels of effective noise cancellation, highly customisable audio and a decent selection of accessories.

Included with the headphones are a carrying case, a USB-to-USB-C charging cable and a 3.5mm audio cable that can be plugged into the right earcup for wired listening.

The headphones are mostly plastic, which gives them a budget look and feel, but once you put them on they sit very comfortably. At 265g they're lightweight and the oval earcups fit perfectly over our ears. Anker could have been more generous with the amount of padding – they feel rather airy – but this doesn't impinge on the seal or snugness.

You control the headphones using buttons located on the outer sections of both earcups (pictured below left). On the left cup you'll find the power button along with the 'NC' button, which cycles through the three sound modes on offer: normal, transparency (which boosts external sounds so you can hear it mixed in with whatever you're listening to) and noise-cancelling.

The right earcup has three buttons that – depending on what you're doing at the time – control playing and pausing audio, accepting/ending/rejecting phone calls, volume adjustment, track skipping and activating voice assistant. As with most headphones' controls they take a little getting used to, but reaching the various buttons isn't a problem.

The headphones are charged via USB-C and have a battery life of up to 60 hours when ANC is turned off and 40 hours when it's on. We spent a fortnight using them as our primary headphones and, impressively, they still had power left in them by the end of testing.

For a pair of budget headphones, they handle noise-cancellation extremely well.

They're as good as or better than more expensive alternatives we've seen recently, though can't match headphones that cost about £100 more. We found that the overall sound emphasised bass a little too much, but you can turn this down using the equaliser app.

SPECIFICATIONS

Over-ear headphones • 40mm speakers • Active noise-cancellation • External audio passthrough • Bluetooth 5 • 3.5mm audio input • Microphone • USB-C charging • Eighteen-month warranty www.snipca.com/37593

VERDICT These noise-cancelling headphones can't match the most expensive alternatives, but they're a great choice for anyone who wants to spend less without compromising too much sound quality

★★★★★

ALTERNATIVE Bose NC700 £279
Set your budget higher and you can opt for a pair of the best noise-cancelling headphones around

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WHAT SHOULD I BUY? We solve your buying dilemmas

What's the best PC for Flight Simulator 2020?

Q I've been a fan of Microsoft Flight Simulator for decades. I currently use Flight Sim X on my old HP desktop PC. I suspect it's not powerful enough to play Flight Simulator 2020 (www.snipca.com/37610, pictured) so I'm tempted to buy a new computer. What would you recommend?
Trevor Gibbs

A Games usually list two specifications, 'minimum' and 'recommended', but Flight Simulator also has an 'ideal' spec. You can view all these at www.snipca.com/37597.

The game should run on a PC with the minimum spec but to get the most from the program's graphics, don't go below the recommended spec. We struggled to find an off-the-shelf PC with the recommended components, because Intel i5 and Ryzen 5 processors are rarely paired with 16GB of RAM.

We recommend going to a PC builder that's happy to configure a PC to your specification, such as PC Specialist (pcspecialist.co.uk) or Chillblast (chillblast.com). You can configure a PC on their website but, if you're not sure, give them a call and talk them through your specific requirements.

Do you need advice on what you should buy? Email us at letters@computeractive.co.uk

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WORTH UP TO £1,072

Don't sleep on your chance to win this fantastic bundle of Emma products.

It's not only this fabulous mattress that you have a chance of winning. Expert Reviews is also giving away two Emma pillows and an Emma mattress protector. With a total value of up to £1,072, it's the perfect bundle for anyone looking to spruce up their bedroom this spring.

Impressive combination of support and comfort | Three layers of foam | Strikingly versatile | Accommodates a range of sleeping positions | Ensures you get the best night's sleep

To take part, all you need to do is head over to the Expert Reviews website and correctly answer one simple question.

Hurry, the competition closes on Thursday 15th April.

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To scan straight through to the competition, open the relevant app on your smartphone and hover over the QR code

Reviews

Samsung Galaxy Fit2

Stepping up

The Galaxy Fit2 is a good-value fitness-tracking watch. It's the successor to the Galaxy Fit E (see our review, Issue 574) but has a larger screen, improved battery life and – best of all – costs around half the price. It has a decent-sized 1.1in colour AMOLED touchscreen and a battery that promises up to 21 days of light use (or 15 days of typical use) between charges, which seemed to match with our experience during testing.

Like most fitness trackers it counts your steps and measures your heart rate. It's also waterproof to 50m, so you can wear it when swimming and let it count your strokes. There's no GPS, so you'll need to have a Bluetooth smartphone within range if you want to track speed or pace when moving around. There's no altimeter either, so you won't know how many flights of stairs you walk up. However, it will keep tabs on your sleep and stress levels.

It also has the usual smartwatch features, with notifications, simple messaging and music control available from your wrist. It can check the weather and run a stopwatch.

It syncs with the Samsung Health app on your phone (which is also available for non-Samsung Android phones and iOS), which does a great job of showing your fitness stats.

We found the accuracy of the device's heart-rate monitor to be variable when measured against more expensive trackers, but it does a pretty good job for the price. However, this is best for those wanting to track casual exercise, rather than serious fitness entusiasts.

SPECIFICATIONS
1.1in 126x294-pixel colour touchscreen • Bluetooth 5.1 • 46.6x11.1x18.6mm (HxDxW) • 21g • One-year warranty www.snipca.com/37575

VERDICT An affordable fitness tracker that keeps tabs on regular exercise, but enthusiasts should spend more to get the features and accuracy they'll need

★★★★☆

ALTERNATIVE Fitbit Inspire 2 **£70** This is more expensive but offers a slicker experience both on the wrist and in the mobile app

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Logitech Ergo K860 Wireless Split Keyboard

Could be just your type

If you've ever suffered from a repetitive strain injury, you'll know it can be a debilitating and painful experience. There are, however, ways to alleviate the problem and, as long as you're a reasonably proficient typist, you might benefit from using a more ergonomic keyboard such as this one.

The Ergo K860 splits the traditionally flat keyboard in two, angling each half of the keyboard toward your elbows. It introduces a hump in the middle, so your hands tilt slightly to the side as you type. You don't have to be able to touch-type to benefit from this but it won't help if you're the kind of typist who has to hunt around a keyboard for keys with one or two fingers.

The keyboard also has a broad, luxurious, padded wrist-rest, which raises your palms up above the level of the keyboard. There are flip-out legs underneath so you can tilt the keyboard up at the front to find your ideal typing angle.

It can connect to up to three devices and switches between them with a button press, which is great if you have a few devices and not much space. It's powered by a pair of AAA batteries (included) and the keyboard connects wirelessly using Bluetooth 5 or the supplied USB dongle.

Although it lacks the travel and the satisfying 'clack' of a mechanical keyboard, the Ergo K860 feels more comfortable to type on than a standard flat model, while its wrist-rest provides satisfying support.

SPECIFICATIONS
Bluetooth 5.0 • Includes 2.4GHz USB receiver • Requires 2x AAA batteries • 10m wireless range • Wireless encryption • 48x456x233mm (HxWxD) • 1.16kg • Two-year warranty www.snipca.com/37571

VERDICT The K860 is expensive but worth it if you're a reasonably proficient typist who wants to feel more comfortable while working at your PC

★★★★☆

ALTERNATIVE Microsoft Ergonomic Keyboard **£60** Microsoft's take on the split keyboard has larger keys and a wire that connects directly to a USB port

Calico Pie Family Historian 7

Track and trace

If you've ever researched your family tree, you'll know it's much harder than the BBC's celebrity genealogy programme *Who Do You Think You Are?* makes it appear. You'll certainly need to sign up for some online services to seek out the information you need, but the big question is: where and how are you going to store it all?

Family Historian 7 is a good candidate. It's a comprehensive family tree program for Windows that lets you collate all your findings and keep them in one place. If you've already got information stored elsewhere you can import it from a GEDCOM file, the universal genealogy file format.

The software's home screen takes you to the 'root person' – the first person you added – and summarises their data. From here you can add additional personal information and start to expand your family tree. The software can, initially, seem intimidating, because the taskbar is packed with buttons and has a slightly dated, unrefined appearance. It's worth persisting, though, because there are a dizzying choice of tools that let you examine your family tree from several different genealogical perspectives.

The software has powerful features that let you simplify your research, with information available from a wide range of sources. There are so-called 'data entry assistants' that make it easier to enter and update your research findings, along with the support of built-in word processing and specialist templates. If you find there's still something you need, a decent library of plug-ins is also available.

You can also import and attach media files to the records. While photos are the obvious choice for more recent family members, you may choose to add painted portraits or even photos of gravestones for older generations. Behind the scenes you build up a comprehensive database of the relationships and history of each member of the family tree, and log where the information came from.

Once you're happy with the results, you can publish your tree in several formats, including an individual summary report, a family group sheet, booklets or even on CDs and DVDs. We especially like the Map feature, which builds a map marking where in the world each member of the family came from.

If you currently use a previous version of Family Historian, there are plenty of reasons to upgrade (including a discount for users of versions 5 or 6). One of the key additions is the built-in word processor, which gives you more formatting control over all the text you enter. There are also new floating tools you can add notes to, and a range of new templates to help you enter your family's history. Find a full list of what's new at www.snipca.com/37630.

SYSTEM REQUIREMENTS

Windows 7, 8.1 or 10 (32bit and 64bit versions) • Not available on macOS • 100MB of storage space
www.snipca.com/37443

VERDICT Reasonably priced for the breadth of features it offers, this is recommended for anyone who's recently started researching their family tree

★★★★★

ALTERNATIVE Family Tree Builder **Free** MyHeritage links family tree software with an online service, but needs a paid subscription to get the most from it

DO I REALLY NEED...

A rollable phone screen?

What is it?

You've heard of folding phones, which open out into a bigger screen, but the Oppo X 2021 (pictured) is a *rollable* phone. It can be used in its 6.7in regular phone size, or stretched out one side into a squarer 7.4in tablet (watch it at www.snipca.com/37631).

What does it do?

The Oppo X 2021's extra screen space is hidden inside the phone case when not in use. However, if you swipe the power button, it automatically unrolls to its larger size. Swipe again to contract it.

What's the catch?

At the moment, Oppo has no plans to launch the screen and has only demonstrated a prototype. There are also a number of questions hanging over the robustness of the design, particularly with regards to dust and water resistance.

So can I do without it?

If you carry a phone and a small tablet around with you, then this could cover both bases. However, foldable screens look more durable.

NEXT ISSUE

On Sale Weds 7 April

Wi-Fi 6 routers Take your Wi-Fi to the next level as we group test the best latest models

Samsung Galaxy Book S Intel A laptop so small and light you'll hardly notice you're carrying it

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Our pick of products that have won the Buy It award

LAPTOP

Lenovo Yoga Slim 7
£849 from www.snipca.com/37348
Tested Issue 601

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

ALTERNATIVE Dell XPS 13 New Intel CPUs and a taller screen make this a more powerful, all-round slim laptop. Prices start at £1,199 from www.snipca.com/36642

DESKTOP PC

Palicomp Intel Mercury
£600 from 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. £1,849 from www.snipca.com/35840

APPLE iPAD

Apple iPad 10.2in
£329 from 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

ANDROID TABLET

PRICE DROP

Samsung Galaxy Tab S6 Lite
£299 from 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

APPLE iPHONE

Apple iPhone 12
£799 from 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

ANDROID PHONE

Realme X50 5G
£269 from 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

30 24 March – 6 April 2021 • Issue 602

AS SEEN ON TV

Why have a stairlift when you can have a *real* lift?

A Stiltz Homelift will help you continue living in the home you love.

STAIRLIFT? NO THANKS!

A Stiltz Homelift is an ideal and affordable alternative to a stairlift. You can now safely travel between the floors in your home while keeping your stairs the way they have always been.

NEAT & DISCREET

A Stiltz Homelift can be installed into almost any room in your home. A Stiltz is uniquely compact with the smallest model taking up just over half a square metre – now that IS discreet. The homelift plugs directly into a standard domestic socket and uses less power than boiling a kettle. The homelifts run on self-supporting rails so there is no need to drill into walls and the motor is fully self-contained within the lift car. Neat.

YOUR FOREVER HOME

While some Stiltz customers have an immediate need for a homelift, others are looking to future-proof their existing home for when the stairs do eventually become a challenge.

Don't go through the unnecessary expense and emotional upheaval of moving house or the disruption of adapting your home for downstairs living. Save money instead; live comfortably and independently in the home you love for as long as you want, with a Stiltz Homelift.

"We've had our lift for 2 years and were so impressed with how it was fitted from our hallway to our landing in what at first appeared to be an impossible space. And in such a short time."

Mr. Eames

PEACE OF MIND

Stiltz are proud to hold the highly-regarded Which? Trusted Trader status meaning they are a reputable, established and trustworthy company. Stiltz customers love them too, rating them 'Great' on Trustpilot. They use their own teams of expert installers, so you can choose a Stiltz Homelift with complete peace of mind, knowing you and your home are in a safe pair of hands.

"Excellent product installed by polite and very competent tradesmen. Fits perfectly into my home. Made a huge difference to my ability to live independently".

Mark via Trustpilot

Elegant, practical and discreet. A Stiltz Homelift will transform your home and your life.

FREE, NO OBLIGATION SURVEY

A Stiltz Homelifts Consultant can visit your property to help you plan the best location for your homelift.

They can also answer any questions you might have, as can any of the friendly, UK-based phone team.

So, why not give your lifestyle a lift with Stiltz. Call FREE today.

Which? Trusted trader

★ Trustpilot
★★★★
Rated 'Excellent'

The UK's No.1 Homelift

- **Urgent install service**
- **Ready to take your call now**
- **Cost-effective**
- **Small footprint**
- **Freestanding design - no wall needed**
- **Wheelchair model available**
- **Manufactured, installed and fully guaranteed by Stiltz**
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Buy It

Our pick of products that have won the Buy It award

EBOOK READER

Amazon Kindle (2019)
**£70** from 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

SECURITY SOFTWARE

Kaspersky Internet Security 2021
£14.99 from www.snipca.com/21532
Tested Issue 564
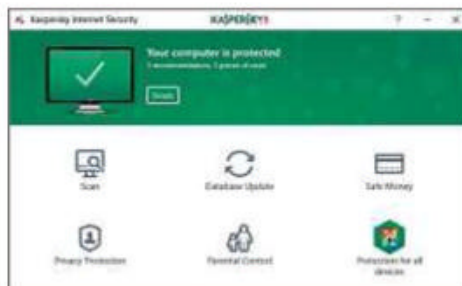
Kaspersky Internet Security has won our past nine antivirus tests and the 2020 version is now available at an exclusive reader discount on our Software Store. Go to the link above for a one-year, one-device licence or buy a two-year, two-device licence for just £26.99.

ALTERNATIVE Norton 360 Deluxe
Almost as good as Kaspersky, but blocks more legitimate software. £15 from www.snipca.com/32069

PHOTO EDITING

Serif Affinity Photo
£24 from 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. £50 from www.snipca.com/26514

PC MONITOR

BenQ GL2780
£156 from 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 241B7QPJEB With a great picture, stylish design and speakers, this 24in Full HD IPS is an excellent smaller screen. £196 from www.snipca.com/37096

ROUTER

PRICE DROP

D-Link DIR-1960
£76 from 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. £202 from www.snipca.com/30710

PRINTER

Epson Expression Premium XP-6105
£159 from www.snipca.com/37271
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

COMPETITION

Win 1 of 2
Grado GT220 headphones

Winner of a 'Recommended' award in Issue 600, Grado's GT220 True Wireless In-Ear Headphones come with a full range of dynamic drivers, Bluetooth 5.0 wireless connectivity and silicon eartips for the ultimate comfort.

Sound quality is second to none, bringing out details of performances that rivals often miss. We tested them with a range of musical styles, from acapella sea shanties to punchy, bassy dance music, all of which it reproduced with exceptional clarity.

The sound quality benefits enormously from the passive noise cancellation provided by the GT220's twist-to-lock fit. Once you've wedged the tips into your ears and twisted them into position, they form a highly effective seal against external sound.

They also have touch controls, while both Siri and Google Assistant are supported. They last for six hours per charge, though the wireless-charging case provides a further five charges, taking the total to an impressive 36 hours. There's also a USB-C cable for charging.

To enter this competition, email your home address to **cacomp@dennis.co.uk** with 'Grado' in the subject line by midnight Tuesday 6 April. Good luck!

You can buy **Grado's GT220 headphones** from Amazon priced £249 (www.snipca.com/37290). For more information on Grado's other headphones, visit www.grado.co.uk and follow @Grado on Twitter.

MESH ROUTER

BT Whole Home Wi-Fi
£200 from 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

SOLID-STATE DRIVE

Samsung 970 Evo Plus 500GB
£80 from 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. £59 from www.snipca.com/37304

SMART SPEAKER

Google Nest Audio
£90 from www.snipca.com/36475
Tested Issue 593

Produces a rich, clear sound, and better understands your questions than Amazon's Echo devices. You can use Google's app to control audio from other units around your home (pair two of them for £160). The clever Ambient IQ tool increases the volume if it detects external noise, such as a hairdryer.

ALTERNATIVE Amazon Echo (4th generation) The latest version of the Echo changes the shape from a cylinder to a ball, which improves sound quality – though the Nest's is still superior. £90 from www.snipca.com/36602

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HOW TO...

by Nik Rawlinson

Use your computer on your TV

What you need: TV set; desktop PC or laptop; various accessories **Time required:** 30 minutes

The biggest screen in your home almost certainly isn't on your PC or laptop. It's sitting in your lounge – or possibly the kitchen or bedroom – and you use it to watch films and TV.

Compared with a good desktop monitor, TVs are relatively cheap. That's because while the surface area is larger, they have a lower resolution, as you'll spot when you get up close to switch one off. While it's impossible to see individual pixels on a modern laptop screen or desktop PC monitor, the pixels on even a high-resolution TV are much more visible.

TV manufacturers can get away with comparatively lower resolutions for the same reason that companies who create billboard posters can: as our distance from the object we're viewing increases, our ability to separate its components – the printed dots or displayed pixels – reduces.

In case you were wondering, 300 dots per inch, both vertically and horizontally, is generally considered an appropriate print resolution for anything that's going to be read at arm's length, like a letter printed at home. However, multi-sheet billboard posters are generally three metres tall and six metres wide and composed of 48 individuals print outs, but an acceptable resolution can easily be as low as 30 dots per inch in each direction.

You can use this quirk of vision to your advantage by using your TV – whether an old set or the smart one you still use – as a screen for your computer. As long as you don't sit too close, it should be almost as good as using a regular screen.

1 Choose your keyboard and mouse

Naturally, if you're going to be sitting a long way from your screen, you'll probably also be some distance from your computer, so you'll need to consider how you're going to control it. If you currently use a wired keyboard and mouse, it's possible to buy cheap USB extension leads. Just make sure you buy one that's long enough to stretch across your lounge. These 5m Rhino cables cost just £4.69 on Amazon (www.snipca.com/37555, pictured below left). Don't forget that, unless you can connect your mouse to your keyboard, you'll need an extension for that, too.

If you're using Bluetooth devices, or a wireless keyboard and mouse with a USB receiver plugged in, you can probably continue doing so. Even relatively old Bluetooth 2.1 devices, which have been around for more than 15 years, should have a range of up to 100m. The range is less easy to predict on wireless devices that use a receiver, but unless you have a particularly large lounge most should work well. If they stall or keep dropping out, make sure the receiver isn't suffering radio interference by being buried among the cables at the back of your TV set.

If you have the choice between using a wireless receiver and Bluetooth,

These 5m extension cables should be long enough to stretch from your TV to your keyboard and mouse

You can use Logitech's K380 keyboard with up to three devices

we'd recommend the latter so you can take advantage of its greater flexibility, such as the option to use them with a smartphone or tablet. Some keyboards, like the Logitech K380 (£40 from www.snipca.com/37554, pictured above), can be set up to work with three devices – your computer, phone and tablet, for example – that you can switch between using a keyboard shortcut.

It's also worth considering whether a

mouse or trackpad would better suit your needs. Mice are great on a desk, but a trackpad might be more practical if you're going to be sitting in an armchair – and a combination keyboard and trackpad can likewise be a good way to cut down on clutter. Amazon sells a wireless keyboard and trackpad combination that connects via a USB dongle for £27.99 (www.snipca.com/37556).

2 Connect your computer to your TV

The type of computer you use will determine the steps you need to take to connect it to your TV. If you have a laptop or a small, portable desktop PC, you're in the best position as it should be relatively easy to position this beside your TV and connect it directly. Larger PCs will be more difficult, naturally, although the process shouldn't otherwise be any different.

Start by checking the back of your TV. Most modern smart TVs will have one or more HDMI connectors (HDMI first appeared 18 years ago). If you have a free HDMI connector, and a matching port on your computer, you connect the two directly. Your computer will now treat the TV as an external screen when it's tuned to that HDMI port's input.

If you need to buy an HDMI cable, consider both its length and the maximum resolution it will support. Even if you don't have a 4K television, it's worth buying a 4K cable because you'll probably benefit from it in future (cables are

backwards compatible, so they work with non-4K TVs). Amazon sells these for less than £10 (www.snipca.com/37557).

Don't worry if you haven't got a spare HDMI port. Instead buy an HDMI switch to simultaneously connect multiple HDMI sources, like your set-top box, streaming stick and computer. Once connected to your TV, you can switch between them as required. This Mrocioa model (£13 from www.snipca.com/37558, pictured below) comes with a remote control. Bear in mind that you'll need an HDMI cable for each device you're connecting to the inputs, and one further cable to connect the box to your TV.

One added complication is that some smaller computers – and particularly ultra-light laptops – can be so small only because their manufacturers have sacrificed connectivity, sometimes to

the point of leaving you with just a single USB-C port that's used for both transferring data and charging. In this case you'll need a USB-C breakout extension, which we find useful in such instances even when not connecting to a television.

Depending on the extension you choose, these can add multiple full-size USB ports, card readers and, of particular importance for this project, a full-size HDMI port. If buying one, and your laptop is charged by USB-C (as well as being used to transfer data), look for an extension with a PD (Power Delivery) port, which has rounded corners and may be indicated by a plug symbol (as pictured below). It lets you charge or run your device while simultaneously transferring data and sending pictures to your screen. There's a wide choice to choose from, at various prices, but it's easy to find devices with a lot of good user reviews for a little over £20 (see www.snipca.com/37559).

All you need to do now is switch on your computer and TV, tune the latter

This HDMI switch from Mrocioa comes with a remote control

A PD (Power Delivery) port lets you charge or run your device while simultaneously transferring data and driving your display

to the input for the HDMI port to which you've connected your computer, and start work as usual. But, if you have a laptop, you may need to go a few steps further, as we'll now explain.

3 Select your laptop screens

Once you've connected and switched on your TV set, your laptop will probably see it not as the primary display (as a relocated PC would), but a second one – the first being its built-in screen. You need to tell it how you prefer to work.

Press Windows key+I to open Settings, then click System, followed by Display. Scroll down to 'Multiple displays' and click the menu, then select one of the options. If you're going to keep your laptop lid open and you can see it well enough from wherever you're sitting, you can choose 'Extend these displays' to spread your desktop across them both. Otherwise, select 'Duplicate these displays' (see screenshot below) so what's shown on your TV will match exactly what's shown on your laptop screen.

If the two screens aren't the same resolution, scroll up to 'Display resolution' and select the resolution of your television from the menu. If you don't know what this is, use trial and error: if you choose a resolution that it doesn't support and you end up with a blank screen, Windows will return to the previous setting after a few seconds and you can try again.

Having two screens active when you need only one can be distracting, so you'll probably want to close the lid when you're focused on the TV. In most instances, this will make your PC go to sleep, but tapping the keyboard or shaking the mouse will bring it back to life. If it doesn't, change your power settings by right-clicking the battery icon on the taskbar and selecting

Windows gives each connected display a number so you can identify them and choose which should remain active
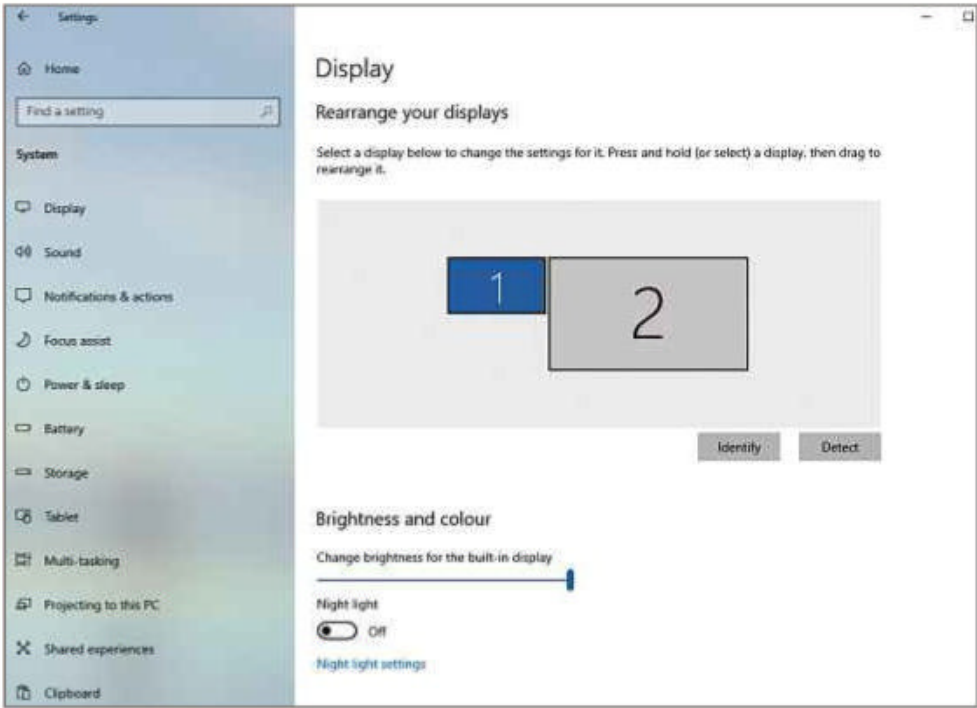
Power Options.

