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Where does choosing whether to upgrade to a new operating system stand in the hierarchy of life's great decisions? Lower than who to marry or where to live, naturally. But it feels higher – or at least more interesting – than which bank to save with, or energy company to switch to (assuming there are any left by the time you read this).

I've always savoured the dilemma. Some decisions were easy – I didn't ponder long before upgrading to Windows 7 and 10. Others took a while. Could Windows 8 really be that

bad? Yes, I concluded, a few months after launch. Now it's time to consider Windows 11. To me, it feels like a very strong maybe, rather than an instant yes. Please tell me if our Cover Feature helps you make up your mind.

On another note, I'd like to mark two debuts in this issue: we've added a Browser Tips section on page 42, while Barry Collins takes over our Named & Shamed column. I hope you enjoy both.

Daniel Booth

editor@computeractive.co.uk



THIS ISSUE IN NUMBERS

1.6 to 12%

Probability of our Sun causing an "internet apocalypse" – p49



2TB

Size of portable USB drive Wayne Williams backs up his files to – p20

£4m

Government 'prize' for businesses building 5G kit in bus shelters and lamp posts – p9

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.

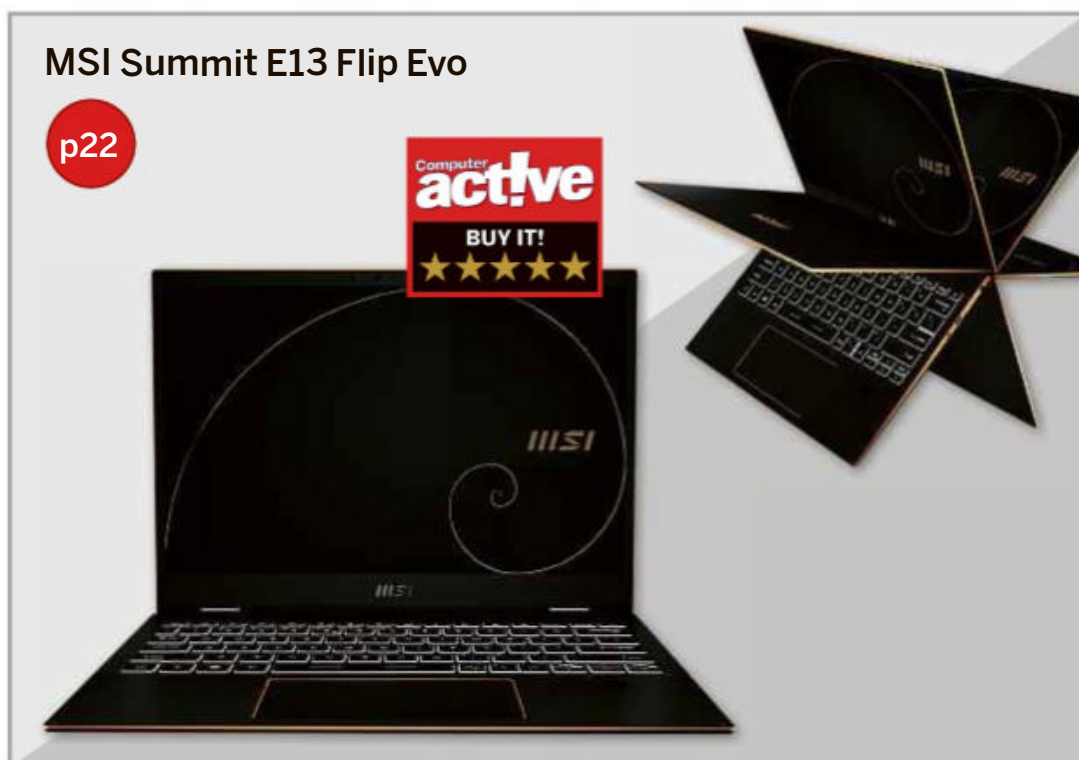
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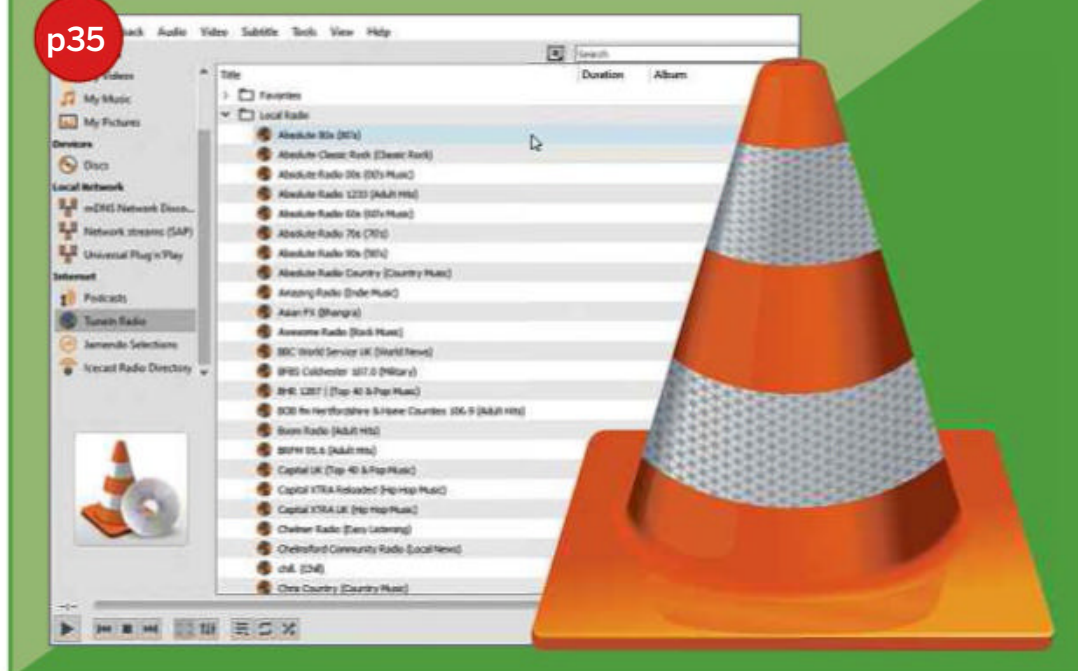
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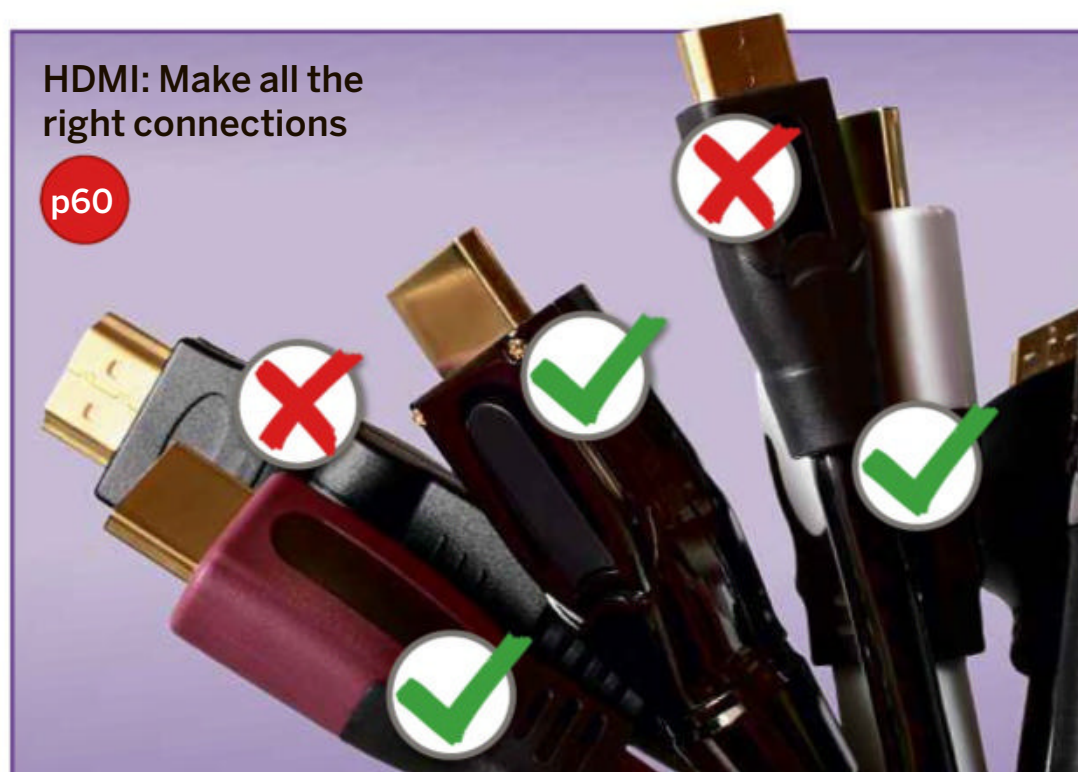
WINDOWS 11 Should You Upgrade?

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FEATURE
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It's **FREE** – but is it right for you?
+ Check whether your PC can run it

HDMI: Make all the right connections

p60



Log into Microsoft accounts without a password

You can now sign into all your Microsoft accounts on a Windows 10 computer without typing a password. The company has extended this option to home users, having previously made it available only for businesses.

It lets you access your accounts using 'passwordless'

WHAT WE THINK

The tech industry has a history of pushing innovations that the public isn't ready for, and we wonder whether passwordless log-ins will be next. Few of us relish the challenge of remembering passwords – juggling letters, numbers and upside-down pound signs – but 2FA infuriates many people. You often tell us that you resent having to reach for your phone when signing in. It's such an annoyance that in our next issue (out Weds 20 October) we'll explain ways to make it easier – or avoid it completely.

methods of verifying your identity. Microsoft's recommended option is to use its Authenticator app (logo pictured right), which either sends you an approval request to tap, or shows a one-time code (pictured far right) that you have to type into your account.

You can also sign in using Windows Hello, which recognises your face and fingerprint, a **USB security key**, or a **two-factor authentication** (2FA) code emailed or texted to you.

Microsoft says all these methods are much safer than using a password because they can't be stolen or guessed, and are already used by nearly all of its staff, as well as 200 million people worldwide.

To install the Authenticator app visit www.snipca.com/39585 and click the link for Android or iOS to go to the respective app store.

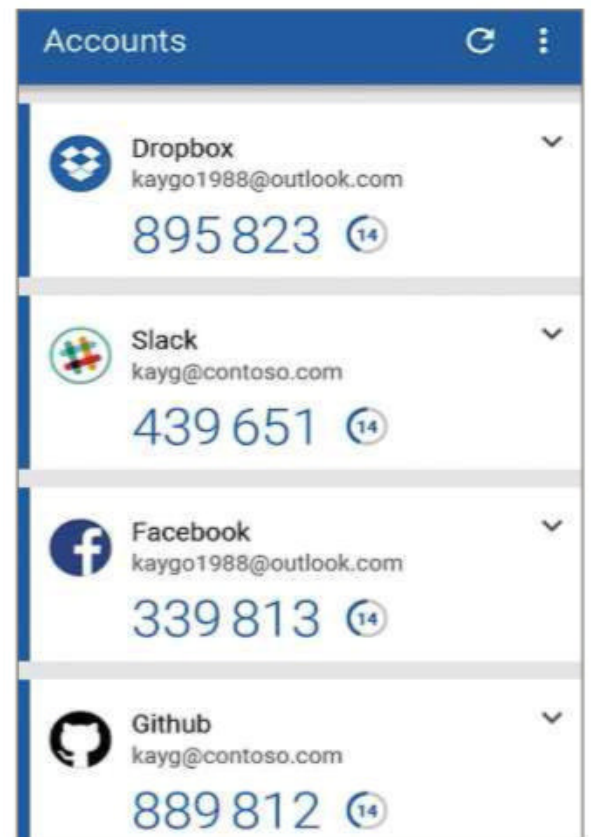
You also need to turn on the 'Two-step verification' and 'Passwordless account' options in Windows. To do this, sign into your Microsoft account at <https://account.microsoft.com>, and choose



'Advanced security options'. Next, scroll down and look for both options under the heading 'Additional security'. Click the blue 'Turn on' links, then follow the instructions, and approve the email you get from Microsoft Authenticator.

Once you've approved, you no longer have to use your password, and you'll see a message saying you have "increased the security of your account and improved your sign-in experience by removing your password" (see it at www.snipca.com/39587).

You can add a password to the account again if you change your mind. If you lose your phone, you can sign in using one of the other passwordless options.



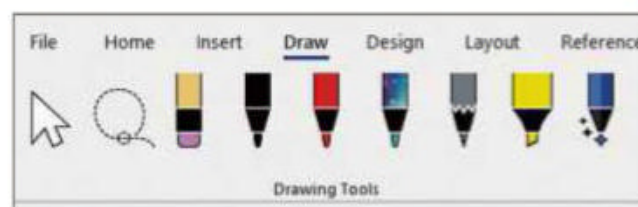
'Nobody likes passwords'

Microsoft has been promoting a "passwordless future" for several years. In a blog post (www.snipca.com/39584), Vasu Jakkal, the company's corporate vice president for security, compliance and identity, wrote: "Nobody likes passwords. They're inconvenient. They're a prime target for attacks. Yet for years they've been the most important layer of security for everything in our digital lives – from email to bank accounts, shopping carts to video games".

She added that weak passwords are the "entry point" for most hacks, and that there are "a whopping 579 password attacks every second – that's 18 billion every year".

DOWNLOAD OFFICE 2021 NOW

Office 2021 is now available to buy as a one-time download, having been released on 5 October – the same day as Windows 11. It costs the same as Office 2019 (£119.99 for the Home & Student edition), and you can check the system requirements at www.snipca.com/39590. Visit Microsoft's site to see what's new



(www.snipca.com/39588), including a refreshed Draw tab in Word, Excel and PowerPoint (pictured). We'll review it soon.



You'll like this...

The Government wants tougher fines for spam callers (www.snipca.com/39568)



but not this...

Email scammers are posing as County Court bailiffs (www.snipca.com/39569)

Tributes pour in for Spectrum creator Sir Clive Sinclair

The world of computing has mourned the death of Sir Clive Sinclair (pictured below right), whose range of ZX devices helped to popularise home computers in the 1980s.

Sinclair, who died on 16 September aged 81 following a long battle with cancer, released the ZX80 in 1980 as the UK's first mass-market home computer for under £100.

This was followed by the ZX81, but it was the launch of the iconic ZX Spectrum in 1982 (pictured) that triggered a generation's interest in coding and playing games. It was released in eight different models over the next five years, selling five million



units.

Together with the Commodore 64, the Spectrum helped to establish the UK's world-leading games industry. However, his C5 electric vehicle was an expensive

flop, and in 1986 he sold much of his business to Amstrad for £5m.

The Centre for Computing History in Cambridge described Sinclair as “a true visionary, disruptor and gentleman”, while Raspberry Pi founder Eben Upton said it’s “hard to overstate his influence” on the computing industry.

• Sir Clive sparked a lifelong interest in computers – Letters, page 12

REMEMBERING SIR CLIVE'S GENIUS...

- Run a ZX Spectrum emulator in Windows www.zxspectrum4.net
- Play Spectrum games online

www.snipca.com/39574

- Watch BBC reporter driving the C5 in 1985 www.snipca.com/39575

EU wants to force Apple to adopt USB-C ports

Apple may be forced to add **USB-C** charging ports to iPhone and iPads after the European Commission (EC) proposed a new law to create a universal charging option for devices sold in the EU.

The EC said the change would reduce waste by encouraging consumers to re-use existing chargers when buying a new phone, tablet, laptop, smart speaker, digital camera, games console or headphones.

Research from the EC estimates that 11,000 tonnes of waste are generated every year by people throwing away unused cables.

However, Apple criticised

the move, saying it would “stifle innovation”.

Currently Apple uses its own Lightning port on iPhones, though some iPads do have USB-C ports (listed at www.snipca.com/39578).

Having to adopt USB-C within the EU would in effect mean doing so worldwide, because Apple would be unlikely to keep making a separate iPhone with Lightning to be sold in other regions. Apple may instead respond by adding wireless charging to iPhones, which would require no ports at all.

Apple has previously argued that scrapping Lightning would be terrible for the



environment because users would have to throw away hundreds of millions of obsolete cables.

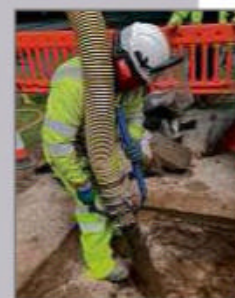
The proposed law would give firms two years to make the change. Android manufacturers would be less affected because most of these devices now come with USB-C.

Some devices, including earbuds, smart watches and fitness trackers, would be excluded from the rules for technical reasons linked to their size, and how they are used.

IN BRIEF

OPENREACH'S AIR WAND BREAKS NEW GROUND

Openreach is using machinery known as the 'Air Wand' (pictured) that uses compressed



air or high-pressure water to make holes in the ground for engineers to install telegraph poles. It's being tested in Derry/Londonderry, as a way of speeding up the rollout of **FTTP** broadband. Watch Openreach's video at www.snipca.com/39543.

APPLE INCREASES IPAD MINI SCREEN SIZE

Apple has released a new version of the iPad mini, its smallest tablet, increasing the screen from 7.9in to 8.3in. It works with **5G** for the first time, and comes in four colours: Purple, Pink, Space Gray and Starlight. It's available to buy now from www.apple.com/ipad-mini, with prices starting at £479 for 64GB. We'll review it in our next issue.

TOMORROW'S WORLD



Look closely and you'll see that this ant is towering over a winged microchip, which its creators at Northwestern University in Illinois claim is the smallest ever human-made flying structure. The size of a grain of sand, it can float unpowered through the air to aid environmental research. Watch at www.snipca.com/39567.



IN BRIEF

DOWNLOAD YOUTUBE VIDEOS FROM PC

YouTube is testing a feature that lets you download videos when browsing on your PC, though only for Premium subscribers (£11.99 a month), and only on Chrome, Edge and Opera. Premium members can already download videos when browsing on phones and tablets. The trial will end on 19 October. Visit www.youtube.com/new to try it.

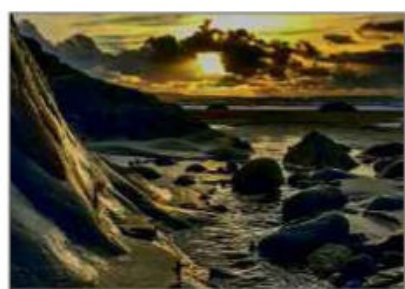
MORE THAN 16 MILLION NOW USE NHS APP

More than 16 million people have now downloaded the NHS app, the Government has announced. Health Secretary Savid Javid said that 12 million people have started using it since the COVID Pass was added in May. He added that 265,000 people have registered to donate organs through the the app, including 150,000 new registrations since May. Read more at www.snipca.com/39557, and download the app from www.nhs.uk/nhs-app.

THE WORLD'S GONE MAD!



Is this view worth £200? That's what you'll need to pay to take a photo from the cliff-top bar at Druidstone Hotel in Haverfordwest, Pembrokeshire. Its owners introduced the membership fee after being overwhelmed by people taking sunset snaps and putting them on Instagram.



Amazon & Roku release fastest ever TV sticks



Amazon and Roku have launched their most powerful streaming sticks ever, both coming with 4K and faster processors.

However, only Amazon's stick – the Fire TV Stick 4K Max – supports Wi-Fi 6, which it says will ensure smoother streaming when multiple devices are being used on the same network.

The Max, priced £55 from www.snipca.com/39546, has a quad-core 1.8GHz processor with 2GB of RAM. Amazon claims this makes it 40 per cent faster than the previous Fire TV Stick 4K, which has a 1.7GHz processor (it remains on sale priced £50 from www.snipca.com/39547).

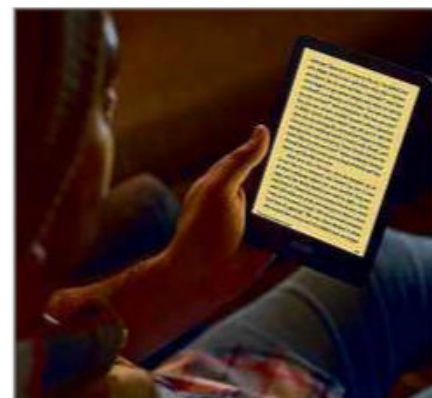
Roku's new Streaming Stick 4K also has a more powerful processor and promises 30-per-cent faster streaming than its predecessor, the

Streaming Stick+.

Roku says it has redesigned the device's wireless receiver to double the Wi-Fi speed. It costs £50, the same as the Stick+. Visit Roku's site for more details: www.snipca.com/39552. We'll review both devices soon.

NEW PAPERWHITE KINDLE HAS 'WARM' LIGHT

Amazon has also announced the Kindle Paperwhite 5 ebook reader, which adds adjustable 'warm' lighting (pictured) to make it more comfortable to read at night. It replaces the microUSB charging port with USB-C, and increases the screen size from 6 to 6.8 inches. The standard edition starts at £130, with 8GB storage (www.snipca.com/39554). The 'Signature' edition increases this to



32GB, and includes wireless charging (£180 from www.snipca.com/39555). Both are available for pre-order.

Police warn against streaming illegal TV

Police have warned hundreds of thousands of people not to use illegal streaming services to watch Sky TV, Netflix and Amazon Prime Video for free.

It comes as West Midlands police announce they've shut down a major illegal streaming network that was providing cheap access to more than 100 paid-for TV services from around the world.

After disabling the network, the police delivered on-screen messages to viewers warning

them they were breaking the law.

Officers worked with the anti-piracy organisation FACT to investigate the illegal operation. They arrested two men, aged 53 and 35, and a 40-year-old woman on suspicion of copyright infringement, fraud and conspiracy to commit fraud.

Kieron Sharp, head of FACT, said: "Users and subscribers of illegal services should be aware that not only are they committing an offence

themselves, but they're also exposing themselves to risks including identity theft, malware and viruses".

He added that the arrests show that running illegal streaming networks is a crime that "will be taken seriously by police".

In July, Paul Faulkner, from the Wirral, was jailed for 16 months for illegally supplying and watching premium content, including Premier League football matches and Sky channels.

Govt wants more 5G in bus shelters and street lamps

More bus shelters, street lamps and CCTV poles could be fitted with 5G equipment in a Government-sponsored “competition” to boost coverage.

The two-year project aims to “ramp up use of street furniture and public buildings” so more people can receive 5G signals. The Government is asking for ideas to make it easier and cheaper for phone networks to use such infrastructure because currently it’s difficult for firms to check whether a structure is large enough or

close enough to a power source.

It can also be tricky for firms to negotiate access to these structures with local authorities. When approved, they can provide 5G to busy public areas, such as shopping malls and tourist attractions.

Ministers want companies and councils to jointly apply for part of the £4m fund being set aside for the work. It’s part of the Government’s Digital Connectivity Infrastructure Accelerator (DCIA) project to



trial new ways of getting 5G and fast broadband to more people.

This scheme already includes plans to run broadband cables through drinking water pipes.

The Government is also considering giving broadband companies access to more than a million kilometres of underground electricity, gas and sewer networks.

The deadline for applications is 18 November, with work on the winning trials expected to run all next year.

BT ROLLS OUT GIGABIT WEB KIOSKS

BT is to place 300 new ‘Smart Hub 2.0’ kiosks (pictured) around UK towns and cities to provide



gigabit public Wi-Fi, charging, free UK phone calls, and small

cells to boost 4G or 5G mobile signals. It will also provide space for local firms to advertise.

Read more at www.snipca.com/39497.

Google sends 20Gbps internet through the air

Google’s parent company Alphabet is now testing internet speeds of 20Gbps by sending signals in pulses of light, rather than through fibre-optic cables.

Called Project Taara (<https://x.company/taara>), the trial connects Brazzaville and Kinshasa in Africa across the Congo river. The cities, capitals of the Republic of the Congo and the Democratic Republic of the Congo respectively, are only 4.8 kilometres apart, yet connectivity is five times more expensive in Kinshasa because broadband cables have to travel over 400kms around the river.

Taara aims to solve this

problem by sending lasers between two terminals that have a clear line of sight. Its engineers say the signals can be transmitted reliably over 20 kilometres, which is much further than has been possible before.

Typically, signals sent over this distance can be weakened by obstacles like birds, high winds or fog. But Taara’s terminals (pictured) overcome these hazards by searching for each other, then locking in each other’s beam of light to create a high-bandwidth connection.

This allows the beam to move without disrupting the



connection, automatically adjusting to changes in the environment.

Taara’s team managed to transfer 700TB of data over 20 days with a reliability of 99.9 per cent. They say it could hit speeds of 100Gbps, though probably over shorter distances. The technology was developed from Google’s Project Loon, which ended earlier this year after spending 10 years testing how to deliver broadband from hot air balloons.

IN BRIEF

GET CO-OP FOOD VIA AMAZON PRIME

Amazon Prime members can now get next-day grocery deliveries through the Co-op. The supermarket has launched the service to Prime customers in Glasgow, before expanding to other UK cities (read more at www.snipca.com/39478). Prime members can already get deliveries from Morrisons – search for nearby stores at www.amazon.co.uk/grocery.

SKIP TV ADVERTS IN SKY GO APP

Sky Go viewers can now skip some TV adverts, as part of a major update to the phone and tablet app. The company says it lets you “jump right into what you want to watch, faster than before”, though it admits not every advert will be “skippable”. You can also now stream on two screens, not just one. For more new features visit www.snipca.com/39505.



UK HAS 43RD FASTEST BROADBAND IN WORLD

The UK now has the world’s 43rd fastest broadband, up from 47th in 2020, according to Cable.co.uk’s 2021 Global Speeds report. Average speed is 51.48Mbps, up from 37.82Mbps last year. However, the UK remains below the 34th place it ranked in 2019. Jersey topped the table with 274Mbps, followed by Liechtenstein (211Mbps), Iceland (192Mbps), Andorra (165Mbps) and Gibraltar (151Mbps). Find the full report at www.snipca.com/39479.

Question of the Fortnight

Is it safe to use phones made in China?

Chinese firms have been accused of censorship and security flaws

Lithuania taking on China doesn't feel like a fair fight. Its population is a mere 2.7 million; China's is \$1.4 billion. Its GDP of 54.6 billion is dwarfed by China's \$14.3 trillion. And yet the small Baltic state has provoked Chinese anger by claiming that phones made in the country can censor messages and leave personal data at risk of being intercepted.

Last month Lithuania's Defence Ministry pointed the finger at two leading Chinese manufacturers: Huawei and Xiaomi. After examining the former's P40 phone (pictured), officials said Huawei's app store, called AppGallery, directs users to third-party stores where some of the apps contain malware.



movement' – whether these were typed in a message or searched for online. The report argued that while this censorship tool was switched off on phones in Europe, Xiaomi could activate it remotely at any time.

The advice from Defence Deputy Minister Margiris

and processes the data necessary to allow its customers to search, install and manage third-party apps, in the same way as other app stores". He added that Huawei also runs security scans to ensure users only download "apps which are safe".

One phone got the all-clear from officials: the OnePlus 8T. This is made by BBK Electronics, which is based in Guangdong and also owns the phone brands Oppo, Vivo and Realme. But the report was damning enough to trigger concerns throughout Europe. A few days later the German Federal Office for Information Security said it was launching its own investigation into phones made in China.

Lithuania said the flaws it found should worry users everywhere, but urging citizens to ditch their phones feels extreme. We doubt the bins of the capital Vilnius will be overflowing with discarded P40s.

But it's reasonable to ask how worried UK consumers should be, and also why our current 'Buy It!' Android phone is Xiaomi's Poco F3

Abukevicius was clear: "Our recommendation is to not buy new Chinese phones, and to get rid of those already purchased as fast as reasonably possible".

Both companies rejected the claims. Xiaomi said it "has never and will never restrict or block any personal behaviours of our smartphone users, such as searching, calling, web browsing or the use of third-party communication software".

A spokesman for Huawei said AppGallery "only collects

THE FACTS

- Lithuania's Defence Ministry told citizens not to use Xiaomi and Huawei phones because they contain censorship tools and security flaws
- Xiaomi denied censoring messages, while Huawei claims it complies with the laws of the countries it operates in
- Germany's regulator has launched an investigation into the security of phones made by Chinese firms

“Do not buy new Chinese phones, and get rid of those already purchased as fast as reasonably possible”

Its allegations against Xiaomi went deeper, claiming the company's Mi 10T phone transfers encrypted data of how people use their phones to a server in Singapore, and has a built-in tool that censors anti-China messages.

Officials from the Defence Ministry, who compiled a report with the country's national cyber-security centre, said Xiaomi's phone could censor 449 terms, including 'Free Tibet', 'Long live Taiwan independence' and 'democracy

(£299 from www.snipca.com/38395, see page 30).

We're not blind to Lithuania's concerns, but it's hard to know how seriously to take them until they've been checked by British authorities.

Until we're advised otherwise, we'll continue to review Chinese devices with the same rigour as we would those made elsewhere. We'll also mention when a phone's manufacturer is Chinese, including those with brands that use English-sounding names like OnePlus and Realme.

While you shouldn't be smashing your current Huawei and Xiaomi phones, we expect many users – in Lithuania and elsewhere – will avoid buying Chinese next time. That leaves only Apple and Samsung as serious alternatives. If Chinese firms lose ground in the West, let's hope other manufacturers exploit the opportunity to give us more choice.

Protect **your tech**

Scams and threats to avoid, plus new security tools

WATCH OUT FOR...

Sharp rise in impersonation scams

What's the threat?

Impersonation scams – calls, emails and texts – doubled in the first half of 2021, according to UK Finance. Research from the trade body shows that between January and June cases rose from just under 15,000 to 33,115, while the amount of money stolen increased from £57.9m to £129.4m.

In these scams, fraudsters pretend to be from a trusted organisation such as a bank, the police, a Government department or a service provider. They use a range of stories to trick you into handing over your bank details, including the need to protect your account from fraud, to pay a fine, or to enable you to receive a tax refund.

How can you stay safe?

One way you can protect yourself is simply by being less polite when scammers contact you. UK Finance said that almost one in five people feel uncomfortable saying no to a request by text or email for personal information.



Worryingly, this rises to 23 per cent for phone calls. Most people admit that the reason they agree to reveal their details is because they don't want to appear rude. Rather than hanging up or simply saying 'no', people use less abrupt phrases such as 'I'm not sure', 'I don't think so', 'Let me think about it' and 'I can't at the moment'. Each of these gives the

fraudster a way into the conversation, like a doorstep scammer shoving their foot in your doorway.

Nobody likes to be rude, but as soon as you realise a phone call is a scam you should end the call without saying anything. It won't hurt the scammer's feelings – and who cares if it did? They'll just move on to their next potential victim.

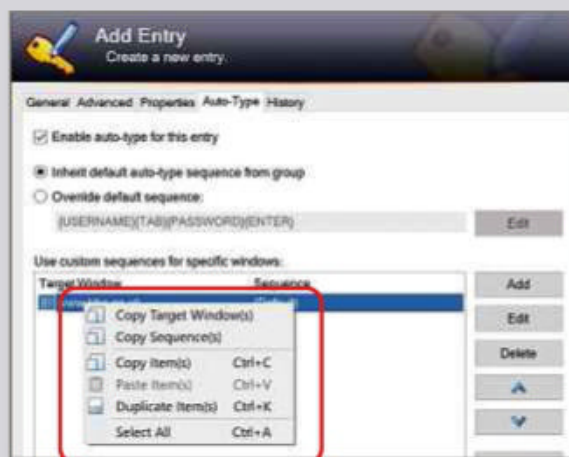
New tools | KeePass 2.49

www.snipca.com/39445

If in doubt, try right-clicking. No matter which program you're using, opening the context menu can reveal options you were looking for – and others you didn't know existed.

Doing so in the new version of password manager KeePass brings up commands for Auto-Type. This is a clever tool that lets you automate an action based on keys you press – such as typing a username and password, then pressing Enter (KeePass explains this at www.snipca.com/39446). It means that now, when you create an action, you should right-click it to see the following options: 'Copy Item(s)', 'Paste Item(s)', 'Duplicate Item(s)' and 'Select All' (see screenshot).

These options will add to KeePass's



core appeal, which is that, unlike many other password managers, it saves your passwords locally (on your computer) rather than online. However, it doesn't update automatically, so you'll need to visit the link above and click the download button at the top.

ScamWatch

Readers warn readers



Scammer claimed he found lost cat

An elderly neighbour of mine was distraught when she lost her pet cat. Her daughter told her to register the disappearance on a missing pets website, stating her phone number. A few hours later she got a call from a man who claimed to be from the RSPCA. He said he'd found the cat and asked for her bank details to pay for its return. Fortunately, my neighbour's daughter answered the call and knew it must be a scam. I notice that the RSPCA warned about this scam in June: www.snipca.com/39437.

Pamela Baxter



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

Letters

Tell us what's on your mind

My PC works well, so why upgrade to Windows 11?

✉ I can't help but think that Microsoft is about to shoot itself not just in one foot, but both. The reason Windows 10 has been such a resounding success is that it was made available to everyone for free, without this 'phased release' that Microsoft seems so keen on now. The technical requirements seemed to be very limited, which suited people like me who had foregone the dubious pleasures of Windows 8 to stay on Windows 7. I had several ancient (in tech terms) computers that I doubted would run Windows 10. But upgrading them was straightforward, and I've had no problems since.

But Windows 11 seems to be a more restricted release. I've checked the requirements, and none of my old computers can run it. OK, that's to be expected – they're all over 10 years old. But shockingly, nor will Windows 11 run on the PC I bought in 2016 with Windows 10 installed. I know the people who work for Microsoft must consider 2016 to be prehistoric in computing years, but pensioners like me who have to be careful about money need to buy things that last.

I can't afford to buy a powerful new computer running Windows 11. And why should I, anyway, when my existing Windows 10 PC is still doing a good job? I expect that Microsoft must be hoping there are millions of people with more money who will be happy to buy a new computer. But I suspect that might turn out to be a huge miscalculation.

Neil Mannister

CA SAYS Neil's surely right that there will be many people happy to stick with Windows 10. What matters is how many others see enough that's new in Windows 11 to make it worth their while upgrading. We explore your options in our Cover Feature – see page 50.

Remembering the 'cosy glow' of our three-valve radio

✉ In Issue 615's Ed's Letter Daniel Booth asked for memories of watching early television. Well, at the age of 88, my memory goes back considerably further than TV receivers. I remember my

father taking a two-volt accumulator to be charged at the local garage. For younger readers, I should explain that the two volts were applied to the filaments of early radio valves, decades before TVs arrived.

In those distant days, not all houses had electricity. In fact gas was used not only for heating the oven, but also for lighting. Our three-valve radio used valves with two-volt heaters that gave a cosy dull glow. To add to the vintage feel, a 120-volt battery was also required (a new one was needed about every six months).

I can still recall the day that electricity arrived in our house, and an all-mains radio was purchased, still with valves that took some time to warm up, but now no trips for accumulator charging. These days we now have delays not for valves to warm up, but to boot the processors that seem a part of our everyday lives. For the record, the radio was a Philips 170 model (see it at www.snipca.com/39530). I'm still trying to find one to refurbish.

Mike Rignall

Sir Clive Sinclair sparked my interest in computing

✉ I'd like to pay tribute to Sir Clive Sinclair, whose idiosyncratic passion for computing sparked my own lifelong interest in the subject. I was

fortunate enough to work for a forward-thinking company in the 1970s, and so was given a Sinclair Executive calculator (pictured below right) to help my number-crunching. It cost the company a fortune, but it was worth it.

That experience made me a Sinclair fan, so I needed no persuasion to buy the ZX80 when it came out, then the ZX81. They were the ideal computers for learning coding, not to mention playing the occasional game.

I loved the Spectrums he made too, but I liked him almost as much for his failures as his successes. Like all great inventors, he wasn't worried about ridicule or failure. And many of his products that didn't catch on were simply ahead of their time. Just think of the C5 electric car, which was a precursor to today's electric cars. There was also the TV80, which was a portable TV. That was released in 1983, and nearly 40 years later watching TV on portable devices is commonplace.

So thanks for all the ideas and inspiration Sir Clive. Some of it was pioneering, some of it a little bonkers, but it was always fascinating.

Joseph Hoyle



What's the Issue...?

✉ I'm considering buying the Amazon Fire HD 10 tablet, but want to know *Computeractive's* verdict. I think you reviewed it recently, but can't find the issue.

Andrew Hartcliffe

CA SAYS We gave it a five-star 'Buy It!' award in Issue 610, page 24. When we last checked, it was available for £150 (www.snipca.com/38713).

✉ I've got fed up with how much time it takes Abbyy FineReader to load. I remember another reader recently was similarly frustrated. Which alternative did you suggest for

converting scans and images into Word docs?

Gerald Adlington

CA SAYS We recommend using Word 2013 or later, once you've converted the files using excellent PDF24 (www.snipca.com/38704). You can read our advice in Issue 609, page 19.

✉ When did you explain how to add tick boxes to spreadsheets?

Phyllis Agnew

CA SAYS See Issue 607, page 47.

✉ The other day I found my ZX81, the 16K RAM pack, keyboard, tape recorder and even a Forth program tape. It brought back memories of queuing in WH Smith one lunchtime for the computer, then many, many happy hours coding, buying and reading magazines and books. RIP Sir Clive!

Andrew Cross

Amazon's drives were flat wrong

✉ I second Martin Ashmore's delight that Amazon has abandoned plans to pepper our skies with delivery drones (Star Letter, Issue 614). One problem I never read a satisfactory solution to was how these flying monstrosities would deliver items to people living in flats. I live on the third floor of five. We share a communal garden. We mostly get on well, but our good relations would have rapidly deteriorated had one of us constantly used our shared garden as an Amazon landing strip!

