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REMOTE CONTROLS**
Use just ONE device instead
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EXTERNAL HARD DRIVE**
Access files easier on ALL your PCs



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Covid has radically changed my taste in music. I used to be an unadventurous pop and rock fan, listening to little else. But to cope with the first lockdown (working from home, 'teaching' the kids) my brain demanded something longer and more reflective, without vocals, guitars or synthesizers. It needed classical music. More than a year on and my working day is now soundtracked by Beethoven, Mozart, Shostakovich, Stravinsky and many others.

One side effect is that I now expect music to follow me around my home in an unbroken

flow of symphonies and sonatas. That wasn't a priority when I lived on a diet of three-minute pop songs.

I recently set up an Amazon Echo system similar to the one Will Stapley describes in his excellent Cover Feature, keeping me bathed in Brahms from basement to bedroom. He explores other options, including Google Nest and Sonos, and reveals a genius workaround for bypassing the BBC's ban on playing radio in multiple rooms. Let me know how you get on.

Daniel Booth

editor@computeractive.co.uk



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3 hrs 37 mins

How long on average people in the UK spent online every day in 2020 – [p9](#)

443,033

Number of phone scams reported to HMRC in the past 12 months – [p11](#)

£1.50

How much a reader is being asked to pay every month to update his [drivers](#) – [p65](#)

HOW TO USE SNIPCA URLs

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

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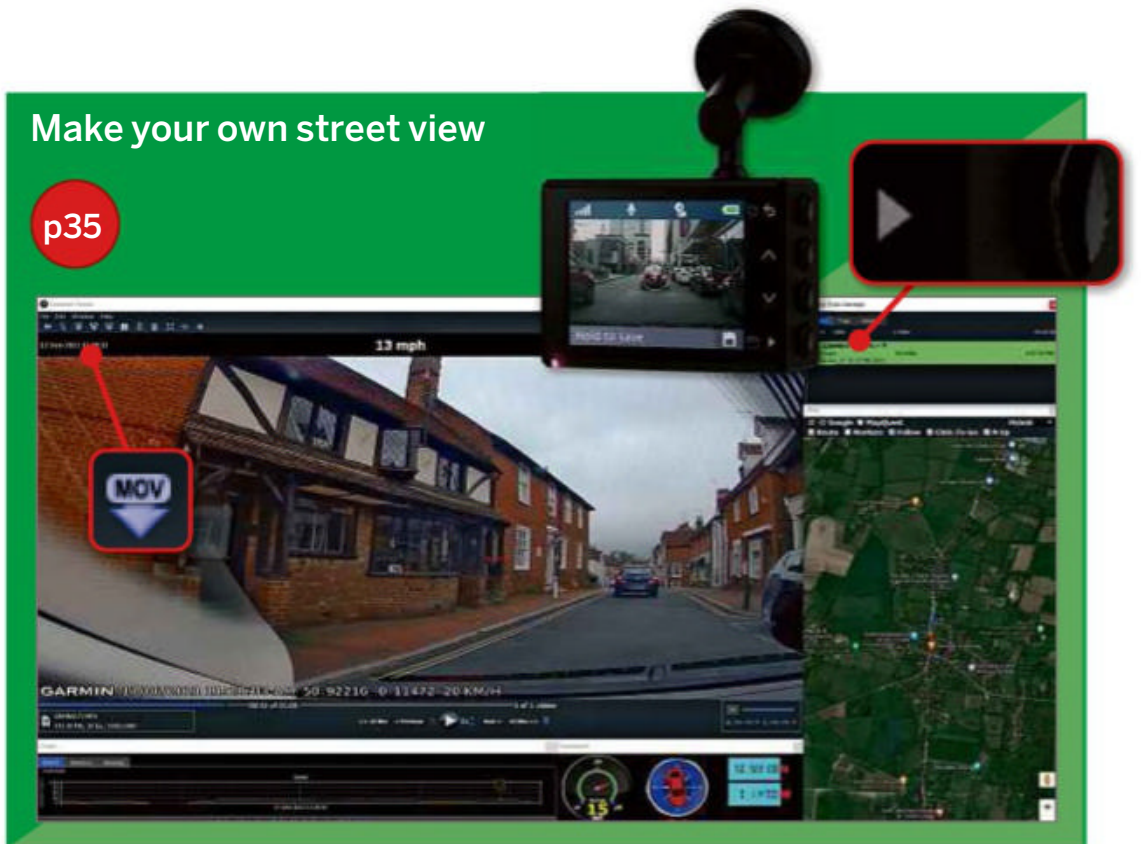
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☒ MP3s ☒ Podcasts ☒ YouTube ☒ BBC radio!



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Windows 10 support ending – is Windows 11 replacing it?

Microsoft has surprised users and experts alike by revealing that it will end support for Windows 10 in 2025, despite previously stating it would continue to support the operating system (OS) indefinitely.

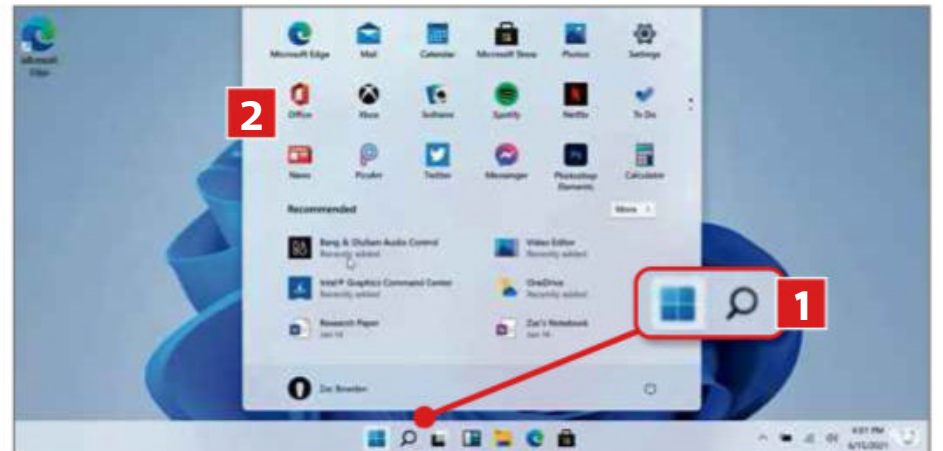
The move was taken by many as a strong indication that the company would soon announce a new OS to replace Windows 10. It was expected to break this news on 24 June (after we went to press), with some industry analysts predicting the arrival of Windows 11.

In mid-June the company

updated the 'Lifecycle' page for Windows 10 Home and Pro (www.snipca.com/38708), showing a 'Retirement Date' of 14 October, 2025. It's the first time Microsoft has given an end date for Windows 10. Until now, the page was used only to give end dates for different versions of the operating system – such as version 1909, which ends on 5 November, 2021.

The 'last version' of Windows?

When Microsoft launched Windows 10 in July 2015, it described the system as "Windows as a service",



saying it would be gradually updated without charge. Under this strategy, Microsoft has released Feature updates for the system twice a year – one in the spring, one in autumn.

At the time of launch, chief executive Satya Nadella hailed Windows 10 as a "new era" for personal computing, while other prominent employees called it "the last version of Windows". This marked a significant change in strategy from the company which until then had released a new edition of Windows every few years.

But rumours have grown this year that Microsoft is working on the biggest redesign of Windows since Windows 10 was launched. Codenamed 'Sun Valley',

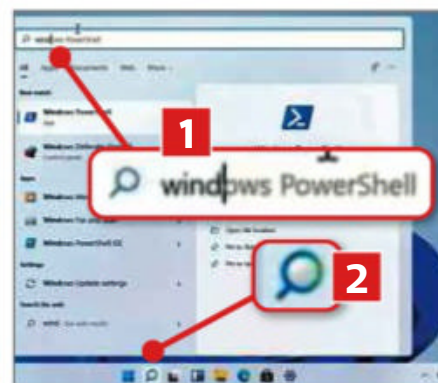
leaked reports suggested this would arrive in the autumn in 2021's second Feature update. However, it appears that Microsoft's bosses now regard the changes as significant enough to justify a brand new OS, not just an incremental update to Windows 10.

Windows 11 images leaked

Several images supposedly showing the new OS were leaked online in the days before Microsoft's event on 24 June. One image shows taskbar icons – including the Start and search button – in the middle (1 in our main screenshot), though it's likely you'll be able to move them to the bottom left if you prefer.

The same image also shows a Start menu with simple icons for 'pinned' apps (2), without Windows 10's 'live' tiles which are continuously updated with information.

Another image shows the search menu that appears (1 in our screenshot left) when you click the magnifying-glass icon in the taskbar (2).



WHAT WE THINK

We've always been sceptical about Microsoft's claim that Windows 10 would be the final edition of the operating system. Whenever a top executive insisted there wouldn't be a follow-up, we just thought "yeah, until you change your mind". We always assumed that Microsoft's marketing department would eventually need something fresh to get the public excited again.

We write this a few days before Microsoft reveals its news, and hope it turns out to be the new operating system so strongly rumoured. Six years feels about the right time to wait for a new system, and certainly more suitable than the three years between

Windows Vista and 7, or Windows 7 and 8.

Windows 10 continues to work well, but everything we've seen so far about the new system shows how it can be improved. We also hope the name is sensible: Windows 11 please, nothing gimmicky or silly.

Our job now is to keep you informed until the system is released. We'll start in our next issue (out Weds 14 July), where we'll analyse everything Microsoft announced, and reveal ways to get some of the new tools early.

Along with the excitement there's bound to be much uncertainty, so please tell us what you'd like to know.



You'll like this...

Thousands of fake online pharmacies have been taken down (www.snipca.com/38591)



but not this...

There's been a surge in fake DVLA emails (www.snipca.com/38709)

Brexit lets us tackle fake web ads, says financial watchdog

The UK's financial watchdog has said that Brexit will allow it to take legal action against Google and social-media sites for showing adverts for financial scams.

Mark Steward, director of enforcement and market oversight at the Financial Conduct Authority (FCA), told MPs that investigators would tackle Google "in a more formal way" if it didn't tighten its rules to prevent fraudulent adverts.

He told the Treasury select committee that before Brexit the FCA had to follow the EU's rules, which didn't cover websites. He added that this "exception" meant scam adverts online didn't face the same level of checks as adverts elsewhere, such as in newspapers and on TV.

Financial scams have escalated online during the pandemic, as scammers take advantage of the extra time people are spending online.



Some frauds offer investments with unrealistically high rates of return, while others promote cryptocurrencies such as Bitcoin as a way to access pension pots before retirement, using the alleged support of financial experts like Martin Lewis (pictured).

Last year the FCA issued 1,200 warnings about fraudulent adverts, double the number in 2019. It paid Google and other sites around £600,000 to show these warnings. "The irony is not

lost on us," Steward said.

He added that it wasn't "immediately apparent" that websites realised that Brexit meant they faced tougher rules from the FCA, though it has made them aware, and now has a lot of "traction to force change".

Google said that protecting consumers and legitimate financial firms was a priority for the company. It plans to spend \$5m (£3.5m) worth of "advertising credits" to warn the public about fraud.

IN BRIEF

UPDATE OLD IPHONES AND IPADS NOW

Apple has released an emergency update to fix security flaws in old iPhones and iPads dating back to 2013. Affected devices include the iPhone 5s, iPhone 6, iPad Air and iPad mini 2 (visit Apple's site for the full list: www.snipca.com/38648). Install the update by tapping Settings, General, 'Software update'. Make sure your battery is full or connected to a power source, and your phone is connected to Wi-Fi.

NVIDIA ENDS SUPPORT FOR WINDOWS 7 & 8.1

Graphics card manufacturer Nvidia will end support for its Game Ready Drivers on Windows 7 and Windows 8/8.1 computers from October. It means they'll no longer receive new features or bug fixes, though you'll still be able to play games on the old versions of Windows. Security updates will continue until September 2024. Visit Nvidia's site for details: www.snipca.com/38656.

Chrome starts showing full URLs again



Google Chrome will resume showing the full URL of a web page after abandoning plans to show only the main domain name.

The company said last year that for security reasons it was going to remove all characters after the website's name, turning www.expertreviews.co.uk/apple/apple-ipad-pro into expertreviews.com, for example.

It claimed long URLs make it harder for people to spot the suspicious elements that indicate whether the URL is real or a scam.

To address this, it wanted to test whether simplifying the URL would make it easier for users to verify a site's authenticity.

However, one year on, Google has admitted that the move has made little

difference. With Chrome 91, launched in May, it has reverted to showing the full URL.

By default Google will continue to hide 'https://www' at the beginning of a URL, but you can easily make it appear all the time (1 in our screenshot). To do this, just right-click the address bar and select 'Always show full URLs' 2.

TOMORROW'S WORLD

This is Eva showing disgust, one of six basic emotions 'she' can display (along with anger, fear, joy, sadness and surprise).



Engineers at Columbia University trained Eva to copy facial expressions of humans looking into a camera. They claim it can be used to build trust between robot carers and humans. Watch its full emotional range at www.snipca.com/38649.

IN BRIEF

**PLAY 200,000 SHOWS
IN BBC ONLINE ARCHIVE**

You can now search for more than 200,000 TV and radio shows in the BBC's Programme Index (www.snipca.com/38690), which was previously called Genome. The archive also contains 10 million programme listings dating back nearly 100 years, and digitised editions of the *Radio Times* up to 2009.

**POP-UP TECH SCAM
FIRMS WOUND UP**

Two companies that tricked people with fake pop-up warnings on their PCs have been wound up by the High Court. Msinfosys Support Ltd and MS Global Support Ltd, both based in Canterbury, Kent, were liquidated in the public interest in March, though the Insolvency Service has only just issued a formal statement. The firms' director, Vikram Singh, admitted they were under the control of an Indian parent company. Read more at www.snipca.com/38695.

**THE WORLD'S
GONE MAD!**

This picture of a Japanese Shiba Inu that sparked the Doge internet meme (and later the Dogecoin cryptocurrency) has been sold as a non-fungible token for \$4m. Don't worry if you understood only half the words in that sentence. It just means some fool with too much money has bought something that will be worthless in a few years.

Ransomware bigger threat than spying, says security chief

Ransomware hackers are a bigger threat to UK security than spying by hostile countries, the head of the National Cyber Security Centre (NCSC) has warned.

Lindy Cameron (pictured), who took charge of the centre last September, said that while spying online by the likes of Russia, China, Iran and North Korea remains a "malicious strategic threat", thwarting ransomware has become a more urgent priority.

Her comments came during the Annual Security Lecture for defence think tank the Royal United Services Institute (www.snipca.com/38686).

In ransomware attacks, hackers encrypt data and demand payment for it to be restored. Cameron said that the illegal market for ransomware variants is becoming increasingly



"professional", with criminals selling them as a one-off purchase or as a share of the profits.

Gangs plan their attacks meticulously, tailoring their demands to the size of the victim.

There are examples of them asking small firms like hairdressers for amounts in

the region of £1,500, while demands for bigger companies can be in the millions.

Attacks have soared over the past two years. Gangs operating from Russia and other former Soviet states have extorted tens of millions of dollars from companies who, Cameron says, "cannot afford to lose their data".

Russia says ransomware hackers operate across the world, but UK spy chiefs claim that the country turns a blind eye to

attacks as long as they target only foreign companies.

The summit's final communique called on Russia to "hold to account those within its borders who conduct ransomware attacks" and said G7 nations would work together "to urgently address the escalating shared threat".

Amazon: blame social media for fake reviews – not us!



Amazon has blamed social-media companies for fake reviews on its site, saying they don't do enough to stop them being sold on their services.

In a statement headed 'Creating a trustworthy reviews experience' (www.snipca.com/38694), Amazon said that in the first three months of 2020 it reported to social-media sites more than 300 groups selling fake reviews, claiming they took a median time of 45 days to shut them down.

Amazon acknowledged this has improved in the first three months of 2021, with the median time falling to five days. But it called for sites to invest in systems that spot fake reviews before Amazon feels forced to contact them.

It didn't mention any specific social-media sites, but Facebook has been heavily criticised for failing to tackle the sale of fake reviews.

In January 2020, following an investigation from the Competition and Markets Authority (CMA), Facebook

promised to "better identify, investigate and remove groups and other pages where fake and misleading reviews were being traded, and prevent them from reappearing". However, a second investigation earlier this year forced the CMA to intervene again.

Amazon says that in 2020 alone it blocked more than 200million suspicious reviews, though it has faced ongoing criticism for the vast number of misleading reviews that don't get taken down.

UK adults spent over 3½ hours online every day during lockdown

Adults in the UK spent an average of three hours and 37 minutes online every day in 2020, much longer than in other similarly sized European countries.

The figure comes from Ofcom's Online Nation 2021 report (www.snipca.com/38587), which surveyed what people did online during 2020, for how long, and on which devices.

The average time spent online was more than an hour longer than in France and Germany, and 30 minutes longer than in Spain.

However, this average is just nine minutes more than time spent online in 2019, which Ofcom says is "surprisingly small given the increased reliance most of us had on online services during the

pandemic".

The amount of time spent online was highest among 18 to 24-year-olds (4 hours 34 minutes), shrinking in every subsequent older age group until the final category, over 55s, who spent 2 hours 51 minutes online every day.

Ofcom added that more people shopped online than ever before, with sales rising by 48 per cent to £113bn. Food and drink sales increased the most.

Adults turned to their computers for entertainment as they were told to stay indoors, with 62 per cent saying they played computer games, while video-chat tool Zoom saw "extraordinary



growth", soaring from a few hundred thousand users in the first two months of 2020 to more than 13 million in April and May.

Forty-nine per cent of adults (around 26 million) visited a porn site or used a porn app in September 2020, Ofcom said. The most popular site, Pornhub, was visited by around a third of online adults in September 2020 – comprising half of all UK online men, and 16 per cent of women.

More than 8.4bn passwords exposed online in the biggest leak ever seen

A 100GB text file containing a total of 8,459,060,239 passwords has been uploaded to a forum used by hackers. This is almost double the number of active internet users (4.66 million).

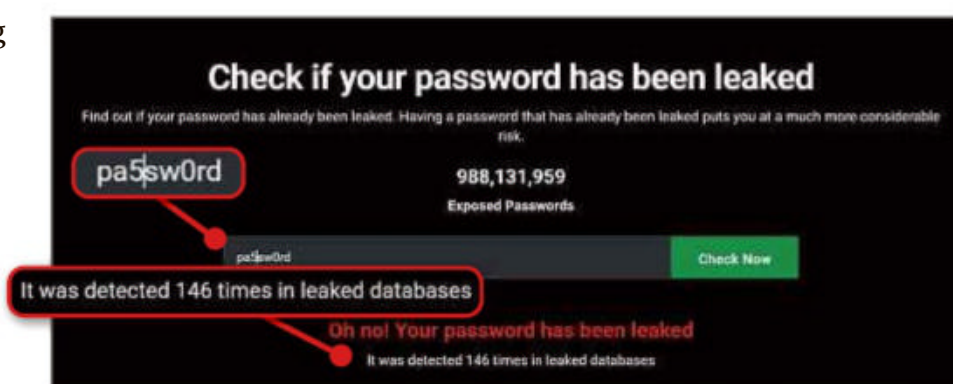
The person behind the file has called it RockYou2021, presumably in reference to 2009's RockYou data breach that leaked more than 32 million MySpace passwords. They said all the passwords are between six and 20 characters, and have had all white spaces and non-ASCII characters removed.

The file, first spotted by security researchers from the website CyberNews, appears to contain passwords from many previous large-scale leaks, including all 3.2bn

logins from the 'Compilation of Many Breaches' file, leaked in February. It seems therefore that the person who compiled it has been collecting leaked passwords over the past few years.

CyberNews has added the file to the database it uses for its password-leak tool, which lets you check whether your details have been exposed.

To do this, visit www.snipca.com/38593, then type



your password into the box and click the green Check Now button. You'll see underneath how many times your password has appeared in CyberNews' database of leaks (146 times in the case of 'pa5sw0rd' – see screenshot).

It's worth checking also whether the website 'Have I Been Pwned?' (<https://haveibeenpwned.com>) has added the file to its database of leaked passwords.

IN BRIEF

EE IMPROVES 4G IN SEASIDE TOWNS

EE has added extra mobile capacity to its 4G network in eight UK seaside towns, including Blackpool, Brighton and Rhyll, so visitors can make the most of a "staycation summer". Berwick, Newquay and Skegness are among eight locations to be upgraded later this summer. In addition, EE has switched on 5G in nine towns, including Ayr, Poole and Swansea. See the full list at www.snipca.com/38557.

SAMSUNG LAUNCHES CHEAP W10 LAPTOP

Samsung has released a new laptop range aimed at the cheaper end of the market. Called Galaxy Book Pro (pictured), it runs Windows 10 Home and is powered by an ARM processor rather than one made by Intel. It comes in two versions: 4GB (£399) and 8GB (£499). They both have 128GB storage, a 14in screen and a 25W USB-C port. A 5G model will follow later this year. Read more at www.snipca.com/38561 and see page 23 for our review of the Galaxy Book Pro 15.6.

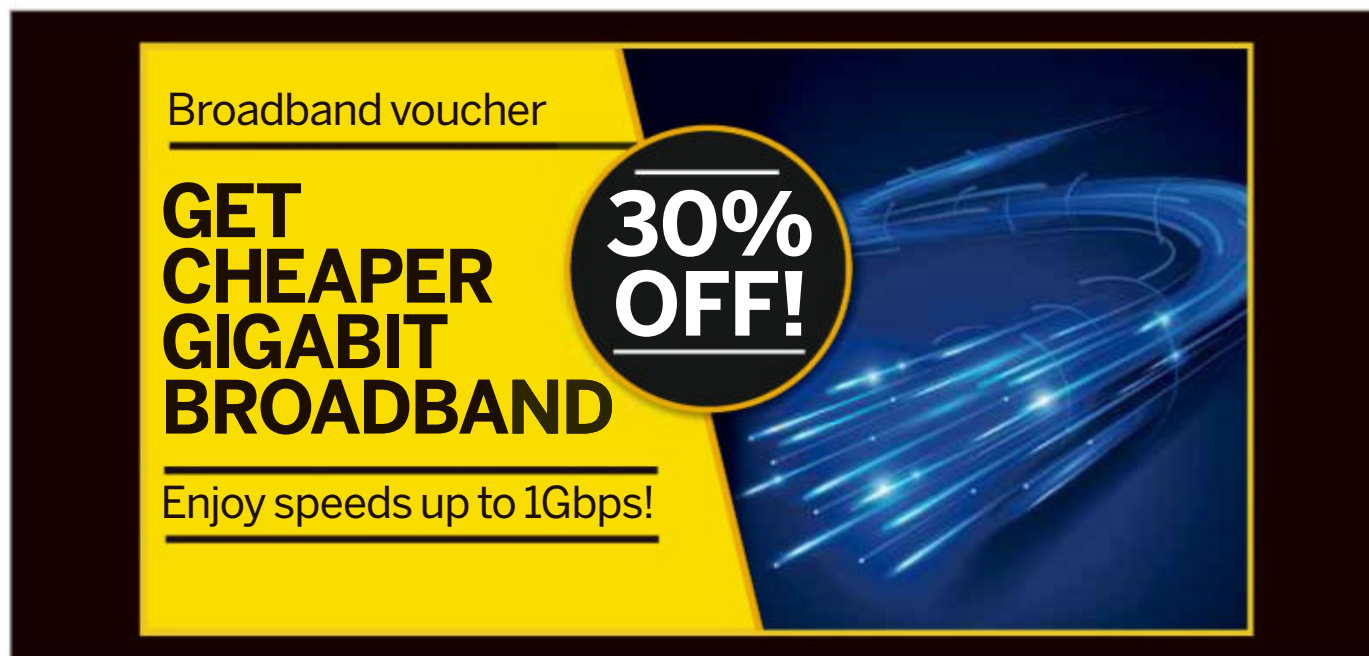


USE FACETIME ON WINDOWS & ANDROID

Apple is developing a version of FaceTime that works on the internet, letting you make calls on a Windows computer or an Android device. To use it, you'll just need to create a FaceTime link and share it with people. It will be part of iOS 15 and iPadOS 15, expected to launch in September. However, it will lack some features found on the iPhone and iPad, such as sharing your screen.

Will low-income homes get cheaper gigabit broadband?

Poorer families might upgrade if they're given financial help, a report says



THE FACTS

- The Government should consider offering vouchers to low-income homes to incentivise them to switch to gigabit broadband, a report suggests.
- The Gigabit Take-up Advisory Group (Gigatag) also suggested companies offer discounts to their staff.
- Research shows that most UK adults are unaware of gigabit broadband.

One of the dangers about immersing yourself in a single subject such as computing is that you lose sight of how well the wider public understands certain issues. One such topic

They just want it to work as reliably as running water and electricity. This partly explains why the majority of UK adults – around 60 per cent – don't know whether gigabit services are available in their area. We

sign up to gigabit.

A key finding of the report is that only one in five people are willing to pay more for faster services. With gigabit typically costing twice as much as packages under 100Mbps, many will stick with what they've got.

A solution proposed by Gigatag is to offer vouchers to low-income households to spend on gigabit. Currently broadband vouchers are available to rural homes and businesses (apply at www.snipca.com/38698), but eligibility is based on factors such as existing speed and whether new networks will be built in your area, not household income.

The problem with discounting broadband for poorer families is setting the cut-off income. Gigatag says households with a joint income below £34,000 will be most likely to mention cost as a reason not to upgrade.

It might be simpler – and fairer – to offer discounts to families who get a certain

level of benefits. Some internet providers already offer such deals. BT has launched Home Essentials (www.snipca.com/38699), giving benefit claimants 36Mbps for £15 a month, while Virgin offers 15Mbps for the same amount (www.snipca.com/38700).

The report also suggests encouraging companies to offer gigabit discounts to staff, which seems sensible with the rise of home working, as well as Government-led schemes to improve digital skills among the self-employed.

But people won't sign up to gigabit if they're unaware of its benefits. This may prompt a Government campaign to promote the advantages, aimed at small firms and consumers. Ministers buoyed by how well various lockdown and vaccination messages cut through to the public might be tempted to repeat the trick with a pro-gigabit push. Stay home, upgrade to gigabit, save jobs, perhaps?

“Only one in five people are willing to pay more for faster broadband”

is gigabit broadband. We must have mentioned it in every issue this year, as internet providers start planning how they can implement the Government's target of delivering gigabit speeds to 85 per cent of the population by 2025.

We certainly don't assume that all readers know what gigabit means. We normally clarify that it's 1Gbps – or 1,000Mbps. That latter figure probably does a better job at hammering home how much faster gigabit is than existing speeds – 100 times faster than 10Mbps, for example.

But most people don't obsess about broadband speed.

also suspect that most people don't know how fast 1Gbps is, beyond a vague sense that it represents a big leap.

This is a problem for a Government that has trumpeted gigabit as being a major part of rebuilding the economy after the pandemic. The 60 per cent figure comes from a new report (www.snipca.com/38697) by Gigatag – an advisory body comprising consumer group Which?, the Confederation of British Industry and the Federation of Small Businesses – set up by ministers to suggest ways to encourage customers and businesses to

Protect your tech

Scams and threats to avoid, plus new security tools

WATCH OUT FOR...

Fake HMRC texts and emails

What's the threat?

HMRC has warned benefits claimants to be aware of fake texts and emails, saying the public reported over 1.1 million scams in the 12 months to April 2021. Of these, 576,960 offered bogus tax rebates, asking you to enter your personal details in order to claim the refund. It also received 443,033 reports of phone scams, up 135 per cent on the previous year.

It issued the warning in early June as it prepared to send annual renewal packs to people who receive benefits. Many scams impersonate official government messages to appear “authentic and reassuring”, HMRC said. Criminals know that using the HMRC and GOV.UK logos adds “credibility to their scams” – such as in the example pictured.

HMRC added that it has fought back against the scammers by working with telecoms firms and regulator Ofcom to

block more than 3,000 malicious phone numbers, and with internet service providers to take down over 15,700 websites.

How can you stay safe?

If you have regular contact with HMRC, there are a couple of web pages you should bookmark. First is a list of scams that it updates every time there's a surge. Visit www.snipca.com/38547 and scroll down to see all of them, or click a link on the left (such as ‘Tax refund and rebate scams’ and ‘WhatsApp messages’) to narrow your search.

The other page (www.snipca.com/38548) shows genuine reasons why HMRC will contact you, and whether that will be by phone, email, text message, letter or automated phone call. It's impressively detailed, and was last updated at the end of May.



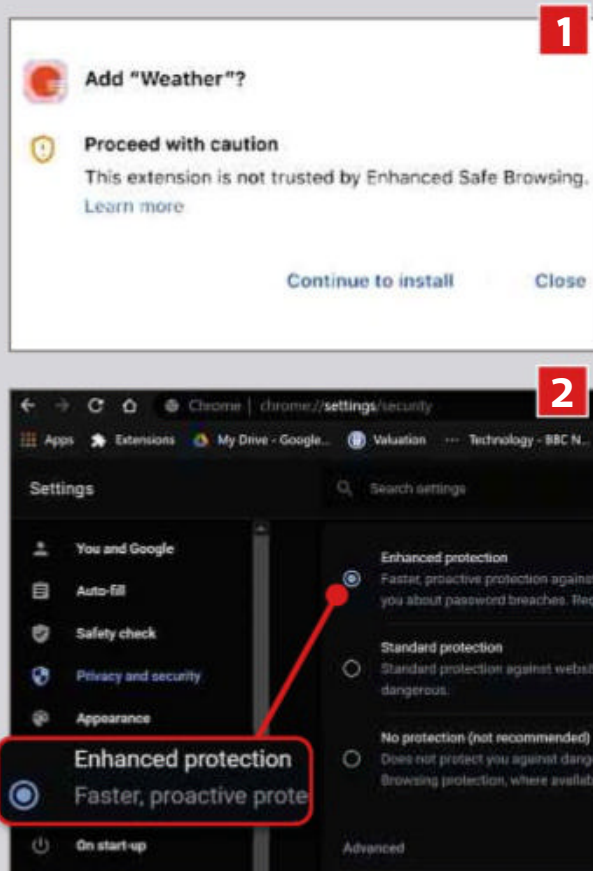
Finally, don't forget to remind yourself and loved ones that if you're owed a tax rebate, HMRC will tell you only by post or through your employer, not by text, phone call or email.

New tools | Chrome's 'Unsafe extensions' warning

Chrome will now warn you when you're installing an extension that isn't trusted by its Enhanced Safe Browsing system, which is the highest level of protection it offers as you browse the web.

On its blog (www.snipca.com/38524) it gives the example of a suspicious extension called 'Weather' (see screenshot 1), recommending you 'proceed with caution'.

First, however, you need to check that Enhanced Safe Browsing is turned on in Chrome. Click the top-right menu button (three dots), then Settings. Next, click 'Privacy and security' on the left, and then on the right scroll down to the 'Privacy and security' section. Next, click the Security heading and select 'Enhanced protection' (see screenshot 2).



ScamWatch

Readers warn readers

Don't cancel iTunes 'payment'

I have an iTunes account, but I don't use it regularly. I was therefore taken aback to receive an email apparently from Apple telling me that I had ordered something called 'DRIVER – pocket edition' for £19.44. I have no idea what this is, and certainly hadn't bought anything recently through iTunes. I realised it must be a scam, so didn't click the 'iTunes Payment Cancellation Form' that was in the email. Like so many scams, it's meant to trigger an instant response of 'I didn't buy that – I must cancel now'. The email I received is similar to this one flagged up by Action Fraud: www.snipca.com/38523.

Adrian Lowe

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

Letters

Tell us what's on your mind

Your recommendation brought colour to my past

✉ I've used many programs mentioned in *Computeractive* over the years, so I had no hesitation in trying Colorize (www.snipca.com/38167) to add colour to my old black and white photos, as recommended by Robert Irvine (Issue 607, page 74).

Most people colourise photos of long-gone relatives, but I tried one of my 10-year-old self. I remembered exactly the colours of the jersey I was wearing (it was a Scottish beach, so I needed the jersey!). I was stunned when Colorize managed to get the colours about 98 per cent correct (as shown below). The only colour that was out was that of the sand, which was greyer. I then tried a large family shot from a wedding in 1950 and again the results were amazing, even the floral dresses.



If any reader finds that Colorize rejects their photo as being too large, they can use another free program, FastStone Image Viewer (www.faststone.org), to reduce the number of pixels.

Billy Armstrong

Amazon's two-factor code is 'discrimination'

✉ I recently tried to access my Amazon account, which is usually a simple and straightforward process. However, Amazon has now adopted **two-factor authentication** (2FA) and I was sent a text to my mobile phone with the instruction to 'tap the link'. My phone is just that – a phone, with just a camera and texting as a nod to the 21st century. It doesn't do tapping.

I'm in my late seventies and have managed so far without a smartphone, and feel no need to buy one. This means I can no longer access my Amazon account. Surely this counts as discrimination?

My bank also uses 2FA, but the code it sends to my phone I can repeat on my computer. Surely a similar system is not beyond the wit of Amazon.

Laurence Rostron

✉ Google's decision to turn on two-factor authentication by default is appalling, and it will drive more people away from using the internet. I don't have one of those toys called a smartphone (I put my toys away when I was about six or seven).

A month ago, I was unable to access my GOV.UK account because I had changed my landline number since I last used the website. It kept insisting on telling me that it had sent a text to me containing my code. What a load of cobblers!

I've also heard that people in my block of flats who have very simple mobile phones (ie, not smartphones) were sent a text containing a link (which had to be tapped) to book their vaccination. Of course, they couldn't do this, which was distressing and frustrating for them. Maybe it was discriminatory too.

This is another example of companies railroading the public into accepting things they don't want. Another is forcing the cashless society on us. It will all end badly.

Mike New

Giving my phone number helped me track order

✉ Having read recent letters about shops asking customers for their mobile-phone numbers, I'd like to comment. A few months ago I was looking for a new laptop because my old

one had failed. There are no computer shops in the town where I live, so I started searching online and found one on Currys PC World's online store.

The order process was very simple, and yes it asked me for my mobile number, which I provided. My order was accepted, and I received texts informing me of the progress of my order, and was even told the name of the driver and the time he would arrive at my door (he was right on time). If I hadn't given my number I would not have been kept informed like this.

I shall not hesitate in purchasing from Currys PC World (and submitting my mobile number) in future.

Allan Watt

CA SAYS We can see both sides of this debate. It's certainly true that too many companies and organisations assume everyone has not just a smartphone, but one of the latest and fastest models.

They also take it for granted that your mobile connection at home is reliable. That said, like Allan we appreciate how smartphones have transformed communication – mostly for the better.

One question we often get asked is what's the smallest amount you have to spend to buy a smartphone that performs all the tasks you need to participate in modern life – such as two-factor authentication, **QR codes** and more. It's a

What's the Issue...?

✉ I'm sure you mentioned recently a program that shows you how much hard-drive resources installed software is taking up. I need it, because my hard drive has slowed to a crawl. Can you remind me?

Adam Weatherly

CA SAYS We think you mean NirSoft's AppReadWriteCounter (www.snipca.com/37734), which we recommended in Issue 603 (page 19).

✉ My memory dimly recalls you explaining to a reader how to change the subject line in a Gmail conversation thread. I noted it mentally, but not on paper. Don't suppose you

could tell me when it appeared?

Dawn Ferry

CA SAYS Happy to jog your memory Dawn. Our solution appeared in Issue 600, page 69.

✉ I've just finished writing a lengthy document in LibreOffice Writer that I need to add footnotes too. Unless I'm going mad, I think you revealed how to do this in one of your Make Office Better sections. Is that right?

Warren Earnshaw

CA SAYS You'll find it in Issue 602 (page 47), where we explained how to add footnotes to Microsoft Word also.

surprisingly small figure, as we'll reveal in our next issue (out on Wednesday 14 July).

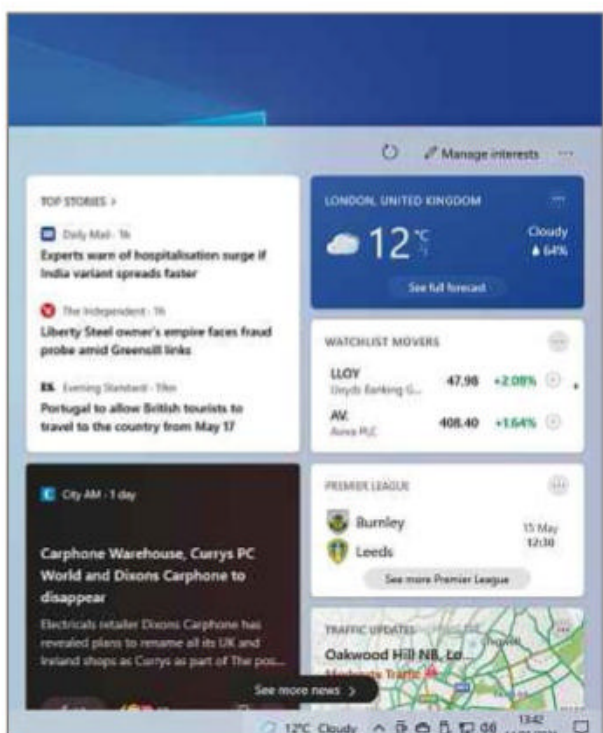
Talking of QR codes, we're not blameless when assuming everyone owns a smartphone. In Issue 608, when we asked you to scan a code to enter a competition to win £50 Amazon vouchers, we didn't provide a link for those without phones who wanted to enter online. We're sorry about that. We've now created a link to enter (visit www.snipca.com/38663), and extended the competition's deadline. You can of course still scan the code to enter – it's pictured above.



Microsoft's taskbar weather not updated automatically

In Issue 607's 'Named & Shamed' (page 21) Jonathan Parkyn complains that Microsoft's new 'News and Interests' widget (pictured below) doesn't provide an accurate weather forecast in his taskbar. The reason for this is that the information in the taskbar isn't updated automatically – it's just a link to the widget itself. Only when you open the widget does the weather forecast update. This shortcut is not really of much use at all, other than to take up a fair amount of space on the taskbar. Like Jonathan, I can do without this and have turned it off.

Regarding which update contains this widget, it was definitely prior to the most recent Feature update (version 21H1), which I downloaded this week. I think it's most likely to have been the Cumulative Update KB5003173, which was installed



STAR LETTER

Royal Mail's timed delivery can't compete with Amazon

I don't want to dismiss Royal Mail's timed-delivery plan before it even launches ('Question of the Fortnight', Issue 608), but I can't see it working well. I'm a former Royal Mail employee, and had roles in many parts of the business. It gave me a broad understanding of the logistical challenges of delivering items at a given time.

My sense is that Royal Mail will struggle to deliver items in anything more specific than a four-hour window, and that won't be precise enough to persuade people to pay for the service. Even if they offer delivery windows of one or two hours, I can see them missing that deadline so often that they'll have to pay a fortune in compensation.

Surely Royal Mail has missed a trick here. A much better option would be to leave items at sorting offices or post offices, where people can pick them up



at any time during the working day. This fits much better with people's busy work-life balance.

It's what Amazon has done so successfully with its lockers (www.snipca.com/38610). I make sure all my Amazon purchases are delivered to a newsagent in

my nearest high street. Popping in to collect these has become part of my weekly routine. It means I don't have to wait at home twiddling my thumbs for a courier to arrive.

My other concern is that Royal Mail's tech wizards aren't as clever as Amazon's. I retain a lot of fondness for Royal Mail but, like the BBC, they're a great British institution that's being taken over by smarter rivals. It makes me sad to admit it, but I would always trust Amazon over Royal Mail to deliver an item safely and in a reasonable time.