Click 'Choose what closing the lid does' in the sidebar, then use the dropdown menus to the right of 'When I close the lid' in the 'On battery' and 'Plugged in' columns to 'Do nothing'. Your laptop will now stay awake even with the lid closed.

If you need to keep your laptop active like this, it's worth powering down its screen to reduce the heat it generates. Return to the Display section in Settings and choose 'Extend these displays' from the 'Multiple displays' menu. Scroll back up to the top of the page and check the illustration of the two screens connected to your computer, each of which will have a number (see screenshot above). Now scroll back down to 'Multiple displays' and select 'Show only on…' followed by the number of the external screen.

4 Stream from your Chromecast

If you use a Google Chromecast (www.snipca.com/37560) to stream content from your phone, you can do a similar trick with your computer by
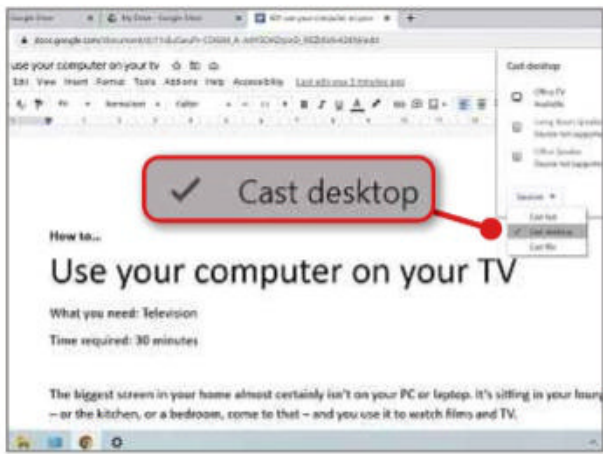
Click 'Cast desktop' in Chrome to show your computer's desktop on your TV screen

streaming software to your TV without using a cable. You'll need to be using the Chrome browser, and both your Chromecast and your computer will need to be connected to the same wireless network. Once you've checked that, click the three dots to the right of the Chrome address bar, followed by Cast. Select the name of the Chromecast plugged into your television from the list of sources that appears.

By default, Chrome casts the contents of whichever tab you happen to be using, so this is a quick and easy way to use web-based software on a larger screen. However, you can do the same with your entire desktop and the programs installed on it. Before selecting the Chromecast to which you want to cast your display, click the down arrow next to 'Cast to' and select 'Cast desktop' (see screenshot above). Now click the name of the Chromecast, as you did above.

To stop casting your computer to your TV, whether you're broadcasting software or your browser contents, return to the Chrome browser and click the Cast icon that appears at the right of the address bar, followed by 'Stop casting'.
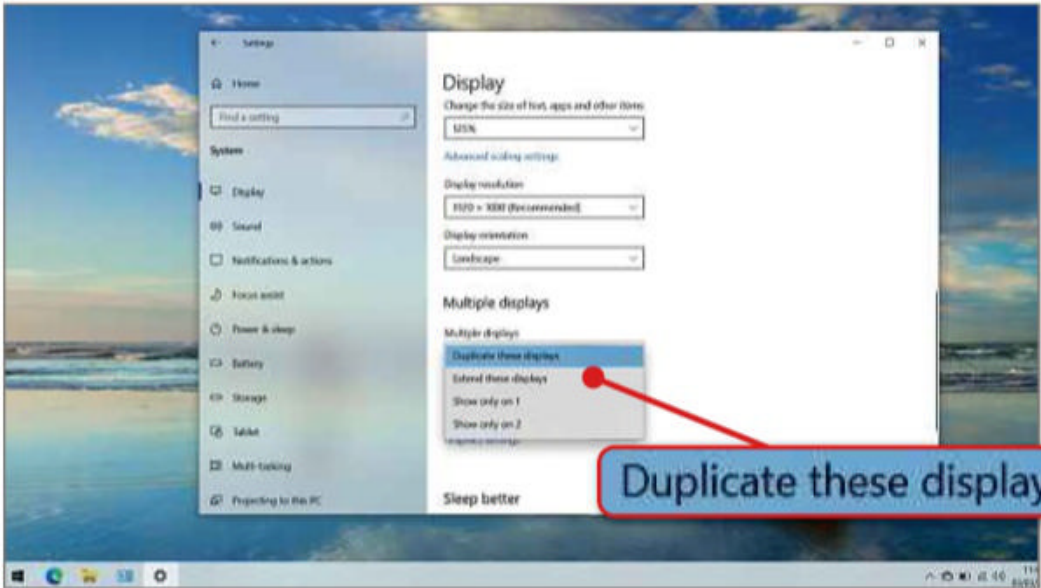
Select 'Duplicate these displays' in Windows to replicate your PC's desktop on your TV screen

Create and share walking maps

What you need: Plotaroute account (free); Windows 7, 8.1 or 10
Time required: 30 minutes

What better way to look forward to a summer free of restrictions (or at least fewer of them), than planning long walks in the countryside with friends. With a free Plotaroute account (ad supported – you can remove these with a Premium subscription at £17 per year), you can create your own detailed walking maps, then share them with others. Plotaroute doesn't offer a mobile app, but the website works flawlessly on phones, and you can download maps for walks that take you away from mobile networks.
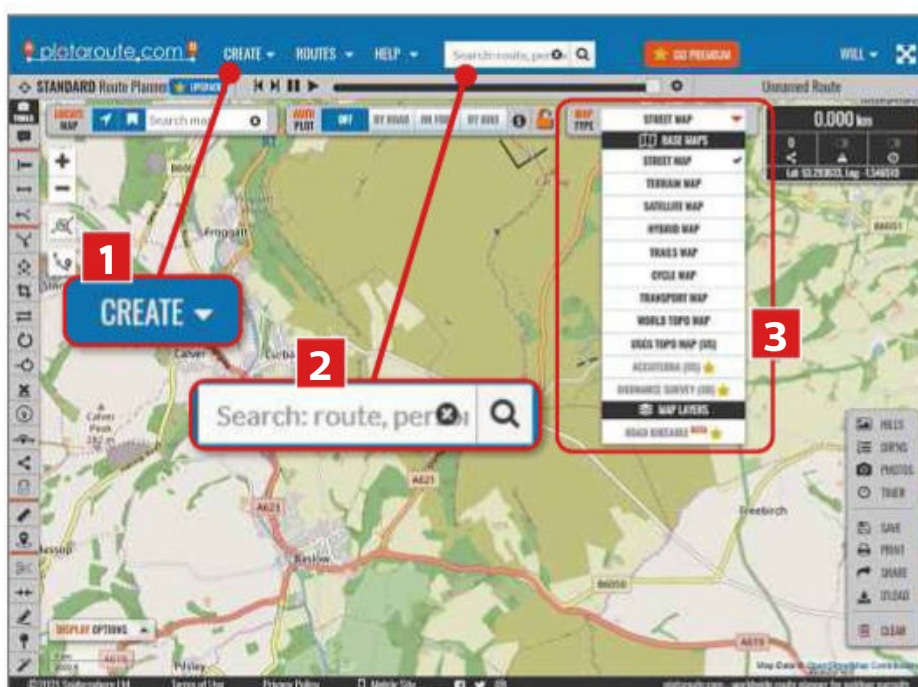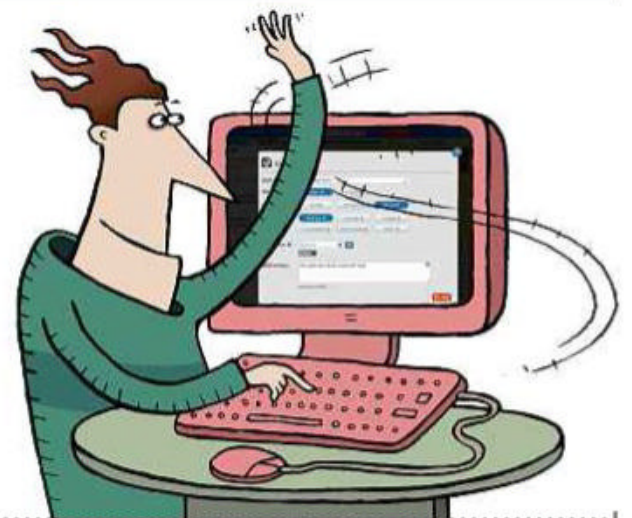
STEP 1

Create a free Plotaroute account at www.snipca.com/37632. Once you've registered, click the Create dropdown menu **1** on the homepage, then select 'Plot a Route'. If you want to open the map at your current location, select 'Show local map' (your browser will ask you to allow Plotaroute to access your location), otherwise select 'Search for a place' then enter your walk's starting point in the search box **2** or click and drag the map using your mouse, scrolling to zoom. Click the Map Type button **3** to choose from a selection of maps (maps with a star, such as Ordnance Survey, require a Premium subscription). We're using Street Map, which works best for walking routes because it shows most footpaths.
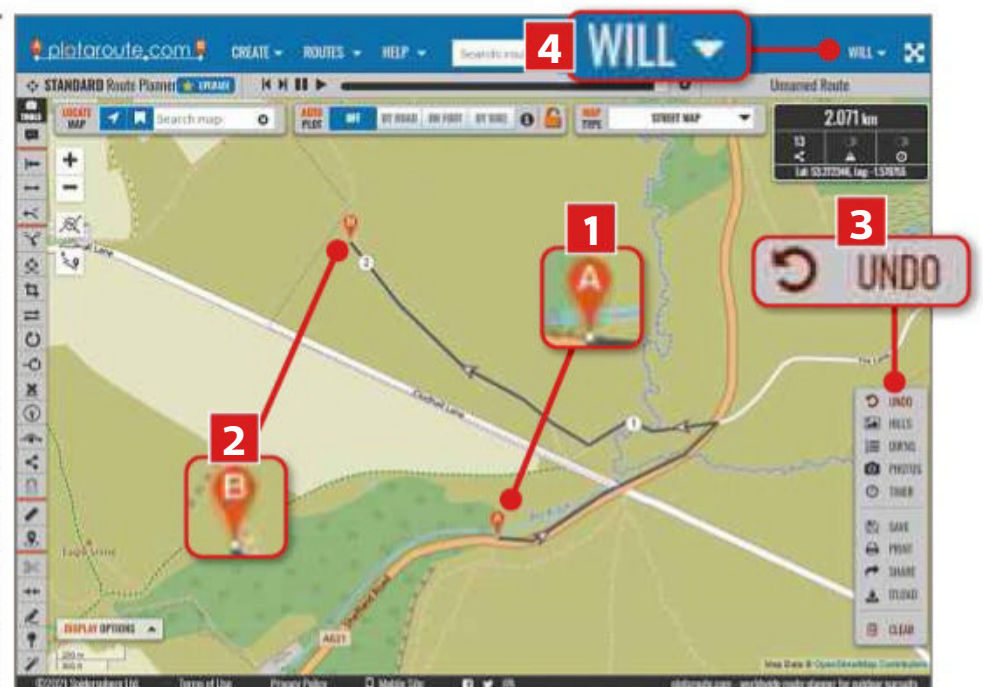
STEP 2

Click the map to set your starting point (marked A **1**), then continue clicking to plot your route – the free version lets you plot up to 2,500 points per route. If you make a mistake, you can click and drag the last point you plotted (marked B **2**). Alternatively, click Undo **3** to roll back through previous points. By default, Plotaroute uses metric measurements – to switch to imperial (as well as change other settings, such as date formats), click your name **4**, My Settings, then change the Units setting to Miles.
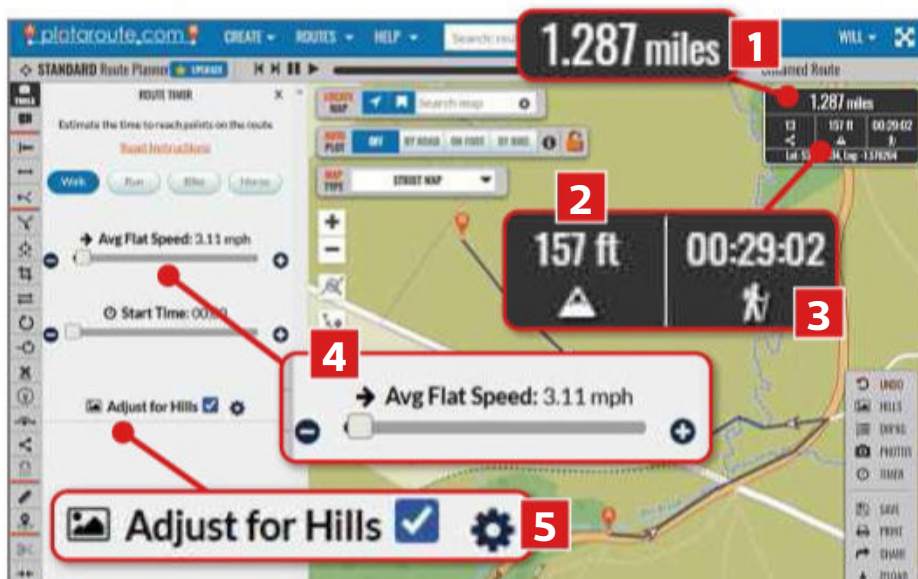
STEP 3

As you plot your route, the distance counter **1** will update accordingly. You can also keep an eye on the altitude **2** and the time it will take to walk **3** (click each icon to enable these). The Avg Flat Speed slider **4** lets you adjust the time taken based on your walking speed. Plotaroute will adjust this depending on the severity of the inclines on your route – if you tend to power up hills, you can disable this feature by unticking 'Adjust for Hills' **5**).
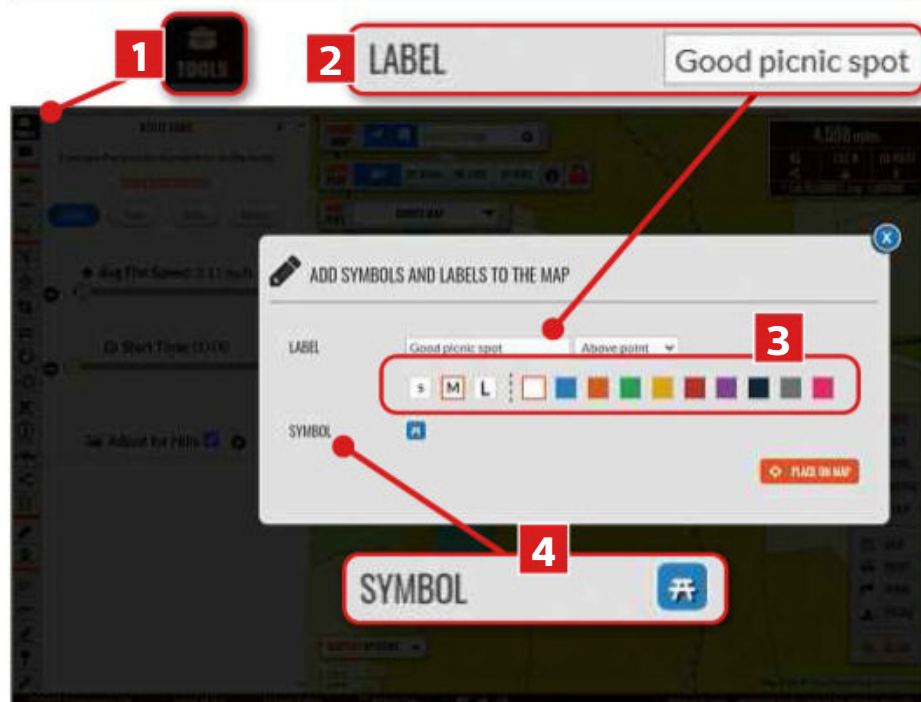
STEP 4

If your route goes through areas of interest or has sections that require more detailed instructions, you can add these by opening the Tools menu **1**, then select Annotate Map. Enter a label for your annotation **2**, choose the text size and colour **3**, then (optionally) click the Symbol button **4** to give it a suitable icon. When you've finished, select Place On Map, then click the appropriate point on your route to add the annotation. You can edit or delete annotations by clicking them.
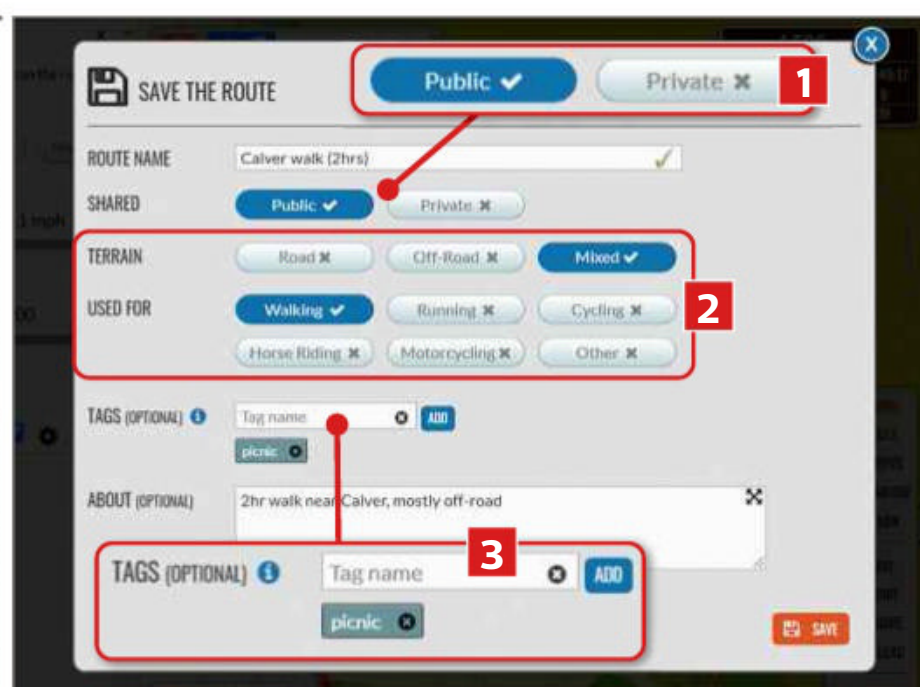
STEP 5

Once you've plotted your map, click Save (bottom right), give it a name, then choose whether it's public or private **1**. Public maps can be viewed by anyone and will appear in search results on Plotaroute; while private maps are only viewable by Plotaroute users that you follow (more on this in a moment). You can create up to five private maps with a free Plotaroute account. Select the type of route in the Terrain and Used For sections **2**, then add any relevant tags **3** (keywords that help your map show up in search results, if it's public) along with a brief description. Click Save when you've finished.
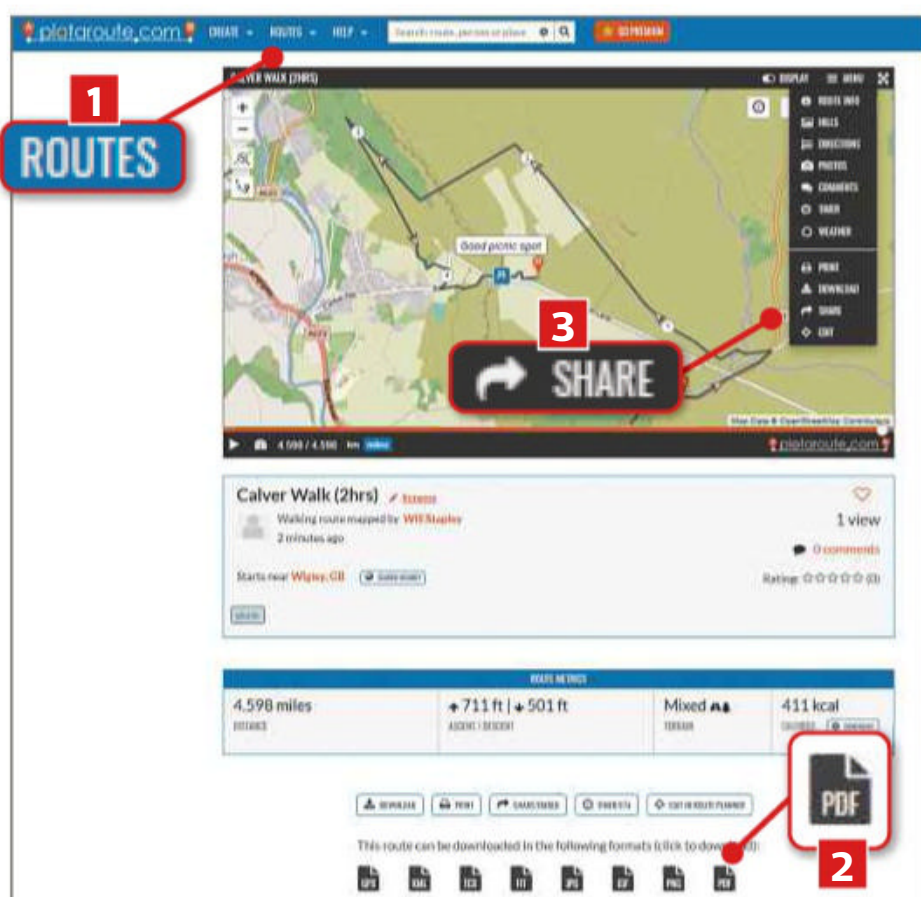
STEP 6

You can access all your saved maps by clicking Routes **1**, My Routes, then selecting a route to open it. For routes in rural areas with limited mobile-network reception, it's best to download the map before you set off. Scroll down and you'll see several download options – PDF **2** is the best as it includes extra information such as annotations (use the options at the top to choose what you want to include, along with other settings such as page orientation). To share your route with others, click the menu button in the map, Share **3**, then copy the link.
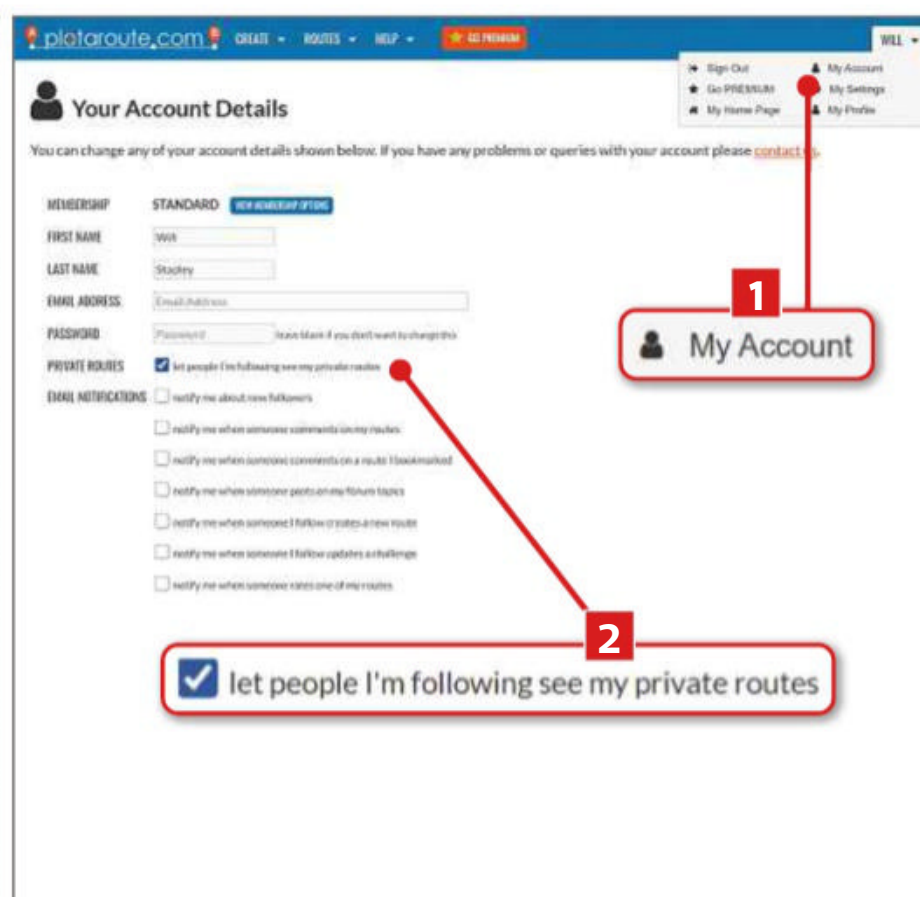
STEP 7

To share private routes, click your name (top right), select My Account **1**, then tick the 'let people I'm following see my private routes' box **2**. Next, search for the person you want to share with (they'll need to have a Plotaroute account) in the search box at the top of the home page, select their name in the results, then click the 'Follow...' button. People you follow will be able to access your routes using the Share link created in Step 6 or by clicking Followers on their Plotaroute home page, selecting your name, then clicking Routes.

Make WhatsApp video calls from your PC

What you need: WhatsApp (desktop and mobile versions); Windows 8.1 or 10
Time required: 15 minutes

Despite the controversy following what was a relatively minor update to its terms and conditions (see Issue 599, page 60), WhatsApp messages and voice/video calls remain end-to-end encrypted. This means nobody (including WhatsApp's owner, Facebook) can read your messages or listen to your conversations. And thanks to a recent update to the desktop version of WhatsApp, you can now make video calls from the comfort of your PC or laptop. The only downside is that you can make calls with only one person. WhatsApp says group video calls will be added soon.