Gavin Duncan

Facebook won't get my phone number

✉ I was initially interested in Issue 615's news story about getting train updates sent to your WhatsApp account. But my enthusiasm died the moment I read that you had to enter your phone number. May I remind people which company owns WhatsApp. Yes, that's right – Facebook. I'd sooner remove my kidneys on the kitchen table and sell them at a local car boot sale than give Facebook my phone number. I'll stick to receiving National Rail's text updates instead (www.snipca.com/39529).

Ted Wilmott

Samsung can 'frazzle' my TV to annoy Mr Burglar

✉ In Issue 614's 'Question of the Fortnight' you ask 'Why would Samsung want to kill your TV?'. I would have asked the same had it not been for a week before, when I ordered the Samsung Galaxy A52s 5G phone (£395 from www.snipca.com/39528), and as part of the deal I traded in my previous phone, a Note 9, for a £100 discount.

I noticed in the small print that if I didn't send the old phone to them within a certain period, they would remotely disable the new phone. Fair enough, I thought, as they sent the new one to me immediately. Obviously there are many

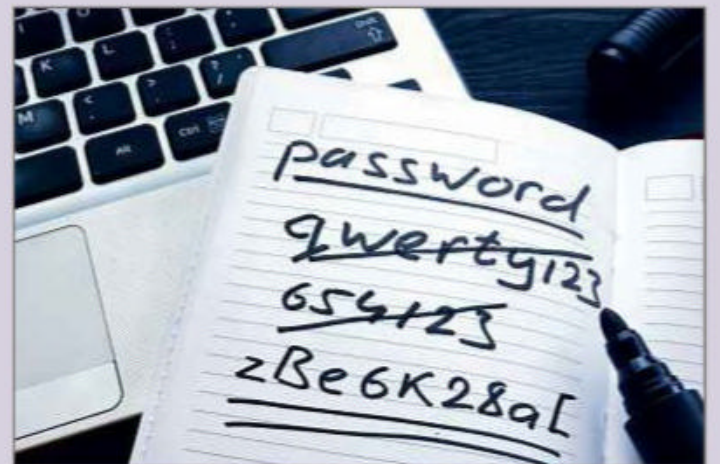
STAR LETTER

Passwords and passphrases are *both* secure – so choose what you prefer

✉ In Issue 614 Ted Winter writes that his 25-random character password was rated excellent, whereas a random three-word password of 25 characters was rated poor. It's worth putting this into context. Twenty-five random characters, based on a character set of, say, 60 (upper and lower case, plus 0-9 numerals), gives upwards of 10 to the power of 30 combinations, which is a million million million million million.

A three-word password based on 60,000 words (including plurals and different tense endings) gives upwards of 10 to the power of 13 combinations, which is over a million million.

So, the former is stronger. Let's assume a password-cracking **brute-force attack** trying every combination in turn at 10 every second, which works out as 2.4 times 10 to the power of 7 (20 million) attempts a year. At that rate, it would take 10 to the power of 23 years to crack a password made up from 25 random characters. That's longer



than the life of the universe so far!

If you have a password manager, and therefore don't have to remember your passwords, then by all means use 25 random characters. But when you don't have access to a password manager, using three random words still has a place. Cracking it by trying every combination of words (ie, not characters) would still take over 10,000 years. This can be increased by using the full 200,000 words in the English dictionary. And these passwords can be memorable while still secure. So, horses for courses?

Andrew Smith



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

chancers who would try to scam them, so I can understand why they would want to protect their property.

So that's your answer. TVs are liable to be stolen and I would certainly give the serial number to them so they could frazzle it to stop Mr Burglar should he pinch mine. I'm more interested with what they are going to do with my old phone. Is there a market for these, or are parts recyclable? Even in my job we use



equipment where my technical department can remotely disable stuff if it gets lost or nicked. It's not a big deal.

John Murphy

Look closely – it's a 2MB stick!

✉ In Issue 615 you asked whether readers had old USB sticks with small memory capacities. I've got such a stick (pictured below). I was given it when I started work for a London-based

charity in 2006. If you look closely, you can see a very faint '2' beside the '0'. Yes, the stick's capacity was just 2MB! That seemed perfectly adequate at the time and the stick still works, but I don't think you could save many modern files to it now!

Sue Rugg



We stand up for your legal rights

Who's responsible for my lost smartwatch?

Q I bought a smartwatch for £19.95 from the online retailer K Smartwatch (<https://ksmartwatch.co.uk>), but returned it because the battery life was so poor. The retailer provided me with a prepaid Hermes returns label, which I used to return the smartwatch. However, the seller now says the watch hasn't arrived, and that the tracking number I provided is incorrect. Hermes is refusing to help me, leaving me in limbo. Can you help me instead?

Alistair Robertson

A We'll try, because it's a nightmare not knowing whether you should chase the courier or retailer, particularly when they both seem to be happy to pass the buck.

When returned goods go missing, it's usually the customer who notices first because their expected refund doesn't materialise. With prepaid labels, the onus is on the customer to return items, though only the seller can track them should they go missing.

The whole case is a mess. The retailer



has told Alistair that the tracking number Hermes provided is wrong, but it's the same code that the courier gave him. At the moment, Alistair has no proof of return, meaning he won't be able to demand a refund. We've asked Hermes whether it's able to provide this proof, and if so will pass it on to K Smartwatch.

Incidentally, Alistair wasn't obliged to use the prepaid labels offered by K Smartwatch. He could have refused them and sent the smartwatch back using Royal Mail or another courier. That would have given him more control of the situation because his contract would have been with the courier, allowing him to claim compensation were they to lose the item.

CASE ONGOING

Was John Lewis allowed to repair my laptop nine times?

Q In January, I bought an HP computer from John Lewis. It's been repaired nine times so far. I'd love John Lewis to replace it or give me a refund, but it says it can work only within HP's warranty guidelines. Is that right?

Gary Cragg

A No it's not. It's shocking that John Lewis thinks it's bound by HP's warranty. The Consumer Rights Act overrides warranties and clearly states that only one repair is allowed, no matter how many different faults occur. John Lewis should have replaced the laptop or refunded Gary months ago. It's not a good look for a retailer with such a good reputation for customer service.

Unfortunately for Gary, more than six months have now passed since purchase, so he's not automatically entitled to a full refund. After this deadline retailers are allowed to deduct money to reflect how long you've used an item for. However, multiple repairs have meant Gary has hardly been able to use his laptop, so we strongly believe John Lewis should return all his money.

CASE ONGOING

CASE UPDATE

Dell gives refund and 15 per cent off next purchase



Reader Frank Davidson was hoping Dell would offer him a more powerful device after it failed to fix his faulty Inspiron 5406 laptop-tablet (pictured, see Issue 615), which he bought through Dell Outlet (www.snipca.com/39328) in May. Dell didn't go this far, but as well as a full refund (£610) it has offered Frank 15 per cent off his next laptop purchase.

Dell had initially said that Frank wasn't entitled to a refund because his extended



warranty didn't cover software, which it claimed was causing the problems. The company was using the warranty as justification for offering to attempt another repair of the device. But Frank knew that the Consumer Rights Act entitles customers to a

full refund if a device fails within six months and a repair can't fix it. His reason for not demanding this straight away was to aim for a more powerful replacement.

Frank has yet to ask Dell for a refund for the extended warranty he paid for when he bought the device. We'll contact Dell about this because under the Supply of Extended Warranties on Domestic Electrical Goods Order 2005, he's entitled to a partial refund. Customers are entitled to a full warranty refund only within 45 days of purchase.

Contact us so we can investigate your case

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

Did you give wrong warranty advice?

Q In Issue 609 (page 22), your five-star review of the Asus PN51 mini PC (£949 from www.snipca.com/38545) said the warranty was for three years. I bought one from Amazon, and registered it, but there's no mention of anything more than a standard 12-month warranty. Can you clarify your information? Did you make a mistake?

Alan Dyer

A Yes, we're happy to put Alan's mind at rest. Asus assures us that we didn't make a mistake and it does offer a three-year on-site

service support warranty with the PN51. We've told Alan this, and we'll contact Asus to make sure he gets the warranty. It doesn't help that Asus's 'Warranty' page for the computer doesn't actually contain any information (www.snipca.com/39462).

We do our best to be accurate and will always hold our hands up if we're wrong, but our liability is limited in these circumstances. Publishing errors don't break any law, such as the Unfair Trading Regulations or Consumer Rights Act.

Reviews published are totally independent of influence of any kind by



either manufacturer or retailer. Prices and offers are correct only at the time of going to press, and we can't affect them in any way. Before buying we suggest readers check with the retailer or manufacturer that any offers are still live.

CASE CLOSED

Can I still use SOGA for refund?

Q In 2018, I bought an Apple keyboard from Currys for £179. I had it replaced when the letters started to wear off, but the same problem has recurred. Currys says I don't have a claim under the Sale of Goods Act (SOGA) and that I have to prove the keyboard's not of "merchantable quality" under the Consumer Rights Act (CRA). Is Currys correct in saying that the CRA supersedes the SOGA?

Nigel Mutimer



A Yes, Currys is correct. The CRA replaced the SOGA in 2015, but that didn't weaken consumer rights. The CRA contains the rights enshrined in SOGA – goods must be fit for purpose, of satisfactory quality (therefore merchantable quality) and free


of minor defects. It added protection for digital goods such as software and streamed content. The onus is also still on the consumer after six months to prove a fault is inherent.

It's true that Apple's keyboard could be less than satisfactory, but Nigel got back in touch to say Currys offered him a voucher for £79 as a goodwill gesture. We've advised him to accept this. To get an actual refund, Nigel would have to prove the fault was inherent, not as a result of fair wear and tear, and even then Currys would be allowed to deduct some money because he's used the keyboard for three years.

CASE CLOSED

CREDIT WHERE IT'S DUE

BenQ sent new monitor the next day

 My 18-month-old BenQ GL2780 PC monitor (pictured right) started failing in July this year. I replaced the **HDMI** cable, but it still failed for long periods of time. I tried using the TV as a monitor and all worked fine, so I concluded that the monitor was faulty.

I sent an email via BenQ's site outlining the problem. Within a couple of hours I had the offer of a replacement monitor from their repair agents Equinox Maintenance

(www.equinox.co.uk), based in Tewkesbury, Gloucestershire. This arrived the next day by DHL who also picked up the faulty monitor.

As I hadn't realised my guarantee was for three years, and dreading having to return the monitor without knowing if the guarantee would be honoured, I thought this was a fantastic service.

Richard Avery

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



Contact
BenQ

• **Email** www.snipca.com/39448
• **Phone** 0207 216 0039

Grow Your Family Tree



If you had ancestors who didn't belong to the Church of England, follow **Nick Peers'** guide to...

Find non-conformist records

Church records are a rich source of family history information, covering baptisms, marriages and burials. They can be split into two basic categories: parish records cover members of the established church, namely the Church of England (CoE), Scotland or Wales, while records covering other denominations, from Catholics and Presbyterians to Methodists and Quakers, are grouped under the label 'non-conformist'. Here, we'll explain where to find the latter.

Research available records

Non-conformist records stretch way back to 1567, so you could easily get overwhelmed by the amount of information. To start, read a summary of English and Welsh records, which begin with the catalogue code 'RG', held by the National Archives (www.snipca.com/39339). A summary of Welsh records within this collection is provided by the National Library of Wales (www.snipca.com/39340).

Those looking for Scottish non-conformist records should download FamilySearch's PDF: www.snipca.com/39342. It reveals that only Catholic records have been placed online (not Protestant) as part of a wider set of church records archived by ScotlandsPeople. Go to www.snipca.com/39343 then click 'Church registers' followed by a record set at the bottom.

You'll find a summary of Irish records

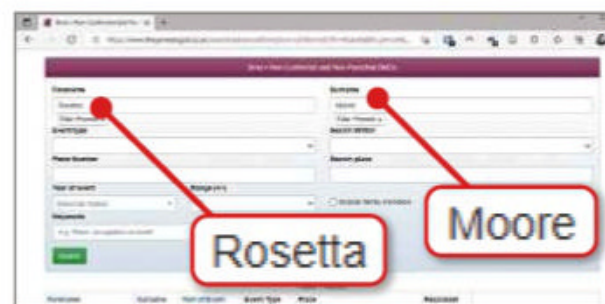
(predominantly Catholic) at FamilySearch (www.snipca.com/39347), along with a list of links to websites holding the records.

View records at The Genealogist and Ancestry

Most English and Welsh records held by the National Archives have been digitised, and are available through The Genealogist (www.snipca.com/39376, prices start from £38.95 for three months). After logging into your account, enter your search terms at www.snipca.com/39348 (I searched for my great-great-great-grandmother Rosetta Moore – see screenshot above right – of whom more later).

No other site can match The Genealogist's comprehensive collection, though Ancestry users can search the record sets RG4, RG5 and RG8, spanning 1567–1936, at www.snipca.com/39349. Find My Past also has these records, but frustratingly doesn't offer a single search portal covering them all. Instead start by searching for births and baptisms at www.snipca.com/39350, then scroll down and have a look at the 'Useful Links and Resources' panel on the right to search for marriages and burials. It also has several non-conformist record sets not available elsewhere, including for Quakers in England, Wales and Ireland.

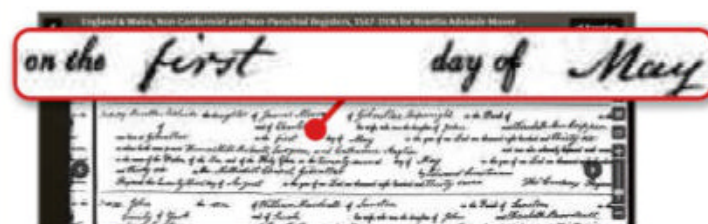
These sites have transcribed the scans of the documents, making it easier to



Nick searched for his great-great-great-grandmother in The Genealogist's records

read the information they contain. However, transcriptions often only include a summary of the information on the record, so being able to view (and download) the original document is useful to verify that the transcription is correct, and to see if it contains any extra information. Subscribers to all three sites mentioned above will be able to download the original document.

I came across an example of the differences between transcripts and documents when searching for Rosetta Moore on FamilySearch (which has free transcripts of indexes RG4 to RG8 at www.snipca.com/39351). The transcript showed that she was christened at a Methodist chapel in London (Methodists were non-conformists), but her baptism record that I downloaded from Ancestry actually showed she was christened in Gibraltar. It also showed other details, including her date of birth (1 May 1836 – see screenshot below), and the witnesses present. It's likely that the transcription mistook the registration of the baptism (which *did* take place in London, in August 1837), with the actual baptism 15 months earlier.



Details in Rosetta Moore's baptism document don't match those in FamilySearch's transcription

Your Genealogy Problems Solved

I think my Family Tree Maker (FTM) file is damaged. How do I go about fixing it? It's backed up to Ancestry, but not on my PC.

Alys Johns

Visit FTM's support pages (www.snipca.com/39333) for several techniques to try: compacting the file, downloading a fresh

copy from Ancestry, or exporting your file as a GEDCOM to reimport as a new tree. Once you've regained your tree, regularly back it up by clicking File, followed by Backup.



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



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*Sales subject to our terms of sale available online - www.palicomp.co.uk - Configuration issues will be advised by phone - any alternatives will also be advised by phone before proceeding with the order. Systems Custom built then are tested 100% prior to dispatch - dispatched via courier for next working day delivery - other delivery options available online. 0% Finance upto 12 months only - terms online - early settlement fee just £29.00 - apply online or phone. Prices inclusive of VAT and free UK mainland shipping. Q-jump cut-off time 15.00pm.

Best Free Software

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

NETWORK MONITOR

GlassWire 2.3.343

www.glasswire.com

What you need: Windows 7, 8.1 or 10

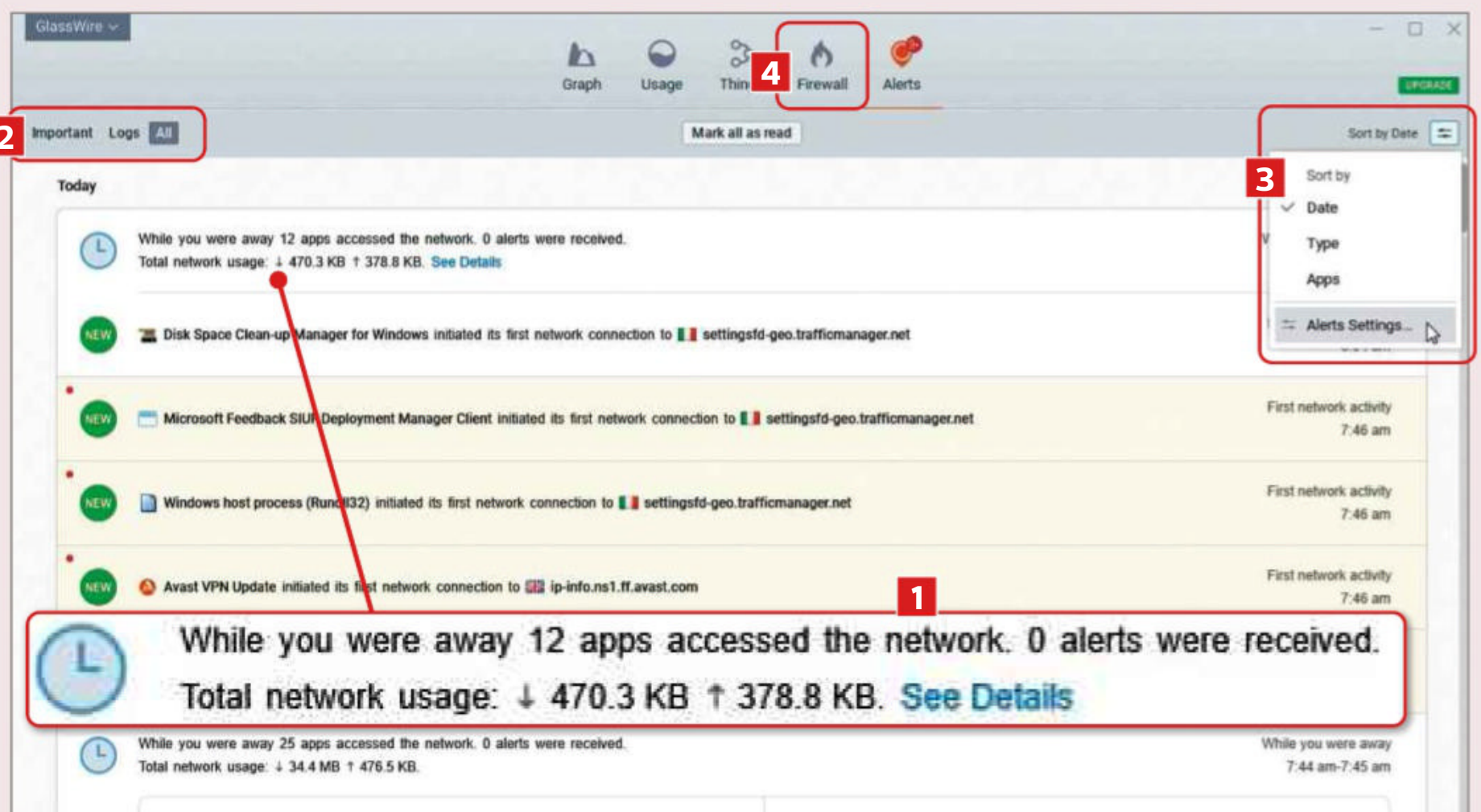
GlassWire is a fantastic program, but slightly frustrating because it lets you try all its tools for free for seven days, then charges you £29 (for its Basic plan) to keep using some of them. Happily, its permanently free version includes its best feature, which monitors network activity on your PC and tells you which programs are connecting to the internet in the background. The latest update to GlassWire improves its alerts system for the suspicious activity it detects.

One of the most common complaints about GlassWire is that it bothers you with unnecessary notifications, in the form of pop-ups above your system tray, for activity that need not worry you. Version 2.3.343 fixes this problem by letting you set unimportant alerts as 'logs' (which don't show desktop notifications), then set other alerts as 'important', (which do). To change your alert settings, select GlassWire's Alerts tab, then click the 'Sort options' icon in the top-right

corner and select 'Alert Settings'. Click 'Unlock' in the Settings window that opens (some settings can't be unlocked in the free edition) and specify how you want to classify different alerts and whether they should show desktop notifications.

GlassWire also now shows 'while you were away' summaries on its Alerts tab. These are useful if you want to check for unusual activity – such as programs connecting to unknown servers or changing system settings – while you weren't sitting at your PC, without having to browse a long list of alerts. If you're concerned about a particular alert, you can now mark it as 'unread' to remind you to investigate it later.

As we've mentioned, after your seven-day free trial, you'll need to pay to use certain GlassWire features, such as its [firewall](#) and Wi-Fi scanner, but we think the revamped alerts make the free version worth keeping.



1 GlassWire's 'while you were away' summaries provide a useful digest of network activity on your PC. Click 'See Details' to read them.

2 Switch between 'Important' alerts, which may report suspicious activity, and standard 'Logs'. Alternatively, choose 'All' to view everything in one list.

3 You can sort your alerts by date, type or app. The 'Sort by' menu also gives you quick access to GlassWire's Alert Settings.

4 You can try GlassWire's firewall for free for seven days, but after that you'll need to pay, so it's best to stick with your current firewall.



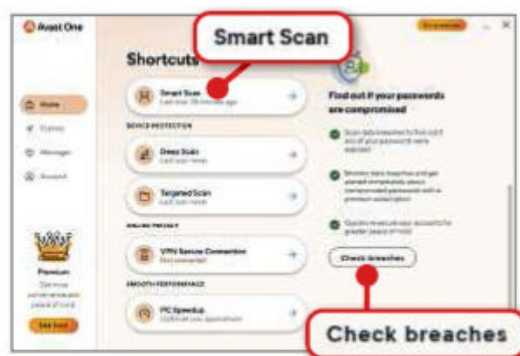
SECURITY SUITE

Avast One Essential

www.snipca.com/39545

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

Avast's new, free antivirus software is packed with useful features for protecting you against the latest threats, which go beyond those offered by Windows Security. As well as scanning for and removing malware, both on-demand and on a schedule, it can check if your passwords have been compromised in data breaches (see screenshot), lock your important folders against ransomware, clear your sensitive browsing data, stop hackers directing you to phishing sites, and more. It also includes a firewall for protecting your network and a VPN, which gives you a generous 5GB of data a week for anonymous browsing, though only one server location in its free version. Similar restrictions apply to other tools, such as automatic driver updating and junk clean-up, which require Avast One's Premium version (£79.99 per year – currently discounted to £41.88), but in most cases these tools can still be run manually.



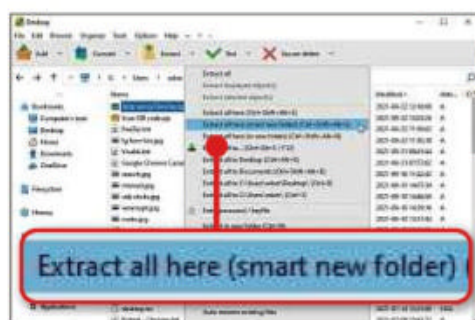
FILE-COMPRESSION TOOL

PeaZip 8.2.0

www.snipca.com/39550

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

PeaZip is one of the leading free file-compression tools, and this update makes it even more powerful. The best new feature lets you access files that you extract from compressed archives even when the program encounters errors during the extraction process – previously you'd just see an error message saying the folder couldn't be opened. PeaZip also now provides more information about the files stored in archives, including how many items are in the folder, the compression and encryption method, and when the files were created and last modified – useful details if you often download or are sent files in ZIP, RAR, 7z or another compression format (the program supports more than 220). Additionally, PeaZip now offers its 'smart' extraction tool, which tells the program to extract files to the current location rather than ask you to specify a folder, as a default option in its Extract menu: simply select 'Extract all here (smart new folder)' – see screenshot.



WHAT SHOULD I DOWNLOAD?

We tell you what software & apps to use

What's the best free PC clean-up tool?

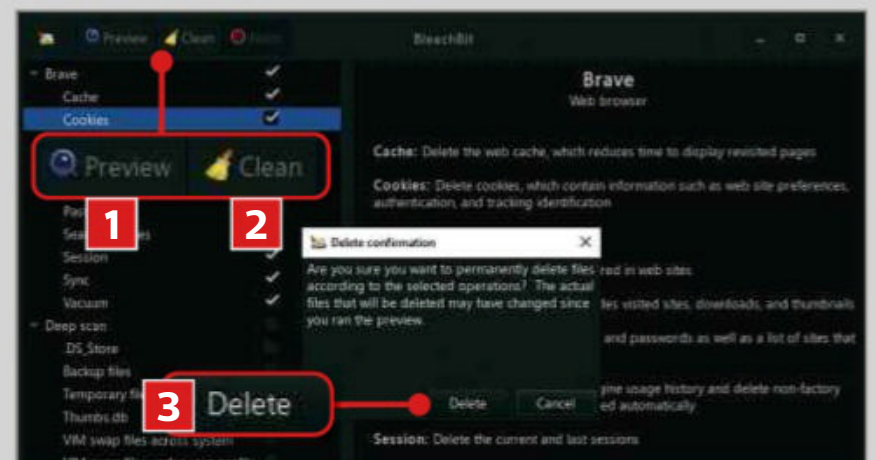
Q CCleaner was driving me nuts so I uninstalled it. Is there a better (preferably free) alternative for performing PC clean-ups? I'm sure you've covered this subject before, but I can't find it in an old issue.

Neil Dunford

A Like many former CCleaner users, we've been disappointed by the program's decline over the past few years, though we know it still has many fans. Particularly annoying are the ads it now displays for its paid-for Pro edition, the CCleaner Browser and products from Avast (which bought CCleaner's developer in 2017).

Our favourite CCleaner alternative is BleachBit (www.bleachbit.org), an open-source program that works in much the same way, but is free to use – with no nags to upgrade to a paid-for version, and none of the bundled junk that has plagued CCleaner. BleachBit lacks some of CCleaner's features, such as a registry cleaner and startup manager, but Windows handles these tasks perfectly well by itself.

BleachBit is very easy to use: simply browse the list of options on the left-hand side of the program window to view details of what they are and the benefits of cleaning them. Select all the items you want to delete (which include data from one of our favourite browsers, Brave) and click the Preview button (1 in our screenshot) to see how much space you'll save. Click the Clean button (2) to proceed with the clean-up, then click Delete (3) to confirm you want to permanently wipe the files (you can click Abort to cancel while deletion is in progress). BleachBit will remove the unwanted junk, free up disk space and speed up your PC.



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

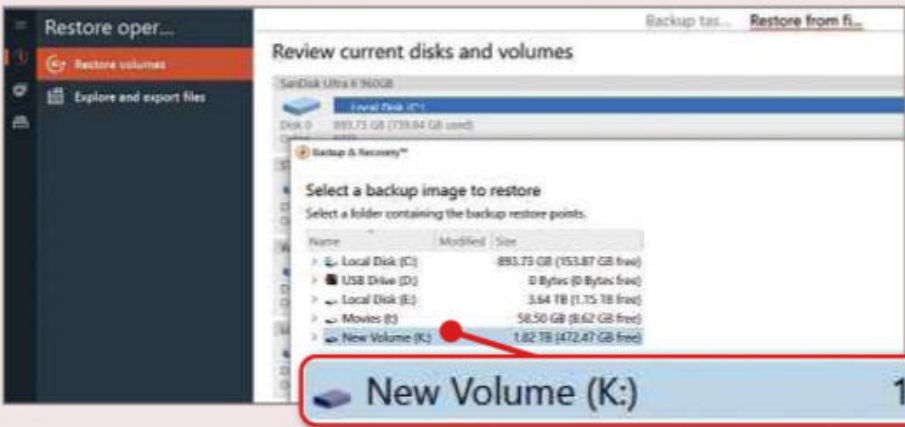
HOW I USE...

Paragon Backup & Recovery

Wayne Williams still remembers the day his work disappeared in a puff of smoke. He now protects himself using this free tool



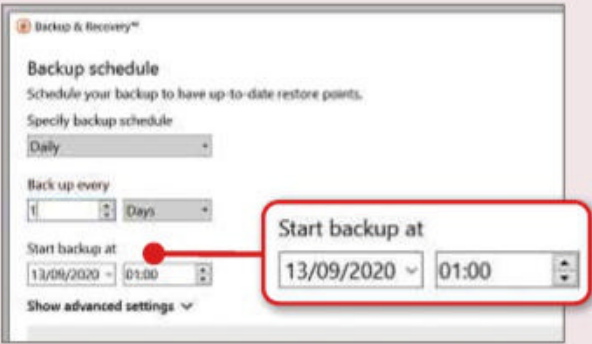
Back in 2005, my work PC started making a weird grinding noise, and yet it continued to work fine. Complacently, I assumed the sound wasn't a sign of a major problem. But a few days later something inside the case shorted and fried the motherboard and everything attached to it, including the memory and hard drive. This was long before we could back up data to online storage. Because I'd never got around to setting up a scheduled backup, all my data – work and personal – vanished in a puff of smoke. Literally. It took a week before the metallic burning smell abated. Since then, I've backed up continually using the Community Edition of Paragon Backup & Recovery (free from www.snipca.com/39440), an approach that saved me when ransomware attempted to take over my PC in 2013. When you run the program, it prompts you to choose a 'Backup strategy'. Click the 'Backup is not scheduled' link and turn the schedule on. This



Use the 'Restore volume' option to load a previous backup

can be when an event happens (such as when the computer wakes from sleep), monthly, weekly or daily. I opt for daily, and because I leave my computer on all the time I set it to start at 1am every day (see screenshot below left). Next, you need to choose the *type* of backup – full, incremental (backs up only files that have changed since the last backup) or differential (targets files that have changed since the last *full* backup). The backup screen lets you choose where to save your data, which in my case is to a Seagate 2TB portable USB drive. I've decided to set up a full backup, then incremental ones for two weeks, before running a new full backup again. I also use the program on one of my laptops and for this I run full backups only. Why? Because this is where I install new software – including potentially risky programs – and make experimental changes to Windows. Having a full backup lets me roll the entire laptop back to the state it was in before I made

the changes. Restoring from a full backup is quicker than an incremental or differential one. The only time I need to make fresh backups on the laptop is after I've installed new programs I want to keep, or following Windows (or software) updates. Even then I have previous full backups I can revert to if something goes wrong. Restoring a full backup requires the same steps as restoring any type of backup. Click 'Restore' in the File tab at the top, then 'Restore volume' on the left. Click 'Next', then select your backup drive in the box that appears – my Seagate drive is highlighted in our screenshot above. I've also created recovery media that I can use to get back into Windows if there's a problem. Click the Settings cog at the bottom and you'll see a Recovery Media Builder option which is where you can create a **bootable** environment on a USB stick or as an **ISO file**. In the dropdown menu, Windows 8 and 10 users should choose the **ADK** (Assessment and Deployment Kit) mode. For earlier versions you'll need WIM (Windows Image). If you don't have an ADK package installed, Paragon will tell you where to download it from.



Wayne sets Paragon to back up his computer at 1am every night

WHAT I'D LIKE TO SEE IN PARAGON BACKUP & RECOVERY

The free Community Edition is missing a few of the features only available in the paid-for version. While that's understandable, it would be good for the free build to have the ability to back up just your operating system for moving to another drive. That would leave enough exclusive features in the paid-for version.

Named & Shamed



Barry Collins puts the boot into tech villains, jargon-spouting organisations and companies peddling junk

WARNING: JUNK AHEAD

Junk offender: Opera

The three-word tagline in the Google search results for the Opera web browser reads ‘Faster, safer, smarter’. It seems they’ve missed a word off, though: sneakier. Opera was once the plucky, ethical underdog of the browser market. Now, not so much.



I installed Opera on my Windows 10 machine recently. I clicked through the innocuous-looking installer then, just as the installation had finished, I saw the Windows Settings menu flash up for the briefest of moments before disappearing again. You might call it the Phantom of the Opera.

What Opera had surreptitiously done was set itself as my default web browser. It’s fair enough that a browser might lob a pop-up in your face to check if you want to make it the default when you first install it, but to shove its way in as the default browser without asking is obnoxious. Chrome doesn’t do it, neither does Firefox or any other web browser I



Try to uninstall Opera and it’ll nudge you into reinstalling it instead

can think of (Edge is installed by default in Windows, of course).

When I went back and looked at the installer, I spotted what the company had done. The installer instructions have a tiny ‘Options’ link, bundled in with other text. Only when you click the options will you see that ‘Make Opera the default browser’ is already ticked. How

thoughtful of them.

Worse, when you go to uninstall the browser – as I did pretty damned promptly – Opera pulls another stunt, making ‘Re-install’ the prominent, default option (1 in our screenshot) instead of Uninstall (2). This is the kind of underhand nonsense that earns Opera a place in my software hall of shame.

WHAT ARE THEY TALKING ABOUT?

WHAT THEY SAY

Lenovo

Lenovo (www.snipca.com/39447)

“Lenovo TruScale offers businesses of all sizes an everything-as-a-service platform with the flexibility they need to stay competitive with a scalable, cloud-like consumption model and predictable payment options for hardware and service inclusions. This transition to a fully integrated as-a-service strategy brings to life the company’s ‘One Lenovo’ vision – addressing common business challenges and providing IT leaders with the performance and flexibility to pay-as-you-grow.”

WHAT THEY MEAN

We also offer jargon-as-a-service.

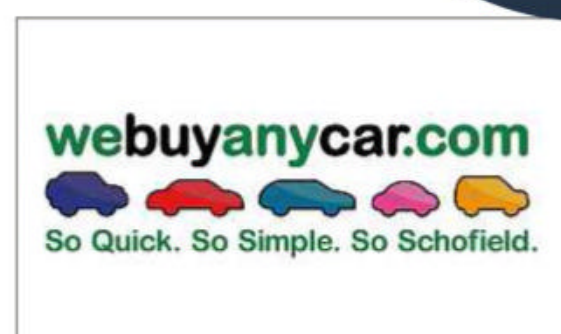
BARRY’S VILLAIN OF THE FORTNIGHT

We Buy Any Car

As if its wall-to-wall TV ads weren’t bad enough, We Buy Any Car has also been barging its way into people’s inboxes without their permission.

The Information Commissioner’s Office (ICO) found the firm guilty of sending nuisance emails and text messages. And we’re not just talking one or two – it sent a staggering 191 million emails and 3.6 million text messages, without first getting the necessary permission.

The ICO fined the company a pathetic £200,000, which equates to about one tenth of a penny for each nuisance message.



Sports Direct and Saga received similarly puny fines for also bombarding their customers (see www.snipca.com/39481). I’m not sure who’s the real villain here – We Buy Any Car and its spam-sending chums, or the chocolate fireguard that is the ICO.

LAPTOP-TABLET | £1,249 from Amazon www.snipca.com/39430

MSI Summit E13 Flip Evo

Bends over backwards to impress

This is a gorgeous laptop both to hold and behold, with its all-metal chassis that's just 15mm thick. As the 'Flip' in its name suggests, the hinges swivel 360 degrees, offering a range of configurations from standard laptop to large tablet. It even comes with a stylus so you can write across the touchscreen.

“An almost flawless laptop produces quick, quiet performance”

Don't get too excited about its tablet credentials, however. While 1.4kg is lightweight for a laptop, it's too heavy to hold in one hand for any length of time. However, the flexible design is useful for watching films, allowing you to flip the screen round to create a tent-like shape, and sit it on any flat surface for your viewing pleasure.

One curious feature is the 13.4in screen's 16:10 **aspect ratio**, rather than the more common 16:9. Although this results in a black border while watching TV programmes, this is not wide enough to be irritating. The screen itself is an **IPS** panel with superb contrast (which we measured at 1,500:1) and excellent colour reproduction. It's bright, vivid and a pleasure to use for watching films and working in Windows.



MSI opts for a wide touchpad (120x60mm), which is large enough that you can place multiple fingers side by side to perform a wide range of gestures. The fingerprint sensor, on the other hand, measures only 12x12mm, so you need to be precise when using it.

The keyboard is sufficient rather than outstanding. We'd prefer more resistance on the keys and the half-height PgUp and PgDn keys are squeezed awkwardly into the cursor key cluster. However, the main keys are large and well separated, so touch typists should hit decent speeds, and there's a choice of three backlight settings.

What's most surprising is how quiet it is in everyday use. You would never know that it's equipped with a top-end and demanding Core i7-1185G7 processor, supported by 16GB of **RAM** and a fast 1TB **SSD**. The E13 Flip Evo cantered through our **benchmark** tests, comparing well with similarly priced laptops from other manufacturers.

The last comparable model we reviewed was the Huawei MateBook X Pro in Issue 610, which had a Core

i7-1165G7 chip – a slower processor that's more common in laptops of this price. In our tests the difference was significant, with the MSI outperforming the Huawei across the board.

It's not designed to be a gaming PC, but it even performed well here, providing decent **frame rates** of between 40 and 50**fps** with high-detail settings in the screen's default resolution of 1920x1200 pixels.

Possibly the most impressive test result was battery life. In our video-playback test the battery lasted 12 hours 19 minutes, which is up there with the best Windows laptops at any price.

With all the connectivity that most people need – including three **USB-C** ports, **Wi-Fi 6** and one **USB 3.0** port – this is a brilliant, flexible and highly recommended lightweight laptop.