John Coombes



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

on my computer on 13 May. I think it would be useful if Microsoft somewhere on its website explained what each update contains.

David Carpenter

Don't forget about SD cards

As a recent subscriber I may have missed something, but it seems to me that SD cards (and microSD, of course) are under-represented, if not neglected, in your magazine – particularly when other storage devices and their standards, ports, speeds, costs and longevity are often reviewed and compared.

I think it is worth considering these advantages of SD cards: they fit in long-lasting card-reader slots; they're extremely versatile (can be used in cameras, dashcams, headphones and soundbars, as well as in computers); and they don't take up much space. What I'd really like to know is how an SD/microSD card of, say, 256GB compares with USB

sticks and SSDs of the same capacity.

Now, I realise that their security might not be as good, and I'm writing from the perspective of a (not very proud, but happy) user of a 2009 HP PC, as well as a couple of Android tablets, one or two cameras, a Bluetooth speaker, and a CD-radio combo with an SD slot.

Tony Watson

CA SAYS We'd be interested to know what other readers think – should we cover SD cards more regularly?

One way they're still useful is for storing dashcam videos, as we explain on page 35. If you're looking to buy an SD card, you might be interested in our feature in Issue 590 (pages 60–61), in which we explained how to select the right capacity, size and speed for your needs.

You can read that issue on our 2020 Back Issue CD (available from Amazon: www.snipca.com/38164).



We stand up for your legal rights

How do I get 'free' game promised to me?

Q I bought an AMD 5900X processor from Scan (www.scan.co.uk) last November and was supposed to get the game Far Cry (worth £67, pictured) with it, at no extra cost. But neither AMD nor Scan will give me the code to access the game. Each company keeps saying that the other is responsible. What's the truth?

Sie Blackmore

A The truth is that it's normally the manufacturer (AMD in this case) that's responsible for providing a gift that it has promoted as an incentive to buy a product. Details on how to claim this gift usually come with the product. Such promotions are legally binding, so you have the same protections as when buying a product. A company must ensure you receive the item, and that it's safe, as described and of appropriate quality.

But with both AMD and Scan denying responsibility for providing the code, Sie

is stuck in limbo. He could report them both to the Advertising Standards Authority, while Trading Standards could investigate the case to find out which firm promoted the offer, and then prosecute it for not fulfilling it. We'd be surprised if it gets this far though. Clearly one of the two companies is responsible, so we just need to dig into the details. We'll follow it up with an update if we make progress.

CASE ONGOING

Correction

In Issue 607 we said that Section 75 covers credit-card purchases up to £100. This was incorrect. Section 75 actually covers purchases between £100 and £30,000. We apologise for the confusion.

LEAD
CASE



How can I prove an inherent fault?

Q I've used Sony headphones for 40 years but believe that there's a problem with the MDR-XB950B1 wireless Bluetooth models. Two pairs I've bought in the past two years (both from Argos) broke in exactly the same spot. With the first pair I accepted the argument that I'd been too rough, but I now think it's an inherent fault. What can I do?

Paul Manser

A Since first emailing us Paul got back in touch to say that he contacted Sony's CEO to complain, and the company has agreed to replace his headphones as a goodwill gesture. But this doesn't address the possibility that the headphones are inherently faulty.

Manufacturers do sometimes admit there's a problem with a particular device, but usually customers have to rely on anecdotal evidence taken from internet forums. Although such evidence is hearsay and can't normally be used in criminal trials, it can be used in the small claims court. A judge would have to decide how much credence to give this evidence. However, Paul would have had to sue Argos because he had no contract with Sony.

CASE CLOSED

CASE UPDATE

Remember, you must pay for non-faulty returns



Most shoppers now know you have 14 days to reject an item you've bought online, and then a further 14 days to return it. But not everyone realises the retailer can ask you to pay the postage to return this item (assuming you're rejecting it because you've changed your mind, not because it's faulty).

Allan Rae contacted us about this (see Issue 606), asking why he had to pay Royal Mail £29 to return a coat to Cruise Fashion (www.cruisefashion.com), based in

Shirebrook, Derbyshire. The answer is that he didn't have to use Royal Mail, despite Cruise recommending this. Customers can use whichever courier they like, so Allan may be able to find a cheaper return price.

He also asked whether he could avoid a return cost, claiming that Cruise didn't make it clear that he would need to pay one should he decide to reject the coat. However, retailers don't actually need to state this in the returns policy. Instead, the law assumes customers will understand they'll need to

pay to return an item, just as you may have to incur costs (bus fare, petrol, car parking) when returning an item bought from the high street.

Allan would have a case if Cruise's policy (www.snipca.com/38580) says customers don't have to pay for returns, but it doesn't. Its terms seem fairly clear to us, pointing out that customers need to include "any packaging that forms part of the goods with a valid proof of purchase", and lists which items can't be returned.

Contact us so we can investigate your case

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

Can I get refund for wrongly described laptop?

Q I bought an Asus VivoBook Flip TM420 laptop (pictured) with a Ryzen 3 processor for £499 from Currys. It claimed this model had a number pad and backlit keyboard, but it doesn't actually have either. Currys has refused to take the laptop back because I've switched it on. Can it do this?

Chris Harvey

A No, it can't. Typically, turning on a device won't affect your rights under the Consumer Contract Regulations, which were introduced so online shoppers don't have fewer rights

than high-street customers who are able to test devices in store.

After Currys' first refusal Chris has decided to keep the laptop, but still wants the firm to knock £80 off the price because it lacks the number pad and backlit keyboard. It helps his case that he still has Currys' advert claiming the laptop comes with both these features.

A request for a price reduction, or a partial rejection, rather than rejecting goods out of hand is covered by the Consumer Rights Act (section 24, subsection 1(b), www.snipca.com/38497). We'll quote this to Currys when we



contact the company, and say Chris wants the refund because the laptop isn't as described. Currys is allowed to offer less than Chris's suggested £80 refund, but we'll gently remind it that he's actually entitled to return the laptop for a full refund.

CASE CLOSED

Why can't I cancel my Virgin email?

Q A friend of mine has a Virgin email account that he wishes to close, but Virgin says it's illegal to do this. He was told if he didn't use it for three months it would automatically close, but this hasn't happened. How can he close his account?

Andrew Rawlinson

A We're not sure he can close his email account and remain a Virgin customer. When you leave

Virgin, the company closes your email account and gives you 90 days to access your emails, which should be enough time to save important messages and contact details. But after this it's gone for good.

Virgin says it creates a customer's primary email address when their contract begins, helping them identify the person. It claims it can't delete an account while the person remains a customer because it needs an address to send correspondence to.

This doesn't mean you have to actually



use the email address, of course. In fact, Virgin says that if you haven't used it for 150 days, it goes 'dormant'. This doesn't mean anything technically or legally – you can still sign into it – but it does tell Virgin that you're no longer an active user.

However, Virgin can always contact you by text or post, so we feel that it should give you the option of closing your email account without also terminating your broadband contract. We'll ask Virgin for clarification. It may help us to know why Andrew's friend wants to cancel his email, so we'll ask.

CASE ONGOING

CREDIT WHERE IT'S DUE

Megatek replied within hours about faulty DVD player

 I recently set up a new DVD player (pictured) made by Megatek that I bought through Amazon (£35 from www.snipca.com/38575). The picture and sound quality were great, but it missed the main menu page on some old DVDs and (as many players do) defaulted to 'subtitles on', which I didn't want. The instructions were also unclear.

I emailed Megatek asking



how to fix these problems. I got a reply within a couple of hours clarifying the instructions, and after another exchange of emails was told that a developer was working on the other problems and I'd be sent a software update to install on Monday (one working day later).

The update had arrived by the time I checked my emails on Monday morning, and was quick and easy to install. Unbelievably good service

for a relatively cheap bit of kit.

Steve Curr

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

**Contact
Megatek**

- **Amazon page** www.snipca.com/38578
- **Email** jessica@megatekelec.com

Grow Your Family Tree



Not sure you have the right document recording when an ancestor died? **Nick Peers** reveals how to...

Confirm a death certificate

Readers Richard Pettet emailed us to ask how he can confirm he has the correct death certificate for a family member. On 10 December 1919, Ernest Lionel Jones died in a road accident in Birmingham aged just 24. Richard is reasonably confident Ernest was his grandmother's half-brother (and therefore his great-uncle), but he still has some doubts, and seeks confirmation.

His main doubt rests with the informant – the person who registers a death. In Ernest's case this was a coroner, rather than a family member, which means there's no family name on the death certificate. Richard also knows that Ernest was born in Leicester in 1895 and was still living there in 1911. Birmingham isn't too far from Leicester, but Richard would still like corroborating evidence that Ernest might have been living or working there.



If an ancestor's death involves a coroner's inquest, it may have appeared in a local newspaper

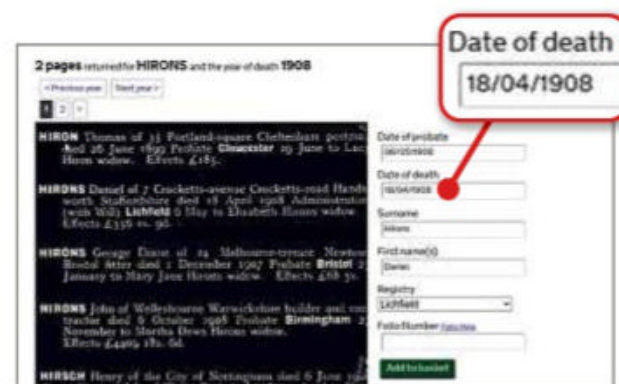
Check war service records

When you purchase a death certificate from the General Register Office (GRO), you don't get the actual certificate itself, but a certified copy of the details recorded in the Register of Deaths. This reveals the person's name, age, profession, cause and place of death, and also the name of the informant. What they don't usually reveal is when and where the person was born.

We wanted to find proof that Ernest had moved to Birmingham. We could do this by linking Ernest's profession (printer) on his death certificate to another document that gave his address as Birmingham: his World War I service record.

World War 1 service records that survived the Blitz can be found online at Ancestry.co.uk (www.snipca.com/38424). First, we used the information on Ernest's war record – his full name, birthplace, and home town of Leicester – to confirm we had the right person. Second, it revealed that he volunteered for the war effort in Birmingham in August 1914, indicating he was then living in the city. Finally – and crucially – Ernest listed his profession as a printer's clerk. All this data adds significant weight to the claim that the Ernest Jones in Richard's death certificate was indeed his great-uncle.

We also found in the *Birmingham*



The record of your ancestor's will should include their date of death, which you can check against the death certificate

Daily Gazette (via Find My Past, www.findmypast.co.uk) a brief report on Ernest's death and a longer follow-up covering the inquest (see screenshot below left). It turns out he was hit by a "motor lorry" that was travelling at "nine or 10 miles an hour".

Check details of will and burial records

Two other sources can also help with confirming the identity on a death certificate. First, if the person left a will then you'll be able to find it at Gov.uk (www.snipca.com/38425). Choose the 1858-1996 section to search by surname and year of death. If the person isn't present, click 'Next year >' to browse the following years in case the probate was delayed for any reason.

Entries in the index reveal the person's name and the date they died (see screenshot above), which can be linked back to the death certificate. Additional info – including home address (as opposed to place of death) – and beneficiary (which should be next of kin) can then help confirm this is your ancestor. If you need more information, order a downloadable PDF copy of the full document for £1.50.

Also consider looking for a record of their burial using Ancestry (www.snipca.com/38467), or search for the grave using Find A Grave (www.findagrave.com) or Billion Graves (<https://billiongraves.com>). If you find a headstone, it may include additional information like birth date or message from a loved one.

Your Genealogy Problems Solved

Following your article about RAF records (Issue 606), I'm trying to find an uncle who I think signed up for National Service in 1953. Are National Service records available?

David Roberts

Sadly no – the Ministry of Defence probably won't release these until 2049 (100 years after National Service began).

No service records after 1920 have been released to the general public. However, your uncle could request them directly or you could ask his next of kin to apply for them on your behalf (or apply yourself if he died more than 25 years ago). Visit www.snipca.com/38468 for full details.

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



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Best Free Software

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

FILE COMPRESSION

PeaZip 8

www.snipca.com/38696

What you need: Windows 7, 8.1 or 10

PeaZip is a powerful compression tool that lets you extract and create no fewer than 218 archive formats, including ZIP, RAR and 7z. To install it, go to the link above, click the button for the **64bit** or **32bit** version, then Download PeaZip.

Our favourite new feature in version 8 is the ability to choose what happens when you open an archive by double-clicking it in File Explorer (see **1** below). The default action is for the archive to open within PeaZip, meaning you can view its contents, then click Extract and choose where to extract the files to.

By setting the default action in 'Archive manager' to 'Extract...', PeaZip will instead open the archive and prompt you to choose where to save the files. Alternatively, set it to 'Extract here' and PeaZip will extract all files within the archive without requiring you to do anything else (it will extract the files to the same folder as the archive).

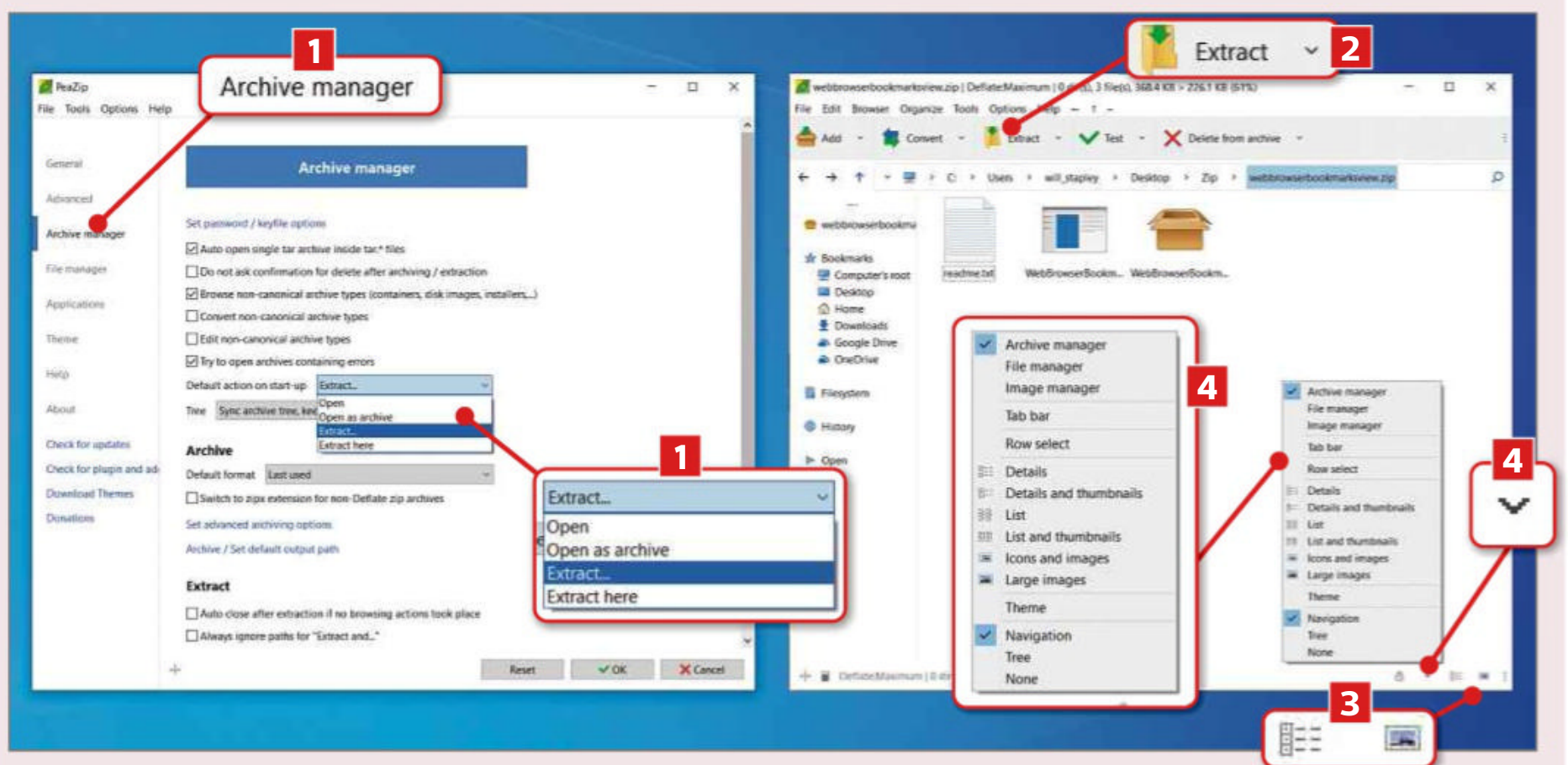
Note that this works only if PeaZip is set as the default

program for the archive format you're opening. PeaZip offers to set itself as the default for all its supported archive formats during installation (if you declined this, see page 46 for how to set default programs).

Other improvements include being able to quickly switch the archive folder view within PeaZip between Details (file name, type, size and so on) and 'Icons and images' **3** (large icons and file names only).

PeaZip will now automatically open archives when you drag them directly into the PeaZip window – previously this resulted in a pop-up window appearing, requiring you to click OK.

Finally, when you ask PeaZip to generate a password to secure an archive (click Tools, 'Create random password'), it will now create a more secure 12-character password by default, up from eight characters in the previous version.



1 To change the default action when opening an archive in File Explorer, click Options, 'Archive manager', then select an option from the 'Default action on start-up' box.

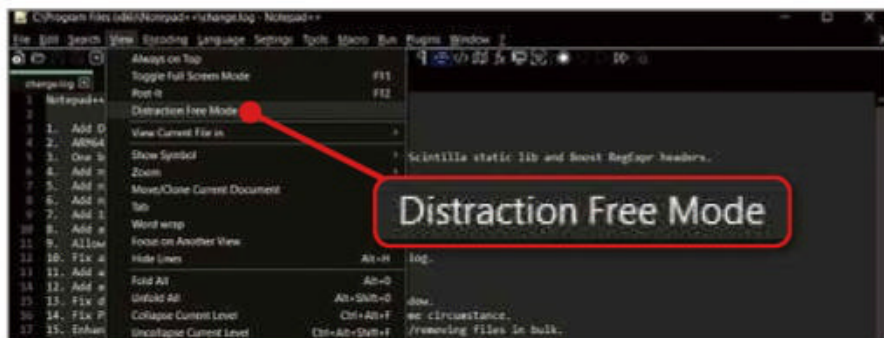
2 When viewing an archive in PeaZip, click Extract to copy its contents to a folder on your computer.

3 You can now quickly switch between PeaZip's Details view (left button) and 'Icons and images'.

4 Version 8 also includes a new shortcut to access additional options. Click the down arrow to change the size of icons, hide/show toolbars, and more.



TEXT EDITOR



Notepad++ 8.1

www.snipca.com/38701

What you need: Windows 7, 8.1 or 10

While we love the simplicity of Notepad – the text-editing tool that comes with Windows – it's been a long time since it received a major update. Notepad++ (select the latest version at the URL above) has a similar design, but adds a host of features, including the ability to open multiple documents in separate tabs. Version 8 includes a new dark mode, which reduces eye strain when using it in low light. To enable it, open the Tools menu, click 'Preferences...', then select Dark Mode in the menu on the left and tick 'Enable dark mode' (you need to restart Notepad++ for this to take full effect). There's also a new Distraction Free Mode (turn it on via the View menu – see screenshot), which is great if you find the extra toolbar buttons in Notepad++ a little overwhelming.

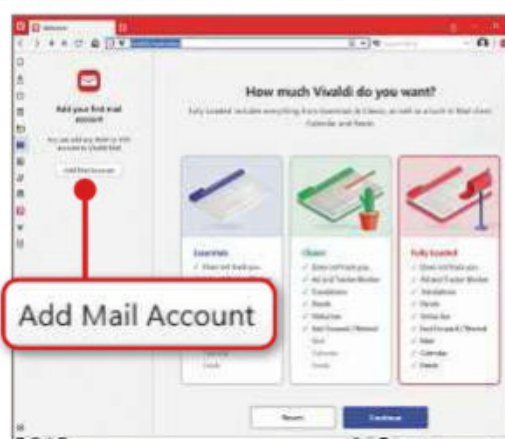
WEB BROWSER

Vivaldi 4

www.snipca.com/38706

What you need: Windows 7, 8.1 or 10

We're used to browsers receiving small, incremental updates, but version 4 of Vivaldi (which runs on the same Chromium engine as Microsoft Edge and Chrome) is a big leap forward. Among many new features, it now comes with its own email and calendar tool, meaning you can check your inbox (all major email services are supported) and upcoming appointments without having to log into a separate service such as Outlook.com or Google Calendar. To use these tools, select the Fully Loaded option when installing, followed by Add Mail Account (see screenshot). Vivaldi 4 also includes a new Feed Reader tool, which lets you receive news and updates from sources of your choice. In fact, there's so much to the new Vivaldi that we're going to delve deeper into it in an upcoming issue – keep your eyes peeled.



WHAT SHOULD I DOWNLOAD?

We tell you what software & apps to use

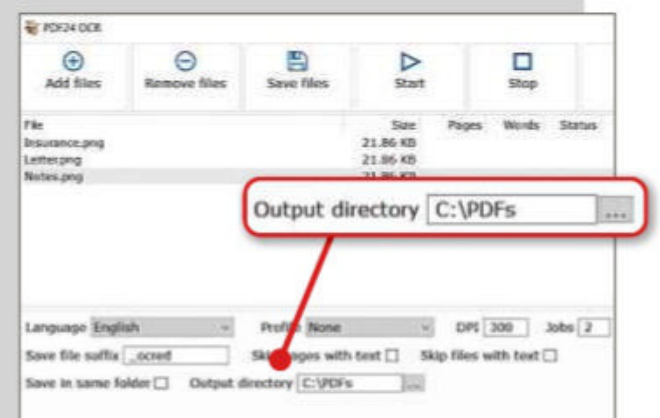
How can I convert scans and images into text?

Q I've previously used Abbyy FineReader to convert scans and images containing text into Word documents, but the program takes a long time to load. Is there a faster alternative?

Tony Burt

A If you have Word 2013 or later, you can use that to convert your scans and images into documents. However, you'll first need to convert your files into PDFs. To do this, we recommend PDF24 (www.snipca.com/38704), which can convert multiple files in one go.

In the main PDF24 menu, select the 'PDF OCR' option (use the search box at the top if you can't find this). In the window that opens, click 'Add files' then locate the scans and images you want to convert – hold down the Ctrl key to select multiple files within the same folder. By default, PDF24 saves the PDFs in the same folders as the originals. To save them all in a different folder, untick the 'Save in same folder' box, then click the three dots next to 'Output directory' (see screenshot) and navigate to your folder of choice. Next, click the Start button. Once PDF24 has finished converting the files, you can drag the PDFs directly into Word and save them as documents by clicking File, Save As, then choosing the Word format you want to use.



If you don't have Word, you can convert the PDFs to documents in Google Drive (you'll need a Google account to do this – get a free one at www.snipca.com/38702). Log into your account at www.google.com/drive, click 'New' (top-left corner), 'File upload', then select your PDFs. Double-click each PDF you upload to open it within Google Drive, select 'Open with' at the top, followed by Google Docs. Finally, save the documents in Word format by clicking File, Download, then 'Microsoft Word (.docx)'.

Bear in mind that with both methods, the accuracy of the conversion depends on the quality of your original scan.

Do you need our advice on what software to use? Just email us at letters@computeractive.co.uk

HOW I USE...



Microsoft OneDrive

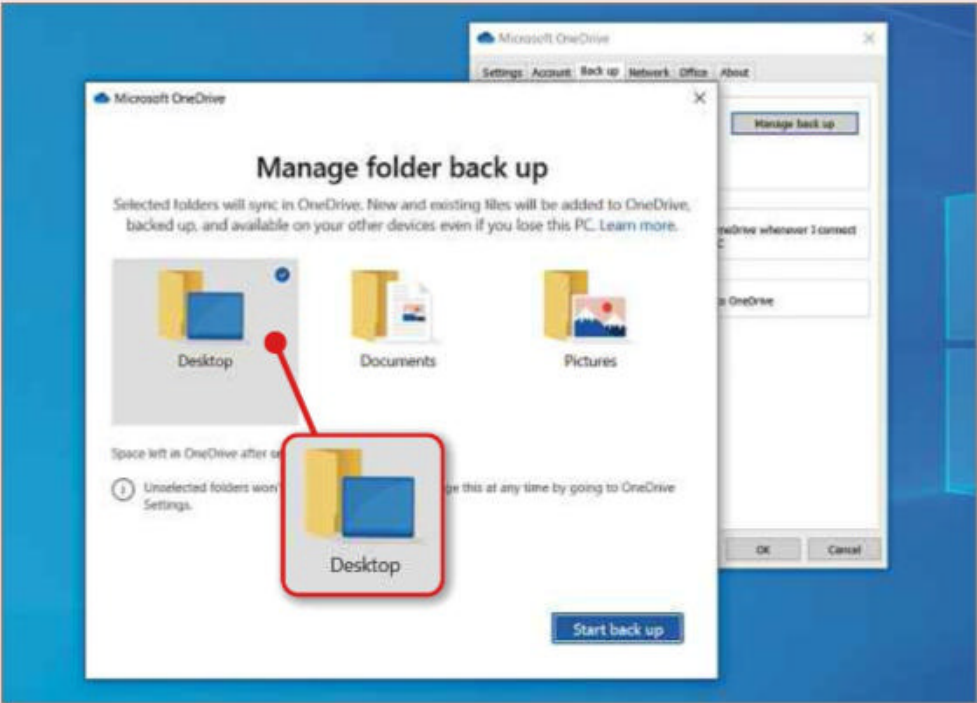
Will Stapley reveals how Microsoft's back-up tool lets him cart his untidy desktop between computers

Try as I might, I can't stop storing files on my desktop. It's just too darn convenient. Right now, it's full of documents, photos, ZIP files and other bits and pieces. These are all files that should be neatly organised into separate folders, but also ones I like having immediate access to. I just have to press the Windows key+D to reveal my desktop, and there they are.

Thanks to a feature in OneDrive, I can get my messy (but useful) desktop to follow me around, so files on my laptop's desktop also appear on the desktops of my other laptop and my PC.

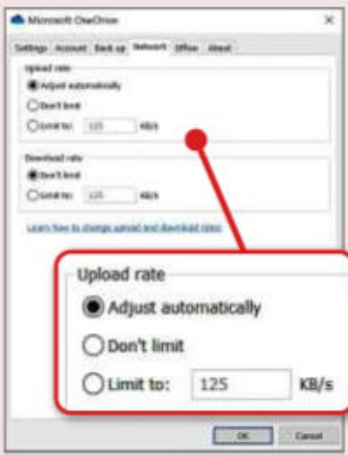
I need to sign into OneDrive using the same Microsoft account on each of my computers, but since it comes pre-installed on Windows 10 there's no need to install additional tools. Once signed in, I right-click the OneDrive icon in the system tray, click Settings, select the 'Back up' tab and click 'Manage back up'.

I then select Desktop from the 'Manage folder back up' window (see screenshot above). OneDrive offers to also sync my computer's Documents and Pictures folders, but I prefer to stick to just my desktop. My computer's desktop is then uploaded to my OneDrive account and the files on it immediately appear on the



You can set OneDrive to sync your Desktop, Documents and Pictures folders across your computers

desktops of my other computers. Of course, this has the potential to cause problems. If I store a particularly large file on one of my desktops, OneDrive not only has to upload that file to my online account, but also download it to my other computers. To prevent this, I've turned on OneDrive's 'Files On-Demand' feature (select the Settings tab, then tick 'Save space and download files...' at the bottom). I still get to see the desktop files from all my computers, but they're just links – OneDrive will download a file from another computer's desktop only if I try to open it. Although



Select 'Adjust automatically' to prevent OneDrive uploads slowing your broadband connection

this can sometimes be frustrating (if the file is particularly big, it can take a while to download), it's better than clogging up all my computers' hard drives with the same files.

Since OneDrive has to upload files as soon as I put them on my desktop, it has the potential to slow my broadband speeds. I've therefore instructed it to upload files only when it won't impact anything else I'm using my broadband for. To do this, I opened the OneDrive Settings window on each computer, selected the Network tab, then ticked 'Adjust automatically' in the 'Upload rate' section (see screenshot above).

WHAT I'D LIKE TO SEE IN ONEDRIVE

OneDrive's Personal Vault (find it in the OneDrive folder in File Explorer) lets me store sensitive files, safe in the knowledge that accessing them requires an extra level of authentication via the two-factor authentication app on my phone. The vault also automatically slams shut after 20 minutes. However, I'm not so keen on the Personal Vault's three-file limit for free accounts. There's a

sneaky way to get around this – you can add multiple files into a ZIP file, then upload the ZIP to your personal vault, which OneDrive treats as a single file. It's not ideal, though. Not only does it take time to create the ZIP, but I need to download the entire thing even if I want to access just a single file within it. I'd like to see Microsoft ditch the Personal Vault's file limit, allowing me to store as many files as my 5GB storage allows.

Named & Shamed



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

WARNING: JUNK AHEAD

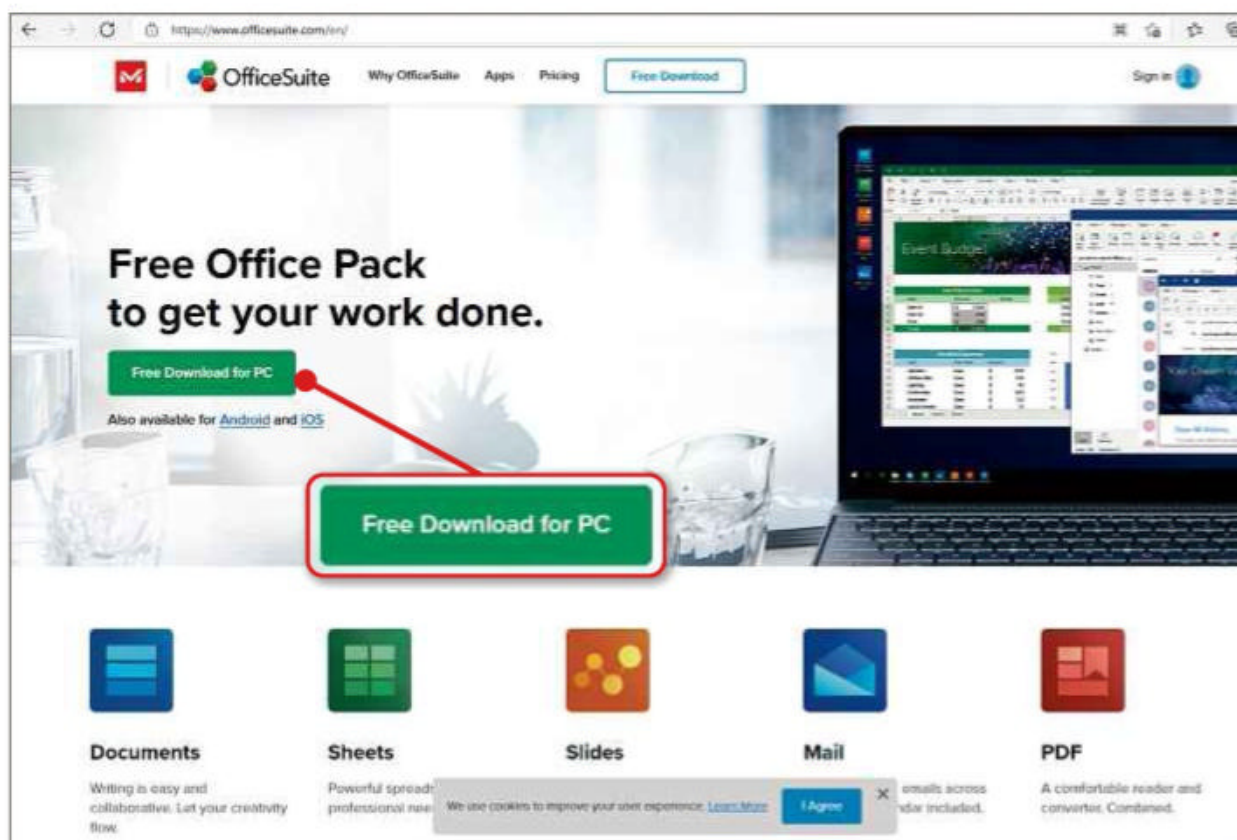
Junk offender: MobiSystems OfficeSuite



If imitation is the sincerest form of flattery, then Microsoft should take MobiSystems' OfficeSuite as one giant compliment. Either that, or it should take the company to court. Everything from its ribbon-based interface to the design of its icons apes Microsoft Office.

Even the company's website (www.mobisystems.com) looks spookily similar to Microsoft's – so much so that, if you're looking to install Microsoft Office, it's easy to end up downloading MobiSystems' lookalike by mistake, especially as a link to it comes up towards the top of any Google search for 'office suite'.

Perhaps I'm being a bit harsh on OfficeSuite? It's a free download, after all. Except it isn't. Cheekily, while the big green button on the home page (pictured) shouts 'Free Download for PC', it's not until you install and run the software that you discover it's free only for 30 days, after which you'll need to pay up to £38 per year.



When is 'free' not free? When it costs £38 a year...

To make matters worse, OfficeSuite comes with the online-storage tool MobiDrive (there's no way of opting out of this) that sets itself to launch in the background every time you start your PC.

I'll admit that OfficeSuite is far from the worst office software I've ever used.

In fact, thanks to its slavish mimicking of Microsoft, it's not bad at all. But I'm not going to recommend a product that tries so hard to trick you into installing it and then overloads your PC with junk, especially when there are great, genuinely free tools available, such as LibreOffice.

WHAT ARE THEY TALKING ABOUT?

WHAT THEY SAY

Samsung www.snipca.com/38647

"The word 'save' has many meanings: 'to store', 'to gather', 'to cherish', 'to protect', 'to recover' and 'to liberate' being just a few. Accordingly, the SAVE campaign's message is 'Samsung Memory Saves All the Progress in the World'. This slogan summarizes Samsung's commitment to contributing to society in ways that benefit everyone and... preserve the multifarious values and experiences of societies from all corners in the world."

WHAT THEY MEAN

Please 'save' us - we're drowning in drivel.

JONATHAN'S VILLAIN OF THE FORTNIGHT

Akpomiemie Ayomanor



Undergraduates are well known for behaving badly, but most draw the line at downing a few too many pints in the student union bar. Not so Akpomiemie Ayomanor. While studying for his IT degree at Teesside University, Ayomanor ran an email scam that befriended vulnerable people then tried to persuade them to send cash.

One victim was a 75-year-old Cornish widower with schizophrenia. She was charmed by a man called Anthony Raymond who claimed to work for the UN in Sudan. He wanted

to move to the UK and marry her, and promised to buy her a house with his \$20m salary. All she had to do was send him money so he could pay his \$40,000 tax bill. Of course, Anthony Raymond didn't exist. She ended up losing her life savings – more than £10,000.

Since then, Ayomanor has not only graduated with a first-class degree, but also earned a conviction for fraud. He'll now spend four years behind bars, where he'll learn the type of lessons no professor could teach him.

MINI PC | £950 from Amazon www.snipca.com/38545

Asus PN51

It's small you need

There are two ways to buy this new mini PC from Asus. The one we're reviewing here is available fully built from Amazon, but if you already have a few spare components you'd like to put to good use, you can also buy a barebones version, which comes with the case, motherboard and processor. You'd then need to add your own memory, storage and operating system. Prices start from £300 for a model with an AMD Ryzen 3 5300U chip installed.

“Space-saving PC provides impressive performance and great connection options”

The Amazon version we tested is fitted with a Ryzen 7 5700U processor, a 1TB SSD, two 16GB RAM modules (a total of 32GB) and runs Windows 10 Home.

It's housed in a solid black box, with a decent selection of ports on the front and back. There's a panel that's easy to remove and provides access to the two RAM slots, SSD mount and the space for an additional 2.5in internal hard drive.

At 49x115x115mm and 470g the PN51 is small and light. It comes with a VESA mount, so you can attach it to the back of a TV or monitor.

Because of its compact size it lacks any space for the kind of additional cooling you'd expect to find in a full-size desktop PC, while the 5700U processor is more typically found in laptops. It also uses the



processor's built-in graphics hardware rather than outsourcing this work to a separate graphics card. But we found it performed pretty well, considering these limitations. In fact it outperformed the M1-powered Apple Mac Mini (see our review, Issue 600) and the Intel NUC 11 Pro (see Issue 608). And it ought to given that it's about 50 per cent more expensive than both of these.

The integrated Radeon RX graphics hardware isn't powerful enough to make the PN51 a serious gaming PC, but it is still reasonably capable. In our tests it ran Doom in Full HD at a playable frame rate (34fps), performing much better when the resolution was dropped to 720p. The SSD also performed well in our tests, providing plenty of speed for loading programs and saving files.

Despite its compact dimensions, the PN51 is very well equipped with connectors. On the front, alongside the power button, you'll find a 3.5mm audio jack, a USB-C port, a USB 3.0 port and a

microSD card slot. There's also a microphone and an infrared sensor on the front, which are useful for making audio calls and using a remote control (though none is included) – should you need either.

Around the back (pictured below left) there's another USB-C port, two more USB 3.0 ports, a Gigabit Ethernet connector and an HDMI port. With both the USB-C ports capable of connecting to a monitor, you could certainly use this as the hub for a handy multi-screen setup.

There are also wireless connections available, with both Bluetooth 5.0 and Wi-Fi 6 built in.

VERDICT The best-performing mini PC we've seen to date, this AMD-powered compact marvel might cost as much as a desktop PC, but it won't disappoint

★★★★★

ALTERNATIVE Intel NUC 11 Pro £640

A cheaper and less powerful alternative, if you want to save money or opt for an Intel processor



SPECIFICATIONS

Eight-core AMD Ryzen 7 5700U processor • Radeon RX Vega 8 graphics • 32GB memory • 1TB SSD • 2x USB-C ports • 3x USB 3.0 ports • 1x HDMI port • Wi-Fi 6 • Windows 10 Home • 49x115x115mm (HxWxD) • 470g • Three-year warranty www.snipca.com/38545



LAPTOP | £1,450 from Amazon www.snipca.com/38553

Samsung Galaxy Book Pro 15.6

Light years ahead

Samsung has a new range of Galaxy Book Pro laptops on the market and they're absolute belters. They all come with **AMOLED** screens, and offer a range of sizes, processors and prices to suit everyone. The £1,450 model we tested here has a 15.6in screen and an Intel Core i7 processor, but you can shave this down to £1,199 if you opt for an i5 processor (www.snipca.com/38554), or £1,099 if you prefer an i5 chip with a 13.3in screen (www.snipca.com/38555).

“Lightweight laptop with ports aplenty, a fabulous screen and long battery life”

The first thing you'll notice about the i7 model is just how light it is – at 1.05kg for a 15.6in laptop, this is the lightest big-screen laptop around. And considering how slim and compact it is (11.7x355x226mm), it's reassuringly unbending and solid.

There are plenty of ports to work with, including a full-sized **HDMI**, two **USB-C**, one USB 3.0, a 3.5mm audio jack and a **microSD card** slot. Wireless connectivity includes **Wi-Fi 6** and Bluetooth 5.1.

Considering there's so little space, the keyboard is a genuine pleasure to type on, and has a backlight that adjusts to light levels in your room. We haven't got a



bad word to say about the 130x90mm trackpad, either, which makes a near-perfect combination.

The sumptuous AMOLED screen is superb. The resolution of 1920x1080 pixels is nothing to write home about, nor is the 60Hz **refresh rate** and the maximum brightness level, which is merely adequate. However, the contrast is perfect (as we'd expect with AMOLED technology) and the colour reproduction performed superbly in our tests. Overall, it looks fabulous.