STEP 1
Download the desktop version of WhatsApp from www.whatsapp.com/download (this downloads the 64bit version **1**, but there's also a link for the 32bit system **2**). If you already have WhatsApp installed on your PC, it should automatically update to the latest version. At the time of writing, this was 2.2106.10, which includes the new video-calling feature. To check your current version, open WhatsApp on your PC, click the three horizontal dots to the right of your profile picture, then select Settings, Help and you'll see the installed version number **3**. If you're running an older version and restarting your PC doesn't update it, try uninstalling WhatsApp, then reinstalling it as explained below.
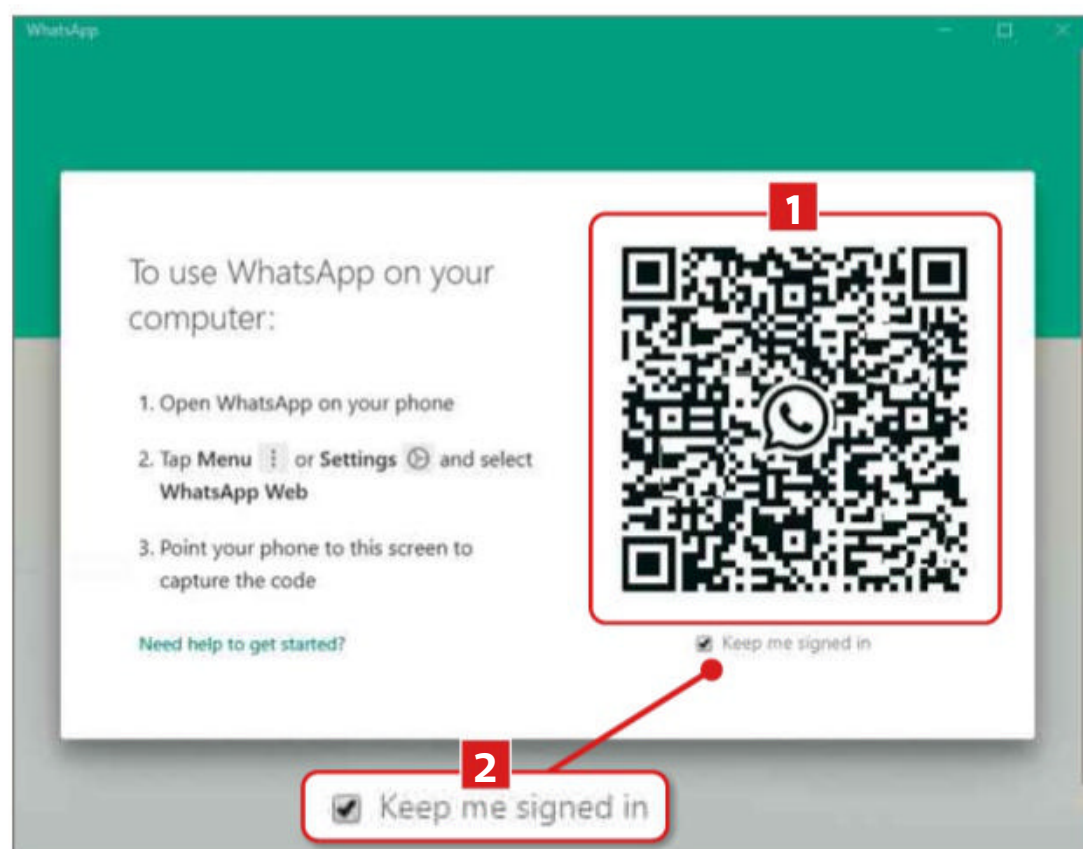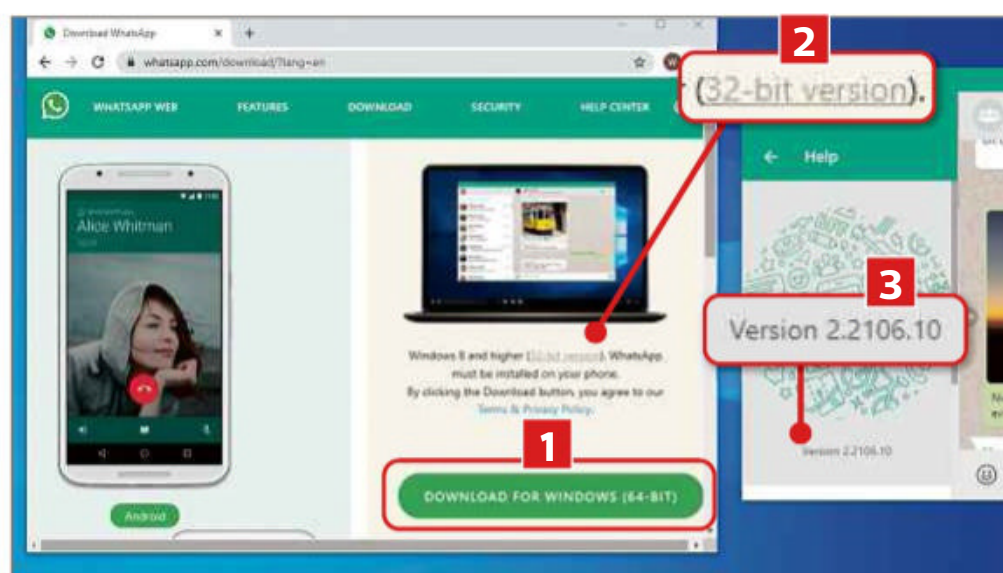
STEP 2
Run the WhatsApp installer that you downloaded in Step 1. After a short delay, you'll see a window with a QR code **1**, which you'll use to link your computer with the WhatsApp account on your phone. Below the code, you can choose whether to remain signed into WhatsApp on your computer **2** once you've linked your accounts. If you untick this option, you'll need to repeat the linking process each time you run WhatsApp on your computer.
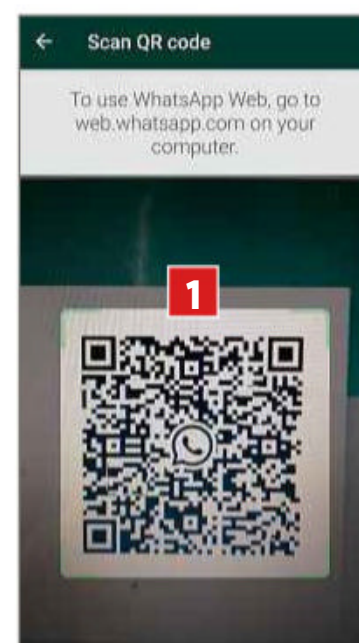
STEP 3
Open WhatsApp on your phone, then tap the three vertical dots top right (Android devices) or the Settings cog icon bottom right (iOS), followed by WhatsApp Web. The 'Scan QR code' window will now open. Point your phone at the QR code shown on your computer screen, holding it around 30cm from it (if the QR code has disappeared, click the vacated space to reload it). After a few seconds, the two should link. If not, try cleaning the lens on your phone's camera and moving the phone so that the entire QR code is visible within the green markers **1**.
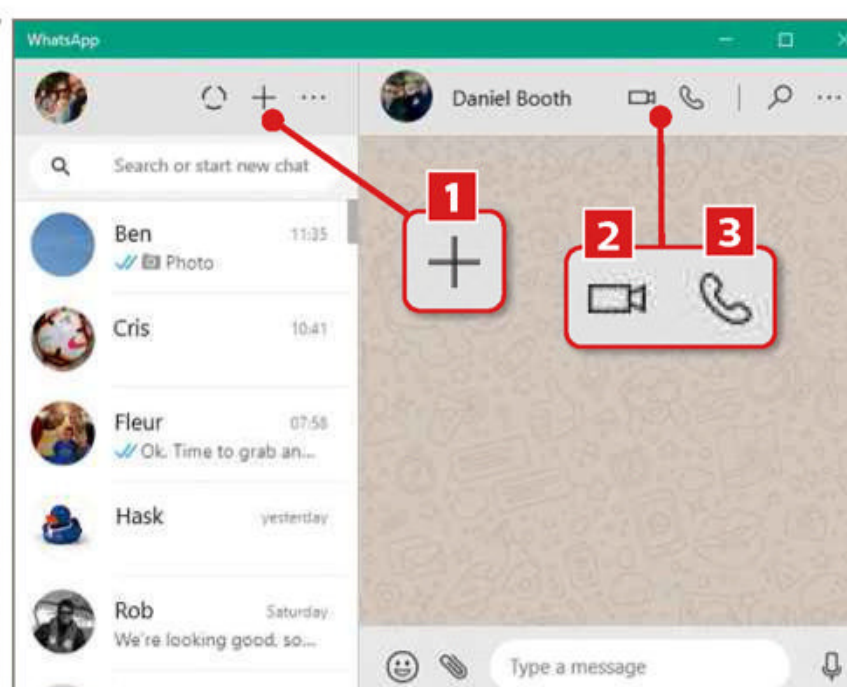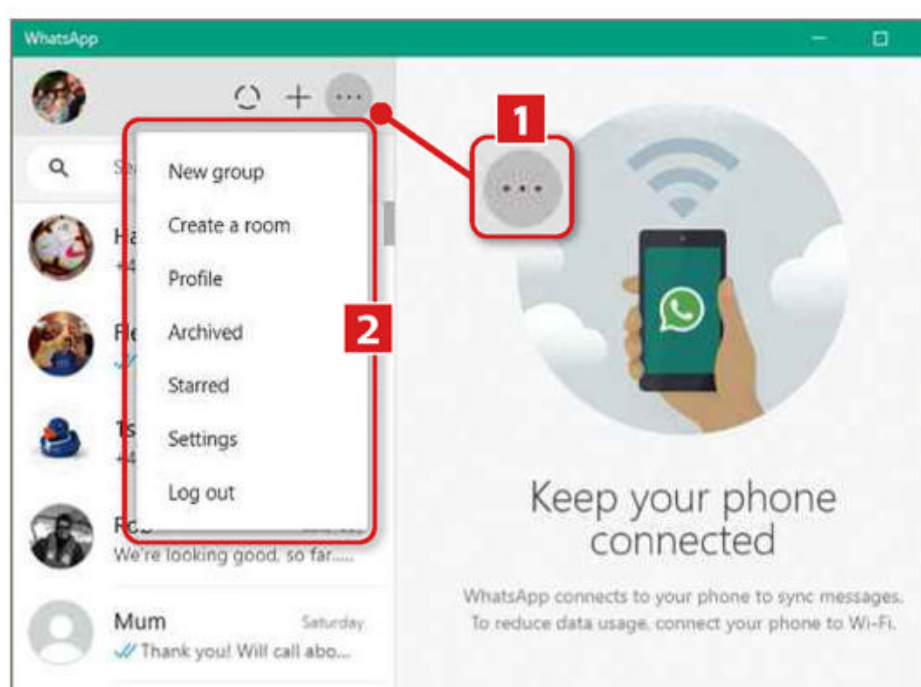
STEP 4 Once the two are linked, your phone app will return to the main WhatsApp screen. The WhatsApp window on your computer will also update, showing your WhatsApp chats on the left. You can now use it to send and receive messages just as you would on your phone, but with the added convenience of using your computer's keyboard. Click the three horizontal dots **1** and you'll be able to access the same settings as on your phone **2** (such as changing your WhatsApp profile). Note that your phone has to be switched on and connected to Wi-Fi to send/receive messages or make calls via your PC.

STEP 5 To make a video call, select an existing chat from the list on the left (remember, at the moment this only works with one-to-one chats, so no group calls). Alternatively, start a new chat by clicking the '+' button **1** (the call recipient won't need WhatsApp installed on their PC). To start the video call, click the camera button **2** - your call will now start, but the recipient won't see your video feed until they accept it. Alternatively, you can also start a call as voice only **3**, then switch to video during the conversation (the other person will be asked to accept the video-call request when you do this).
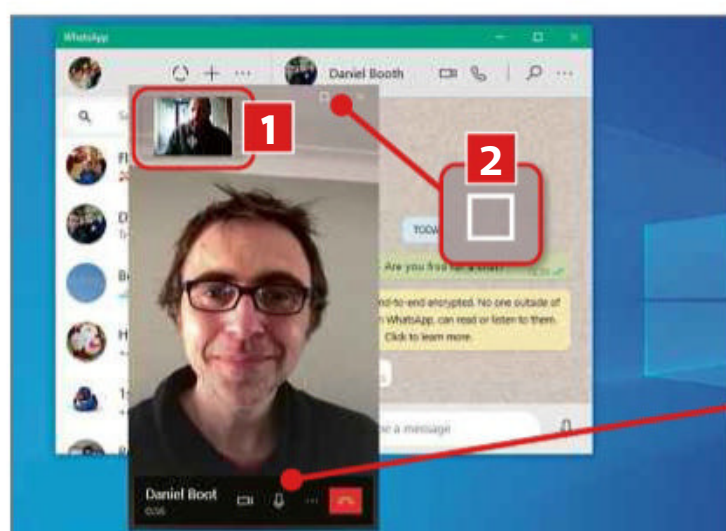
STEP 6 Once the video call has started, you'll see the person you're calling along with your own video in a small window **1** – you can click and drag this to reposition it. You can expand the video to full screen by clicking this square **2**. During the call, you can temporarily hide your video or mute yourself by clicking the camera **3** and mic **4** icons along the bottom. You can also access other call settings, including changing the microphone or webcam you use, by clicking the three horizontal dots **5**.

STEP 7 To set WhatsApp to launch every time you boot your PC, return to the Settings section (as described in Step 1), then select Desktop Settings and tick the 'Start WhatsApp at Login' box. When someone tries to call you via WhatsApp, both your phone and PC will ring. You'll also be notified of new messages in Windows. To control these notifications, return to the Settings section in WhatsApp on your PC, then select Notifications. You can choose whether to hear notification sounds **1**, see alerts on your desktop **2** and see previews of messages within these alerts **3**. If you'd rather not be disturbed, you can turn all desktop notifications off **4** (you can choose to turn them off for eight hours, one week or until you turn notifications back on).
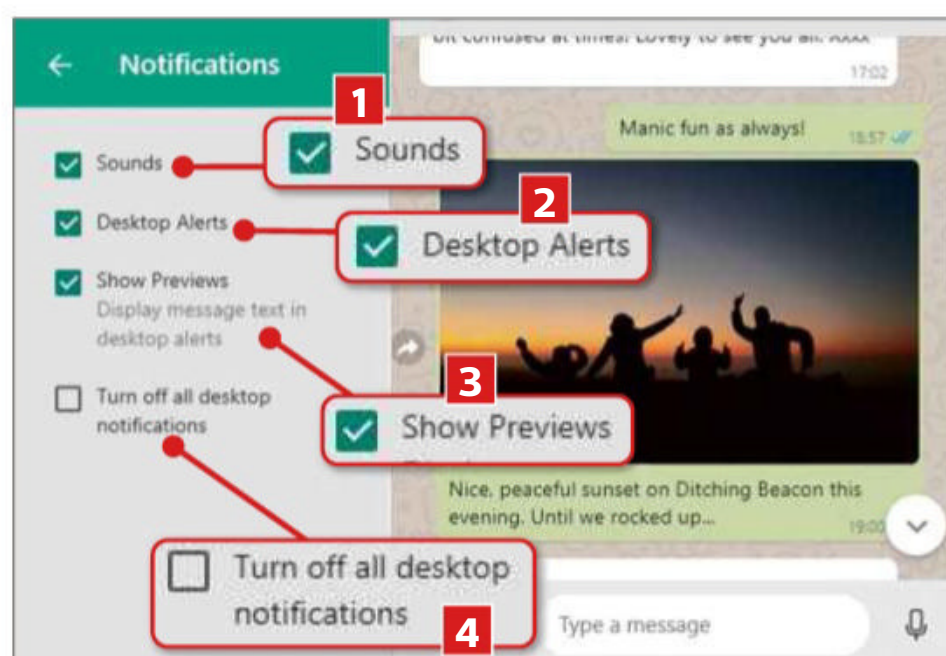
Readers' Tips

Delete videos from dashcams to free up space

With the increased popularity of dashcams, may I suggest that many readers will be unaware of a certain limitation with them? Thankfully though, it's easily solved. Dashcams save recorded videos to microSD cards, overwriting the oldest recording when the card becomes full. However, if the camera feels any 'jolting', the current recording gets protected so that it can't be overwritten, letting you access it later, possibly for insurance claims.

This jolting may be severe braking or impact, but it could also be something as simple as going over a
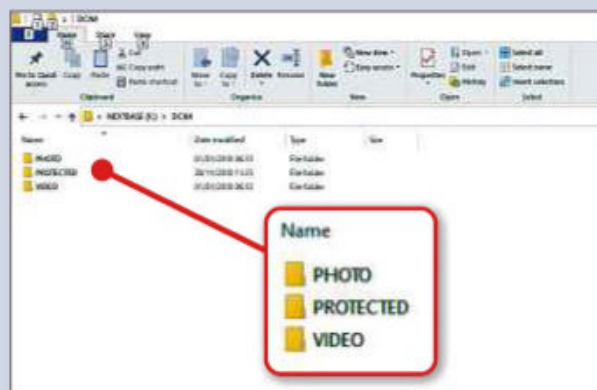
speed bump. As a result, the protected recordings build up and the amount of usable memory steadily decreases until the card becomes full.

The easiest solution is to remove the microSD card from the dashcam and

connect it – normally via an adapter – to your computer. My dashcam (a Nextbase model) shows up on File Explorer with three options: Photo, Protected and Video (see screenshot). I always select Protected and delete recordings not required. When I last did this I saved over 8GB of memory.

It should be noted that when the card is connected to the computer it may show up in red as a possible fault. This might be because the memory has all been used but, of course, the oldest entry is ready to be overwritten.

Don Palmer

APPS

Hide your phone number when using Telegram

Following your instructions in Issue 600 (page 44), I switched from WhatsApp (which I no longer trust, given Facebook's disgraceful actions in Australia) to Telegram (https://telegram.org). It works well – I just need to persuade more people to join me (several already have).

Because one of the reasons I switched was to strengthen my privacy, I looked for a way to hide my phone number when using Telegram. I found it, but it's buried in settings. Here's how to do it on

Android phones. First, with the app open, tap the three lines at the top left, then tap Settings followed by 'Privacy and Security'.

Now tap Phone Number and in the 'Who can see my phone number?' section you should see 'Everybody' – which doesn't sound very private! Instead, tap My Contacts or Nobody, whichever you prefer (see screenshot). If you choose Nobody you'll be taken to the 'Who can find me by my number?' section, where you should tap My Contacts. With this selected, only people in your contact book will be able to find you on Telegram. Your name and phone number will be hidden to everyone else.

Finally, tap the top-right tick icon and you're done.

I'm sure there are similar instructions for iPhones, if any readers want to supply them.

Ted Arnold

Why I stopped using...

Snip & Sketch

In Issue 598's feature on disappearing Windows tools (pages 60-61), you mention that Snipping Tool is being replaced by 'Snip & Sketch'. I lost Snipping Tool after a clean reboot of Windows 10 a while ago, and initially thought 'Snip & Sketch' would be more comprehensive, but soon discovered a major drawback.

And what I used instead...

The problem is that you can't paste an image into LibreOffice or OpenOffice Impress. At first I thought I was doing
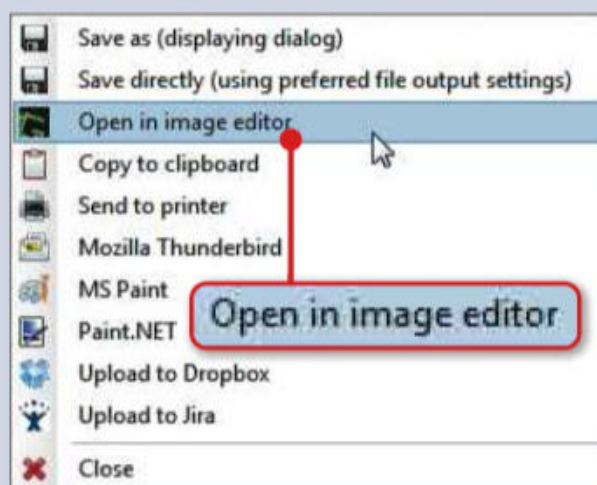
something wrong, until I discovered that it *will* paste into Paint.NET without problems. A quick search online revealed

that I'm not the only one with this problem.

So, until it's resolved, I would suggest downloading the free snipping program **Greenshot** (https://getgreenshot.org), which takes screenshots and pastes them into any program without a hitch (press Ctrl+Print Screen). If you want to edit the grab first, choose 'Open in image editor' at this point (see screenshot).

Yvonne Whitehead

Handy hints and tips from your fellow readers

SOFTWARE
Install apps from Microsoft Store to keep old scanners working

☑ I had a similar experience to David Johnson (page 43, Issue 600) when my very old HP F380 scanner stopped working in Windows 10 following the withdrawal of support for Adobe Flash. The printer itself continued to work properly using the original drivers.

I found some alternatives on the Microsoft Store: HP's 'Scan and Capture' (www.snipca.com/37460), Microsoft's Windows Scan (www.snipca.com/37461), and 'Scanner for Windows 10' (www.snipca.com/37462, pictured above) by a developer called Simon Knuth. The HP offering was pretty basic, but the other two perform very well with a similar choice of output formats. Of the two, I currently favour 'Scanner for Windows 10'. I hope this may help those having similar problems.

Paul Haldenby

HOME NETWORK
Use Ethernet cable to boost your home connection

☑ In response to readers' problems with powerlines in recent issues, here's what we did to improve our connections. Our home is split between two properties about 30 metres apart, with no phone signal in either due to walls being two-feet thick. I solved the problem using a 50-metre Ethernet cable and an access point, plus two Wi-Fi extenders in the main house to give full coverage.

I had to replace the Ethernet cable (an ordinary indoor one) after about five years. I now use a top-of-the-range outdoor Cat 6 cable running overhead

Reader recommends...

Iiyama ProLite XUB2493HSU-B1
£129 from Amazon www.snipca.com/36858

☑ When it comes to monitors, my main priority in recent years has been getting one that can rotate 90 degrees, so I can easily swap between simple web browsing and editing long PDFs. I was motivated to buy this Iiyama model after reading your positive review in Issue 596 (page 26), particularly because its price was affordable to me (anything above £200 is too much).

It's just as good as you said. The rotating function is smooth, and it's easy to adjust the height. I need to connect a variety of devices to it, so I'm glad it has so many different ports – DisplayPort, VGA, HDMI and USB 2.0. You mention that the controls on the back are fiddly, and I'd agree that they've been poorly designed. But apart from that, this is a bargain monitor that's proving to be an excellent buy.

Alan Chan

✉ Want to recommend hardware or software to fellow readers?
Email letters@computeractive.co.uk

between the buildings. I also replaced the rusty support wire with a stainless steel one, with stainless fittings and screws.

Chris Adam

SOFTWARE
Make a copy of software discs

☑ A recent question in Problems Solved ('How do I recover a corrupt DVD?', Issue 596, page 65) reminded me of a similar problem I had with a corrupt program-installation disc. The solution I eventually found was to make a copy of the disc using disc-burning software. The new disc installed without any problem. This is because the software used in the burning process is more powerful than the software used to play a DVD, and can detect data missed previously.

Joe McBriarty

SOFTWARE
Play music together online using Jamulus

☑ Going through some old copies recently, I spotted in Issue 584's Problems Solved (page 68) a letter from a reader in lockdown who was managing to continue her singing with a group over Zoom, having all but the host muted, but was missing the full choir experience. I'm a musician

playing in a number of local big bands and smaller groups and have managed to continue playing with others during the lockdowns.

We have tried Zoom using the same approach with the host playing a recording and all the muted musicians joining in with their part, hearing just the track and themselves. But we've also tried other solutions, the best of which is the open-source software Jamulus (https://jamulus.io, see screenshot above). It uses a server to 'collect' everyone's output and resend to all users together. There is no video gobbling up bandwidth. You quickly adapt to the minimal latency (about 30 milliseconds). I think this solution should also work with singers. There are public servers you can use if you find them empty, but we opted to pay for our own server for less than £4 a month. It is a joy to be able to play together again.

Catherine Gandolfi

Phone and Tablet Tips

ANDROID
Stream 4K videos on lower-resolution screens

YouTube now lets you select a video resolution that's greater than that of your device's screen. It then converts the video to a lower resolution in a process called downscaling. This results in an oversampling of the image, which makes the picture look sharper than your device is normally capable of (the effect is particularly noticeable on a tablet screen).

For whatever reason YouTube has not made this feature available on all Android tablets and phones. You can, however, check if it works on your device (and make use of it) by opening the YouTube app and typing 4K into the search engine. Select a video with 4K in the title and tap the video when you're ready to play.

Tap the three dots in the top-right corner, then select Quality and choose the highest possible resolution (2160p in our screenshot right). Our Google Pixel 3a phone has a maximum resolution of 1080p, for instance, but there were options for 1440p and 2160p. Just be careful about choosing a high resolution if you're on a limited data plan and bear in mind that the larger the screen you have, the better the video will look.

iOS
Record background music while filming a video

Apple's Camera app lets you record video, but it doesn't have a button that lets you add a background soundtrack. Instead, you can use a workaround using the app's QuickTake shooting mode. The idea is that you play music through your iPhone's speakers and so the device's microphone can record the audio while you film.

This trick works only on more recent iPhone models (the iPhone XS, iPhone XR and those released since). You should also install iOS 14 (if you haven't already) and ensure there are no headphones attached. When you're ready to record, launch a music app that supports background playback (ie, it doesn't require the app to be open). Most do, including Apple Music and Spotify, but check by starting a track and closing the app. If the track continues playing, you're ready to move to the next step.

Launch the Camera app then select the Photo mode. Tap and hold the shutter button to record and let go only when you've finished filming. If your recording is likely to be longer than one minute, consider sliding the record button to the lock icon (see

screenshot above). Recording will then continue until you tap the shutter button again.