VERDICT A fast, attractive and versatile laptop, perfect for both work and leisure

★★★★★

ALTERNATIVE Huawei MateBook X Pro 2021 **£1,300** This has a less powerful processor, but offers a larger 14in screen with a higher resolution of 3000x2000 pixels



SPECIFICATIONS

Four-core Intel Core i7-1185G7 processor • 16GB memory • Intel Iris Xe graphics • 13.4in 1920x1200-pixel IPS touchscreen • 1TB SSD • 720p webcam • Wi-Fi 6 • Bluetooth 5 • 3x USB-C ports • 1x USB 3.0 port • MicroSD card slot • HDMI port • Windows 10 Home • 15x300x222mm (HxWxD) • 1.4kg • One-year warranty www.snipca.com/39430

LAPTOP | £999 from Amazon www.snipca.com/39441

Microsoft Surface Laptop 4 13.5in

Second portion of chips

From the outside, Microsoft's latest Surface Laptop looks much like previous models, and you'd be forgiven for wondering if anything much had changed. On the inside, however, Microsoft is now offering the option of AMD or Intel processors across the range, whereas AMD's chips were previously only available on the larger 15in model. For this review we tested the smallest, cheapest 13.5in model, which is fitted with AMD's six-core Ryzen 5 4680U processor, 8GB of RAM and 256GB of storage.

It's a slim, lightweight laptop that's lovely to look at and easy to use. It measures 14.5x308x223mm (HxWxD) when the lid is closed, and weighs 1.27kg. Sadly, ports are limited to one USB-C and one USB 3.0. The keyboard is coated in Alcantara – the velvety material that's unique to Surface keyboards and makes them more comfortable on your wrists.

The 2256x1504-pixel resolution, 3:2 aspect ratio touchscreen is taller and more practical than the 16:9 screens found on most laptops. It's not the best dimensions for streaming films and TV programmes, but it's much more effective for working on. In our tests it also proved to be reasonably bright and accurately recreated the colours of the sRGB standard.

The Ryzen 5 processor performed well in everyday tasks, outpacing other laptops at a similar price. It isn't as impressive when running games, lagging behind rivals a little, but this won't be a problem if you're not a gamer.

Competition is stiff around this sub-£1,000 price point and we're torn between this and



“It performed well in everyday tasks, outpacing other laptops at a similar price”

the Samsung Galaxy Book Pro (www.snipca.com/39442).

Prices on the slightly older Samsung laptop have been slashed recently, with the base price of £1,099 down to £860 at the time of writing. The Book Pro's screen is slightly smaller at 13.3in and its 11th-generation Intel Core-i5 processor is slower when running Windows, but it has a generous 512GB SSD and is better at running games.

Alternatively, if you don't mind a slightly bulkier laptop, the 512GB storage version of our current overall favourite laptop, the Lenovo Yoga Slim 7, is currently available for £579 (www.snipca.com/39443) and comes with a Ryzen 7 processor. The Surface marginally outpaced it in basic Windows benchmark tests, but it's a better choice for gamers.

SPECIFICATIONS

Four-core AMD Ryzen 5 4680U processor • 8GB RAM • AMD Radeon graphics • 13.5in IPS 2256x1504-pixel resolution touchscreen • 256GB SSD • Wi-Fi 6 • Bluetooth 5.0 • 1x USB-C port • 1x USB 3.0 port • 1x 3.5mm audio jack • Windows 10 Home • 14.5x308x223mm (HxWxD) • 1.26kg • One-year warranty www.snipca.com/39441

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 website *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.

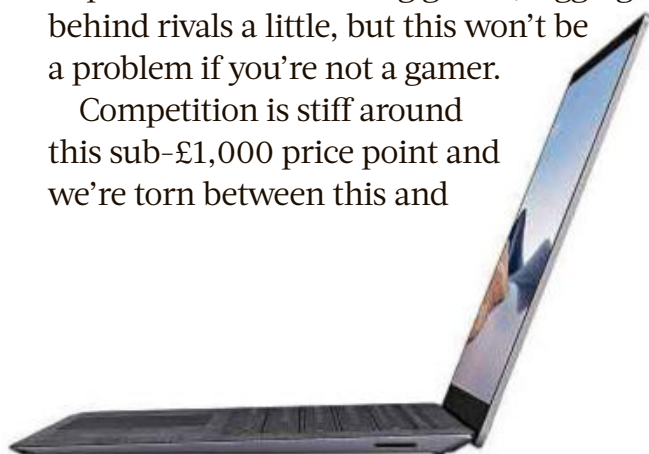
PRICES

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

VERDICT A compact laptop that's better for work than play, running Windows as well as you'd expect a Microsoft laptop would

★★★★★

ALTERNATIVE Samsung Galaxy Book Pro £860 Samsung's 13.3in laptop is currently undercutting the Surface on price with an Intel i5 processor and a larger 512GB SSD



PHONE | £949 from Amazon www.snipca.com/39451

Samsung Galaxy Z Flip3 5G

Case closed

We've been sceptical about the concept of foldable phones up to now, but this phone has confounded many of those expectations. Admittedly, a phone that costs just short of £1,000 remains out of reach of many. However, if you see your smartphone as one of life's little indulgences, we think you'll find this convenient design – which harks back to a time when phones were easier to pocket – might just be worth the money.

“A phone with a tall, high-quality screen that performs well and fits in your pocket”

This phone starts at £949 for the 128GB model, or you can double the memory for an extra £50 (www.snipca.com/39450). Folded, the phone is half the size of a regular smartphone, and you only get access to its large screen when you flip it open. When folded in half, the phone is square and fits neatly into a small pocket or handbag.

It has a small 1.9in screen on the outside (pictured below), so you can quickly glance at **widgets** and notifications (up to four at a time) without opening it. We love the way you can use it to hang up after a call simply by snapping it shut, just like in the good old days.



The phone has **IPX8**-rated waterproofing, which means it should survive being submerged in 1.5 metres of water for up to 30 minutes. However, it doesn't have any rated protection against dust particles, so don't be tempted to take it to the beach.

Despite its unusually tall 22:9 **aspect ratio**, the Z Flip3 works as well as any smartphone when unfolded. It's slim – measuring just 6.9mm wide – and it can be cradled easily in one hand. The side-mounted power button, which also doubles as a fingerprint sensor, is convenient to reach. We particularly like the floating dock on the side of the screen, which can be used to quickly access a list of pre-selected apps.

The 6.7in **AMOLED** main screen has a resolution of 2640x1080 pixels and a maximum **refresh rate** of 120Hz. It's bright and has perfect contrast, though we were a little disappointed with the colour accuracy in our tests, which isn't as high as we'd hoped for from a smartphone at this price.

Qualcomm's latest Snapdragon 888 processor powers the phone and is accompanied by 8GB of **RAM**. As you might expect then, overall performance – as measured in our **benchmark** tests – is up there with the fastest phones around, both for general use and gaming. Everything from opening apps to navigating menus feels incredibly fluid and blisteringly responsive.

However, battery life was fairly poor. In our video-playback test it lasted 15 hours 54 minutes. By comparison, the Samsung Galaxy Fold3 5G (see our review, Issue 615) lasted for two-and-a-half hours more.

There is a pair of 12-megapixel cameras

SPECIFICATIONS

Octa-core Qualcomm Snapdragon 888 • 8GB of RAM • 128 or 256GB storage • 1.9in 512x260-pixel cover screen • 6.7in 2640x1080-pixel inner screen • 12-megapixel main camera • 12-megapixel ultrawide camera • 10-megapixel selfie camera • Android 11 • 6.9x166x72mm (unfolded), 17x86x72mm (folded) (HxDxW) • 183g • One-year warranty www.snipca.com/39451



on the front cover – a standard camera and an **ultrawide** unit with a 123-degree field of view. Unfold the Flip and you can use the simple 10-megapixel selfie camera. These are so-so camera specifications, but the shots they capture look better than you might expect, with plenty of detail, even in poor light.

There aren't too many foldable phones to compare this with, except Samsung's own Galaxy Z Fold3 5G, though its tablet-like form represents a different concept, and it costs significantly more at £1,599. There's also the Motorola Razr, but with weaker specs, a much higher price (£1,200) and a less impressive design, it doesn't come close to the Samsung Galaxy Flip3.

VERDICT Despite our initial reservations, this is a surprisingly well-designed model, that does everything a regular high-quality phone can do, but also folds up small when not in use

★★★★★

ALTERNATIVE Motorola Razr £1,200 Lenovo's foldable offering is more expensive, despite its smaller screen and slower processor



SMARTPHONE | £399 from Amazon www.snipca.com/39533

Nokia XR20

Want a fast phone? Tough!

One of the more worrying aspects of smartphones is their fragility. Even the most expensive phone can be rendered unusable the first time it slips through your fingers. The new Nokia XR20 aims to solve this problem with a tough exterior that can survive the odd knock or two, and does so without sacrificing its looks.

“Tough as old boots, but its specs are poor for the price”

The outer rim of the phone may be protected by rubber ‘bumpers’, but it still looks relatively sleek. The whole thing fits nicely in your hand, despite it being bigger than the average phone, and the textured rear offers a firm grip.

The front is covered by a protective layer of **Gorilla Glass Victus**, and the device is **IP68**-rated for protection against dust and water, meaning you can submerge the phone up to a depth of 1.5 metres for at least half an hour. It’s also capable of withstanding temperatures between -25°C and 55°C, and drops of 1.8 metres. We particularly like the red emergency button on the top edge that, when pressed, calls the emergency contact you’ve set up.

However, it’s powered by a relatively weak Qualcomm Snapdragon 480 processor and offers 4GB or 6GB of **RAM**. It’s a chip we’d normally expect to see in much cheaper phones, such as the Motorola Moto G50 (£170 from www.snipca.com/38633). Motorola’s own tough phone, the Moto Defy (£270 from www.snipca.com/39037) has a

SPECIFICATIONS

Eight-core Qualcomm Snapdragon 480 • 4GB or 6GB memory • 128GB or 256GB storage • 6.67in 60Hz 2400x1080-pixel IPS screen • 48-megapixel rear camera • 13-megapixel ultrawide camera • Wi-Fi 6 • Bluetooth 5.1 • Android One • 10.6x82x172mm (HxWxD) • 248g • One-year warranty www.snipca.com/39533



Snapdragon 662, which is an older chip that’s even slower than the Nokia’s.

The XR20’s limited chip can run only Android One – the stripped-back version of the operating system designed to ensure it runs adequately on cheaper models. However, it failed to perform particularly well in our tests, lagging behind the Moto G50, and only just bettering the Moto Defy.

With a 4,630mAh battery, the XR20 just about stretches to a couple of days’ use on a single charge, though it fell behind most rivals in our video-playback test, lasting a little over 17 hours.

The large **IPS** screen measures 6.67in across the diagonal and has a resolution of 2400x1080 pixels. It may be tough, but it has only a 60**Hz refresh rate**. It’s bright enough to be used in daylight, but it recreated only 85.9 per cent of the **sRGB** colour standard – we’d expect better from a phone of this price.

On the back there are two cameras – a 48-megapixel main camera and a 13-megapixel **ultrawide** unit – both of which produce images that lack vibrancy and detail.

VERDICT It may be tough on the outside, but this phone is simply too expensive for what’s inside

★★★★★

ALTERNATIVE

Motorola Defy **£279**

A cheaper phone with a similarly tough build, but it has a smaller **720p** screen and doesn’t support 5G



CHOOSE THE RIGHT SPECS

Phone battery power



What does it do?

All batteries have a power rating, measured in milliamp hours (mAh). It’s a useful specification for comparing phone batteries. However, it won’t necessarily tell you how long a battery will last in any given device, because each device requires a specific amount of power, depending on factors like their processor’s speed and screen’s resolution. You can’t therefore assume that a battery with a high mAh will last longer than one with less.

How does it work?

mAh is a measure of capacity. Phone-battery capacity typically numbers in the thousands, such as the 2,800mAh Samsung battery (pictured right). This means it could run a phone that draws at a rate of 100 milliamps (mA) for 28 hours.



What are the specs?

The average phone battery is around 3,300mAh. If you have a larger battery, you can expect your phone charge to last longer than a model with similar specifications but a smaller battery. If long life is particularly important to you, opt for the largest battery you can, while remembering that other factors will affect it.

Can I change it later?

Batteries deteriorate over time, reducing their capacity. So, if you’d like to use your device for longer, you’ll need to replace its battery at some point. You might be able to install a more powerful battery, but you should check with the manufacturer to make sure it’s compatible.

PRINTER | £290 from Cartridge People www.snipca.com/39496

Lexmark MC3326i

Laser precision



Lexmark's MC3326i is one of the cheapest colour laser multi-function printers we've seen, yet it offers a great range of features. It brings together print, copy, scan and fax, connects to either a wired or wireless network, and does all this in a reasonably compact device. It's capable of double-sided (duplex) printing, and comes with a 50-page document feeder for the scanner.

“Impressive print speeds and quality, but costly long term”

With a quoted print speed of 24 pages per minute (ppm) it isn't the fastest laser printer, but it's perfectly sufficient for a home office. And it delivers on its promises, with a 24-page black-and-white text document delivered in 59 seconds, (albeit after a wait of 11 seconds for the first page). Switching to colour didn't slow it down, either, as we recorded the same time for a 24-page mixed colour and text document, though printing on both sides of a page dropped speeds to 13ppm.

Print quality is also good, with beautifully sharp text and plenty of detail in black-and-white photos. Colour prints

are also satisfactory, if not quite flawless. Complex colour transitions in our test chart looked ultra-smooth, while photos were bright and vibrant, but there was a hint of banding in larger blocks of colour.

Scan operations are swiftly dispatched, with a 10-page, single-sided test document sweeping through the scanner at 18ppm. Note, however, you won't be able to scan both sides of a page when using the document feeder.

The catch here is the running costs. Lexmark's standard toner cartridges represent poor value, with mono and colour page costs working out at 4p and 18.5p respectively. Even the high-yield versions reduce these to only 3p and 13.7p per page. If you print a lot, the costs could mount up.

For a laser multifunction printer with cheaper running costs, look to the HP Neverstop (£260 from www.snipca.com/39498). You are sacrificing colour printing, but mono prints cost as little as

SPECIFICATIONS

4800x4800ppi print quality • 600x600ppi scan quality • 2.8-inch LCD touchscreen • Duplex printing • 250-sheet input tray • 100-sheet output tray • 50-sheet automatic document feeder • USB, Ethernet or Wi-Fi connection • 344x411x394mm (HxWxD) • 19.4kg • Four-year warranty www.snipca.com/39496

0.2p each. If colour is important, an inkjet printer might be a better bet. The Canon Pixma G650 (£250 from www.snipca.com/39500) uses six colours and prints brilliant photos. Its colour prints cost only 1p each, though its print speeds aren't as fast.

VERDICT An affordable colour laser printer that's faster than most inkjets and includes scanning and copying options, but costly if you print a lot



ALTERNATIVE Brother DCP-L3510CDW £269 If you're prepared to live without the scanner's sheet feeder, this model has a similar specification for a lower price



WHAT SHOULD I BUY?

We solve your buying dilemmas

What's the best remote control for my laptop?

Q

I want to get a good remote control for listening to the music on my laptop, which mostly sits on a desk rather than my lap. The last one I tried came with a terrible infrared receiver, which plugs into the laptop and was hopeless at picking up the signal from the remote. Can you suggest a better one?

Stephen Murchieson



A

The option we like the look of is the DroiX G10 (pictured). It's actually an air mouse, so you can control the cursor on the screen if you want to, but you don't have to use this function. It also operates as a simple remote control that lets you click through options, and has enough media controls to adjust key elements of music playback, such as volume and skipping between tracks.

It communicates with your PC using 2.4GHz wireless radio instead of infrared, so is much more reliable, and works up to 10 metres away.

You can buy it direct from DroiX for around £14 (including postage) at www.snipca.com/39504. Alternatively, you can get it via Amazon for £17 from www.snipca.com/39503.



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



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



Reviews

SMART DOORBELL | £180 from Google www.snipca.com/39474

Nest Doorbell (battery)

Doesn't ring a bell

Google's latest Nest Doorbell works as both a video camera and a doorbell. The camera captures 30fps video at a resolution of 960x1280 pixels, with a 145-degree field of view.

The device sends you alerts when people approach your door and when someone presses the button. The one thing it won't do is go 'ding dong' because it doesn't come with its own chime unit. However, you can wire it to an existing unit or make it 'ring' on any Nest smart speakers you may have.

There are plenty of installation options. You can either wire it to your existing

SPECIFICATIONS

960x1280-pixel video resolution • 30 frames per second • 145-degree field of view • 3.05m night vision • Wi-Fi 4 (2.4GHz only) • USB-C port for charging • 160x46x24mm (HxWxD) • 206g • Two-year warranty www.snipca.com/39474

doorbell wiring, have it professionally installed if you don't have wiring in place, drill a hole and feed a supplied cable to an existing wall socket, or use its battery – the easiest option of all. Google states that the battery should last for up to two-and-a-half months, and it recharges via a USB-C port, though you will be without a doorbell for the few hours it takes to charge. Video footage can be viewed on a phone or tablet, and there's two-way audio, so you can have a conversation with your visitor even if you aren't at home.

This is all fairly impressive, but we don't think it's the best video doorbell for the money. For that, look to the Eufy Video Doorbell 2K (£179 from www.snipca.com/39484), which records video in far higher resolution (so images are even clearer) and comes with its own

chime unit, so you can hear the doorbell ring even if you don't have Nest devices or your phone to hand.

VERDICT A decent video doorbell, particularly for those who already use Google smart speakers, but there are better options available

★★★★★

ALTERNATIVE Eufy Video Doorbell 2K (battery-powered) £180 This is generally a better choice because it gives you higher resolution, and comes with a chime unit



SECURITY CAMERA | £180 from Google www.snipca.com/39475

Nest Cam (battery)

Big budget film

While we're on the subject of new Nest devices, Google has also launched a security camera that can be used inside or outdoors and is weather-proof rated to IP54. You can buy one unit for £180 or a twin pack for £320. Each camera comes with its own charging cable and magnetic plate for mounting. Attach the plate to a wall using screws or magnetically (depending on what you're attaching it to) and the camera clips on and off easily.

The camera is capable of recording 30fps video at 1080p resolution (1920x1080 pixels) and a reasonably wide

SPECIFICATIONS

1920x1080-pixel video resolution • 30 frames per second • 130-degree field of view • 6.10m night vision • Wi-Fi 4 (2.4GHz only) • USB port for charging • 830x830x830mm (HxWxD) • 398g • Two-year warranty www.snipca.com/39475

130-degree field of view. There's a built-in speaker and microphone for two-way audio communication and the camera provides automatic, black-and-white night-vision recording with the help of six infrared LEDs.

Image quality and audio quality are both excellent, and object detection generally works well – the camera can differentiate between a person, an animal and a car, for example.

The problem is that you need to spend £5 per month on Google's Nest Aware service, otherwise you can record only up to three hours of footage, which may not get you through a night if there's a lot going on.

Because of this limitation, we prefer the Eufy SoloCam E40 (£99 from www.snipca.com/39483 – see Issue 615, page

28). This has most of the same features as the Nest Cam for less money, but crucially includes its own internal storage, with plenty of space for recordings.

VERDICT A capable security camera, but it requires a costly monthly subscription to get the most from it

★★★★★

ALTERNATIVE Eufy SoloCam E40 £99 A cheaper camera that has similar features but captures higher resolution images (2560x1440 pixels) and doesn't require a subscription



PC | £497 from Currys www.snipca.com/39537

Acer Chromebox CX14

Out the Windows

Chrome OS is Google's operating system for desktop PCs and laptops. Instead of running a wide range of programs, as Windows does, it simply runs a web browser (Chrome), through which you can access online versions of software, such as Google Docs for office work, web-based email, and any other essential software that has a web-based alternative. The upside of not having to install anything is that Chrome OS is fast and secure. The downside is that you can't run any of your favourite Windows programs unless they're also available online.

“If Chrome OS provides all you need, this is a good choice”

However, this new Chromebox from Acer can also install and run Android apps from the Google Play Store. It's configured as a small desktop PC, so you'll need to add your own monitor, but it comes with a wired keyboard and mouse. Setup is simplicity itself: just plug it in, switch it on and log in with your Google account.

The model we reviewed is powered by a 10th-generation Intel Core i5-10210U processor with 8GB of memory and a 256GB SSD. When compared with a typical Windows PC this won't sound especially powerful, but it's more than sufficient to run the less demanding Chrome OS.

Once you're up and running, the first thing you'll notice is that the CX14 is fast – even with a couple of dozen Chrome tabs open and several Android apps running in the background. It's also incredibly quiet, with a passive cooling system that slows the machine when things start getting too hot, rather than relying on noisy fans.

The box has a USB-C port, five USB 3.2 ports, two HDMI ports, an Ethernet port, a 3.5mm audio jack and a microSD card slot. Wireless connectivity is provided by



Wi-Fi 6 and Bluetooth 5.0.

It's worth noting that this specification is above and beyond what you need to run Chrome OS. If you want to run it more cheaply, consider the HP Chromebox G2 (£398 from www.snipca.com/39539), which has an older processor and half the storage. For a similar-sized PC that runs Windows instead, the Chillblast Mini PC (£539 from www.snipca.com/39538) is a good alternative.

SPECIFICATIONS

Four-core Intel Core i5-10210U processor • 8GB memory • 256GB SSD • 1x USB-C port • 5x USB 3.2 ports • 2x HDMI ports • Ethernet port • Wi-Fi 6 • Bluetooth 5.0 • Chrome OS • 40x149x150mm (HxWxD) • One-year warranty www.snipca.com/38537

VERDICT A fast and quiet way to access Chrome and Android, but it's more powerful (and therefore more expensive) than many will need

★★★★★

ALTERNATIVE

HP Chromebox G2 £398 This is cheaper but uses an older 7th-generation Intel Core i5 processor and has only 64GB of storage



DO I REALLY NEED...

A Windows tablet with 120Hz screen?

What is it?

Microsoft's new Surface Pro 8 (pictured) has launched with a screen that has a refresh rate of 120Hz. Most tablet screens have a refresh rate of 60Hz, meaning the screen is updated 60 times per second.



What does it do?

By increasing a touchscreen to 120Hz, everything feels much smoother, from scrolling to animations. Apple and Samsung's top-end tablets already offer this refresh rate, but this is the first 120Hz tablet that runs Windows.

What's the catch?

A 120Hz screen needs the graphics power to ensure that the screen's ability to update can be fulfilled by the rest of the hardware. It also requires more power, so may drain the battery faster. The Surface Pro 8 seems to have these bases covered.

So can I do without it?

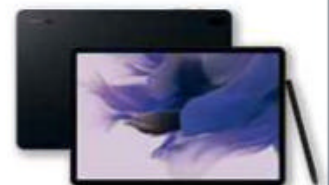
For now, yes. But once you've used a 120Hz screen you'll find that older, 60Hz screens start to feel very slow.

NEXT ISSUE

On Sale **Weds 20 Oct**

Samsung Galaxy Tab S7 FE

Brilliant 12.4in tablet gets a more affordable relaunch



Acer Swift 3

A new version of Acer's slim 14in laptop with the latest Intel chips

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LAPTOP

PRICE
DROP

Lenovo Yoga Slim 7 (256GB)
£579 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 £1,499 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. £1,740 from www.snipca.com/35840

APPLE IPAD

PRICE
DROP

Apple iPad 10.2in
£319 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. £479 from www.snipca.com/33050

ANDROID TABLET

PRICE
DROP

Lenovo Tab P11 Pro
£549 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. £289 from www.snipca.com/38606

APPLE IPHONE

PRICE
DROP

Apple iPhone 12
£679 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. £389 from www.snipca.com/34773

ANDROID PHONE

Xiaomi Poco F3
£299 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

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SCAN ME

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



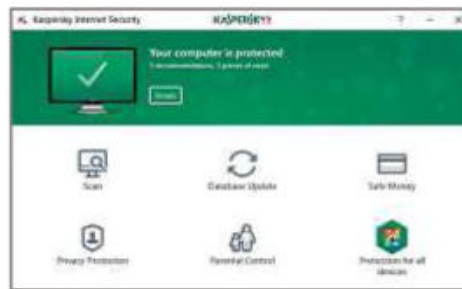
Now with built-in light and audiobook support, this budget model is fine for most users, though limited by its 4GB of storage. The Paperwhite (£120) is even sharper, waterproof, and has bigger storage options as well as a cellular data option (£100 extra).

ALTERNATIVE Kobo Clara HD

Not waterproof, but has more lighting options to avoid blue light. £120 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. £16.99 from www.snipca.com/39570

WEBCAM

Logitech C925e Business Webcam
£75 from www.snipca.com/38385
Tested: Issue 608



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

ALTERNATIVE Anker PowerConf C300

Good image quality, crisp audio and lots of features. £80 from www.snipca.com/38752

PC MONITOR

PRICE
DROP

BenQ GL2780
£144 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. £266 from www.snipca.com/37096

ROUTER

Netgear Nighthawk RAX80
£300 from www.snipca.com/39013
Tested Issue 603



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

ALTERNATIVE Asus RT-AX82U

Slower than the Nighthawk on Wi-Fi 6, but faster on Wi-Fi 5, so a better choice for older devices. Has four Gigabit Ethernet ports. £130 from www.snipca.com/37675

PRINTER

PRICE
DROP

Canon Pixma TS8350
£139 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... Netgear Orbi LBR20 tri-band router

Issue 613's competition to win this tri-band router was so popular that we're giving you another chance to win one.

Netgear's Orbi LBR20 is a 4G LTE & Tri-Band Mesh WiFi router that works with any compatible network, including EE, O2, Three and Vodafone. Insert a nano-SIM card to get speeds up to 1.2Gbps. It connects with Orbi

satellites to create a mesh Wi-Fi system throughout your home, covering up to 1,500 square feet.

It has two Gigabit Ethernet ports to keep your wired devices connected. You can control and set up guest networks using Amazon Alexa and Google Assistant, while parental controls let you pause or schedule device access, set online limits, view which sites have been visited online, and block sites from being visited.

It comes with advanced antivirus protection in the form of Netgear



Armor, powered by Bitdefender. This blocks attacks across your network on an unlimited number of devices.

To enter this competition, answer the question at www.snipca.com/39461 and enter your details. It runs until midnight Tuesday 19 October. Good luck!

You can buy the **Netgear Orbi LBR20** for £370 from <https://store.netgear.co.uk>. For Netgear product updates, follow [@NETGEAR](https://twitter.com/NETGEAR) on Twitter.

NETGEAR®

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. £295 from www.snipca.com/27309

SOLID-STATE DRIVE

Samsung 970 Evo Plus
500GB
£77 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. £60 from www.snipca.com/37304

SMART SPEAKER

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



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

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

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

35 Make VLC do more by installing add-ons

38 Turn a website into an audiobook

40 Readers' Tips

42 Browser Tips: Force websites to use secure connections

PLUS

44 Phone & Tablet Tips

46 Make Windows Better

47 Make Office Better

48 In The Club: Collaborate on Google Maps

HOW TO...

Make VLC do more by installing add-ons

by Nik Rawlinson

What you need: VLC media player **Time required:** One hour

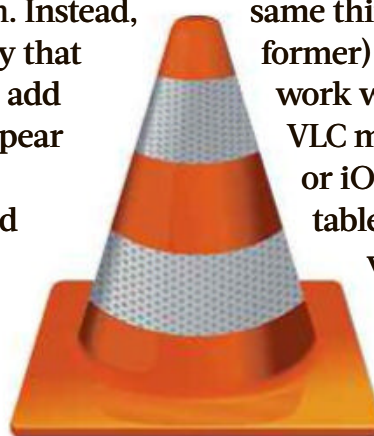
VLC media player is one of the best audio and video playback programs on any operating system. It can handle all common video and music formats – including DVDs – works with subtitles, and is free, with no surprise fees. Indeed, unless you're committed to an alternative, we'd recommend giving it a go: you've nothing to lose.

The default version of VLC is packed with features. Its developers could have added more, but this would have

consumed time and resources better spent improving the program. Instead, they designed it in such a way that third-party developers could add their own features, which appear within VLC's menus.

Many of these are organised in the VideoLAN Add-ons catalogue. Visit <https://addons.videolan.org/browse> then click VLC Extensions in the sidebar (VLC uses

'add-ons' and 'extensions' to mean the same thing, but we'll stick with the former). These add-ons are designed to work with the desktop versions of VLC media player, not the Android or iOS editions on a smartphone or tablet, or the browser-based version that you can add to Chromium browsers (do this by installing the browser extension at www.snipca.com/39476).



How to install an add-on

There are two ways to install most add-ons for VLC media player (see our Workshops on pages 36 and 37): through the player itself, or by downloading them from <https://addons.videolan.org/browse>, where you'll find a wider choice. That's where you'll find the first three add-ons we've recommended below – click the link then follow our instructions. To get the fourth add-on (TuneIn Radio) you'll need to go through VLC, as we explain.

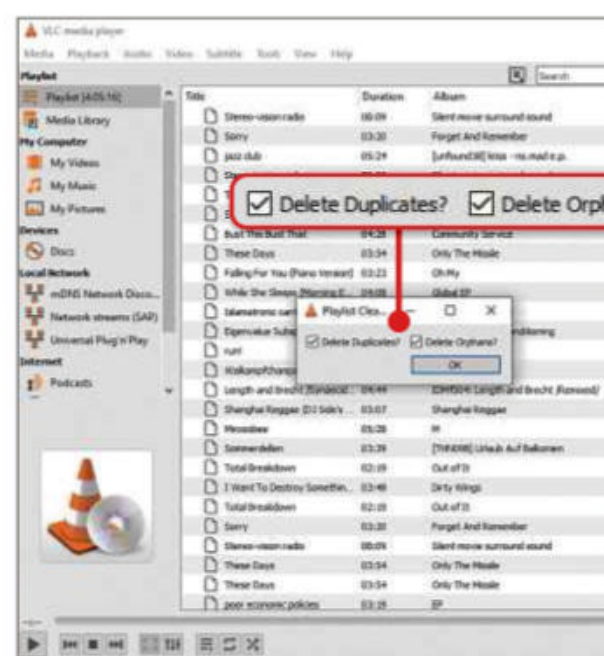
FOUR FANTASTIC VLC ADD-ONS
Remove false & duplicate entries
Playlist Cleaner www.snipca.com/39488

Playlist Cleaner does a couple of simple things well. First, it finds entries on

playlists that don't exist on your hard drive, so it can remove them. And second, it looks for and removes duplicates.

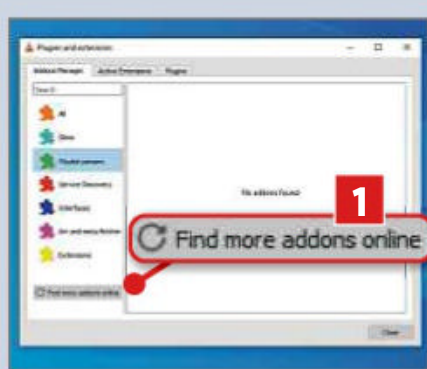
Open the playlist you want to clean by pressing Ctrl+O and navigating to it. Next, click View followed by 'Clean orphaned and duplicate tracks from the playlist'. You'll now see two options ticked: Delete Duplicates and Delete Orphans (see screenshot right) – 'Orphans' are entries that no longer exist. Either leave both ticked, or untick one that you don't want. Click OK.

After a few seconds it will tell you how many tracks have been removed. You'll notice that the playlist running time has been shortened to match this reduction.



Playlist Cleaner finds duplicate entries, and those that no longer exist (Orphans)

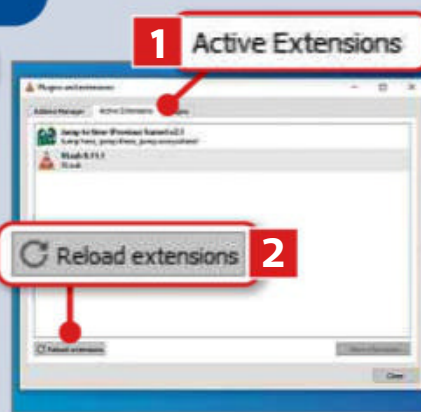
WORKSHOP Install add-ons through VLC software



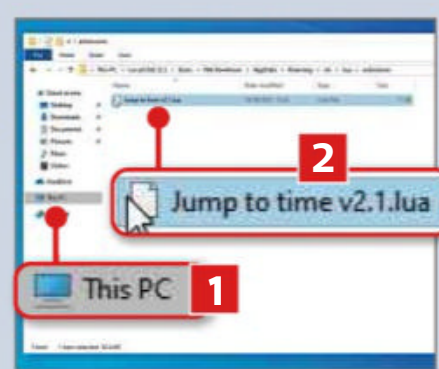
1 Launch VLC media player and click Tools, followed by 'Plugins and extensions'. If you've never installed any add-ons before, the list will be empty, as you'll see if you click through the categories in the sidebar. Remedy this by clicking 'Find more addons online' **1** at the bottom. As soon as it's updated the list, that button will disappear.



2 You can now click through the categories, or use the search box at the top if you know which add-on you want to install. The descriptions beside each one are short, but there's rarely any need to revert to the website for a fuller explanation: click whichever add-on looks interesting, then the 'More information...' button **1**. If you're happy, install by clicking the Install button **2**.



3 After a few seconds a green Installed tab will appear to the right. Click 'Close' to complete the process. If you ever want to check what you've installed, open the 'Plugins and extensions' panel again, click Active Extensions **1**, then the 'Reload extensions' button **2**.



4 To delete an add-on, open a new File Explorer window, then click This PC **1** in the sidebar, and open your C: drive in the main part of the window. Double-click Users, then your name, followed by AppData, then Roaming. Open the 'vlc' folder, then the 'lua' folder, and finally 'extensions'. Your address bar should look like this **2**. Select the one you want to remove, then press Delete on your keyboard.

Access film details quickly

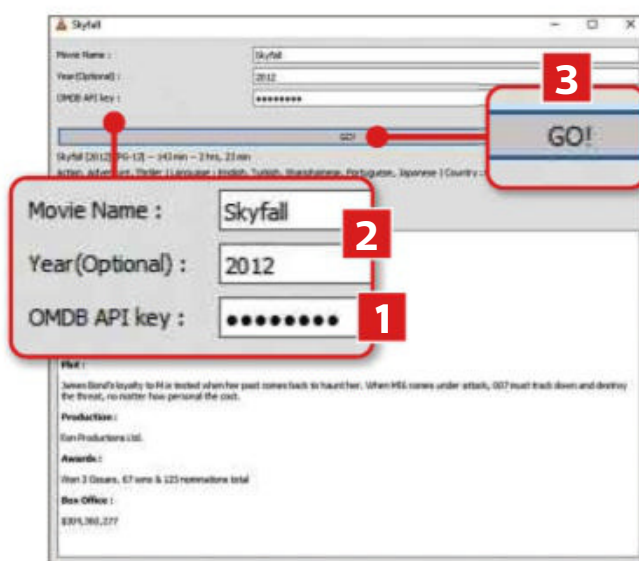
Get Movie Info www.snipca.com/39490

You may already know about IMDb (Internet Movie Database, www.imdb.com), which contains exhaustive information of the cast and crew for just about any film or TV show you could ever imagine. OMDb is the **open-source** equivalent, containing similar details, but available for third-party developers to add to their software without paying a fee. It's what Get Movie Info uses to retrieve film details in VLC.

To install it you'll need what's known as an API Key. 'API' stands for Application Programming Interface, and is simply the gateway through which developers can interact with a service that they don't own. The 'key' is a unique string of characters that unlocks it. You can get a free key for the OMDb database, letting you look up 1,000 films a day.

Start by clicking View in VLC, followed by Get Movie Info, then the 'get key' link in the box that pops up. This redirects you to a web page where you'll need to click 'FREE! (1,000 daily limit)', and provide an email address, your name, and a brief description of how you're going to use the service. 'VLC plugin' should suffice for the last of these requirements.

Check your inbox for an email from the service containing your API Key. Copy the



Install the OMDb add-on to search for film information in VLC

code beside 'Here is your key:', then click the link at the bottom of the email where it says 'Click the following URL to activate your key'.

Switch back to VLC and paste the key you copied into the box beside 'OMDb API key' (**1** in our screenshot above). You should only need to do this once as it will remember the key the next time you use it. Now type the name of the film you want to look up in the 'Movie Name' box **2** and, if there are several films with the same name, put a year in the optional box below to help identify the correct one. Click 'Go' **3** to send your query to the database, which should return with ratings, actor, plot and crew details.

Play tracks you've been neglecting

History Based Shuffle

www.snipca.com/39491

If you find yourself playing the same songs again and again and want to freshen things up, install History Based Shuffle. This 'demotes' tracks you've been playing a lot recently, replacing them with songs that have languished unplayed for a while. Open the playlist (press Ctrl+O, then select the playlist file) and select Shuffle Playlist from the View menu.

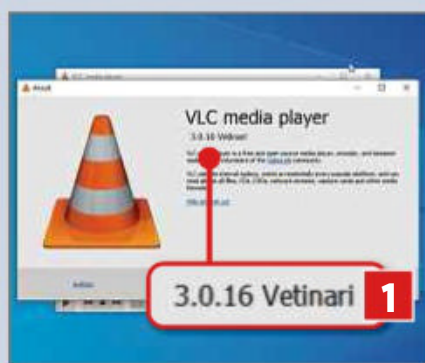
Stream radio stations

TuneIn Radio www.snipca.com/39489

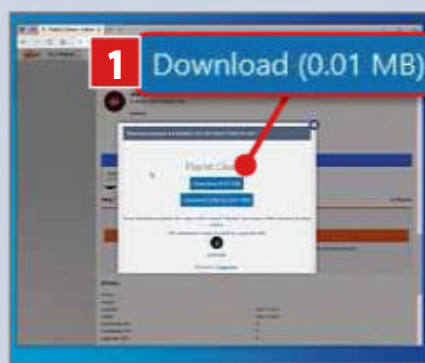
Installing TuneIn Radio takes more work than the others here because it's downloaded as a **ZIP** file containing several items that need to be put in specific locations. Right-click the file in the Downloads folder, then click 'Extract All...'. Leave the suggested destination address as it is and keep the 'Show extracted files when complete' option ticked, then click Extract.