Our review model comes with an Intel Core i7-1165G7 processor, integrated Iris Xe graphics and 16GB of **RAM**. We saw a similar specification in the Razer Book 13 (see our review, Issue 605). This Samsung model performed slightly better in our **benchmark** tests, but not enough that you'd notice the difference in everyday use. However, overall the Galaxy Book Pro 15.6 was quicker at running both Windows programs and games.

Battery life is as impressive as performance, with our video-playback test running for 16 hours 28 minutes. This is the second best laptop battery we've ever tested, bettered only by the M1 Apple MacBook Pro 13.

SPECIFICATIONS

Four-core Intel Core i7-1165G7 processor • 16GB RAM • Intel Iris XE graphics • 15.6in 60Hz 1920x1080-pixel screen • 500GB SSD • Wi-Fi 6 • Bluetooth 5.1 • 2x USB-C ports • 1x USB 3.0 port • 1x 3.5mm audio jack • 1x HDMI port • Windows 10 Home • 11.7x355x226mm (HxWxD) • 1.05kg • One-year warranty www.snipca.com/38553

HOW WE TEST

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

Dennis Publishing also owns the magazine *PC Pro* and the websites Expert Reviews (www.expertreviews.co.uk) and IT Pro (www.itpro.com). This means we can test thousands of products before choosing the most relevant for *Computeractive*.

FAIR AND IMPARTIAL

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

OUR AWARDS



We award every product that gets five stars our Buy It! stamp of approval. It means we were

extremely impressed by the product, and we think you will be too.



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

PRICES

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

VERDICT Slim, powerful, as light as laptops get, a great-quality screen and long battery life – this is a fantastic laptop

★★★★★

ALTERNATIVE Razer Book 13

£1,199 A 13in laptop that's almost as impressive, with a chunky, solid build quality



ANDROID TABLET | £600 from Amazon www.snipca.com/38585

Lenovo Tab P11 Pro

Chairman of the keyboard

For anyone struggling to choose between a small laptop and a tablet, the Lenovo Tab P11 Pro could be the solution. It's an Android tablet, but comes with a magnetic clip-on keyboard cover and stand, so you can work with it as you would a laptop. With every accessory attached, it weighs a travel-friendly 920g. Lenovo even adds a full-size stylus in this package, complete with a snug travel case.

“A tablet that doubles as a laptop, with an amazing screen, comfortable keyboard and long battery”

The obvious question is whether this compromise can truly replace a Windows laptop. The Android operating system won't run your Windows software but it does automatically detect when the keyboard is attached and slips into Productivity mode – similar to Chrome OS, which runs on Chromebooks. Your open apps appear as icons in the taskbar, and switching between them is as simple as a prod on the screen.

The keyboard works as well as any clip-on unit we've tested. There's enough **travel** on the keys to make typing feel responsive, and once we got used to the relatively narrow width we were typing at close to normal speeds. There are two minor annoyances: the backspace key

is tiny, and the trackpad is a little too sensitive – we accidentally activated it a few times with our palm while typing.

Although there's no Windows software, you have access to the full power of the Google Play Store. While few of these apps are built specifically for the larger screen of a laptop, they typically adapt well – and you can always keep them in phone-size windows if you prefer.

The screen is where Lenovo has clearly spent much of the budget. It's an 11.5in **OLED** 2560x1600-pixel panel and it romped through our technical tests, with excellent colour accuracy and reasonable brightness levels for an OLED screen. In use, videos and photos look amazing.

Sound is equally well handled, with dialogue coming across particularly well. It's also good for playing music, with audible stereo from its four side-mounted speakers. This quality is replicated throughout the build, with an aluminium chassis that has a quality approaching that of an iPad, helped by its slim 5.8mm thickness. It's built around a Snapdragon 730G processor, which sits in the middle of Qualcomm's range. This performed pretty well in our **benchmark** tests and, in use, it never felt slow.

Our previous favourite Android tablet was the Samsung Galaxy Tab S6 (see our review, Issue 582), but this Lenovo model

SPECIFICATIONS

Eight-core Qualcomm Snapdragon 730G processor • 6GB RAM • 11.5in OLED 2560x1600-resolution screen • 128GB storage • 13MP/5MP rear cameras • 8MP front camera • Wi-Fi 5 • Bluetooth 5 • USB-C port • 8,400mAh battery • Android 10 • 171x264x5.8mm (HxWxD) • 485g • One-year warranty www.snipca.com/38585



surpasses it. The S6 has a smaller 10.4in screen and a slower processor. It's still available, however, and significantly discounted at £280 (down from £348), but while it comes with a stylus, you'd have to buy a separate Bluetooth keyboard, if you wanted one.

For the same price as a Tab P11 Pro, you could opt for an iPad Air instead. This is a faster, slicker experience, and Apple's iPadOS has more apps specifically designed for tablets, but it costs nearly £300 more to add a keyboard and stylus.

The Tab P11 Pro's camera is good for a tablet, and better than the Tab S6's. If you used it for a Zoom meeting you would probably have the best video and audio quality of all participants – the latter courtesy of the device's effective dual mics.

There is one other factor in the Tab P11 Pro's favour: battery life. Put through our standard video-playback test, it lasted for 17 hours 28 minutes, which is hours more than its rivals.

VERDICT A brilliant Android tablet for a reasonable price, particularly as it comes with an impressive magnetic keyboard and stylus

★★★★★

ALTERNATIVE

Samsung Galaxy Tab S6 Lite **£280** With 64GB storage and 10.2in screen, this used to be our favourite Android tablet but now seems slow



SMARTPHONE | £190 from Amazon www.snipca.com/38633

Motorola Moto G50

Making your day (and a bit more)

The Motorola Moto G50 is the next model up from the Moto G30 (see our review, Issue 606). It's more expensive, but remains comfortably below £200. So if you're looking for an affordable phone that's capable of making use of 5G coverage in your area, this could be a great option.

At first glance it isn't easy to spot the difference between an affordable phone like this and vastly more expensive models, but there are a few giveaways. The bezel around the edge of the screen is a bit thicker than you might expect, though this won't bother you when you're actually using it. The case is made entirely of plastic, and the fingerprint scanner is on the back below the rear cameras, rather than built into the screen.

“Budget phone with excellent screen and a day-long battery”

For the price, the 90Hz 720p IPS screen is excellent, capable of recreating a solid 92.2 per cent of the sRGB standard. It also has reasonable contrast and it's bright enough to use outside on all but the sunniest of days.

The phone's internal workings are built around the eight-core 2GHz Qualcomm Snapdragon 480 processor, backed up with 4GB of RAM and 64GB of built-in storage. If that's not enough, there's a microSD card slot for adding up to 1TB more.

In our benchmark tests the G50 trumps the G30 by some margin, and holds its own against similarly priced phones from other manufacturers. It performed particularly well in our video-playback

SPECIFICATIONS

Eight-core Qualcomm Snapdragon 480 • 4GB memory • 6.5in 90Hz 1600x720-pixel IPS screen • 64GB storage • 48-megapixel rear camera • Wi-Fi 5 • Bluetooth 5 • Android 11 • 165x75x9mm (HxWxD) • 192g • One-year warranty www.snipca.com/38633



test, lasting 25 hours 45 minutes before draining the battery, which is better than most models.

The main camera is a three-lens unit, with a 48-megapixel option for standard shots and a 5-megapixel macro lens for taking extreme close-ups. The third lens is simply a depth sensor, which helps add blurring to the background of portraits. Overall the camera isn't bad, but it isn't brilliant either. It fares reasonably well in bright light but quickly loses detail in dimmer conditions, especially on overcast days. If photography is a key factor in your smartphone purchase, it's worth paying more for a model that works better in low light.

Video can only be captured at 30fps in 1080p resolution. Image stabilisation works well, but video footage is a little soft in terms of the focus, and very light on detail.

VERDICT A great-value 5G phone with a good screen and a great battery life, but the camera isn't brilliant

★★★★★

ALTERNATIVE Xiaomi Poco F3 £324 More expensive but worth it, with exceptional performance and screen and a much better camera



CHOOSE THE RIGHT SPECS

Monitor response time



What does it do?

A screen's response time is a standard measure of how quickly a screen's pixels change colour. If you spend most of your time browsing websites and sending emails, you don't need a monitor with a particularly fast response time. However, if you enjoy gaming or watch a lot of videos, a fast response time is essential.

How does it work?

Manufacturers usually measure the response time of their screen's pixels as the time it takes for them to transition from black, to white, to black again. A black pixel is 'off', with no light coming through, while a white pixel is fully on, letting all the light through from the red, green and blue sub-pixels to make white. In other words, the response time is how long it takes a pixel to fully switch on and switch back off again.

What are the specs?

Response times are usually less than 10 milliseconds (ms). However, some monitors, particularly those aimed at gamers, offer response times of 5ms or less – some getting as low as 1ms (such as the Lenovo G24-10, £124 from Amazon www.snipca.com/38653 pictured below). With games running at high frame rates, and monitors offering fast refresh rates, a good response time is vital.



Can I change it later?

Unfortunately not. It's a fundamental physical characteristic of your monitor or laptop screen. For faster response times, you'll just have to buy a better screen.

Reviews

SMARTPHONE | £197 from Amazon www.snipca.com/38612

Doro 8050

Keeping things simple

Many *Computeractive* readers know their way around the Android operating system, but not all. Not everyone feels the need to have a smartphone, despite society increasingly expecting them to.

Swedish firm Doro makes phones that run its own simplified version of Android. It markets its phones at older users – but it's really more about attitude than age. This kind of phone might appeal to those who now realise they need a smartphone, but don't want to be baffled by numerous settings, nor pay a fortune for the privilege.

It looks conventional enough, measuring 9x152x70mm and weighing 165g. Its polycarbonate casing is easy to hold and doesn't feel like it might slip out of your hand. The physical home button may seem a little dated to some, but it's large enough to press easily and takes you straight back to the home screen, no matter how many apps you have open.

Below the rear camera there's a

dedicated Response button, which is a great idea for more vulnerable people who live alone.

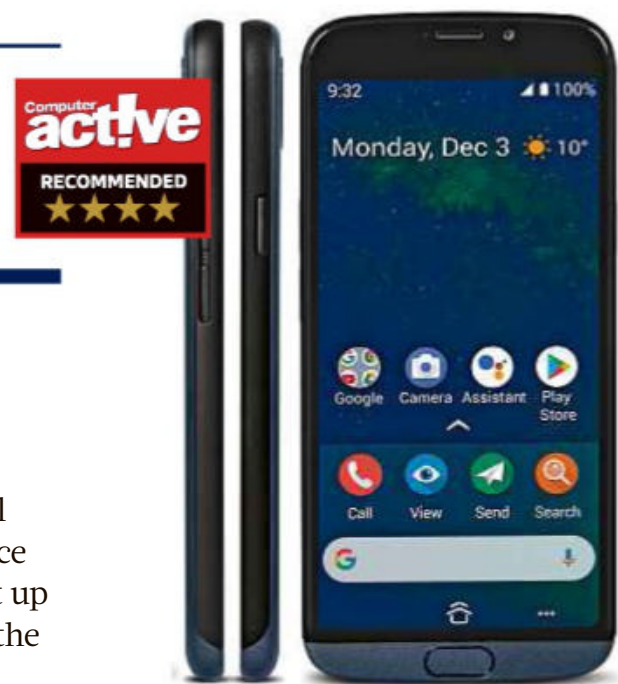
To get it up and running, you install Doro's Response app on another device and pair the two phones. Once it's set up a long press or three rapid presses of the Response button sends an alert and location details via Google Maps to the linked device. As soon as the receiver acknowledges the alert, a hands-free phone call is established between the two phones.

The 8050 runs a modified version of Android 9. This includes action-labelled icons to guide users to the correct apps, such as Call, View, Send, Add, Search, Help and Set. For example, the Add icon offers further options such as contact, note, alarm, event or application. There is also a well-thought-out series of setup tutorials and the phone's accessibility settings are easy to use.

When it comes to performance, the phone is smooth and responsive, though

SPECIFICATIONS

Four-core Qualcomm Snapdragon 215 • 2GB RAM • 5.45in 1440x720-pixel IPS screen • 13-megapixel main rear camera • 5-megapixel front camera • 3.5mm audio jack • MicroSD card slot • 9x152x70mm (HxDxW) • 165g • Two-year warranty
www.snipca.com/38607



it's never going to rival more expensive models and its camera (pictured below left) is merely average. Internal storage is listed as 16GB, but our test phone had only 8GB of usable space when we first switched it on. However, this can be expanded with a **microSD card**.

VERDICT This isn't the best Android phone you can buy for the price, but it's ideal for those who find most modern smartphones overwhelming

★★★★★

ALTERNATIVE

Samsung Galaxy A21s
£140 One of the best budget models around, the Galaxy A21s is cheaper but doesn't offer the Doro's simplified interface



WHAT SHOULD I BUY?

We solve your buying dilemmas

What's the best scanner for negatives and slides?

Q Can you please recommend a scanner for 2.5in square black-and-white negatives (I have around 100 to scan) and a few colour slides of the same size? Or is it more cost effective to send them away to be scanned?

Mike Capper

A There are plenty of scanners for specifically converting 35mm slides and negatives into

digital files, but for 2.5in (63.5mm) square negatives you'll need a flatbed scanner. Most basic models aren't capable of scanning negatives because they need a light built into the lid. These used to be more common but are fairly thin on the ground nowadays.



However, Epson still makes one. It's called the Perfection V600 Photo and costs £260 from Amazon (www.snipca.com/38609, pictured).

It has an A4 bed, so if your negatives are exactly 63.5mm square with no border, you should be able to scan 12 at a time, though you'd still need to digitally edit them.

It's worth checking whether sending them away would be any cheaper, particularly if this is a one-off job. Don't forget to factor in your own time, as scanning transparencies can take ages.

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

Eternal Spring of the Mind by Elena Paraskeva



AFFINITY Photo

The fastest, smoothest, most powerful professional photo editor for macOS, Windows and iPad

Experience the new way to edit photos with a **10 day free trial:** affinity.serif.com/photo



APPLE DESIGN
AWARD WINNERS

Editors' Choice



worldwide customer rating

Reviews

PC MONITOR | £383 from HP www.snipca.com/38596

HP Z27u G3

Get connected

With narrow bezels, a slim stand and solid build quality, the HP Z27u G3 makes a great first impression. The screen is only 38mm thick, and the entire thing measures just 230mm from front to back. There's even 150mm of height adjustment, along with the ability to pivot into portrait mode, and generous amounts of tilt and swivel.

It has two **DisplayPort** sockets – one can output to another screen while the other inputs from your PC, so you could use these to create a multi-monitor setup, even if your PC lacks sufficient ports. It also offers four **USB 3.0** ports, with two on one edge for easy access, and a **USB-C** port that supports DisplayPort and a

SPECIFICATIONS

27in IPS screen • 2560x1440-pixel screen • 1x HDMI port • 2x DisplayPort • 1x USB-C ports • 4x USB 3.0 ports • 356-506x612x38.9mm (HxWxD) • 9.5kg • Three-year warranty www.snipca.com/38596

whopping 100W of power delivery. You also get **Gigabit Ethernet** and **HDMI** ports.

This attractive design conceals some solid specifications. It's a 27in **IPS** screen with a resolution of 2560x1440, and that makes sense for everyday work. It's certainly more spacious than the average **1080p** monitor (1920x1080 pixels) and the 109ppi density leaves everything looking crisp.

It performed well in testing, too. It's bright enough for any indoor setting, while a decent **contrast ratio** gives it a vibrant look. It provides wide coverage of the **sRGB** gamut, meaning all colours look correct. While the peak **refresh rate** of 60Hz isn't unusual, you might want to look for a model with a higher rate if you're likely to be playing games.

The Z27u G3 has no speakers, no headphone jack, no **KVM switch**, no



USB-B port and no webcam. However, the features it does have, and its standout design, mean it's still a worthy buy.

VERDICT A good-quality 27in PC monitor, though it's designed for serious Windows work rather than gaming

★★★★★

ALTERNATIVE BenQ GL2780

£143 This 27in monitor from BenQ is a better bet for gamers, with faster response and refresh rates



PC MONITOR | £360 from Amazon www.snipca.com/38597

AOC U28P2A

Vote against the resolution

This 28in AOC monitor gives you an extra inch of space more than the HP Z27u G3, reviewed above. It's also a much higher **4K** resolution (3840x2160 pixels) and is equipped with its own speakers, though they are a little tinny at three Watts. It has four USB 3.0 ports and 130mm of height adjustment.

It's another **IPS** screen, but in our tests the colour wasn't as solid as the HP's. It has an 'sRGB' setting in its configuration tools, but we found this limited the brightness level significantly. Switch to the monitor's 'Warm' setting and it can be made much brighter. The colour

SPECIFICATIONS

38in IPS screen • 3840x2160 pixels • 2x HDMI ports • 2x DisplayPort • 4x USB 3.0 ports • 2x 3W speakers • 403-533x636x223mm (HxWxD) • 7.2kg • Three-year warranty www.snipca.com/38301

reproduction on either setting isn't as good as what you get from the HP monitor above, however.

Switching between these settings is done via AOC's onscreen menu, which clumsily relies on buttons mounted on the bottom bezel. You get used to them, but not before accidentally switching the monitor off a few times.

Elsewhere, AOC's design impresses. Its flexible stand allows the screen to pivot, making it easy to access the USB hub and the monitor's three video inputs: two **HDMI** and one DisplayPort. It's a solid stand and won't be easily knocked over.

The big question to answer before buying this monitor is how much 4K matters to you. We're not convinced of its usefulness at this size. It makes a lot of sense once the screen is over 30in, but at



normal viewing distances it's hard to differentiate between 1440p and 4K at this size.

VERDICT An affordable 4K monitor, but at this size we think the superior colour accuracy of the HP is more important than extra resolution

★★★★★

ALTERNATIVE AOC Q32P2 £159

A huge 32in monitor, if you're looking for something even larger



WIRELESS EARPHONES | £99 from Google www.snipca.com/38650

Google Pixel Buds A-Series

Ear, can you help me?

Google may be most people's search engine of choice, but it's not the first name you think of when it comes to earbuds. However, these earbuds come with Google's voice-activated assistant - imaginatively called Assistant - letting you perform voice commands such as playing music, making a call and setting alarms. It effectively places a Google Nest smart speaker in your ear.

It's worth noting that although you can connect these earbuds to any Bluetooth 5.0 (or later) device, you'll need to connect to a phone or tablet running Android 6.0 (or higher) to use Google Assistant.

The batteries in the buds should last for five hours of audio playback, with 24 hours of recharging available via the case (pictured below). If you're talking on a phone call, these numbers drop to 2 hours 30 minutes and 12 hours respectively. However, a full charge only takes an hour, and even 15 minutes of charging the case provides enough for three hours of audio playback.

All the usual features of Google Assistant are present, but there are some serious benefits to having it in your ear and always available, such as real-time translation courtesy of Google Translate. However, this isn't Douglas Adams' Babel fish just yet (sorry fans of *Hitchhiker's Guide to the Galaxy*) because it still needs your phone to show translations.

The touch controls are simple and responsive. A single tap on either bud



plays or pauses your audio, a double-tap skips forward a track and a triple-tap plays the previous track. Remove either bud from your ear and audio pauses; pop them back in and it resumes. You can use Google Assistant hands-free, though, with the usual "Hey Google" or "OK Google" command. This worked every time we tried it.

Overall sound quality is impressive, particularly with vocals. They lack power in the bass sounds, even with 'bass boost' mode turned on, but that's not unusual for earbuds this cheap. They don't block or cancel background noise, either, so they're not great in noisy environments, such as train carriages.

SPECIFICATIONS

Bluetooth 5.0 • 12mm dynamic speaker driver • USB-C charging case • 3 sizes of ear tips • IPx4 • Buds: 20.7x29.3x17.5mm • Case: 63x25x47mm • 5g • One-year warranty www.snipca.com/38650

VERDICT For the price, these earbuds sound great and work with Google Assistant superbly well

★★★★★

ALTERNATIVE

Creative Outlier Air V2 £45 A cheaper in-ear option with Google Assistant, but you have to touch the buds to use it



DO I REALLY NEED...

Wi-Fi 6E?

What is it?

Wi-Fi 6 (also known as 802.11ax) uses the same 2.4GHz and 5GHz channels as Wi-Fi 5 and all previous wireless networking standards. Wi-Fi 6E is an extension of Wi-Fi 6 that opens the 6GHz channel.

Why is that good?

Unlike 2.4 and 5GHz, there's nothing on the 6GHz channel, except Wi-Fi 6E devices. Using it will be the Wi-Fi equivalent of leaving the M6 at Birmingham and taking the less-used M6 Toll road.

What's the catch?

There are no compatible routers available. When they do appear, they're likely to be expensive, because they require an extra 6GHz radio, which adds to the cost. Watch out for the TP-Link Archer AX96 (www.snipca.com/38659, pictured), which is likely to offer this cutting-edge tech at a reasonable price.



So can I do without it?

For now you'll have to, because the hardware isn't there. However, we suspect Wi-Fi 6E will eventually become as popular as Wi-Fi 5 is now.

NEXT ISSUE

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Amazon Fire HD 10
Amazon's newly updated £150 10in tablet



PC Specialist Aurora R
A desktop PC for less than £500

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

LAPTOP

Lenovo Yoga Slim 7 (256GB)
£749 from www.snipca.com/38429
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 £780 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. £1,800 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

NEW ENTRY

Lenovo Tab P11 Pro
£600 from www.snipca.com/38585
Tested Issue 609



A fast tablet that comes with a magnetic stand and keyboard that means you can also use it as a laptop. It has an outstanding screen, 128GB storage and a 17-hour battery life, while its excellent dual mics make you sound clear in video chats.

ALTERNATIVE Samsung Galaxy Tab S6 Lite Slower than the Lenovo Tab P11 Pro, but the 64GB storage and decent 10.2in screen make it good value. £280 from www.snipca.com/38606

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

Xiaomi Poco F3
£329 from www.snipca.com/38395
Tested Issue 608



This is a phenomenal phone for the price. It's 5G, has a brilliant screen, and comes with 6GB of RAM and 128GB storage (256GB costs £349). Performance is exceptional – in fact, the only phone under £450 that's faster is the iPhone SE.

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

WHAT A DIFFERENCE A DAY MAKES

"It's the best home improvement we have ever made. Our conservatory is now our dining room in the garden."

Mike Millis,
Middleton On Sea

**SUBSIDIES
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LATER THAT DAY

BEFORE

There are many reasons to change your conservatory roof with Green Space UK

INSTALLED IN 1 DAY

"What a difference a day makes as the saying goes, and yes, that's all it took to install."

Mr & Mrs Barber, Wells

WARMER IN WINTER

"There is no doubt that the conservatory is much warmer than previously, and no, the room is not darker either!"

David Birch, Chichester

USABLE ALL YEAR ROUND

"The conservatory is now used throughout all seasons of the year and is far more comfortable to sit in whatever the weather outside."

Mr & Mrs Gibson, Portishead

MOULD & CONDENSATION

"This is the best thing we have done in this house. Used to run with condensation and now zero."

Karen Thomas, Chippenham

COOLER IN SUMMER

"You could have fried an egg on the table in there in the summer, I now look upon the conservatory as a new room. It is quiet, restful and cosy."

Carol Doyle, Surrey

REDUCES ENERGY BILLS

"I've already turned the underfloor heating down. Lovely job guys, thank you!"

Anne Bird, Bristol

QUIETER IN BAD WEATHER

"For the first time in 10 years we do not have to close the door to the conservatory when it rains, as the noise is minimal and before I found it difficult to hear the TV over the loudness of the rain on the old roof."

Mr & Mrs Bailey-Webb, Warsash

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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 £32.99.

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. £45 from www.snipca.com/26514

PC MONITOR

BenQ GL2780
£143 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

241B7QPIEB With a great picture, stylish design and speakers, this 24in Full HD IPS is an excellent smaller screen. £276 from www.snipca.com/37096

ROUTER

D-Link DIR-1960
£104 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. £203 from www.snipca.com/30710

PRINTER

Canon Pixma TS8350
£150 from www.snipca.com/38079
Tested Issue 606



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

ALTERNATIVE Epson Expression

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

COMPETITION

Win a... Sonos Move smart speaker

With the Sonos Move smart speaker you'll enjoy a surprisingly rich bass, a wide soundstage and automatic Trueplay tuning that continually adapts the sound for where you are and what you're listening to.

You can stream over Wi-Fi and connect it to the rest of your Sonos system at home, then switch to Bluetooth when you're away and offline. Its 10-hour battery life

guarantees a whole day of brilliant sound, and the base makes recharging easy. You can also get power on the go with the USB-C travel charger.

You don't need to worry about accidental drops or unexpected weather. With a tough durable shell and IP56 rating, Move is built to withstand falls, bumps, moisture, dust, UV rays, and extreme temperatures.

It has Amazon Alexa and Google Assistant available, letting you control your music and other tasks with your voice. In addition, customers can now listen to Sonos Radio with over 40+ genre stations, plus curated artist stations from the likes of Brian Eno,



Bjork, D'Angelo and Thom Yorke to name a few. And it's all free straight out of the box.

To enter this competition, answer the question at www.snipca.com/38550 and enter your details. It runs until midnight Tuesday 13 July. Good luck!

You can buy the **Sonos Move** from Sonos's site: www.snipca.com/38655.

SONOS

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. £260 from www.snipca.com/27309

SOLID-STATE DRIVE

Samsung 970 Evo Plus
500GB
£73 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. £65 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. £72 from www.snipca.com/36602

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Workshops & Tips

14 pages of easy-to-follow workshops and expert tips

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HOW TO...

Transfer and edit dash cam footage on your PC

by Will Stapley

What you need: A dash cam; LosslessCut; Dashcam Viewer **Time required:** One hour

Dash cams are great for monitoring routes your car has driven and capturing video footage of an accident (useful if you need to prove you weren't at fault), but sifting through the footage and trimming it to what you need isn't always easy.

Here, we explain how to set up a dash cam, then transfer the footage it captures to your computer, where you can view and edit it. Throughout, we'll be using our recommended dash cam, the Garmin Dash Cam 46 (£116 from www.snipca.com).

[com/38675](http://www.snipca.com/38675), pictured right). It's small (5.62x4.05x2.14cm), easy to use and captures high-quality **1080p** HD video. Besides capturing video footage of your journey, it has built-in GPS, which can record your routes and speed.

The Dash Cam 46 also includes a range of useful extra features including voice control (letting you save a clip without fumbling for the Save button), driver alerts (warning you if you're too close to the car in front, for example) and a G-sensor that detects incidents (such as



a sudden jolt) and instructs the dash cam to save any relevant footage of the incident.

1 Choose and insert a memory card

Like most dash cams, the Garmin 46 doesn't have internal memory and instead stores all video footage on a **microSD card**, which you slot directly into its base. There's no microSD card included in the package, so you'll need to buy a microSD-to-SD card adapter.

Before doing so, it's worth checking whether you can repurpose one from an old phone or tablet. Bear in mind that you'll need a card that meets the minimum specifications of your dash cam – with the Garmin 46, this means a Class 10 microSD card (in other words, one that's fast enough to record the dash

cam's HD video streams).

When buying a new card, look for 'Class 10' in the product description – the card may also have 'C10' printed on it. Also, make sure the one you choose



Samsung's Evo Plus microSD card slots into an SD card adapter

is within the capacity range specified by your dash cam's manufacturer. The Garmin 46 works with microSD cards that are between 8GB and 512GB.

Samsung's 128GB Evo Plus (£15 from www.snipca.com/38677) is great value. Precisely how much footage it can store depends on the resolution of your dash cam – when using the Garmin 46's maximum 1080p resolution, 128GB is enough to store just over 24 hours of video. Like most microSD cards, the Samsung Evo Plus comes with an SD card adapter. This looks like a standard SD card but has a small slot in the side, into which you can slide the microSD card (pictured left). You can then insert it

into an SD card reader (most laptops have these) to access your recorded footage – more on this in a moment.

2

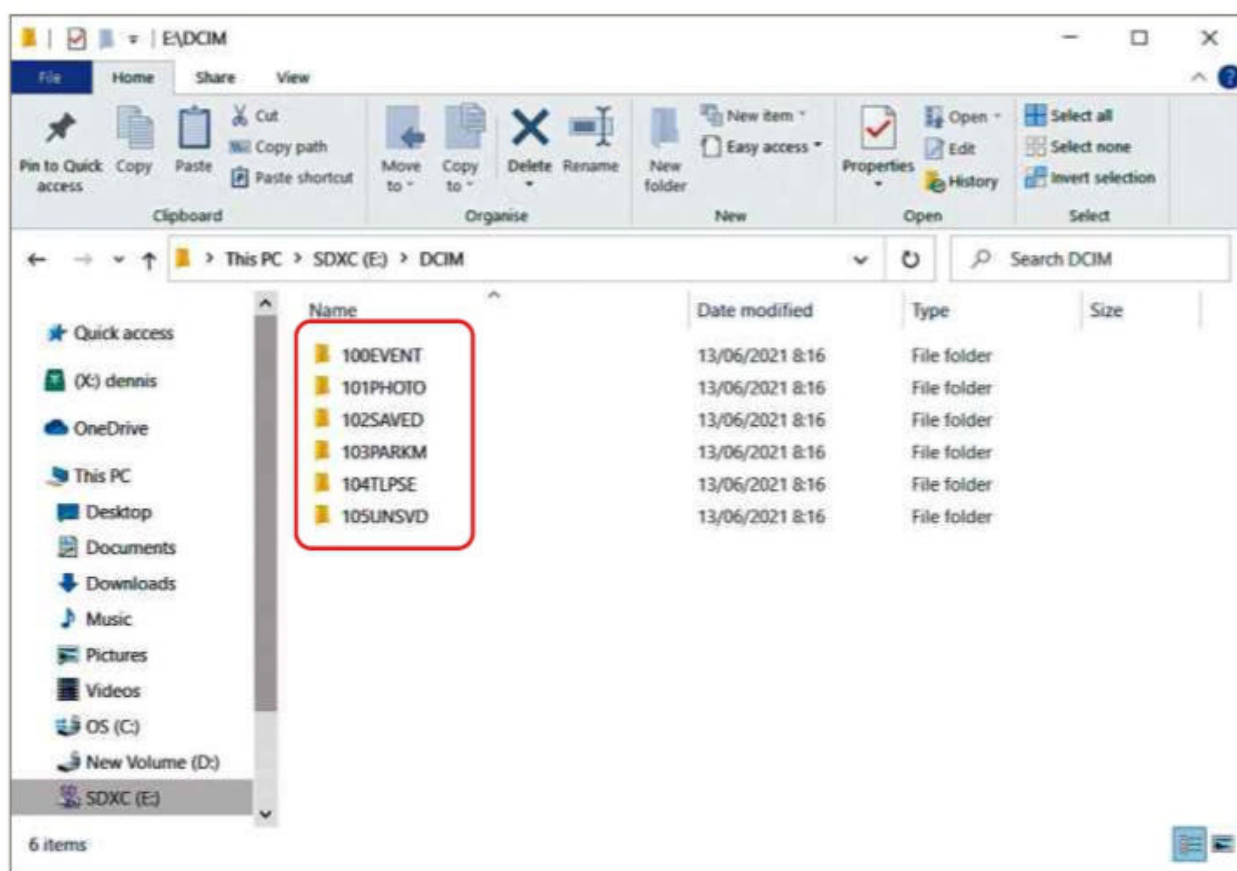
Install your dash cam

The ideal spot for a dashcam is behind your rear-view mirror. This gives the camera a central perspective of the road ahead and ensures it's not obstructing your view when driving. The Garmin 46 uses a magnetic mount, so you can remove the camera but leave the mount in place.

It also has a built-in battery, but this lasts only 30 minutes so you'll need to attach the dash cam to your car's USB port or circular 12v power supply using the supplied four-metre USB cable. If you plan to hide this cable by routing it inside the trim of your car, take care not to create any trip hazards or block any airbags. If in doubt, ask a local garage to install it (Halfords has an installation service that starts at £35, but only for dash cams you buy from it, not other retailers – find out more at www.snipca.com/38678).

Once it's set up, the Garmin 46 records video continuously, saving the footage in separate files as it goes. When your microSD card is full, the dash cam will delete the oldest files first to make room for new recordings. If you have an accident, you can save the relevant clip (meaning it won't be overwritten by new footage) either by long-pressing the Save button (pictured below) or by saying "OK Garmin, save".

Save footage on the Garmin 46 by long-pressing the Save button or using a voice command



The Garmin 46 saves your video footage in separate folders, depending on the type

3

Transfer videos to your computer

Like most dash cams, the Garmin 46 comes with a companion app (www.snipca.com/38676). This connects to the dash cam, letting you view both saved and live footage. It's useful if you're away from your computer and want to check what's stored on your dash cam and download videos to your phone. However, we found it very slow, particularly when trying to watch and trim clips.

We therefore recommend transferring footage to your computer and viewing or editing it there. Along with the four-metre USB cable, the Garmin 46 includes

a 1.5-metre USB cable for connecting the dash cam to your computer. If you want to leave the dash cam in your car, you can instead remove the microSD card (push it to release), insert it into a microSD-to-SD card adapter as explained earlier, then slot that into your computer's card reader.

Whichever method you choose, open File Explorer on your computer (press the Windows key+E), select 'This PC', then either the microSD card or the dash cam.

The Garmin 46 stores all footage within a variety of sub-folders within a main DCIM folder (see screenshot above), including a '100EVENT' folder (containing footage recorded after it detects an impact), '101SAVED' (your saved video footage) and '105UNSD' (unsaved video footage).

Open the relevant folder, then double-click an MP4 file to view the video in your default player. The footage will display a bar along the bottom showing the date, time, location and speed.

4

View your footage

Working your way through video clips to find exactly what you want can take time. To make things easier, we recommend installing Dashcam Viewer – go to <https://dashcamviewer.com> and click 'Try for Free'. It works with most dash cam models (scroll down the website and click the See Compatible Dashcams link under the Compatibility heading), including our Garmin 46.

THE THREE BEST ALTERNATIVE DASH CAMS



Nextbase 322GW £99

www.snipca.com/38682

It may be bigger than the Garmin 46 and lacks some of its extra features (such as voice control), but this dash cam is cheaper, records video at 1080p and includes GPS.



Nextbase 622GW £250

www.snipca.com/38683

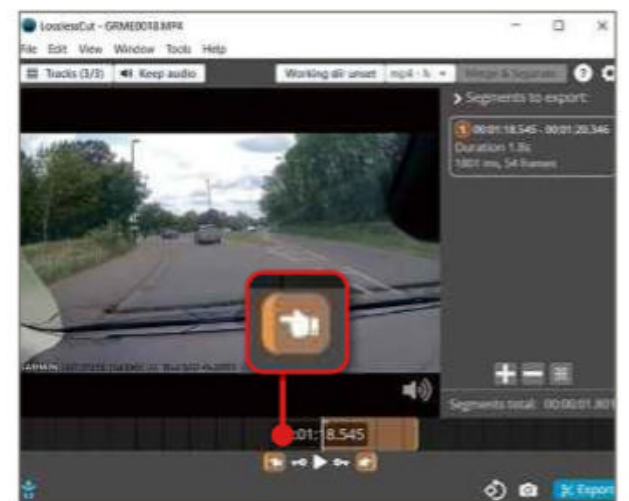
The 622GW records stunning 4K video that's better quality than any other dash cam we've tested. It also uses image stabilisation to reduce the impact of vibrations for a smoother, clearer image.



Garmin Tandem Compact Dual £279

www.snipca.com/38684

This has two lenses: one facing forwards, the other to the rear. Both capture a 180-degree field of view, so you get a 360-degree view of what's going on inside and outside your car.



LosslessCut lets you quickly export multiple clips from a single video

The free version of Dashcam Viewer lets you load only two videos at a time and limits exported video clips to 5 seconds (you can upgrade to the Plus version to remove these restrictions for a one-off fee of £25), but the free version is fine for checking where you've been and locating specific sections of your footage.

During installation, you'll be prompted to download a **codec** pack (Dashcam Viewer needs this to play the video footage). When the website for the codec opens, click the 'HTTPS Server 1' link and follow the installation instructions.

Once this is installed, run Dashcam Viewer, then click File, 'Open Video Files...' and locate the clips you want to look at (if you've upgraded to the Plus version, you can choose an entire folder of clips by selecting 'Open Video Folder...').

Dashcam Viewer's interface is split into several windows, with the main

one displaying your video footage and providing playback controls. On the right-hand side, you'll see a window with a Google Maps view of where your video was recorded (this requires your dash cam to have GPS, as on the Garmin 46). As you play your clip, a small dot in the Maps window will move accordingly.

At the bottom of the window, you can keep an eye on information such as the direction you were travelling and your speed. Select the Speed tab and you'll see a chart showing your speed over the entire clip – click on this chart and the video will skip to that point. To export a clip, navigate to its starting point, then click the MOV button in the top toolbar (see screenshot below). In the window that opens, click 'Export to Video...'.

5

Trim and export your video

As mentioned, the free version of Dashcam Viewer limits

exported clips to just five seconds. If you don't want to upgrade to the Plus version, you can still use Dashcam Viewer to locate the file with the section you want to export, then use another tool to export it – such as the Photos app, which is the default photo and video viewer that comes with Windows 10.

In File Explorer, navigate to the file you want to export, then double-click it to open it in the Photos app (if the Photos app isn't your default viewer, right-click the video file, select 'Open with' then Photos). In the Photos app, click 'Edit & Create' (top right), followed by Trim. Next, drag the white circles at either end of the video timeline to select the section you want. When you've done this, click 'Save a copy' (top right) and the trimmed video will be saved in the same folder as the original (it will have '_ Trim' at the end of the file name).

The Photos app lets you save only one section of your video. To extract multiple clips, we recommend using LosslessCut (free from www.snipca.com/38679 – scroll down and click the 'LosslessCut-win.exe' link).

Within the tool, press Ctrl+O to load the relevant video file, then use the timeline to navigate to the start of the first clip. Click the 'Cut start' button (a hand pointing left – see screenshot above) to mark the start point of the first clip, then play the video to where you want the clip to end and click the 'Cut end' button (right-pointing hand).

You can now repeat this process, selecting as many sections as you like. When you've finished, click the 'Export & merge' button (bottom right). At the top of the window that opens you can choose whether to combine your clips into a single video (select 'Merge cuts'), as individual clips ('Separate files'), or both ('Merge & Separate').