You can use the front or back-facing camera, and add a voiceover by lowering the volume of the music and talking over the top of it. But if you want to capture music only, avoiding all environmental sounds, you should increase the volume to the maximum. Once complete, videos are stored in the Photos app where you can share, edit and play them back.

BEST NEW APPS | What you should install this fortnight

Museum Alive
£2.99
iOS www.snipca.com/37537
This stunning augmented-reality app lets you resurrect three prehistoric creatures – Smilodon (pictured), Opanina and Dimorphodon – so they can roam, swim or fly around your immediate environment. Find a flat open space and the action will begin, complete with narration from David Attenborough. You can also read information about how the animals might have looked and behaved within the app.
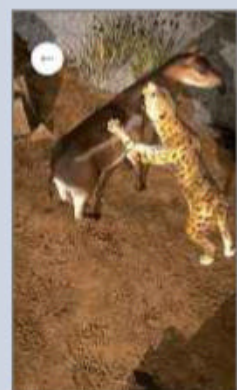
Telegram
Free
iOS www.snipca.com/37518
Android www.snipca.com/37519
You can set the recently updated Telegram to automatically delete messages after a set period of time (24 hours or seven days). In iOS, press and hold a message, choose Select, then tap Clear Chat followed by Enable Auto-Delete. On Android, tap the three-dot menu then select Clear History. Next, choose one day or one week. The new version also lets you create invite links for groups and channels.
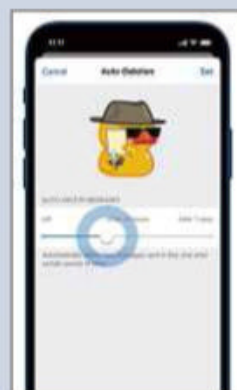
Mission to Mars AR
Free
iOS www.snipca.com/37535
Android www.snipca.com/37536
Perseverance might be 34 million miles away exploring Mars, but this app lets you steer the rover around your home using augmented reality. Grant it access to your device's camera, place the rover in your home and guide it using the controls – which even let you move the rover's arm. You can also launch the Atlas V rocket, try landing the rover yourself and spin the Red Planet to discover its features.
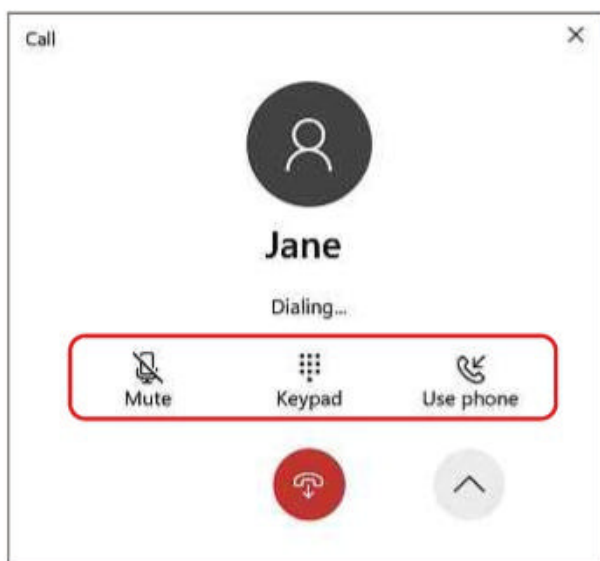
iOS
Use your iPhone with Windows 10

If you own an iPhone but have a Windows 10 computer rather than an Apple Mac, you're missing out on some useful features, such as being able to answer incoming calls and receive Apple notifications on your computer. But you can add these to your PC using the new tool Thy Phone.

First you need to install Thy Phone on your PC (£3.99 from the Microsoft Store: www.snipca.com/37544). Launch it, then select your phone. If you can't see it, you will need to pair it. Open the Settings app on your iPhone and tap Bluetooth. Next, launch the Settings app in Windows 10, click '+ Add Bluetooth or other device', then click Bluetooth. Choose your iPhone and a code will be shown on your phone and on your PC. If they match, click Connect.

Next, make calls using the app (via your iPhone) – enter a number on Thy Phone's dialling pad and click the green button to connect. Expand the call window and you can switch back to your phone, mute your microphone or make use of the keypad (see screenshot above).

Aside from calls, you can click the three-line menu for two more options: to check incoming notifications sent to your iPhone or to redirect audio from your iPhone to your PC's speakers. This is a great feature if you want to listen to music or podcasts through your computer.

ANDROID & iOS
Read local news in Google

Given how underfunded local newsrooms are, it's good to see Google investing in regional journalism. Its latest service, News Showcase, lets local newspapers (alongside a range of national titles) publish and promote stories. Each newspaper is given its own panel, making it easier for you to discover the stories you're interested in.

To find these, tap the Newsstand tab in the latest version of the Google News app and look under the News Showcase section. Next, scroll through the panels and tap Follow on publications you want to read. These will show in the For You section of the app. Tapping an article opens it within the mobile version of the paper's website.

You can also view more content from the site by tapping the paper's logo within the panel, or by tapping the three-dot menu icon and selecting 'Go to...' (see screenshot right).
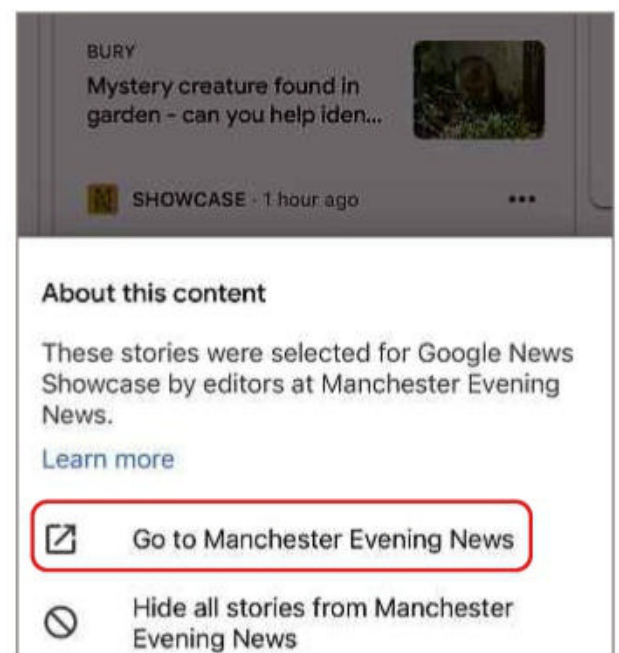
BEST APPS FOR...   Selling DVDs, games and tech

CeX
iOS www.snipca.com/37539
Android www.snipca.com/37538
Like all three apps here, CeX offers you a price when you type an item's barcode, or scan it with your camera's phone. It gives you two options: a cash payment, or a higher-value voucher to spend in its store. Usefully, it also tells you how much it plans to sell the item for, giving you an idea of what you could get for it on eBay.
Best For: Checking a value's sell-on item

Music Magpie
Free
iOS www.snipca.com/37540
Android www.snipca.com/37541
Music Magpie buys CDs, DVDs, books, games and electronic devices. You scan items as with CeX (above) except for devices which you select from a series of menus. These are added to your basket, ready for checkout. It also buys Lego, giving you a price based on the overall weight of the bricks. Get a friend to refer you and you'll get £5 added to your total.
Best For Selling a wider range of items

Ziffit
Free
iOS www.snipca.com/37542
Android www.snipca.com/37543
Ziffit buys your CDs, books, DVDs and games (but not devices), paying a particularly good price for books. The scanning doesn't work as well as on CeX and Music Magpie – it sometimes scans twice by accident. On the plus side, you can choose to be paid by cheque if you don't want to enter your bank details.
Best For Selling your books

*Contains in-app purchases

WINDOWS 10
Trim your videos

When you want to share only a short section of a video with someone, one option is to simply tell the recipient to jump to that specific point in the video. However, there are two problems with this: the program they use to view the video might not let them jump to a specific point, and the file you share will be unnecessarily large. Instead, use Windows' built in video-clipping tool to trim the video down to only the relevant section.

Locate your video in File Explorer (press Windows key+E), then double-click it to open the video in the Photos app (if you've chosen a different default app for viewing photos, right-click the file, select 'Open with', then Photos). Next, click the 'Edit & Create' button in the top-right corner of the window and select Trim.

Now click and drag the two white circles on the timeline at the bottom (see screenshot above) to mark the start and end of the section you want to share (the blue circle lets you preview a specific point in the video).
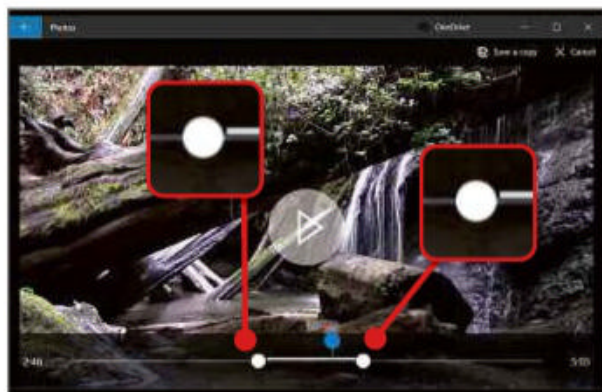
The minimum duration for a trimmed section is 1 second. Click the Play button in the centre of the window to preview your clip, then click 'Save a copy' (or press Ctrl+S) to export it as a new video file. The trimmed video will be saved in the same folder as the original and have '_Trim' added to the end of its file name.

WINDOWS 7, 8.1 & 10
Add files to *all* users' desktops

Windows includes a hidden folder called Public Desktop, which lets you add files, folders and shortcuts to the desktops of all user accounts on your PC. This is particularly useful if you want to give all users quick access to specific programs, or even a link to a document with instructions on how to carry out a certain task.

To access the Public Desktop folder, click the Start button, type **run**, then press Enter. In the Run window that opens, type **shell:common desktop** in the Open box (see screenshot above), then press Enter. The 'Public Desktop' folder will now appear in a File Explorer window, in which you can add and remove as many items as you like.

WINDOWS 10
Take time-lapse photos

You're probably more used to using your PC's webcam for video calls, but thanks to the time-lapse feature in the Windows Camera app you can also use it as a simple security tool.

Click the Windows Start menu, type **camera**, then select the Camera app from the search results. Next, click the cog icon in the top-left corner to access the settings and click the slider under 'Time lapse' to On (see screenshot). Next, click the camera icon on the right-hand side of the screen (this switches the Camera app to Photo mode).

On the left side, you'll notice two icons – click the stopwatch icon to set a timer (click this repeatedly to switch between intervals of 2, 5 and 10 seconds).

To start your time lapse, click the Camera button on the right. The app will now continuously take photos according to the timer you set. To stop the time lapse, click the Camera button a second time.

Bear in mind long time-lapse sessions can result in a lot of photos. Our webcam has a maximum resolution of 1280x720 pixels, which creates photos measuring 150KB each. This means a 24-hour time lapse with a 10-second interval would result in 8,640 photos, measuring just under 1.3GB. You can reduce the size of your photos by lowering their resolution. To do this, go back to the settings menu and select resolution in the 'Photo quality' dropdown menu.

WINDOWS 7, 8.1 & 10
Quickly access your network connections

If you need to disable or enable your wired or wireless network adapter, or just check the properties of your adapters, you normally have to click through several menus. There is a quicker way. Click the Start button, type **ncpa.cpl** (see screenshot above) then press Enter. The Network Connections window in Control Panel will immediately open.

MICROSOFT EXCEL

Try Excel's new web features

Microsoft has just updated the online version of Excel (officially known as 'Excel for the web', www.snipca.com/37634), adding a range of new features that help bring it in line with the traditional offline version. One of the most useful is the ability to select multiple cells simultaneously – previously you could only select adjacent cells. Just as in the offline version, you have to hold Ctrl while selecting the cells.

You can also now use many of the same Alt and Ctrl keyboard shortcuts as in the offline version. To view the available shortcuts, select the Help menu, then Keyboard Shortcuts. Be aware that these override similar
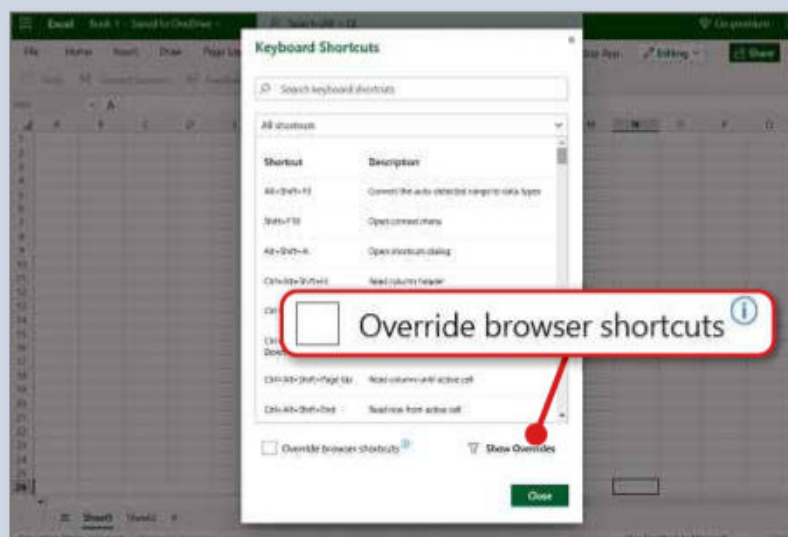
shortcuts in your browser. For example, in Edge and Chrome, Ctrl+1 switches to the first tab in your browser, but when using Excel it will instead open the

Number Format window. You can turn Excel keyboard shortcuts off by unticking the 'Override browser shortcuts' box in the Keyboard Shortcuts window (see screenshot).

Finally, zooming in and out of spreadsheets is now much easier. Simply hold Ctrl while using your mouse's scroll wheel (this zooms only your cells, so other elements of the website aren't affected).

You'll need a Microsoft account to access Microsoft Excel online – get one free at www.snipca.com/37633.

MICROSOFT WORD & LIBREOFFICE WRITER

Add footnotes and endnotes to documents

Both Word and Writer let you add footnotes (notes that appear at the bottom of each page) and endnotes (those that appear only on the last page) to your documents, letting you add extra detail or highlight references.

To add them in Word, highlight the word or phrase you want the note to refer to, select the References tab at the top, then click Insert Footnote or Insert Endnote. In Writer, you'll find similar options by clicking the Insert menu, then selecting 'Footnote and Endnote'.

Both programs use numbers to mark individual footnotes and endnotes. These will also be added (in superscript) next to the word or phrase in your document that they relate to. In Word, you can customise the footnote characters by clicking the small box with an arrow in the bottom-right corner of the Footnotes

section (see screenshot below left). You can choose from the range of preset formats, or enter your own by typing them into the 'Custom mark' box. In Writer, select 'Footnote or Endnote…' within the Insert menu, then click 'Choose…' to select a symbol, or enter your own in the Character box.

MICROSOFT WORD & EXCEL

Save documents using the traditional method

When you open or save a Word or Excel document, Office opens the Backstage view, with links to OneDrive and recent folders on your computer. If you prefer the old Open and Save boxes, you can restore them. In Word or Excel, click File, Options then select Save on the left. In the 'Save documents' section, tick the box labelled 'Don't show the Backstage when opening or saving files' (see screenshot below), then click OK.

Note that the old Save box will only appear when you click File, Save within

a document (or press Ctrl+S). The Backstage view stubbornly remains when you select 'Save as'.

LIBREOFFICE WRITER

Highlight untested links in docs

It's easy to make mistakes when typing web links into documents. However, by changing the link colours in Writer you can make sure you know which links you haven't tested. Open the Tools menu within Writer, then pick Options. Double-click the LibreOffice section on the left of the window, select Application Colours, then tick 'Unvisited links' in the General section on the right and select a colour in the box next to it (this is the colour for links you *haven't* tested). You can also change the colour of links you *have* tested – tick 'Visited links' and choose a different colour. In this example, we've chosen red for untested links and blue for tested (see screenshot below). Click OK to save your changes. It can take a few minutes for links to change colour after you click them.
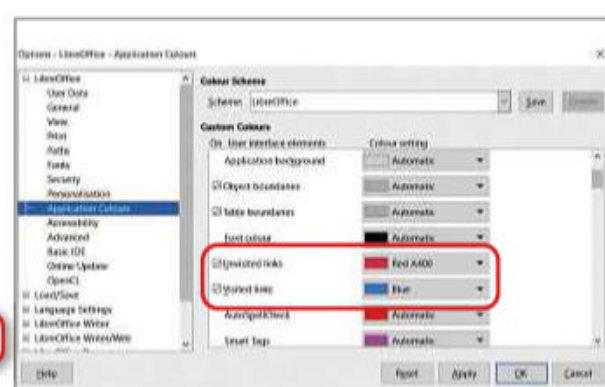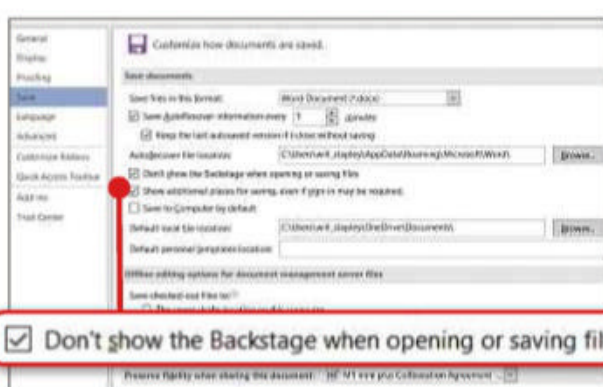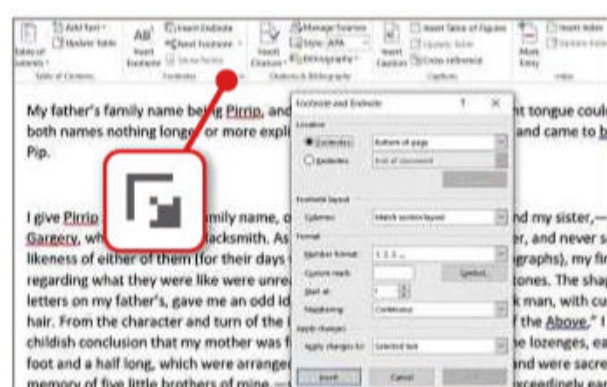
In The Club

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

Create templates for your regular Zoom meetings

Video-chat tools have been a lifeline for clubs during the pandemic, but setting up a new call for each meeting takes time. This is particularly true with Zoom, which offers a multitude of settings that you can apply to a group video call. To make things easier, Zoom lets you create meeting templates that let you set up regular online get-togethers in a matter of seconds.

Select duration and how you admit members

To create a meeting template, you need to first log into your Zoom account at www.zoom.us (if you don't already have an account, click 'Sign up, it's free' – all the features we cover here work in the free version).

Once you've logged in, click Meetings (depending on the size of your browser window, this option will be either in the left-hand column or at the top), then click 'Schedule a Meeting' (see screenshot above right). In the Topic box, give your meeting template a name and a description. Unless you want to schedule a meeting immediately, leave the date boxes as they are – you'll be able to enter the appropriate date when you schedule your meeting using this template.

Below the date boxes, select how long meetings using this template should last. This is required only to help you schedule the meeting – your meeting won't be cut off if it lasts longer than the time you specify here. However, remember that free accounts have a 40-minute limit for meetings with three or more people.

Note that you can't create meeting templates that use your personal meeting ID (the unique meeting ID that's linked to your Zoom account). Zoom will therefore create a new, random ID for each meeting you schedule and assign it a new passcode every time.

Scroll down and you'll find additional settings for the template. If you want to keep control of who can join meetings that use this template, tick the Waiting

Create a meeting template by first scheduling a meeting

Room box. This lets you vet participants before they join, allowing you to filter out anyone you don't recognise or want to exclude. Alternatively, for regular club meetings, you might want to let people join the call without having to first wait for you to join – to do this, tick 'Allow participants to join at any time'.

In meetings where you plan to present information rather than canvas opinion, the video streams from other people in the call can be distracting. To turn them off, scroll to the Video section, then click Off nex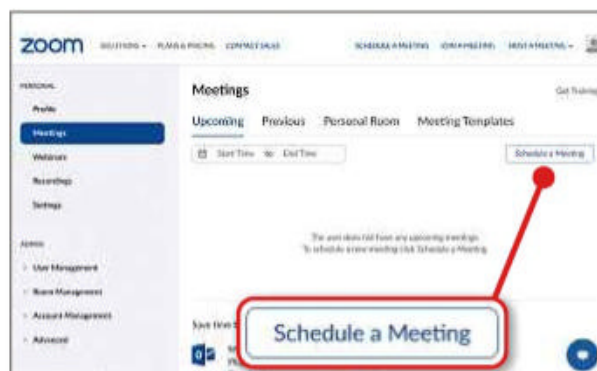t to Participants (bear in mind people will still be able to turn their video on during the call). You can also choose to automatically record all meetings to your PC, which is a great alternative to scribbling down the minutes as you talk – tick 'Automatically record meeting on the local computer' to turn this on.

Once you've finished making your changes, scroll to the bottom and click Save (you can always make changes to the template later if needed). You'll now see a summary of your meeting settings. Scroll to the bottom once again, but this time select 'Save as Template'. In the window that appears, give your meeting template
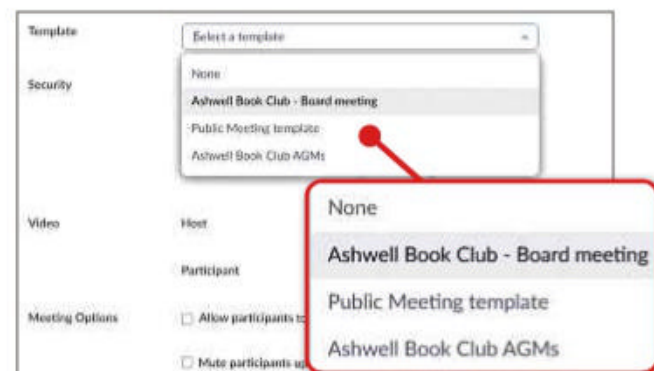
When scheduling a meeting, select which template you want it to use

a name, then click the blue Save button. You can repeat this process, creating up to 40 meeting templates.

Schedule a meeting

With your templates created, you can now use them to create a new meeting. Return to the Meetings section of the Zoom website, then click 'Schedule a Meeting'. Scroll to the Template section, click the dropdown menu, then select the template you want for this meeting (see screenshot above) – doing this replaces all meeting settings with those of the chosen template. The meeting's Topic will also change to the name of the template, so you may want to change it to something more appropriate (doing this won't alter your template, only the meeting you're currently scheduling).

Edit and delete templates

You can review all your Zoom meeting templates by going back to the Meetings section, then clicking Meeting Templates. Alongside each template, you'll see the date it was last modified, alongside a Delete button (see screenshot below left), which permanently removes the template.

To review a template's settings, click its name. You can then make changes to it by clicking 'Edit this Meeting Template' at the bottom.

You can delete your existing templates in the Meeting Templates section of the Zoom website

Fuss About...

Wolverine

Listen, here's how you might one day get superhuman hearing

What is it?

Google's project to give you hearing 'superpowers' that let you isolate a specific source of noise so you can understand it more clearly. It would prove useful in a room full of people all talking at the same time, or where there's loud and distracting background noise, such as in a factory. You'd be able to focus on just one conversation, ignoring everything else. This type of technology is called speech segregation.

Would you have to wear a device?

Yes, inside the ear. It contains sensors and microphones that use algorithms to identify which audio to pick up. Early designs were crude, covering the entire side of the ear, or sticking out above it. Since those prototypes, it seems that Google has shrunk the device so it doesn't look too ugly – or indeed, can't be noticed at all by others.

Can I see what it looks like?

Sadly not. Information on the device comes from the website Business Insider, which quoted sources working at Alphabet X (https://x.company). This is a Google offshoot that works to create "radical new technologies to solve some of the world's hardest problems". The device is probably at an early prototype stage, and the final version – should it ever appear – will look significantly different. Google isn't ready to share images just yet. It's why we've had to illustrate this page with a picture of that bloke above.

Ah, I was wondering about that. Who is he?

A superhero called Wolverine, from the Marvel comic-book empire. He's a 'mutant' born with three retractable claws in each hand, and a superhuman sense of sight, smell and - yes - hearing. It won't surprise you to learn that Google's geeks love superheroes almost as much as they love technology. One of them told Business Insider that the Wolverine project is more than a single device – it's about "exploring the future of hearing".

What does that mean?

It's the kind of starry-eyed thing staff at Google (and other tech giants) always say when they're getting carried away. In previous years they've also babbled excitedly about Google Glass, the smart specs that projects the web in front of your eyes, and Loon, which aimed to deliver the internet to remote areas by transmitting signals from hot-air balloons. Both projects are now dead.

So will Wolverine amount to anything?

It's far too early to say. Alphabet X's mission is to develop risky ideas – those 'What if?' brainwaves that sometimes fail completely, or occasionally fail at first but lead to breakthroughs many years later. But similar work from rival firms suggests it's more than just a fantasy. Last year Facebook revealed it was working on a pair of augmented-reality glasses that "turn up the volume on the person sitting across from us while turning down the volume on unwanted background noises". Its video demonstrates how this might be handy when trying to hold a meaningful conversation in a crowded bar (www.snipca.com/37582). In an intriguing twist though, Facebook is using the kind of smart specs Google has abandoned.

"Sorry, what did you say? Speak up!"
"I said, why are we wearing these daft things on our heads?"

How do they work?