Quit VLC media player, then click the Start menu in Windows and type **CMD**. Right-click Command Prompt and select 'Run as administrator'. When Windows asks if you're happy to make changes to your device, click Yes. Now

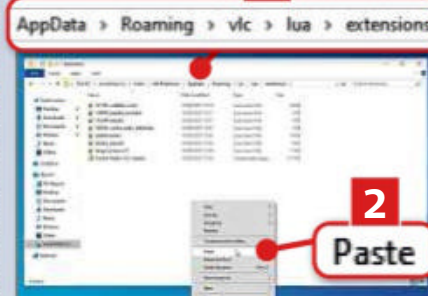
WORKSHOP Install add-ons through the VLC website



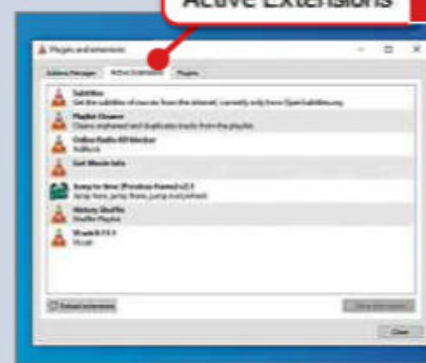
1 Browse or search the catalogue at <https://addons.videolan.org/browse>. When you've found an add-on you want to install, check the listing for any minimum version requirements to make sure it will work with your version of VLC 1. You can find the version you're running by switching back to VLC media player and pressing Shift+F1.



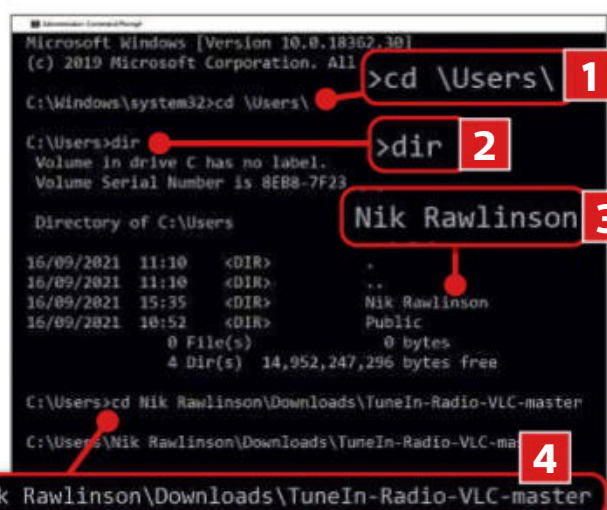
2 Click the large blue Download button. You'll see a box with two options: the main download location, or a 'mirror', which is an exact copy of the file, stored on a second server. We'd recommend clicking the first, labelled simply Download 1.



3 When the download has finished, open a new File Explorer window and click Downloads in the 'Quick access' section of the sidebar. Right-click the file you've just downloaded (it will end in .lua) and click Copy. Now click 'Local Disk (C:)' in the sidebar and navigate through the folders in the main part of the window to Users, [your name], Roaming, vlc, lua, extensions 1. Press Enter, then right-click any blank area in the main part of the File Explorer window, and click Paste 2.



4 Switch back to VLC media player and click Tools followed by 'Plugins and extensions'. Click the Active Extensions tab 1 and the add-on you've just installed should be there.

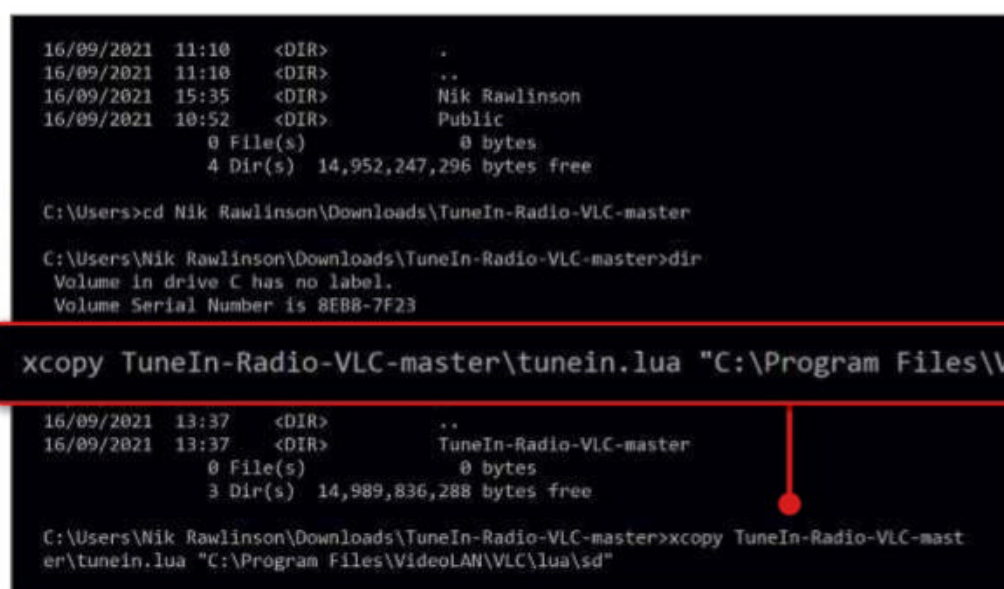


Type these commands into Command Prompt to see the TuneIn Radio files you extracted

type `cd \Users\` (1 in our screenshot above) and press Enter. Next, type `dir` 2 and press Enter. Check the name of your user folder. In our case, it's Nik Rawlinson 3.

Type `cd [user name]\Downloads\TuneIn-Radio-VLC-master` 4, replacing [user name] with the name of the user folder you just checked, then press Enter. If you type `dir` and press Enter again, you should now see the files that you extracted from the compressed download. Your next task is to copy them to the VLC folder.

Quit VLC, if it's running. Go back to Command Prompt and type the following (as shown in our screenshot above right) then press Enter: `xcopy TuneIn-Radio-`



Use this command to copy TuneIn's files to your VLC folder

`VLC-master\tunein.lua "C:\Program Files\VideoLAN\VLC\lua\sd"` (you can cut and paste this from our Pastebin account: www.snipca.com/39540)

Finally, type the following and press Enter: `xcopy TuneIn-Radio-VLC-master\playlist* "C:\Program Files\VideoLAN\VLC\lua\playlist"` (cut and paste this from www.snipca.com/39541).

Now relaunch VLC, then click Playlist on the View menu. Scroll down the left-hand sidebar and click TuneIn Radio in the Internet section (1 in our screenshot above right). After a few seconds of downloading information from the TuneIn servers, it will display a list of categories. Click the chevrons (>) to the left of any one of them 2 to



You can stream radio stations listed in the TuneIn catalogue via VLC

view its contents, then double-click one of the radio stations it contains to start streaming.

Workshop

Turn a website into an audiobook

What you need: Web browser

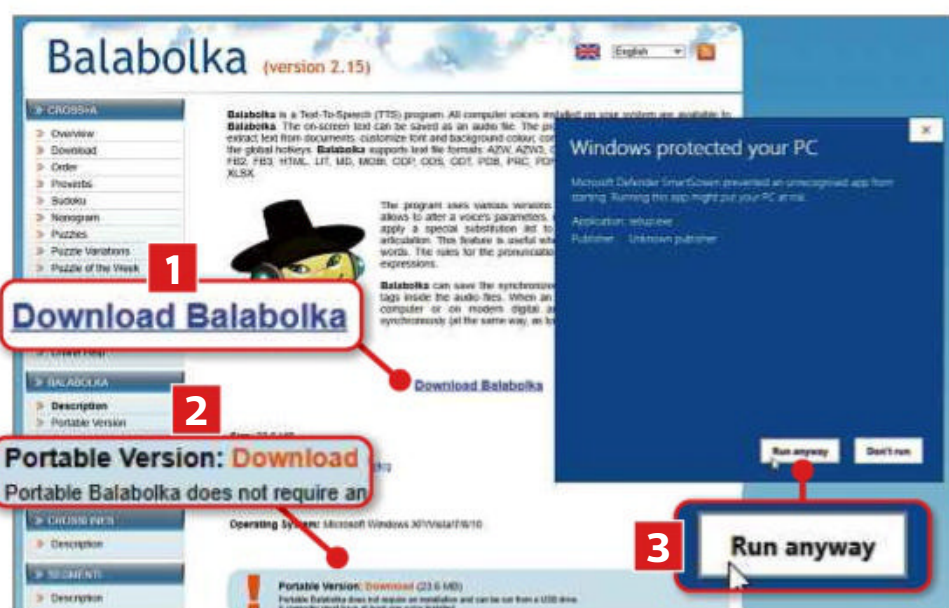
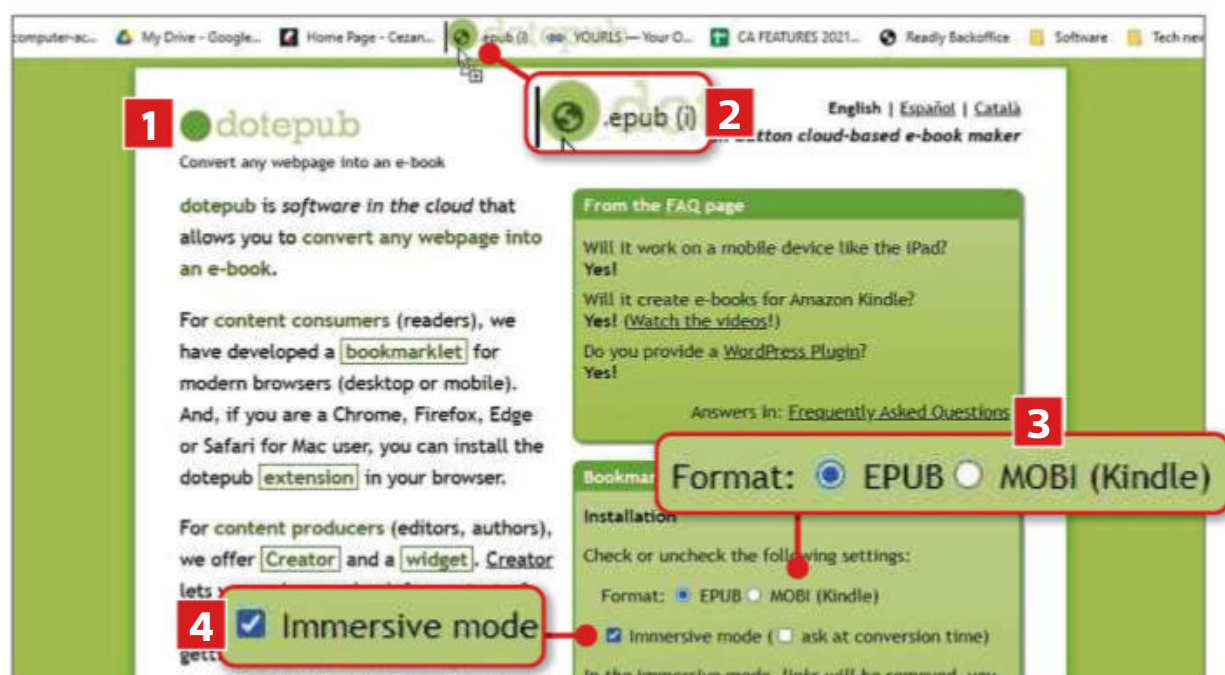
Time required: 20 minutes

Creating an audio version of a web page is a great way to get information from an online article when you're too busy to sit down and read it – especially if there's a lot to digest. While you could use Windows 10's Narrator screen reader for this job, a better option is to convert the

page into an audiobook file that you can listen to in any media player on any device, even when you're offline. Here we explain how to use the Dotepub software to save web pages in an audiobook format by first converting them into ebook files, effectively giving you the best of both worlds.



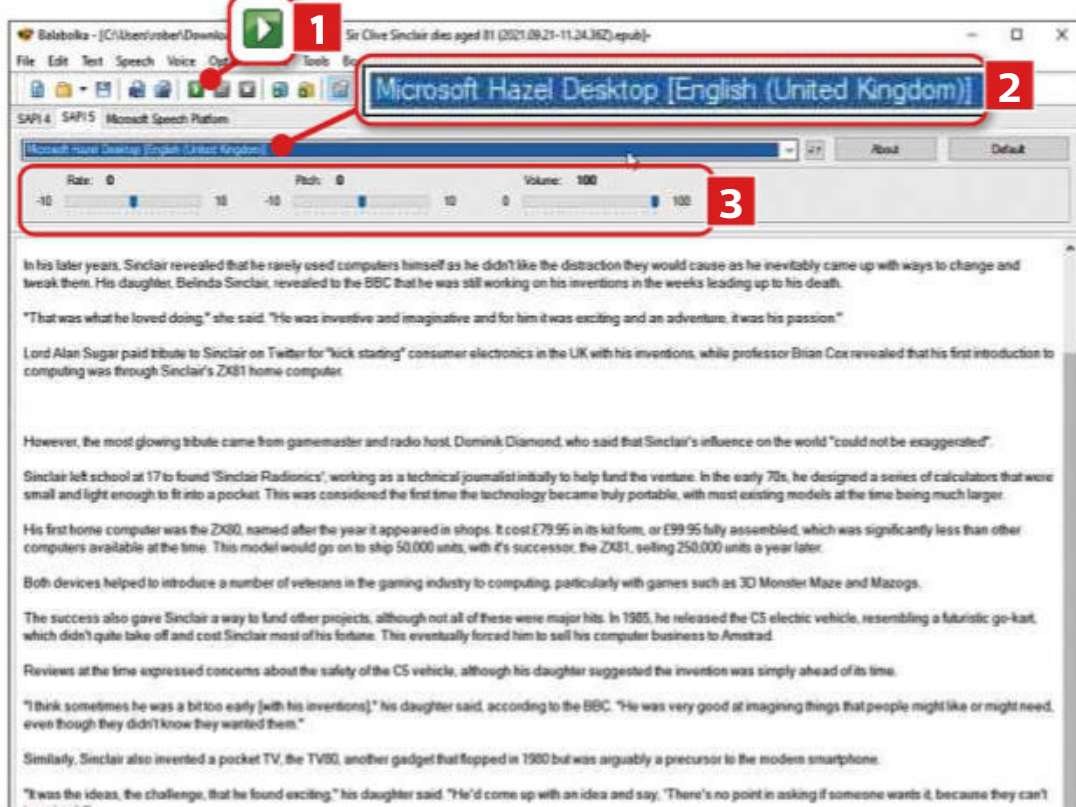
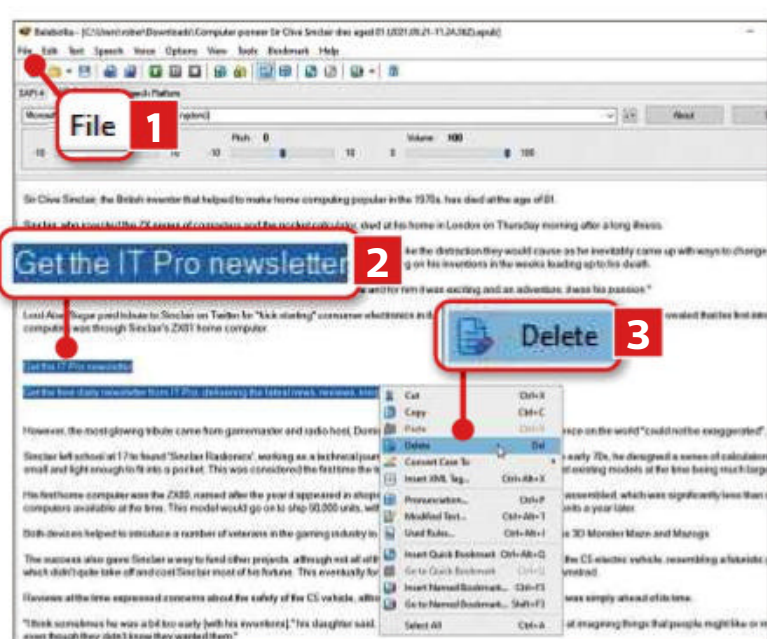
STEP 1 Go to <https://dotepub.com> and drag the 'dotepub' logo **1** at the top of the page to your web browser's bookmarks toolbar **2**. This will create a **bookmarklet** that you can click to download a web page as an ebook. First, however, choose which ebook format to save pages as – either **EPUB** or **Mobi** **3** (which is compatible with Amazon's Kindle e-readers) – and make sure 'Immersive mode' **4** is selected, to remove links, images and videos from articles. If the bookmarklet doesn't work, you can install the Dotepub extension for Chrome, Firefox, Edge or Safari by clicking the relevant browser's 'Install' link. This offers the same options as the bookmarklet.



STEP 2 Next, you'll need a program to convert ebook files into an audio format. We recommend the free text-to-speech software Balabolka (Russian for 'chatterer'). Download Balabolka by visiting www.snipca.com/39534 and selecting the standard **1** or portable version **2**, which can be run from a USB stick and doesn't require installation. Note that Windows may show a SmartScreen warning when you first extract and run Balabolka, but the program is safe to use so click 'More info' and then choose 'Run anyway' **3**.



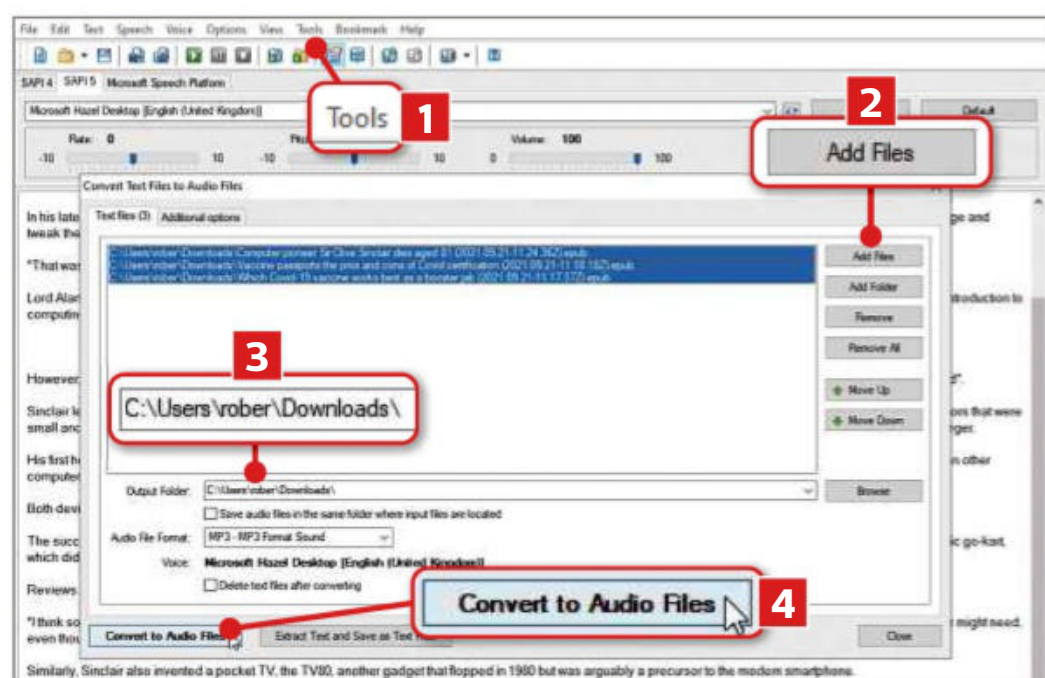
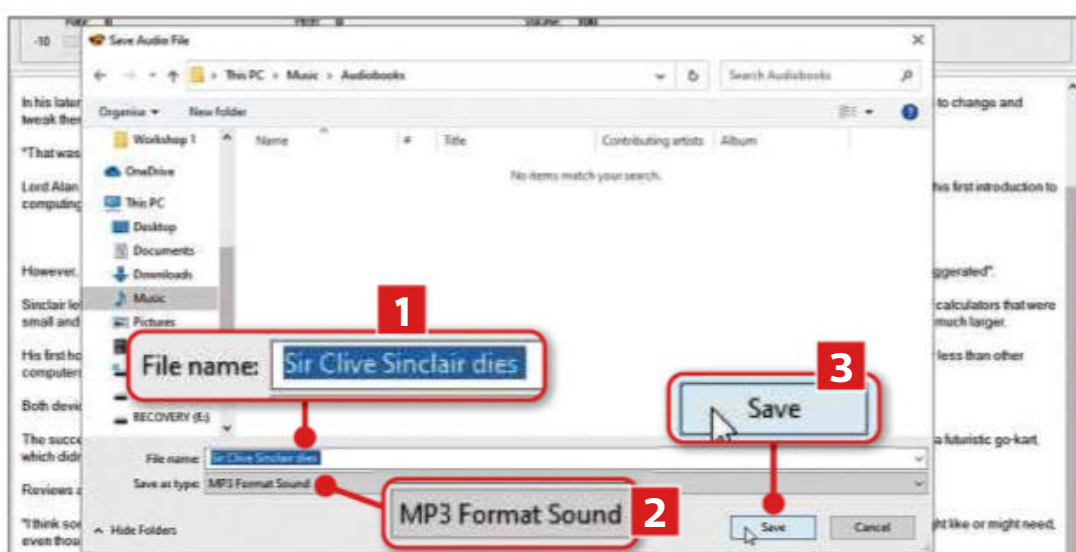
STEP 3 Back in your browser, visit a web page that you want to turn into an audiobook and click the Dotepub bookmarklet **1** or the extension's button on the toolbar. Provided the page is compatible with Dotepub, you'll see a message at the top of your browser saying 'Conversion in progress' **2**. The converted ebook will be saved to your browser's Downloads folder **3**. Dotepub's Immersive mode should remove non-text elements from the page, but you can also switch to your browser's 'reader view' – if it has one – to remove surplus formatting. Look for a book icon in the address bar.



STEP 4 You should now check your downloaded ebook before you convert it to audio. Launch Balabolka, click the File menu **1** and select Open, then find the file you downloaded and click Open. Scroll through the ebook's content and remove any sections of text that you don't want to hear in your audiobook. To do this, highlight them with your cursor **2**, then right-click and choose Delete **3**, or press Backspace or Delete on your keyboard. Balabolka also lets you rearrange parts of the text by cutting and pasting them into place using those options in the right-click menu.

STEP 5 Once you've edited the text, click the green 'play' button **1** on the top toolbar or click the Speech menu and select Read Aloud - you can also press F5 on your keyboard. Balabolka will convert the text to speech and read it aloud to you using Windows 10's default UK voice, which is called Microsoft Hazel. You can switch to a different voice using the dropdown menu **2** and adjust the reading rate, pitch and volume using the controls below **3**. To pause or stop playback, click the relevant buttons on Balabolka's toolbar or select them in the Speech menu.

STEP 6 Next, click the File menu in Balabolka and choose 'Save Audio File'. Enter a name for the file **1** and select an audio format from the dropdown menu - we recommend 'MP3 Format Sound' **2** for the best balance between file size, audio quality and device compatibility. Click Save **3** and Balabolka will convert your ebook to an audiobook and tell you when 'Recording is complete'. You can now open and play the file in a media player such as VLC (www.videolan.org). If you're not happy with the result, try editing the text or adjusting the voice settings, then save the audio file again.



STEP 7 Balabolka lets you convert multiple ebooks into audiobooks in one go, which is useful if you want to save and listen to several articles from a website. Use Dotepub to download the pages, as described in Step 2, then open, edit and save them as text files in Balabolka. Now click the Tools menu **1** and select 'Batch File Converter'. When the 'Convert Text Files to Audio Files' window opens, click Add Files **2** and choose your edited ebook files. Select a folder and audio format to save the files to **3**, then click 'Convert to Audio Files' **4** to create your audiobooks. You can then listen to the articles wherever and whenever you want, such as by transferring them to your phone so you can listen to them on the go.

Readers' Tips

TIP OF THE FORTNIGHT

Cut your web connection with Net Disabler

With regard to Mike Whitehead's question 'How do I disable Ethernet to stop ransomware?' in Issue 614's Problems Solved (page 65), another possible solution would be to use the excellent program Net Disabler by Sordum. I use it on a dual-boot Windows 7/Windows 10 PC to disable network access on the Windows 7 partition.

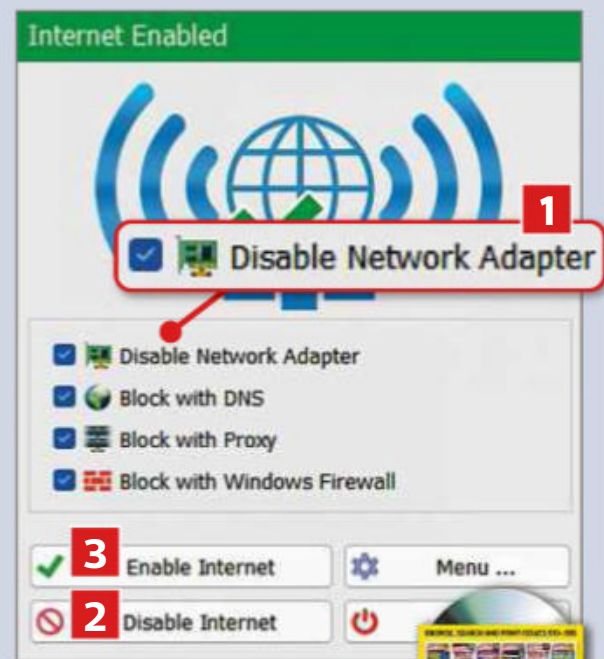
There are four methods available for blocking your network connection. I've found that the 'Disable Network Adapter' option works best for me, so with that option pre-ticked (1 in our screenshot), you only need to click the

Disable Internet button 2 to block the internet connection. To re-enable when required, just click the Enable Internet button 3.

This latest version has the option to disable the window on startup, with the controls for disabling and re-enabling the internet available by right-clicking the program's icon in the notification area.

You can download the latest version (1.1), updated in April, from www.snipca.com/39438. Be sure to click the grey download button toward the bottom of the page, and avoid all the brightly coloured download adverts.

Dave St Pier



Dave wins a copy of our 2020 Back Issue CD

Buy it on Amazon www.snipca.com/38164



PHONES

Set up emergency calls to bypass silent setting

✓ I don't use an iPhone (or any smartphone for that matter), but I



did recently see this tip which may be of use to iPhone owners who miss important calls because their phone is set to silent, and therefore won't ring. They need to activate the Emergency Bypass feature for a specific contact, which means the call will override the silent setting.

First, tap the phone icon at the bottom of the home screen, then tap the contact you want. Next, tap Edit at the top right followed by Ringtone. At the top of the next screen you should see the Emergency Bypass option. Tap the slider to activate this setting (it'll turn green - see screenshot left), then tap Done.

Frank Everett

PHOTO EDITING

Remove backgrounds using Adobe Spark

✓ Harold Fry certainly deserved to win 'Tip of the Fortnight' in Issue 614. I've been using his recommended site CleanPNG (www.cleanpng.com) ever since the issue dropped through my letterbox. For the benefit of others, I'd like to share how I remove the background from my own photos using Adobe Spark (www.snipca.com/39436).

It's all done online, so just visit the site, click the blue 'Upload your photo' button at the bottom left, then browse for the photo saved on your computer (or drag and drop it). Spark will now remove the

Why I stopped using...

Gmail, Yahoo and Outlook

✓ I always had a problem with Gmail because of too much central control from Google. I stopped using Yahoo Mail because my passwords were leaked just four days after opening. And in Outlook it took me 40 attempts just to update the password.

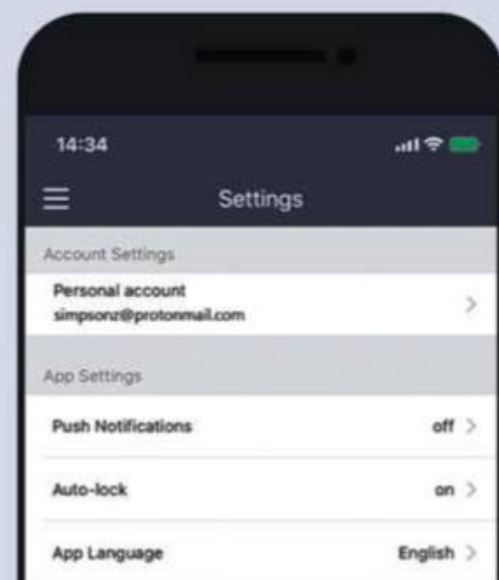
And what I use instead...

I came across ProtonMail (<https://protonmail.com>, pictured) while checking my iPhone 12 for the most

secure email service I could find (it's also available for Android and computers). ProtonMail is based in Switzerland, and uses end-to-end encryption (E2EE), and therefore is as safe as it gets. I've had it for a month and have had no leaks or problems so far.

It's also easy to use and free for single users (you can send up to 150 emails a day). It reveals all your different contacts as you enter them in your 'Send' box, letter by letter and address by address. I've found that customer service is fast too.

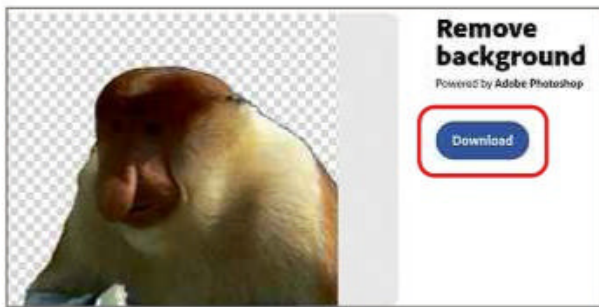
Stephen Kingsdon



✉ 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



background, leaving you to click the Download button (see screenshot above). The transparent image will now download to your computer as a **PNG** file. If it's the first time you've used Spark, Adobe will ask you to sign up with your email address, but you don't have to pay anything.

Bill Ratcliffe

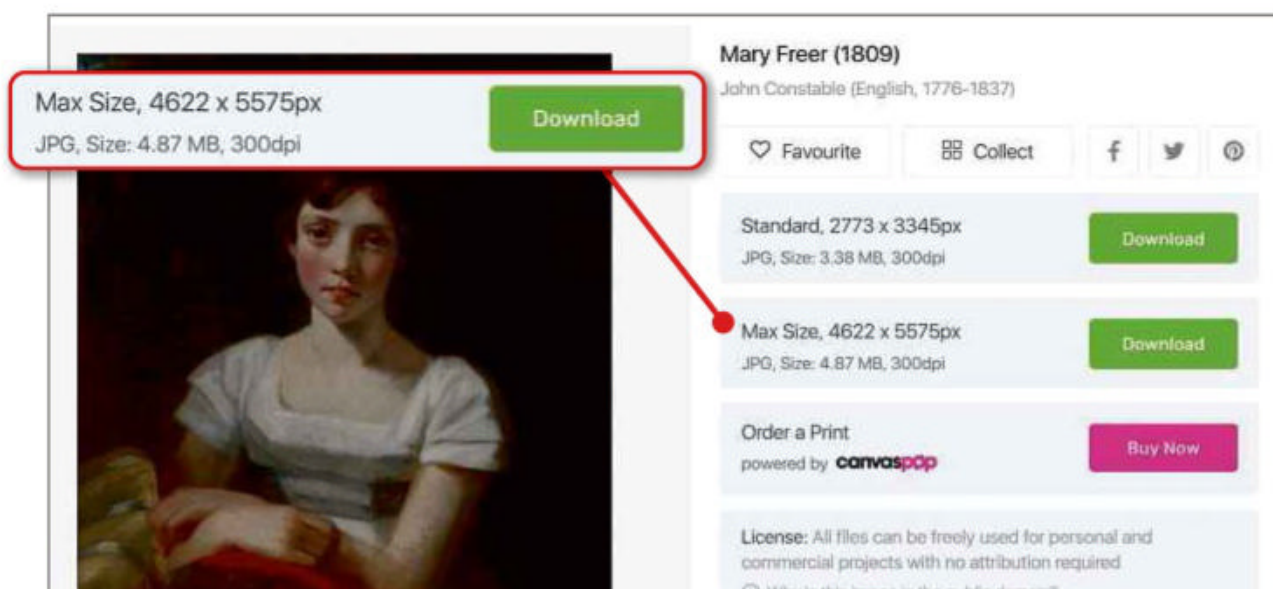
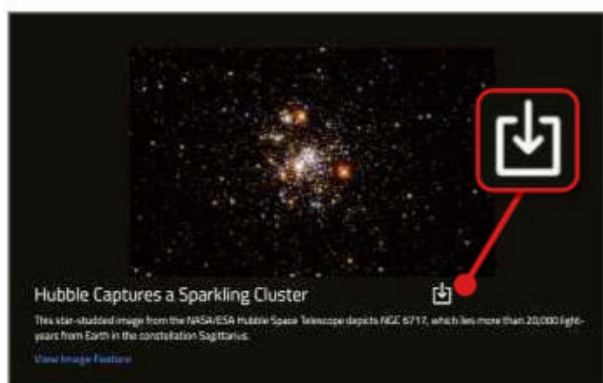
WEBSITE

Download images from Hubble Space Telescope

✓ In response to Issue 614's interesting Cover Feature ('Most Useful Websites Ever'), the site I value most is Nasa's collection of images from the Hubble Space Telescope (www.snipca.com/39434). I'm not sure whether it's being updated anymore, but enough images have been uploaded already to keep amateur astronomers happy.

To download an image, click it, then click the download icon (see screenshot below) – this will show it in full-screen. Now just right-click it, select 'Save image as' and save it where you like. I often turn these downloads into screensavers.

Nigel Forsyth



Reader recommends...

MailWasher Pro

£30 from Firetrust www.snipca.com/39433

✓ For some years I've been using the superb program MailWasher Pro, which is the perfect guard against spam and other evils which may lurk in your mail. It sits and runs in the background, and every so often – at intervals that you define – it analyses your servers and tells you if there's any email waiting for you. You can then see those messages and decide which ones you don't want (before they are ever downloaded to your computer) and lets you delete them from the server.

You can see who the email is from, the subject line, and whatever **plain text** it contains. I haven't had anything in my spam folder for many years! I like it so much, I bought a lifetime licence.



They also make a very good VPN called Hideaway (www.snipca.com/39432).

Pete Chadwick

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

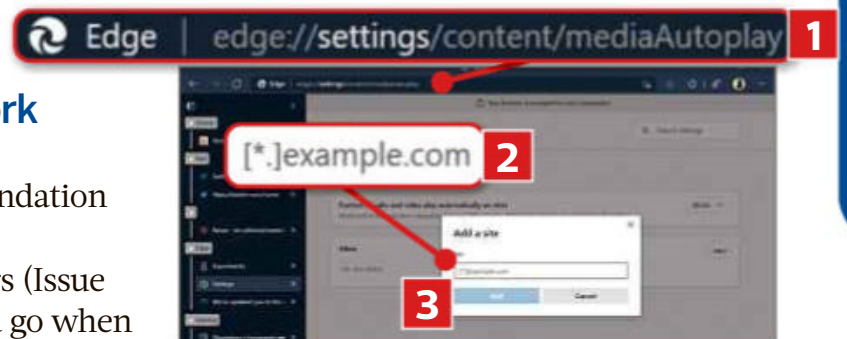
WEBSITE

Download and print artwork for free

✓ Thanks for your recommendation to use Rasterbator (www.rasterbator.com) to create posters (Issue 614, page 52). I intend to give it a go when time permits. Another site readers might like is Artvee (<https://artvee.com>), which has a huge collection of high-resolution works from artists including Monet, Rembrandt, Turner and Constable.

Once you've found a painting you like, select it, then click Download. If you print it, make sure you download the highest possible resolution by clicking the Download button next to 'Max size' (see screenshot below). All the artwork is free of copyright, so you don't have to pay anything.

Rose Sackett



INTERNET

Allow Edge to auto-play videos on certain sites

✓ So many of the sites I visit play adverts and videos automatically that I was delighted by your instructions on how to block these in Edge (Issue 612, page 9). However, I don't want to block them on *all* sites. I'm more than happy for YouTube to play music videos automatically in the background. It's handy therefore that Edge lets you make some sites exempt from its blocking.


To do this, type **edge://settings/content/mediaAutoplay** into Edge's browser bar (1 in our screenshot above). You can also click the three dots top right, followed by Settings at the bottom, 'Cookies and site permissions' on the left, then scroll down to 'Media autoplay' and click it. Next, click the Add button to the right of Allow, and in the box that appears type the URL of the site you want to exempt (do this without 'http://www' at the start – so for YouTube it's **youtube.com** 2). Finally, click the blue Add button 3.