Dashcam Viewer lets you view your dash cam footage alongside GPS data, but the free version exports only five-second clips

Workshop1

Block annoying GDPR cookie pop-ups

What you need: uBlock Origin

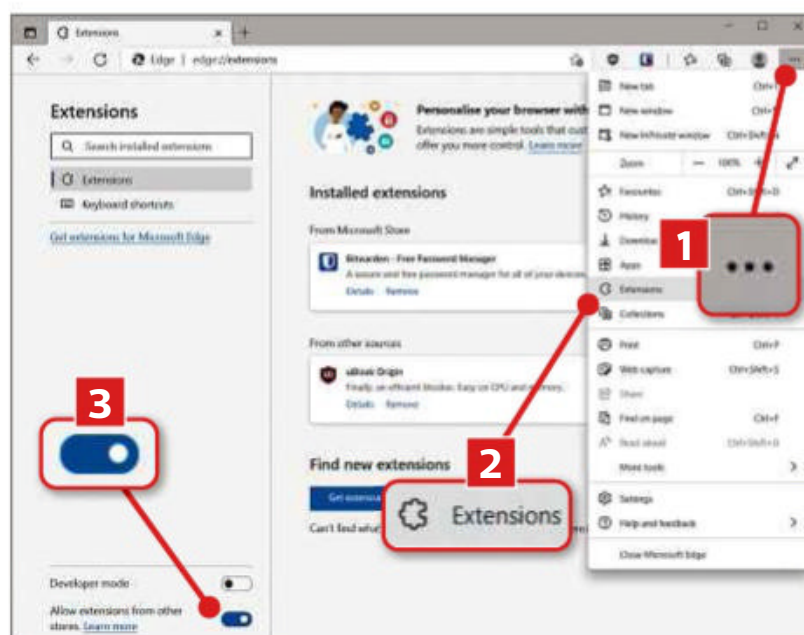
Time required: 30 minutes

This June marks three years since **GDPR** legislation was applied across the EU. Although the regulations give us more control over how our data is used, they do mean we are hit with pop-ups requesting our consent to **cookies** every time we visit a website. Choose to reject these

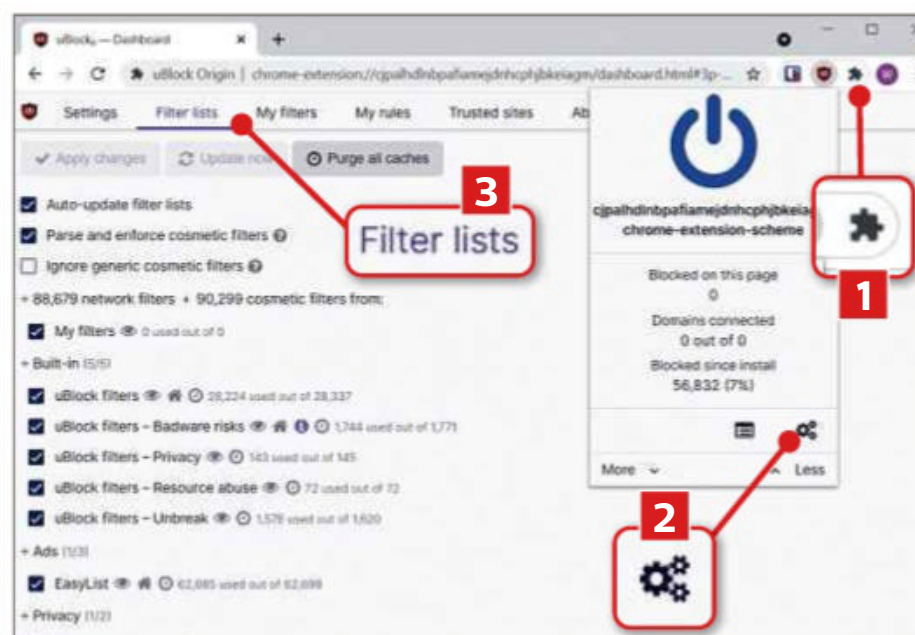
cookies and you'll probably see a long list of confusing options with sliders to switch on or off. Most of us just end up clicking Accept. Here, we show you how you can simply hide all GDPR pop-up messages and browse like you used to. All you need is the uBlock Origin browser extension.



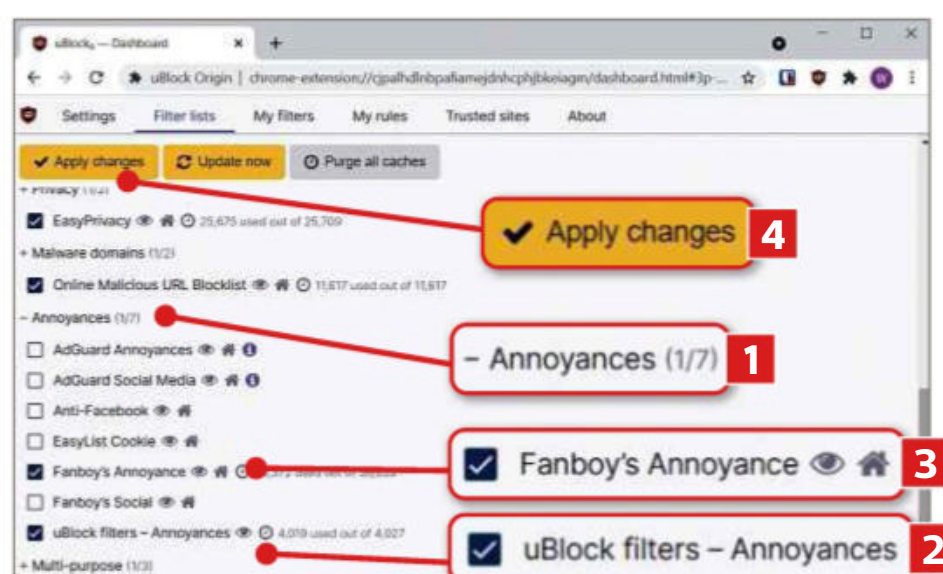
STEP 1 The uBlock Origin extension is available for all major browsers. For Chromium-based browsers like Chrome, Edge and Brave, you can download it from www.snipca.com/38558. Note that if you're using Edge, you'll need to first click the menu button (three dots, top right **1**), Extensions **2**, then turn on 'Allow extensions from other stores' **3** (if you can't see this option, click the three horizontal bars top left). UBlock Origin is also available for Firefox from www.snipca.com/38559. There are lots of similarly named extensions, so we recommend using the links above when downloading.

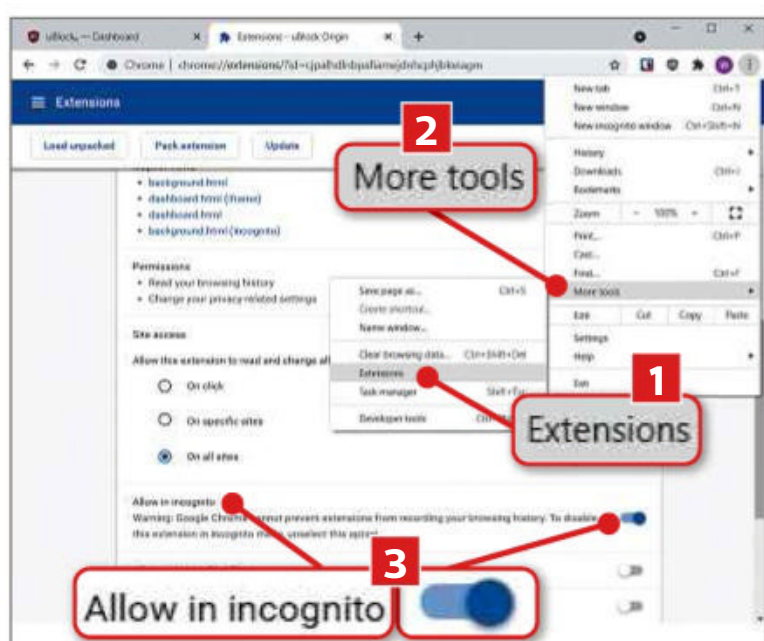


STEP 2 Although the default uBlock Origin settings will hide adverts on websites, you'll still see GDPR cookie-consent messages. To block these, you need to enable several filters. Click the uBlock Origin extension in the top-right corner of your browser – in Chrome, you may first need to click the jigsaw icon **1** (click the pin icon next to uBlock Origin to make sure the extension's icon is always visible). Click the cog icon **2** then, in the new browser tab that opens, select 'Filter lists' **3**.



STEP 3 Scroll to the bottom of the window and, if it's not already expanded, click the Annoyances section **1** to reveal seven filters. Now tick the boxes next to 'uBlock filters - Annoyances' **2** and 'Fanboy's Annoyance' **3**. These two filters block GDPR cookie requests (and other annoying pop-ups, such as those that nag you to sign up for email newsletters) on most websites. To save your changes, click 'Apply changes' **4** at the top. There's no need to restart your browser, although you will need to refresh any tabs you currently have open if you want uBlock Origin to block pop-ups on them.

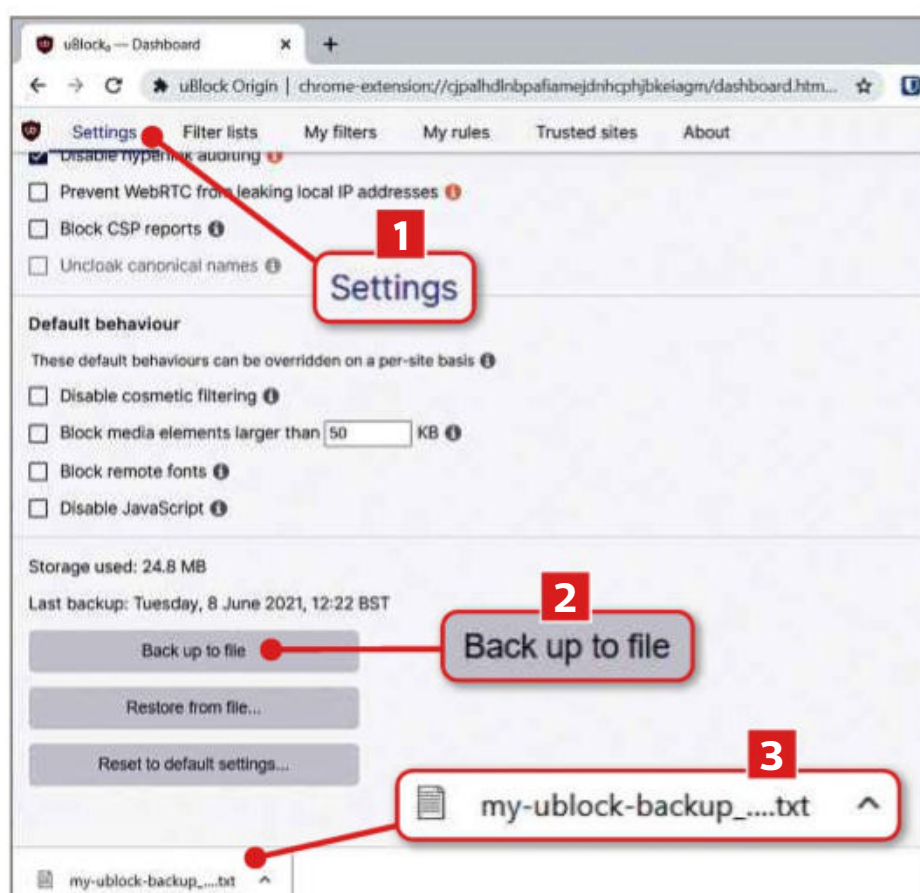




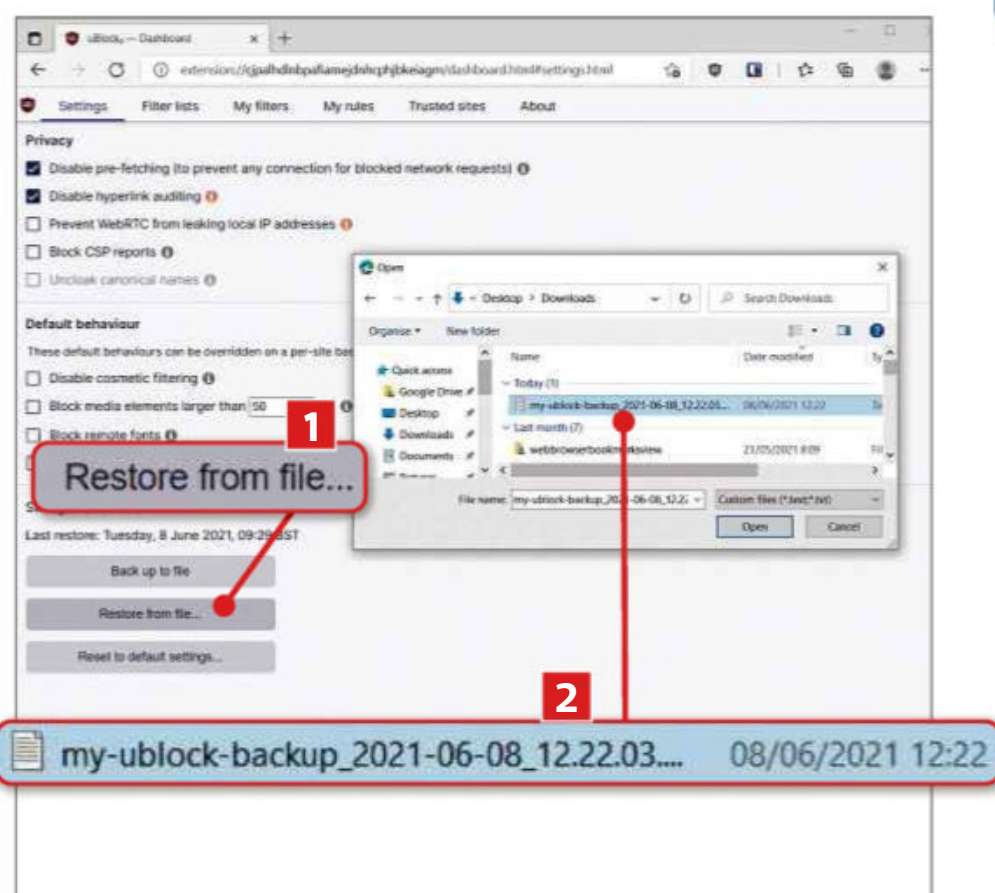
STEP 4 We recommend setting the uBlock Origin extension to work even when you're browsing in a private window (otherwise you'll still see GDPR popups when using this mode). Precisely how you do this depends on the browser you're using, but they all follow a similar process. Click your browser's menu button, then select the Extensions or Add-ons option (in Chrome, which we're using here, you'll find the Extensions option in the 'More tools' section **1**). Click 'Details' under the uBlock Origin extension, then enable 'Allow in incognito' **3**, 'Allow InPrivate' or similar.



STEP 5 To check the uBlock Origin filters are working, launch a new private browsing window by pressing Ctrl+Shift+N (Chromium browsers) or Ctrl+Shift+P (Firefox). Now go to the BBC homepage at www.bbc.co.uk and you won't see the usual GDPR popup **1**. Although rare, uBlock Origin can prevent some websites from working properly. If this happens, you can set the extension to be disabled on that site – simply click the uBlock Origin extension icon, then the large power button **2**, followed by Refresh **3**. As you'll see, disabling the uBlock Origin on the BBC website brings up its cookies pop-up **4**.



STEP 6 If, like us, you use several different browsers depending on what you're doing online, there's no need to spend time making the same changes to uBlock Origin on each one. Instead, return to the Settings window of the uBlock Origin extension on the browser you've already set it up on (Chrome, in our example), then select the Settings tab **1**. At the bottom of the page, click 'Back up to file' **2**. A settings file will then be downloaded **3** (this will be saved to your Downloads folder unless you've previously specified a different location).



STEP 7 Next, open your other browser (we're using Firefox here). If you haven't already done so, install uBlock Origin on this browser (as explained in Step 1), then go to the Settings tab of the extension. Click the 'Restore from file...' button at the bottom **1**, locate and select the settings file **2** you saved in Step 6, then click OK. You'll now see a warning that doing so will overwrite all existing uBlock Origin settings – click OK. Your settings will now be imported, including any for sites that you've exempted from blocking pop-ups.

Workshop 2

Partition an external hard drive

What you need: An external hard drive; Windows 7, 8.1 or 10 **Time taken:** 30 minutes

Large external hard drives are getting cheaper (such as the 1TB WD Elements, which costs £40 from www.snipca.com/38687) and are great for storing backups and transferring files between PCs. In this Workshop, we'll show you how to use MiniTool Partition Wizard to split your external drive into multiple partitions.

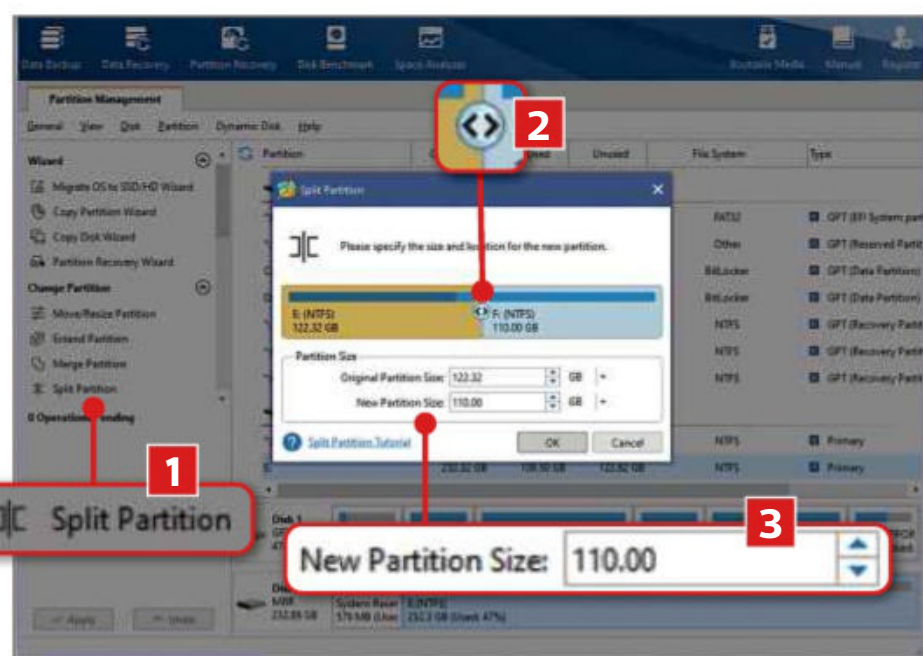
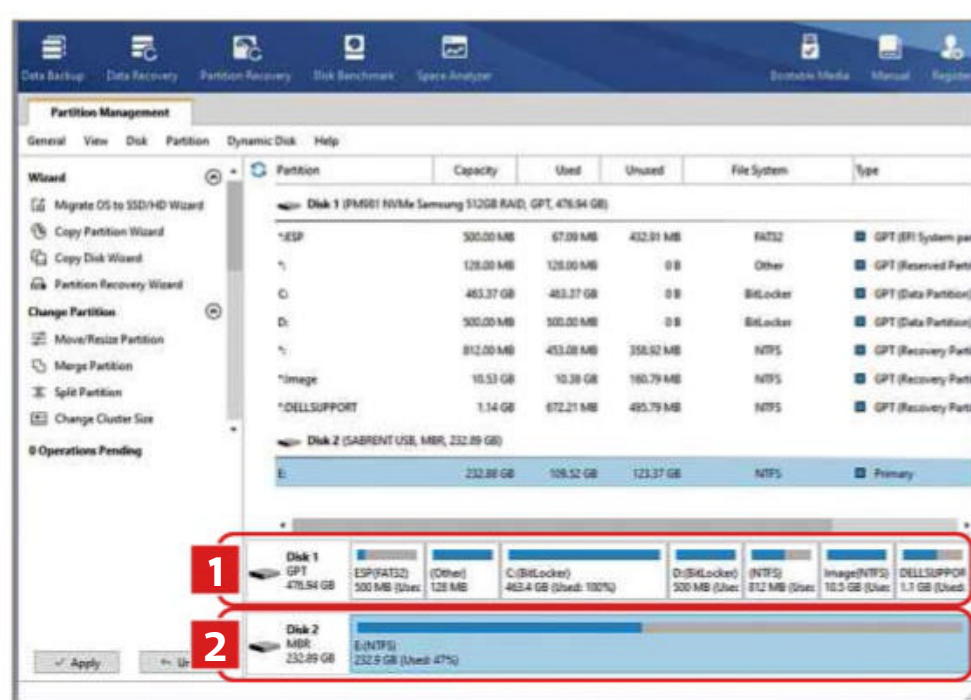
Windows will treat each partition as a separate drive, which not only makes it easier to organise the files stored on your drive (keeping your backups separate from other files, for example), but also means you can format an entire partition without affecting the others.



STEP 1

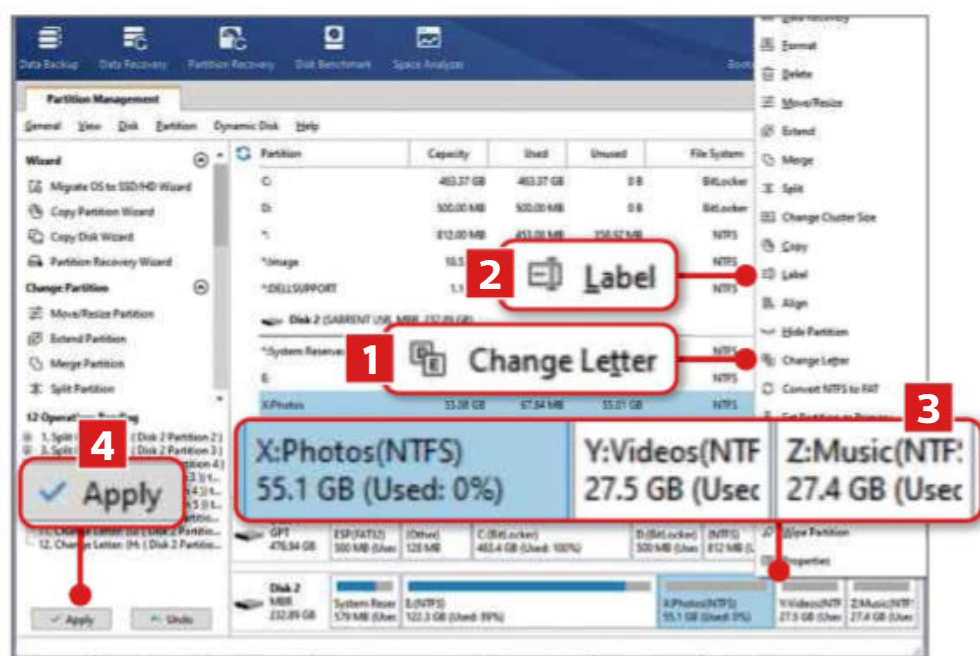
To download Partition Wizard, go to www.snipca.com/38685, scroll down to the Free Edition section, then click Local Download and run the EXE file.

During the installation process, untick the option to also install MiniTool ShadowMaker (you don't need this to create partitions). We also recommend unticking the 'Participate in Customer Experience...' box – this will prevent data on how you use Partition Wizard being sent back to MiniTool. Once it's installed, run Partition Wizard. You'll now see all hard drives attached to your PC. In our example, Disk 1 is our internal hard drive **1** and Disk 2 the external drive we want to partition **2**.



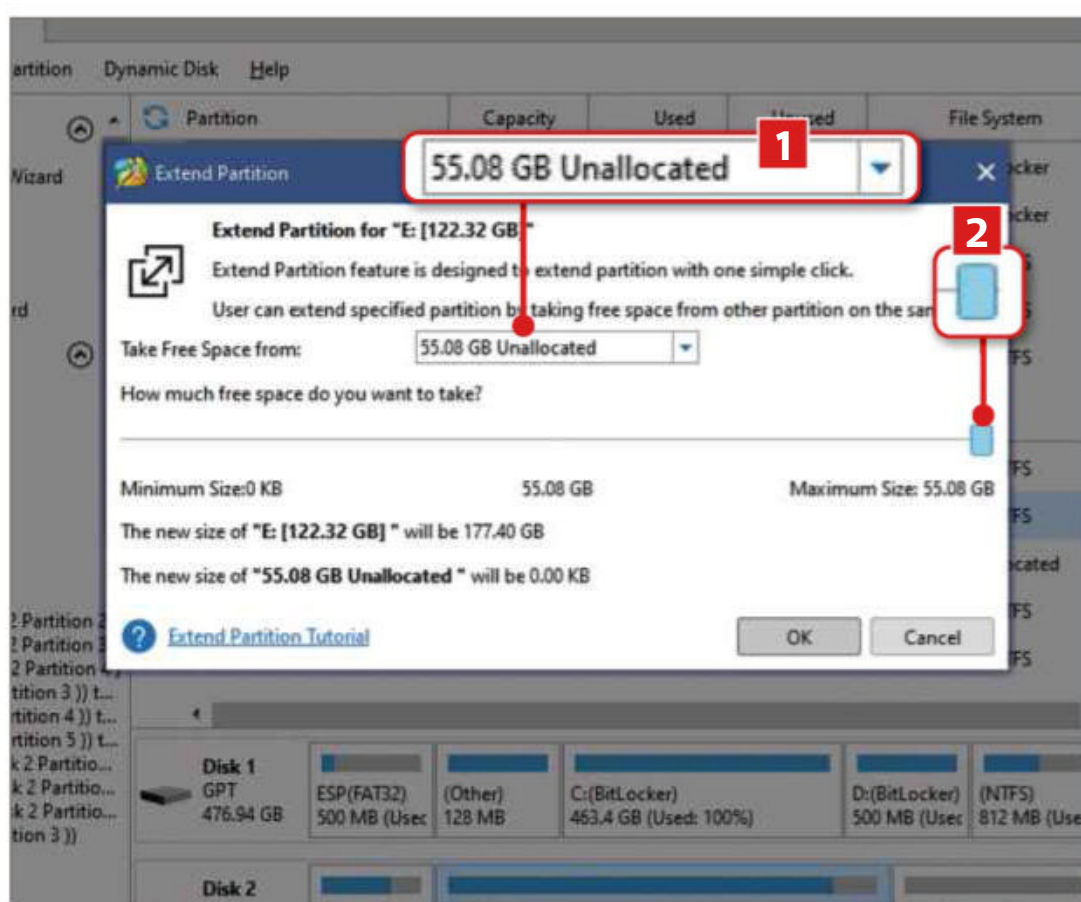
STEP 2

To create a new partition, select your external hard drive's existing partition (unless you've previously partitioned it, there should be only one), then select Split Partition **1** from the menu on the left. In the window that opens, use the slider **2** to set how much you want to distribute the capacity across the old and new partitions. Alternatively, enter the desired size of your new partition in the New Partition Size box **3**. Click OK to save your changes, then repeat the process to add additional partitions. In our example, we've created separate partitions for Videos, Photos and Music.

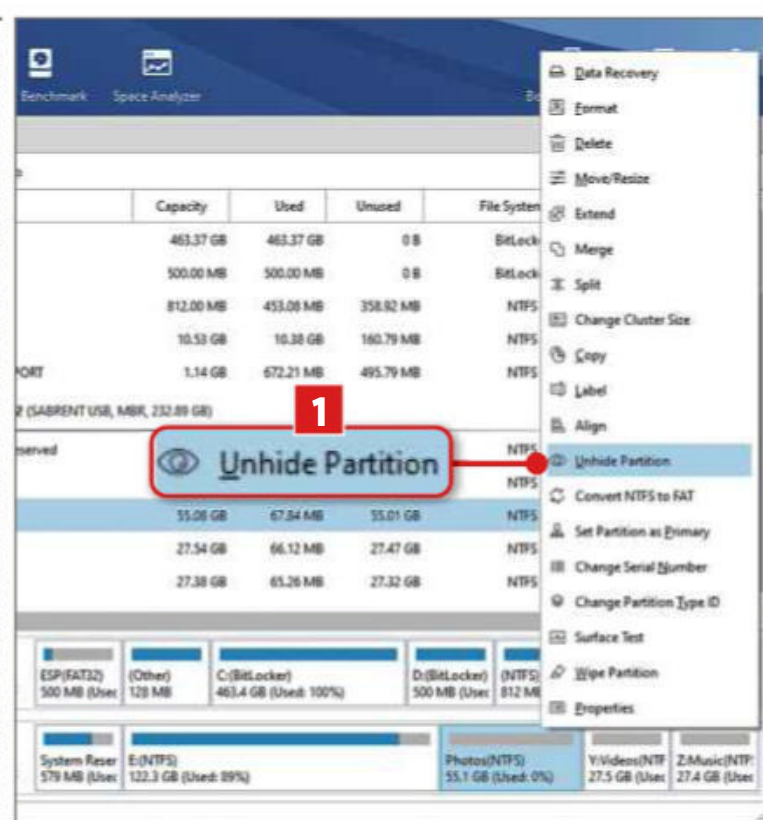


STEP 3

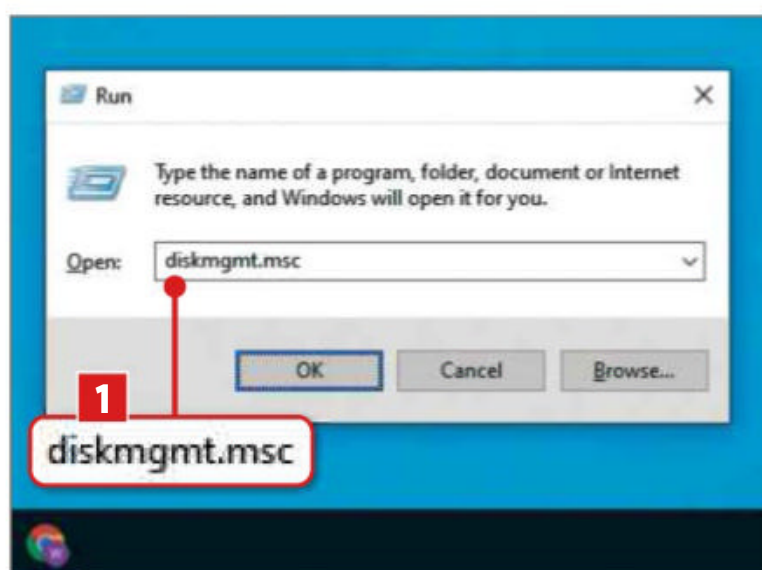
Whenever you create a new partition, Partition Wizard will automatically assign it the next available drive letter. If you want to change this drive letter, right-click the partition, select Change Letter **1**, then select a letter from the dropdown menu. You can also give each drive a label, which will be displayed in File Explorer – right-click a partition, then select Label **2**. Here, we've chosen to give our three partitions the letters X, Y and Z, labelling them Photos, Videos and Music respectively **3**. To apply these changes, and split your drive into the partitions you created in Step 2, click Apply **4**.



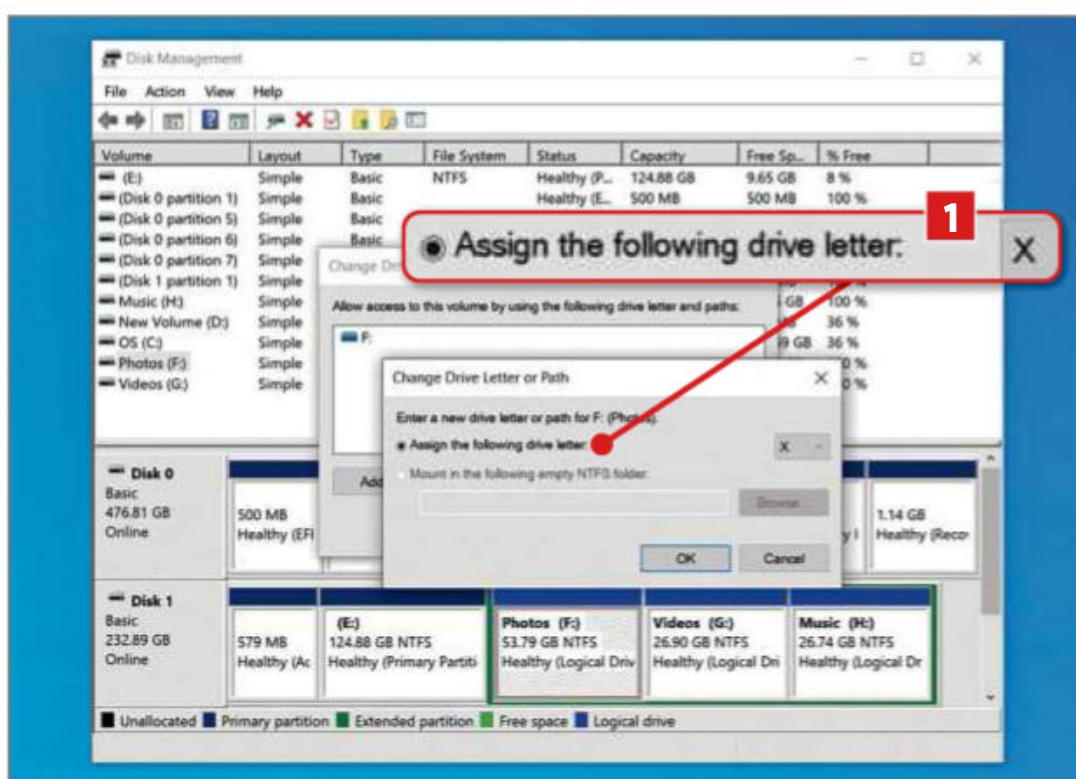
STEP 4 As well as creating new partitions, you can delete existing ones – just bear in mind that deleting a partition will permanently delete all data stored on it. Right-click the partition you want to remove, then select Delete. The partition will now be labelled ‘(unallocated)’. You can now use this space to enlarge another partition – simply right-click the relevant partition and select Extend. In the ‘Take Free Space from’ box, select the partition you just deleted **1**, then drag the slider all the way to the right **2**, which means you want the partition to take all the available space. Click OK to continue. As before, these changes only take effect when you click Apply.



STEP 5 You can also create a hidden partition – meaning it won’t show in File Explorer when you (or anyone else) uses the drive. Right-click the relevant partition, then select Hide Partition. Partition Wizard will now remove the drive letter. When you want to access the partition, right-click it, select Unhide Partition **1** and choose a drive letter. Note that creating a hidden partition isn’t a particularly secure way of protecting your data because anyone can follow this same process to unhide it, but it will stop others casually snooping at your files.



STEP 6 The drive letters you’ve assigned to each partition will take effect only on the computer your external drive is currently connected to. If you have a second computer, it will still assign the next available letters to your partitions (so, for example, if the computer already has a C and D drive, your external drive’s partitions will be assigned letters E, F and so on). You don’t need to install Partition Wizard on your second computer to change these drive letters – instead, run the Disk Management tool in Windows by pressing the Windows key+R to open the Run box, typing `diskmgmt.msc` **1** then pressing Enter.



STEP 7 The ‘Disk Management’ window will now appear. As with Partition Wizard, all drives attached to your computer will be listed in the bottom section. To change the letters for your external drive’s partitions, right-click the partition and select ‘Change Drive Letters and Paths...’. In the window that opens, select ‘Change...’, then click the dropdown menu next to ‘Assign the following drive letter’ **1** and select the letter you chose for the partition in Step 3. Click OK to save your changes, then repeat the process for the other partitions.

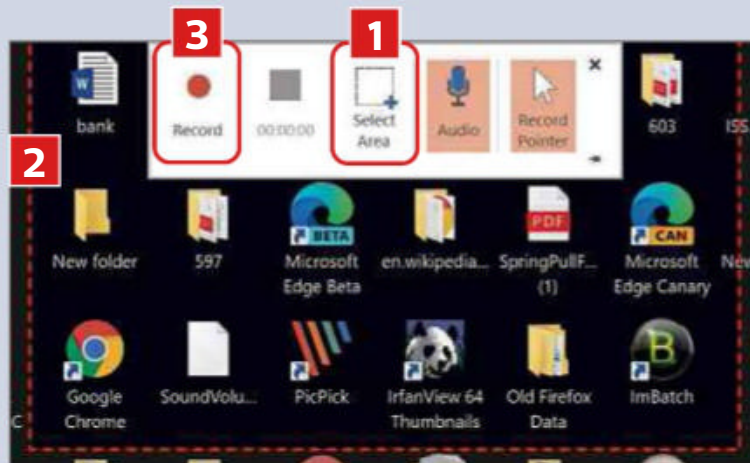
Readers' Tips

TIP OF THE FORTNIGHT

Record areas of your screen using PowerPoint

Issue 606's Cover Feature ('Stop Using Software') led me to revisit how to capture a video from my computer screen.

I have used 'free' software in the past and recently tried NCH Debut (www.nchsoftware.com/capture), but I soon discovered that it's very limited once the trial period ends. So, following your suggestion I experimented with Xbox Game Bar and found it works only on a full screen or a window, and you can't define a specific area of the screen to record.



I searched around and realised that the solution was hiding in plain sight as a feature of PowerPoint, which I have in my Microsoft 365 subscription. There's an

option under the Insert menu that lets you define an area of the screen to record. Click the Insert tab, then Screen Recording at the top right.

Now click the Select Area button (1 in our screenshot) that appears at the top, and 'draw' the area (2) you want to record.

Next, click the Record button (3) to record your video. To finish, press Windows key+Shift+Q. The recorded video goes into a slide, which you can easily save as an MP4 file.

Ken Field



Ken wins a copy of our 2020 Back Issue CD

Buy it on Amazon www.snipca.com/38164

RAM Truth [RAM Size: 2 GB]	
Reserved:	191.99 MB
User:	1856.01 MB
Active:	1550.68 MB
Available:	305.34 MB
Hibernating:	248.43 MB
Idle:	56.91 MB
Device Info:	
Android: 5.1	

APPS Check the real RAM of your phone

✓ I'm a tech freak and refuse to pay top prices, so I search for bargain Android phones. I use the Oukitel K6000 Pro, which is a great device.

However, I bought a different model about a year ago, which was supposed to have 64GB storage and 4GB RAM. I had loads of problems with it and thought the RAM might be to blame. I downloaded the free app RAM Truth from the Google Play Store (www.snipca.com/38474) to check the device's actual RAM. It revealed that rather than 4GB, the phone had a paltry 512MB (the

generic screenshot left shows how results are broken down). No wonder it wasn't working as it should. I will now check every new phone I buy using this app.

Chris Adam

HARDWARE Download and print return labels

✓ Following your reply to Hefin Davies in Issue 607, page 26 ('What's the best printer for eBay and Royal Mail labels?'), I'd like to share the method I use



Why I stopped using...

My lap

✓ After years of almost scalding my lap using my laptop, as it heated to what must be dangerous levels, I decided to break the habit and place it on a stand instead.

And what I use instead...

There are loads of expensive stands available, but I went for a basic model with the catchy name of **Metal Desk Monitor Stand Riser with Organizer Drawer** (pictured). I don't know much about the manufacturer (a company called



Simple Houseware), but I trusted the 2,000-plus positive reviews on Amazon (www.snipca.com/38479).

I like to be organised, so I was attracted

by the draw underneath the stand, where you can tuck away items you need for a day's work (paper, staples, sticky notes etc). I also like the side compartments. On the left I have my highlighter pens, while on the right I've got my pencils and Biros. It's about 20 inches long, so I can slide my small portable keyboard underneath when I'm done for the day.

Paul Barraclough

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

Handy hints and tips from your fellow readers

✉ Email us your tips: letters@computeractive.co.uk

for printing return labels to StinkyInk (www.stinkyinkshop.co.uk). I download the label from their website, copy it, then paste it on to a sheet of Avery's L7166 self-adhesive labels (www.snipca.com/38465, pictured below left), after sizing it to suitably fit the label. I'm sure this method could be adapted for other sizes, and labels made by other companies.

Neil Howells

HARDWARE

Connect Sonos via Ethernet

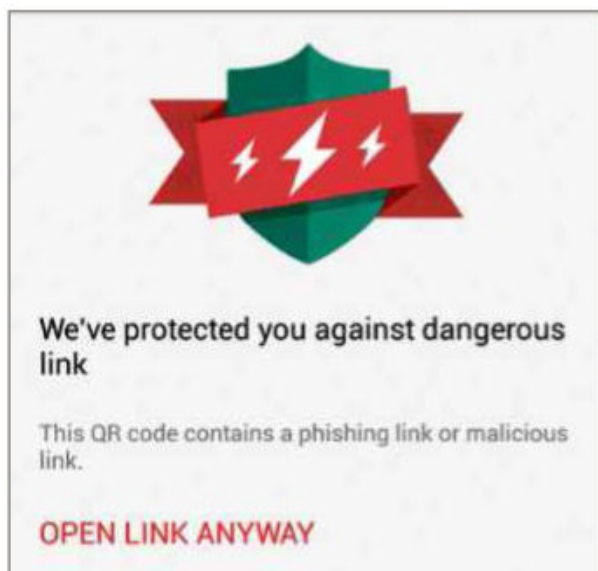
✓ It's good to know that BT is planning to release a fix for the problems with its Smart Home 2 router (Issue 606, page 7), but I've already found a workaround having suffered the same problem a few months ago. We use some Powerline adapters, including a three-port model close to one of our Sonos speakers with a vacant port. I simply connected the Sonos speaker to the adapter with an Ethernet cable, and fixed the problem. The other unwired speaker connects with the wired one and both now connect to the router. My iPad, which connects via the 5GHz network, is now happily reconnected to Sonos.