By analysing your eye and head movements in order to estimate who or what you're trying to listen to, "dampening" irrelevant noise in the process. The photo left shows it being tested, though it also looks like they're trying to pick up Channel 5 through their heads. Somebody should have a quiet word in their ear.

BLOCK APPS THAT TRACK YOU

Ever get the feeling you're being followed? Well, that's because you probably are. **Robert Irvine** explains how to protect your privacy by blocking all the hidden trackers in websites and mobile apps

It's no secret that every time you go online, your activities are being watched. Trackers are endemic across the web, and it's rare to find a site or app that isn't embedded with at least one hidden spy.

These invisible elements monitor how you use websites and mobile apps, and analyse that data to target you with customised content and adverts. This may seem harmless and even helpful, but when that information is passed to less trustworthy companies, or the trackers follow you to other websites and apps, it's a flagrant invasion of your privacy.

Most of us have been unnerved when adverts for Amazon products we've searched for appear on other sites, or when Facebook makes suggestions related to things we've mentioned privately. Even tools that are supposed to keep our data safe, such as LastPass, have been found to contain built-in trackers (www.snipca.com/37520).

The good news is that some tech companies are now fighting back against trackers – a 'tracklash', if you will – to help protect their users' privacy. Apple improved Safari's tracker blocking in iOS 14, and will take this further in an upcoming update by blocking all iPhone and iPad apps from tracking users without their consent (see www.snipca.com/37570). Mozilla, meanwhile, has tightened Firefox's protection against supercookies, and now stops third-party trackers from following you from site to site (see page 52). Even Google has promised to stop using third-party cookies or alternative identifiers "for tracking individual people as they browse the web", when it introduces its Privacy Sandbox system next year (www.snipca.com/37568).

Welcome though these improvements are, there's still much more you can do to block the hidden apps and elements that follow you online. In this feature, we explain the best ways to lock down your browser and mobile device against all unwanted and intrusive tracking.

WHAT YOU CAN DO

- Prevent personalised ads from following you around the web
- Scan Chrome extensions for trackers before you install them
- Disconnect risky third-party apps from your online accounts
- Fake your location to stop apps tracking your real one

BLOCK TRACKING IN YOUR BROWSER

Is your browser protecting you?

Before you start blocking apps that track you online, it's useful to know about the type and amount of your data that browsers gather. Most browsers include a 'do not track' setting (in Chrome, you'll find it in Settings, 'Privacy and security', then 'Cookies and other site data'; in Edge it's in Settings, 'Privacy, search, and services' - see screenshot right). However, this is little more than a polite request and many websites ignore it.

To find out just how much information websites can gather, visit Cover Your Tracks (https://coveryourtracks.eff.org), a new website from the privacy group Electronic Frontier Foundation (EFF). Click the Test Your Browser button and Cover Your Tracks will check the strength of your browser's protection against tracking, with the option to connect (anonymously) to a real tracking company so *you* can see what it can see.

Once the tests are complete, the site will tell you if your browser is blocking tracking ads and invisible trackers. It also tells you whether your browser has a unique fingerprint (see screenshot below) – in other words, a profile built up using data such as your screen resolution, operating system and device memory. If your browser does have a unique fingerprint, websites can use it to track you.

Cover Your Tracks states that because tracking techniques are complex, subtle and constantly evolving, it can't measure them all. For a more comprehensive privacy audit, try the tests at BrowserLeaks (https://browserleaks.com), which show how websites and trackers can detect where you are, which ISP you use and your specific browser permissions.
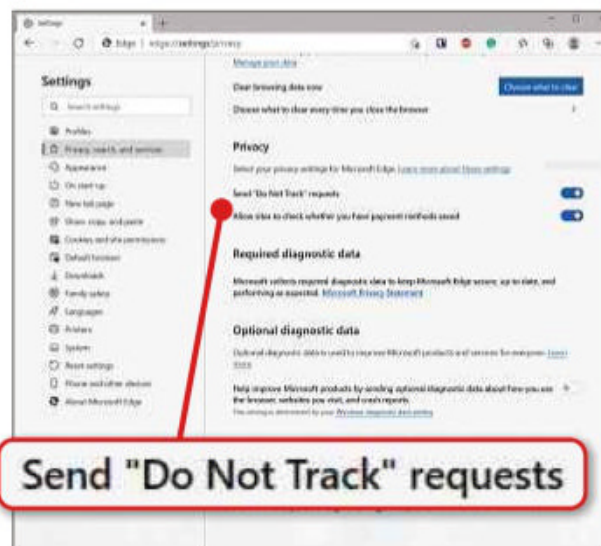
Your browser's Do Not Track setting won't protect you from *all* tracking

Expose trackers hidden in websites

Social networks and online shops are the worst offenders for tracking their users, but virtually every website has some form of tracker. You can use the free online tool Blacklight (www.snipca.com/37484), which launched last September, to expose the secret trackers in sites you visit every day. Simply paste a web address into the search box and click Scan Site to scour for ad trackers, third-party cookies, session-monitoring scripts, keylogging and (less worrying) analytics tools.

This takes less than a minute, and uses DuckDuckGo's Tracker Radar technology (www.snipca.com/37486). The results can be eye-opening and include the number of trackers, whether that figure is above average and the names of ad-tech companies the site shares information with. Even non-commercial websites such as those from the BBC aren't completely clean, but note that Blacklight doesn't cover all UK websites (sometimes defaulting to US versions).

Thunderbeam–Lightbeam shows how many third-party servers (triangles) are connected to the websites you visit (circles)

To view hidden trackers as you browse the web, install Thunderbeam-Lightbeam (www.snipca.com/37487) in Chrome or Edge. This version of the excellent Firefox extension Lightbeam (which Mozilla has discontinued but can still be installed from www.snipca.com/37488), shows all trackers that lurk in the background online. The large circles in the graph represent the sites you've visited, while the triangles show third-party servers connected to each site, which may be collecting and sharing your data (see screenshot above).

On page 53, we'll show you how to stop these hidden trackers (and more) using content-blocking browser extensions.

Stop adverts following you around the web

Ads are a necessary evil to keep web content free, but it still feels creepy when they target you with products and services based on your activities. Advertisers place cookies in your browser when you visit a site, which lets them track you to other sites that use the same advertising network. When you consider the enormous reach of the ad networks owned by Google, Amazon and Facebook, it becomes clear why adverts for things you've searched for, looked at and mentioned seem to stalk you around the web.

The obvious way to stop this is to use an ad blocker, but as this removes all ads (not just personalised ones) it deprives smaller sites of the revenue they need to survive. Another option is to opt out of 'behavioural tracking' with ad providers. The website Your Online Choices (www.snipca.com/37493) lets you choose which advertisers to block cookies from, to avoid customised ads based on your previous web activity. There are nearly a

Use Cover Your Tracks to find out whether websites can track you using 'fingerprinting'
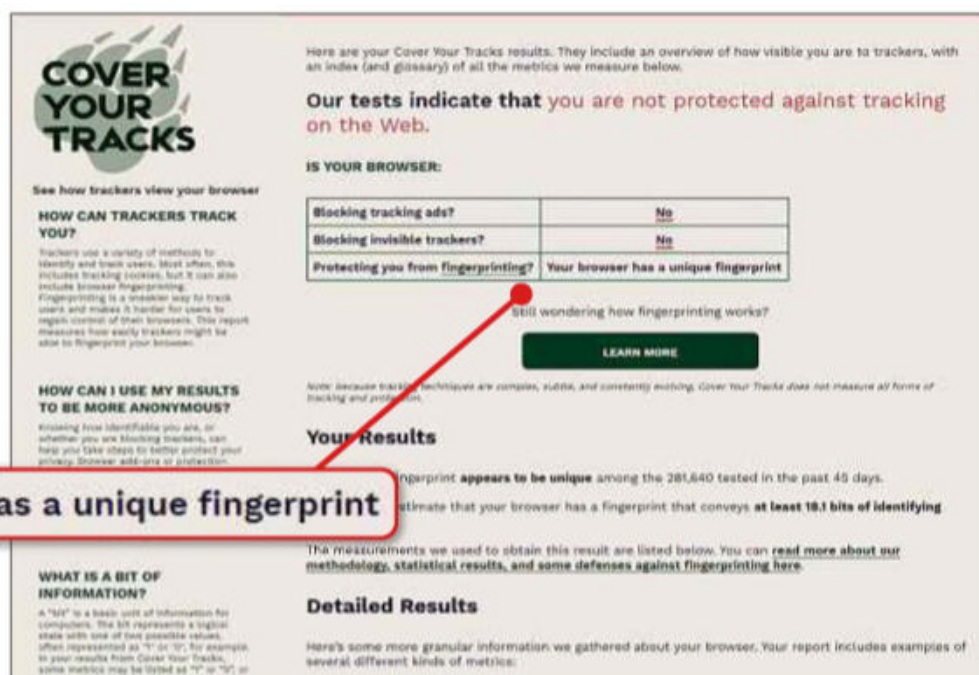
hundred of them, so save yourself time by clicking the red 'Turn off all companies' button.

Next, go to Google's Ad Settings page (www.snipca.com/37494) and switch off 'Ad personalisation'. Click 'Advanced' and also disable that option, which lets Google's website and app 'partners' display personalised ads. This page also reveals the data Google uses to target ads at you, including your age, gender and interests.

You can turn off 'interest-based' Amazon ads at www.amazon.co.uk/adprefs. Facebook also has several options for depersonalising your ads at www.snipca.com/37497. The important ones to change are 'Data about your activity from partners', which shows ads based on your activities *outside* Facebook, and 'Ads shown off of Facebook', which continues pestering you on other sites and apps.

Prevent cookies from tracking you online

All browsers now offer the option to block tracking cookies (in Chrome, go to Settings, 'Cookies and other site data' and select 'Block third party cookies'; in Edge, go to Settings, 'Cookies and site permissions', then 'Manage and delete cookies...'). However, as with 'Do Not Track', this feature is neither sophisticated nor completely effective, which is why Mozilla has ramped up cookie-blocking in the latest version of Firefox (86).

A new feature called Total Cookie Protection (www.snipca.com/37502) creates a separate 'cookie jar' for every site you visit. This isolates cookies so they don't follow you to other sites and track your activity there. It builds on the 'supercookie' protection introduced in the previous Firefox version that prevents trackers from storing supercookies - which are harder to detect and delete than standard cookies - in your browser. To activate Total Cookie Protection, click the Firefox menu button, choose Options, 'Privacy & security' and select Strict under

Would a web without trackers work?

An internet free of the hidden trackers used by tech giants sounds idyllic, but in practice it's almost impossible to avoid their spying tricks.

To prove this point, research institute Economic Security Project has created a tool called Big Tech Detective (BTD, https://bigtechdetective.net) that exposes trackers from Google, Amazon, Facebook and Microsoft as you browse the web. It tells you when a site is sharing information with any of those four companies and (optionally) blocks your access.

BTD isn't available in add-on stores, but you can sideload it in Chrome. Download and extract the installation file, go to chrome://extensions and switch on 'Developer mode' in the top-right corner. Click 'Load unpacked', select the extension's folder to install it, then click its
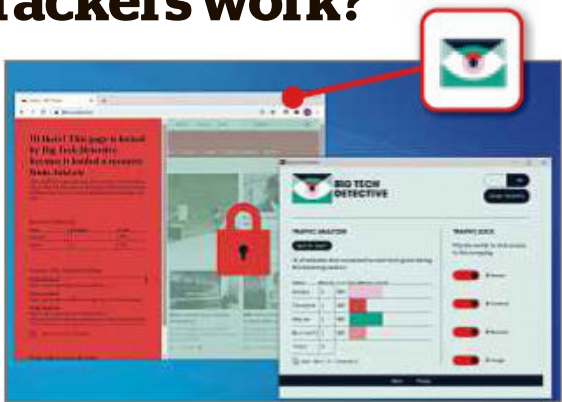
extension icon (see screenshot). Choose which tech giants you want to block, then try browsing as normal. You probably won't get far without BTD warning that it can't display a website due to the companies you've blocked.

It's an effective reminder of how ingrained Google, Amazon, Facebook and Microsoft are with the web, and that you compromise your privacy every time you go online.

Browser Privacy (see screenshot below).

Google plans to add a similar feature to Chrome next year as part of its new Privacy Sandbox (www.snipca.com/37503). In the meantime, you can boost your protection against tracking cookies by installing a content-blocking add-on (see page 53).

Avoid dodgy browser extensions

Google has banned hundreds of extensions from the Chrome Web Store in the last few years because they were found to be tracking and selling users' data – most recently, the tab-management tool The Great Suspender. If you're worried that an add-on you've installed – or plan to install – may threaten your privacy, check it at CRXcavator (https://crxcavator.io).

Simply copy and paste the Chrome extension's ID (pictured above right) into the search box and click Submit. You can find this ID (a 32-character block of text)

To check an extension, copy its ID, then paste it into CRXcavator

in the last part of the add-on's web address either in the Chrome Web Store or by clicking the Details button in its entry on the chrome://extensions page (edge://extensions for Edge).

CRXcavator will then tell you if the tool has risky permissions, a dubious security policy or missing information, so you can remove or avoid it if necessary. The higher the total score, the more risky the extension. Most trustworthy extensions have a total score of under 500 (such as the 'Dropbox for Gmail' extension, see screenshot below).

Select the Strict privacy option in Firefox to block hard-to-remove supercookies
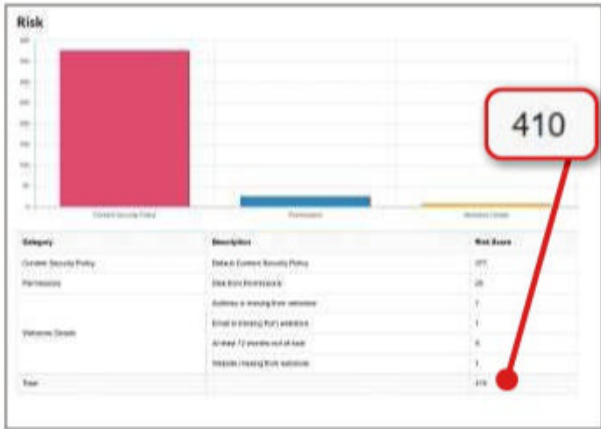
Use CRXcavator to scan Chrome extensions to find how many risky permissions it has

THE BEST EXTENSIONS FOR BLOCKING TRACKERS

Privacy Badger
https://privacybadger.org

Ad blockers such as AdBlock (https://getadblock.com) prevent tracking by using lists of known ad servers, but Privacy Badger offers a more nuanced approach. Available for Chrome, Firefox, Edge and Opera, this tool from EFF (see page 51) monitors which websites are tracking you, and sends them a do-not-track signal. If they refuse to comply, Privacy Badger blocks the trackers (click the extension icon to see how many trackers it's blocked – see screenshot below). Privacy Badger is less

Privacy Badger automatically detects and block trackers hidden in websites

10 potential **trackers** blocked

likely to cause page-loading problems than traditional ad blockers, while also catching trackers that they miss. It gives you total control over which hidden sites can and can't connect, using a colour-coded system that shows you what's safe and what's not.

ClearURLs
www.snipca.com/37511

You've probably noticed that some websites insert extra code after the main URL in your address bar. This happens on Amazon product pages and when you click links to external sites on social networks. These long URL strings (usually containing the text 'source' or 'utm' followed by a long series of random characters), tell websites where you've been and which links you clicked to open them, and are a sneaky means of tracking your online activities. ClearURLs strips all web addresses of tracking code, using more than 250 rules to identify and block unnecessary

elements. Install the extension in Chrome, Firefox or Edge and it will work automatically, and keep a tally of how many trackers it's blocked.

AdNauseum
https://adnauseam.io

AdNauseum strikes a compromise between blocking ad trackers and letting small websites earn essential revenue. When it filters ads (it's based on the popular content blocker uBlock Origin, www.snipca.com/37508), it also clicks them in the background, so that sites still get paid by the advertising networks.

To prevent companies from using those clicks to track you, AdNauseum "obfuscates" the data, rendering their targeting useless. The extension is available for Firefox, Opera and Edge (www.snipca.com/37509), but because it interferes with Google's business model, it's banned from the Chrome Web Store. See www.snipca.com/37510 for details of how to install it in Chrome.

DISCONNECT APPS FROM YOUR ACCOUNTS

One of the biggest threats to your online privacy comes from the tools and apps you've granted access to your accounts, such as when you register for them using your Google account (the 'Sign in with Google' option). Most of these apps request access to only your basic account information, but there's still a risk they could track and share your data. Here's how to block potentially intrusive apps in popular web services.

Google

Go to https://myaccount.google.com, select Security from the left sidebar, then scroll down to 'Third-party apps with account access' and click 'Manage third-party access'. Select any apps and services that concern you and click Remove Access to disconnect them. Alternatively, use the 'Third-party access' menu in Google's Security Checkup tool (www.snipca.com/37498), which highlights any apps it considers to be risky, such as those with extensive access to your data.

Facebook

Go to www.facebook.com/settings and click 'Apps and websites' in the left-hand sidebar.

Select unwanted entries on the Active tab then click Remove. Also click 'Your Facebook information' on the left, followed by View next to 'Off-Facebook activity' on the right, then 'Manage your off-Facebook activity'. You can then stop a specific tool sharing your data with Facebook by selecting it and choosing 'Turn off future activity', then Turn Off. To prevent all such spying, click Manage Future Activity and switch off 'Future off-Facebook activity'. Click 'Clear history' to wipe all previously collected data.

Apple

Sign into your Apple ID account (https://appleid.apple.com) and go to Security, 'Apps & Websites using Apple ID'. Select 'Manage' and click 'Stop using Apple ID' next to an undesirable entry. Alternatively, on your iPhone or iPad, open the Settings app, tap your name, then 'Password & Security' and choose Apps Using Your Apple ID.

Microsoft

Log into your Microsoft account at https://account.microsoft.com and click Privacy. Make sure the Overview tab is selected, then scroll down to 'Other privacy settings', click
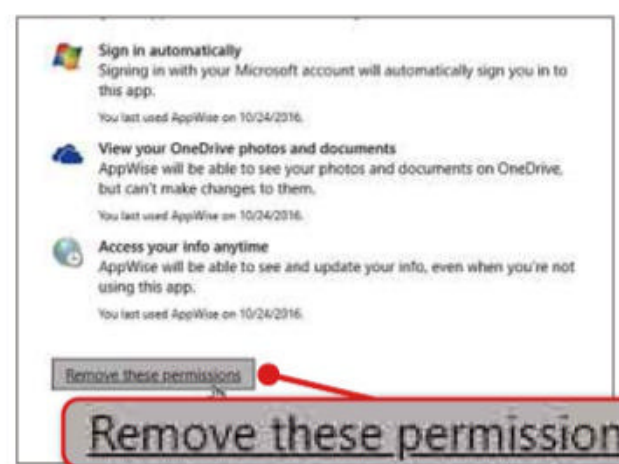
Click this option to stop apps tracking you through your Microsoft account

'Apps and services that can access your data' and select an entry to see which permissions you've granted that tool. Click 'Remove these permissions' (see screenshot above) to disconnect an app from your account.

Amazon

Sign into the 'Login with Amazon' page (www.snipca.com/37548) to view and remove third-party websites and apps that use your Amazon account. Note that even if you revoke access, companies retain information you previously provided, so you'll need to contact them directly to unsubscribe from their databases.

BLOCK TRACKING ON YOUR PHONE

Stop apps accessing your location

Many mobile apps request access to your phone's location. Often, this is nothing to worry about and probably vital for the app to work. You wouldn't get directions in Google Maps nor receive local forecasts from BBC Weather without granting them permission to know your location. However, there will always be apps you've granted permission to but no longer use and, more worryingly, those you don't even remember installing. For this reason, it's wise to check your location permissions regularly and block apps that you don't fully trust.

The process varies depending on your specific device, but on most Android phones and tablets go to Settings, Location, 'App permission' (if you don't see these menu options, use the search option in Settings to find them). This will tell you which apps can detect your whereabouts all the time, which can do so only while you use them (see screenshot above right) and which you've denied permission. Select an app to revoke its location access. It's also worth tapping 'See all [app name] permissions' in case the app is accessing other data unnecessarily, such as your calendar and call logs. Alternatively, go to Settings, 'Apps & notifications', Advanced, 'Permission manager' (or 'App permissions') to browse all permissions that have been granted on your device.

On an iPhone or iPad, go to Settings, Privacy and tap Location Services to see all the apps that can detect your location. Select an entry to view *why* it needs that permission and, if that doesn't sound essential, change its access to Ask Next Time or Never. Tap 'System Services' at the bottom of the screen and disable settings that track you, such as 'Location-Based Apple Ads and Suggestions', Significant Locations (which provides "useful information" based on where you are) and Popular Near Me. Switch on the Status Bar Icon option to display an arrow at the top of your screen when an app is accessing your location.

Fake your location so apps can't track you

When it's not possible to disable location access – for example, because an app won't work without it – you can protect your privacy by 'spoofing' your location. There are dozens of apps in the Google Play store that claim to fake your GPS
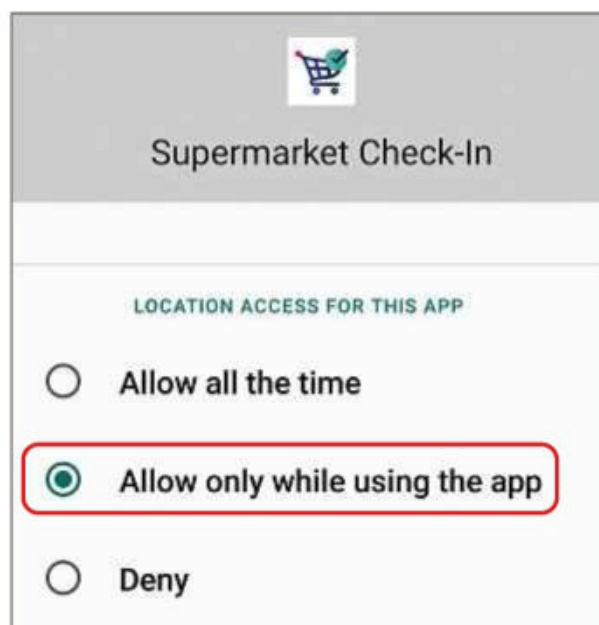
You can set apps to access your location only when you're using them

location, but many don't work or require you to root your Android phone. Our favourite is Location Changer (www. snipca.com/37524), which lets you use Google Maps to spoof your whereabouts.

To use this free app, first allow it access to your device's location (which is ironic, but understandable), accept the adverts (these aren't intrusive) and tap Start. Open your phone's 'Developer options', tap 'Select mock location app' and choose Location Changer. If you don't see the 'Developer options' screen, go to Settings, System, 'About phone' and tap 'Build number' seven times to unlock it.

Once this is done, either long-press the map or search for a location to place the marker where you want to pretend to be – a 'location changed' message will appear once your new location is set (see screenshot above right). Other apps won't be able to track you for as long as Location Changer is open, or until you tap Stop.

Apple doesn't allow GPS location-spoofing tools in its App Store (any that claim to do this are likely to be useless). Your best bet is to use a free VPN such as Windscribe (www.snipca.com/37466) or TunnelBear (www.snipca.com/37470), but this will limit your faked location to only its available servers.

Stop Bluetooth beacons tracking your location

Plenty of mobile apps use Bluetooth to share data between devices, and may rely on it to function properly, not least the NHS COVID-19 contact-tracing app. But Bluetooth also allows your location to be tracked, not only through your proximity to other Bluetooth-enabled phones, but by using Bluetooth beacons.
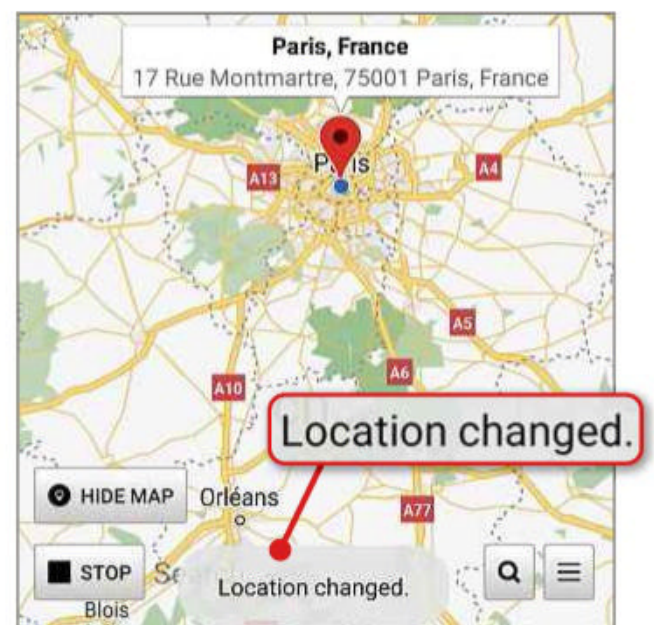
Location Changer stopped apps tracking our location by moving us to Paris

Put a stop to Bluetooth beacons secretly tracking your location
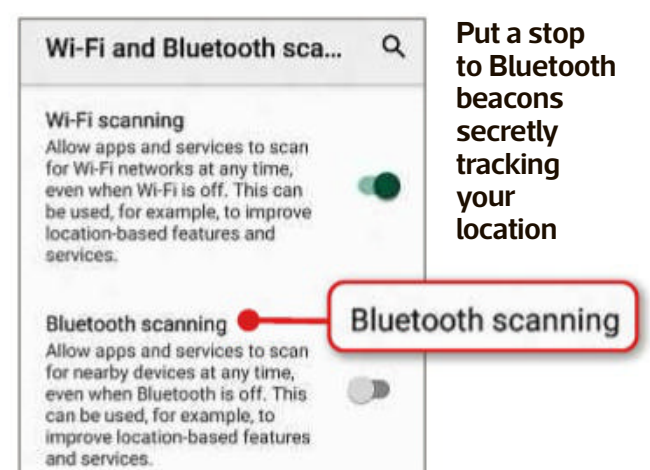
These tiny devices are hidden in shops, transport hubs and other public places to deliver relevant information (such as in-store discounts, travel updates and adverts) to compatible apps on your phone. More worryingly, they also let the companies behind the Bluetooth beacons pinpoint where you are, even when you're not actively using their apps (as reported by Interesting Engineering at www.snipca.com/37506). Likewise, Google and Apple can track your activities using the unique identifiers of beacons you've been close to.