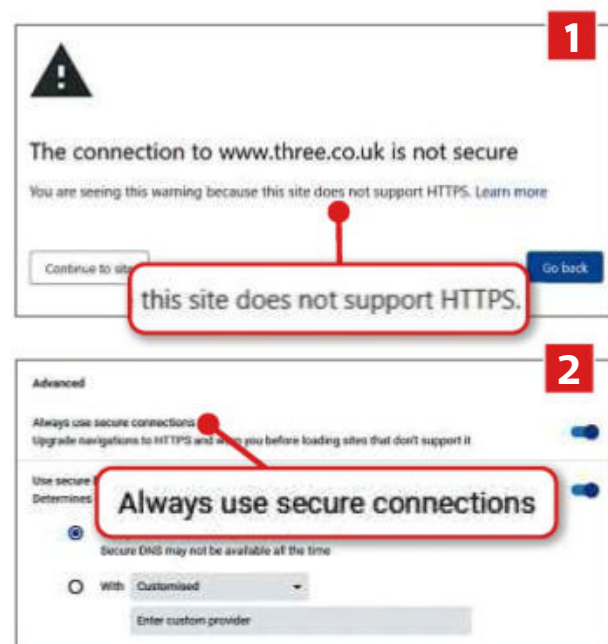
Barry Morrell

Browser Tips

CHROME

Force websites to use secure connections


 Chrome has now switched from a six-week release schedule to a four-week one, so version 94 of the browser is already upon us (we covered Chrome 93 in Issue 615's Best Free Software). The most notable new feature ensures that you always browse securely by automatically upgrading websites to their encrypted **HTTPS** connections. When that isn't possible because a site only uses unencrypted HTTP, Chrome will stop it loading and display a warning (see screenshot **1** below), leaving you to decide whether you want to continue to the site or go back.



This HTTPS-only option (which has long been available in Firefox and Brave) is disabled by default, but it's easy to turn it on (and off again, if it starts to annoy you). Click Chrome's three-dot menu button, choose Settings and click 'Privacy and security', then Security. Scroll down to the Advanced section and switch on 'Always use secure connections' (see screenshot **2** below left).

EDGE

Change your compromised passwords instantly

 Microsoft has followed Google by moving Edge to a four-week release cycle, and version 94 of the browser adds a handy option for changing your passwords. Edge already offered a Password Monitor, which alerts you when your saved passwords may have been exposed in a data breach, as well as a Password Health Check, which rates the strength of each of your passwords to highlight easy-to-guess and reused logins.

These tools are now complemented by a new 'Change' button that lets you quickly change a compromised password by taking you straight to the reset page on the relevant website. You can also change your weak passwords by clicking the three-dot button next to them and selecting Change (see screenshot above right).

It's a great idea, but as in Chrome



– which offers a similar feature – it's currently hampered by the fact that only a few websites support it, and clicking Change sometimes just opens the site's homepage. Still, it's a useful security measure for Edge to have in place for when more websites come on board.

VIVALDI

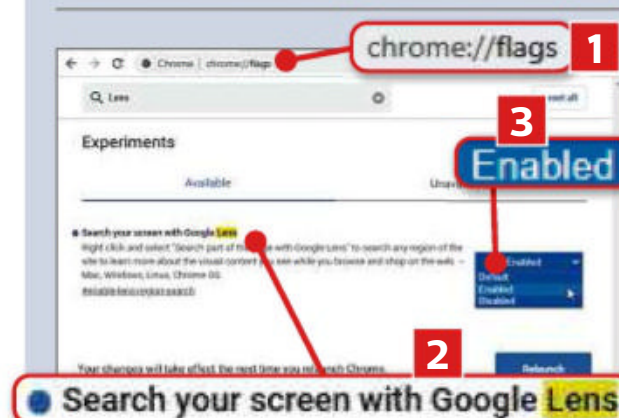
Translate sections of web pages

 Vivaldi added a feature earlier this year that lets you translate entire web pages into English (or another language), and the latest version of the browser (4.2) makes this even more useful. You can now highlight a section of foreign text on a page and translate it simply by right-clicking and choosing 'Translate Selection' (see screenshot right). Vivaldi will automatically detect the source language and translate it into your native lingo. To translate an entire page, click the 'Translate Page' icon in the browser's address bar, then click the Translate button.

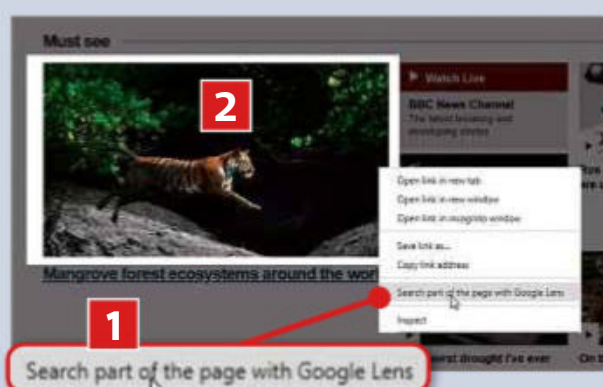
WORKSHOP Identify anything using Google Lens in Chrome

Chrome 94 brings Google Lens to your desktop browser. On your phone, this feature uses **AI** to identify mystery objects in photos

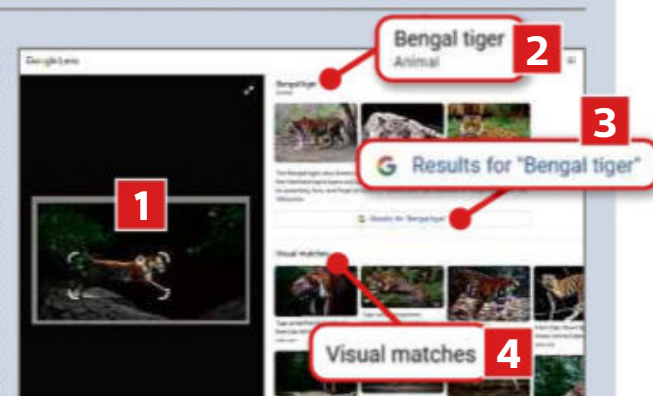
you take, but Google Lens in Chrome lets you look up items directly from web pages. Here's how it works.



1 The new Google Lens feature is still an 'experiment' in Chrome 94, so you'll need to turn it on manually. Type **chrome://flags** into the address bar **1**, press Enter and search for 'Lens'. Click the dropdown menu next to 'Search your screen with Google Lens' **2** and select Enabled **3**, then relaunch the browser.



2 With Google Lens enabled in Chrome, right-click anywhere on a web page that contains something or someone you want to identify and choose 'Search part of the page with Google Lens' **1**. This will cover the page with a grey overlay. Drag your cursor around the mystery item and it will appear in a white rectangle **2**.



3 Google Lens will now look up the part of the page you highlighted and open a new tab. On the left, you'll see the search item **1**, and on the right Google Lens will (hopefully) identify it for you ('Bengal tiger' in our example **2**). Click 'Results for...' **3** to see web pages Google has found for your search query, or explore the 'Visual matches' **4** to identify the item from similar images.

BEST EXTENSION FOR...

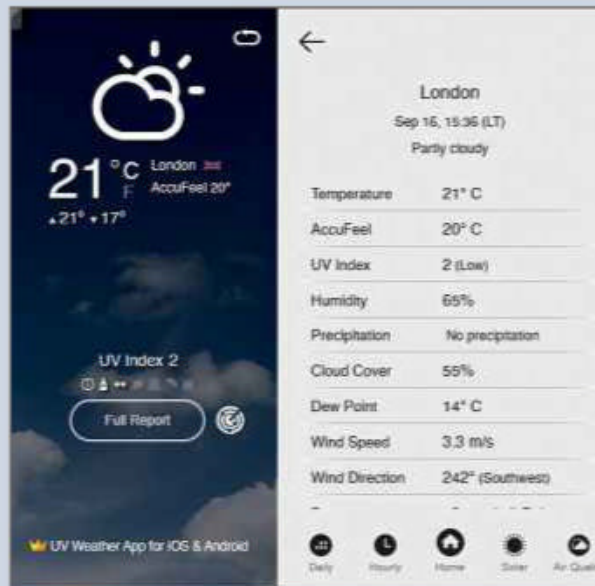
Checking the weather

UV Weather

Chrome & other Chromium browsers
www.snipca.com/39485

There are hundreds of weather extensions for Chrome (which also work with other Chromium browsers), but many are inaccurate, US-biased or charge you to use their best features. UV Weather suffers none of these flaws (although there is a small ad you need to close when you first install it), and provides detailed, reliable forecasts for anywhere in the world.

It automatically detects your location and displays a summary for the next four days, then lets you view more in-depth data for today (see screenshot), the next 48 hours and the next week.



You can also explore a weather radar map, see 'solar times' such as sunrise, sunset and

when the 'golden hour' begins (for taking photos in warm, soft light), and check the air quality and UV index for where you are.

To switch to another location, click the plus sign in the top-left corner and type it into the search box. UV Weather even offers a **dark mode** for when you're checking the weather at night.

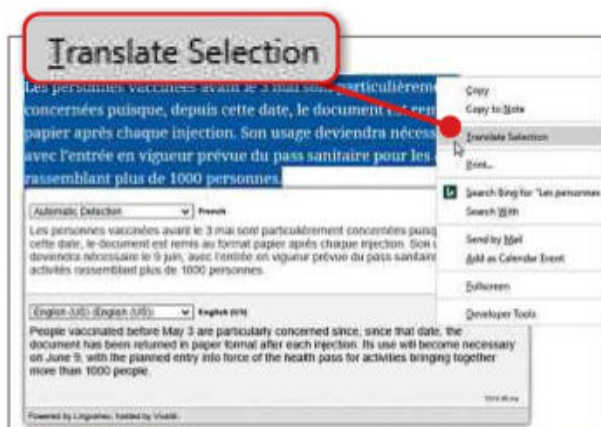
If you don't like that, try...

My Weather

Chrome & Firefox

www.snipca.com/39487

This uses your browser's New Tab page to display a five-day weather forecast for your location, which includes temperature, wind speed and precipitation (rainfall).



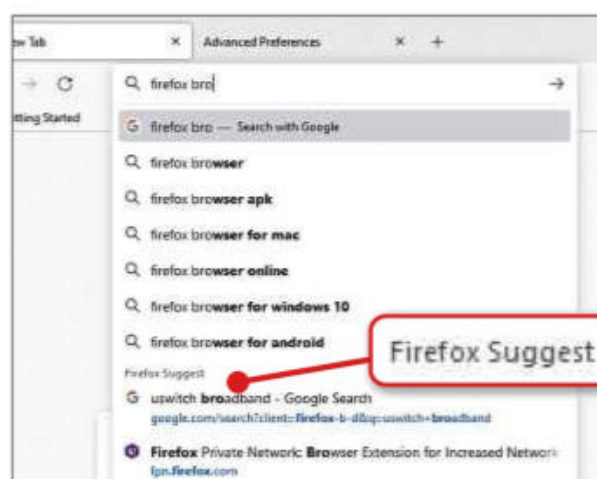
The translation tool uses a **machine learning** service called Lingvanex (<https://lingvanex.com>) and is hosted on Vivaldi's own servers, so no data is passed to third parties – unlike Google Translate. Our only complaint is that you're limited to translating languages to 'English (US)' rather than 'English (UK)' – hopefully Vivaldi will fix this *faux pas* soon.

FIREFOX

Turn off Firefox Suggest



Released in September, Firefox 92 introduced a feature called Firefox Suggest, which supposedly "serves as a trustworthy guide to the better web, surfacing relevant information and sites to help you accomplish your goals". Such jargon suggests Mozilla is angling to be included in our 'What are they talking about?' box (see page 21), but it simply means that Firefox now suggests sites to visit when you start typing a search query into the address bar. These suggestions are based on your browsing history, bookmarks and open tabs and appear in a 'Firefox Suggest' section at the bottom of the dropdown box (see screenshot



above). Mozilla says it may include "sponsored suggestions from vetted partners" (www.snipca.com/39480), and that if – for example – you search for "vans", you may be shown eBay listings for Vans shoes. Essentially, such suggestions are form of targeted advertising.

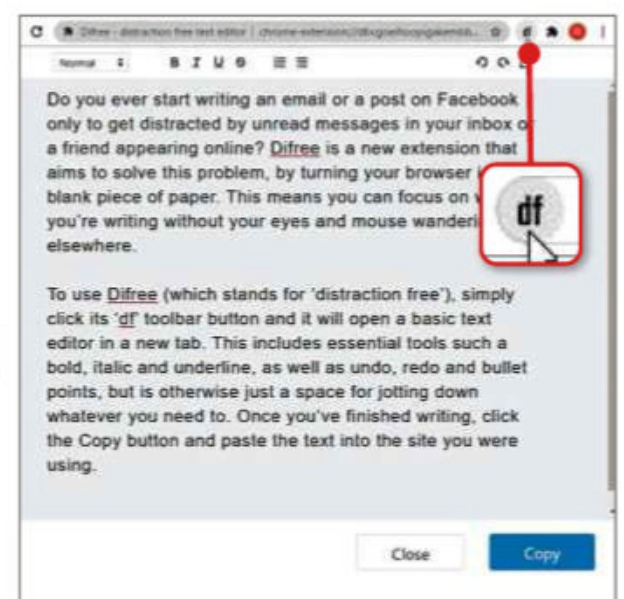
Thankfully, you can turn off Firefox Suggest to avoid seeing these sneaky ads, though the setting is currently hidden in Firefox's Advanced Preferences. Type **about:config** into the browser's address bar, press Enter, then click 'Accept the Risk and Continue'. Search for the preference **browser.urlbar.groupLabels.enabled** and either double-click it or click the Toggle button to change its value to 'false'. Firefox Suggest will now be removed from your search suggestions.

CHROMIUM

Remove distractions when writing online



Do you ever start writing an email or Facebook post only to get



distracted by unread inbox messages or a friend appearing online? Difree is a new extension that aims to solve this problem, by turning your browser into a virtual blank piece of paper. This means you can focus on what you're writing without your eyes and mouse wandering elsewhere.

To use Difree (which stands for 'distraction free'), simply click its 'df' toolbar button (see screenshot above) and it will open a basic text editor in a new tab. This includes essential tools such as bold, italic and underline, as well as undo, redo and bullet points, but otherwise it's just a big space for jotting down whatever you need to. Once you've finished writing, click the Copy button and paste the text into the site you were using.

Difree is available from the Chrome Web Store (www.snipca.com/39482). Its developer says that the extension doesn't read or store anything you write – once you delete your text, it's gone.

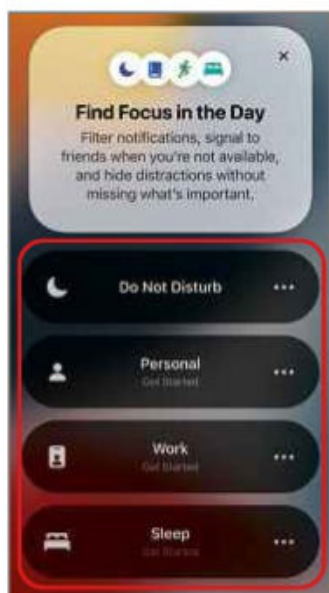
Phone and Tablet Tips

iOS Block distractions with new Focus mode

Although iOS 15, which was released on 20 September, isn't a radical overhaul of Apple's mobile operating system, it does offer some great new features. Our favourite is Focus mode.

This expands on your iPhone's Do Not Disturb option to block specific distractions depending on what you're currently doing and when. For example, if you're working on a joint project, you can set your phone to accept messages only from colleagues and block notifications from apps that have nothing to do with your work. Alternatively, when you're relaxing at home, you can set Focus to silence calls and notifications from everyone except close friends and family members.

When you launch Focus – you can access it from Control Centre or manage it from within the Settings app – you'll see four default modes – Do Not Disturb, Personal, Work and Sleep (see screenshot left). Each of these modes can be tailored to your personal needs,



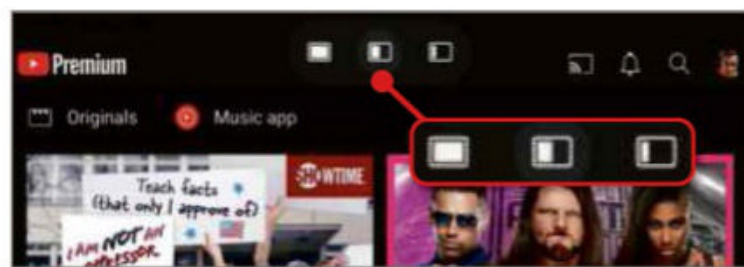
and have a customised home screen that only includes necessary apps – for example, you can hide social-media apps when you're in Sleep mode to resist the temptation to check Facebook while you're in bed.

You can also create your own modes. We particularly like that other iOS 15 users can see your Focus mode status via Apple's Messages app, so they'll know not to disturb you at inconvenient times (unless there's an emergency).

Focus mode is complemented by iOS 15's improved notifications system. This sorts your notifications by importance and lets you temporarily mute apps that are showing too many. Usefully, you can set up a notification summary that delivers all the messages from a specific group of apps at once, rather than constantly pinging you. This means you can tell your iPhone to only provide email alerts a few times a day or receive all your social-media notifications in a single evening digest.

iPadOS Multi-task more easily with iPadOS 15

Focus mode (along with other new iOS 15 features) is available in iPadOS 15, but the best new feature in the iPad operating system is the multitasking button. This three-dot icon appears at the top of every app window and tapping it lets you choose how you want to view



that app: full-screen, Split View or Slide Over (see screenshot above). This means you can now browse multiple apps (or multiple windows from the same app) in a split-screen layout in a couple of taps, so you can multi-task by, for example, having your email app, browser, documents and media player open at the same time.

This multitasking feature makes much better use of the iPad's larger screen and saves a lot of swiping back and forth when you have multiple apps open. It also gives you faster access to your home screen and means you're less reliant on the iPad's on-screen dock when switching between apps.

ANDROID Get Android 12's Privacy Dashboard on your phone now

Android 12 introduces a useful feature called Privacy Dashboard, which helps you keep track of phone apps that require sensitive permissions – so you can stop them snooping on your data. Although the new mobile operating system is expected to start rolling out this month, it's likely to take a long time before it reaches every device – many users still haven't been updated to

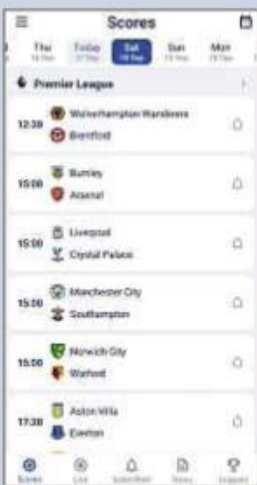
BEST NEW APPS

What you should install this fortnight

Opera Football Free

Android www.snipca.com/39495

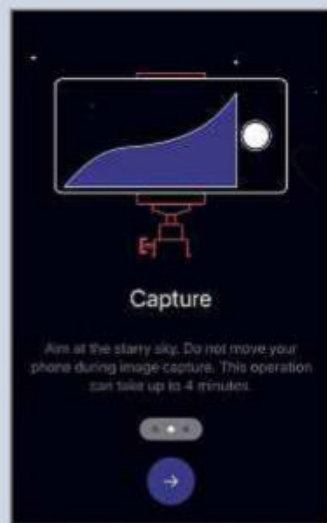
Browser developer Opera is venturing into the sporting arena with this app, which offers live football scores and text commentary. You can view fixtures, league tables and news for all European leagues, including the Premier League, Serie A and the Bundesliga. Subscribe to upcoming matches to receive match alerts, and view line-ups and head-to-head stats.



Nocturne by Unistellar Free

iOS www.snipca.com/39506

Nocturne helps your iPhone's camera take better photos of the night sky. Prop up your phone to keep it stable (or use a tripod) then aim it at the stars and press the shutter button. The app will capture a series of images – this can take a few minutes – and combine them into one photo with visible stars.



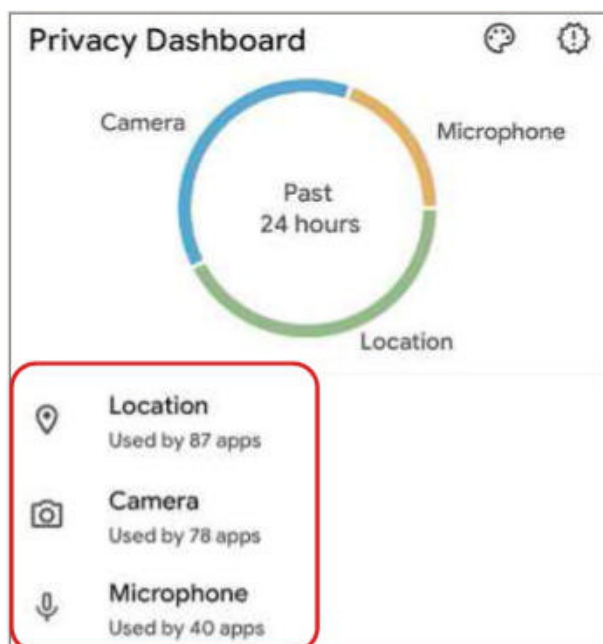
Eco Pedometer Free

Android www.snipca.com/39509

Want to get fit and help the environment? Eco Pedometer not only counts every step you take and calorie you burn, but also tells you the amount of carbon dioxide you've saved: 1,000 steps apparently reduces carbon emissions by 176g. You can set yourself daily goals and earn badges when you achieve them.



Brilliant things to do on your device



Android 11. But while you wait, you can get Privacy Dashboard's main features from an unofficial (non-Google) app of the same name.

Privacy Dashboard (www.snipca.com/39501) can be installed from the Google Play Store on any Android device running version 7 and above. Ironically, when you first open the app, you're prompted to grant it location and accessibility permissions. This is so Privacy Dashboard can detect when other apps are accessing that data, so it's safe to do so and necessary for the app to work.

Leave Privacy Dashboard running in the background on your phone (you can hide the notification that says it's doing so) and it will detect when apps access permissions such as for your location, camera and microphone. You'll see an icon indicating that a specific permission is in use as well as a notification (optional). Most usefully, you can view which permissions were accessed by which apps over the past 24 hours – just tap a permission on Privacy Dashboard's home screen (see screenshot above) for a timeline of when it was accessed and what by.

Suspicious apps can be uninstalled from your device, or you can stop them using a specific permission by tapping the 'Manage permissions' button and revoking their access.

ANDROID & iOS

Take new 3D tours and put yourself in works of art



Google has updated its excellent 'Arts & Culture' app for Android (www.snipca.com/39531) and iOS (www.snipca.com/39532) to make immersing yourself in culture even more illuminating and fun. It has added 19 3D tours that let you explore historic sites, monuments and places of interest as if you were there,

while learning about their hidden details and history. These include tours of Tokyo's tallest towers and ancient Sicilian temples, and although you're supposed to use a Google Cardboard viewer for the full **augmented-reality** experience, you can still try the tours without it.

Even more fun is the app's Art Filter feature, which has been expanded to include five new artworks and artifacts to play around with, so you can turn yourself into a living work of art. The filters include Da Vinci's



Mona Lisa, a Medusa head and Giuseppe Arcimboldo's painting of Rudolf II of Habsburg as Vertumnus, the Roman god of the seasons (pictured left). Art Filter uses **machine learning** to position artifacts smoothly on your head and make them react realistically to your facial expressions. To use it, tap the camera button in the app,

select Art Filter and choose from the options along the bottom of the screen. Once applied, tap the shutter to capture a photo of yourself as the artwork.

BEST APPS FOR...

Cataloguing your books

Bookshelf

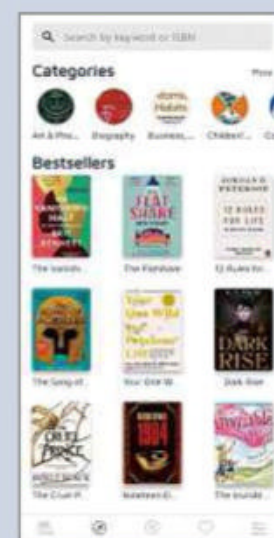
Free

Android www.snipca.com/39510

iOS www.snipca.com/39511

This brilliant app lets you create a digital library of all the books you own, then organise them on virtual shelves. You can either add books by searching for their titles or scan their **ISBN** codes with your phone's camera. You need to register to use Bookshelf, but it's otherwise very easy to use.

Best For Bookworms with huge collections



Handy Library

Free*

Android www.snipca.com/39516

Handy Library lets you catalogue up to 100 books for free or pay £4.99 for unlimited storage. We like the fact you can enter price information when you scan a book's ISBN so you can track how much you spend on reading and keep a record of books you've lent to other people.

Best For Anyone who's ever aspired to be a librarian



Bookly

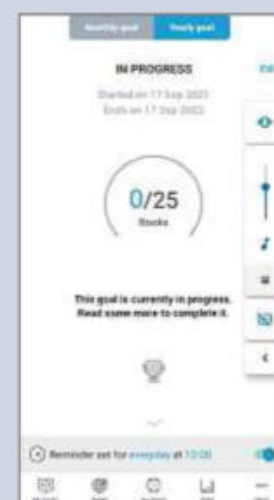
Free*

Android www.snipca.com/39517

iOS www.snipca.com/39518


Bookly helps you keep track of every book or ebook you read. Add the title to the app, then tap to start the timer when you begin reading. You can save your current page number to get an estimate for when you'll finish the book, or set your own goal, and view monthly reading statistics.

Best For People who need an incentive to read



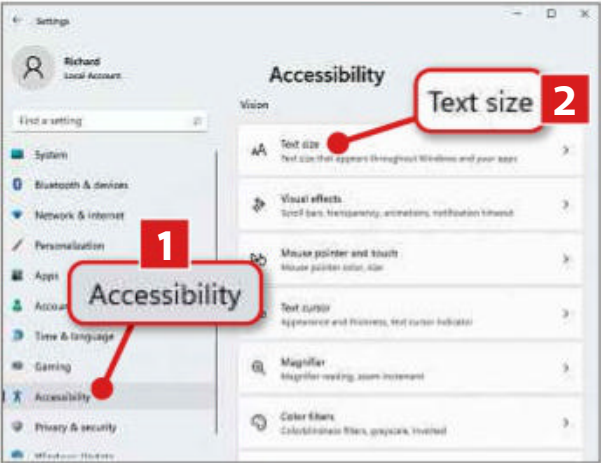
*Contains in-app purchases

WINDOWS 11
Increase font size

 In Windows 11 Microsoft has moved the option for making system fonts larger.

First, open Windows Settings (press Windows key+I), then click Accessibility in the sidebar on the left (1 in our screenshot below), followed by 'Text size' (2 in the middle. Next, move the 'Text size' slider until you get the size you want (you'll see it as a percentage above the slider). When you've decided, click Apply. All open windows will now refresh, showing you the larger text size. To go back to the default, select the size as 100 per cent.

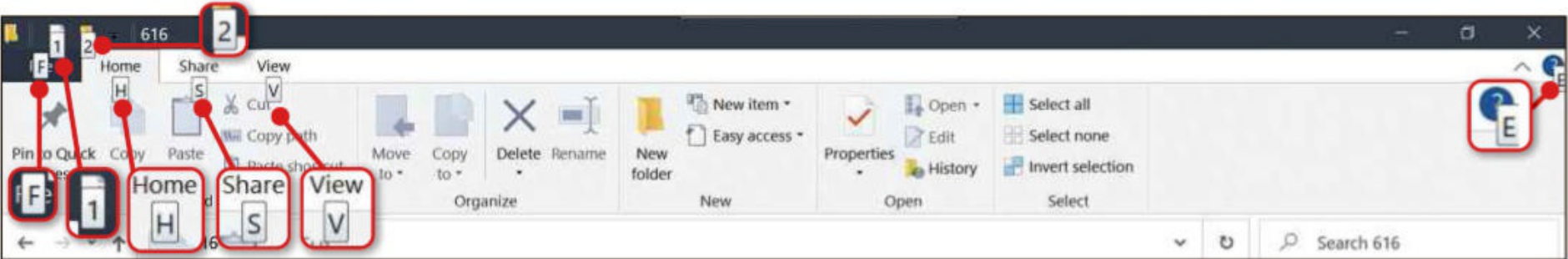
The method in Windows 10 is similar, except that in Settings you have to click 'Ease of Access', then Display.



WINDOWS 10
See all Alt keyboard shortcuts in File Explorer

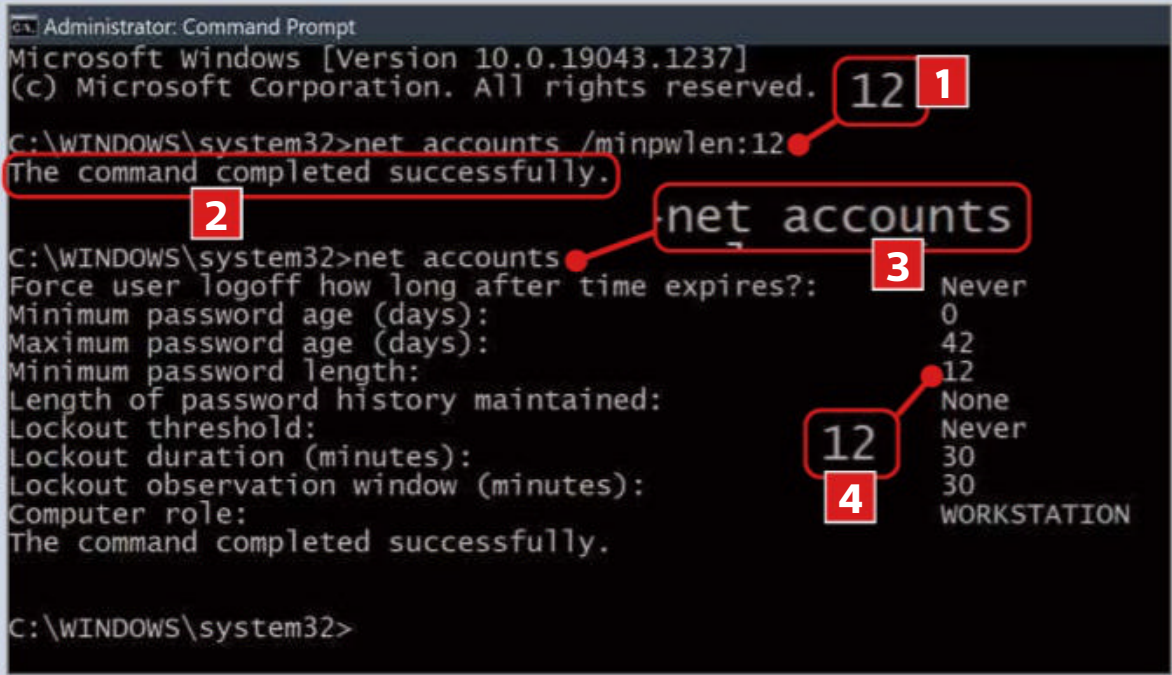
 It can be difficult to remember all the keyboard shortcuts in File Explorer, but it's easy to get a quick reminder. Simply press the Alt button when you're in File Explorer and you'll see the shortcuts highlighted at the top of your screen (see screenshot below). Each letter and number corresponds to the key you need to press in combination with Alt to activate the shortcut.


In our screenshot, from left to right, you can see that pressing Alt+F opens the File menu; Alt+1 opens Properties; Alt+2 creates a new folder; Alt+H opens the Home tab; Alt+S opens the Share tab; Alt+V opens the View tab - and, at the top right, Alt-E searches online for help with



WINDOWS 10

Set minimum password length



 If you've created local user accounts for people sharing your computer, you can ensure they use a secure login password by setting a minimum length for it.

You'll first need to create an elevated command in Command Prompt, which are commands you can run only if you're an **administrator**.

Click Start, type **cmd**, then select 'Run as administrator' (you may need to right-click 'Command Prompt' to see this option).

Next, type **net accounts /minpwlen:XX** into Command Prompt, replacing XX with the number of characters you want (it's 12 in our screenshot 1). Press Enter, and you should see confirmation that it's been activated 2.


To check, type **net accounts** 3 into Command Prompt, press Enter, and check the number next to 'Minimum password length' 4.

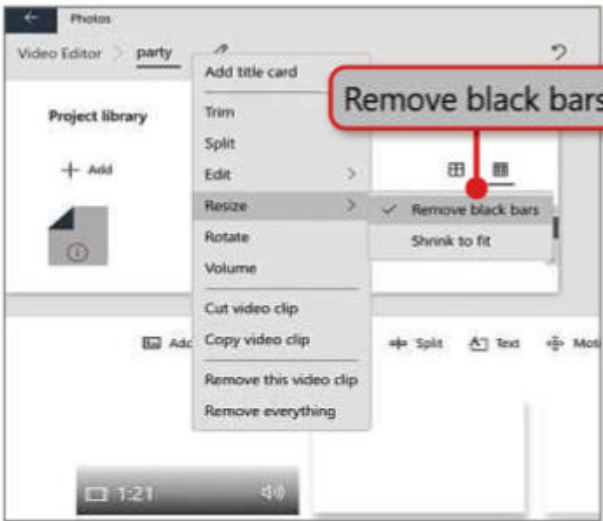
To remove the minimum length, type **net accounts /minpwlen:0** and press Enter.

File Explorer.

If you then press one of the shortcuts, you'll also see additional shortcuts that work within that section.

WINDOWS 10
Remove black bars from a video


 As well as editing your images, the Windows Photos app can improve your videos. One useful tweak is removing black bars that appear when videos shot in a wide **aspect ratio** get resized to fit standard-width video players. First, import your video, then click 'Edit & Create', followed by 'Create a video with text'. Right-click the video in

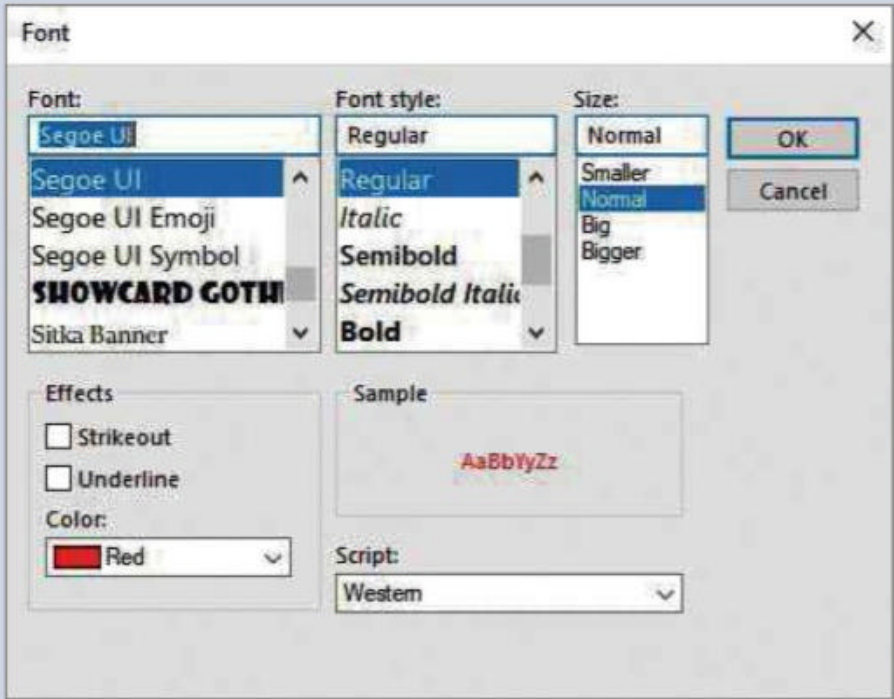


the Storyboard section, then select Resize followed by 'Remove black bars' (see screenshot above).

MICROSOFT OUTLOOK


Colour-code your emails

 You can make emails from different people appear in certain colours and fonts so they stand out. In Office 2013 and 2016, open Outlook’s View tab, then click View Settings followed by Conditional Formatting. Now click Add, give the colour-code/font rule a name, then click Font. Select a colour, style and size, and click OK (see screenshot). On the next screen click Condition, then in the From box type the email address you want to colour-code. For multiple people, separate the email addresses with a semicolon. You can apply this change across all your folders by clicking View, then Change Views, followed by ‘Apply Current View to Other Mail Folders’. Now select the relevant folders, choosing at the bottom whether to select ‘Apply view to subfolders’.



MICROSOFT WORD

Add Venn diagrams to documents


 You can use the SmartArt tool in Word to add Venn diagrams to your document. To access this tool, click the Insert tab, then SmartArt. Now click Relationship on the left to see diagrams that represent relationships to each other, including cog icons and pie charts. Scroll down and you’ll see Venn diagrams at the bottom right, such as the Basic Venn (which we chose). Double-click the diagram you want and it’ll appear in a new document. Click the ‘Text’ headings inside each circle and type your own. Now you need to draw a text box where the circles overlap, so click Insert, select Text Box, then Draw Text Box. Click and drag your mouse cursor over an area to draw the box, then let go of the cursor when it’s finished. Hover your mouse precisely over the outline of the box, then right-click and select Format Shape (see screenshot

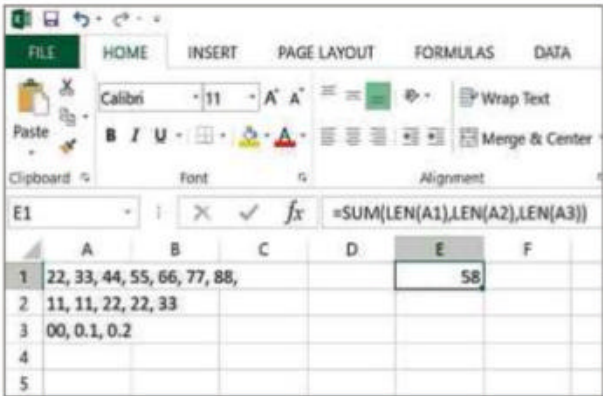
below). In the sidebar on the right, expand the Fill and Line menus, then select No Fill and No Line in both. This will fill in the background of your overlapping text box and remove its border. Type what you want inside. To change the design of your diagram, right-click outside the circles and select Style, Colour or Layout. You may instead see Design and Format tabs at the top, depending on your version of Word.

and searching for it. Restart Writer once it has installed. When you next want to save a document, click File at the top left, then Multi Save As (which should be directly under Save As). You can then choose where to save the file, and which of five formats to save it in: odt for OpenOffice; doc for Word 1997 to 2003; docx for Word 2007 and later; PDF; and Rich Text (see screenshot below left).