Karen Wood

APPS

Use Kaspersky's QR code scanner to avoid scams

✓ I enjoyed your article on using QR codes (Issue 608, pages 60-61). I thought I was a bit of an expert on them, but as always you taught me things I didn't know. One thing you failed to mention, though, is that some scammers are exploiting the popularity of QR codes and creating fake codes to trick people. I protect myself by using Kaspersky's free QR scanner app for my



Reader recommends...

Moshi Porto Q Wireless Portable Charger

£85 from Amazon www.snipca.com/38478

✓ I was prompted by your feature on chargers (Issue 607, page 60) to recommend this excellent wireless model from Moshi, which I got for my 70th birthday in April. It's light and highly portable, so I take it to relatives' houses and the odd coffee shop.

It's power capacity (5,000mAh) is lower than some of the chargers you recommend in the feature, but it kept my Samsung Galaxy S9 phone topped up long enough to last on recent day trips. I also love its design. It has a soft material cover that always produces an admiring "ooh" from people when they first see it.

I'm not sure I would've bought it for myself, but it's one of those luxurious products that make lovely gifts.

Doug Jensen



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

Android phone (it's available for iPhones also – same link for both: www.snipca.com/38466). This tells you if the code you've scanned is actually an attempt to steal your personal details (pictured below left). I must've scanned hundreds of codes in the past few years and it has flagged up two suspicious ones, which I subsequently ignored.

I've been told that there's no security risk with the NHS COVID-19 app (www.covid19.nhs.uk) because it only reads codes approved by the Government.

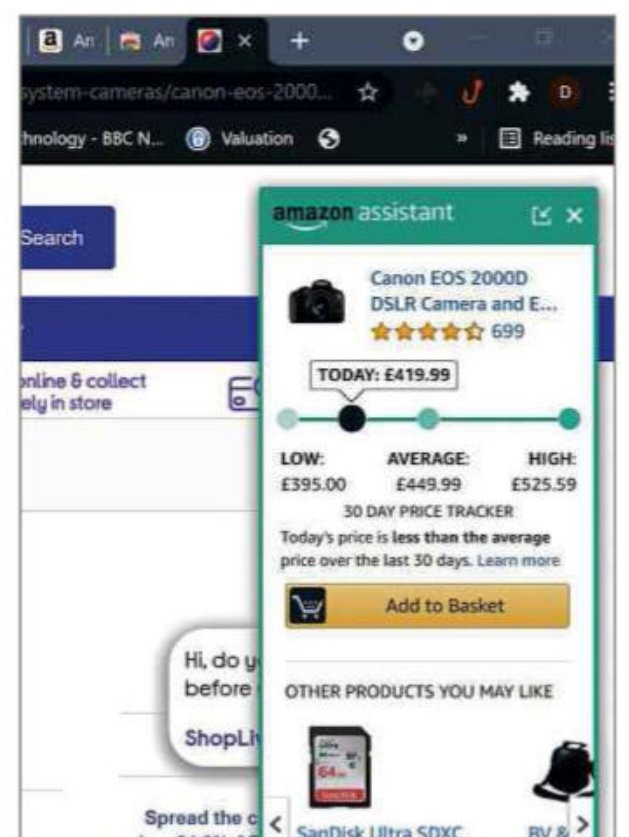
Helen Lawrie

ONLINE SHOPPING

Use Amazon's Assistant extension to find bargains

✓ As an avid Amazon shopper, I'm hoping Issue 608's Cover Feature on finding bargains will help me save money in future. I'd like to suggest my own tip that wasn't mentioned in your feature – using Amazon's own Assistant browser extension. With this added to Chrome, it shows me Amazon's prices for items that I browse on other sites.

So, as an example, I was looking at Canon's EOS 2000D DSLR camera on the Currys PC World site, where it was priced at £589. The Assistant extension then popped up a banner telling me the camera was available for £419.99 on



Amazon (see screenshot above), and that over the past 30 days it's never been available for more than £525.

These pop-ups can be a little annoying, so I turn off the extension when I want a break from it. Overall though, it's worth having when shopping. You can add it to Chrome from www.snipca.com/38357.

I notice also that it's available for Edge: www.snipca.com/38476.

Ruth Bradshaw

Phone and Tablet Tips

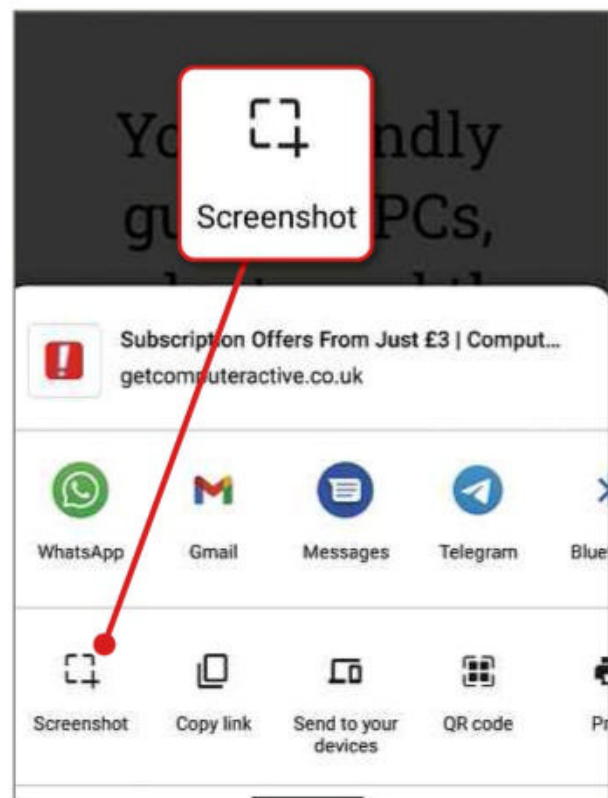
ANDROID

Capture and edit screenshots in Chrome for Android



Google has just added a useful screenshot tool to the Android version of its Chrome browser, letting you take and edit screenshots without having to open or switch to a separate app.

To take a screenshot in Chrome, open the app and browse to a web page. Scroll to the part of the page you want to capture, then tap the menu button (three dots) in the top right and select the Share option. In the panel of sharing options that opens at the bottom of the screen, you should see a new Screenshot icon bottom left (see screenshot below left).



Tap this and it will instantly capture what's currently showing in your browser window, then display the screenshot.

At the bottom of the screen you'll now see some editing tools. Tap 'Crop' if you want to cut out unwanted areas of your screenshot. Tap 'Text' if you want to write an annotation on to your shot. Or tap Draw if you want to circle something or scrawl something freehand. When you've finished editing, tap the Next button to save, share or delete your screenshot.

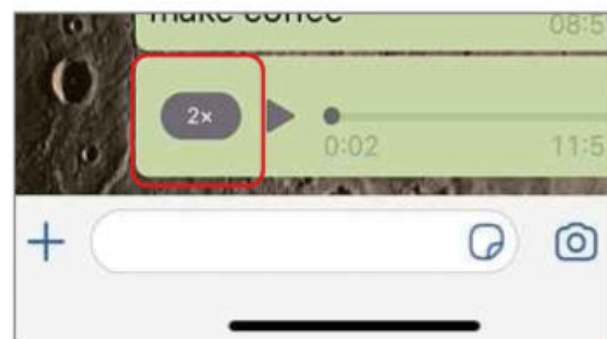
ANDROID & iOS

Speed up voice messages in WhatsApp to save time



Life's too short – a sentiment that's clearly shared by the WhatsApp development team, if its latest update is anything to go by. The new version of the app for Android and iOS adds a feature that allows you to control the playback speed of any voice messages you send or receive – great for speeding up messages from slow talkers and reclaiming valuable seconds of your time.

Changing playback speed is pretty straightforward. Simply open a thread



containing a voice message and tap the play button to start playing a message. You'll notice that the user icon of the person who recorded the message will now change to a button marked '1x'. Tap the button once to increase playback speed to 1.5x or tap it twice for 2x speed (see screenshot below left). Tapping a third time returns playback to 1x speed. Usefully, when you select a playback setting, all your voice messages will play at the speed you choose until you change it again.

iOS

Get Outlook to read your emails out loud



Microsoft has updated its Outlook app for iOS to include a new feature that reads your latest emails out loud for you – handy if you have trouble reading tiny on-screen text or if you're on the move and want to get your messages, even when you're not able to look at the screen.

You'll need to enable this feature before you can use it. To do so, open the Outlook app on your device and tap your profile icon in the top-left corner of the screen. At the bottom of the menu that opens you'll see a Settings (cog) icon – tap this. Now scroll down to the Email section and look for an option labelled Play My Emails (see screenshot above right). Tap this, then tap your email account.

On the next screen, tap the slider next to your account to turn on Play My Emails.

BEST NEW APPS

What you should install this fortnight

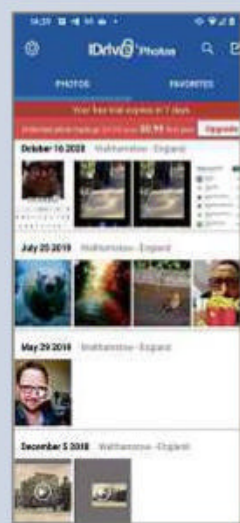
IDrive Photo Backup

Free*

Android www.snipca.com/38566

iOS www.snipca.com/38567

With Google Photos' unlimited photo-storage option killed off in June, IDrive's new app is definitely worth considering as an alternative. It automatically backs up your device's photos online in full quality. Unlimited storage requires a subscription – the good news is this currently costs 70p for the first year.



The Sky by Redshift

Free*

Android www.snipca.com/38568

iOS www.snipca.com/38569

There's no shortage of stargazing apps, but this new one (from the company behind those brilliant Redshift astronomy CD-ROMs) is a particularly slick affair. Point it at the sky to identify planets and stars, view interplanetary info or go on 3D journeys through space. Subscribing (£2.99 per year) removes adverts and adds a few extras.



Artbox 2

£1.99

iOS www.snipca.com/38570

If you have any youngsters in your life, it's likely you also have a lot of their artwork



hanging around – paintings, drawings and other scrawls that have been lovingly gifted to you only to sit in a pile or get lost behind the fridge. This clever new app lets you capture, organise and back up their art online.

*Contains in-app purchases



Tap 'Try now' then tap 'Got it' in the Safety First warning screen that opens. You'll be prompted to let Outlook access your device's microphone. Tap 'OK' and listen to the tips for using spoken commands to have your messages read.

Go back to Settings, Play My Emails and tap your account to customise your options. Here you can select which emails are automatically read to you – you can choose from Focussed Inbox, Favorite People or Favorite Folders. You can also select what to play – either 'Unread emails in the last 72 hours' or 'All emails in the last 72 hours'.

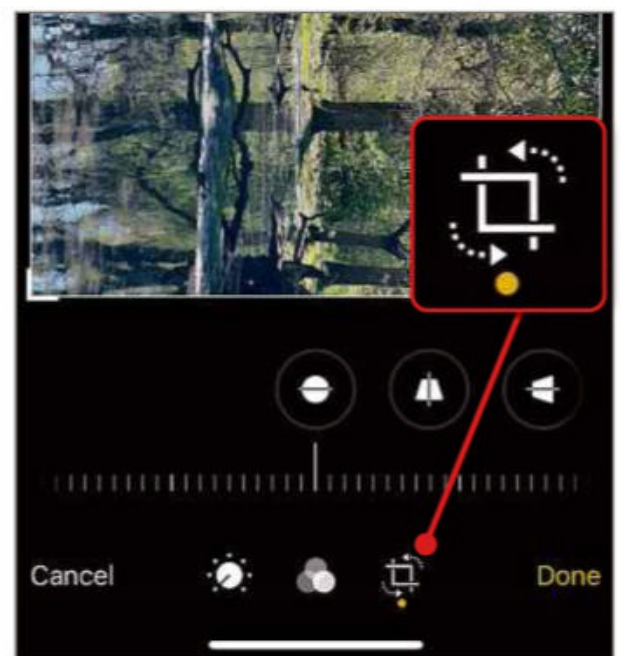
Now, whenever you open the Outlook app, tap your user icon and you'll find a new playback button in the menu. Tap this and the app will read your latest emails to you. Using spoken commands, you can tell Outlook to flag, archive, pause or skip emails as they're read out.

iOS/iPadOS

Rotate a picture on your device

Apple's iPhones and iPads tend to do a fairly good job of automatically working out which way round a photo should be. But every so often, a landscape shot will end up being saved in portrait mode or vice versa. This can be a particular problem with older photos, or snaps you've transferred from a digital camera. You could transfer your photos to a PC and rotate them in an image-editing program, such as Paint.NET. But there's a much easier way to cure the problem on your device.

Open the Photos app and browse to the photo you want to rotate. Tap it to open it, then tap the Edit button in the top-right corner. Now look for the icon of a square with curved arrows around it at the bottom of the screen (to the left of the Done button – see screenshot right). Tap this, and you'll now see an icon of a square with a curved arrow in the top-left corner of the screen. Tapping this will rotate your image by 90 degrees each time – keep tapping until your picture is the right way up. If the image is still a bit wonky, you can use the slider below the picture to fine-tune its rotation. When you're happy, tap the Done button.



BEST APPS FOR...

Historical maps

History Around You

Free*

Android www.snipca.com/38571

Find out nearby locations of historic interest with this app. Locations can either be shown as a list or on a map, and you can follow links for more information on each. Paying £1.69 removes ads, enables map searching and unlocks advanced options, such as setting the number of historic locations displayed at the same time.

Best For Finding local historical sites

OldView

Free*

Android www.snipca.com/38572

iOS www.snipca.com/38573

OldView is a brilliant idea – it allows you to view historic photos of locations around you, uploaded by community members. As with History Around You, you can view items either in a list or on a map. Tap an item to view or rate it. It's even possible to upload your own historic snaps.

Best For Historic photos of local areas

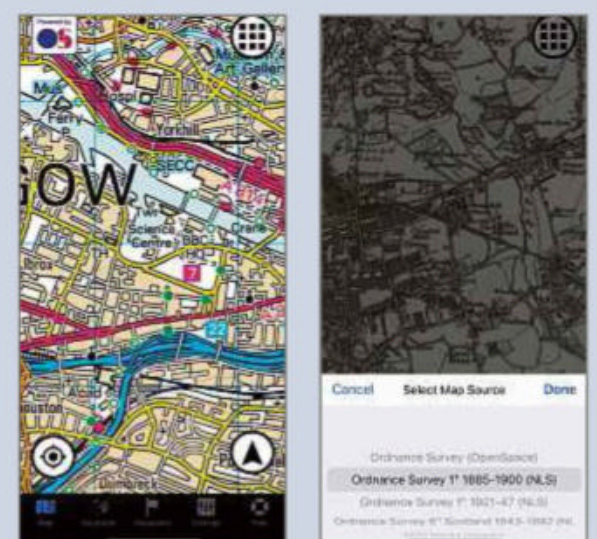
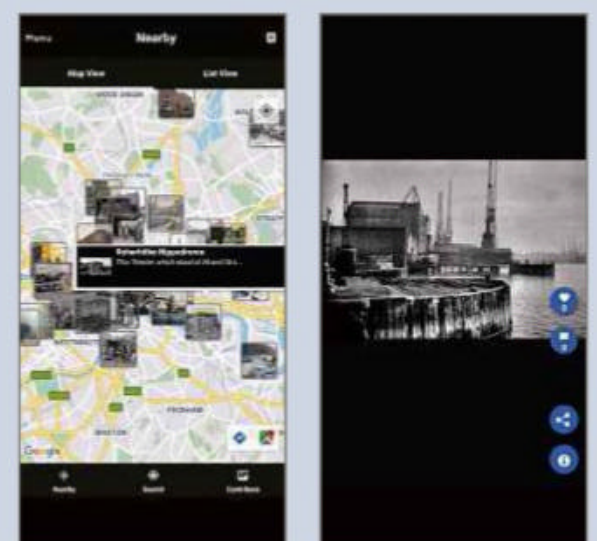
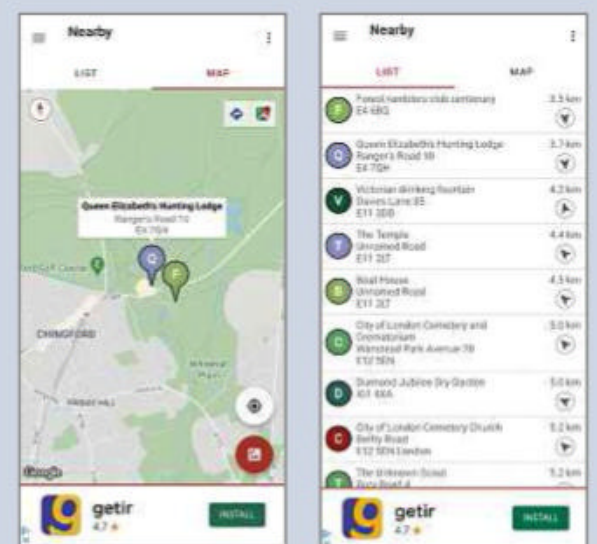
Outside Maps

Free

iOS www.snipca.com/38574

This app lets you view and navigate a variety of different maps, including historic Ordnance Survey maps from 1880-1990 and 1921-1947. Tap the menu button to select your map, then tap the target button to locate yourself on it. Functionality is fairly basic, but you can get GPS data on your location, set points on a route and more.

Best For Historical OS maps

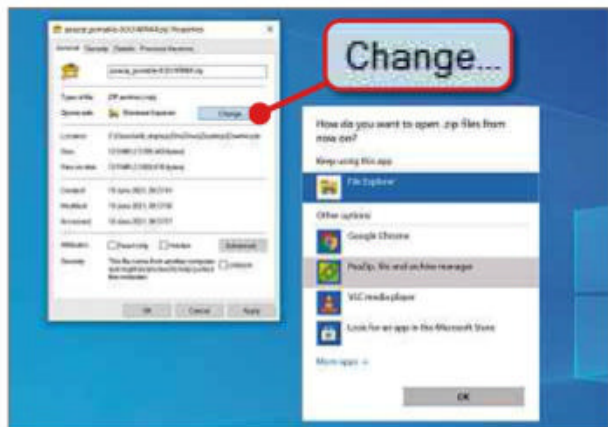


*Contains in-app purchases

WINDOWS 7, 8.1 & 10 Change default programs more easily



Setting a default program for a particular file type, such as ZIP files, can be a frustrating process in Windows 10. You have to open Settings, go to Apps, Default Apps, then click the 'Choose default applications by file type' option. You then have to scroll through a long list of file types to find the one you want.

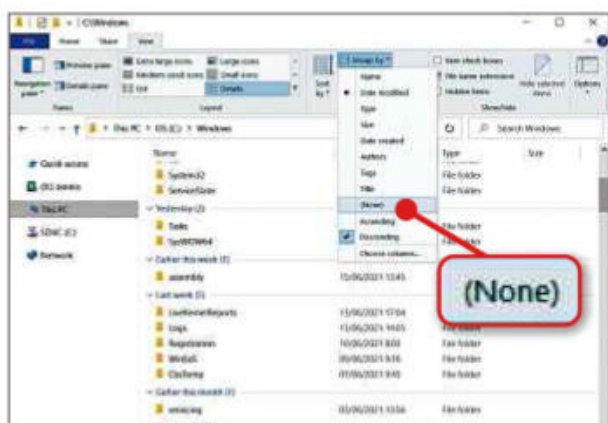


In all versions of Windows, it's far easier to simply locate the file whose default program you want to change, then right-click it and select Properties. In the window that opens, make sure the General tab is selected and click the 'Change...' button (see screenshot above). You can now choose from a selection of suggested default programs for that file type. If the program you want to use isn't listed, scroll to the bottom and click 'More apps', followed by 'Look for another app on this PC', then locate the EXE file for the program you want to use.

WINDOWS 7, 8.1 & 10 Remove date groupings to manage folders in File Explorer



Whenever you view a folder in File Explorer, you may find that Windows has organised the files inside into groups based on date (such as Today, Yesterday, 'Earlier this week', 'Last week' and so on). While this can be useful,



WINDOWS 7, 8.1 & 10

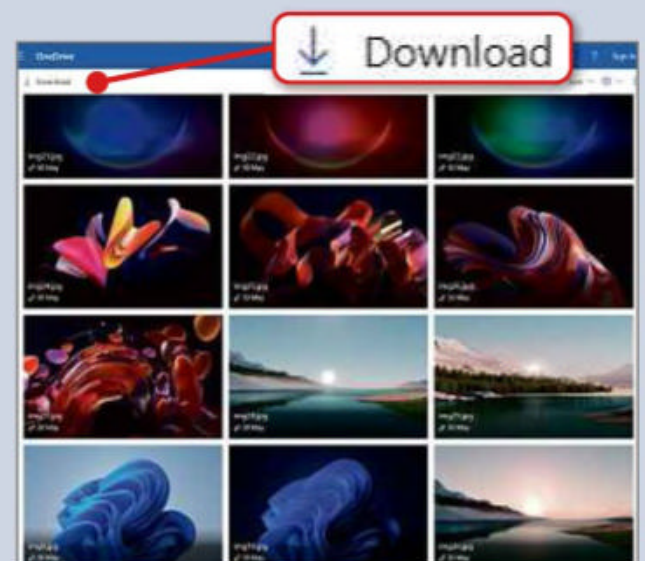
Upgrade to Windows 11 wallpaper now



By the time you read this, Microsoft should have confirmed whether it's launching a new operating system (possibly Windows 11) this autumn (see page 6). Wallpapers reportedly from the new system have already been leaked on the @ChangeWindows Twitter account.

If you want to add these wallpapers to your computer, open the tweet at www.snipca.com/38705 and click the link contained within it. This takes you to a OneDrive account, where you'll find the full set of high-resolution wallpapers. To download the entire collection of 32 stunning images in a single ZIP file, click the Download button at the top (see screenshot).

Once it's downloaded, open the ZIP file, click 'Extract all', then choose where you want to extract the images to. From this folder, simply right-click the image you want to use as your



wallpaper, then select 'Set as desktop background'.

Alternatively, to have Windows cycle through all of them, right-click an empty section of your desktop, select Personalise then select Slideshow in the Background dropdown menu. Finally, click Browse, locate the folder you saved the images to and choose how often you want Windows to change your wallpaper.

these groupings prevent you from re-ordering the folder contents by file name, size or any other attribute.

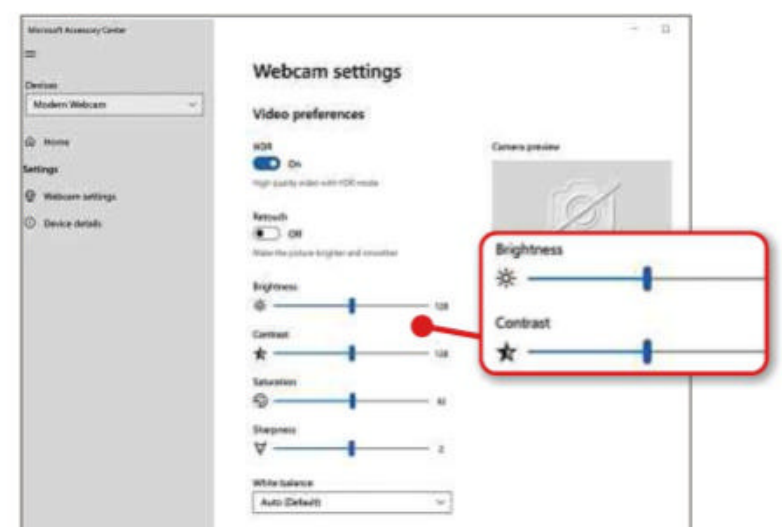
To remove the headings so you can view (and reorder) the folder's contents in one long list, open the folder in File Explorer (press the Windows key+E), click the View tab at the top of the window, then click 'Group by' in the toolbar. If you can't see this option, try maximising the File Explorer window (pressing the Windows key+up arrow is the quickest way to do this). In the menu that appears, click '(None)' (see screenshot below left).

The group headings will now disappear from your File Explorer window. Windows will remember this setting for each folder you apply it to, so you don't have to keep making the same change.

WINDOWS 10 Tweak your Microsoft devices



Microsoft has just released a new Windows app called Microsoft Accessory Center that lets you manage and tweak devices connected to



your computer. The catch is it works only with certain Microsoft devices. We don't recommend buying Microsoft products just so you can make use of this app, but if you already have a Microsoft headset, webcam or speaker, for example, it's worth downloading. You can then rename your devices, change their settings (such as your webcam's brightness and contrast – see screenshot above) and more.

To get Microsoft Accessory Center, go to www.snipca.com/38703, click Get (if prompted, log into your Microsoft account). When the Microsoft Store window opens, click Install.

MICROSOFT POWERPOINT

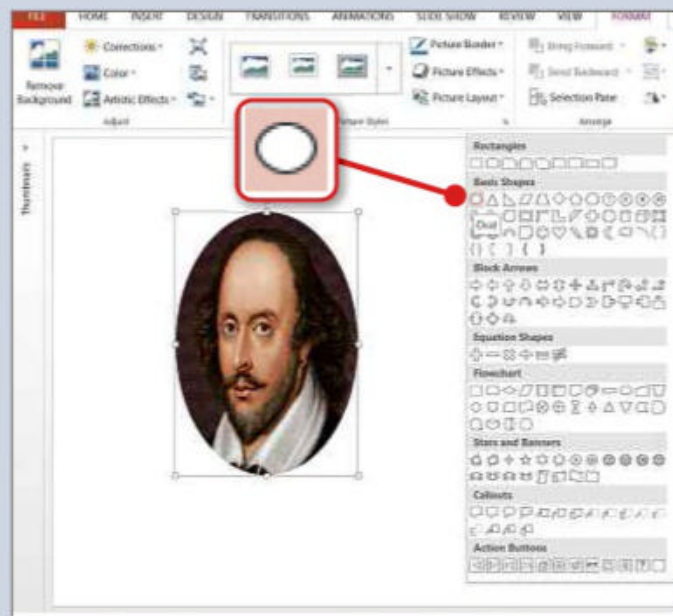
Crop images to specific shapes

Images in slideshows often look better when they've been cropped to the shape of a circle or oval – particularly images of people.

To do this in PowerPoint, insert your image as normal by dragging and dropping it into your presentation or by clicking the Insert menu, selecting Pictures, then locating the image you want to use. Next, select the image, then click the Format tab. In the Size section on the right-hand side of the toolbar, click the Crop button (make sure you click the Crop label, not the

icon above it). In the menu that appears, click 'Crop to Shape' then select the shape you want to crop your image to – in our example, we've selected an oval (see screenshot).

You can tweak how your image is cropped by clicking the Crop button again, then selecting Aspect Ratio and choosing from the options. If needed, you can make more changes by clicking and dragging the edge of the shape, as well as moving the shape so it sits over a specific part of the image.



MICROSOFT WORD

Convert documents into presentations

Thanks to a new feature in Word, you can now convert a document into a presentation in a matter of seconds. This feature is available only in the online version of Word (known as 'Word for the web'), which you can access at www.office.com. You don't need a paid-for Microsoft 365 subscription, but you will need a Microsoft account. If you don't already have one, click the 'No account? Create one' option after clicking the link above.

Open the Word document you want to convert (if the document is on your computer, click 'Upload and open...'), then click the File menu and select Export, followed by 'Export to PowerPoint presentation...'. Choose from the selection of presentation themes (these can take a few seconds to appear), then click Export (see screenshot below).

In the next screen, click Open Presentation. The online version of PowerPoint will now launch, along with a presentation containing the text from

your Word document.

This feature is still in **beta**, but it worked well in our tests. Our only complaint is that it exports only the text from your documents. You will therefore need to import any images and videos contained in your document separately.

LIBREOFFICE CALC

Convert formulas to calculated data

When you copy a cell whose contents have been calculated using a formula, pasting it elsewhere in your spreadsheet will insert the formula from the original cell rather than its calculated value. If you want to leave the formula in the original cell, you can paste just the value by right-clicking the destination cell, then selecting Paste Special, followed by Paste Values.

LibreOffice Calc also lets you convert the original cell from its formula to calculated value, letting you copy it to several other cells without having to use the Paste Special command. To do this, select the cell containing the formula (you can select multiple cells by holding

down the Ctrl key), then click the Data menu in the toolbar at the top, followed by Calculate, then 'Formula to Value' (see screenshot below left).

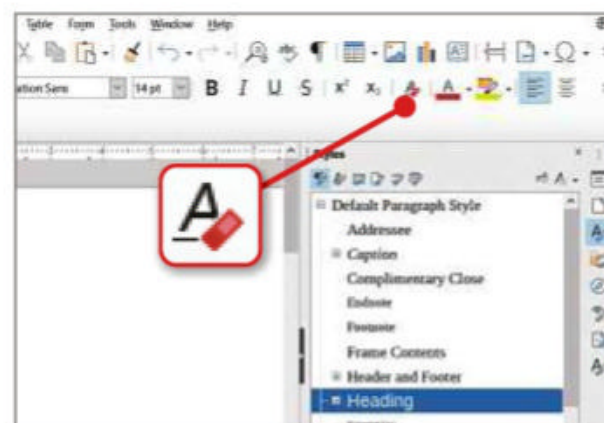
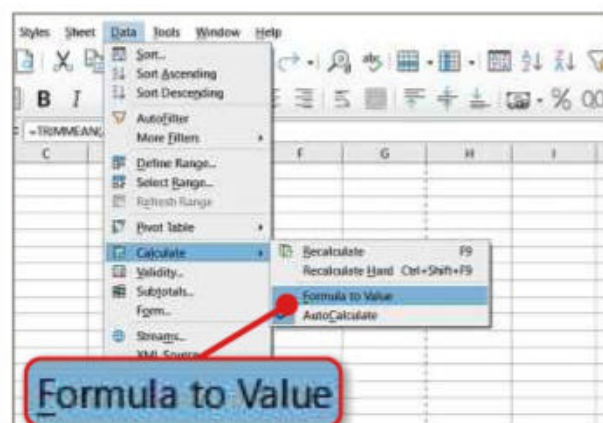
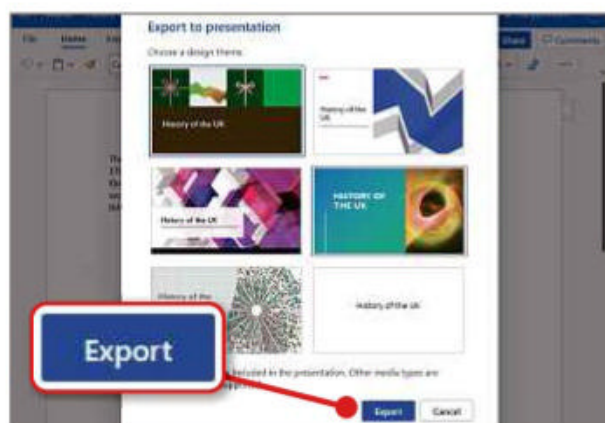
LIBREOFFICE WRITER

Clear formatting, not styles

Clearing *all* formatting from a LibreOffice Writer document isn't difficult – simply select the entire document (press Ctrl+A), then press Ctrl+Shift+V and select 'Unformatted text'. Your document will now appear with all formatting removed. But what if you want to keep your document's styles (Heading, Paragraph, Body and so on), and clear only additional formatting such as bold, underline and italics?

The good news is that this is actually easier than clearing all formatting. Select your entire document as before, but instead of pasting it, click the Clear Direct Formatting button in the toolbar (an icon of an A with an eraser – see screenshot below) or press Ctrl+M.

Writer will now remove formatting from your document, but leave all your text styles in place.



In The Club



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

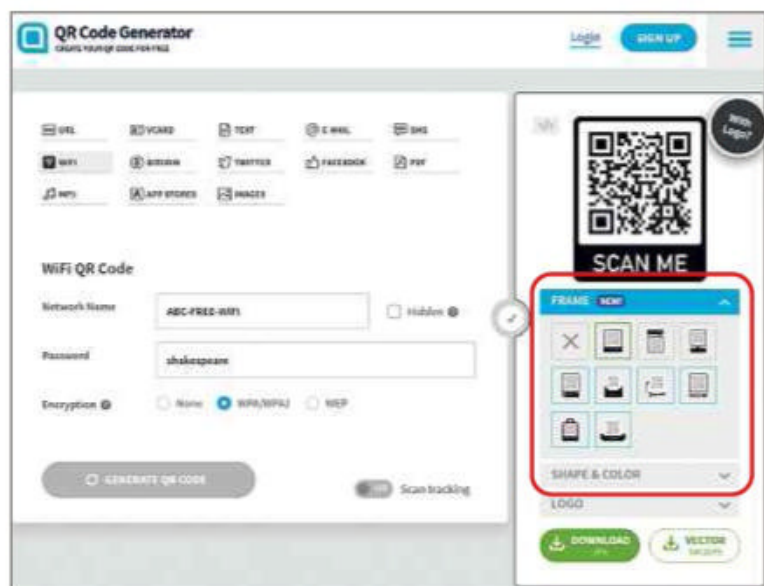
Create QR codes for your club

You see QR codes everywhere these days, partly because many venues are required to display them as part of the NHS test and trace system. With more people now getting to grips with QR codes and more comfortable scanning them with their phones, it's the perfect time to start using them for your club. They're great for linking to your club's website on a poster, letting people log into your club's Wi-Fi and more.

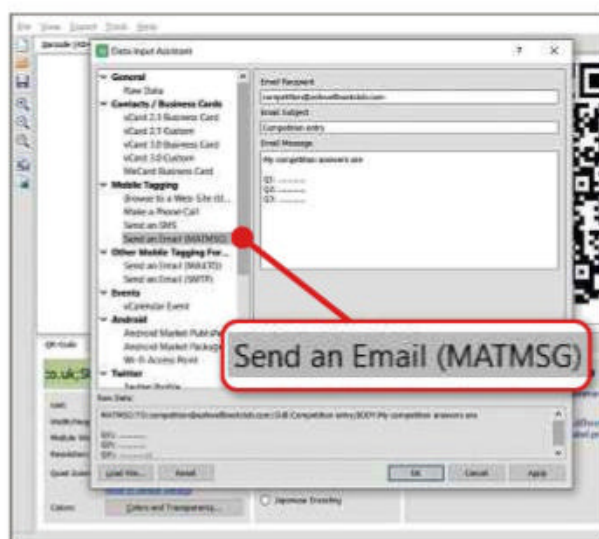
Add frames to your code

If you're in a hurry to create a QR code, head to the free QR-Code Generator website (www.qr-code-generator.com). Select the type of QR code you want to create (for example, 'URL' will create a link to a website and 'WIFI' will share your club's Wi-Fi details), then fill out the relevant boxes and click Generate QR Code. On the right-hand side of the window you can tweak your QR code – including adding a frame (see screenshot below) and changing its colour. Click the green Download button to save your QR code as a JPEG image.

Sign up for a premium account (from £5 per month – see www.snipca.com/38692) and you'll get extra features including being able to add your club's logo to QR codes, tracking how many people have scanned them and editing previously created QR codes (useful if



The QR-Code Generator website lets you add a selection of frames to your QR codes



In QR Code Studio you can choose from a range of templates, including one for sending emails

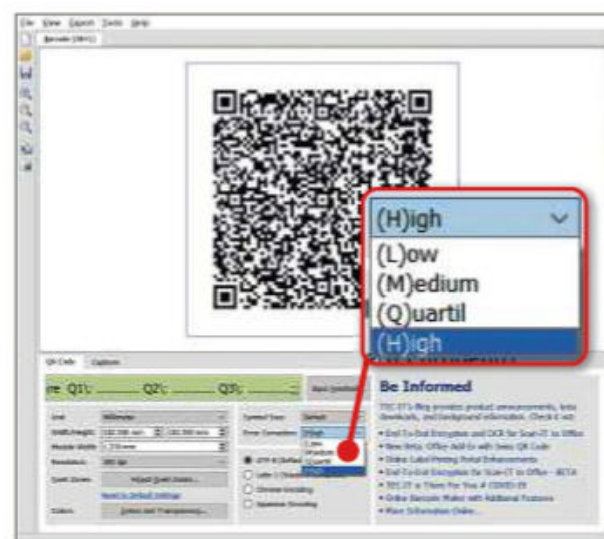
you print one, then need to change the website it links to).

Set templates for your codes

For more control over your QR codes, including applying error-correction so that the code still works if the paper it's printed on becomes damaged, download the free QR Code Studio from www.snipca.com/38693. Once you've opened it, in the green box, type whatever you want to appear in your QR code – the code itself will update as you type.

Alternatively, choose from a list of templates by clicking 'Input Assistant...'. The 'Send an Email...' template (in the Mobile Tagging section – see screenshot above) is useful when printing a poster you want people to respond to via email, such as for a competition. Enter the email address you want people to use, the subject line and any text you want to appear in the body of your email. Click OK to return to the main screen, where you'll see the text for your QR code in the green box.

The boxes at the bottom let you fine-tune your QR code. You can adjust its size with the Width/Height boxes (the smaller it is, the closer people will have to approach in order to scan it with their phone). You can also change the code's



Set the Error Correction box to High to make your QR code work on damaged paper

size using the Module Width box, which determines how wide each block is within the QR code.

If you plan to print your QR code, make sure the Resolution box is set to '300 dpi', which ensures it prints at high quality. To make your QR code stand out, add a white border around it – click 'Adjust Quiet Zones...', set the unit of measurement for the border (millimetres, inches, etc), then set the size of the border on each side of the QR code. You can also change the colour of the QR code (click 'Colors and Transparency').

QR codes can fail to work if the paper they're printed on becomes torn or crumpled. To increase the chances of your QR code still working, set the Error Correction box to High (see screenshot above). Note that doing this enlarges your QR code.

To include text with your code, click the Captions tab, then tick Caption Above or Caption Below, type whatever text you want to include, then tweak its formatting. You can also add secondary captions ('Caption Above 2' and 'Caption Below 2'), letting you include a main caption above with terms and conditions in a smaller font below.

We recommend periodically saving your code as you're creating it (press Ctrl+S) – you can then revert to an earlier version if needed. To export your QR code so that it's ready to be displayed online or in print, press Ctrl+E.

What's All the Fuss About...



Graphene

Scientists say this incredible substance can greatly increase hard-drive capacity

What is it?

The strongest, thinnest material known to exist, made from honeycomb sheets of carbon just one atom thick (as imagined in the main image). It's also one of the most effective substances at conducting heat and electricity. Since being first produced in 2004, it's become known as a 'wonder material' that promises to revolutionise a variety of electronic devices – including, now, hard drives.

What's happened?

In a paper published in *Nature* magazine, researchers at Cambridge University showed how graphene can be used to make hard drives that can store 10 times more data than existing models.

How can it do that?