On an Android phone, you can protect your privacy without turning off Bluetooth altogether by going to Settings, Location, 'Wi-Fi and Bluetooth scanning' and disabling the 'Bluetooth scanning' option (see screenshot above). If left enabled, this lets beacons track you through apps even when Bluetooth is switched off.

On an iPhone, go to Settings, Privacy, Bluetooth and disable Bluetooth access for apps that don't need it, such as those for shops, social media and restaurants. Since iOS 13, Apple has required apps to ask your permission to use Bluetooth, but there's no harm in double-checking, in case you've inadvertently allowed them.

Prevent apps from tracking you over Wi-Fi

Hopping on to a nearby Wi-Fi hotspot provides a fast, convenient connection and saves you mobile data, but it also allows you to be tracked. By default, your phone is set to scan for Wi-Fi networks automatically, which means that apps and services can detect where you are, even when Wi-Fi is switched off.

To stop this happening on Android, go to Settings, 'Network & Internet', Wi-Fi, tap 'scanning settings' and switch off 'Wi-Fi scanning'. Then choose 'Wi-Fi preferences' and disable 'Turn on Wi-Fi automatically'.

On an iPhone or iPad, go to Location Services, System Services and turn off 'Wi-Fi Networking & Bluetooth' until it's needed. You can also use the new Private Address feature introduced in iOS 14. This assigns your device a different MAC address for every Wi-Fi network you connect to, so your location can't be tracked as you move around. Go to Settings, Wi-Fi, tap the 'i' information button next to a network and switch on Private Address (see screenshot above right). You'll be prompted to rejoin the network privately if you're already connected.

Stop apps collecting and sharing your data

The trackers embedded in mobile apps aren't always a threat to your privacy – they may simply report bugs, so the developer can improve the app – but some share data with advertisers and other companies. Android apps are particularly rife with such elements – go to privacy-audit site Exodus (www.snipca.com/37469) and search for an app (or paste its Google Play store URL) to see all the trackers it contains.

Disabling trackers is difficult without uninstalling the relevant apps, but there are a few things you can try. On an Android device, go to Settings, Privacy, then open the Advanced menu. Select 'Ads', tap 'Reset advertising ID' and turn

Turn on 'Opt out of Ads Personalisation' to stop Android apps tracking your data

Beat location tracking on your iPhone or iPad by connecting to Wi-Fi using a Private Address

on the 'Opt out of Ads Personalisation' option (see screenshot below left). This won't block ads in apps, but it will prevent them from building a profile of your interests and targeting you. Next, choose 'Usage and diagnostics' on the Privacy screen and switch off this feature to stop Google collecting data about how you use apps.

In iOS 14, go to Settings, Privacy, then Advertising. Enable the Limit Ad Tracking option and tap Reset Advertising Identifier. Next, choose Analytics on the Privacy screen and turn off 'Share iPhone & Watch Analytics' and Share iCloud Analytics. Finally, go to Privacy, then Tracking and switch off 'Allow Apps to Request to Track' to tell apps never to track you.

It's also worth checking individual app Settings screens for options that limit how your data is tracked. In the Wikipedia app, for example, tap the More menu, choose Settings and disable 'Send usage reports' in the Privacy section.

Use your browser's private mode

The mobile versions of popular browsers all offer a private browsing mode, which stops details of your online activities being stored on your device. To use this in the Chrome app, tap the three-dot menu and choose 'New incognito tab'; in Firefox, tap the mask button in the top-right corner; and in Safari, tap the new tab button and press Private.

In YouTube's private mode, nothing you watch or search for is saved, and you won't see video recommendations. Tap your profile picture in the top-right corner of the app and choose 'Turn on Incognito'. Google Maps offers the same option (see screenshot above right) to stop places you look for being saved – annoyingly, this mode won't hide your mapping activities from other Google apps.

Other apps with a private mode include Microsoft's keyboard tool SwiftKey,
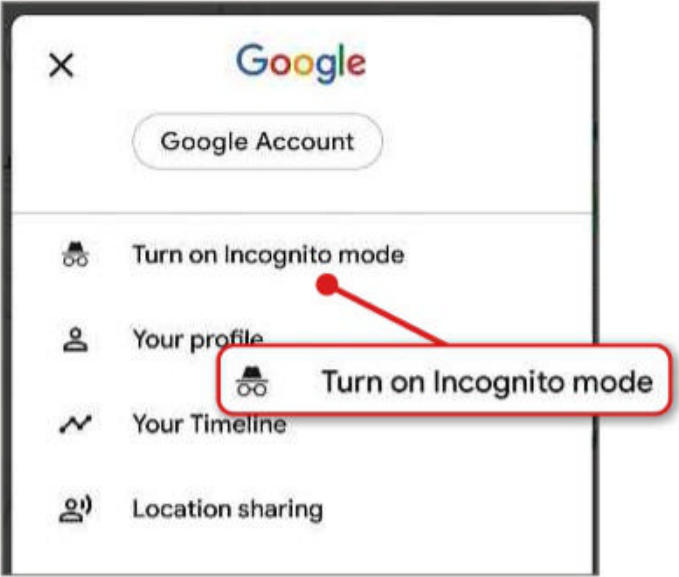
Enable Google Maps' Incognito mode to stop it tracking your travels

social-network site Reddit (which calls it Anonymous Browsing) and Spotify, which lets you listen to your guilty pleasures anonymously by choosing 'Private session' in Settings.

Switch to a more private mobile browser

If you're really concerned about your web activities being tracked, you need a dedicated private browser. There are plenty to choose from, of which our favourite is the brilliant DuckDuckGo Privacy Browser (www.snipca.com/37475) for Android and iOS.

This forces websites to use encryption, blocks hidden third-party trackers and lets you clear your browsing history with a single tap. DuckDuckGo helpfully grades the sites you visit for privacy and tells you which trackers it has blocked and why (see screenshot above right). In iOS 14, this DuckDuckGo-powered feature is built into Safari: tap the AA icon in the address bar and choose Privacy Report.

Other good options include Brave Private Browser (www.snipca.com/37476), which automatically blocks adverts, scripts and third-party cookies, and Firefox Focus, a lightweight, privacy-focused version of Mozilla's browser

Avoid these 5 android apps that secretly track you

UC Browser

Owned by Chinese company Alibaba, UC Browser claims to keep you private and secure, but according to privacy–audit website Exodus it contains eight trackers and requires a shocking 78 permissions. Use DuckDuckGo's Privacy Browser instead (see below).

Clean Master

This Chinese cleanup app was banned by Google Play in 2018, but is still available from other sources. It has 18 trackers and 81 permissions and is definitely best avoided (Android devices do a good job of cleaning up after themselves anyway).

Turbo VPN

VPN apps are supposed to protect your privacy on your mobile device, but they're among the worst offenders for tracking you. Turbo VPN has a 4.6 rating on Google Play, but also has seven trackers. Stick with something trustworthy like Proton VPN (www.snipca.com/37551).

Virus Cleaner

With 15 trackers, spanning at least four ad networks, this supposed antivirus app is the last thing you should install to keep your phone safe. You're better off with a security app from a well–known name such as Kaspersky (www.snipca.com/37550).

My Talking Tom

This virtual pet game, which involves you nurturing the titular cat, features 32 embedded trackers (see screenshot). In fairness, the developer warns users about ads, but surely Tom doesn't need *that* many!
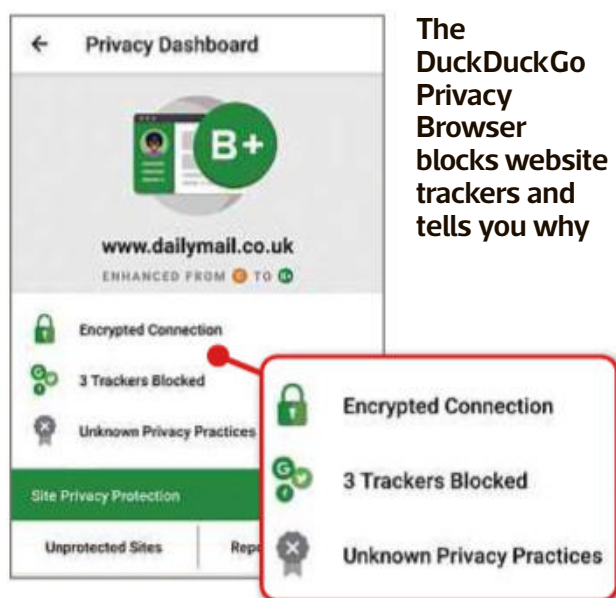

The DuckDuckGo Privacy Browser blocks website trackers and tells you why

(Android www.snipca.com/37478; iOS www.snipca.com/37479). There's also the Tor Browser for Android (www.snipca.com/37477), which prevents anyone from seeing anything you do online, but is slow for everyday use.

Stop apps recording your face and voice

The camera and microphone on your phone or tablet will only be accessible to apps with the relevant permissions. You can check this on Android by going to Settings, 'Apps & notifications', Advanced, 'Permission manager' (or 'App permissions') and tapping Camera or Microphone to view all permitted apps. On iOS, go to Settings, then Privacy to do the same.

A bigger privacy concern is when an app uses your camera or microphone in the background, potentially recording what you're doing or saying without your knowledge. Apple addressed this fear in iOS 14 by introducing a feature that warns you about surreptitious audio and video tracking. When your microphone is being used by an app, a tiny orange dot appears in the top-right corner of your screen; when your camera is activated, you'll see a green dot. You can then swipe down to your Control Centre to discover which app is responsible and change its permissions.

To get the same privacy indicators in Android, install the free app Access Dots (www.snipca.com/37472), which also uses green and orange dots for camera and microphone usage, plus a blue one for GPS location (see screenshot above right). Go to 'Settings', Accessibility, Access Dots (on some Android devices, you'll need to tap 'Installed services' first), then select 'Use service' (or just tap the slider to turn it on) to activate the app. You can resize and reposition the coloured dots as required.

If you never make use of it, it's also
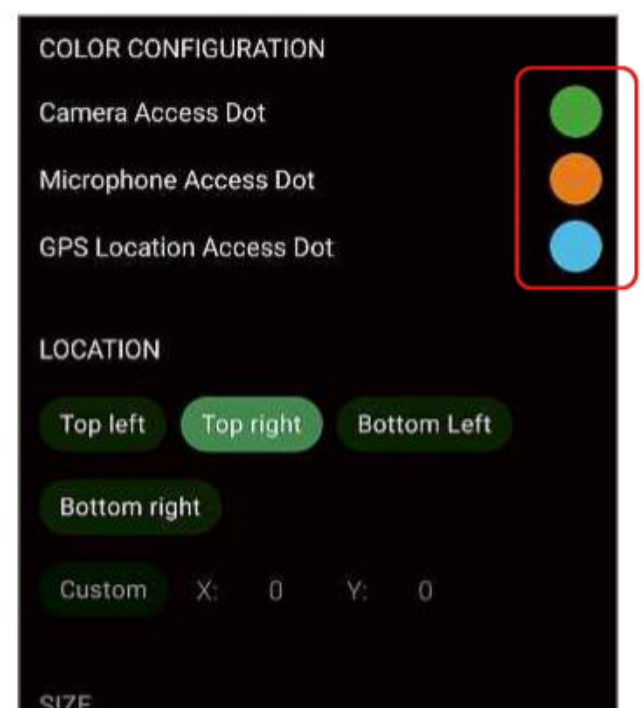
Access Dots brings iOS 14's camera and microphone indicators to Android

worth switching off your phone's built-in voice assistant – doing so means it won't start recording what you're saying if you accidentally activate it. To disable Google Assistant, open the Google app, tap More, Settings, Google Assistant, then General and switch it off there. With Siri on iOS, go to Settings, 'Siri & Search', switch off 'Listen for "Hey Siri"' and 'Allow Siri When Locked', then tap Turn Off Siri to confirm. **ca**

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STEP 3 Tap 'Subscribe'

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STEP 3 Click the 'Subscribe' button and pick your term

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ANDROID

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How NOT to update your drivers

Windows does a good job of installing and updating drivers, but it's not perfect. **Will Stapley** reveals when you should take control and how to avoid making the mistakes that will drive you to distraction

Every component of your PC's hardware (whether inside or attached externally) requires a driver. These small but vital pieces of software tell Windows what each device is and how to work with them. Install the wrong one, and your PC will soon start playing up. Here's how to avoid the five most common driver mistakes.

1 Avoid drivers from unofficial sources

Remember the days when adding a new piece of hardware to your PC meant scrabbling around for the floppy disk that came with it, then installing the driver yourself? These days Windows 10 does most of the hard work for you. As soon as you connect a new device,
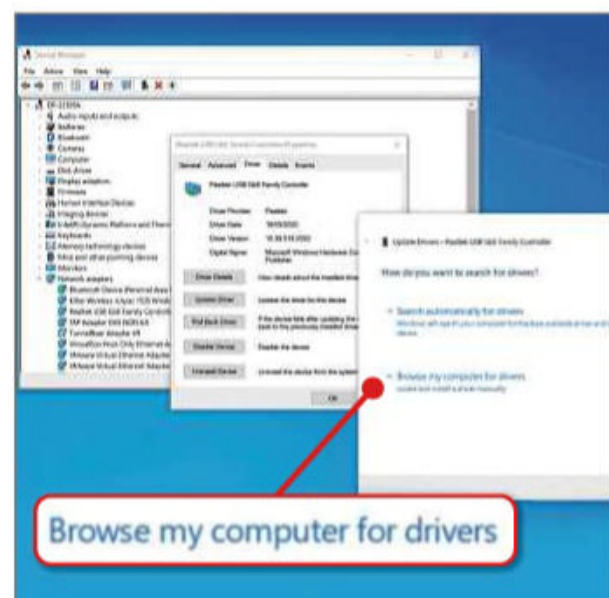
Bypass Windows Update by downloading and installing drivers yourself

Windows searches its huge database of drivers for the best one, downloads and installs it, then displays a 'Device is ready' notification – often in under one minute.

Although this process works well most of the time, Windows sometimes fails to find a driver for a device, or it may install an updated driver that causes problems (such as Nvidia's latest driver, as we'll explain in a moment). When this happens you'll need to find the correct driver yourself, but you should take care when searching online as the web is full of dodgy driver-download sites. Although you're not at risk of installing a fake driver (Windows will only install digitally signed drivers – ie, verified by Microsoft), you may find these websites bundle PUPs and malware with the official driver.

Most drivers are downloaded as EXE files – to install them, simply run the file. Those that download as ZIP files require a bit more work. Extract the ZIP file's contents to a folder on your computer, then open Device Manager (click the Start menu, type device manager, then press Enter). Double-click the relevant category of hardware to open it, then right-click the device you want to update. In the window that opens, select the Driver tab, 'Update driver', then 'Browse my computer for drivers' (see screenshot left). Click 'Browse', locate the folder you want to extract the ZIP file to, then click Next and Windows will install the driver.

2 Don't always install 'optional' drivers

When submitting new or updated drivers to Microsoft to be digitally signed, hardware manufacturers mark them as either 'automatic' or 'optional'. Those marked as automatic are typically drivers that fix security flaws or major bugs (these are installed automatically as part of the Windows Update service). Optional drivers are less critical and usually fix minor bugs or add new features.

In August last year, Microsoft changed how Windows manages optional driver updates. Previously, had you searched for an updated driver in Device Manager, Windows would download the latest one, even if it was marked as optional. Now, however, you can decide whether optional drivers are installed.

To see which optional drivers are available for your PC, open Settings (press the Windows key+I), select 'Updates & Security', then click the 'View all optional updates' link on the right. In the window that opens, click the 'Driver updates' category.

While it might be tempting to download any drivers you find here, bear in mind newer drivers aren't always better. For example, Nvidia's latest driver for its RTX 3060 graphics card (released on 4 March) has left some users suffering glitches with 3D games (see Nvidia's forum at www.snipca.com/37583).

Microsoft doesn't provide much information about these optional drivers
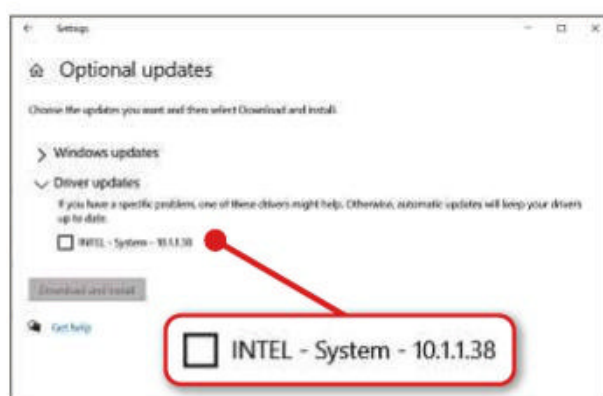
Find out whether an optional driver update is necessary before you install it

Stop Windows updating your drivers automatically by selecting this option

The 'new' driver for our wireless card on Dell's site **1** was three years older than our current one **2**

so before installing any, we recommend you carry out some research. When we checked the optional driver updates for our laptop, we saw 'INTEL – System – 10.1.1.38' listed (see screenshot above). An online search threw up an Intel support page telling us the update was for our laptop's motherboard. In the description, Intel said that it may cause 'a loss of functionality'. Not exactly a ringing endorsement, and because we weren't experiencing any problems with our laptop we chose not to install it.

If you find an optional driver that you *do* want to install, tick the box next to it in the list, then 'Download and install' at the bottom.

3 Don't turn off Windows driver updates

If you don't like the idea of Windows automatically installing certain drivers, it is possible to stop this. However, it's not something we recommend because you'll have to regularly check for and install updated drivers yourself (particularly important for those that fix security flaws). Plus, thanks to the recent changes to Windows Update (as mentioned above), Windows installs only high-priority drivers automatically – in other words, those you really need.
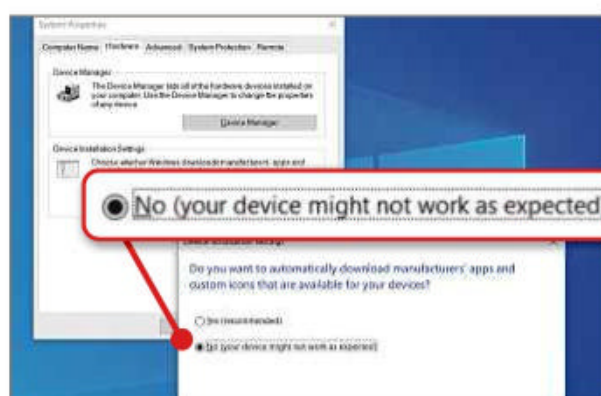
That said, if you're happy to take

responsibility for updating *all* your drivers, you can turn off automatic driver updates by right-clicking the Start button, selecting System, then clicking 'Advanced system settings' (either at the bottom or right-hand side of the window). In the System Properties window that opens, select the Hardware tab, then click Device Installation Settings, select No (see screenshot above), then Save Changes.

4 Avoid batch-installing drivers using third-party tools

Promising to update *all* your drivers with one click, tools such as IObit Driver Booster (www.snipca.com/37578) seem to offer a hassle-free option. However, we advise caution. A quick search online reveals plenty of disgruntled users who have suffered PC freezes and other problems after updating their drivers in one go, often because these tools have downloaded out-of-date or incompatible updates.

If you do use a program like Driver Booster, be sure to research the required drivers it lists before installing them. Better still, make a note of the updates you need, then go to the manufacturer's support page for each and get the driver from there.

Another option is to use your PC manufacturer's driver-update tool – such as Dell's (www.snipca.com/37579) and
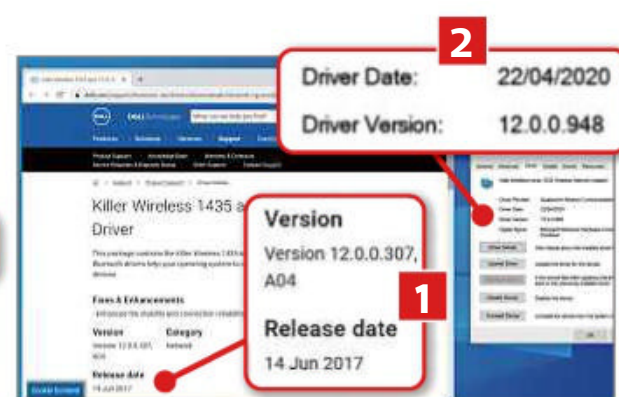
HP's (www.snipca.com/37580). The updates listed here have been tested on your precise make and model of computer, but you still need to take care.

When we scanned our XPS 13 laptop, Dell's tool recommended we upgrade the driver for our wireless networking card (a Killer Wireless 1535). However, clicking 'View details' led us to a webpage that revealed the version it wanted to install (v12.0.0.307) was three years older than the card's current driver (v12.0.0.948) as shown in Device Manager (see screenshot above). Needless to say we opted to give this 'update' a miss.

Of course, if you've been experiencing problems with your PC, 'downgrading' to an earlier version of a driver might fix it (see box below left).

In 64bit versions of Windows 8.1 and 10 you'll see this message if you try to install a driver that isn't digitally signed

5 Don't install unverified drivers

If you have an old piece of hardware, you may find its driver isn't digitally signed, meaning Windows refuses to install it (see screenshot of error message above). Search online and you'll find ways to bypass this Windows requirement. However, unsigned drivers may contain vulnerabilities, which hackers can then use to access your PC. Instead, ditch the device in question and upgrade to one that's fully supported. Note that it's only the 64bit versions of Windows 8.1 and 10 that require drivers to be digitally signed. If you're running a 32bit version of Windows, you'll be able to install unsigned drivers, but you'll still see a warning message first. **ca**

Reverse driver updates

Updated drivers don't always work as planned – some cause your device to stop working, others can freeze your PC. The good news is that rolling back to a previous version is relatively easy.

Open Device Manager by typing device manager into the Start menu and pressing Enter, then locate the relevant device and double-click it. In the window that opens, select the Driver tab, then click Roll Back Driver.

If you've tried installing multiple drivers for this device, rolling back the driver may

simply revert to one that also causes a problem. If this happens, click Uninstall Device, then tick the 'delete the driver software for this device' option.

For USB devices, simply unplugging then reinserting them will tell Windows to look for the best driver online.

For hardware such as your graphics card, click the Action menu in Device Manager, then 'Scan for hardware changes' – this prompts Windows to re-detect your device and download the correct driver.

Listen To Your TV Wirelessly

Is the peace and quiet in your household constantly disturbed by your – or someone else's – TV viewing habits? **Jonathan Parkyn** reveals the essential wireless kit that lets you watch your favourite programmes in private

TVs are getting smarter, but most lack a relatively simple feature: the ability to connect a pair of wireless headphones. As we explain here, with an inexpensive Bluetooth transmitter and a little know-how, you can connect a set of wireless headphones to just about any TV in a matter of minutes.

Along with providing better audio compared to the tinny speakers on most modern TVs, listening via wireless headphones can help if you're hard of hearing (particularly if you find the dialogue in current TV shows hard to decipher). And as well as putting an end to arguments about how loud the TV is, you'll be able to watch TV late at night without disturbing family or neighbours.

Check your TV's audio connections

Most TV sets have a socket for wired audio output. You can refer to your TV's manual to identify this, but it's easier to take a look at the back and sides of your set.

There are three main types of audio-output socket to look for. The most common is a 3.5mm jack (usually marked by a headphone icon). You may also see a pair of red and white phono sockets. And newer TVs will usually have a digital optical audio output - a small, square socket that emits a red light. Make a note of which audio outputs your TV has, as you'll need to buy a Bluetooth transmitter that's compatible with at least one of them.

Choose your headphones

You'll need a pair of Bluetooth headphones to listen to your TV wirelessly. As you might expect, these vary significantly in price. Sony's WH-1000XM4 Noise Cancelling Wireless Headphones, for example, produce superb, balanced audio, block out noises around you and the battery lasts for up to 30 hours on a single charge. But at £299 (www.snipca.com/37526), they are expensive and primarily designed for audiophiles who take their music very seriously. If you only plan to use your headphones for watching TV, we recommend looking elsewhere.

Creative's Outlier ONE V2 Wireless In-Ear Headphones (£30 from www.snipca.com/37527, pictured below) are one of the cheapest options around. These Bluetooth earbuds (the type that sit inside your ears rather than over them) are surprisingly light and more comfortable

Creative's Outlier ONE V2 Bluetooth earbuds are cheap and comfortable

Philips' PH805BK headphones are our top pick for listening to the TV wirelessly

than most we've tried. While their sound quality can't compete with more expensive headphones, they are perfectly adequate for watching TV.

If your budget allows, we recommend Philips' PH805BK headphones (£99 from www.snipca.com/37528, pictured above), which combine decent audio quality with a snug, over-the-ear design. And while not quite as impressive as the Sony headphones, their noise-cancelling feature does a decent job of insulating you from background noises.

Select your Bluetooth transmitter

The final piece of the jigsaw is a Bluetooth transmitter – a device that bridges the wireless gap between your TV and your headphones. It plugs into the audio-out socket on your television and transmits the sound wirelessly to your headphones over a Bluetooth connection.