LIBREOFFICE WRITER


Save documents in several formats

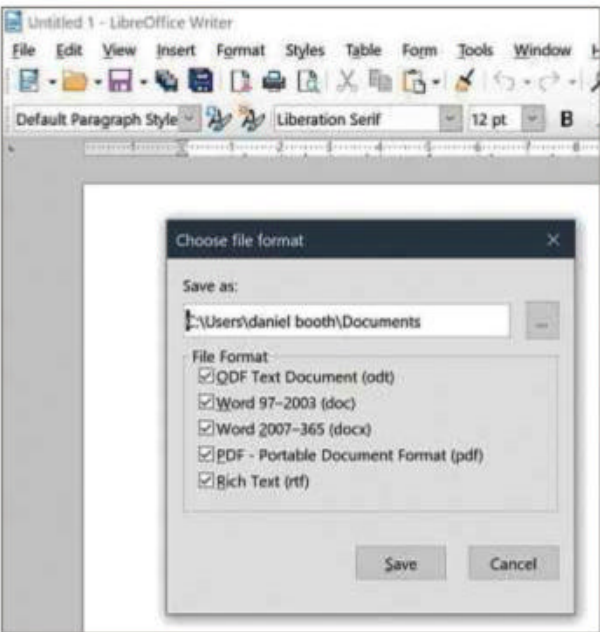
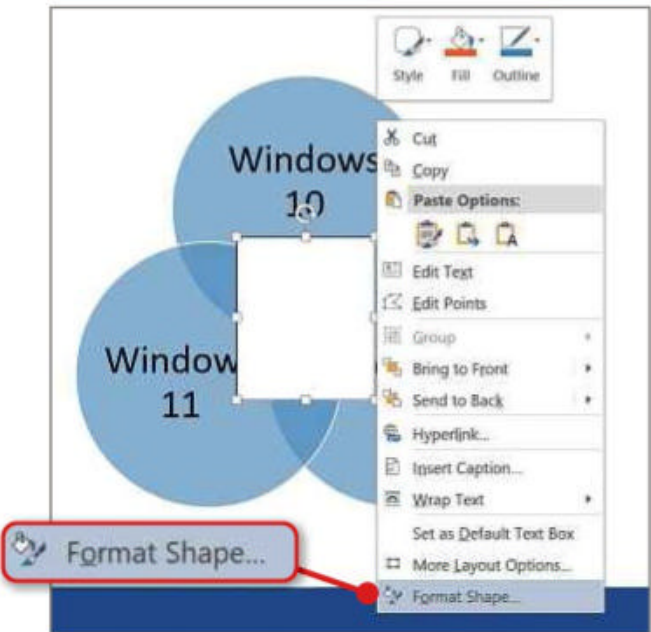
 By installing the MultiFormatSave extension to LibreOffice Writer you can quickly save documents in more than one format. The quickest way to download it is from www.snipca.com/39561 (choose the most recent version in the Release List). You can also access it through Writer by clicking Tools, Extension Manager, then clicking the small ‘Get more extensions online’ link



LIBREOFFICE CALC & MICROSOFT EXCEL

Count the characters in your spreadsheet

 You can use the LEN function to count the number of characters (including spaces) you’ve typed into a spreadsheet. First, select the cell you want to show this number, then type `=SUM(LEN(XX),LEN(XX),LEN(XX))` into the formula bar at the top. For each XX, type the cells you want to count. In our screenshot above, that’s A1, A2 and A3. We’re displaying the answer in E1. Press Enter, and we can see we’ve used 58 characters. To calculate the number for one cell, shorten the formula to `=LEN(XX)`, where XX is the cell in question.



In The Club



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

Collaborate with members on Google Maps

Most people use Google Maps for directions, but it's also a great tool for creating your own route maps, which you can then share and collaborate on with others. Anyone you allow to edit your map can replace anything you've added - so make sure you give this power only to people you trust.

Choose a map style

In our example, a walking club is planning a week-long hike around the Cotswolds. Some of the members have been there before but most haven't. To prepare for the trip, we'll create a basic map of walking routes, then ask our more experienced members to add to it.

To create a collaborative map, first sign into your Google Account. Next, go to Google Maps (www.google.co.uk/maps) and click the top-left menu (three horizontal lines). In the sidebar that opens, click Your Places, then the Maps tab at the top. If you've created any maps before, they'll appear here. Click the Create Map button at the bottom of the sidebar to load a new map. Click where it says 'Untitled map' and type a name and a description of your map in the box that opens, then click Save.

The dropdown arrow beside 'Base map' lets you choose the style of map you want. Google offers a choice of nine styles, but you'll probably want either

Map, Satellite or Terrain. As our map is for a walking club, we'll choose the Terrain option. The on-screen map will change accordingly.

Add your map points

Use the search box at the top of the page to find the starting point for your walk. Press Enter, and a green pin will mark the location on the map. Click 'Add to map' in the box above the pin to add it as a new layer on the left. More options will now appear in the box for that location. You can change the marker's style and colour, edit it (change the name and add some location details), add an image or photo, get directions to the place or delete it.

A toolbar under the Search box lets you undo or redo an action (1 in our screenshot below left), drag the map around and select items (2), add a marker (3), draw a line, shape or route (4), add directions (5), and measure distances and areas (6).

You can create your map in a couple of ways. One option is to use the search box to find points along your route, adding each one as you go, then click 'Add directions' to get the route. Alternatively, click 'Select items' and type each point on your route into the boxes that appear. You can also draw the route by holding down the 'Draw a line' option and selecting 'Add walking route'. Click the

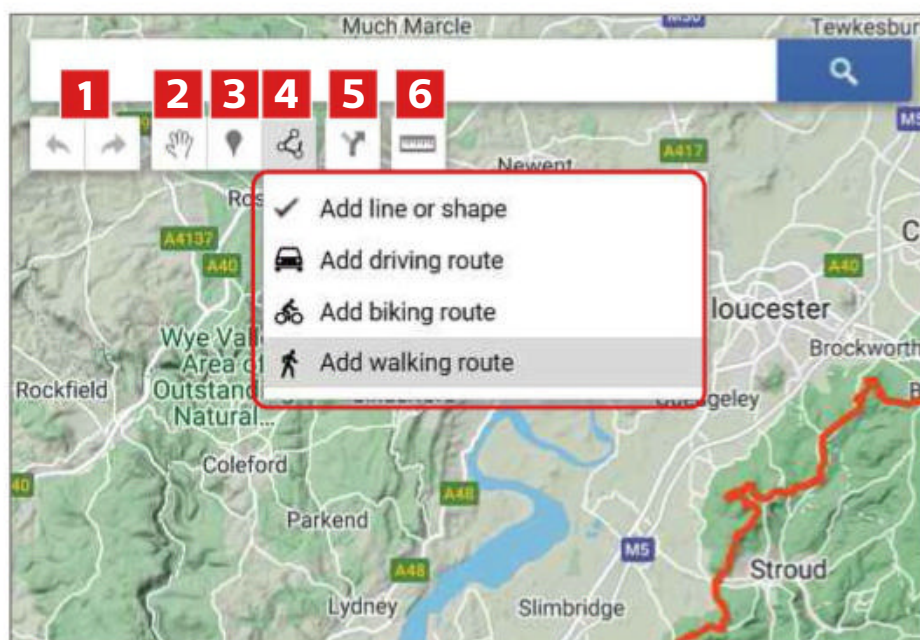
start point on your map, then move the cursor along the route you want to take. Google Maps will select available footpaths (and other places you can walk), to help you plot your course.

Share your map and set editing permissions

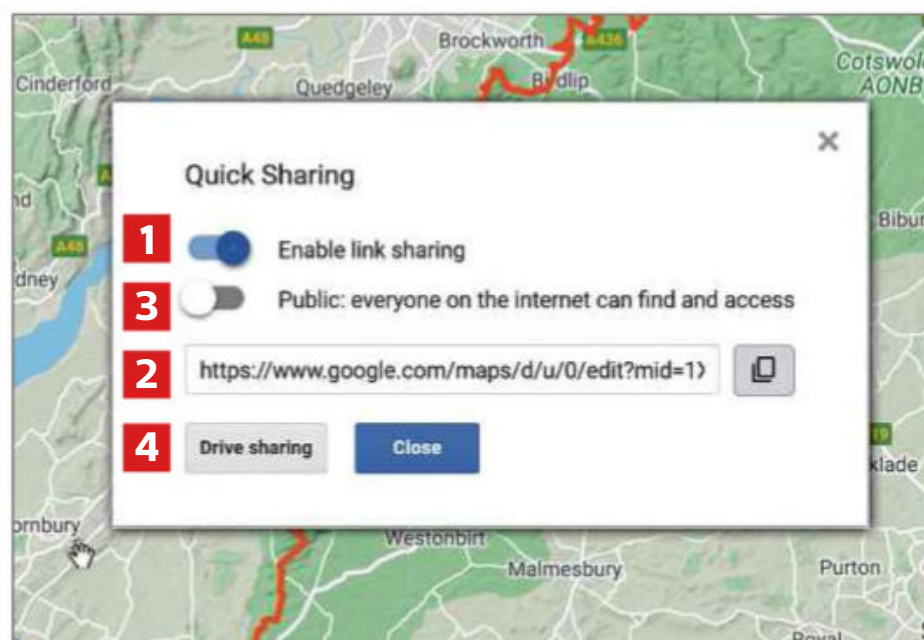
To share your map, click the Share button on the left. This opens the Quick Sharing box (see screenshot below). Turn on 'Enable link sharing' (1 in our screenshot below) and Google Maps will generate a URL (2) you can share to let others view your map. If you activate the 'Public' slider (3), your map appears in Google searches, and anyone can view it.

Members who receive a link can only view your map. To let them edit it, click 'Drive sharing' (4). Add people by entering their names and email addresses. The dropdown menu to the right of a name lets you decide whether they can edit the map or only view it.

By default, the 'Notify people' option is selected, which sends an email message to the people you invite. Click 'Send' when you're ready. If you untick the 'Notify people' box, you need to click Share instead, and your recipients won't receive a notification email. The box at the top left has a Preview button. Click this to see what your map looks like to members with view-only access.



The toolbar provides several useful route-plotting tools, including the ability to measure distances and draw lines and shapes on your map



Use the options in the Quick Sharing box to determine whether members can edit your map or just view it

What's All the Fuss About...

Internet apocalypse

Been knocked offline? The Sun – not your ISP – might be to blame

What is it?

It's the end of the web as we know it. That's according to scientists at the University of California, who warn that a Coronal Mass Ejection (CME) from the Sun could disable undersea fibre-optic cables that connect countries to the internet. It could be severe enough to keep millions of people offline for months.

Wait – what's a Coronal Mass Ejection?

It's a huge expulsion of plasma and magnetic field from the sun's corona, its outermost layer, equal to the power of 20 million nuclear bombs. When this hits the Earth, it can interfere with our own magnetic field, producing Geomagnetically Induced Currents (GICs) through metal structures such as electric lines and railway tracks. This burst of power can short the systems, causing mass disruption.

How often do they happen?

Every hundred years or so. The most famous is the 'Carrington event' in 1859 (named after British astronomer Richard Carrington, who recorded it), which blew fuses throughout the newly built global telegraph network. The biggest CME last century happened in 1921, and again took down telegraph cables worldwide. In short, it feels like we're due another one. Scientists fear the damage would be much greater in today's electrified, interconnected world.



Google's Grace Hopper cable now connects New York to Bude in Cornwall



How prepared are we?

Not very. Professor Sangeetha Abdu Jyothi, who wrote the study *Solar Superstorms: Planning for an Internet Apocalypse* (www.snipca.com/39452), was spurred into investigating the threat after seeing how unprepared the world was for a pandemic. She told *Wired* magazine: "Our infrastructure is not prepared for a large-scale solar event. We have very limited understanding of what the extent of the damage would be".

What are the chances of a CME happening?

It's certain that another one will happen – it's just a matter of when. Abdu Jyothi estimates that there's between a 1.6 and 12 per cent chance of a CME occurring in any 10-year period. That's uncomfortably high for a global society utterly dependent on the internet.

Gulp. So we're doomed?

Not necessarily. CMEs can take several days to reach Earth, giving engineers some time to devise a strategy that minimises damage, such as shutting down power grids worldwide. Also, local internet cables shouldn't be hit too badly. The risk is far greater for undersea cables that span continents. The cables themselves wouldn't be directly

affected because they're made of fibre optic, and therefore not harmed by bursts of electrical power. But they are fitted with electronic repeaters every 50 to 150 kilometres to amplify the optical signal. Sudden injections of electricity could short these repeaters, cutting connectivity at source even while land-based cables within countries remained unscathed.

How much do we rely on undersea cables?

Massively. As an example, Google's Grace Hopper cable has just been brought onshore in Bude, Cornwall (pictured below left). Running from New York to the UK and Bilbao, it's fast enough to let 17.5 million people stream 4K video simultaneously (read Google's blog: www.snipca.com/39460). But because CMEs have more impact at higher latitudes, nearer to Earth's magnetic poles, it's also at high risk of disruption. Asia by contrast faces less risk because Singapore, which acts as a hub for the region's undersea cables, is at the equator.

So what can be done?

Short of dragging the UK level with Equatorial Guinea, not much. As with pandemics, it's largely a case of hoping that things won't turn out too bad.



WINDOWS 11 Should You Upgrade?

Microsoft's successor to Windows 10 has landed – and it's free. But what's different about it? Is it right for you? And can your current PC even handle it? Jonathan Parkyn weighs up the pros and cons of upgrading to Windows 11

WHAT YOU CAN DO

- Use Microsoft's PC Health Check tool to see whether your computer can run Windows 11
- Perform your own hardware check in your computer's system settings
- Find out what's new in Windows 11 and what's been dropped from Windows 10
- Clear your storage so there's enough space to install Windows 11
- Fix Windows Update problems so Windows 11 installs smoothly
- Back up your system so you can safely return to Windows 10

When Windows 10 launched in 2015, it felt like a big win for PC users. For the first time,

upgrading to a new version of Windows was free. And Microsoft's promise that Windows 10 would be the last ever version seemed to suggest devices would be supported for their entire lifespan.

But in June Microsoft announced that Windows 10 *wouldn't* be the final version and would be replaced with the new-look Windows 11. Its release date (5 October) came sooner than many expected, though it's going to be made available as a 'phased' release only – which means Microsoft will prioritise computers with a good chance of installing and running it smoothly.

It's now decision time: should you upgrade? It's a tough question. For a start,

it's not immediately obvious that Windows 11 justifies the upgrade. Sure, it's free and the redesigned interface is attractive. But what are the standout features, and are they worth the hassle of learning a brand new operating system?

To complicate matters, Microsoft has ostracised many users by imposing a strict set of hardware requirements that refer to components most people have never heard of.

Here, we'll cut through Microsoft's confusing messaging and provide you with everything you need to make an informed choice. We'll also explain how to find out if your computer is compatible with Windows 11. If it is, and you want to upgrade now, follow our advice on what to do before you proceed.

CHECK WHETHER YOUR PC CAN RUN WINDOWS 11

Before we talk about whether you *should* upgrade to Windows 11, we'll need to establish whether you even *can* upgrade. The upgrade to Windows 10 wasn't without problems, but at least Microsoft's messaging was straightforward – anyone running Windows 7 or 8 was allowed to upgrade for free. Crucially, Windows 10's system requirements were very similar to 7 and 8, meaning almost any computer running either operating system had the technical specifications needed to upgrade to Windows 10.

Things aren't so simple with Windows 11. On the one hand, Microsoft has said it will be a free upgrade for anyone who is currently running Windows 10. But, at the same time, it has imposed a rigid set of minimum system requirements. However, it's not easy to find out whether your computer is compatible, as we'll explain.

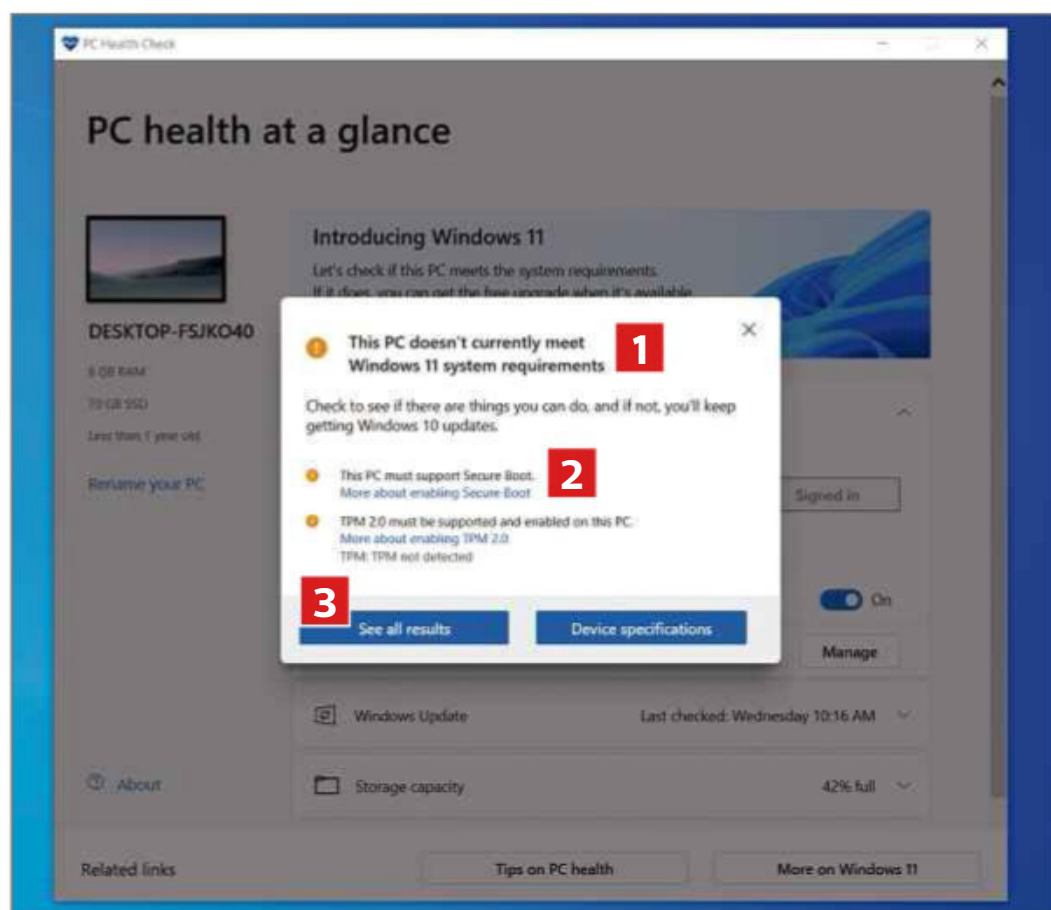
What are Windows 11's minimum requirements?

At first glance, Windows 11's parameters appear to be fairly similar to Windows 10's, but look a little closer and you'll see the requirements are more demanding. For example, Windows 11 needs a **1GHz** (or faster) processor – the same as Windows 10. However, the processor needs at least two **cores** (not one) and must be **64bit** (**32bit** is no longer supported). Complicating matters further, the chip needs to be on Microsoft's list of compatible processors. Also, Windows 11 needs **4GB** of **RAM** and **64GB** of storage – quite a leap from Windows 10's requirements of **1GB** of memory and **16GB** of storage.

Your computer will also need a **DirectX 12**-compatible graphics adapter and a **720p** (or higher)-resolution screen. A Microsoft account and internet connection are now required for setting up Windows 11 Home, and you'll need to be running Windows 10 version 2004 (released in May 2020) or more recent.

There are two further potential stumbling blocks. First, your computer must use the newer **UEFI firmware** rather than the older **BIOS**. This supports a feature called Secure Boot, which blocks hackers and malware during startup. Second, your machine must have the **TPM** (Trusted Platform Module) 2.0 chip – a tiny and hitherto obscure piece of hardware that generates **encryption keys**.

Finding out whether your PC ticks all



Use the PC Health Check tool to find out if your PC will run Windows 11

these boxes is far from straightforward. To make matters worse Microsoft withdrew its PC Health Check tool – to check compatibility – just a few days after it was released for Windows 10.

Check your PC's compatibility

Until very recently, the PC Health Check tool was only available to members of the Windows Insider preview programme. Just as we were going to press, however, Microsoft finally made the tool available again, within just a few days of Windows 11's launch – that's cutting it pretty fine, we'd say. To get hold of the tool, head to Microsoft's Windows 11 home page (www.snipca.com/39463), then scroll down to the bottom and click the Download PC Health Check App under where it says 'Check for compatibility'.

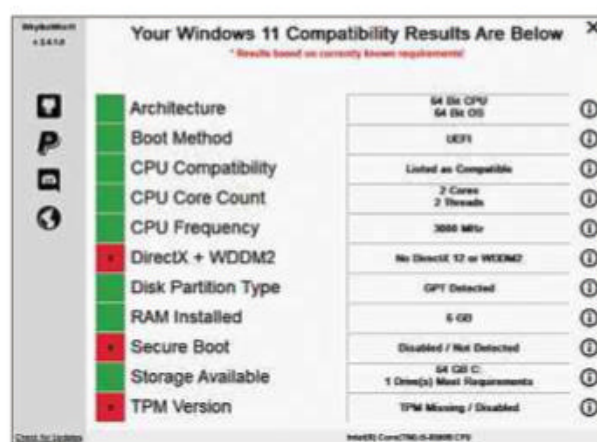
Install and run the program once it has downloaded. In the main part of its program window, PC Health Check will

show a few seemingly random facts statistics about your computer's current status, including when Windows last checked for updates, what percentage of your storage you have remaining and so on. This is all information you can easily glean from Windows itself without the need for any extra software, and none of it has any bearing on your PC's compatibility with Windows 11, so it's unclear why they've been included here.

Under the 'Introducing Windows 11' heading, however, you'll find a blue 'Check now' button. Click this and you'll see a pop-up telling you whether your PC meets Windows 11's system requirements (our old test machine doesn't – **1** in our screenshot above), along with any problems the tool has uncovered **2**. Click 'See all results' **3** for further details.

You may have come across a few third-party system-check tools, but we don't recommend them. Win11SysCheck (www.snipca.com/39466) presents its results in a Command Prompt window, making them hard to decipher. ReadySunValley (www.snipca.com/39468) is a Microsoft Store app that gives accurate results, but you have to avoid its dodgy registry 'fixes'.

The best of a mediocre bunch is probably WhyNotWin11 (www.snipca.com/39467), which provides results that are easy to interpret (see screenshot left). Should you prefer, you can simply check your system's compatibility yourself.



WhyNotWin11 is the best third-party compatibility tool, but you should still check for yourself

Check your PC's specifications yourself

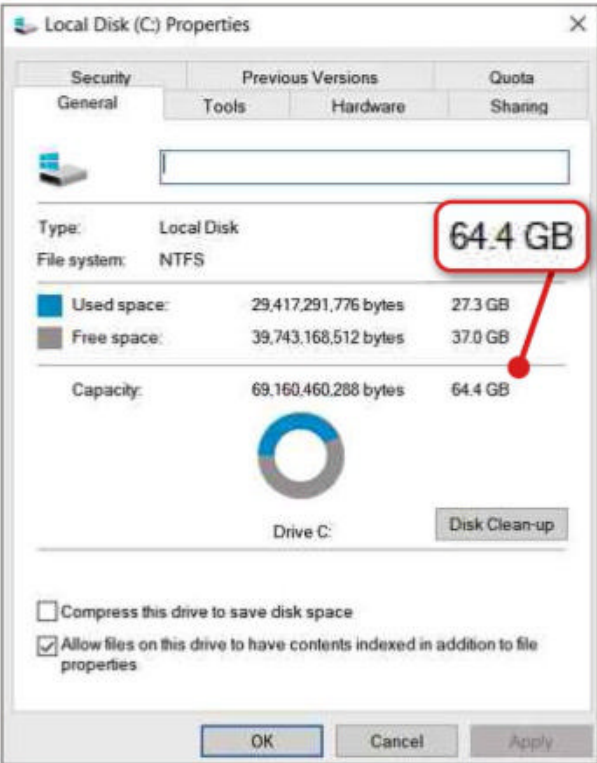
Manually checking whether your current PC meets Microsoft's requirements yourself is a multi-stage process. Begin by opening Settings (press Windows key+I), then clicking System followed by About. Under 'Device specifications', note down the details listed next to Processor (1 in our screenshot right), Installed RAM (2), and 'System type' (3). Also, under 'Windows specifications', make a note of what's shown next to Version (4).

This will provide you with the basic configuration of your computer. You'll then need to check your processor's model number against Microsoft's lists of supported chips – Intel: www.snipca.com/39469, AMD: www.snipca.com/39470, and Qualcomm: www.snipca.com/39471 – to see if yours is compatible.

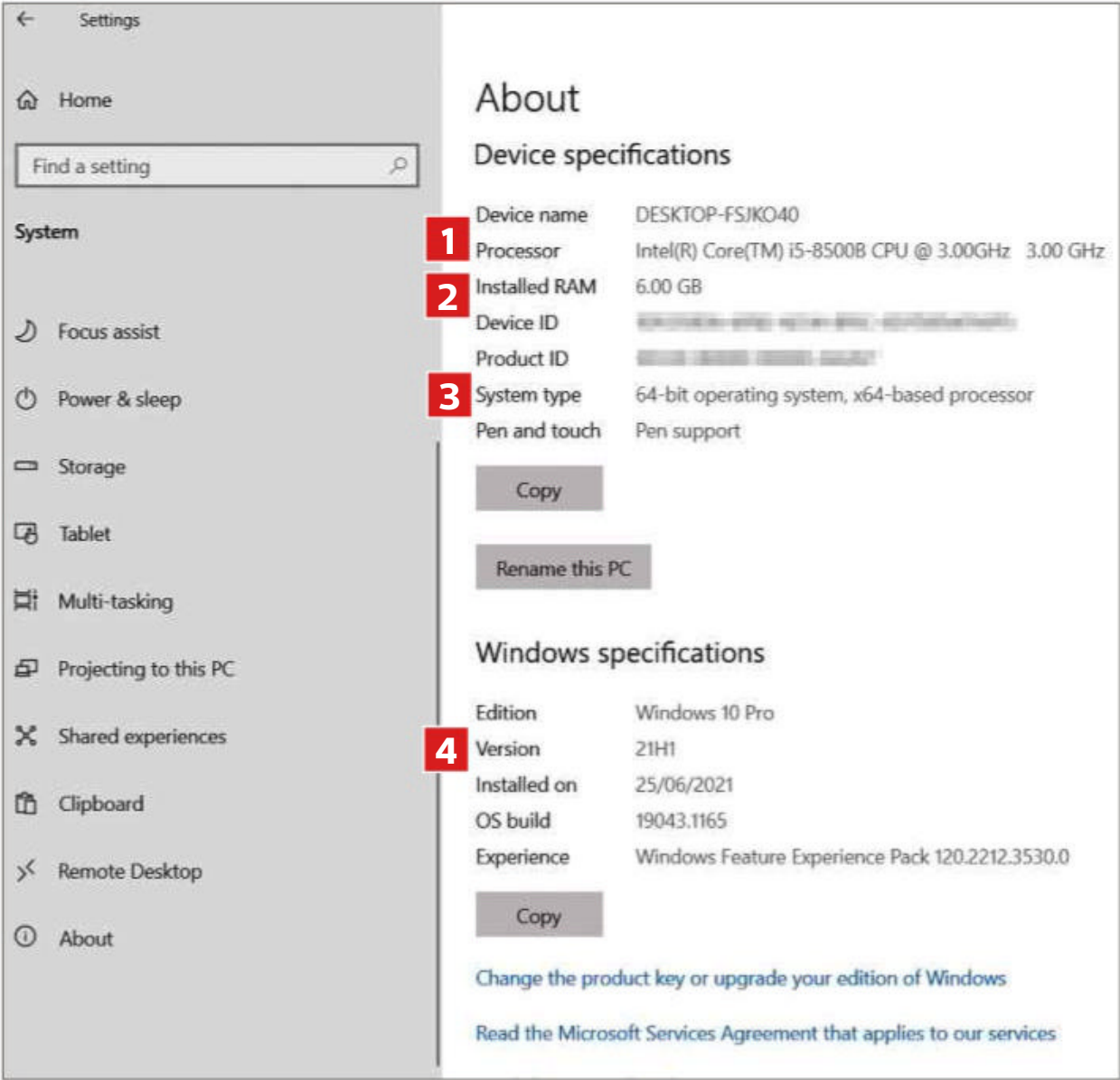
To establish whether your PC meets Windows 11's 64GB storage demands, open File Explorer, click This PC, then right-click your system drive and select Properties. The size of your drive will be listed in gigabytes (GB) to the right of Capacity (see screenshot below).

Next, click Start, type `dxdiag`, press Enter, then click Yes and let the diagnostic tool scan your PC – this will give you your graphics adapter's DirectX version (at the bottom of the System Information pane). Right-click your desktop and select 'Display settings' to see your display resolution – it needs to be higher than 1280x720 pixels for Windows 11.

To find out whether your system supports Secure Boot, click Start, type `MsInfo32` and press Enter. In the window



Right-click your system drive, then select Properties to see your computer's capacity



Find the basic specifications of your computer in System settings

that opens, check under Secure Boot State on the right. If the value is shown as Unsupported, your firmware (whether that's UEFI or BIOS) is not compatible with Windows 11. If it says On, then you're fine. If Secure Boot State is listed as Off, then you can enable it by changing the relevant setting in your PC's UEFI/BIOS – more on this shortly.

Finally, click Start, type `tpm.msc` and press Enter. In the window that opens, click the 'TPM Management on Local Computer' entry in the left-hand pane and you'll see information about your PC's support for TPM in the middle pane.

With any luck it will tell you that 'The TPM is ready for use' (1 in our screenshot above right) and that the Specification

Why has Microsoft opted for these requirements?

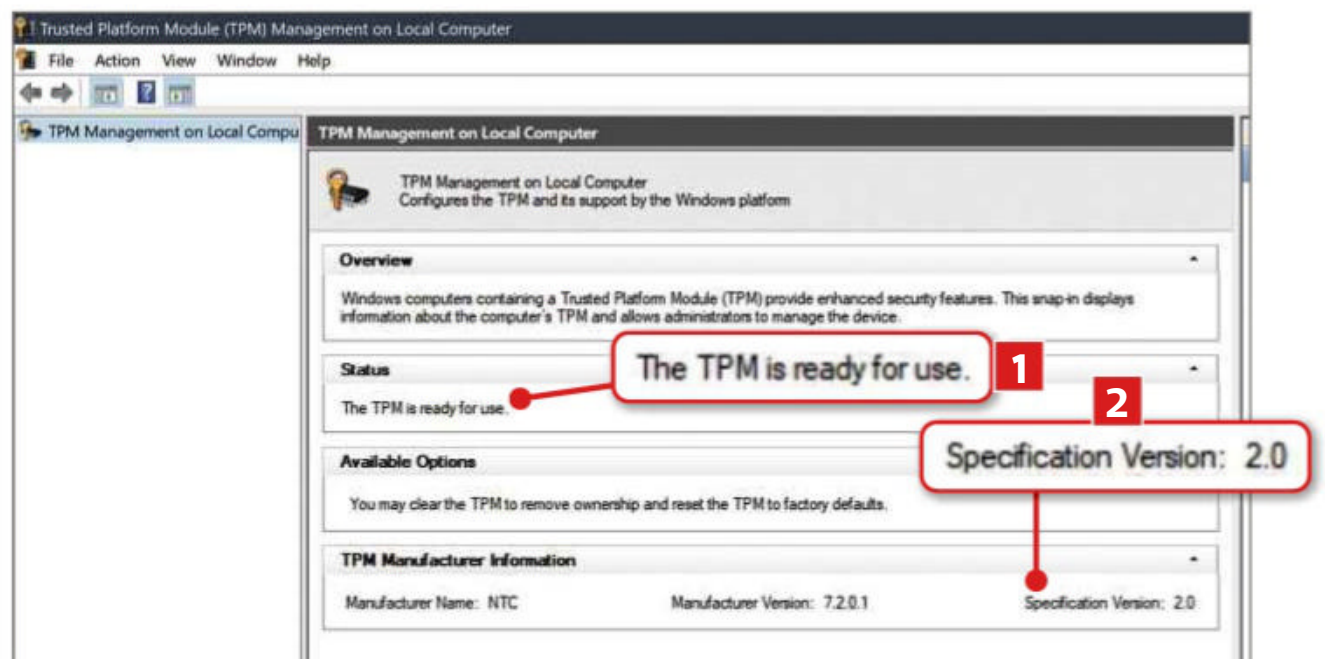
Windows 11's more demanding memory and storage requirements shouldn't come as a surprise. A modern operating system needs more than 1GB of memory to work properly. And anyone who has tried using a Windows 10 machine that's limited to 32GB of storage will tell you that this is nowhere near enough. As for limiting it to 64bit, it was only a matter of time before the ageing 32bit platform was sidelined. Perhaps more curious – and annoying – is Microsoft's insistence on Secure Boot and TPM 2.0. Microsoft will tell you that Windows 11 requires these because they make your PC more secure – and that's probably true. However, that's only part of their logic. The older your machine,

the less likely it is that it'll run Windows 11 smoothly. The requirement for newer hardware features – such as TPM 2.0 – also ensures that Windows 11's user base must have computers made within the last four years or so. Indeed, in a recent blog post (www.snipca.com/39472) Microsoft effectively admitted that reliability was a key factor when it came to deciding on Windows 11's system requirements. But there's hope for people with older computers. In June, Microsoft said Windows 11 would run only on processors made after 2017, but two months later admitted it was considering adding older chips to its compatibility list. We'll keep you posted.

Version is 2.0 **2**. If the version is 1.2, you won't be able to install Windows 11. If the console reports that the module can't be found, there's every chance the module may be installed but disabled in your UEFI or BIOS.

To access your PC's UEFI or BIOS, open Settings and click 'Update & Security', then Recovery. Click 'Restart now' under 'Advanced start-up', then click Troubleshoot on the blue screen of options that opens. Click 'Advanced options', then select the UEFI Firmware Settings option.

You'll probably need to dig around a bit at this point – UEFI's menus vary from PC to PC, so we can't give precise instructions. However, assuming there is a Secure Boot setting, in most cases you'll find it listed in the Boot options, while



Type **tpm.msc** into the Start menu to find out which TPM version you have

TPM settings can usually be found under Security or Advanced options. You may

need to refer to your PC manufacturer for more help here.

SHOULD YOU UPGRADE? 4 QUESTIONS YOU MUST ASK

We can't yet offer our verdict on the new operating system because Microsoft is still adding features and apps, but we'll review it as soon as it's fully released. That said, we've spent enough time with the preview versions to appreciate the key changes. So, before you take the plunge, we recommend asking yourself the following questions to help you decide whether Windows 11 is right for you.

1 What's new in Windows 11?

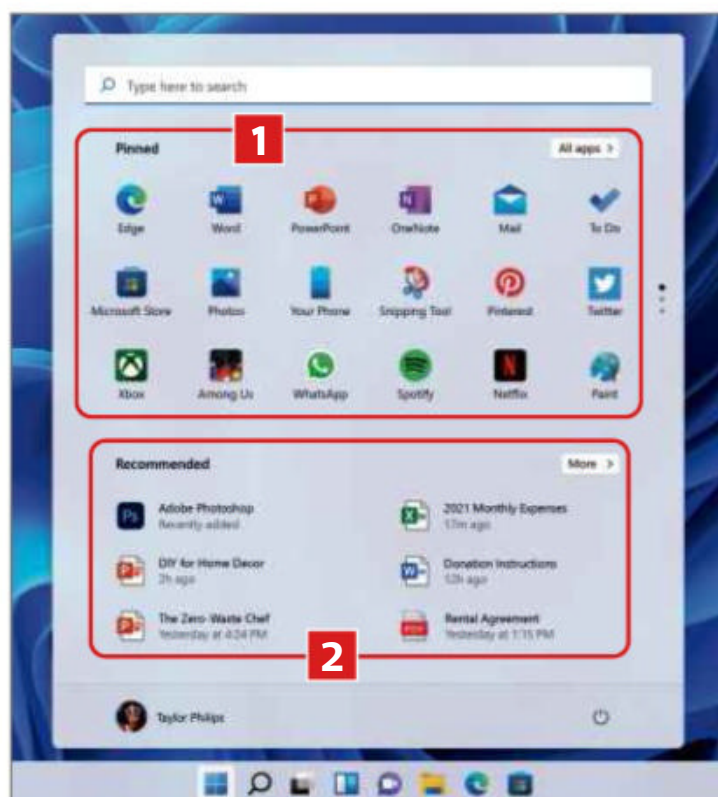
The centralised Start menu – it's in the middle of the taskbar (see screenshot below right) – and the overall design refresh make Windows 11 seem very different to Windows 10. But, beyond the cosmetic changes, we'd say Windows 11 is probably more evolution than revolution. In many ways it feels more like one of Windows 10's major Feature Updates rather than a full generational leap such as from Windows 8 to Windows 10. That's a testament to how much Microsoft got right with Windows 10, of course.