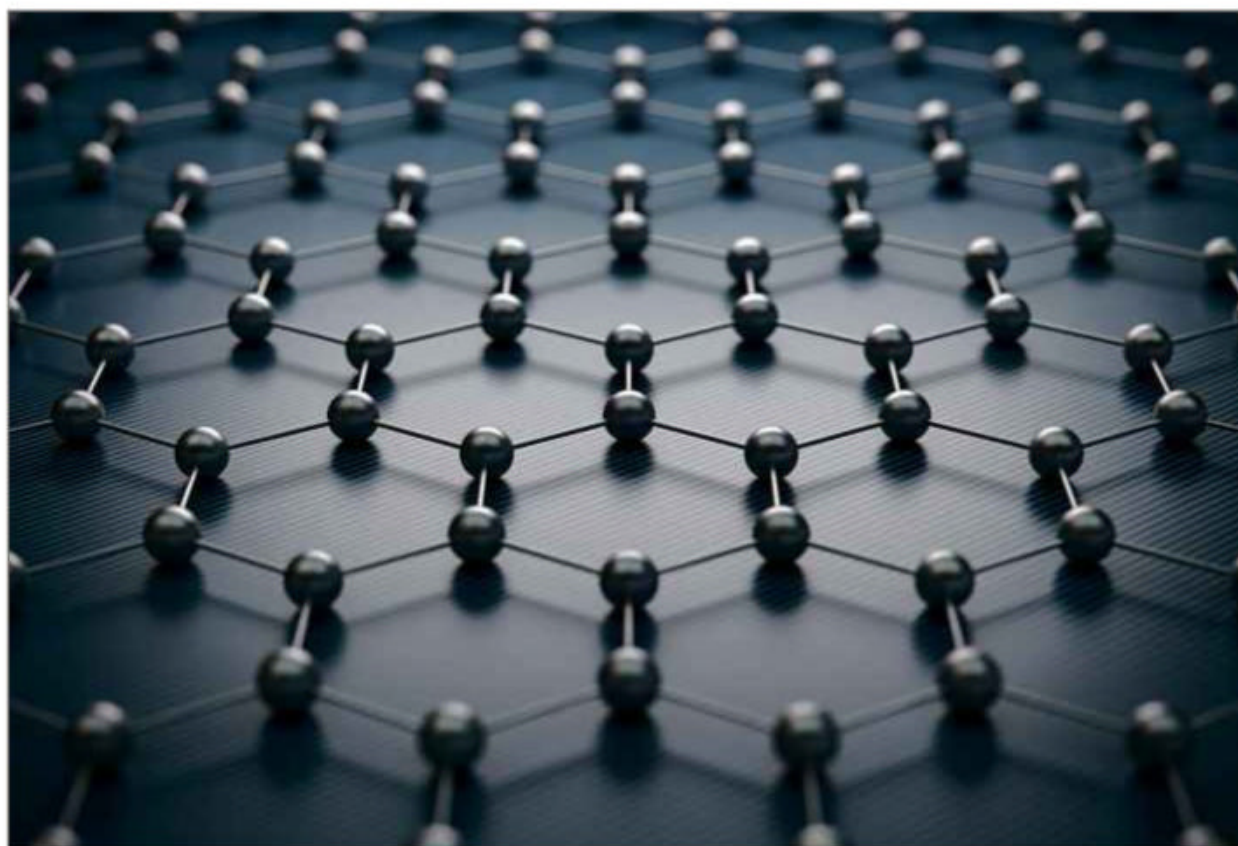
By replacing the carbon-based overcoat (COC) layers that protect a drive's platters when they spin.

Protect them from what?

From wear and tear caused by the magnetic heads (1 in our photo below) that move above the platter (2) when you save data to (write) and retrieve data from (read) a drive. The thinner the COC layer, the more data can be stored on a drive. This layer has shrunk from 12.5 nanometres (nm) in the 1990s to about 3nm today. That's almost unimaginably thin – the head of a pin is about one *million* nanometres wide, while a sheet of paper is 100,000 nanometres thick.



In a hard drive, the magnetic head 1 reads and writes data by moving above the platter 2



With a 3nm COC, drives can store one terabyte (1TB) of data per square inch.

And graphene can make the COC even thinner?

Yes, below 2nm, letting drives store between four to 10TB per square inch. It also cuts the amount of friction and corrosion the platters have to endure, making hard drives last much longer than their current five-year life span. The key to graphene's effectiveness is how heat resistant it is – in theory, it can resist an unlimited amount of heat. Manufacturers could use this to read and write data using a cutting-edge method called Heat-Assisted Magnetic Recording (HAMR), which lets a platter hold even more data when it's heated.

Sounds great. But aren't solid-state drives (SSDs) better?

They're certainly faster, because they don't have any moving parts, storing data on **flash memory** chips rather than mechanical platters. But these chips are much more expensive to make than platters. Hard drives still give you

much more storage for your money, which is why they remain so popular. In 2020, 260 million hard drives were sold globally, though this was much fewer than the 333 million SSDs sold. So graphene could help sustain the hard-drive market in future. There's just one (very big) catch.

What's that?

Graphene is incredibly expensive to make in large quantities – around \$100 a gram. You'd need a lot of Scotch tape to get enough to be useful.

Scotch tape? What's that got to do with anything?

It's what professors Andre Geim and Kostya Novoselov used when they became the first scientists to separate flakes of graphene from a lump of bulk graphite. Their work at Manchester University won them the Nobel Prize in Physics in 2010. Their approach was playful and inventive, but it's hard to replicate at an industrial scale – you'd need something far more effective than just a really big roll of Scotch tape. That's why, so far, the potential for graphene to change the world has remained just that: potential.

Stream MUSIC RADIO & Around Your Home



With the right equipment and the correct settings, you can play your music, radio and podcasts in multiple rooms – from lounge to bedroom to kitchen. **Will Stapley** reveals how to make your audio follow you around your home

Do you ever find yourself turning up the volume of your music or digital radio station just so you can continue listening to it while moving around your home? It's not ideal. Unless you have the sort of hi-fi system that makes you fall out with neighbours, you'll struggle to hear it if you go to a

different floor. And if you try tuning into the same radio broadcast on multiple devices across several rooms, you'll find each speaker will be slightly out of sync with the others, creating a nasty echo effect around your home.

Here, we explain how you can combine multiple smart speakers into multi-room speaker groups, immersing your home with whatever you want to listen to – whether that's classic hits from the 1960s, the latest episode of your favourite podcast, or a heated radio phone-in.

Once you've set up your speaker groups, you'll be able to play the same audio on each speaker so that it follows you seamlessly as you move around your home. You won't need to turn the volume up and each speaker will be in perfect

sync with the others.

To set this up you will need to spend money on smart speakers, so we'll first explain the pros and cons of the three most popular brands (Amazon Echo, Google Nest and Sonos) and how you can set up multi-room speaker groups with each. It's important to make the right choice from the outset, as you can't sync speakers from different manufacturers.

The good news is that you can use your hi-fi system as part of your speaker group and you may already have devices that can work as multi-room speakers, such as Google's Chromecast streaming stick.

We'll also explain how to play free music and radio across your speakers, and enhance their quality.

WHAT YOU CAN DO

- Stream MP3 files from your computer to every room
- Play vinyl records on all your speakers
- Combine two speakers into a stereo pair
- Create a multi-room speaker system using your PC

CHOOSE & SET UP YOUR MULTI-ROOM SPEAKERS

AMAZON ECHO

Amazon's Echo smart speakers let you use voice commands to perform everyday tasks, from ordering your online shopping, receiving weather reports and choosing which music you want to stream.

The standard Echo speaker costs £90 (www.snipca.com/38614, pictured right), but Amazon frequently offers discounts of up to 50 per cent across its entire Echo range. If you missed June's Prime Day offers and you're not in a rush to buy, it's worth waiting for the next round of discounts, which take place every few months or so (Black Friday offers are available in the last week in November, for example).

In contrast to the original, tube-shaped Echo, the latest version (released in October last year) has a smaller, spherical design. Inside, it has two small speakers to output mid-to-high range frequencies and a **subwoofer** for extra bass – together, they produce high-quality audio that in our tests easily filled a medium-sized room.

For smaller rooms, consider the Echo Dot (£50 from www.snipca.com/38615). While the lack of a subwoofer can make music output sound a little flat, we found the Dot is perfectly adequate for listening to radio and podcasts. Like all Echo speakers, it has a 3.5mm audio output socket. This lets you connect it to more powerful speakers (for example, any you may have as part of a hi-fi system) using a 'male-to-male' audio cable – such as Amazon's 2.4-metre option (£6 from www.snipca.com/38616).

The Flex is Amazon's cheapest Echo (£25 from www.snipca.com/38617) and plugs directly into a power socket. The tiny (and indeed tinny) built-in speaker isn't suited to listening to music or radio, so you'll need to keep the Flex connected to a set of external speakers via its 3.5mm socket.

The Echo Studio (£190 from www.snipca.com/38618, pictured above far right) sits at the other end of the scale, both in terms of price and audio quality. Around twice the size of the standard Echo (and weighing nearly 3.5kg), the Studio has three speakers along with a large subwoofer. In our tests, this provided rich and immersive audio even in large rooms. Our only complaint is that the bass can sometimes become too dominant, with the audio losing crispness as a result. The Studio also supports Amazon '3D audio', which creates



The standard Amazon Echo produces high-quality audio for medium-sized rooms

an impressive surround-sound effect.

Finally, there's the Echo Show, which includes a screen for video chats (the 5in version is £80 from www.snipca.com/38662). It's also worth noting you can use old Echo speakers as part of a speaker group, including the original Echo and Echo Dot, which were released in 2016.

Play multi-room music

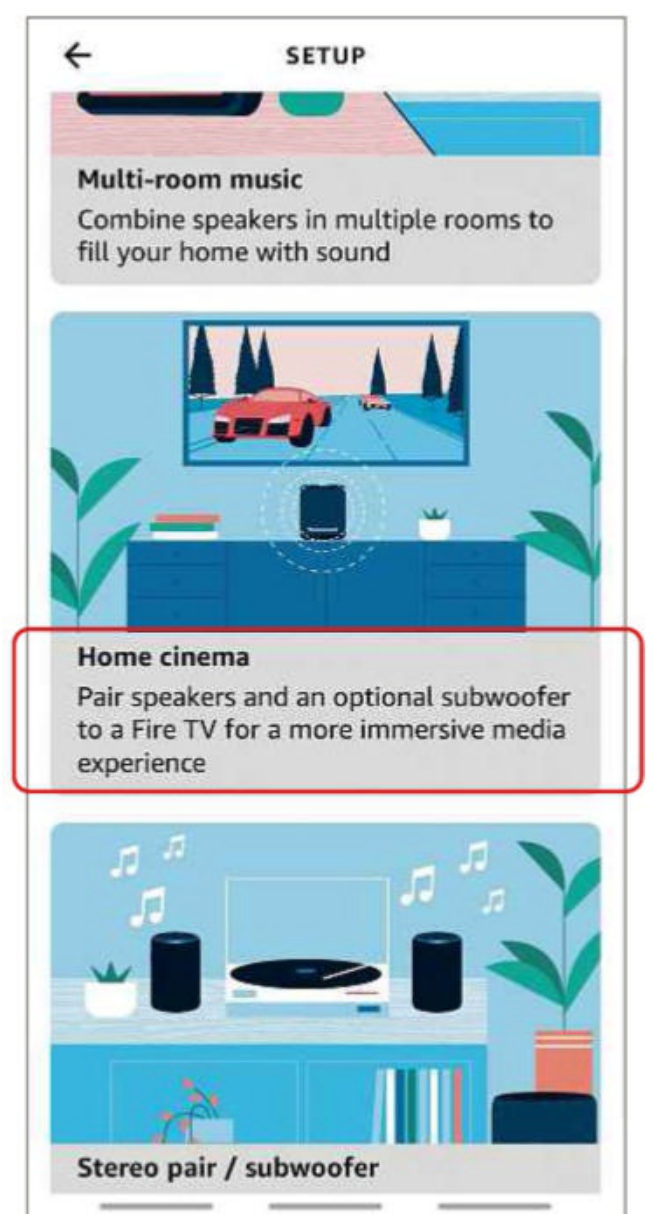
You need to use the Alexa app (Android www.snipca.com/38619; iOS www.snipca.com/38620) on your phone or tablet to create and manage multi-room Echo speaker groups. Note that although there's an Alexa app for Windows computers that lets you ask questions and play music, you can't use these as part of a speaker group. We show you how to create a multi-room speaker group in the Mini Workshop on page 52.

Once you've created your speaker group, you can use it to play music, radio or any other audio by simply adding the speaker group name to the end of your voice command. So if you've created a speaker group called 'downstairs' (Echo speakers located on the ground floor), you could say "Alexa, play LBC radio downstairs", while "Alexa, play Sixties music everywhere" will play on all your Echo speakers elsewhere (the 'everywhere' group is created automatically when you have more than one Echo).

When listening to multi-room audio, you can adjust the volume of each speaker (by pressing the volume buttons or by saying "Alexa, louder/quieter" when near to it), but if you want the same volume on each speaker you can use your group's name, with a command such as "Alexa, set downstairs to volume five".



The Amazon Echo Studio provides rich and immersive audio even in large rooms

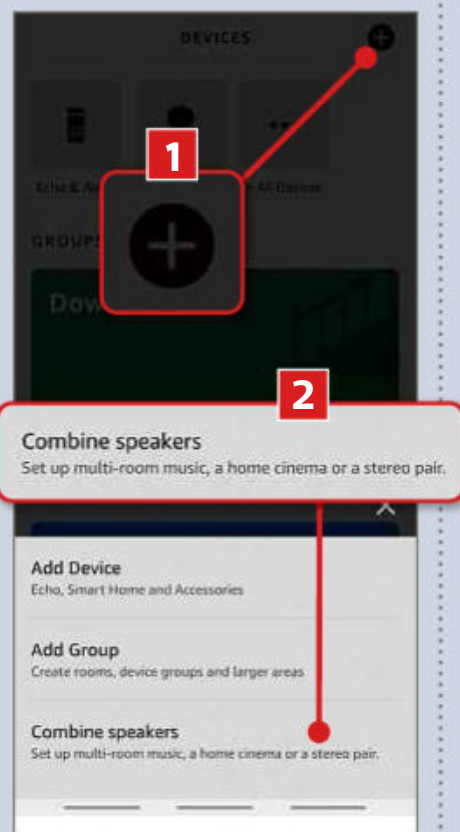


Select this option to play TV audio through a Echo speakers when using a Fire TV Stick

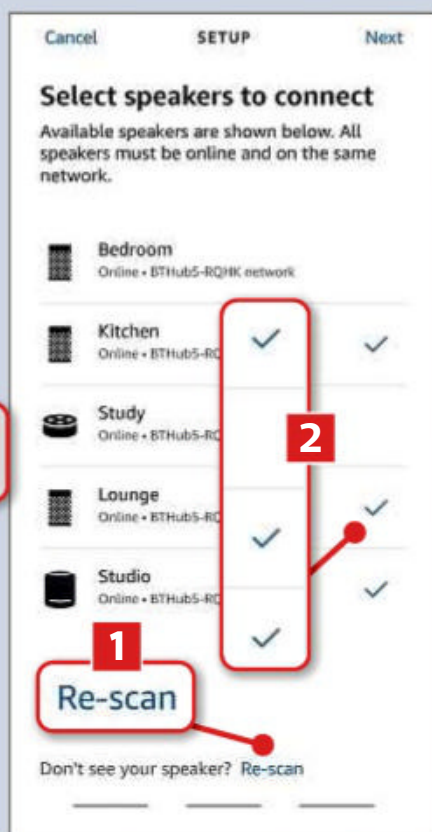
You can also use two Echo speakers (and, optionally, an Echo Sub for extra bass – £120 from www.snipca.com/38621) to play audio from your TV. Bear in mind this works only when you're streaming TV via an Amazon Fire TV Stick (£30 from www.snipca.com/38622). To set this up, go to the Devices section in the app, tap 'Combine speakers', then select 'Home cinema' (see screenshot above) and follow the instructions.

WORKSHOP Set up a speaker group with Amazon Echo

1 Open the Alexa app on your phone or tablet, select the Devices tab at the bottom, then tap the '+' button in the top-right corner **1**. Select 'Combine speakers' **2**, then 'Multi-room music'.



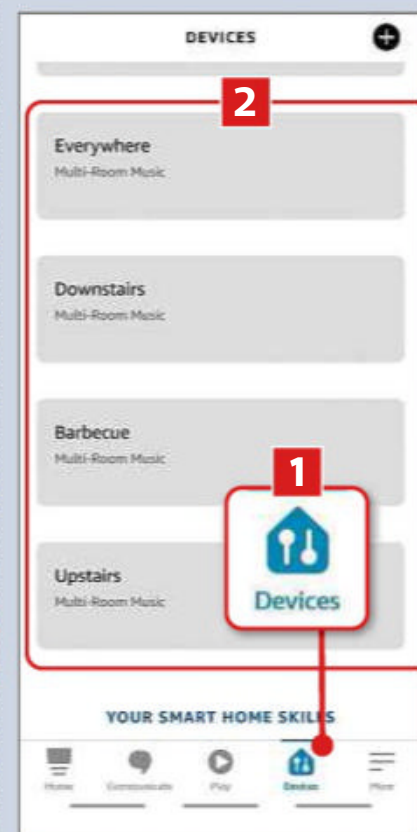
2 You'll now see all your Echo smart speakers (if some are missing, tap 'Re-scan' **1** at the bottom). To add a speaker to your group, simply tap its name so that a tick appears next to it **2**. You can select as many speakers as you like.



3 Tap 'Next' in the top-right corner, then either choose a name for your speaker group from the Suggested Names section **1** or swipe to the bottom of the list and enter your own name in the Customised Name box **2**.



4 You can now use your speaker group by adding it to the end of your Alexa voice commands. To review your groups, select the Devices tab **1** and swipe down (select a group **2**, then tap Edit to change which speakers it uses).



GOOGLE NEST

Like Amazon's Echo speakers, Google's Nest range comes with a voice assistant, called Google Assistant, that also lets you speak commands and play multi-room music and radio.



The Nest Audio produces decent audio, but it lacks a 3.5mm audio socket

The cheapest in the range is the Nest Mini (£49 from www.snipca.com/38623). Although the Mini's speaker is fine for listening to radio, we still prefer the Echo Dot for this kind of thing because it provides richer, more full-bodied output. However, the bigger issue with the Nest Mini is that, unlike the Dot, it doesn't have a 3.5mm audio output. If you want to connect it to a set of external speakers, you'll need to use Bluetooth (something most hi-fi speakers lack).

For this reason, we recommend the larger Nest Audio (£90 from www.snipca.com/38624, pictured left). While it also lacks a 3.5mm audio port, it produces excellent quality audio that's on a par with the Amazon Echo, so you're less likely to need an external speaker.

We particularly like Google's Ambient IQ technology that's built into the Nest Mini and Nest Audio. This adjusts the audio based on what's being played and background noise. So, for example, if you're listening to a podcast while cooking with boiling pans or sizzling oil, it boosts the higher frequencies making it easier to hear what's being said.

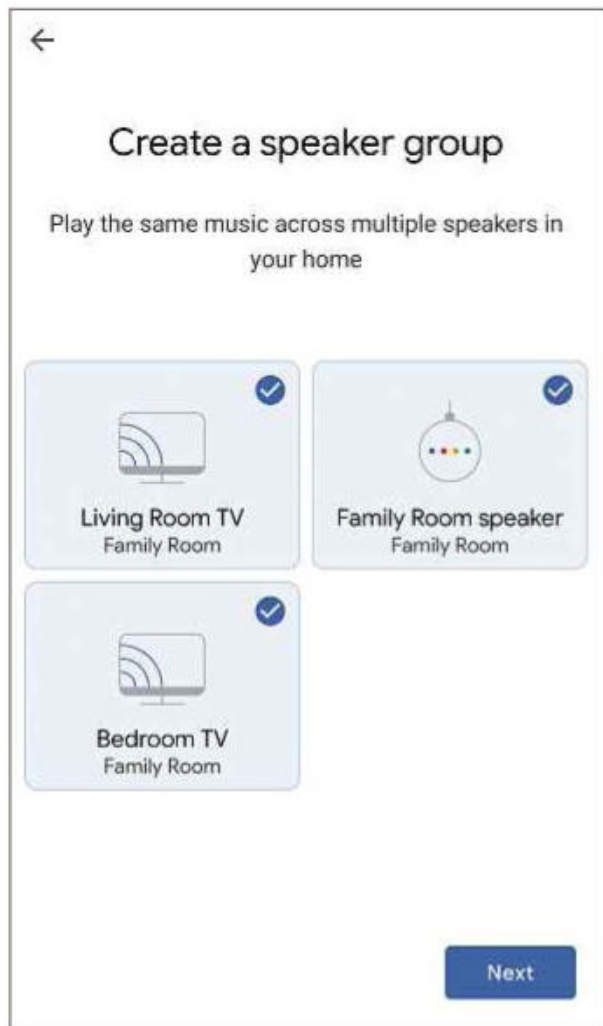
It's disappointing that there are just two speakers to choose from in Google's Nest range. It used to include a powerful Home Max speaker (£299), but Google discontinued this late last year and there's no word on a replacement model to rival the Echo Studio.

Create Nest speaker groups

You need the Google Home app (Android www.snipca.com/38625; iOS www.snipca.com/38626) to link multiple Nest devices into speaker groups.

Within the app, tap the '+' button (top left of the home screen), then 'Create speaker group'. You'll now see all Google speakers and devices that support multi-room audio. Select those you want to include in your group (a tick will appear next to each one when you do this), then tap Next and enter a name for the group, followed by Save.

To edit an existing speaker group, select it from the home page of the Google Home app, then tap the settings button (cog icon), followed by 'Choose devices'. You can now add and remove individual speakers by tapping them



Combine Nest speakers into a group using the Google Home app

(see screenshot above). Tap 'Next' to save your changes.

You can also add Google Chromecast streaming devices to your speaker group. While these don't have built-in speakers, adding Chromecast means you can use your TV's speakers – or whichever speaker system is attached to your TV – in your speaker group. The basic Chromecast (£30 from www.snipca.com/38627) is an inexpensive way to stream music around your home. Be aware that the original Chromecast (the USB-stick version, released in 2013) doesn't work with speaker groups.

One multi-room Nest feature we particularly like is shifting music between speaker groups while listening to it. So if you're listening on your Nest Audio speaker in the lounge, for example, and you want to play it on a speaker group that you've named 'downstairs', you just say "Hey Google, transfer music downstairs". On the Echo, you have to stop whatever's playing before you can switch speaker groups.

SONOS

Sonos speakers don't come with their own voice assistant, though some models – including the Sonos One (£199 from www.snipca.com/38670, pictured right) – have microphones that let you choose between using Alexa or Google Assistant for voice control.

Given its price, you'd expect the One to deliver decent audio, and in our tests we weren't disappointed. The bass feels more balanced than on the similarly priced Echo Studio. If you have no need for an integrated voice assistant, opt for the One SL (£179 from www.snipca.com/38632), which is essentially the same speaker without voice control.

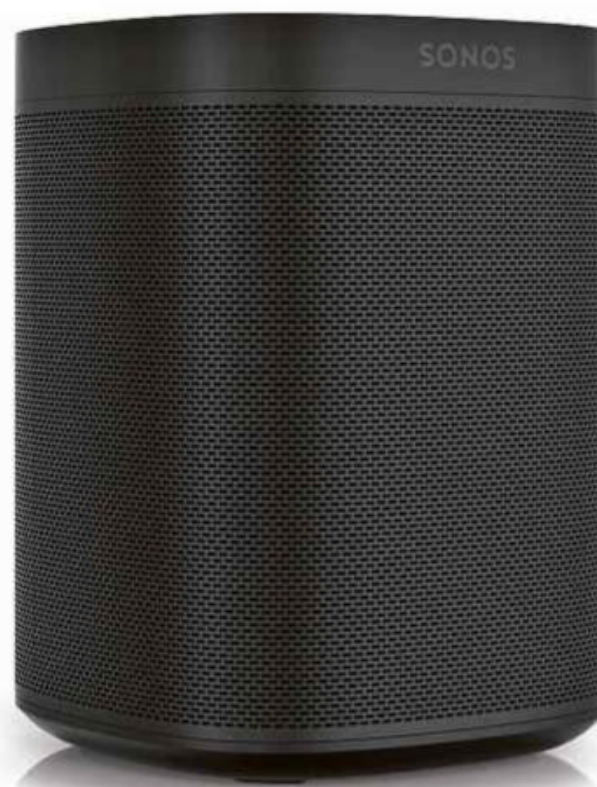
The downsides to choosing Sonos for your multi-room setup is that it can get very expensive. Unlike Amazon and Google, which offer cheaper speakers for smaller rooms or ones that connect to external speakers, Sonos units cost well over £100.

The Roam (pictured right), which Sonos launched in April, is the cheapest option (£159 from www.snipca.com/38628). Its speaker isn't as powerful as the One's, but with a battery that lasts up to 10 hours and an IP67

waterproof rating (meaning it can survive being submerged in three feet of water for up to 30 minutes), it's a terrific outdoor speaker. It also supports Alexa and Google Assistant, and at 430g it's light enough to take on your travels.

The Sonos Move (£399 from www.snipca.com/38629) is a significantly bigger and more powerful portable speaker, weighing 3kg. Although less portable, it's capable of delivering audio that will fill even large rooms and, like the Roam, lasts up to 10 hours on a single charge.

If your budget allows, consider the Sonos Five (£499 from www.snipca.com).



The Sonos One is a powerful speaker that supports voice control

The Sonos Roam lets you extend your speaker group into the garden



[com/38630](http://www.snipca.com/38630)). As well as producing louder, richer audio it has a line-in socket. This lets you connect it to other audio sources – such as a record player with turntable – then stream the audio from it to other Sonos speakers in your home.

Like the One SL, the Sonos Five doesn't have a microphone. However, you can still use voice commands to control it (either using a Sonos One, Roam or Move, or a separate Echo or Nest speaker).

Create Sonos speaker groups

Sonos it easy to play music on. When playing something on one speaker, hold the Play/Pause button on another speaker and it will also start playing. You can repeat this process to add other Sonos speakers you may have. Also press Play/Pause to temporarily stop music playing on a specific device.

You can also use the Sonos app (www.snipca.com/38631) – simply tap the System tab, then the Group icon and select which speakers you want to play the music through.

Last year, Sonos upgraded its speaker **firmware** and app to its S2 platform. Along with better audio quality, this upgrade allows you to group speakers into 'rooms', letting you save your favourite speaker groups (such as a 'downstairs' group for your lounge and kitchen speakers).

READER OFFER!



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In this special offer exclusively for *Computeractive* readers, you can buy **Windows 10 Pro** for only £69.99.

That's a whopping £150 cheaper than Microsoft's full price of £219.99.

To buy **Windows 10 Pro**, visit www.snipca.com/38398 and click the red Buy Now button on the right.

If you have any questions about your purchase, please email *Computeractive* Editor Daniel Booth: editor@computeractive.co.uk.



JUST SO YOU KNOW...

This offer can be used by one person only, and expires at midnight on **13 July, 2021**.
It's a lifetime licence for one computer.

STREAM FREE MULTI-ROOM MUSIC & RADIO

Stream free music

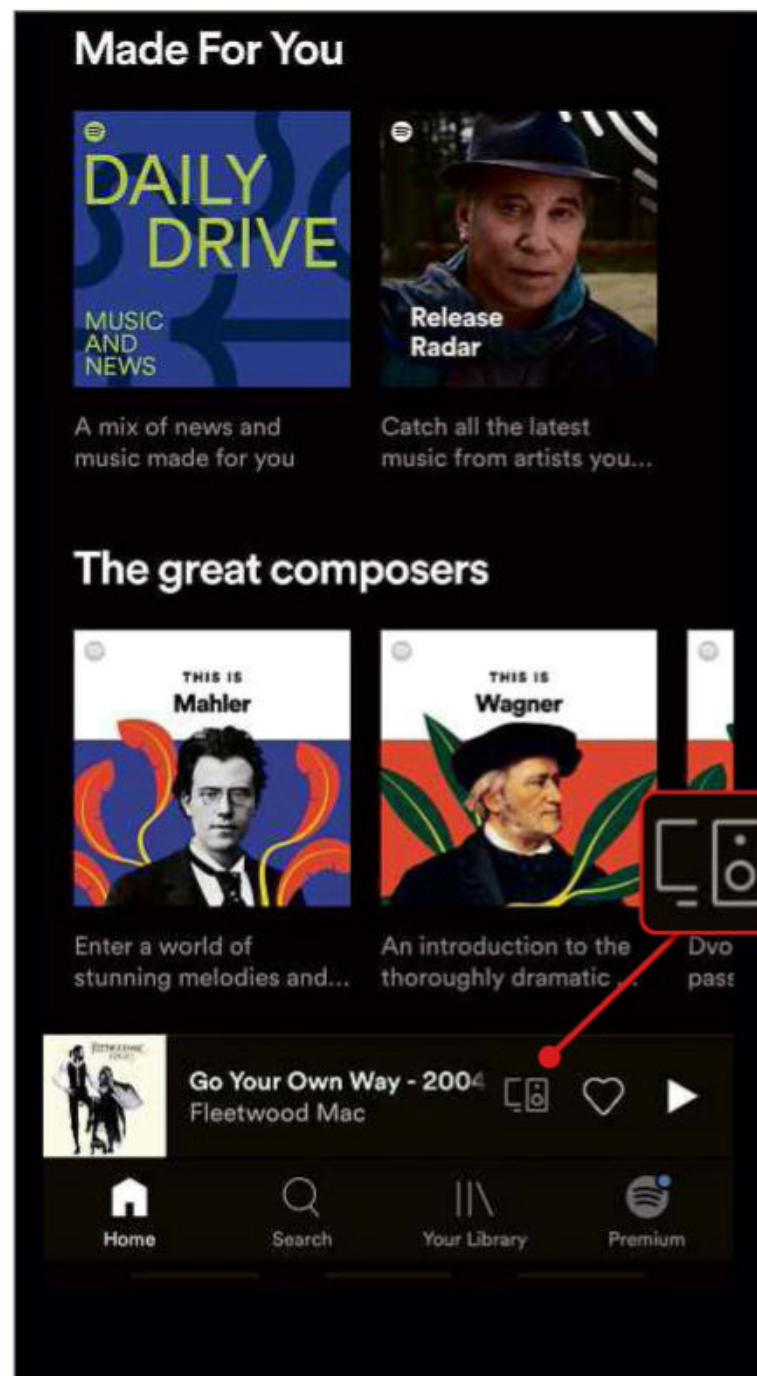
There are plenty of paid-for streaming services (Amazon Prime Music, Spotify, Apple Music and more), but if you're willing to live with a few adverts there are ways to stream music on your multi-room speakers for free. With Echo speakers you can access songs on Amazon Music Free, while Google's Nest speakers let you play free tracks from YouTube Music – just use voice commands such as “Play Sixties music on YouTube Music everywhere”. You can also access other free streaming services, such as Spotify Free.

With an Amazon Echo speaker, go to the Alexa app, tap More, ‘Skills & Games’, then search for Spotify (you'll be prompted to link your Spotify account to the Alexa app – sign up for a free account at www.snipca.com/38639). With a Google Nest speaker, open the Google Home app, tap ‘+’, followed by Music, then select Spotify and link your account.

To stream Spotify Free on Sonos speakers, open the Spotify app on your phone or tablet, select the track or album you want to play, then tap the speaker button (see screenshot right) and select the speakers you want to use.

Access free radio

The BBC might be making it difficult to listen to its radio stations on multi-room speaker groups (see box below), but there are plenty of other free radio stations you can try. On Echo and Nest speakers, you can play these stations simply by asking for them by name (remembering to add the speaker group



Stream Spotify Free to your Sonos speakers from within the Spotify mobile app

at the end of your command).

These stations are provided by various streaming services. TuneIn (<https://tunein.com>) includes Talk Radio, Heart and several local radio stations.

GlobalPlayer (www.globalplayer.com) offers Classic FM and LBC, while Wireless (www.snipca.com/38640) gives you access to Virgin Radio and Times Radio.

On an Echo or Nest speaker, you can simply say which radio station you want and the voice assistant will hunt it down for you. With Sonos speakers, you need to first enable the relevant radio service in the Sonos app – search for it by going to Services, ‘Music & Content’, then ‘Add a Service’.

Listen to your own music

Sonos makes it easy to stream music stored on your computer – simply install the Sonos app for Windows (www.snipca.com/38641), then point it to the folder on your computer where your music files are stored. Once you've done this, you can access your music library via the Sonos app (on your computer, phone or tablet) and play it on your multi-room speaker groups.

It's slightly more complicated with Amazon Echo and Google Nest speakers because they are primarily designed to play music from streaming services, not from your computer. Thanks to a change late last year, you can now upload your music library (up to 100,000 tracks) to YouTube Music, then play them on your Nest speakers – previously this was restricted to YouTube Music Premium subscribers. Your uploaded

Bypass the BBC's multi-room block

The BBC angered many people in August 2019 when it removed all BBC radio stations from TuneIn, forcing Echo, Nest and Sonos speakers to instead stream stations via the BBC Sounds service. The drawback to this move is that, unlike TuneIn, BBC Sounds is unable to stream radio to multi-room speaker groups, only *single* speakers. The BBC says it's looking into the problem, but its last word on the matter was in 2019 (www.snipca.com/38642), so we're not holding our breath.

However, there is a workaround if you have groups made up of Amazon Echo

speakers. First, you need to start playing some music on your speaker group from a source other than the BBC, with a command such as “Alexa, play classical music everywhere”. Once the music starts, tell Alexa to play the BBC radio station you want to listen to (such as “Alexa, play BBC Radio 2”) – it's important not to tell Alexa to stop playing before issuing this command, nor include the speaker group in the command. Your Echo speaker group will then switch to playing the BBC radio station you requested.

In our tests, this works well for all BBC radio stations, but we couldn't use the same



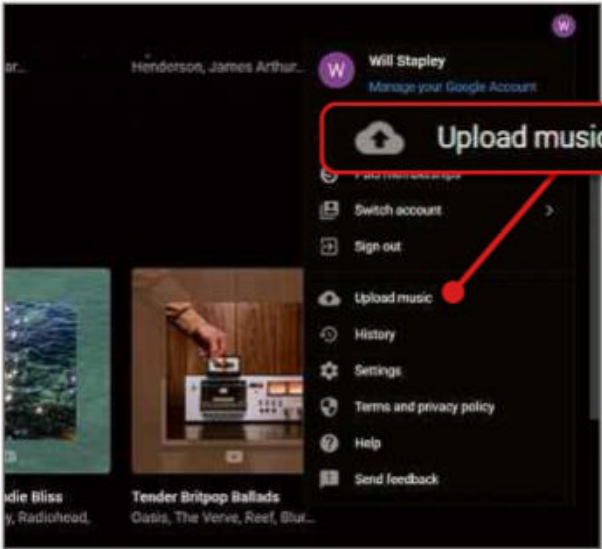
trick to get BBC Sounds podcasts playing on speaker groups.

If you've got any smart-speaker hacks such as this, we'd love to hear about them – email yours to letters@computeractive.co.uk.

music will be available only to you.

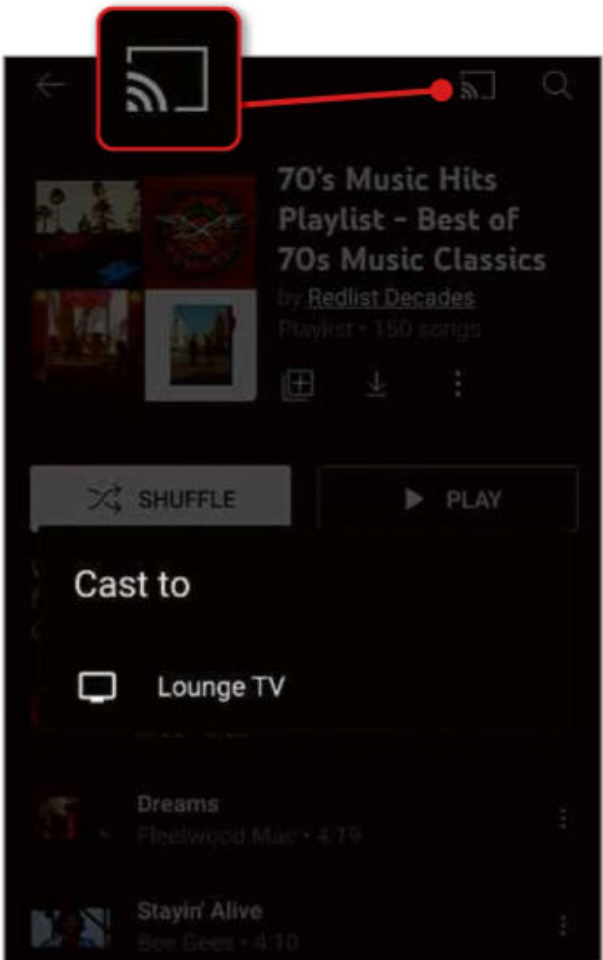
To get started, go to <https://music.youtube.com>, sign in with your Google account, click your account icon (top right), then 'Upload music' (see screenshot right). Once it's uploaded, you can **cast** your music to a single speaker or speaker group from YouTube Music on your phone (tap the cast icon in the top-right corner – see screenshot far right) or in your browser (tap your browser's menu button, then Cast).

Amazon Echo speakers don't have the same casting feature, but you can access your library using Plex. You first have to install the Plex server on your computer (free from www.snipca.com/38645), then tell it where your music files are stored – Plex's support page explains how to do this at www.snipca.com/38646. You then need to install the Plex skill on the Alexa app on your phone by selecting the More button (bottom right), 'Skills & Games', then searching for and installing Plex.



Upload your music library to YouTube Music, then stream it to your speakers

During the installation, you'll be asked to link the skill to your Plex account. You can then tell Alexa to play your Plex music with voice commands like "Alexa, tell Plex to play dinner party playlist". You can't tell Alexa to play music from Plex via multi-room speaker groups, only a single Echo speaker.



Cast YouTube Music to Nest speakers and Chromecast devices

DO MORE WITH YOUR MULTI-ROOM SPEAKERS

Create a stereo pair

You can link two smart speakers to create a stereo pair – in other words, use separate speakers for the left and right audio channels. This not only creates more immersive audio in larger rooms, but also lets you enjoy songs with strong stereo separation, such as *A Day in the Life* by The Beatles.

To create a stereo pair using Echo speakers, follow the Mini Workshop on page 52, but after selecting 'Combine speakers' in Step 1, choose the 'Stereo pair...' option. Select the two speakers you want to use, then specify which to use as

the left and right speakers (tap the circles to test them, swapping the speakers if necessary – see screenshot below right). Finally, give your stereo pair a suitable name, such as 'lounge stereo'. You can then use this stereo pairing by saying "Alexa, play A Day in the Life on lounge stereo".

For Nest speakers, open the Google Home app, tap Settings (cog icon), Audio, then 'Stereo pair' and select your speakers. To set up a Sonos stereo pair, open the Sonos app, then go to Settings, System, select the first speaker and tap Set Up Stereo Pair.

Control volume settings

When you've got music playing through a speaker group, you'll probably want to adjust the volume of each speaker to achieve the perfect balance. If you're near the speaker you want to adjust, it's best to simply use the volume control buttons that are found on all Echo, Nest and Sonos speakers.