Again, prices vary. Devices like Sennheiser's BT T100 Bluetooth Audio

Sennheiser's BT T100 connects to a TV set using 3.5mm jack **1** and digital optical **2** connections

Most Bluetooth transmitters can be powered by connecting them to a USB port on your TV

When used with a TV, the TaoTronics transmitter needs to be set to transmit (TX)

Transmitter cost around £70 (www.snipca.com/37529, pictured above right). The BT T100 offers a choice of TV audio connection – 3.5mm jack and digital optical. It doesn't support the latest Bluetooth 5.0 standard (more on this below), but it mitigates this by converting audio using a low-latency codec. In plain English, this means it compresses your TV's audio before transmitting it, allowing it to be sent via Bluetooth faster and ensuring the audio is always in sync with the picture.

However, you don't necessarily need to pay a premium for a latency-free transmitter. TaoTronics HD Wireless Audio Adapter (£23 from www.snipca.com/37530) supports Bluetooth 5.0. This means it can transfer data at 2Mbps (double that of the Bluetooth 4.2 standard), so you shouldn't have a problem with out-of-sync audio.

The TaoTronics transmitter has a 3.5mm audio connection and can work as a Bluetooth receiver as well as a transmitter, meaning you can also use it to send music from your phone to your music system's speakers.

Set up your kit

You first need to connect your transmitter to your TV's audio output – in most cases this means using the supplied audio cable to connect the transmitter's 3.5mm socket to the corresponding one on your TV. If your TV has phono outputs, you may need a 3.5mm-to-phono adapter – the TaoTronics transmitter comes with one of these, but you can pick one up for just £3 on Amazon (www.snipca.com/37567) if your transmitter doesn't.

You'll need to power your Bluetooth transmitter. In most cases, you can use the supplied USB cable to connect it to a USB port on your TV (as we did with our TaoTronics transmitter – pictured above), though you may need to power it via the mains, as we'll explain later.

Finally, you'll need to connect the Bluetooth transmitter to your headphones by putting both into pairing mode. The precise process varies from device to device - when connecting our TaoTronics transmitter with a pair of Philips PH805BK headphones we had to hold down the power button on both for around five seconds. The two then paired

and our TV started outputting audio to the headphones.

Solve connection problems

Bluetooth can be unreliable, so you may have to run through a few troubleshooting steps if you can't get your connection to work. First, check whether your transmitter is receiving an adequate power supply. Some TVs don't provide sufficient power through their USB sockets, so if your transmitter isn't showing any signs of life at all, try connecting it directly to a mains socket using a USB power adapter, such as the one you use to charge your phone.

Pairing Bluetooth devices can be fiddly too, so be sure you follow your device's instructions. Even then, it may take several attempts to get your headphones and transmitter talking to each other (turning them both off and on again often helps). If they still won't connect, move the transmitter and the headphones closer together and look for any other wireless devices, such as mobile phones, that could be causing interference.

As mentioned earlier, some Bluetooth transmitters - such as the TaoTronics model - work as both wireless transmitters and receivers. If your device can do both and you're having connection problems, check which mode it's set to. The TaoTronics transmitter has a small switch on one side that needs to be set to TX (pictured above), indicating 'transmitter' mode. If it's set to RX (receiver), you won't hear the TV audio through your headphones.

If you're receiving audio through your headphones but it's out of sync with the picture, try moving closer to your TV and making sure there are no other wireless devices within range. The most common cause of audio lag, however, is the limited bandwidth provided by the Bluetooth standard itself. If your headphones don't support Bluetooth 5.0, consider upgrading (the three headphones mentioned earlier all support Bluetooth 5.0). **ca**

Listen wirelessly via your streaming box or TV stick

If you have a streaming stick, you may not need a separate Bluetooth transmitter to listen wirelessly. Amazon's Fire TV Sticks (including the Lite version – £29 from www.snipca.com/37564) let you listen via Bluetooth headphones by going to Settings, 'Controllers and Bluetooth Devices', then Other Bluetooth Devices. You can pair headphones with an Apple TV (£199 from www.snipca.com/37565) by going to Settings, 'Remotes and Devices', then Bluetooth.

Roku provides a different method – you can listen to your TV's sound wirelessly via the Roku mobile app (Android www.snipca.com/37532; iOS www.snipca.com/37533). Connect headphones to your phone or tablet, then tap the Private Listening button (headphone icon - see screenshot) in Roku's app to stream audio. Roku sticks start at £27 for the Express version (www.snipca.com/37566). The only downside of these methods is that you're restricted to watching content on your TV stick.

Problems **Solved**

Our experts solve all your tech problems

Why can't I activate Microsoft Office?

Q In 2014 I bought Microsoft Office Professional Plus 2013 through a company scheme. I installed it on my laptop and desktop PC. My laptop failed in 2019 and I then installed Office 2013 on my new laptop with no problem. This year I had a catastrophic PC failure so I purchased a new PC, duly installing Office 2013 from my original disc. This would not activate and has become unusable. This is disappointing and in my opinion unfair. I've been using Word and Excel for 30 years now. Office 365 is not somewhere I wish to go. If I buy a copy of Office 2019 I get a limited set of programs and one copy, one PC. This is very limiting, as I have both a desktop PC and a laptop. There is also the spectre of failure: if my PC fails then do I lose the licence and have to fork out once again? Microsoft seems to be alienating a portion of the computer-using public.

Richard Avery

A The terms of Microsoft's licences are generally impenetrable to us mere mortals, which we suppose is just the way the company likes it. If people are confused about what is allowed then they're more likely to pay to 'upgrade' when they hit a brick wall – which is precisely where you're at.

Russia (Россия)	+7 N/A	495 916 7171 8 800 200 8001	Русский
Serbia (Srbija)	N/A +381	0700 300 300 (0)11 330 55 00	Srpski
Slovakia (Slovensko)	N/A +421	0850 111 300 259 295 888	Slovenčina
Slovenia (Slovenija)	N/A +386	080 80 28 (0)1 584 61 00	Slovenščina
Spain (España)	N/A	902 197 198	Español
Sweden (Sverige)	+46	(0)8 55 99 00 00	English / Svenska
Switzerland (Schweiz / Suisse)	N/A N/A	0848 858 868 0848 801 255	Italiano / Deutsch / Français
Turkey (Türkiye)	N/A	0850 390 2777	Türkçe
Ukraine (Україна)	N/A +380	0 800 308 80 0 44 230 5101	Українська / Русский
United Kingdom	+44	(0)344 800 2400	English

North America / Central America / Caribbean
Middle East
South America

(0)344 800 2400

Microsoft operates an Office-activation service you can access by calling 0344 800 2400

Now, while we're in no way defending Microsoft's modus operandi, with a few exceptions licences for traditional, boxed copies of Office have always tended to be for only one computer at a time. So, while we also do not know the specific conditions of the scheme through which you purchased Office 2013 – and nor therefore the particular licence terms – it's clear that your repeated installations of the program, on different computers and with the attendant multiple product-key activations, have triggered a 'Computer says no' response from Microsoft's servers.

As frustrating as that is, there's likely to be a simple solution – and that's to call Microsoft. While the firm hardly advertises the fact, it still operates an activation service that's manned by humans, not machines. It is possible to force Office to display the option to activate by phone (see screenshot below left) by disconnecting your computer from the internet. If you're in the UK that number is 0344 800 2400 (see screenshot above).

So, forget buying Office 2019 (at least until 2023, when support for Office 2013 finally ends).

Instead, pick up the phone, dial that number and then use your telephone keypad to navigate through the robotic answering system to indicate that you're a home user who wants to activate a new installation.

Work your way through the menu system and, eventually, you'll be put through to a living, breathing human employed by Microsoft.
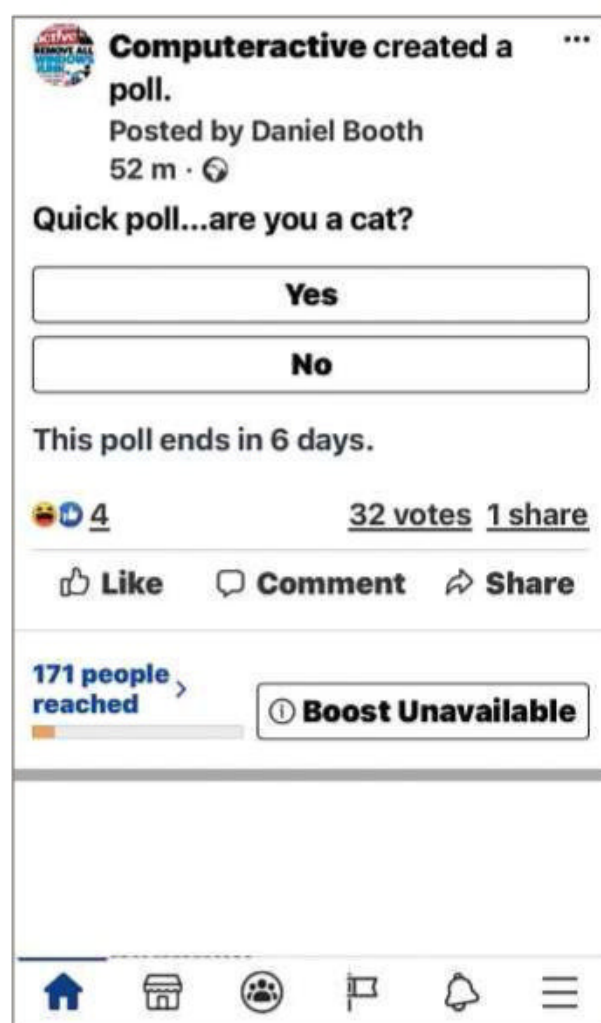
Explain the situation and, if the person on the other end of the line believes that your story stacks up, they'll lift the activation block and you'll be good to go.

Disconnect your computer from the internet to make Office display the option to activate by phone

Can I cancel my Facebook vote?

Q Recently, while browsing Facebook on my iPhone, I saw a poll posted by an organisation I follow. Almost without thinking I tapped an option in this poll, resulting in an instant vote. Fair enough, I did voluntarily tap. However, I realised only afterwards that my vote was effectively public, because it seems anyone who clicks the vote-count link sees who voted. At least, that was my experience: when I tapped the number of votes, I could see everyone who had voted! If I had known this then I would never have tapped to vote. Moreover, I could find no way of removing my vote. It's probably too late now for this poll and I doubt I'll ever vote again in a Facebook poll, but I'm wondering if votes can be cancelled?

Mick Ward

A We agree that Facebook polls are far from ideal, not least because the service doesn't warn users that votes aren't private. It's also not remotely obvious if or how a vote can be cancelled. The good news is that it is actually easy to undo a Facebook vote but, as so often with these things, that's true only if you know the method.

Once you've voted, all you need to do is tap the bar that represents how you voted (it'll have a little tick symbol next to it) and then tap 'Undo vote' (see screenshot above right).

To undo a Facebook vote, tap the bar showing your vote (with a tick by it – see above right)

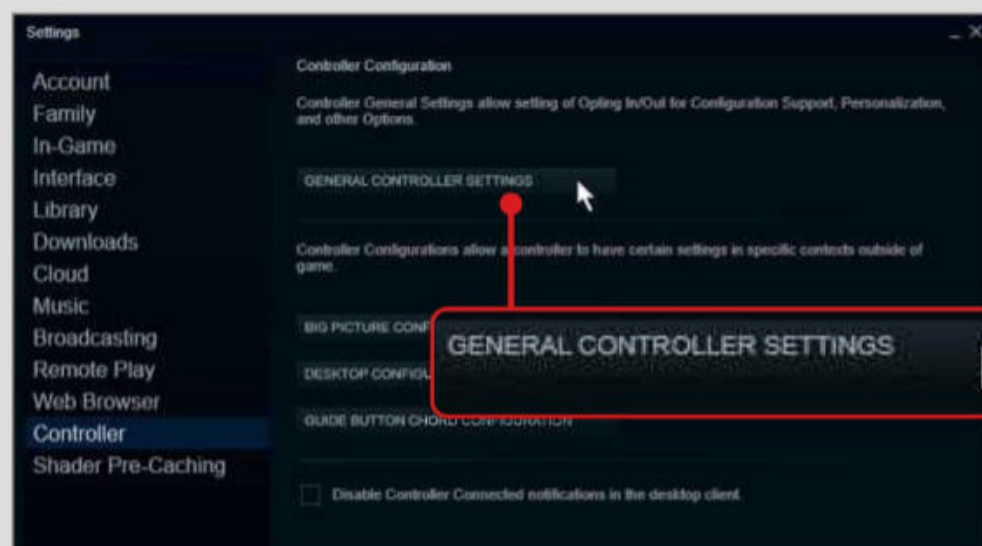# Will my old joystick work with Flight Simulator 2020?

Q I'm about to buy a good, modern flight simulator – either X-Plane 11 or Microsoft Flight Simulator 2020. I have an ageing Logitech Wingman Digital 3D joystick, which appears to work fine. It has the old yellow 15-pin games connector, which I have attached to my computer using a USB adapter. Do you know if this will work with a modern flight simulator or will I have to upgrade?

Paul Davies

Assign the controls for your Logitech joystick via Steam's 'General Controller Settings'

A Almost certainly yes, because you already have the joystick working in Windows 10 with a USB adapter.

However, your controller is old and, as we don't have one, we have no way of testing what will happen in these specific games.

One possible hurdle, though, is how or rather where you obtain your new game. Buy either title directly from the relevant developer and we think you'll be OK. However, if you buy via the Steam platform you might need to tweak its controller settings to map commands to your joystick.

To do this, first click to open the Steam menu at the top left and then choose Settings. Next, choose Controller and then, on the right, click General Controller Settings (see screenshot above).

Now click to select your Logitech joystick and then follow the prompts to assign the controls.

Why is Microsoft Money taking up 100GB?

Q A few years ago I installed the 'sunset' edition of Microsoft Money to enable me to access old financial files. That went fine, and I still use it. Recently, though, when uninstalling another app, I noticed that Money is taking up over 100GB of space on my drive! This seems ridiculous. I don't want to get rid of it but I would like to know why such an old program needs so much room.

David Griffin

A It doesn't. In fact, the actual size of the Money program folder is likely to be closer to 100MB. However, remember that this is a very old program that Microsoft no longer supports. The way Money's entries are added to the modern-day registry fools Windows 10 into thinking that it takes several orders of magnitude more space than it really does.

You can check this for yourself by first right-clicking the program's installation folder, which is usually within C:**Program Files (x86)**, and then choosing Properties.

Click the General tab and then check the figure alongside Size (see screenshot below).
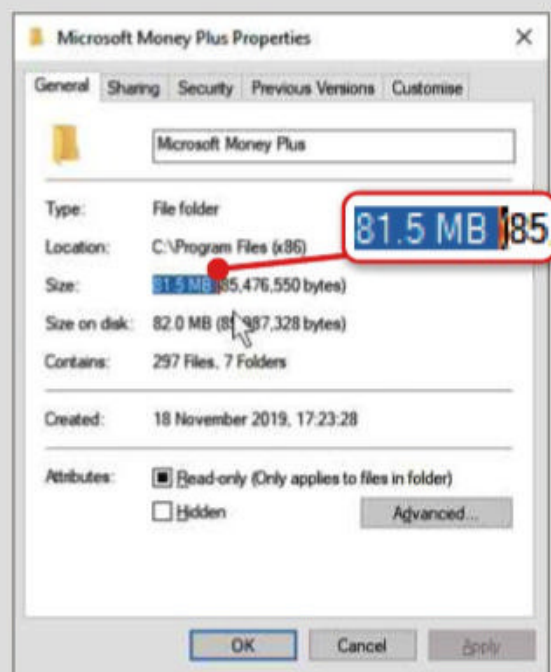
Check the size of Microsoft Money under the General tab in Properties

How do I stop my icons scattering?

Q For no apparent reason, the icons on my Windows 10 desktop scatter randomly. It happens when returning to the desktop from a program screen. After the latest scattering, when moving icons back into order, I found that some were 'stacked' – one behind the other. This has happened a few times now. Any ideas?

Derek Wellings

A It's hard to say what causes a problem like this because Windows has no shortage of frustrating little bugs.

However, there are a few things you can try to stop it. First, there are a couple of auto-sorting options that you should check are enabled. To do this, right-click a blank part of your desktop and then point to View. In the submenu tick either one or both of 'Auto arrange icons' and 'Align icons to grid' (see screenshot below). The first will keep icons in regimented lines, starting on the left; while the second – without the first enabled – ensures that icons you move 'stick' to an invisible grid.

If the problem recurs, then Windows 10's icon cache might be corrupted. To fix it, first close everything other than Windows 10. Next, click Start, type cmd and then right-click Command Prompt and choose 'Run as administrator'.

This will open the Command Prompt window. Here, type cd C:\Users\ YourUserName\AppData\Local\ Microsoft\Windows\Explorer – replacing YourUserName with your Windows 10 username – and press Enter. Check that the prompt now reads C:\Users\ YourUserName\AppData\Local\ Microsoft\Windows\Explorer and then type del iconcache* and press Enter. Note that the asterisk on the end is an intentional wildcard indicator.

At this stage, an error might appear saying that some files have not been deleted. This is because an icon is still in use by Windows Explorer. Incidentally, by this we mean the process that handles the Windows 10 environment, not File Explorer (which, confusingly, used to be called Windows Explorer – thanks for making life easy, Microsoft!).

To stop this, launch Task Manager by pressing Control (Ctrl)+Shift+Escape, then select the Processes tab, right-click Windows Explorer and choose 'End task'. Now return to the Command Prompt window to repeat the above steps.

Finally, press Ctrl+Alt+Delete and then click 'Sign out'. When you sign back into your PC the icon cache will be automatically rebuilt – and that will hopefully be the end of your problem.
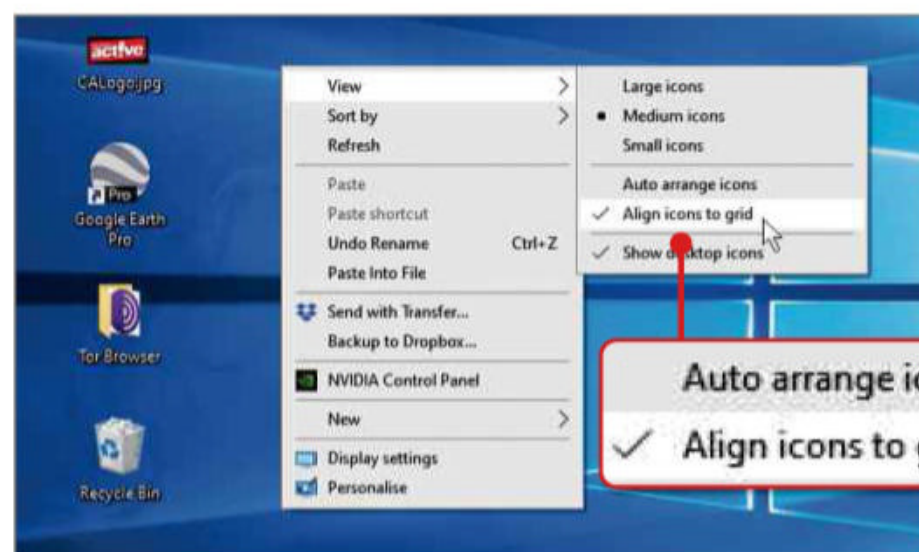
Select 'Auto arrange icons' to keep icons in regimented lines, while 'Align icons to grid' makes them 'stick' to an invisible grid

Why does Zoom elevate my importance?

Q I've been taking *Computeractive* since the introduction of Windows 10 and it has helped me many times to overcome problems. However, my question isn't really a problem but a curiosity. I'm mystified about why Zoom always makes me appear as the second person on the display, no matter how many people I'm meeting. Other people move around the display but I always remain second, making me look more important than I am! How does Zoom organise participants?

Roger Bennett

Click 'Gallery' in Zoom and then drag and drop participants into the order you want

A There are several aspects that affect the order of displayed participants in Zoom meetings. In the first instance, it's at the control of the meeting host. This person is able to enforce whatever view they choose on all participants, and they can make you see whatever order they want by opening the View menu and ticking the Follow Host's Video Order option. This enforcement will apply in either Gallery or Speaker view (also in the View menu).

Most likely, though, your hosts are not doing this. Rather, you're viewing

in Gallery view, which will always show the host as the first participant, and you as the second. It might seem that everyone else is shuffling around randomly but, actually, it's just Zoom reordering only your display as people enter or leave, or mute or unmute their microphones. Or, in the case of Speaker view being selected at your end, when a person becomes the active speaker.

Assuming that the host doesn't have

the aforementioned Follow Host's Video Order option enabled, then you can actually fix any order you choose.

First, click View followed by Gallery and then just click, drag and then drop people's images around your screen into any order you choose (see screenshot above).
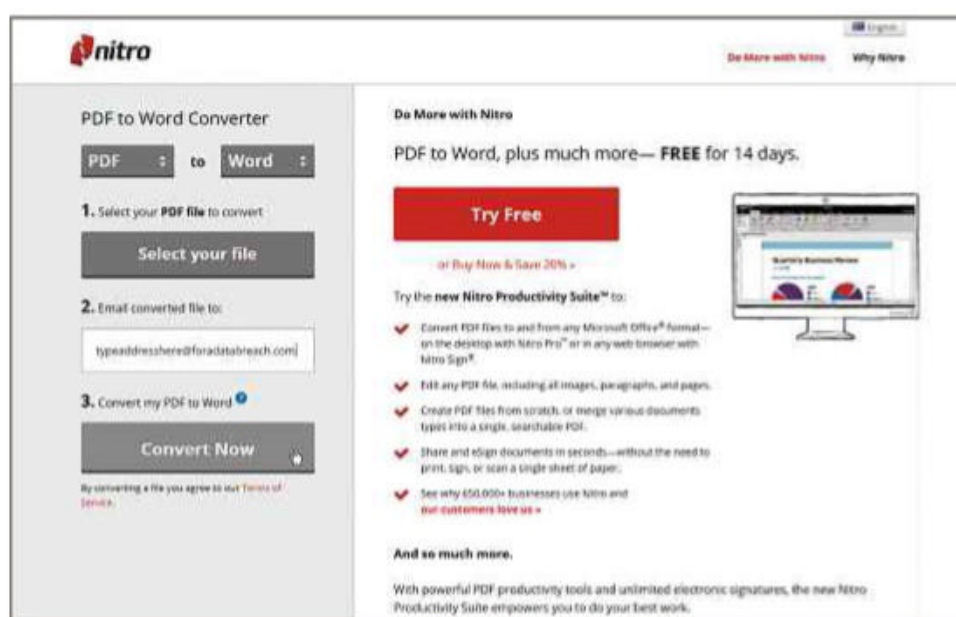
Now, no matter what happens, their position (from your perspective) will not change during the meeting.

Have I been 'pwned'?

Q I have received an alert email from 'Have I been pwned?' (https://haveibeenpwned.com), notifying me of a data breach of Nitro PDF users' details. Apparently, this breach contains my contact details. As far as I know, I don't have an account with Nitro PDF. How serious is this breach and do I need to change anything to do with my email address?

Tony Pelham

Anyone who used Nitro's 'PDF to Word Converter' website would have needed to supply their email address

A We have bad news and good news. Yes, Nitro suffered a data breach late last year, so the warning from 'Have I been pwned?' is accurate. However, Nitro insists that it isn't 77 million accounts that have been compromised (as widely reported). Rather, the company has stated that

many of the 77 million have merely used one of its free online document-conversion services, such as 'PDF to Word Converter' (www.pdftoword.com, see screenshot above). As users must supply an email address to receive the resulting document, it is these email addresses that make up the bulk of the 77 million.

So, you needn't have signed up for an

'account' for your email address to have appeared on this list: you merely need to have used one of Nitro's services.

The good news is that if you've never signed up for any Nitro account then the only piece of data exposed by this breach is your email address. That's not great, but nor is it a disaster. Expect some spam, perhaps – but otherwise don't worry.

Problems **Solved**

Is there any hope for my lost photos?

Q Getting on for a decade ago the hard drive in my laptop died. The machine had been working well the day before, sat on a table and hadn't been moved overnight. Foolishly, I hadn't backed up many treasured photographs.

I sent the old drive off to a data-recovery company who charged me over £300 to dismantle it and check it over. Their report concluded that the drive was physically damaged and no data could be recovered.

I kept the drive in the hope that recovery techniques may improve.

Is there any hope that I could get my photos back?

David Lisle

A Practically speaking, we're afraid the chances are close to zero – because data-recovery techniques haven't really changed. We've not seen the drive but if a specialist data-recovery firm has reported that it's physically damaged, then we have to assume that it is.

Now, we should say that even if the drive were broken in two then, with endless time, money and patience, it wouldn't be inconceivable that someone, somewhere – a national intelligence agency, say – might be able to recover fragments of data from the platters. But data fragments are not photos, and the difficulty involved would anyway be enormous.

Of course, you could send the drive to a different company for a second expert opinion, but we really wouldn't hold out much hope.

**Even if split in two, an old drive's data (but not photos) may be salvageable in fragments**

Do I have to keep two copies of every file?

Q I read Daniel Booth's 'Easy When You Know How' column (Issue 595, page 74) on switching from Google Drive to OneDrive. Despite being in the IT industry all my life, one thing has always confused me – the setting of the PC source folder, whether it be Google Drive, OneDrive or another service. Is it *only* stuff in these areas that's automatically uploaded to the relevant cloud service? Does this mean that I must keep an extra copy of any file that I currently use in my Documents or Pictures folders? And must I continually replace the 'extra' copy of the main one that I edit? It seems an inordinate waste of time, effort and duplication.