If you hate big updates, upgrading to Windows 11 might be a wise choice. Windows 10 users have had to endure the disruption of two major updates per year, but Windows 11 will get just one big annual makeover. Microsoft has also promised that

Windows 11 places the Start menu in the centre of your taskbar, but you can move it back to the left if you prefer

Windows 11's updates will be 40 per cent smaller than Windows 10's, though it remains to be seen whether that minimises disruption. So far, our own daily experience of updating the Windows 11 previews is roughly in line with Windows 10. Updates have been fairly frequent, with some requiring a restart.

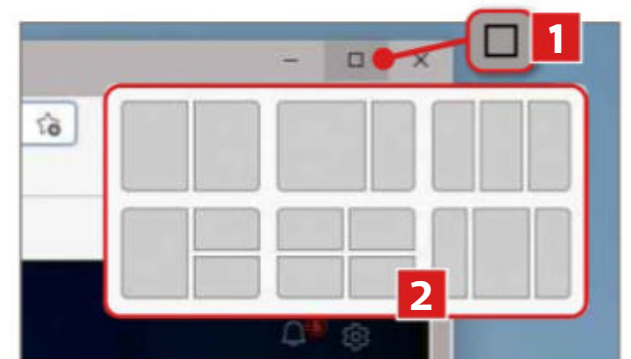
Microsoft seems to have learned its lesson from the complaints it received about Windows 8's Start screen, when you needed to install third-party software to put the Start menu back where it belongs. It's much easier this time. Just right-click the taskbar and select 'Taskbar settings', then click 'Taskbar behaviours' and choose Left from the 'Taskbar alignment' dropdown menu.



Although Windows 10's Start menu was largely hailed as a success, not everyone was a fan of Live Tiles, which regularly update to show real-time information, such as weather forecasts and news headlines. If that includes you, you'll welcome Windows 11's simplified Start menu, which dispenses with Live Tiles altogether, offering instead a double-decked selection of pinned apps that you can customise (**1** in our screenshot below left), and a Recommended section of shortcuts to recent files **2**. The search bar now sits at the top of the Start menu rather than the bottom, but works in a similar way.

Multi-taskers will appreciate the new Snap Layouts feature. Whenever your desktop is getting too cluttered, you can hover your mouse over the Maximise (square) button (**1** in our screenshot below) in the top right of a program window to select one of the six layouts **2** and instantly organise your open programs into a neat grid.

Many of us have been using video-chat tools since Covid-19 struck, so Microsoft's decision to let you launch a chat right



Click the Maximise button to see how Snap Layouts can organise your desktop

from Windows 11's taskbar makes a lot of sense. But what makes less sense is that the tool in question is Microsoft Teams – which is aimed at businesses – rather than Skype, which no longer even comes installed when you buy a new Windows 11 PC.

Perhaps the most significant change is the Settings app. It follows the same concept as Windows 10's but it's laid out more logically (see screenshot right). The Accessibility settings, in particular, are now much simpler to navigate.

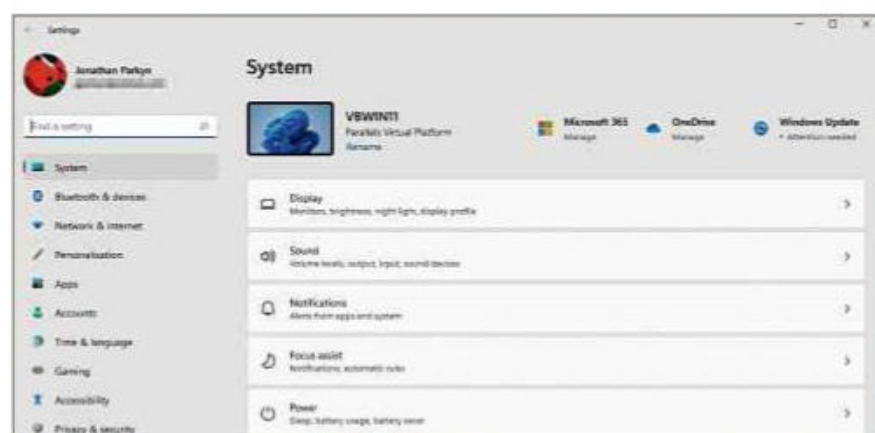
If you use a touchscreen device, you'll be pleased to hear that Windows 11 improves touch controls enormously, adding useful new **gestures**, such as a three-finger downward swipe to minimise windows, and enlarging the touch target areas on buttons and icons, making them easier to hit with your fingertips.

As ever, Microsoft has refreshed the set of apps and tools that come with Windows 11. The most useful is the revamped Snipping Tool (which combines the features of Windows 10's two separate screen-capture tools). There's not much else to get excited about, though Microsoft has just started to roll out updates to Windows 11's

Windows 11's Settings app is laid out far more logically, making it easier to use

Calculator and Clock apps.

Most apps and tools have been redesigned, to fit with Windows 11's style. And ribbon haters will have cause to celebrate here. Windows 11 does away with the Office-style toolbar in File Explorer. Instead, you get a clean toolbar featuring a single strip of icons (see screenshot below) that change depending on the task you're performing. Fans of Paint aren't so lucky. The venerable image-editing tool is – for now, at least

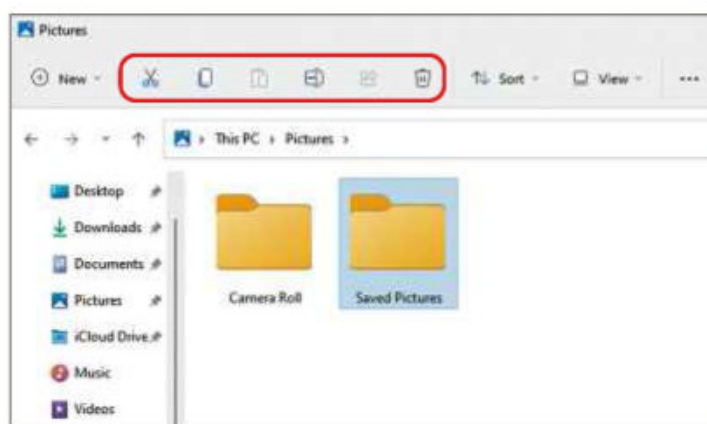


– still lumbered with the ribbon.

Android users may be keen on Windows 11 getting support for the mobile operating system, letting you run phone and tablet apps on your computer. However, despite Microsoft hyping this feature when it announced Windows 11, it won't actually be available at launch.

Instead it will be introduced in a future Feature Update and won't be available until next year at the earliest. Currently, we don't have much detail on how it'll work in practice. There remains the possibility that Microsoft might ditch it completely.

Windows 11 ditches File Explorer's ribbon-style toolbar in favour of a single strip of icons



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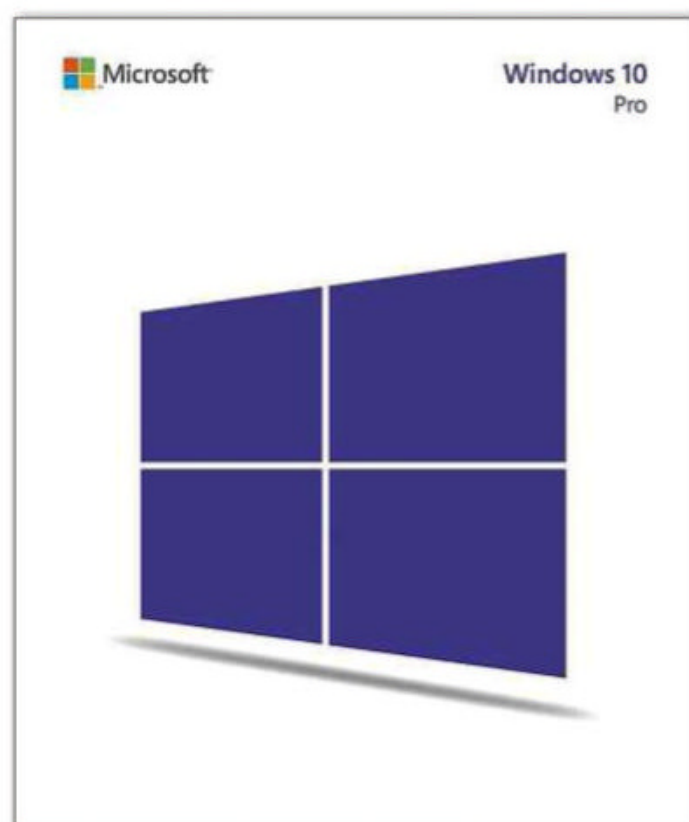


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2 Will you miss what's being dropped from Windows 10?

As with every incarnation of Windows before it, Windows 11 loses almost as many features as it gains. Many of these are unlikely to be missed. For example, will many people lament Cortana's absence from the taskbar? Even more annoying was the 'News and Interests' pop-up, added earlier this year. It's been ditched in favour of Windows 11's more useful **widgets**. Windows 10's under-used Timeline feature has also been killed off.

Those who feel a connection with Internet Explorer (IE) may be sad to learn that it's finally bitten the dust. However, there's an IE mode in Edge if you need it – enable the 'Internet Explorer mode button' (see screenshot 1) in Edge under Settings, Appearance. This is aimed mostly at organisations that need to open websites designed especially for old versions of IE.

It's the smaller things Windows 11 ditches that many users may miss. For instance, it's no longer possible to relocate the taskbar to the sides or top of the screen, while right-clicking the taskbar no longer provides a shortcut to the Task Manager – instead you get a single option to launch 'Taskbar settings' (see screenshot 2). Worse still, you can no longer open a file by dragging and dropping it on to a program's taskbar icon. If you've been opening files this way for years, as we have, you'll find this change infuriating.

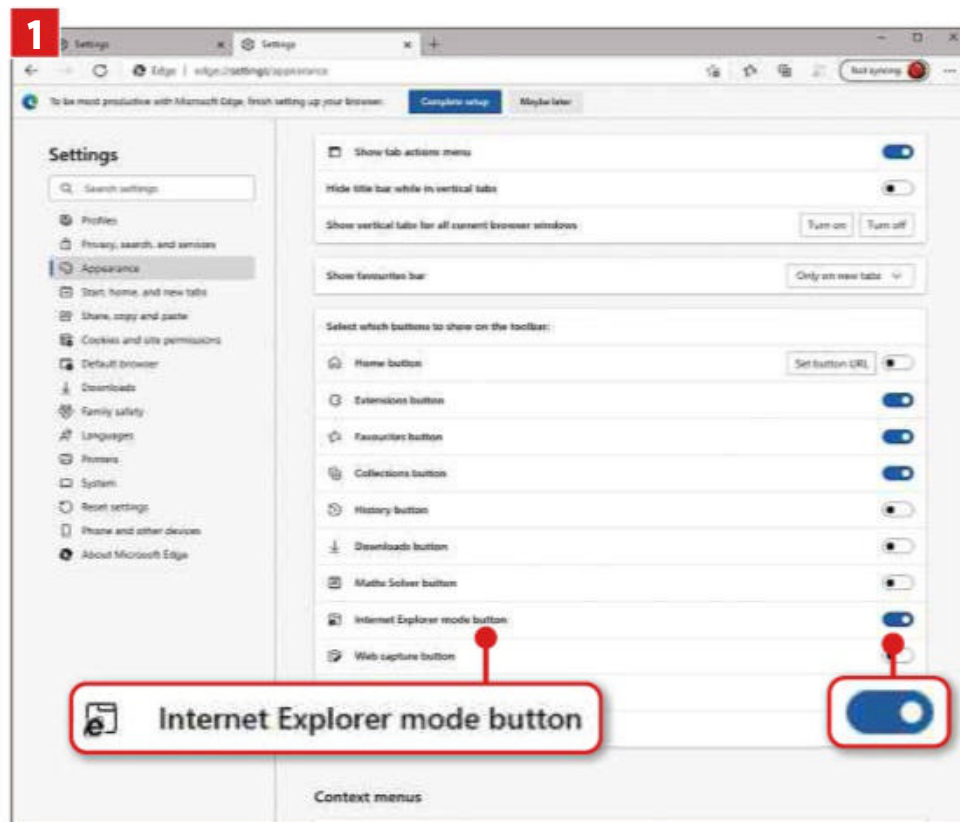
3 Are you happy with Windows 10?

This question may feel more psychological than practical, but it's vital. If you like Windows 10 and none of the new Windows 11 features seem essential, you've got a strong case for staying put – at least for the time being.

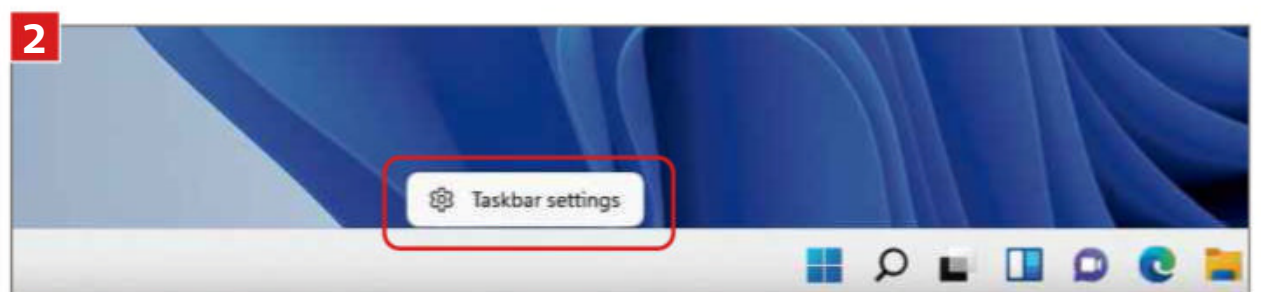
Windows 10 is still a brilliant operating system, after all – undoubtedly one of Microsoft's best. Many of you will be thinking 'If it ain't broke...', particularly since upgrading *can* often break things. Even if the upgrade goes smoothly, moving to Windows 11 will require much preparation, as we explain on pages 56–57.

4 Do you want to buy a new computer?

The final thing you'll need to consider is the longevity of your current computer, and whether you're ready to buy a new one. If your computer's existing specifications don't match up to Microsoft's requirements and you can't



Turn on this setting to enable IE Mode in Edge



Right-click the taskbar in Windows 11 and you'll see only the option to launch 'Taskbar settings'

(or don't want to) upgrade its components, then buying a new PC is effectively your only other way of getting Windows 11. We'll start reviewing the first desktop PCs and laptops that come with the new operating system in upcoming issues.

The problem is that even relatively new computers can fall foul of Windows 11's system requirements (see the box on page 52 – and our own experience in the box below). And if you bought your PC

relatively recently, you'll want to keep it running for as long as possible, even if it means sticking with Windows 10.

Ultimately, however, upgrading to Windows 11 is something you'll need to face. Like previous versions, Windows 10 will become obsolete and unsafe to use when Microsoft terminates support. That fateful date is 14 October 2025 (as confirmed on Microsoft's Lifecycle page: www.snipca.com/39536).

Why I can't upgrade to Windows 11

I've been a keen early adopter of Microsoft's operating systems since Windows 95. Yep – even the rubbish ones (I'm looking at you, Vista and Windows 8). Windows 11 will be the first that I won't be upgrading to – not because I don't want to, but because Microsoft won't let me.

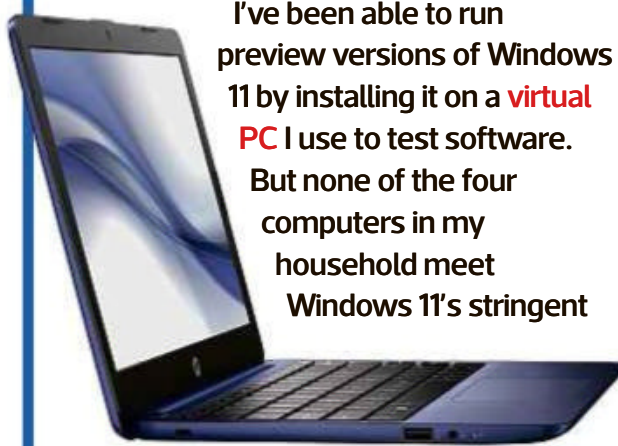
I've been able to run preview versions of Windows 11 by installing it on a **virtual PC** I use to test software.

But none of the four computers in my household meet Windows 11's stringent

system requirements. My trusty Windows 10 PC, for example, doesn't make the cut because its processor isn't on Microsoft's supported list and doesn't have the all-important TPM 2.0 chip. But the PC is more than five years old, so I'm not massively surprised.

I was, however, shocked to discover that the HP Stream laptops (pictured) I bought for my two sons last year during lockdown aren't eligible for Windows 11 either. Their storage and memory are both too low (these are soldered on to the motherboard and so can't be upgraded). They're not especially fast, but they're less than 18 months old. It's absurd that Windows 11 effectively renders them obsolete.

Jonathan Parkyn



WHAT TO DO IF YOU DECIDE TO UPGRADE

If you decide to upgrade to Windows 11 by buying a new PC, then the process is relatively straightforward – you'll just need to use an external hard drive to move the personal files from your old computer to the equivalent folders on your new one. But if you're installing Windows 11 on your existing PC, you'll need to prepare your computer beforehand.

Clear storage to make space for Windows 11

The process of upgrading can consume a lot of storage, and the last thing you want is for the upgrade to fail because you're running low on space. Upgrading is likely to be slower the more files and programs you have installed, so slimming down first can save you time in the long run.

Click Start, Settings, Apps, then work your way through the list of programs and tools you have installed, asking yourself whether you really need each one. If it's something you never use, click it, then click the Uninstall button, followed by Uninstall again.

Now turn your attention to any large files, such as videos, stored on your computer. You may want to move them to an external drive temporarily. Also check your Downloads folder because it may be home to a lot of large program

installers you can safely delete. Move downloads you want to keep to a different location on your hard drive.

Next, wipe **temporary files** from your PC. Click Start, Settings, System, Storage, then 'Temporary files'. Windows will scan for any junk that can be safely removed. Tick all the categories (1 in our screenshot below) except Thumbnails, then click

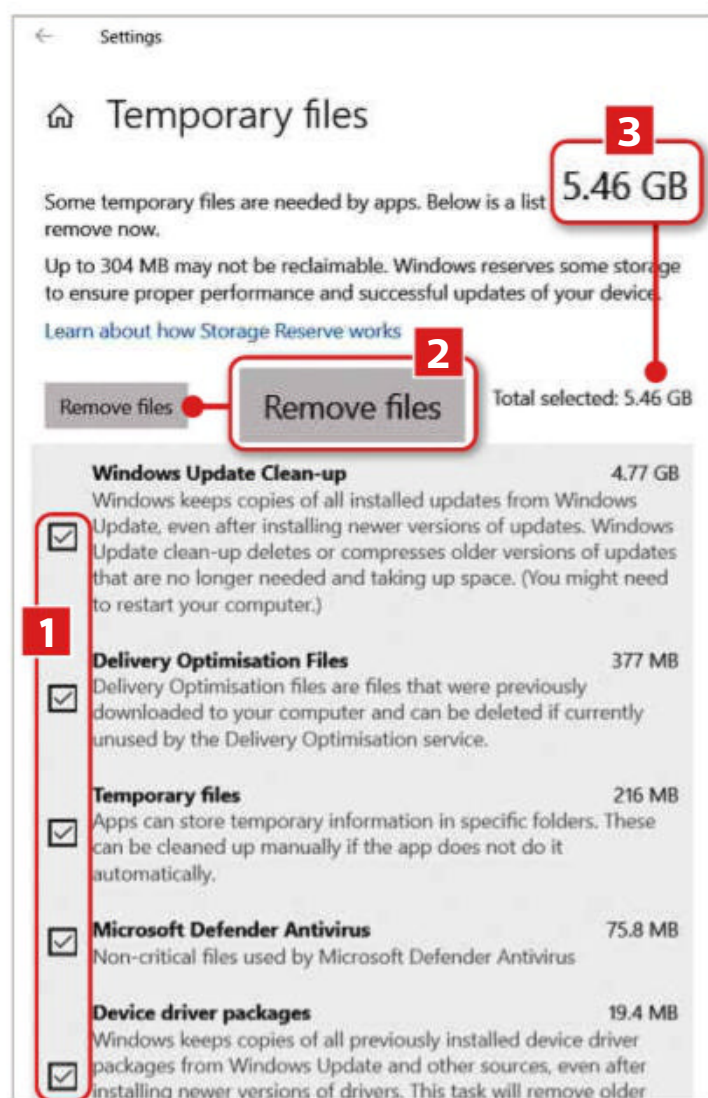
'Remove files' 2. On our machine, this process freed up a healthy 5.46GB 3.

Make sure Windows 10 is up to date

Your upgrade to Windows 11 may run into problems if Windows 10 isn't up to date. Officially, your device must be running Windows 10 version 20H2 or later to qualify for Windows 11. But even if you have a newer version, it's worth making sure all the latest updates have been applied before you begin.

Check your Windows 10 version number (Settings, System, then About). If you see 21H1 below the 'Windows specifications' heading (see screenshot above right), you have a current version of Windows 10 and should be able to get the latest updates by going to Settings, 'Update & Security', Windows Update and clicking the 'Check for updates' button. Apply any pending updates, restart your PC if necessary, then repeat the process until Windows can't find any more updates to install.

If your Windows 10 version isn't listed as 21H1 (or 21H2 – the newest version of Windows 10, due for imminent release), try checking for available updates as described above. Hopefully, this will update your copy of Windows 10 to the latest version. However, it's not uncommon for Windows 10 to get stuck on an older version. If that's the case, you may even see error messages when you attempt to run Windows Update. Freeing

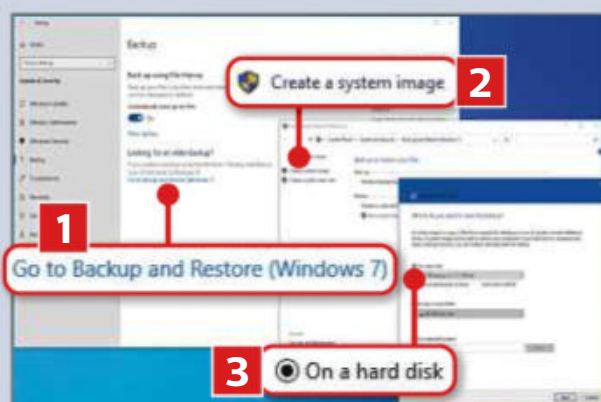


Remove temporary files to clear space for Windows 11

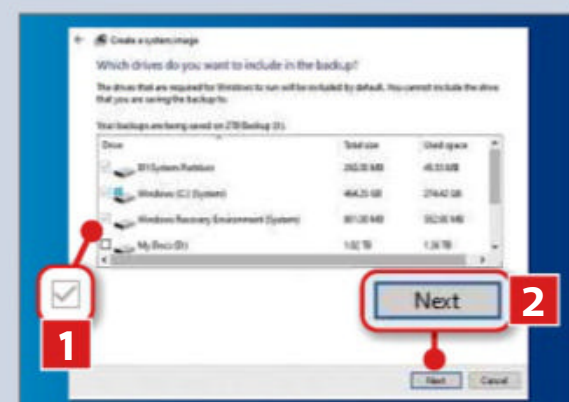
WORKSHOP Create a system image backup before you upgrade



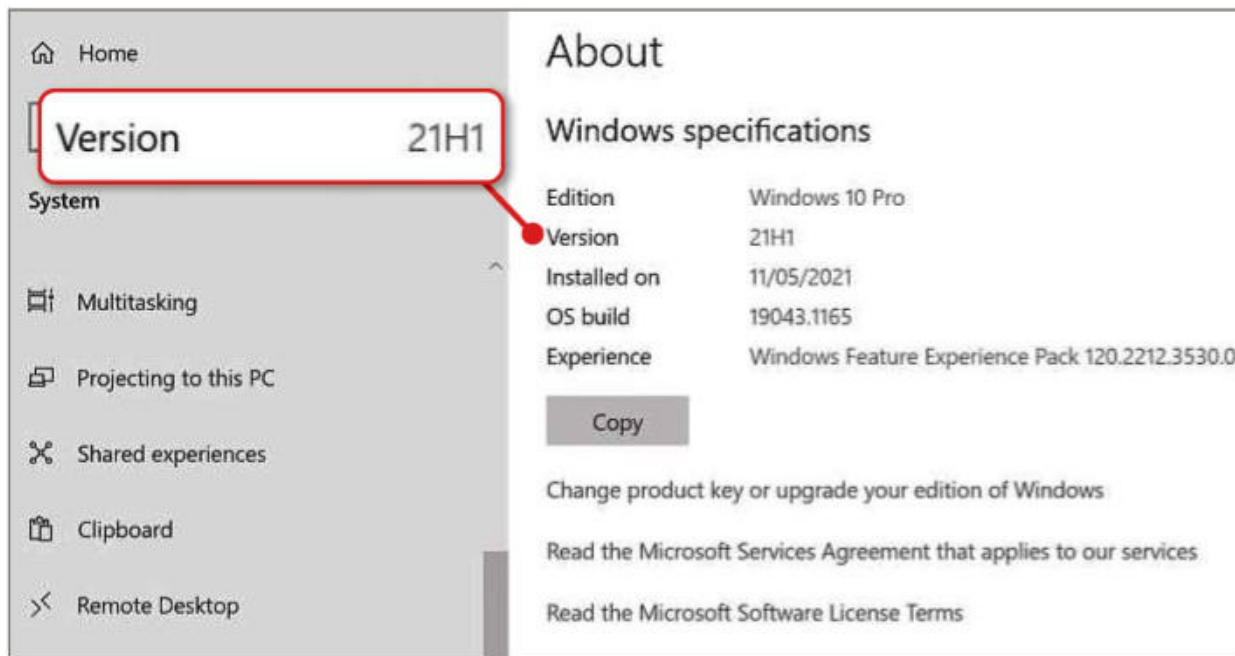
1 Attach a good-sized external USB drive to your PC – ideally one with at least as much free space as the used space on your PC's system drive. To find that out, right-click your C: drive 1 under This PC in File Explorer and select Properties, then look under 'Used space' 2 to see how much space you'll need.



2 Click Start, Settings, 'Update & Security', then Backup. Here, click the link that says 'Go to Backup and Restore (Windows 7)' 1. In the window that opens, click 'Create a system image' 2 on the left. Select 'On a hard disk' 3 and choose your drive from the dropdown menu. Click Next.



3 If you have any other drives or partitions on your PC, you'll be able to include these in your system backup on the next screen – tick the box of any you want to include 1, then click Next 2. On the confirmation screen, click 'Start backup'. Be aware the process can take a while.



Check your version of Windows 10 under 'Windows specifications'

up space, as we described above, may solve the problem. If not, Windows Update itself may need fixing.

First, try Windows 10's built-in troubleshooting tool. Click Start, Settings, 'Update & Security', Troubleshoot, 'Additional troubleshooters', then click the Windows Update option. This will attempt to fix any problem it finds. Once it's finished, try checking for updates again. If it hasn't solved the problem, you may have to install the latest version of Windows 10 manually. This effectively means you'll be upgrading Windows twice – once to install the latest version of Windows 10, then once to install Windows 11. It's a bit of hassle, but effective.

Before you install the latest version of Windows 10, back up your PC and all its data, as we outline below – just in case. Next, go to www.snipca.com/39549 and click the blue 'Update now' button. This will download the Update Assistant tool. Run the tool and follow the steps.

If you had to install a lot of Windows 10 updates, it's worth scanning for and removing temporary files again one last time (as explained earlier).

If the 'Go back' option is greyed out, you've missed the 10-day deadline to restore Windows 10

Back up everything twice

You should use a tool such as Windows 10's File History to automatically back up your personal files to an external drive. Make sure you also run a manual backup immediately before upgrading. In File History, for example, make sure your backup drive is connected, then click Start, Settings, 'Update & Security', Backup, 'More options', then 'Back up now'.

We also recommend making a full system backup of your computer – again, right at the last minute before upgrading. This lets you restore your system to its pre-Windows 11 state. Follow our Mini Workshop opposite for instructions.

Roll back to Windows 10


If you don't like Windows 11, return to Windows 10 by clicking Settings, System,

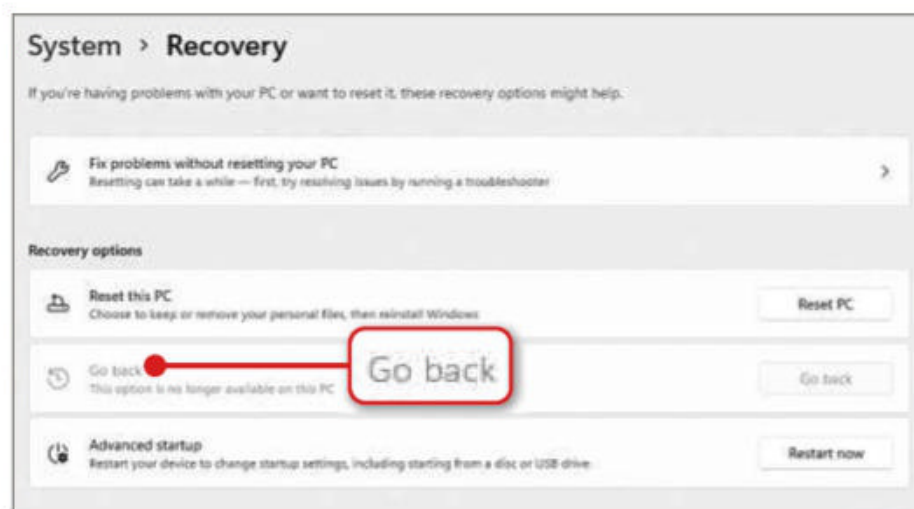
How will Microsoft deliver the update?

At the time of writing, Windows 11 isn't available to install outside of its **beta** preview, so we don't know precisely how Microsoft will deliver it. What we do know is that the rollout will be "phased", and will continue several months into 2022.

Judging by previous Windows 10 version upgrades, we think that, soon after launch, people with compatible computers will start seeing Windows 11 suggested as an optional feature update in Windows Update. It's also likely that Windows 11 will soon be available to download from Microsoft's site (www.snipca.com/39556). This route will be useful if you don't see the option to install it through Windows Update, or for those wishing to carry out a **clean install**.

Recovery, then 'Go back'. There are two things to be aware of, however. First, you'll need to be able to start Windows 11 in order to access the 'Go back' option – something that a botched upgrade could prevent you from doing. Second, you've got only 10 days after upgrading to return. If the 'Go back' option is greyed out (see screenshot below left), then you've missed the deadline.

Both these potential problems can be resolved by making a system backup. It means you can go back to Windows 10 at any time by restoring the backup image. It's even possible to restore a system image backup if your computer won't start – just start your PC with your backup drive attached. You should see a blue screen of recovery options – click Troubleshoot, 'Advanced options', then System Image Recovery. 



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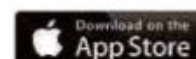
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Don't buy the **wrong** HDMI cable

HDMI cables let you enjoy TV shows, films and games at amazingly high quality, but you need the right one for the maximum benefits. **Robert Irvine** guides you through the different types



HDMI (High-Definition Multimedia Interface) is now the standard means of transmitting audio and video signals from a source device to a screen. These sources include computers, games consoles, DVD/Blu-ray players, TV set-top boxes and streaming sticks, while screens span TVs, PC monitors and projectors. HDMI offers superior sound and picture quality to previous connection methods such as **SCART** and **VGA**, and its cables are thinner and lighter.

Since HDMI ports started appearing on consumer products in 2004, there have been several standards of the technology – the latest is HDMI 2.1 – with each upgrade increasing the **bandwidth** capacity to allow for higher resolutions and faster data-transfer speeds. These standards work best with different types of HDMI cable, so in this guide we'll help you find the right cables for all your HDMI devices.

Which HDMI cable do you need?

Your HDMI device probably came with its own cable, but if you want to enjoy the best possible picture quality on your TV or monitor, you may need to upgrade. For example, if you've bought a huge **4K** TV, connecting it to your Blu-ray player or

Sky Q Ultra HD box using an older HDMI cable won't give you the best viewing experience – in fact, it might not even work. The same applies to a Full HD (**1080p**) monitor, such as our Buy It choice, the BenQ GL2780 (see www.snipca.com/34834, pictured below).

There are currently four main types of HDMI cable, which differ in the maximum video resolution they provide, and their refresh rate (how many times a second they can display a new image). The higher the resolution and refresh rate – which is measured in Hertz (**Hz**) – the sharper, smoother and better quality the picture. Also important is how quickly the HDMI cable can transfer data from the source device to the screen, which is measured in gigabits per second (Gbps). Here's a brief summary of the differences between HDMI types:

Standard HDMI (Category 1)

This delivers a standard high-definition resolution of up to 720p (1280x720 pixels) at a 30Hz refresh rate. It offers a data-transfer speed of 5Gbps and is optimised for HDMI versions 1.0 to 1.2a.

High Speed HDMI (Category 2)

These cables have a maximum resolution of 1080p (1920x1080 pixels) at 60Hz or

4K at 30Hz. Their transfer speed is 10Gbps and they're optimised for HDMI versions 1.3 to 1.4a.

Premium High Speed HDMI (Category 3)

This offers up to 4K/Ultra HD resolution at 60Hz, transfers data at 18Gbps and is optimised for HDMI versions 2.0a and 2.0b.

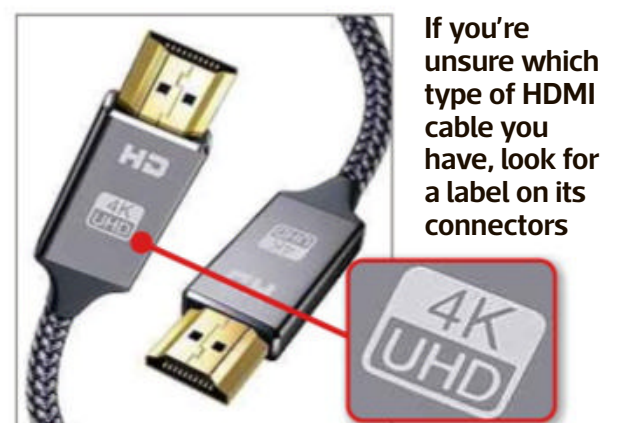
Ultra High Speed HDMI (Category 4)

Designed for use with HDMI 2.1 (see box opposite), the latest cables support resolutions of up to 10K at a 120Hz refresh rate, with a transfer speed of 48Gbps.

Unless you plan to play graphic-intensive video games, or you regularly stream 4K content on, for example, Netflix's Ultra HD plan (www.snipca.com/39449), a High Speed HDMI cable will be sufficient for your needs. However, choosing a Premium High Speed HDMI cable will future-proof your home-entertainment setup and won't cost much more. Cables are 'backwards compatible', which means they work on



Use a High Speed HDMI cable with the BenQ GL2780 monitor for optimum quality



If you're unsure which type of HDMI cable you have, look for a label on its connectors

devices that use older versions of HDMI – you just won’t get the quality or speed benefits.

If you’re unsure which type of HDMI cable you currently have, look for a label on the cable or its connectors that says something like ‘Premium High Speed’, ‘Cat 3’ or the relevant resolution – as on this Snowkids 4K Ultra HD cable (www.snipca.com/39459, pictured below left).

Choose the right HDMI connector

As well as choosing the right type of cable, you need to ensure it has the correct connectors. There are three types of HDMI connector – Standard, Micro and Mini (pictured below) – which all have 19 pins and differ only in size.

Your TV, monitor, PC, console or DVD player will almost certainly have a Standard HDMI port (Type A, 13.9x4.45 mm). But smaller devices such as DSLR cameras, camcorders and portable projectors, as well as some tablets and laptops, have Mini HDMI ports (Type C), so require a connector of that size (10.42x2.42 mm). Micro HDMI ports (Type D), which need connectors measuring 6.4x2.8 mm, are less common, but you’ll still find them on Raspberry Pi computers, GoPro cameras and older smartphones. Check your device’s specifications to see which port you have.

You can either buy a cable that has a Standard HDMI connector at one end and a Mini or Micro connector at the other, or purchase an adapter that converts the larger connector to the smaller size. You can buy a Mini HDMI adapter (www.snipca.com/39454) or a Micro HDMI adapter (www.snipca.com/39453) for under a tenner, as well as an angled HDMI adapter for plugging your connector into hard-to-reach ports (www.snipca.com/39456).

Choose the right cable length

The length of HDMI cable you need obviously depends on how far apart your source and display devices are. There’s no

Do you need HDMI 2.1?

The latest version of HDMI is being built into an increasing number of devices, but HDMI 2.1 has a long way to go before it’s as prevalent as previous versions. Most notably, HDMI 2.1 output ports are available on the PlayStation 5 and Xbox Series X games consoles, allowing for smooth and incredibly sharp gameplay on compatible TV sets.

HDMI 2.1-enabled TVs include 4K (and 8K) sets from Samsung, LG, Sony, Philips and Panasonic, and are both huge (upwards of 48in) and expensive – for example, the LG G1 OLED (www.snipca.com/39477) costs £2,000. Several new PC monitors also support HDMI 2.1, including the 28in Acer Nitro XV282K (www.snipca.com/39458, pictured),



which costs \$1,398 (about £1,010). But unless you’re an avid gamer with a lot of money to spare, it’s not worth buying an HDMI 2.1 device just yet, or the Ultra High Speed HDMI cable you’ll need to enjoy its benefits. Wait until more devices become available and prices drop significantly.



Amazon Basics HDMI cables are available in various sizes and are great value for money

point buying a 50-metre cable to connect your set-top box to your TV, but you also don’t want a cable that’s too short for your requirements.