You can also adjust the volume of the entire group using voice commands such as "Set downstairs volume to five", but barking commands at a speaker while hosting a dinner party isn't always ideal. Instead, load the app for your speakers. Within the Alexa app, you can control each Echo speaker's volume by selecting the Devices tab, tapping 'Echo & Alexa' (top left), then selecting the speaker whose volume you want to change –

How I use multi-room audio

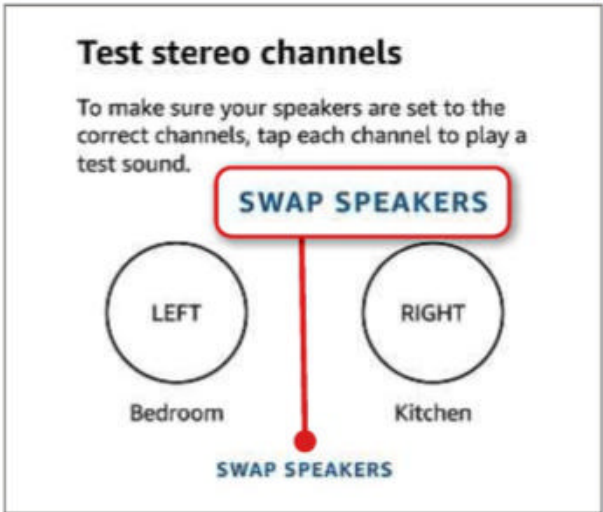
I've amassed a small army of Echo speakers throughout my home. The latest recruit – an Echo Studio – does a fantastic job of filling my lounge with bass-heavy audio.

To play music throughout my home, I've created various speaker groups including Upstairs, Downstairs and a 'Not Dad' group – that last is for when the kids are in party mode and I'm trying to work, playing on all speakers bar the Echo Dot in my study.

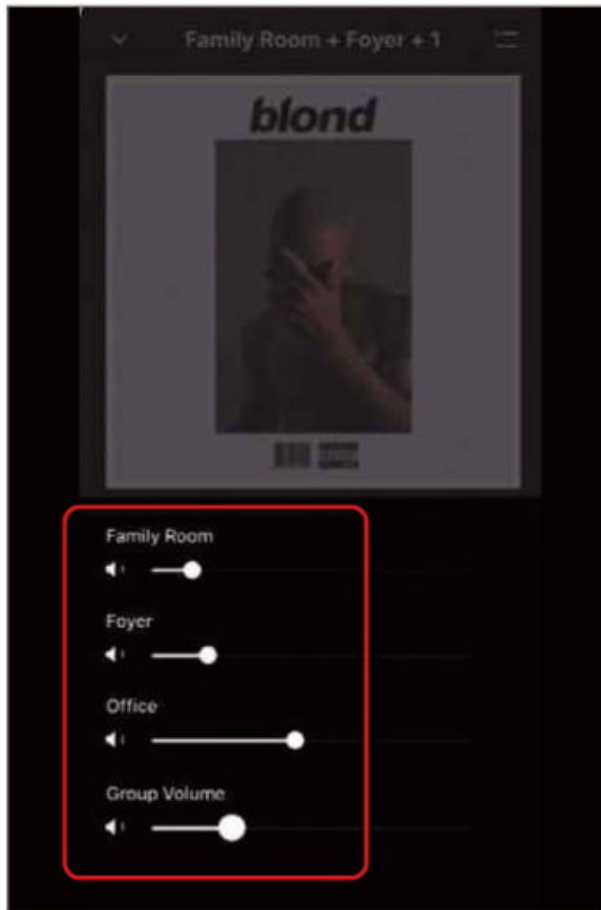


For months I suffered problems with my speaker groups – sometimes they worked, other times certain speakers would drop out. Selecting the speakers in the Google Home app (tap Devices, then 'Echo & Alexa') revealed I'd inadvertently connected some to my router's 2.4GHz network and others to the 5GHz one. I've since shifted them all to the 5GHz network (select Change next to 'Wi-Fi Network' – see screenshot), which seems to have fixed the problem.

Will Stapley



Create a stereo pair of Echo speakers and swap left and right channels if necessary



The Sonos app lets you change the volume of a group as well as individual speakers

simply drag the slider to adjust it.

To change the volume of your Nest speakers, open the Google Home app, tap the Media button (three vertical lines), then adjust the volume sliders for each individual speaker or an entire speaker group. In the Sonos app, go to the Now Playing screen, then adjust the volume slider at the bottom – if you're playing music on a group of speakers, separate volume controls for these will also appear (see screenshot above), letting you change their volume settings individually.

Tweak your audio

As well as changing the volume on each speaker, you can adjust the audio using an equaliser – boosting the bass when playing music and the treble when listening to radio shows. The amount of control you have depends on the speaker you're adjusting. On Echo speakers, you can adjust the bass, mid-tones and treble by selecting the speaker in the Alexa app as explained in the previous tip, tapping Audio, then adjusting the sliders.

Nest speakers let you adjust the bass

Create multi-room audio using your PC

Don't fancy spending hundreds on smart speakers? If you already have a Bluetooth speaker, you can use it alongside your computer's speakers to create a basic two-room audio system.

With your computer's speakers attached (you can also use your laptop's built-in speakers) and your Bluetooth speakers connected, open Settings on your PC (press the Windows key+I). Select System, Sound, then click Sound Control Panel (this will be either at the bottom or on the right-hand side of the window). In the window that opens, select the Recording tab, double-click Stereo Mix (if you can't see this, right-click the window and select Show Disabled Devices), then select the Listen



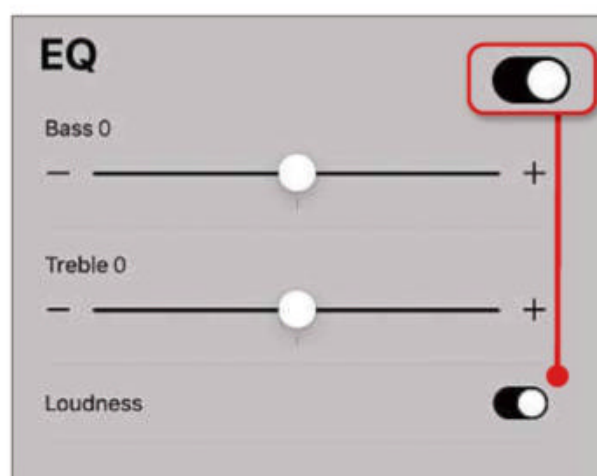
tab. Tick the 'Listen to this device' box (see screenshot) and, in the box below, select your Bluetooth speakers.

You can now play audio on your computer (such as a radio station, a track from YouTube Music or an MP3 file), and hear it on both your wired and Bluetooth speakers. Keep in mind that Bluetooth isn't as

powerful as Wi-Fi, so you may find the audio breaks up if you take it too far from your computer.

Of course, it's not the multi-room audio you get with a set of Echo, Nest or Sonos speakers – not least because the audio won't be in sync (your Bluetooth speaker will be around a second behind the speaker wired to your PC). However, as long as the speakers aren't set too loud, you probably won't notice this.

and treble (select the speaker in the Google Home app, tap the cog icon, then select Audio followed by Equaliser). Along with bass and treble adjustments, Sonos speakers also offer a Loudness option, which boosts both the bass and treble, and improves audio at low volume.




When listening to a Sonos speaker at low volume, turn on Loudness to boost audio

Make multi-room announcements

Your multi-room speaker system isn't just great for listening to music and radio – you can also use it to broadcast announcements across your home.

On an Echo speaker, start what you want to say with "announce" (such as "Alexa, announce dinner's getting cold"); with a Google Nest speaker replace "announce" with "broadcast". You can broadcast announcements with Sonos speakers, but only if you're using a Sonos speaker that supports Google Assistant or Alexa, such as the Sonos One, Roam and Move.

Amazon Echo speakers also let you call another speaker in your home – simply say "Alexa, drop in on lounge" to start a conversation with whoever's sitting near your lounge speaker. 

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*Assuming that's what Microsoft calls Windows 10's sequel...

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SCAN ME

DITCH YOUR TV'S Remote

Tired of juggling multiple remotes and hunting down the side of the sofa when you lose one? **Robert Irvine** reveals the best alternative ways to control all your streaming devices in one place



Install an official remote-control app

Most manufacturers of smart TVs and streaming devices now offer remote-control apps to use instead of or alongside your physical remote. These free apps allow you to manage your TV from your phone or tablet over your Wi-Fi network, letting you browse content, adjust volume and control playback. Aside from the fact your phone or tablet is less likely to go missing, they have other advantages over

standard remote controls.

For starters, your phone and tablet can be quickly recharged, meaning you won't have to worry about replacing drained batteries. App-based remotes also offer larger on-screen controls that are easier to press and swipe, and often let you access your smart TV's options with just a couple of taps, rather than having to navigate cumbersome menus. This makes installing and uninstalling apps much simpler, and selecting the film or TV series you want is a relative breeze.

Best of all, you can type search terms, usernames and passwords by tapping the on-screen keyboard on your device. This saves you having to select letters, numbers and special characters using the awkward navigation buttons on your TV's remote. Some apps, such as those from Samsung and LG (as we explain later), offer extra features such as the ability to **mirror** your phone or tablet's screen on your TV, and **cast** photos, videos and music from mobile apps.

You can find the right remote app for your device by searching the Apple App Store or Google Play Store for the manufacturer's name followed by 'TV remote'. However, make sure the app you install is the official one (see box left for links to some of the more popular ones), because there are plenty of dubious imitations that don't work properly and may steal your data. Have a look in the app's description and check that the device's manufacturer is named as the app developer.

Note that Apple removed its Apple TV Remote app from its App Store last

Use a remote app – like this one for Amazon Fire – on your phone or tablet to control your TV more easily



October because it's now built into the iOS Control Centre (see www.snipca.com/38507). Google is planning to do

the same by integrating its new Android and Google TV remote into Android phones (www.snipca.com/38542). Sony appears to have scrapped its 'Video & TV SideView' remote, but you can use the Android TV app to control its Android-powered Bravia TVs.

Use a universal remote app

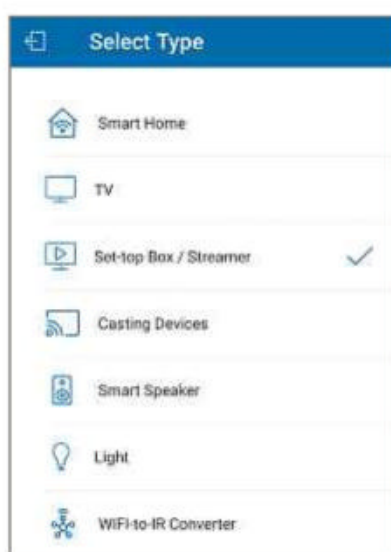
If there isn't an official remote app for your streaming device, or you have several streaming devices but would prefer not to have multiple apps, consider installing a universal remote app. These turn your phone or tablet into an all-in-one remote control, and some go beyond TVs and streaming sticks to let you operate DVD players, projectors, smart lighting, heating systems and more.

The most comprehensive universal remote apps require your mobile device to have an IR (infrared) 'blaster', which (as with a physical remote) sends signals directly to devices with IR receivers. Our favourite IR-enabled app is Sure - Smart Home and TV Universal Remote (www.snipca.com/38528, pictured above right),

Where to get remote-control apps

- **Amazon Fire TV**
Android www.snipca.com/38505
(pictured above right)
iOS www.snipca.com/38506
- **Android TV**
Android www.snipca.com/38510
iOS www.snipca.com/38511
- **LG TV Plus**
Android www.snipca.com/38508
iOS www.snipca.com/38509
- **Panasonic TV Remote 3**
Android www.snipca.com/38514
iOS www.snipca.com/38515
- **Roku Official Remote Control**
Android www.snipca.com/38503
iOS www.snipca.com/38504
- **Samsung SmartThings**
Android www.snipca.com/38512
iOS www.snipca.com/38513
- **Virgin TV Control**
Android www.snipca.com/38525
iOS www.snipca.com/38526

Control multiple devices – including TV boxes – over Wi-Fi or using IR with Sure’s universal remote app



which is free to use and claims to support around one million devices.

Sadly, very few new phones and tablets feature IR blasters, and iPhones and iPads never did. You can check if yours has one by looking for a black plastic circular or rectangular indent on top of the device, or browse the list of devices with IR blasters at www.snipca.com/38527. These include HTC One, Honor 10 and various Samsung Galaxy Tab models.

If you lack an IR blaster, universal remote apps still work with plenty of TVs and streaming sticks over Wi-Fi. As well as the Sure app, we recommend the free apps Universal Remote Control for Android (www.snipca.com/38530) and Universal Remote TV Smart for iOS (www.snipca.com/38529), which both make it easy to configure and control your smart devices.

Use a physical universal remote control

Universal remote controls have been around since the 1980s, and with more electronic devices in our homes than ever, they remain a great way to keep these multiplying little control pads to a minimum. They tend to be compatible with more devices than universal remote apps, and use both Wi-Fi and IR technology, which means they’re not rendered useless when your internet goes down.

One For All offers a wide range of products (www.snipca.com/38532), including Smart Control models that operate up to five smart TVs and streaming sticks as well as set-top boxes, soundbars, DVD players, games consoles and more. Check each product’s description to find out how many devices it supports or use the handy ‘Find the right remote’ tool (visit www.snipca.com/38533 then scroll down to the ‘Select your devices’ section). The Streamer Remote, which lets you control three streaming devices and has a simple large-button design, currently costs just

Control a TV box with your old remote

If you’ve lost the remote for a streaming device or set-top box, you may be able to control it using your TV’s standard remote thanks to a feature called CEC (Consumer Electronics Control). This allows your TV to control devices that are plugged into its **HDMI** ports, and vice versa.

To activate CEC, you’ll need to dig into your TV’s settings and look for its CEC

option. This varies between models: on Samsung TVs it’s called Anynet+; on Sony TVs it’s Bravia Sync; and on LG TVs it’s Simplink – a quick Google search may help here. Turn on the feature, then select the HDMI port that your streaming stick or set-top box is plugged into. You should now be able to use your TV remote to control the smart device.

£12 on Amazon (www.snipca.com/38551, pictured right).

You can quickly set up Wi-Fi-enabled devices using One For All’s mobile app, while IR devices require you to press a unique pattern of buttons on the remote.

Control your TV from your computer

If you often use your laptop while you watch TV, reaching for the remote to pause a film or mute the volume can be a hassle. Although there are several Windows apps that claim to let you control certain TVs from your PC, such as TV Remote Control for Samsung models (www.snipca.com/38535), none of them actually work – so don’t waste your time and money! The best solution we’ve found is to use an **emulator** to run an official remote app (as covered earlier) in Windows, and fool your TV into thinking you’re controlling it from your phone.

Install the free BlueStacks Android emulator (www.bluestacks.com), then open the Google Play Store and install a remote app, such as Amazon Fire TV or Roku (see box left for links). BlueStacks will resize to a smaller window on your desktop that looks like an app (pictured below, showing the Roku remote control).

Next, sign into your streaming service,



Control your TV from your PC using a remote-control mobile app – such as Roku – in the BlueStacks Android emulator



One For All’s Streamer Remote lets you control three streaming devices

ensure both your PC and TV (or streaming device) are connected to Wi-Fi, and once the emulated app detects the latter, click to connect the devices. If it can’t detect anything, choose to connect manually and enter your TV’s **IP address** in the app – you can usually find this in System settings, then About.

Control your TV with your voice

Most remote controls now have dedicated buttons for controlling the device with your voice using Alexa, Google Assistant or Siri – a feature you’ll also find in their app versions. But if you’d prefer a completely hands-free approach, you can use your smart speaker to turn your TV on and off, open apps, adjust the volume and control playback.

To set up TV voice control on an Amazon Echo speaker, open the Alexa app on your phone or tablet, choose More, then Settings and select ‘TV & Video’. Press the plus sign next to the name of your smart TV or streaming device, then tap ‘Enable to use’ or Link, and follow the instructions. Back in the Alexa app, choose the TV you want to connect Alexa to, select your Echo speaker and tap Link Devices to confirm. Useful voice commands include: “Alexa turn on [TV name]”, “Alexa, open Netflix [or other streaming app]” and “Alexa, mute/unmute [TV name]”.

With Google Assistant, your TV will need to have Chromecast (either built in or plugged in) for you to control it via your Google Home/Nest speaker. Open the Google Home app on your phone or tablet, tap the plus sign in the top-left corner and choose ‘Set up device’, then ‘New device’. Select your home, then your Chromecast-enabled device, Wi-Fi network and the streaming services you want it to cover. You can now control your TV by saying “Hey Google...” followed by a voice command. **ca**

Share your phone & tablet screen

Why waste time taking screenshots when you can instantly share what's on the screen of your mobile device with friends and family? **Robert Irvine** explains the best free ways to show others your screen



The screen of your phone and tablet is usually your private territory, letting you browse the web and use apps without anyone else seeing what you're doing. But there are times when you may want to share the contents of your screen with friends, family or work colleagues. For example, you may want to show someone a bargain you've found online or an important piece of information. Or you may want to demonstrate how to perform a specific task in Android or iOS.

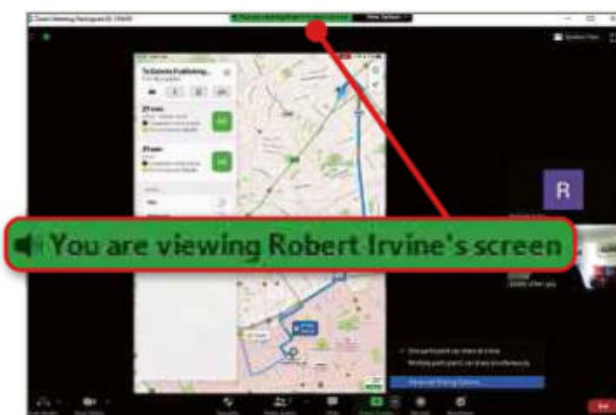
Although you could do this by capturing and sending a screenshot, sharing your entire screen saves a lot of time and trouble. Here we explain the best free ways to do so. Just make sure there's nothing sensitive or embarrassing on screen before you share.

Share your screen in Zoom and other video-chat apps

Most video-chat services now let you share your device's screen with the people you're talking to, but Zoom (<https://zoom.us>) does it best, offering excellent picture quality and simple activation.

When you're in a Zoom meeting on your Android device, just tap the Share button at the bottom of the app and select Screen, then tap 'Start now'. Allow Zoom permission to 'draw' over other apps and it will share your screen with the other chat participants, who will see it in the main area of the Zoom window (it's showing Google Maps in our screenshot above right).

Once you've finished sharing, tap the arrow in the bottom-right corner of your



On this PC we're seeing directions for Google Maps being shared from Robert's iPad

screen and select Stop Share to return to the standard video view.

On an iPhone or iPad, you'll first need to go to Settings, Control Centre then tap the plus sign next to Screen Recording to add the option to your Included Controls (assuming it isn't there already).

Once you're in a Zoom call, tap the Share Content button – on the bottom toolbar of the iPhone app or in the top-right corner on an iPad – then select Start Broadcast. After three seconds, Zoom will start broadcasting your screen, so swipe and tap to the content you want to share. Tap the red band or button at the top of the screen to stop sharing.

You can also join a Zoom meeting with your screen already shared. On the Zoom home screen in both the Android and iOS app, tap the Share Screen option, enter the Sharing Key or Meeting ID then press OK. Note that, by default, only the host can share their screen in Zoom meetings. To lift this restriction, you – or whoever is hosting – should click the arrow next to the Share Screen button in the Zoom desktop app, choose Advanced Sharing

Options and select 'All participants'. You can also allow all participants to share their screens simultaneously.

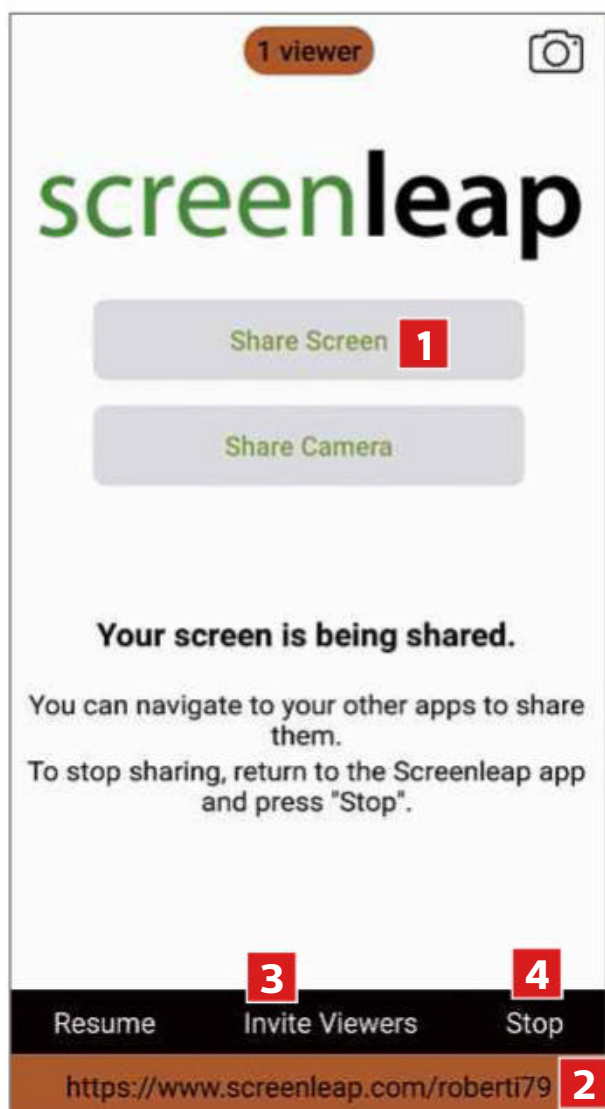
In other video-messaging apps, including Skype, Google Meet and Microsoft Teams, screen sharing works in much the same way: tap the three-lines button in the corner of a chat window and choose Share Screen. In Facebook Messenger, swipe up from the bottom of the screen and tap 'Share your screen'. On iOS, you'll also need to select the relevant chat service, then Start Broadcast.

Broadcast your screen without using video chat

Not everyone uses video-chat apps, and you may prefer to share what's on your screen without opening one. Our favourite free tool for this is Screenleap (www.screenleap.com), which lets you share the contents of your phone or tablet screen without starting a video call or granting remote access to your device (see next tip). Best of all, the other person doesn't need to install any software to view your screen – it just works in their web browser on their computer or mobile device.

To use Screenleap, install its free app for Android (www.snipca.com/38564) or iOS (www.snipca.com/38565) and create an account. It's easiest to do this through the Screenleap website, because the app currently displays a sign-up error. Next, sign in with your 'handle' (username) – not your email address, as the app says! – and password.

Once you've registered, tap Share Screen (1 in our screenshot above right)



Screenleap offers an easy free way to broadcast the screen of your phone or tablet

to start broadcasting and Screenleap will show your unique sharing link at the bottom of your screen **2**. Select 'Invite Viewers' **3** to send this link to other people by email, text message or messaging app, and when they click or tap it, your phone or tablet screen will instantly load in their browser. Choose 'Stop' **4** to terminate the connection, or Pause then Resume to suspend sharing while you find something else to share.

Receive or provide remote technical support

When you're trying to help someone fix a problem with their phone or tablet, or you need assistance with your own device, it's useful to be able to see the other person's screen. You can do this by using a remote-access tool to view and control another device as if it were in front of you.

We've often recommended TeamViewer (www.teamviewer.com) in the past, but recently some of its free users have reported that it's asking them to pay for a commercial licence (see the reviews at www.snipca.com/38579 and www.snipca.com/38582). Instead, we suggest using the even simpler and speedier service AnyDesk (www.anydesk.com), which is free for personal use.

Install the AnyDesk app for Android (www.snipca.com/38583) or iOS (www.snipca.com/38584), and ask the person you want to connect with to do the same. You may be prompted to install a **plug-in** to allow remote access.

Make notes with others using a 'digital whiteboard'

Plenty of apps now let you create and contribute to a 'digital whiteboard', so you can discuss ideas with other people using notes, doodles, images, annotations and more.

Google's free Jamboard app for Android (www.snipca.com/38594) and iOS (www.snipca.com/38595) is a good place to start, because it's



focused less on business and schools than similar tools.

Tap the plus sign in the bottom-right corner (see screenshot) to start your first 'jam', then press the three-dots menu and select Add People. You can insert photos from your mobile device and content from Google Drive, and share your finished jam as a PDF.

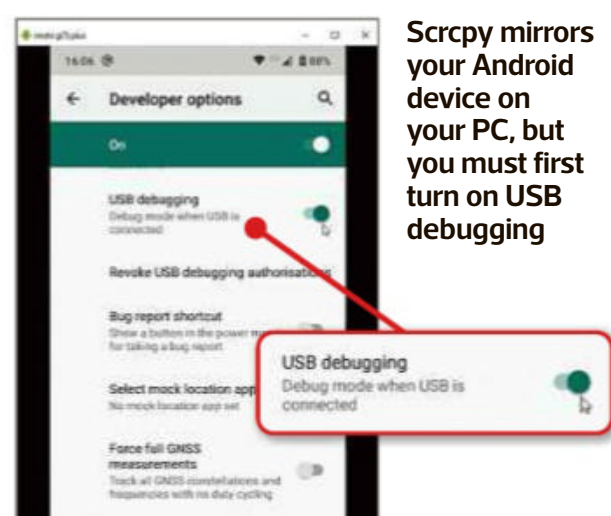
On AnyDesk's home screen, you'll see a unique nine-digit code under Your Address. To share your screen, tap the three dots next to this and choose 'Send invitation' or tell the other person your address over the phone. Alternatively, to take control of someone else's screen, ask them to send you their address, then enter this in the 'Remote address' box and tap Connect. Accept the security warning, then tap Accept to connect the devices.

Your phone or tablet screen will now be shared in the other person's AnyDesk app – or theirs will appear in yours. This will let them swipe around, open apps, adjust settings, type with the keyboard and perform other actions, and hopefully fix your problem – or you theirs. To exit a remote session, press the AnyDesk icon on the left-hand side of the screen then tap the 'X'. Alternatively, leave the app to disconnect automatically after five minutes of inactivity.

Mirror your mobile device's screen on your PC's desktop

Sometimes it's useful to share your screen with yourself rather than other people. You can do this by **mirroring** the contents of your phone or tablet on your computer's larger monitor. This makes it much easier to use fiddly apps, play mobile games without an **emulator** and capture screenshots and screen recordings.

Microsoft's Your Phone app for Windows (www.snipca.com/38588) offers a feature called 'Phone screen' that mirrors the screen of your Android device on your PC over your Wi-Fi network. Annoyingly, however, this only works on



Scrcpy mirrors your Android device on your PC, but you must first turn on USB debugging

supported Samsung phones – see www.snipca.com/38589 for the full list.

The best solution we've found for mirroring your Android screen in Windows is the free tool Scrcpy (www.snipca.com/38590). Download and extract this program, then connect your phone or tablet to your PC with a USB cable. When prompted, tap to allow 'USB debugging' (see screenshot above – this lets your device communicate with your computer).

If you don't see this message, go to Settings, 'About phone' and tap 'Build number' seven times to unlock 'Developer options', then go to System, Advanced, 'Developer options', and here turn on USB debugging.

Run the downloaded 'Scrcpy.exe' file and your mobile device will be mirrored on your desktop, allowing you to control it with your mouse.

You can mirror your iPhone or iPad screen in Windows over Wi-Fi by installing a program called LonelyScreen (www.lonelyscreen.com). Choose the 'free trial' on the download page, which is actually a *full* free version. On your iOS device, go to Settings, Control Centre and activate Screen Mirroring. Swipe the top-right corner of your screen to open the Control Centre and choose Screen Mirroring, then Lonely Screen. **ca**

Problems Solved

Our experts solve all your tech problems

PROBLEM OF THE FORTNIGHT

Why does eBay think I live elsewhere?

Q I received an email from eBay telling me I had logged in from Buckinghamshire. It warned that, if it wasn't me, I should change my password (see screenshot below). I did this, setting a longer password, and also looked at my sign-in activity list, which goes back a year. I'm not a regular user of eBay, but according to the log I have never signed in from Lincolnshire, despite having lived here for a decade. It even said I had used an Android device last year, but my first smartphone did not arrive until August 2020 – and I've never used it to sign into eBay. More recently, eBay's activity list reckons I've moved to Northamptonshire! Is this the same for everyone or have I been hacked? Or maybe eBay's system is inaccurate? All my account details are correct for where I live. Can you clarify this chaos?

Greg Chilton

A There's always the possibility of such messages being scams, but the eBay alert

email you forwarded to us was legitimate. Instead, we think the inconsistencies are being caused by the **IP address** (or addresses) issued to you by your internet service provider (ISP).

Historically, IP addresses have offered a broad indication of location, and it's this information that eBay and many other online companies use when they say you logged in from a particular location.

However, ISPs buy 'blocks' of IP addresses and, while they're generally issued to subscribers with approximate geographical accuracy, there's really no guarantee: in theory, you could live in Land's End but at any time be issued an IP address that's identified as being in John O'Groats.

Moreover, while some ISPs offer 'static' IP addresses that never change, the majority of UK customers will be on broadband packages that have a 'dynamic' IP address. This means the IP address issued to your router can change at any time. This would typically happen when it is reset or powered off and then back on, forcing the router to

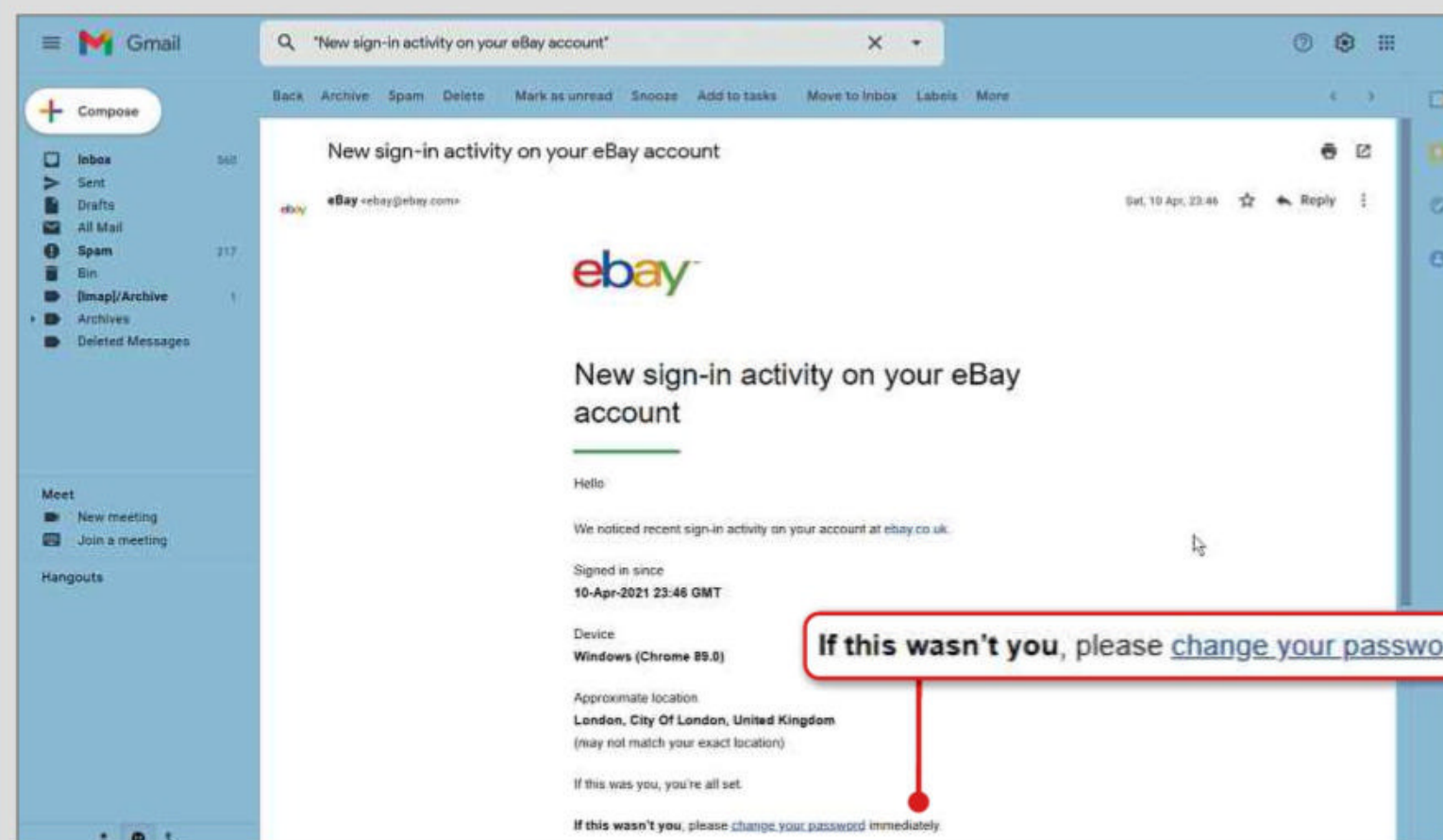
reconnect to your ISP. However, a fresh IP address could also be allocated on a fixed schedule imposed by the ISP – such as once a week, or even once every 24 hours.

With all that in mind, then, there's likely to be nothing untoward about being told that you've 'shifted' by a county or two. If a service like eBay detects something it considers 'new' or 'unusual', it's standard practice to email a warning to the customer.

So, we think that's what has happened here with your eBay warning, and it'll probably happen again every now and then.

However, there is one major caveat – and that's the mystery Android detection. If you're sure that the arrival of your smartphone was after the recorded Android login, then it could either be a misidentification by eBay or cause for genuine concern.

There's really no way of telling which it is but, as you've already changed and strengthened your password, there's nothing else you can usefully do.



When eBay alerts you to new sign-in activity on your account, it gives you the option to change your password

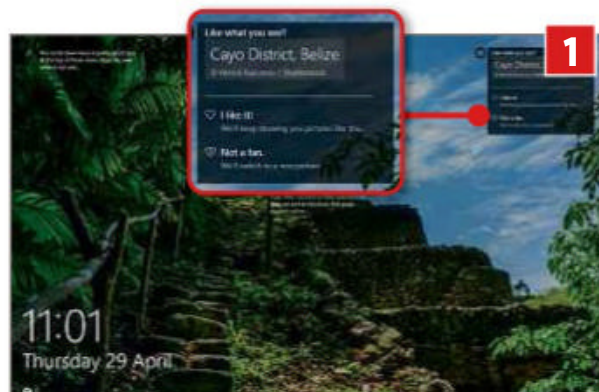
What does this Bing page keep opening?

Q I have a new laptop with Windows 10 Home. Every time I start up, a Bing window opens with a search for Lake Skadar. Why is this and how can I stop it happening?

Bill Junor

A There are actually three things to explain here. The first relates to the Windows 10 lock screen, the background for which is a random, rolling selection of eye-catching photos. If the mouse pointer is hovered over the top right of one of these images, an information panel will appear to tell you more about the displayed photo (see screenshot **1**). If you click that panel then, once you've logged in, Edge will launch, open a Bing search tab and automatically execute a search on the location of the image. This is actually helpful, and at some point we imagine you've intentionally done exactly this – though it's certainly not impossible to do it by accident.

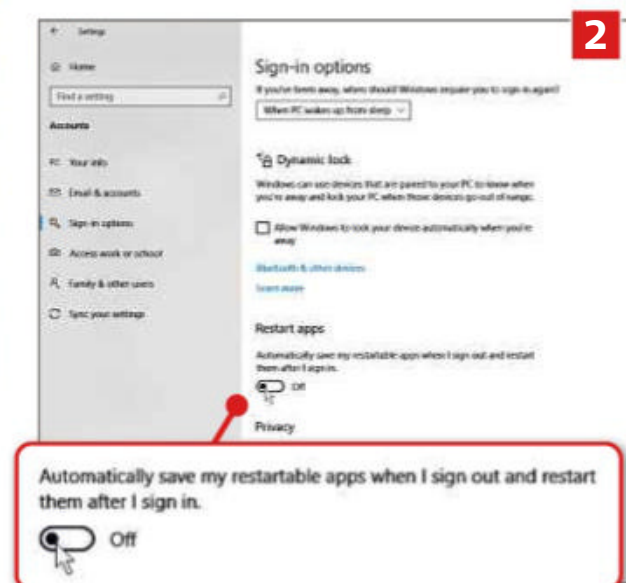
So, that's the cause of your problem. The reason why it keeps appearing is twofold. First, you have an option set in Windows 10 to restore apps that were



Hover the mouse over the top right of a background image and an info panel appears

open when you last shut down the PC. That, too, can be a useful option, but if you otherwise don't use Edge, it can in effect be frustrating. The simplest solution is just to close Edge before shutting down Windows.

However, if you don't want to use the feature at all, then it can be disabled. To do this, click Start followed by the Settings cog, and then Accounts followed by, in the left-hand menu, 'Sign-in options'. Now, in the right-hand pane, scroll down to find the 'Restart apps' heading and, below that, click to flip the 'Automatically save my restartable apps when I sign out and restart them after I sign in' switch to its Off position **2**.



Click the 'Automatically save my restartable apps...' switch to its Off position

Equally, it's also entirely possible that you want to keep this feature on, are happy with Edge launching automatically and just want to kill the tab with the Bing search page. To do that, just close the tab and then close and relaunch Edge. That should fix the problem, but, if not, first open the Edge menu (by clicking the three dots, top right) and then choose Settings. Finally, on the left, click 'On start-up' and then, on the right, click to select the 'Open a new tab' option.

Should I pay for driver updates?

Q I have an advert that comes up all the time advising that I have **drivers** that need updating. For this service I have to pay £1.50 a month. Should I pay?

Sydney Stewart

A No, no and thrice no! We have no idea where you're seeing these adverts or why, but we can tell you not to pay any amount for drivers. Drivers should always be free.

If you're using a PC this could be a **malware** infection displaying scam adverts on your Windows desktop. However, given that your email was sent to us from an iPad, we think it's more likely that you're seeing these in the Safari web browser.

As such, they're almost certainly dodgy commercials and can



On the iPad's Software Update page you can download and install pending updates

therefore be safely ignored, because the iPad doesn't require 'drivers' in the traditional sense.

Moreover, the way the iPad is controlled by Apple means it's virtually immune to malware. Updates for iPads

come directly from Apple. In the Settings app, tap General followed by Software Update.

If any updates are found, tap 'Download and Install' – then follow the prompts (see screenshot).

How do I get old software?

Q Like many people in these times, I'm working from home. As a contractor I have to provide my own equipment. My employer uses Office 2016, which I find to be so integrated and far easier to use than any of the free alternatives. My personal PC falls short and I would really like to upgrade it to match my employer's laptop. I've had a look on the internet, but you just know that the cheap software is so dodgy that even Arthur Daley would be ashamed (that gives my age away). Where can I buy genuine copies of old software?

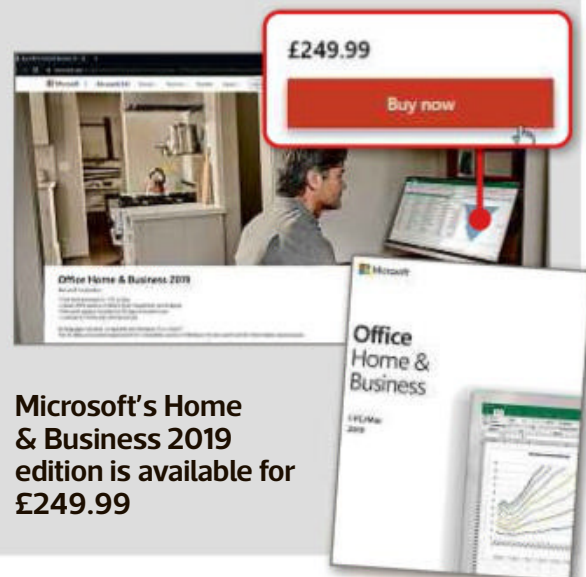
John Gledhill

A The direct answer to your question is that there is no good answer.