Alan Brown

A What you describe would be inefficient, but it's not the way these services are intended to be used. Rather, they're meant to be a 'main' repository, into which you throw everything. These days, OneDrive is well integrated into Windows 10, so on a new PC, for example, the default Documents and Pictures folders would already be within OneDrive.

However, it's also possible to move these Windows 10 default (or any other) folders into the top-level folder
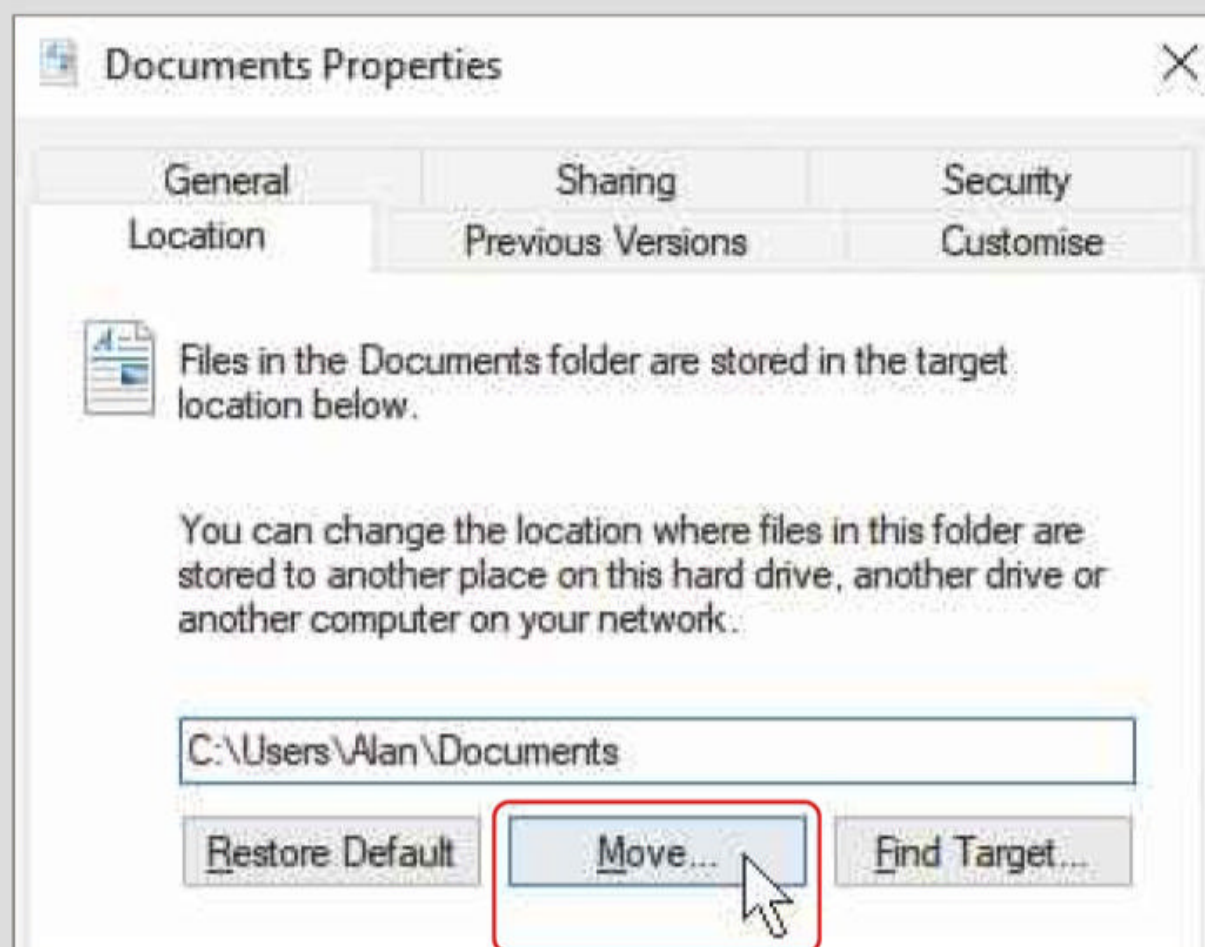
In File Explorer, Properties, you can opt to keep files in a cloud service such as Google Drive

of whatever cloud service you're using. To do this with the Documents folder, for example, first press Windows key+E to launch File Explorer and then navigate to C:\Users\YourUserName. Now, right-click the Documents folder and then choose Properties.

Next, select the Location tab, then click the Move button (see screenshot above). Now navigate to the relevant cloud-service folder, such as C:\Users\YourUserName\Google Drive, and then click Select Folder followed by OK. A warning box will appear. Click Yes to confirm your intentions and then relax while Windows 10 gets on with the job.

Screen ratios?

Q I have a Dell 19in E193FP monitor that's quite old but operating perfectly. The Dell screen dimensions are 15in by 12in, which I calculate to be a 5:4 ratio. I would like to upgrade the monitor to 24in HD IPS widescreen, but I'm confused by the differences between screen ratios. For example, will a display with a 16:9 ratio give me a distorted or 'stretched' image? I use the PC mainly for basic web browsing and the occasional YouTube video.

Neil Howells

A There was a time when Windows wasn't terribly well-equipped to deal with varying aspect ratios, as these width-to-height measures are often called. Connect a 16:9 widescreen display to an old Windows XP computer, for example, and you could expect either a stretched Windows desktop or one that was centred in the middle, with black bars down the left- and right-hand sides. Depending on the graphics card, display and drivers this might have

been fixable by adjusting some options in XP's Control Panel.

But Windows 10 is a dab hand at adjusting itself to fit whatever screen might be attached. This goes for almost all modern apps, too. So, no, attaching a 16:9 display to your existing setup won't result in a 'stretched' image. Rather, as a modern 16:9 monitor is likely to have a higher resolution – meaning more pixels overall – you'll simply get more space in which to work.

Indeed, there are now monitors that are wider still. The pictured LG 25UM58 (from £201: www.snipca.com/37449), for instance, offers a 2590x1080 resolution in a 21:9 aspect ratio – around 33 per cent more space than a 16:9 model.

If it helps, think of buying a wider monitor as extending your living room. Your sofa and armchairs won't suddenly
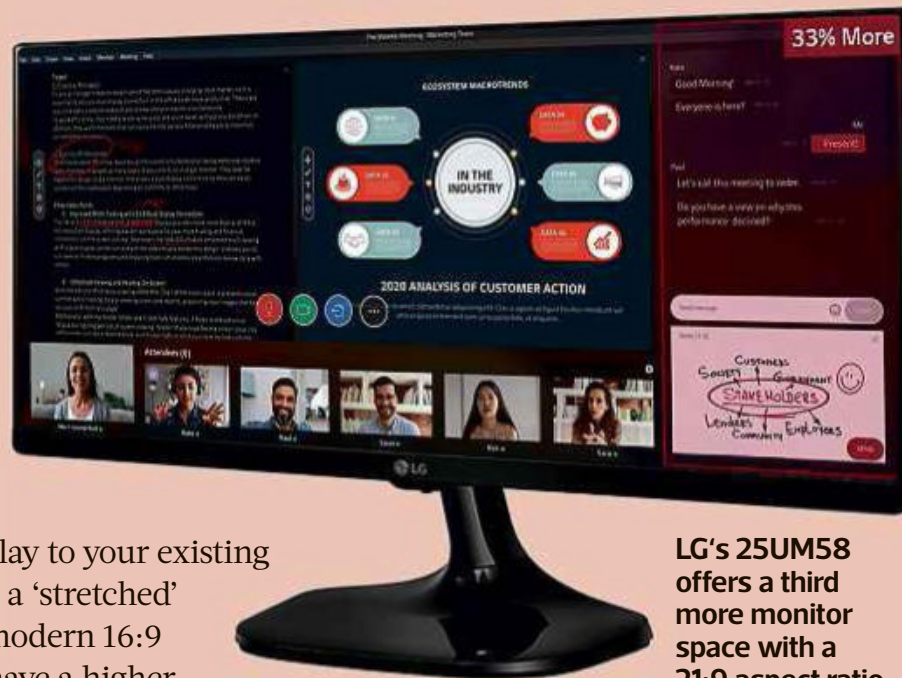
LG's 25UM58 offers a third more monitor space with a 21:9 aspect ratio

get bigger, but you will have more space in which to position them. Similarly, your browser window could stay the same size so you could fit other windows on screen at the same time, or you could expand it to fill the screen – while many YouTube videos are now made for viewing in a widescreen ratio.

✉ Want to know the difference between technical terms? Email noproblem@computeractive.co.uk

Why doesn't my Virgin V6 USB port work?

Q I was rearranging our TV setup recently, so for the first time in years I had reason to move my Virgin V6 box. It was then that I noticed it has a USB port around the back. Following your recent features on USB sticks, I thought I'd stick one in to play some videos from my PC, but nothing

happened. Online advice suggests this port isn't supposed to do anything. Is that correct? If so, why is it there?

Gordon Brewer

A What you've read online is correct: this port currently has no function. Virgin might one

day enable it to do something useful, but the company hasn't given any indication that it ever will. In the meantime the only thing it's remotely good for is as a charging point, as it will actually power up a smartphone, tablet or other USB-powered device if you string a standard USB cable between the two.

The USB port on a Virgin V6 box is currently only useful for charging devices

Problems **Solved**

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Why can't I view Bing's Ordnance Survey maps?

Q I was just reviewing the alternatives to Google and exploring what you wrote in Issue 597's 'Stop Using Google' Cover Feature. I went to the Bing Maps website (www.bing.com/maps) and the maps came up on screen just fine. I also found the Road box mentioned on page 55. However, when I clicked it there was no Ordnance Survey option. Am I missing something? I am currently in the US, so I'm wondering if I have to be back in the UK for this feature to show up?

David Jaggar

**A** Yes, your location is the problem. If Bing Maps determines that you're currently outside the UK, based on your PC's IP address, then the Ordnance Survey option will not show. That's probably down to Microsoft's licensing agreement.

However, there are workarounds. If you use a VPN, for example, you could set it to use a UK-based server and fool Bing Maps into thinking you're in the UK. Windscribe (https://windscribe.com/download) is a good option, as it's free for up to 10GB of data per month. It's also available as an extension for most popular browsers, so it doesn't even need installing.

Once you've added the browser extension and registered your details, click the Windscribe icon in the toolbar followed by the On/Off switch. Initially, its Autopilot feature will probably connect you to a local (meaning US) server. To select a UK one instead, click where it
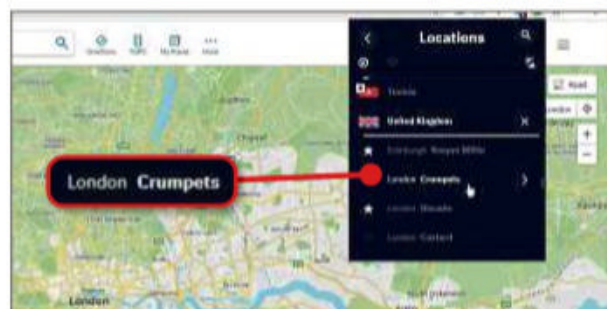
Select one of the free UK-based servers in Windscribe VPN to fully use Bing Maps abroad

says Autopilot then scroll down the list and click United Kingdom, and then click any of the free servers – those not marked with a star (see screenshot below left). You'll now be able to access the Ordnance Survey option in Bing Maps.

Why can't I install BleachBit?

Q I was following your 'Remove All Windows Junk' Cover Feature in Issue 599 to declutter my PC but, when I downloaded BleachBit, Windows Defender tried to block it. I overrode that, but then couldn't run the installer. There is no mention in the article that this might happen and I am a little unhappy at disabling Widows Defender in order to install BleachBit. Is this a known problem?

Nick Shepherd

A We love BleachBit but we're not such big fans of its website. This is because it's littered with advert boxes that show fake Download buttons. While Windows Defender popping up to alert you to a non-Microsoft Store app is quite normal, not being able to continue beyond that suggests that something else might be going on – like third-party security software blocking the installation.

We've installed BleachBit so many times that we have little concern about its legitimacy or safety. However, we think you may have inadvertently downloaded something other than BleachBit – when there's so many fake download buttons it's an easy mistake to make.

So, on the home page at www.bleachbit.org click only the greyish 'Download now' button. Next, under the 'Installation package' heading, click only the Windows link. Finally, click only the 'BleachBit installer.exe' link See screenshot above right).

Why must my Wi-Fi dongle accept interference?

Q I bought the made-in-China Foktech Wi-Fi dongle for my laptop, as recommended in Issue

Click this link on the BleachBit download site to get the official version of the program

599 (page 67). I was intrigued to read a notice on the packet that says the device "must accept any interference received, including interference that may cause undesired operation". Should I be concerned?

JB McGee

A No. This is a standard warning message that's actually a requirement of the US Federal Communications Commission (www.fcc.gov) rather than any UK regulator. However, from the user's perspective it's more or less irrelevant.

What it means is that, in order for it to receive certification (for use in the United States), your Wi-Fi dongle must not attempt to block (or jam) interference from other legally permitted devices broadcasting on the same frequency. So, if American neighbours both had the same device, the two dongles would both have to put up with those occasions when their radio signals might interfere with each other – potentially impacting performance. That would, of course, be undesirable.

However, it's also inevitable – and true of almost any commercial device that uses radio, be it in the US, here in the UK or almost anywhere else in the world. In other words, radio interference is normal. Practically speaking, it's not generally much of a problem, but the FCC in particular requires manufacturers of licensed devices to make this declaration as a requirement of selling their products in the US.

Jargon Buster

1080p Of the common types of high-definition video, this is the best quality: 1920x1080 pixels.

1440p High-definition video of 2560x1440 pixels.

2160p High-definition video of 3840x2160 pixels.

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 Technologies that deliver faster mobile broadband.

4K Video with a resolution of at least 3840x2160 pixels.

Active noise cancelling Method for reducing unwanted sound by adding a second sound specifically designed to cancel the first.

Ad tech Companies such as ad agencies and marketing firms that use software to work out how best to advertise online.

Add-on A program that adds extra features to your browser.

Altimeter A sensor for measuring height about sea level.

AMOLED Active-Matrix Organic Light-Emitting Diode. An alternative technology to LCD for creating flat-panel displays. Most commonly used in smartphones, tablets and smartwatches.

Augmented reality Lets you view the real world on a digital display and add elements from the digital world.

Bandwidth A measure of how much data can be transferred through a connection at one time.

Benchmarking Comparing software and products with an accepted standard.

Blue screen of death Technically called a 'Stop error', this is shown when your PC crashes.

Buffering Downloading a certain amount of data before starting to play a video. Can cause delays to your streaming.

Cache A temporary space for storing information. Can be memory used on a computer processor, or space on a hard drive used by a web browser.

Cat 6 Ethernet cable that can transmit up to 55 metres.

cd/m² Candela per square metre. Standard unit of brightness.

Clean install An operating system installation that overwrites all other content on the hard drive.

Clock speed The speed at which a computer processor can perform operations. Measured in Gigahertz (GHz).

Codec Short for Compressor/Decompressor. A file that tells a computer how to record or play a type of media file.

Colour temperature How blue and yellow-orange combine to produce the overall colour of your monitor.

Computer vision A field of artificial intelligence that trains computers to interpret and understand the visual world.

Cookie A small text file stored on your computer by a website. Used to store browsing preferences, website log-in details and so on.

CSV Comma Separated Value. A standard file format, used for storing tabulated information, that can be opened by most spreadsheet applications.

DisplayPort A new socket for connecting monitors.

Downscaling Reducing a video's quality so it can be played on a device with a lower resolution.

Driver A file that tells Windows how to work with an external device.

Dual-channel memory Memory modules are installed on two separate channels, doubling the peak data bandwidth available.

End-to-end encryption Ensures that messages that can be seen only by the sender and recipient.

Ethernet A standard used for almost all wired computer networks.

EXE A program file designed to run in Windows. Has the file extension .exe.

Firewall A piece of software or hardware that prevents unauthorised access to a computer over a network, such as the internet.

Firmware Basic software stored on hardware, such as a processor, to control its operation.

Frame rate The number of still images, or frames, shown per second to create a moving image. Higher frame rates make games appear smoother and more realistic.

GEDCOM Short for Genealogical Data Communication. A file format used by genealogy programs to share data.

Geekbench 5 A test for measuring processor speed.

Gigabit Internet connection offering speeds of at least 1Gbps (1,000Mbps).

Gigabit Ethernet A very fast networking standard that can transfer data at up to 1,000Mbps.

Graphics card A component in a computer that produces the image shown on the monitor.

HDMI High-definition media interface. A type of connection that transmits high-definition video and audio signals.

Hotspot A public area covered by a Wi-Fi network that allows you to access the internet, either free or for a fee.

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.

Keylogging Recording everything someone types. Normally used to steal passwords.

Launcher An app that changes how the Android home screen looks and works, especially for managing and opening apps.

Latency A measure of the delay in exchanging data between devices and web servers and on networks. Low latency means the delay is imperceptible, while high latency connections are unsuitable for services that rely on online interaction, such as multiplayer gaming.

MAC address Media Access Control. A unique code that identifies any router. A laptop PC might have one MAC for its wired network socket and another for wireless.

Macro camera Lets you take sharp, detailed, close-up photos of small objects.

Manhattan 3 A test that measures the performance of graphics cards.

Metadata A set of data that gives information about a file.

MicroSD card A small type of memory card. Can be converted to SD size using an adapter.

Object tracking Identifying an object in a video.

Open source Software that can be modified by anyone, rather than just by the employees of the company that created it.

Overclock Make a processor work faster to boost performance at the cost of it getting hotter and requiring more power.

Oversampling Capturing video frames at the sensor's full resolution and then convert them to the required video resolution.

Phono A term often used to describe standard stereo (red and white) audio connections.

Plug-in A small program that adds extra features to software or to your web browser.

Port forwarding Choosing which computer in your network a router should connect to.

PUP Potentially unwanted program. A program that may not be desired, despite the user consenting to it being downloaded. Examples include unnecessary plug-ins, toolbars and browser hijackers.

QR code Quick Response code. A square barcode that can be read using smartphones and dedicated QR-reading devices.

RAM Random-access memory. The computer's working area, used for data storage while the PC is switched on. Its capacity is measured in megabytes (MB): the more memory your PC has, the more things it can process simultaneously and the faster it will seem.

Root To perform tasks on Android devices that aren't permitted by the manufacturer.

Screen calibration Ensuring that a monitor correctly displays colours and shapes. Often used to match colours used onscreen and on print-outs.

Script A short program that is stored on a web server to control part of a website. For example, a script could check that a date you have entered is valid, or move words across the screen.

SD card Secure Digital card. A popular type of memory card.

Sideload To install apps without using the official Android or iOS stores.

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.

Supercookies Trackers that are added by your ISP rather than the website itself, and are harder to block or remove.

Switch Allows more than one PC to be connected to a wired network.

Thunderbolt A very fast port for connecting external storage to a computer. Can be used to connect monitors, a network and more.

Transition A way of joining two video clips together or moving from one clip to another. Common examples include wipes, dissolves and cutting to black.

Travel The distance the keys of a keyboard have to be pressed before the keystroke is recognised.

Two-factor authentication A system that uses two different means to identify the user. For example, a PIN in addition to a password.

Ultrawide Offering a field of view that's wider than traditional digital cameras.

USB 2.0/3.0/3.1 Faster successors to USB.

USB-C A new connector that's reversible, letting you plug it in upside down.

VGA Video Graphics Array. An older standard socket for connecting a monitor to a computer.

Volume An alternative term for drive or disk.

VPN Virtual private network. Keeps all internet communication safe and private.

Wildcard A character that can be substituted for one or more characters in a web search, much like the blank tile in Scrabble.

ZIP file A file that contains compressed documents or files.

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Easy when you
Know How

Nostalgic for sun, sea and snapping, **Robert Irvine** opens Google Photos and tries to…

Add his old photos to a map

As we pass the one-year anniversary of the first coronavirus lockdown, I've been reminded of Microsoft's old advertising slogan, "Where do you want to go today?". To which my answer is, "Anywhere, really". Like most people in the UK, my world for the past few months has been limited to the same handful of shops, lunchtime walks around the block and occasional trips to a tired patch of grass that's optimistically described as a park.

So when I discovered that the Google Photos app now has a feature called Your Map, which uses your Google Maps timeline to plot the locations of pictures you've taken, I was prepared to be underwhelmed. After all, my snaps from 2020 to 2021 consist of home-cooked meals I was proud of, pretty sunsets and bored selfies. Certainly nothing I could enter for Photographer of the Year, or that would attract more than a couple of 'likes' on Instagram (thanks, Mum!).

But I soon realised that Your Map, which you can find under Places on the Search screen in the Photos app, covers more time than I'd realised. Swiping through the image thumbnails below the map took me all the way back to 2013, while tapping highlighted places on the map let me view my holiday photos from around the globe. Oh, for the days when my biggest worry about travelling abroad was not having change to tip the taxi
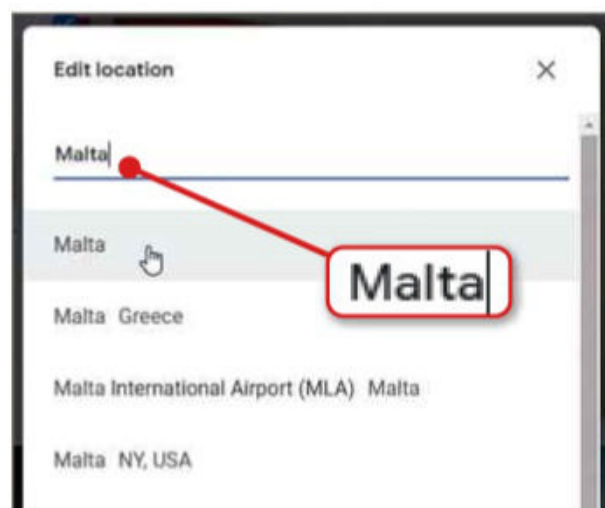
> **My personal snaps from the past year mainly consist of sunsets and bored selfies**

driver from the airport, rather than being banged up in a quarantine hotel.

Your Map relies on pictures being 'geotagged' by your phone or digital camera with location and date information. This meant that older photos I'd taken with a basic camera or that I'd scanned and added to Google Photos (or Picasa, as it was then) didn't appear on my map. Determined to fill these gaps in my cartographic history, I resolved to geotag the missing images myself.

Sadly, this wasn't as straightforward as I'd hoped, because the Google Photos app doesn't let you add metadata to photos. I tapped in vain on a picture from a trip to Malta in 2007 (easily identifiable from the 'Malta' T-shirt I'm wearing, like the tacky tourist I am), but could enter only a description of the shot, not the geo-location of where it was taken.

Switching to the browser-based version of the service (https://photos.google.com) proved more successful. I clicked the 'i' icon in the top-right corner of the image viewer to open the Info panel, which included a 'Where was this taken?' option. I then clicked the Edit button next to this, started typing 'Malta' and Google filled in the rest. I was even able to specify Malta International Airport (having noticed the grouchy cab driver in the background).
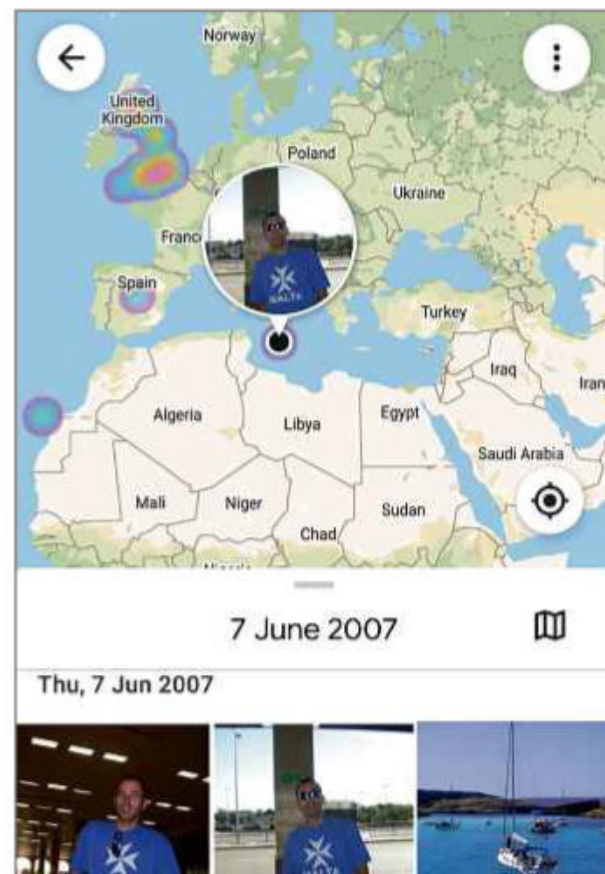
The Your Map feature in Google Photos pinpoints your pictures on a map

To save me the effort of geo-tagging the rest of my Maltese photos individually, I selected multiple images of the same place in the Google Photos album, then clicked the three-dot menu in the top-right corner and chose 'Edit location'. I then entered 'Malta' (not being fussed about precise places – see screenshot below left) to apply that tag to those pics.

With my old photos now geotagged, I went back to the Google Photos app on my phone and chose Search, Your Map again. I navigated to Malta, which 14 years later is still a tiny island in the Mediterranean Sea, and was delighted to see that my holiday snaps had been added to the map (pictured above).

Hopefully, after lockdown is lifted in a few months, I'll be able to add new locations to my Google Photos app, but until then I'll settle for nostalgically reliving my past excursions.

Pass the sun cream!

✉ Need help with mapping and geotagging your old photographs?
Let us know: noproblem@computeractive.co.uk

You can easily add missing location information to multiple pictures

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