The likes of eBay and Amazon Marketplace will forever host listings for outmoded software, but we can't vouch for the legitimacy of a particular vendor or product – meaning there are just no guarantees when buying old stuff.

However, what we can tell you is that Microsoft sells standalone copies of Office 2019 (and soon, Office 2021) that are certainly legitimate. While this won't be exactly the same as the Office 2016 installed on your employer's laptop, the only disadvantage is that the newer suite will have a few more features.

The Home & Business 2019 edition, which includes Outlook, costs £249.99 – from www.snipca.com/38457 (see screenshot below).

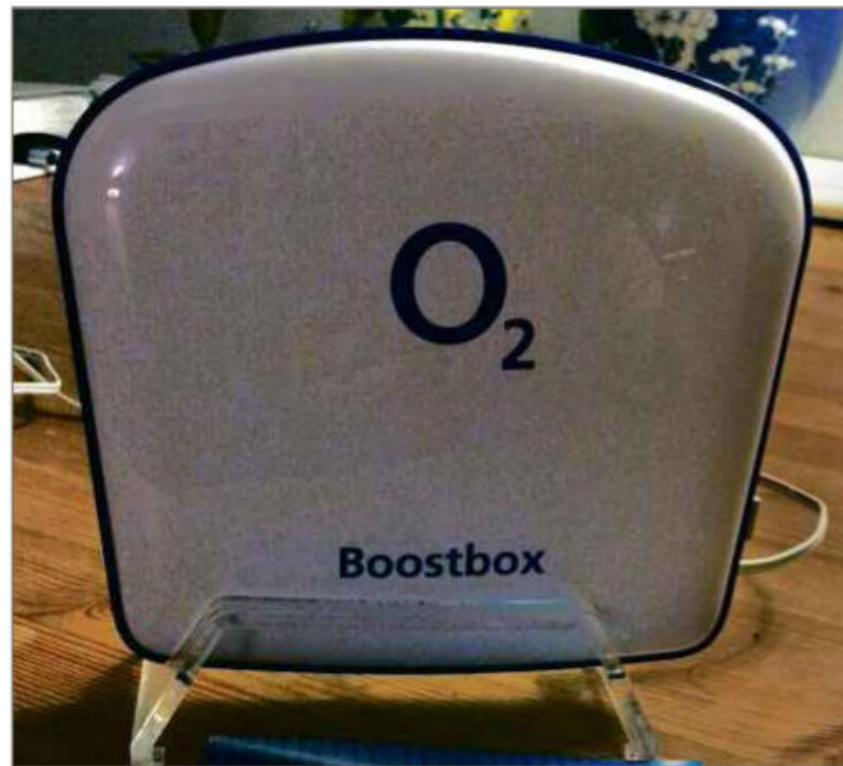


Can I boost my mobile signal at home?

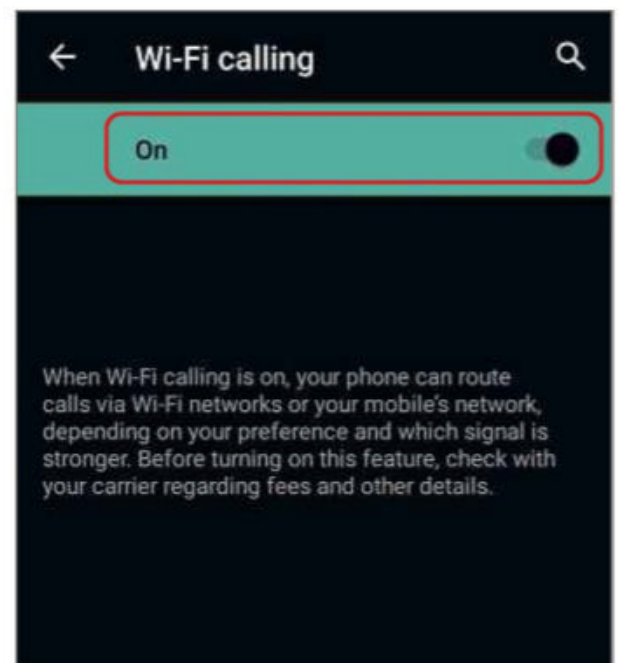
Q As a volunteer with a community-rescue service, I receive call-out alerts via text messages. However, the reception at my home on my Samsung S10 phone on O2 is awful, so I frequently don't receive them. Is there any sort of tech that would boost the signal so I don't miss these important texts?

Michael Finlay

A Some networks do offer dedicated in-home, mobile-signal boosters. O2 calls its version Boostbox, and it would solve your problem (www.snipca.com/38460). However, it's actually aimed at businesses and comes with a price to match – a cool £216 including VAT. It'd be cheaper to switch networks, as long as there's another provider that offers a good signal to your home. That said, you may be able to pick one up cheaper on eBay, or even being given away for free on neighbourhood networks like Nextdoor (<https://nextdoor.co.uk>), which is where



O2's Boostbox costs £216 including VAT, but we saw this one being offered for free on Nextdoor



Switching on Wi-Fi Calling on your phone lets you receive calls or texts over Wi-Fi

we saw the model pictured right.

Alternatively, assuming you have broadband at home, and a wireless router, you could rely on a feature called Wi-Fi Calling. On your Samsung phone, launch the Settings app, then tap Connections followed by 'Wi-Fi calling'.

Now flip the switch to its On position (see screenshot above). This will allow your phone to receive calls or texts over Wi-Fi, whenever it's connected to your router (or any other Wi-Fi hotspot).

However, there's still a problem: right now, O2's version of this service supports only calls – not texts. O2 promises that support is coming this year, but there's no date. Vodafone, EE and Three already support text messages over Wi-Fi Calling, so it could be time to switch networks.

Q: Will a new SSD save this old laptop?

A: Issue 588, page 64 – find it on our 2020 Back Issue CD

Buy it from
www.snipca.com/38164



Can I build a searchable PDF archive?

Q I recently bought a copy of the *Computeractive* 2020 back-issue CD (www.snipca.com/38462), and I am very pleased with its contents and ease of use. I have an archive of PDFs related to my other passion – gardening. Each PDF is searchable and I would like to build a comprehensive searchable PDF archive, similar to the one on your CD. Is this a feasible project and if so how do I set about constructing the archive? Many thanks for an informative magazine.

Paul Horbury

A Our CD is put together by a professional production company that we commission to create an interface for easy navigation. However, while the search is part of this interface, there's nothing particularly magical going on behind the scenes – and it's easy enough to replicate a search of a folder (or even a whole hard drive) full of PDFs.

First, if you don't already have it



In Adobe Acrobat Reader, click 'Browse for Location' and then Browse For Folder to find the PDFs you want to search

installed, grab a copy of Adobe Acrobat Reader from www.snipca.com/38459. Then, click to open the Edit menu and choose Advanced Search.

Next, under the 'Where would you like to search?' heading, click to select 'All PDF Documents in' and then, below that, open the dropdown menu and choose 'Browse for Location' (see screenshot). Next, in the Browse For Folder menu, select the folder that contains your

gardening PDFs.

From here, all that's left to do is type a search in the 'What word or phrase would you like to search for?' box. Refine your query by ticking the various boxes below, and then click the Search button. That's all there is to it.

It might not be quite as pretty as the *Computeractive* CD interface, but this method is just as effective at searching PDFs.

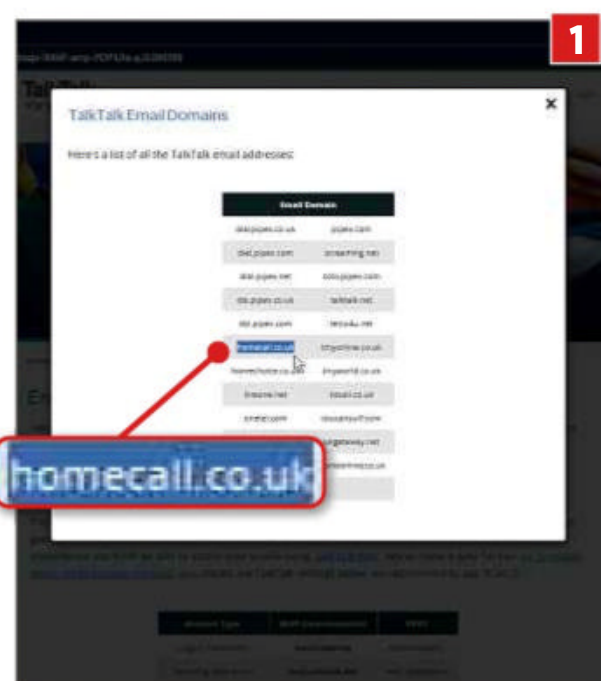
Why can't I send emails?

Q Your magazine is the best in the galaxy! Since my ISP, Fleur Telecom, stopped supporting HomeCall users and handed us over to TalkTalk, I've been unable to send emails. Fleur told me to contact TalkTalk, but that seems impossible at the moment. I've tried to find the correct outgoing **server** settings without success. My latest attempt resulted in a message saying: "Outgoing server **SMTP** pop3.homecall.co.uk unknown". I use Thunderbird, incidentally. Can you assist?

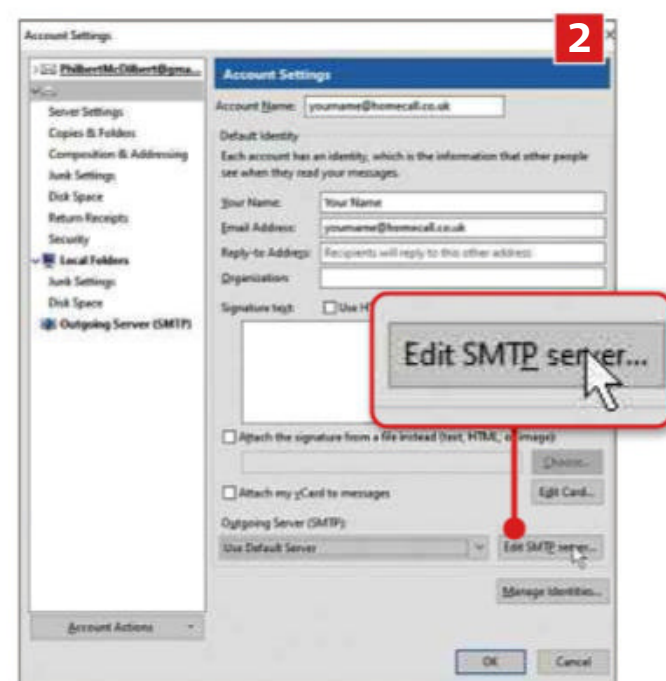
Dennis Broadway

A Your compliment is certainly far out. And yes, we think we can help. For whatever reason it seems that Thunderbird is set up to send emails via a **POP3** server – but POP3 is for incoming emails only. To send emails, Thunderbird needs to be directed to the relevant SMTP (outgoing) server.

For HomeCall, that used to be



The homecall.co.uk domain is controlled by TalkTalk (1). Click the 'Edit SMTP Server' button (2)



smtp.homecall.co.uk. That should still work but, if you read the TalkTalk support page at www.snipca.com/38463, you'll see that the company has set up unified email servers for all **domains** it now controls.

These include the 'legacy' homecall.co.uk domain (see screenshot 1). So, the correct SMTP server to use is smtp.talktalk.net, while for incoming (**IMAP** or

POP3) email it's mail.talktalk.net.

In Thunderbird, open the Tools menu and choose Account Settings. Next, choose the account and then, near the bottom right of the Account Settings box, click the Edit SMTP Server button 2.

Now use the information on the aforementioned TalkTalk support page to fill in the various fields on the SMTP Server menu.

Problems Solved

Why does my screen go black?

Q When my laptop reboots after a Windows update, it gets to the Windows 10 logo with the spinning dots, but then the screen goes black. I figured out that if I connect the laptop to my TV using an **HDMI** cable I can then see a picture, allowing me to log in. If I then shut down the computer to complete the update, when it restarts everything is back to normal – and I can use the machine's built-in screen again. Any idea what's going on?

Paul Heap

A Yes and no. We think that, for whatever reason, during updates your laptop is deciding to output only to its HDMI port. That's probably down to an inherent graphics driver glitch but we're just not sure.

However, we think there's an easy workaround. Most laptops have keyboard shortcuts for switching between the built-in display and the external screen.



Hold down the Function key (sometimes labelled 'Fn') along with the key along the top with two overlapping screens

We think this is your way out of this problem.

So, look at the top row of your laptop's keyboard – at the Function (Fn) keys, labelled F1-F12 – for an icon that looks like two overlapping screens (1 in our screenshot above). If you hold down the

Function key (usually somewhere near the bottom left, and sometimes labelled 'Fn' 2) and then tap the relevant Function key, your laptop will switch from its internal display to its external output, and vice versa. So, try this the next time the screen goes blank after an update.

Can I hide file names in a ZIP?

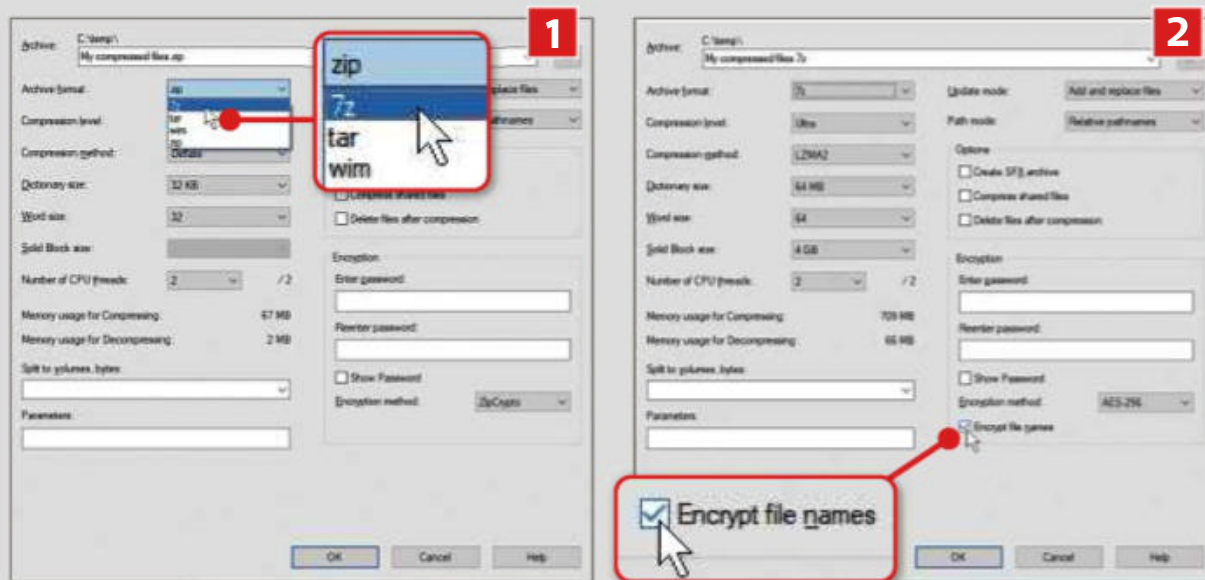
Q I noticed that it's possible to see the names of files in a **ZIP** file even without knowing the password. I wonder if there is a program that performs a similar operation but keeps the contents confidential?

Geoff Long

A We're afraid the ZIP file format doesn't support encryption of file names. That's problematic for anyone who wants the contents of a compressed file to be truly private.

One workaround is to first create a password-protected ZIP file, and from it create a second password-protected ZIP. This works because only the name of the first ZIP file would be visible. The file names within the 'nested' ZIP file cannot be accessed without first unzipping the second file – requiring the password to be entered.

So, that's a bodge fix. But you asked if there was an alternative program. We don't know what current compression tool you use, or indeed whether



Next to 'Archive format' select 7z (1) and then click the box to 'Encrypt file names' (2)

you're just using the option built into Windows 10.

However, 7-Zip (www.7-zip.org) is a free option that offers a different compression format that does support encryption of file names.

Once installed, launch 7-Zip or right-click the files you want to compress and then point to 7-Zip before choosing 'Add to archive'.

Next, from the 'Archive format'

dropdown menu, ensure 7z is selected (see screenshot 1): this is the program's compression format, which is both more efficient than the ZIP format and lets you encrypt file names. There are lots of options to explore in 7-Zip, but the relevant one for you is the 'Encrypt file names' box 2, in the Encryption section. Ensure this is ticked, before clicking OK to create your 7z compressed file.



WHAT'S THE DIFFERENCE BETWEEN...

Edge and Bing?

Q

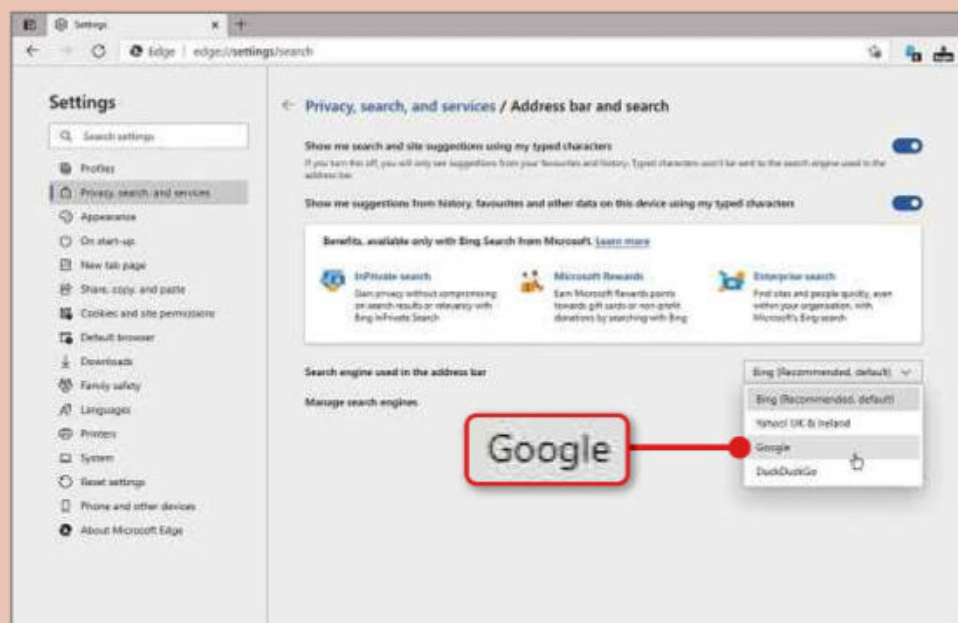
I'm sorry if this sounds stupid. Could you explain the difference between Edge and Bing? On my computer there's a window with Bing at the top. A carer who used my computer to look something up said it was Edge running Bing, but that I'd be better off using Chrome and Google. I can use Bing (or Edge?) to search for stuff, so is there a benefit in switching. If so, how?

George Barnes

A

This stuff can be confusing, so let's go back to basics. Edge is the name of a web-browsing (or 'browser') application made by Microsoft. It's Windows 10's default browser. However, other browsers can be installed. The best-known of these is Chrome, made by Google, which is a free download from www.google.com/chrome. Google is the name of the company, obviously, while Google Search is the proper name of Chrome's default search tool (or 'search engine') – though many people just call it 'Google'.

Bing is made by Microsoft and it's the name of the company's search engine. By default, when Edge launches it will



In Edge you can go to 'Privacy, search and services' and make Google your default search engine

show the Bing home page, which is where your setup is at right now. Edge is a great browser – and actually the same as Chrome in many ways, as it now runs on the same underlying computer code – and Bing is a pretty good search engine.


Google Search is more popular, though largely for historical reasons rather than any current technical superiority.

If you want to try Google Search, you can do so simply by clicking at the address bar at the top of your Edge browser and, there, typing www.google.co.uk and press Enter.

There's little benefit switching from

Edge, but if you want to make Google Search the default search engine within it, first click the Edge menu button (three dots, top right) and then choose Settings. Next, on the left, click 'Privacy, search and services' then, on the right, scroll down to the Services section.

There, click 'Address bar search' and then, next to 'Search engine used in the address bar', click to open the menu and choose Google (see screenshot above).

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

Can I set up keyboard shortcuts for favourite websites?

Q

I use Chrome as my web browser and have recently discovered the Pin option, so I now have Gmail, BBC News and Google as my first three pinned tabs. I find that very useful, but it'd be even more useful if there was a way to assign keyboard shortcuts to these tabs. Do you know of an app, preferably free, that'll let me do this?

David Duncan

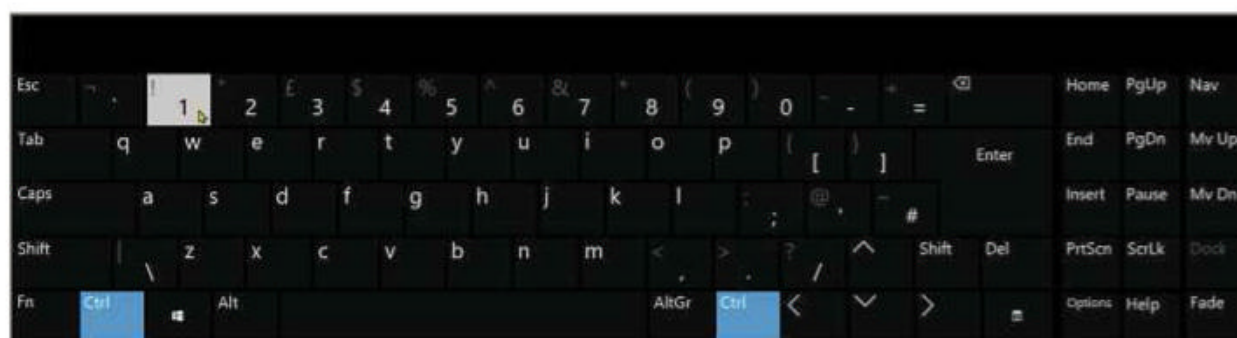
A

You don't need a free app – or any app at all – because Chrome has built-in shortcuts for precisely this purpose. In fact, so do all the main browsers.

All you have to do is hold down the Control (Ctrl) key before tapping the relevant tab number.

So, in your case, tapping Ctrl+1 will jump to your Gmail tab, Ctrl+2 to BBC

News and so on (pictured). This works up to Ctrl+8 for the eighth tab. Ctrl+9, though, will open the ninth tab or, if you have more than nine open tabs, the last tab.



Tapping the Ctrl and 1 keys will open your first pinned tab in Chrome

Next Issue

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Weds
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- Why does my PC randomly reboot?
- Can I use a TV as a PC monitor?...And many more

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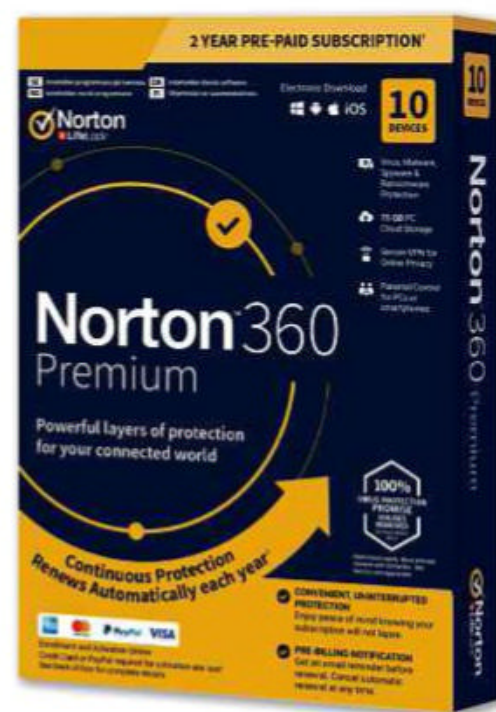
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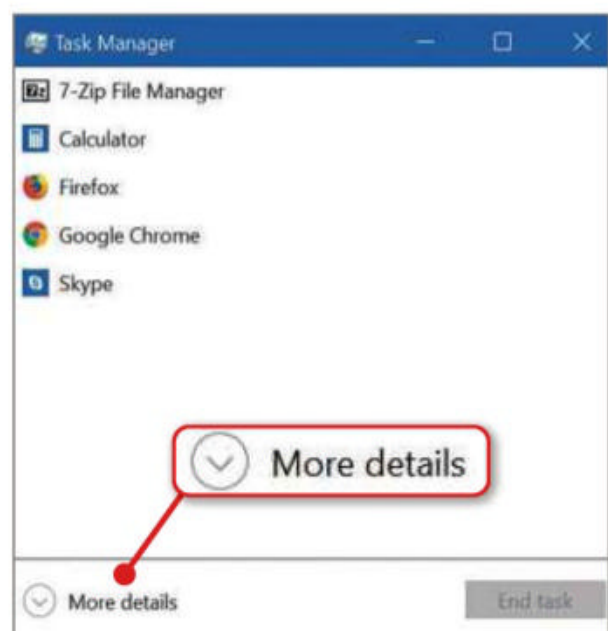
Where's my Start-up tab?

Q I followed the tip headed 'Remove unwanted startup items' in Issue 606's 'Stop Using Software' Cover Feature. I accessed Task Manager by pressing Control (Ctrl)+Shift+Escape (Esc), as directed, but couldn't find a Start-up tab. Are you using a more modern version of Windows 10 than I am? In the same article, under the 'Monitor your laptop's battery' heading, after obtaining the full path of the generated report from the Command Prompt window, where do I paste it into my Google browser?

Warren Welstead

A It's possible we have a slightly later version of Windows 10 than you, as we do tend to run preview editions for test purposes. However, that's not the problem here. Rather, we think your Task Manager window is opening in compact mode – so you can't see Start-up or any other tab. To fix that, click the 'More details' link at the bottom of the window (see screenshot below). You can reverse this later, if you wish, by clicking 'Fewer details'.

As for the battery report file path, it just needs to be copied (Ctrl+C) and pasted (Ctrl+V) into the browser's address bar.



Click 'More details' in Task Manager to see all options, including the 'Start-up' tab

Why do you say you can't take 'tall' screenshots in Windows 10?

Q On page 67 of Issue 606's Problems Solved section, you tell Victoria Moss that there's no way to capture 'tall' screenshots in Windows 10. Not true! CaptureWizPro from PixelMetrics (www.pixelmetrics.com) can do just that. I believe the free version does it, although because I've upgraded to the paid-for version I cannot be certain. You just need to select the Scroll option.

David Spens

A What we meant was simply that Windows 10 does not have such a feature built in. Victoria told us she uses the Chrome web browser, which is why we suggested the GoFullPage extension (www.snipca.com/38005) to get the job done. The tool you've suggested does offer this feature too, but it's still additional software. Nonetheless, we're happy to clear up any confusion, and to pass on your suggestion to Victoria.

Why can't I see NirSoft's Wireless Key column?

Q In Issue 607's Best Free Software you suggested NirSoft's ManageWirelessNetworks tool (www.snipca.com/38378). You said to look in Wireless Key column for passcodes. However, I cannot for the life of me find a Wireless Key column!

Peter Hayler

A There are two possibilities. ManageWirelessNetworks has a lot of columns, so the most likely cause is that the Wireless Key column is beyond the boundary of the app window. Even maximising the window is unlikely to fix this, as the Wireless Key column is way over to the right. Instead, use the slider control at the bottom of the window to pan the view: just click and drag with the mouse.



In Column Settings, scroll down to the Wireless Key box and click it

However, if the Wireless Key column really isn't there, you'll need to click to open the View display. Click to open the View menu then click Choose Columns. Scroll down to the Wireless Key box, click to tick it and then click OK (see screenshot above).

Were your OSK instructions still lacking?

Q On Issue 606's Reader Support page you admitted to Brian Windsor your embarrassment at Issue 604's suggestion that one way of overcoming a failed keyboard would be to launch Windows 10's On-Screen Keyboard (OSK) – by typing **osk** in the Start menu. I too sniggered at your original article but I'm afraid you still have it wrong. Anyone that uses a password or PIN still can't access the Start menu or settings cog without a keyboard. The way around this is, at the login or lock screen, to click the middle icon at the bottom right – 'Ease of Access'. From here, you can then click On-Screen Keyboard.

Peter Hodges

A This is a situation we hadn't covered in our original article, and your solution is the way forward. However, here we'd say that our example was focused on when Windows was already running – so our original error was meant for that situation. Regardless, your additional tip is a great one, so we're glad to share it.

Jargon **Buster**

32bit/64bit A measure of how much data a PC can process at once. Most older computers are 32bit, more modern ones are 64bit.

3G/4G/5G Technologies that deliver faster mobile broadband.

720p/1080p/1440p Common types of high-definition video of 1280x720, 1920x1080 and 2560x1440 pixels respectively.

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

AMOLED Active-Matrix Organic Light-Emitting Diode. An alternative technology to LCD for creating flat-panel displays.

ASCII American Standard Code for Information Interchange. Represents each character on a PC keyboard as a number.

Benchmarking Comparing software and products with an accepted standard.

Beta A version of software that's being tested.

Cast To send content from your PC to TV.

CD-ROM A compact disc that holds data or program files. Can't be recorded on to.

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

Contrast ratio A measure of the difference between the darkest and lightest possible shades shown by a screen. Screens with higher contrast ratios are good for watching movies or playing games.

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

Core Units on a processor that carry out program instructions.

DisplayPort A new socket for connecting monitors.

Domain These are used to identify one or more IP addresses.

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

Dual-SIM A phone that holds two SIM cards, letting you use services from two different networks.

Emulator A program that makes one computer act like another, allowing it to run that computer's software.

eSATA External Sata. A relatively rare type of connection for external hard disks.

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

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

Flash memory A type of memory that can retain information without a power source. Used in memory cards, USB sticks and other storage devices.

Fps Frames per second. Normally used to indicate gaming performance.

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

FreeSync AMD's technology for varying the screen's refresh rate to avoid two frames being shown at the same time.

GDPR General Data Protection Regulation. 2018 EU law strengthening people's privacy.

Gesture Finger movements on a screen that perform an action, such as pinching to zoom.

GHz Gigahertz. A measure of how many instructions a chip can process per second. 1GHz is equal to 1,000MHz.

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.

Image stabilisation A mechanism built into digital cameras that compensates for any shaking or vibrations that occur during shooting.

IMAP Internet Message Access Protocol. A method for email that lets the user manage messages stored on a remote server.

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 than monitors that do not use this technology.

JPEG Joint Photograph Experts Group. A common type of image file created by most digital cameras. Some image quality is lost with each save.

KVM switch Keyboard, video and mouse. A device that lets you control multiple computers from one or more sets of keyboards, monitors and mice.

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

Malware Malicious software that tries to disrupt the normal operation of your computer, bypass security controls or gather data without your knowledge. Viruses are a type of malware.

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

Mirror To display on your TV what's on your PC or tablet screen.

MP4 A type of digital movie file often used for portable players.

OCR Optical character recognition. The process by which printed text is scanned and converted into documents that can be edited.

OLED Organic light-emitting diode. A thin-film organic light-emitting diode used in computer displays and television screens.

Partition A large hard drive can be split into two or more partitions or 'virtual' drives. Once partitioned, each section is treated by Windows as though it were a completely separate, smaller hard drive.

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

PNG Portable Network Graphics. A format for images that shrinks file sizes using compression but without discarding any data.

POP3 Post Office Protocol 3. A system for remotely accessing and retrieving email from an ISP. Most email applications and ISPs use POP3.

ppi Pixels per inch. Measure of screen resolution.

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

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

Refresh rate Measured in Hertz (Hz), the number of times per second that the image on your monitor is redrawn. Slight changes in the image each time it is updated combine to give the illusion of movement. For a steady image, the higher the refresh rate, the less flicker you will see. A refresh rate over 85Hz is generally accepted as being flicker-free.

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

Server A computer on a network, such as the internet, that distributes information to other PCs.

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

SIM Subscriber Identity Module. The smart card used by all digital mobile phones. The SIM card carries the user's identity and phone number for accessing the network.

Simulator A video game that simulates real-world activities.

SMB Server Message Block. A protocol for providing shared access to files, printers, and ports.

SMTP Simple Mail Transfer Protocol. A standard for sending email messages. It is now largely reserved for sending messages rather than receiving them.

Splash screen Conveys an impression of what a document will look like. Also refers to the screen you see when an application begins to load.

Spoofing A technique whereby hackers pose as legitimate websites, emails or IP addresses to gain access to sensitive data.

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.

SSID Service Set Identifier. A name used to identify a wireless network.

Subwoofer A special type of speaker designed to reproduce deep bass sounds only. Even on a stereo system, only one subwoofer is required because human ears cannot detect the direction of bass frequencies.

System restore point The collection of system files stored by System Restore on a given date and time to which Windows can revert if a problem occurs.

Thread Smallest sequence of instructions that can be managed by your processor. PCs consist of multiple threads.

TIFF Tagged Image File Format. A standard file format used to store graphics images.

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 code sent to your phone in addition to a password.

USB 2.0/3.0/3.1 Faster successors to USB.

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

VESA Video Electronics Standards Association. A standard mount for attaching monitors on to stands, walls and PCs.

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

Virtual PC A Windows tool that enables you to run a second 'virtual' operating system on a PC, such as running a version of Windows 7 in a Windows 10 computer in order to use older programs.

Waveform An image that represents an audio signal or recording.





Wi-Fi 6 Wi-Fi standard with speeds up to 10 times faster than 802.11ac. Also called 802.11ax.

Widget A small program such as a calendar that runs on the Windows desktop.

ZIP file A file that contains compressed documents or files.

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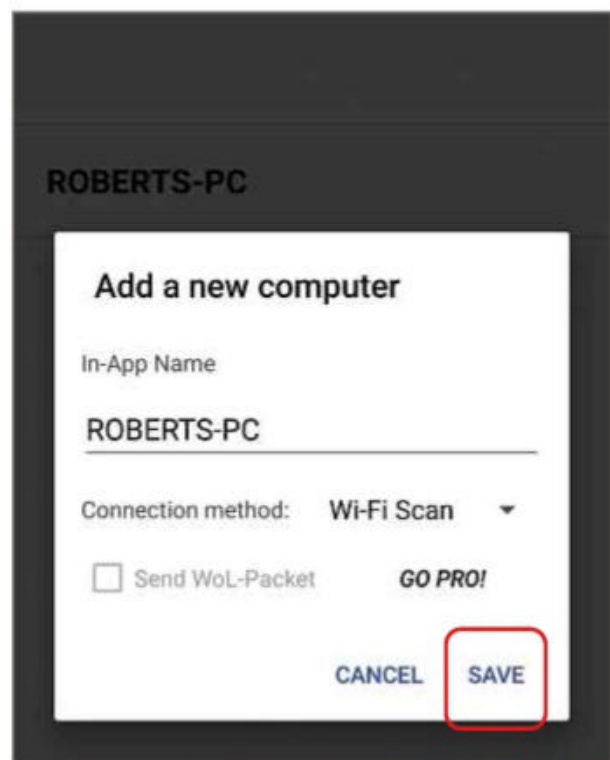
Tired of typing a PIN to log into his PC, **Robert Irvine** summons the spirit of Sting and tries to...

Turn his phone into a fingerprint reader

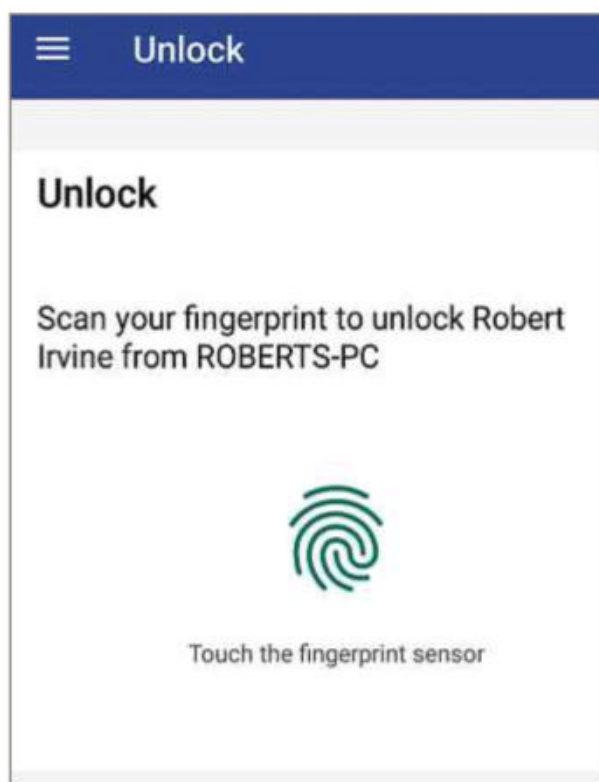
Although I was never a big fan of The Police when I was at school (the pop-rock-reggae band, not the law-enforcement agency), I remember being impressed by a fact I once read about their lead singer. No, I don't mean Sting's noble efforts to save the rainforest or his tantric shenanigans, but a story that he was able to turn on his house lights, close his curtains and even run a bath using a remote control in his car as he drove up to his gates.

This ingenious technology seemed very exciting to my teenage self, but such features are now standard in so-called smart homes. Still, as I typed my security PIN into Windows for the umpteenth time the other day, I grumbled to myself: "I bet Sting never has to put up with this nonsense". Wouldn't it be easier if I could unlock my PC from across the room, without having to enter a pesky password or passcode? The obvious solution was to buy a USB fingerprint scanner, but those devices are expensive and require you to be within reach of your computer.

My hopes were raised when I came across a free app called Remote Fingerprint Unlock, which lets you unlock your PC from afar by using the fingerprint sensor on your smartphone.



Connect your phone with your PC over your Wi-Fi network or Bluetooth



Robert can now log into his PC by scanning his finger rather than typing with it

Provided it was as smart, speedy and thrifty as it promised, this seemed like the ideal solution.

To find out, I installed it from the Google Play Store (www.snipca.com/38469) on my Android phone – sadly, there's no equivalent for iOS. As instructed in the app description, I also downloaded something called the Fingerprint Credential Provider module (www.snipca.com/38470) to my Windows PC. This was hosted on Google Drive rather than a website or blog, which seemed a bit fishy, so I scanned the ZIP file on VirusTotal and was relieved to find it was completely clean (www.snipca.com/38471).

Naturally, that didn't stop Microsoft Defender SmartScreen blocking its installation like an old scold, but I clicked 'More info' and 'Run anyway' to continue. I was then told that I'd either need to allow "explicit firewall exceptions" in Windows Firewall for the module to work or configure them myself in a different firewall. As I use Windows Firewall, I just clicked Yes, then Finish – and Fingerprint Credential Provider was set up.

The next step was to open Remote Fingerprint Unlock on my phone and

touch the fingerprint scanner to authenticate the app. I then chose Scan in the main menu to search for and link my PC. I used the easiest option of connecting the devices over my Wi-Fi network, but you can also tap the plus button to connect via Bluetooth or by entering an IP address. At first, the app couldn't find my computer, but I soon realised this was because Windows wasn't displaying the lock screen. On activating this, by pressing Ctrl+Alt+Delete and choosing Lock, my phone found my computer and I tapped Save (see screenshot below left) to achieve synchronicity.

“

The app may only do one job, but every little thing it does is magic!

”

Next, I chose My Accounts in the app's menu, tapped the three dots next to my PC's name and selected Add Account. I entered the username and password for my Microsoft account, hoping that this would be for the last time, scanned my fingerprint to confirm and tapped Save.

Finally, I set my PC back to the lock screen, opened Remote Fingerprint Unlock on my phone and pressed the fingerprint reader when prompted (which is as soon as the app launches – see screenshot above left). Windows unlocked instantly, with no need to type anything or configure any settings, and even worked from several metres away.

Remote Fingerprint Unlock may only do one job, but – as I'm sure Sting would agree – every little thing it does is magic!



Need help setting up your PC to unlock with your fingerprint?

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