For most purposes, a one-metre HDMI cable should suffice, but you can opt for two or three metres to be on the safe side. The Amazon Basics High Speed HDMI cable (www.snipca.com/39455, pictured above) is handily available in lengths from 0.9m (£4.99) to 30.5m (£46.39), so choose the one that best suits your needs. Bear in mind that the longer the cable, the further the audio and video signals have to travel, although it’s claimed that a



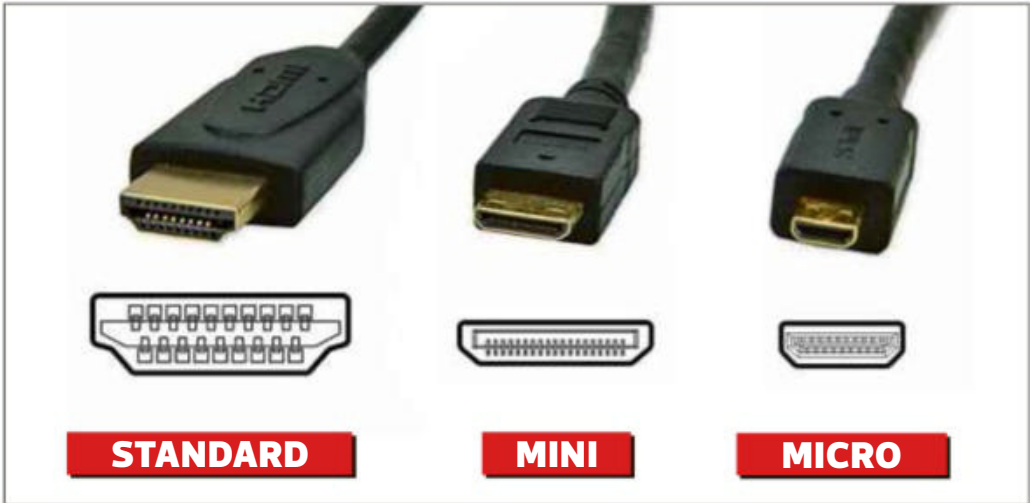
Braided HDMI cables don’t offer better picture quality but are less easily damaged

‘passive’ HDMI cable (one without a signal booster) can maintain 4K quality over a distance of 10 metres.

Is it worth buying a more expensive HDMI cable?

One myth about HDMI cables is that the more you pay, the better picture quality you’ll get. Manufacturers try to convince you that gold-plated connectors and nylon-braided designs make their products superior, but it’s what happens inside the cable that counts. You shouldn’t need to pay more than £20 for your required type and length.

HDMI uses digital signals, which means that a cable either transmits data correctly or it doesn’t. The amount of bandwidth may vary between the different versions of HDMI, but gold plating won’t improve your picture and the main advantage to braided cables is that they’re more durable against wear and tear (and teething pets). You can currently buy the Amazon Basics Premium-Certified Braided HDMI cable for just £7.52 (www.snipca.com/39457, pictured above).



There are three sizes of connector for HDMI cables: Standard, Mini and Micro

In the US, internet service providers (ISPs) are permitted to collect and sell their customers' data for advertising purposes, so in the UK we're lucky that the likes of Sky, BT, TalkTalk and Virgin Media respect our privacy – or do they?

Earlier this year, it was reported that two unnamed ISPs were taking part in a trial that involved them sharing details of their users' browsing activities with the Home Office and the National Crime Agency (see www.snipca.com/39439). The trial followed the introduction of the controversial Investigatory Powers Act 2016, better known as the Snooper's Charter, which could force ISPs to log the Internet Connection Records (ICRs) of their customers for up to 12 months.

This means that your ISP could already be collecting data about the websites you visit and what you do on them, either because it's been ordered to do so by the Government or for the more benign purpose of "improving user experience".

In this feature, we'll explain the best ways to prevent your ISP from watching everything you do online, without revealing your privacy-protecting tactics.

Change your default DNS server

When you type a web address into your browser's address bar, your ISP's **DNS** (Domain Name Service) server looks up the **IP address** that's linked to it, so the corresponding website can be opened. This DNS server is assigned to you when you sign up with your internet provider, usually through the supplied router, and means that your ISP can view and store details of every web page you visit. Fortunately, you're under no obligation to stick with your ISP's default DNS server, and switching to an alternative can offer speed benefits as well as letting you browse the web more privately.

To manually switch to another DNS server in Windows 10, open the Settings app, select 'Network & Internet', then 'Network and Sharing Centre' and click 'Change adapter settings'. Right-click your network adapter (the one shown as 'Enabled') and choose Properties,

then select 'Internet Protocol Version 4 (TCP/IPv4)' and click the Properties button. Type the IP address for the DNS server into the 'Preferred DNS server' box and an alternative IP address into the 'Alternative DNS server' box.

Below are the main and alternative IP addresses for the most popular and reliable DNS servers that don't collect your personal data:

Cloudflare: 1.1.1.1 and 1.0.0.1

Google Public DNS: 8.8.8.8 and 8.8.4.4

OpenDNS: 208.67.222.222 and 208.67.220.220

Click OK to confirm and restart your PC to switch to your new DNS server. If you have any problems, go back to the Properties box and select 'Obtain IP address automatically' and 'Obtain DNS server address automatically' to restore your ISP's default server.

If that sounds too fiddly, you can

use the excellent free tool DNS Jumper (www.snipca.com/39431) to change your DNS settings for you. Download, unzip and run the program (it doesn't require installation), then select a DNS server from the dropdown menu (see screenshot below left) and its IP addresses will be entered automatically. Click 'Apply DNS' to switch to the new server. To change back to your ISP's DNS server, select 'Default DNS' at the top of the list.

Turn on DNS-over-HTTPS in your browser

HTTPS websites encrypt data such as your passwords, personal details and search queries, so it can't be intercepted by third parties, including ISPs. However, your ISP can still see which HTTPS websites you visit.

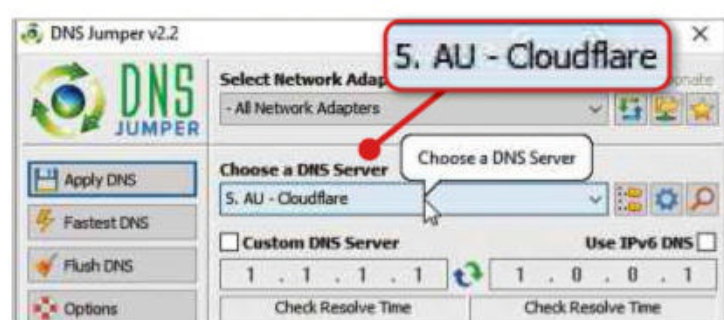
Most browsers now offer a built-in feature that addresses this privacy concern – you just need to make sure it's switched on. Called 'DNS-over-HTTPS', it



Stop your ISP SPYING on you

Whether you go online through BT, Sky, TalkTalk or another company, your ISP could be watching everything you do.

Robert Irvine explains the most effective ways to prevent this snooping



Use DNS Jumper to switch your DNS server more easily and stop your ISP snooping on you

encrypts the DNS requests your browser makes when you enter web addresses, making it more difficult (but not impossible) for your ISP to identify the sites you visit, without you needing to switch your DNS server (see previous tip).

Firefox was the first browser to use DNS-over-HTTPS (via Cloudflare) and activates it by default. To double-check, click Firefox's three-line menu button, select Settings, then General and scroll down to Network Settings. Click the Settings button and ensure 'Enable DNS over HTTPS' is selected.

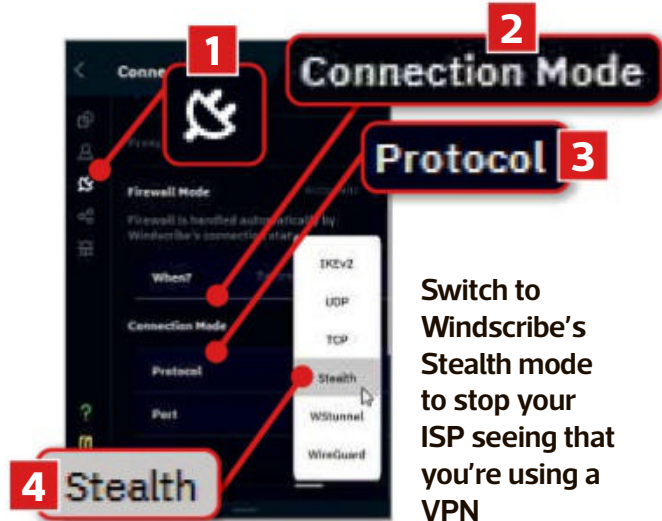
In Chrome or Brave, go to Settings, click 'Privacy and security' and choose Security. Make sure 'Use secure DNS' is switched on and 'With your current service provider' selected, but note the warning that: 'Secure DNS may not be available all the time'. In Edge, go to Settings, then 'Privacy, search and services'. Scroll down to Security and ensure the 'Use secure DNS...' option is enabled.

Access the web using a VPN

A more effective way to conceal your online activities from your ISP is to browse the web through a **VPN**. Although VPNs are most commonly used to spoof your location, allowing you to access, for example, US Netflix content in the UK, they also encrypt your internet connection so that nobody can see what you're doing – and that includes your ISP.

However, this encryption is also a giveaway sign that you're using a VPN, because when your ISP checks which sites you're visiting, it will see a string of gobbledygook rather than a standard data connection between your IP address and that of a website. This isn't a massive problem, because it's completely legal to use a VPN in the UK, unlike in China where they are banned, but it may suggest that you have something to hide.

Still, if you want to protect your privacy from the prying eyes of Sky, BT, Virgin Media, TalkTalk or any other ISP, a VPN is



What your ISP knows about you

- **Every website you visit** – and what you do there, unless the site uses HTTPS encryption. On unencrypted HTTP sites, your ISP can even see your passwords.
- **The content of your emails** – unless the email service uses Transport Layer Security (TLS) encryption. If your email account is provided by your ISP, this intrusion is almost a given.
- **What you download** – your ISP may

- even 'throttle' (slow down) your connection if you regularly download large files.
- **What you search for** – again, unless the site uses HTTPS encryption. Google does, but then it collects your search data itself.
- **When you go online and where from** – this may not seem like a major privacy intrusion, but allows your ISP to build a profile of your browsing habits.

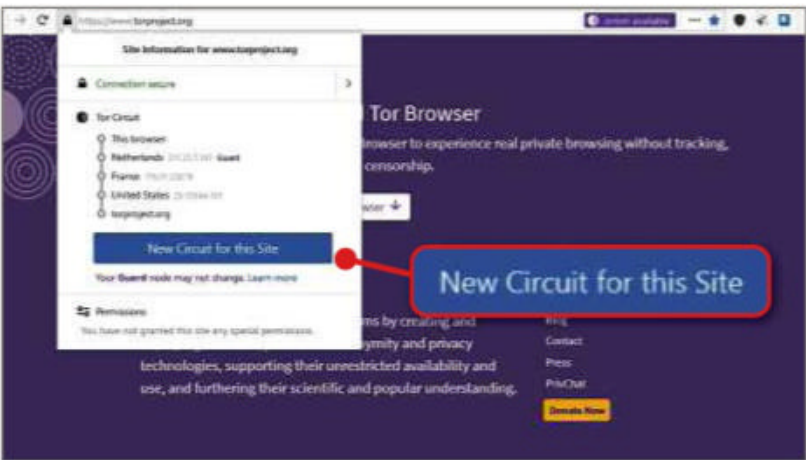
the way to go. Our favourite free option is Windscribe (www.snipca.com/39424), which gives you access to servers in 10 countries, including the US, and 10GB of data a month without a subscription. Windscribe also offers two connection modes that disguise that you're using a VPN, which means your ISP will be none the wiser.

Open the Windscribe desktop program, select the Connection option on the left (this looks like a cable connector – 1 in our screenshot below left) and click Manual next to 'Connection Mode' 2. Click the dropdown menu next to Protocol 3 and choose either Stealth 4, which masks your VPN 'tunnel' to make it look like HTTPS traffic, or WStunnel, which makes it look like standard HTTP traffic. Windscribe says these modes are useful for web browsing over "restrictive networks", but they're equally handy for fooling nosey ISPs.

Browse the web anonymously with Tor

You can also stop your ISP (or anyone else) spying on your web activities by using the privacy-focused Tor Browser (www.snipca.com/39425 – see screenshot above right). This is based on Firefox, but uses the Tor network to encrypt your browsing, disguise your location and block all trackers. Tor is also now available in Brave (<https://brave.com>) – click the browser's menu button and choose 'New private window with Tor'.

Although Tor is associated with the **dark web**, you can use the browser to access standard perfectly legal websites, though because it redirects your connection through a circuit of 'relays' (you can create a new circuit by clicking



Tor lets you browse the web anonymously so your ISP can't see which sites you visit

the padlock icon – see screenshot above right), your browsing speed will be slower than in Chrome, Edge or Firefox. Don't worry about stumbling across illegal or disturbing content, because dark websites require you to know their precise 16-character 'onion' addresses, and Tor Browser itself is safe and legal to use.

Although your ISP can't see which sites you visit through Tor, it can tell that you're using the network from the 'entry node' (the first site you connect to) in your Tor circuit. Currently, no UK ISP blocks access to Tor (though its website has been blocked in the past – see www.snipca.com/39426), but the fact that it's frequently misused for dubious purposes may make your usage look suspicious.

Earlier this year, it was reported that the Tor feature built into Brave was leaking details of the sites users visited, so that "your internet service provider (ISP)... might be able to tell that the request for that specific website was made from your IP address" (www.snipca.com/39427). The bug was quickly fixed, but shows that even Tor suffers occasional flaws.

The best way to prevent your ISP from seeing that you're using Tor is to run a VPN at the same time. This will significantly slow your browsing and may stop some sites working, but at least you'll be completely anonymous online. **ca**

Problems Solved

Our experts solve all your tech problems

PROBLEM OF THE FORTNIGHT

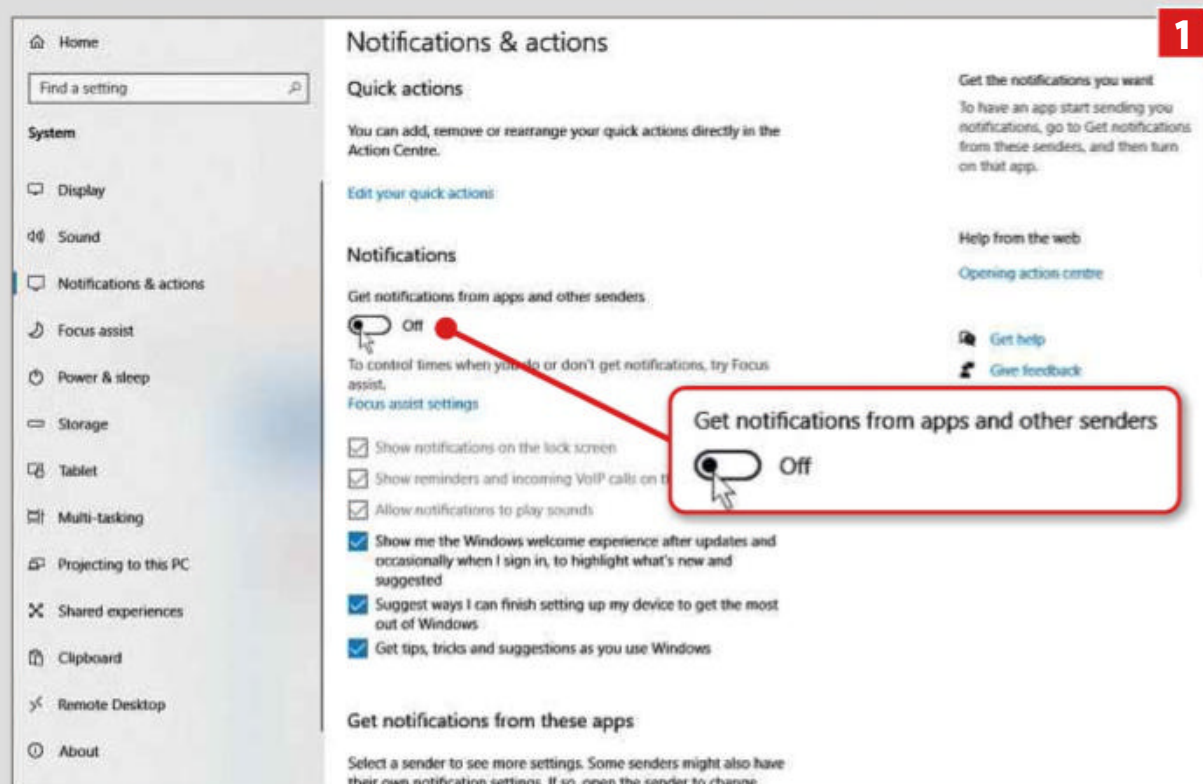
Can I enlarge Peek on my desktop?

Q I was interested to learn in Issue 610 that a Windows tool I often use is called the Peek bar. Is there a way I can make this bigger? When displaying my desktop in Teams meetings, I often need to return to the desktop to access other folders, but the red Teams display window covers this Peek bar, so trying to click it can be rather hit and miss. Can you advise?

Ian Henderson

A Strictly speaking, this mere sliver of a button is called 'Show desktop', not Peek. However, hovering the mouse pointer over it activates a feature called Peek, so many people, including us here at *Computeractive*, simply call it that.

Naming aside, although many users would no doubt appreciate the ability to change the size of the Peek strip, there is unfortunately no such option. Microsoft's idea is that you simply drag the mouse pointer over to the very bottom right of the screen and hover there without giving it much thought. This triggers the Peek feature, which lets you 'see through' all the currently displayed windows, or click to switch to the desktop. That's all well and good, but the logic instantly



In 'Notifications & actions', you can switch off all notifications or just those from specific apps

falls apart if you use more than one monitor, because the mouse pointer just keeps going to next screen – and the Peek strip is a very small target when you're trying to hit it intentionally. It's also a bit useless if pop-up notifications get in the way, as happens to you regularly.

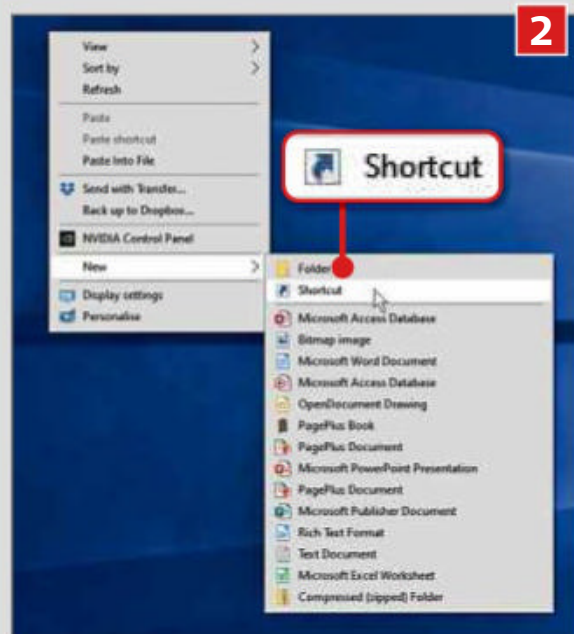
One workaround is to disable some or all notifications so that the bottom-right of the screen is never obscured. To do this, first click Start followed by the Settings cog and then System followed by 'Notifications & actions'. Next, under the Notifications heading, either click to flip the 'Get notifications from apps and other senders' slider to its Off position (see screenshot 1), or scroll down

to find sliders that control notifications from individual apps.

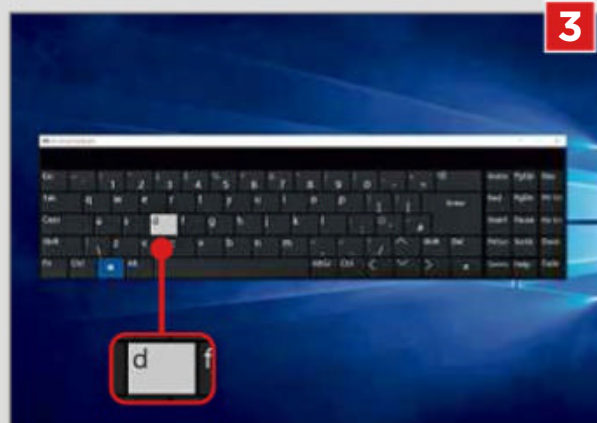
Alternatively, you could create a dedicated 'Show desktop' button that lives on your taskbar. Right-click a blank area of the Windows desktop, then point to New and choose Shortcut (see screenshot 2). Next, in the 'Type the location of the item' box, type the following code: `explorer.exe shell:::{3080F90D-D7AD-11D9-BD98-0000947B0257}`. This is easy to get wrong, so instead we'd suggest you use the Control (Ctrl)+C keyboard shortcut to copy it from the Pastebin page we created, at www.snipca.com/39352, then use Ctrl+V to paste it into the box mentioned above.

Now click Next, type **Show desktop** as the name for the shortcut, then click Finish. Finally, find the new shortcut's icon on the desktop and drag it to your taskbar.

We should also mention another quick way to get to the desktop at any time and from within any app, which is to use a Windows keyboard shortcut. It's Windows key+D (see screenshot 3).



Make a 'Show desktop' icon for your taskbar or use the keyboard shortcut Windows key+D



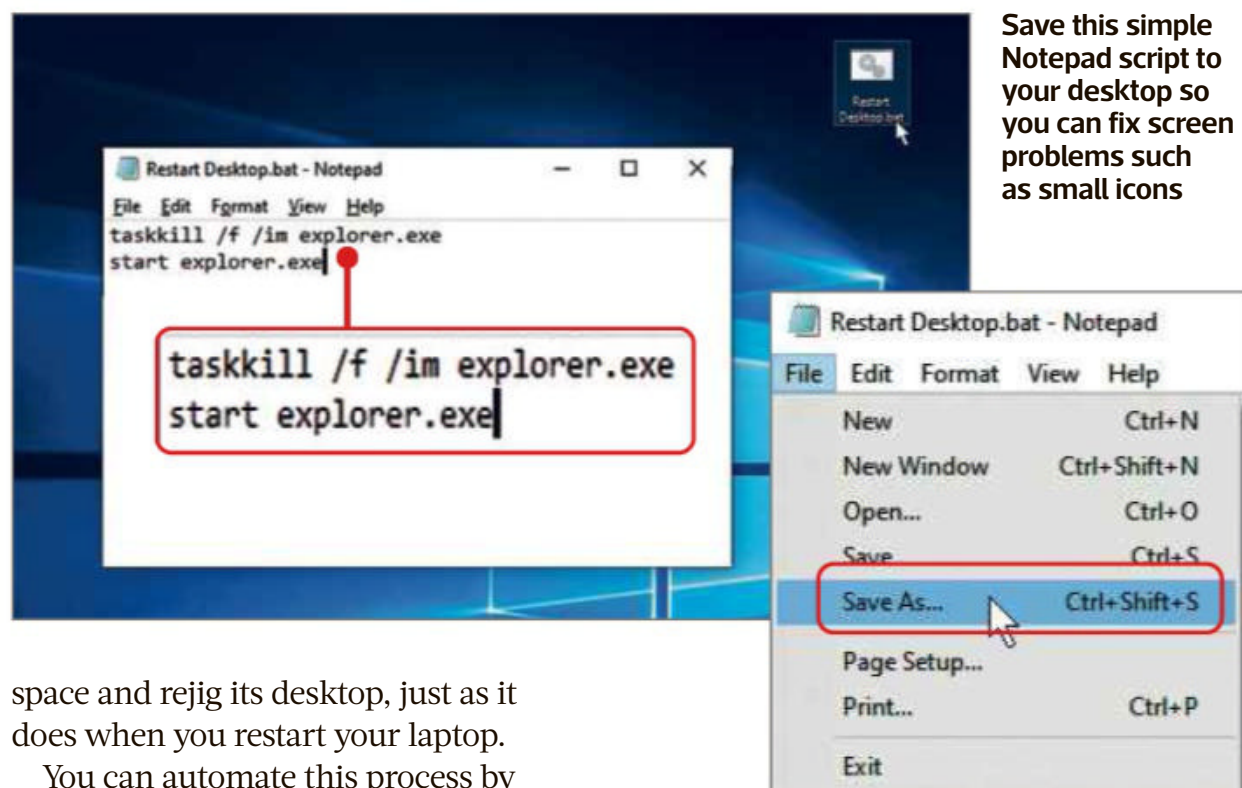
How do I stop my icons changing size?

Q I usually connect my laptop to a large external monitor. I use this as my main screen, but the Windows 10 desktop extends to the laptop's screen too. This generally works well, but sometimes when I disconnect the laptop from the monitor while it's running, the screen wobbles a bit and the icons on my taskbar go very small. Restarting the laptop fixes it, but this is a pain. The same problem also happens in reverse, so connecting my running laptop to the external monitor results in taskbar icons that are too large. Again, restarting the laptop fixes it. It doesn't happen every time, but it is annoying. Is there a fix?

Martin Crouch

A Windows has never been great at handling sudden screen changes, and little quirks like this have been annoying people pretty much forever. Restarting your laptop usually allows the operating system to pull itself together, as you've noticed.

Until Microsoft gets around to creating a truly seamless experience for switching monitors, one workaround is to restart the explorer.exe process that drives the Windows desktop. This forces Windows to reassess the amount of available screen



space and rejig its desktop, just as it does when you restart your laptop.

You can automate this process by creating a little batch-file **script** in Notepad, the text-editing app that's included with Windows 10 (see screenshot above). Launch it, then type these two lines, pressing Enter after each: `taskkill /f /im explorer.exe` `start explorer.exe`

Alternatively, you can copy these commands from the Pastebin page we created at www.snipca.com/39353, then paste them into your Notepad window. Now click File followed by 'Save As' (see screenshot above right),

and name this script 'Restart Desktop.bat' (or anything else, as long as it ends in '.bat', which is short for 'batch file'). We'd suggest saving it to the Windows desktop so it's within easy reach.

Now if you disconnect or reattach your laptop to your external monitor and the icons change size, double-click the Restart Desktop.bat file to make Windows close then restart explorer.exe, saving you the hassle of rebooting your computer.

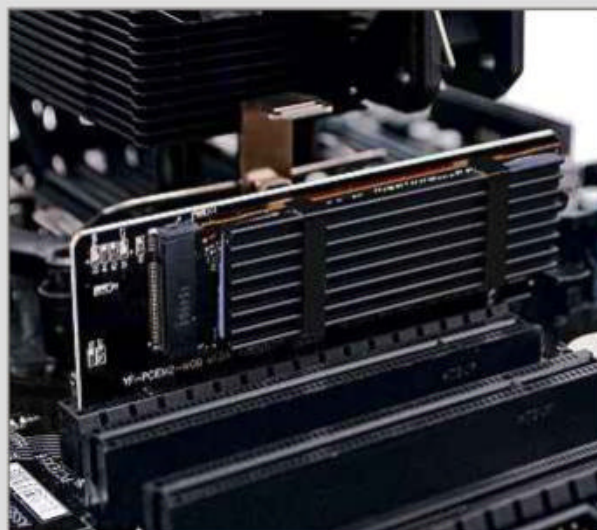
Can I add an M.2 drive to my desktop PC?

Q A friend has given me an **M.2 SSD**, which he says won't work in his laptop. I thought I might be able to just slot it into my desktop PC but I can't see a compatible slot. Is there any way I can fit this inside my computer?

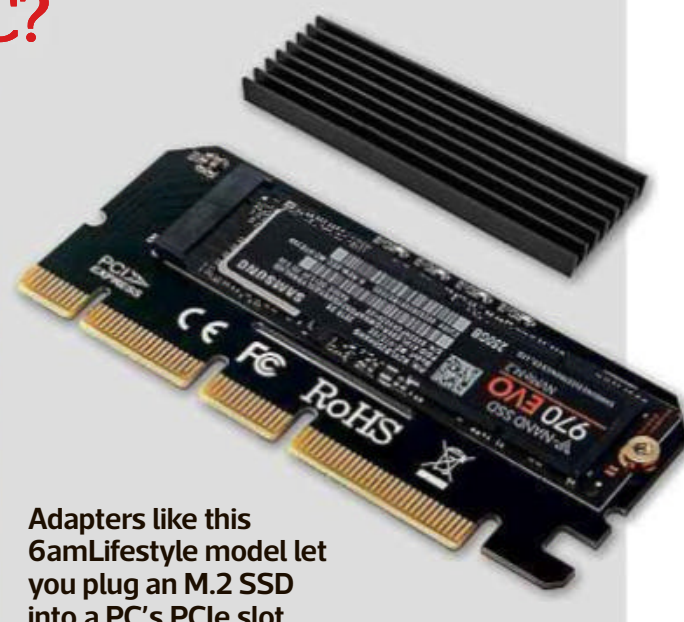
Stephen Graham

A We don't know the model of your PC or SSD, but yes, in principle you can buy an adapter that fits into a standard **PCI Express** (PCIe) slot – and this will allow you to connect an M.2 drive to your PC.

There are various caveats, but they mainly revolve around using the



longest PCIe slot available in your PC to ensure the best possible transfer speeds. The 6amLifestyle adapter (pictured) is compatible with all lengths



Adapters like this 6amLifestyle model let you plug an M.2 SSD into a PC's PCIe slot

of PCIe slot and most popular M.2 drive types, so it should be a good choice. It costs around £13 from www.snipca.com/39336.

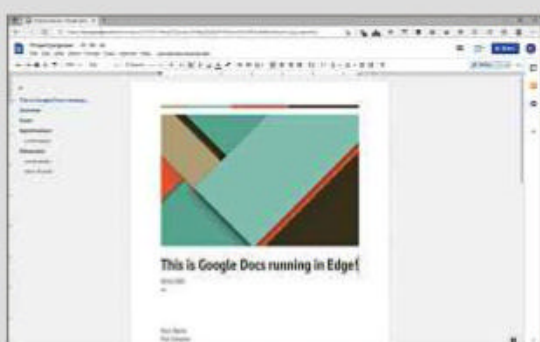
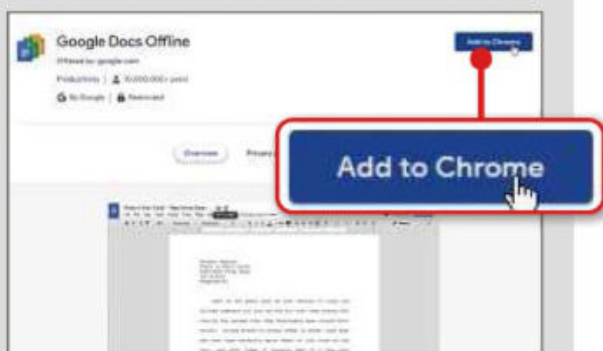
Can I get Google Docs for Windows?

Q My wife uses Google Docs on her iPad, but now she also has a Windows laptop. Is there a way to use Google Docs on this? It would be great if she could use the same word processor on both platforms - Windows and iPadOS.

Alan Thomas

A Yes, you can access and use Google Docs through any standard web browser, simply by visiting <https://docs.google.com> and logging in with a Google account.

Of course, it's possible that you already knew this, and are asking whether there's a Windows app version of Google Docs, just as there is for iPads and Android devices. Sadly, there isn't, but if you use Chrome or Edge, the official Google Docs Offline browser extension in effect amounts to the same thing, because it lets you use all the Google Docs tools as usual, even if your computer loses its internet connection. It's a free download from www.snipca.com/39337 (just click the 'Add to Chrome' button - see screenshot below).



The Google Docs Offline extension brings all your Google Docs tools to Edge

Can I remove USB transceiver?

Q As a long-term subscriber, I'd like to thank you for producing such a consistently brilliant magazine - it can't have been easy in recent times.

My problem relates to my Acer Aspire Z24-891 all-in-one PC (pictured below). It's great except for the flimsy keyboard, which came as part of the package, along with the mouse. I need to change the keyboard to one that's better suited to my increasingly arthritic hands. On the underside of the machine, I can see what looks like a USB transceiver for the keyboard and mouse, but it appears to be permanently fixed - it certainly doesn't want to move! Is it possible to remove this transceiver to fit a replacement for a new keyboard? If not, could I simply fit a new transceiver into one of the USB ports on the back of machine to run a new keyboard and mouse?

Terry Donovan

A Yes, the device you describe is the transceiver for the bundled keyboard and mouse. It's fitted into a standard USB 2.0 port on the PC's underside. However, it seems that Acer has taken to gluing them in place, perhaps to stop them falling out during transport. You may be able to break the bonds with a pair of pliers, say, but we really can't recommend doing this, because you might damage it or your PC.

Besides, there's no need to remove it, because it sounds as if you have spare USB ports, so you can just plug in another transceiver. These 2.4GHz devices are 'keyed' to their specific keyboards and mice, so having two connected shouldn't cause any problems. In fact, if you're happy with your bundled mouse, you could continue to use that through the glued-in transceiver, and simply buy a new one as part of a wireless keyboard.



Acer glues its wireless keyboard dongles into all-in-one PCs, such as the Aspire Z24-891, but you can plug in a replacement if you want a new keyboard

Q: Have I bought the wrong memory for my PC?

A: Issue 586, page 67 - find it on our 2020 Back Issue CD

Buy it from
www.snipca.com/38164

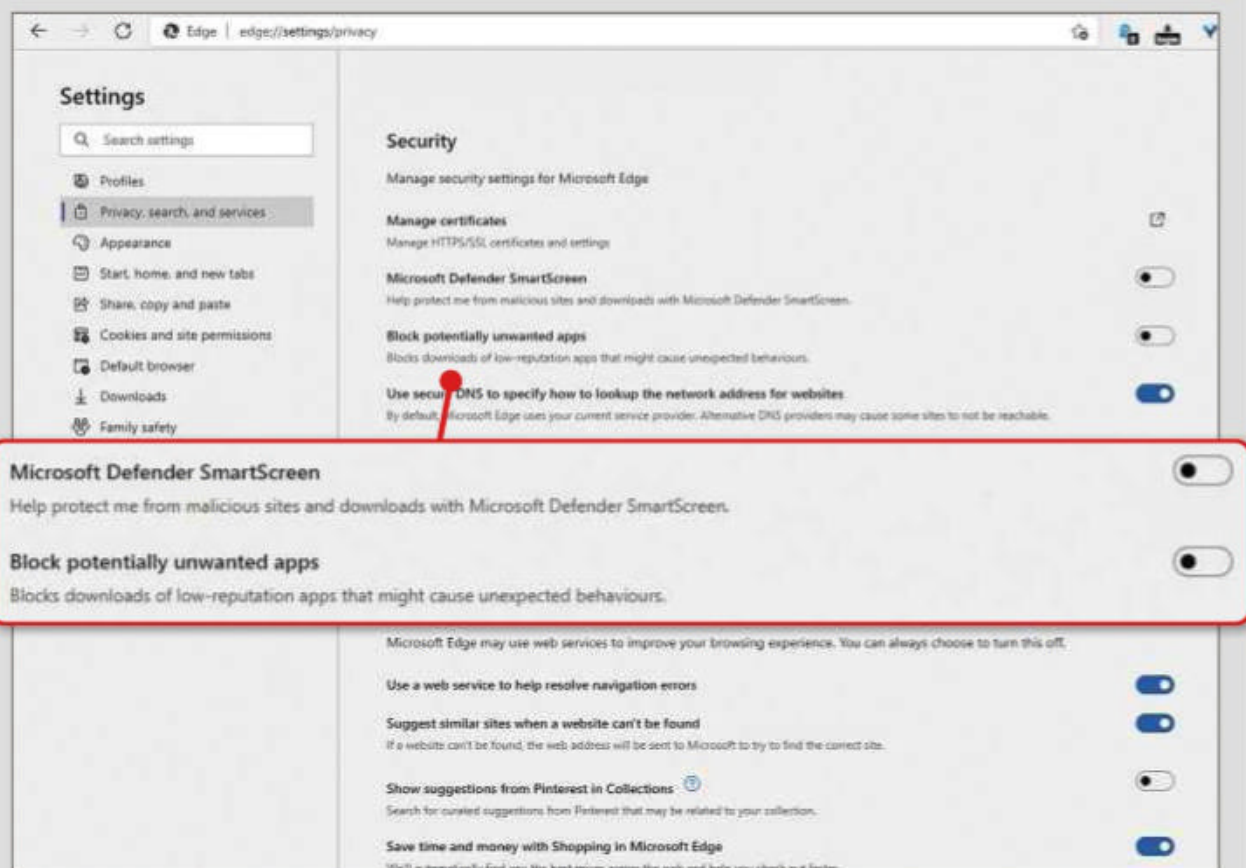


Why does Edge (but not Chrome) block downloads?

Q In every issue of your magazine, I find at least one app or program I want to try. However, when I attempt to download them, Edge – my default browser – sometimes blocks the files. Either nothing happens or a new tab opens and promptly closes again. Chrome, on the other hand, downloads the same files perfectly. Do you know why this might be happening? I use McAfee as my anti-virus software, and might have suspected this was to blame if both Edge and Chrome were blocking downloads, but I can't see why it would affect only one of my browsers.

Gordon Davie

A This could be due to Edge's security features, which block content that might be dodgy. They're well intentioned but not perfect, so they sometimes stop you downloading files that are perfectly safe. What's more, the filters they use are updated continually, so a download that's blocked today might be allowed tomorrow – and vice versa. We suspect that's what's going on here.



If Edge is blocking downloads, switch off these settings in 'Privacy, search and services'

These tools are a useful line of defence, but for savvy users they can get in the way. To disable them, click to open the Edge menu (three dots, top right), then Settings. Next, on the left, click 'Privacy, search, and services'.

Finally, on the right, scroll down to the Security section and click to flip both the Microsoft Defender SmartScreen and 'Block potentially unwanted apps' sliders to their Off positions (see screenshot).

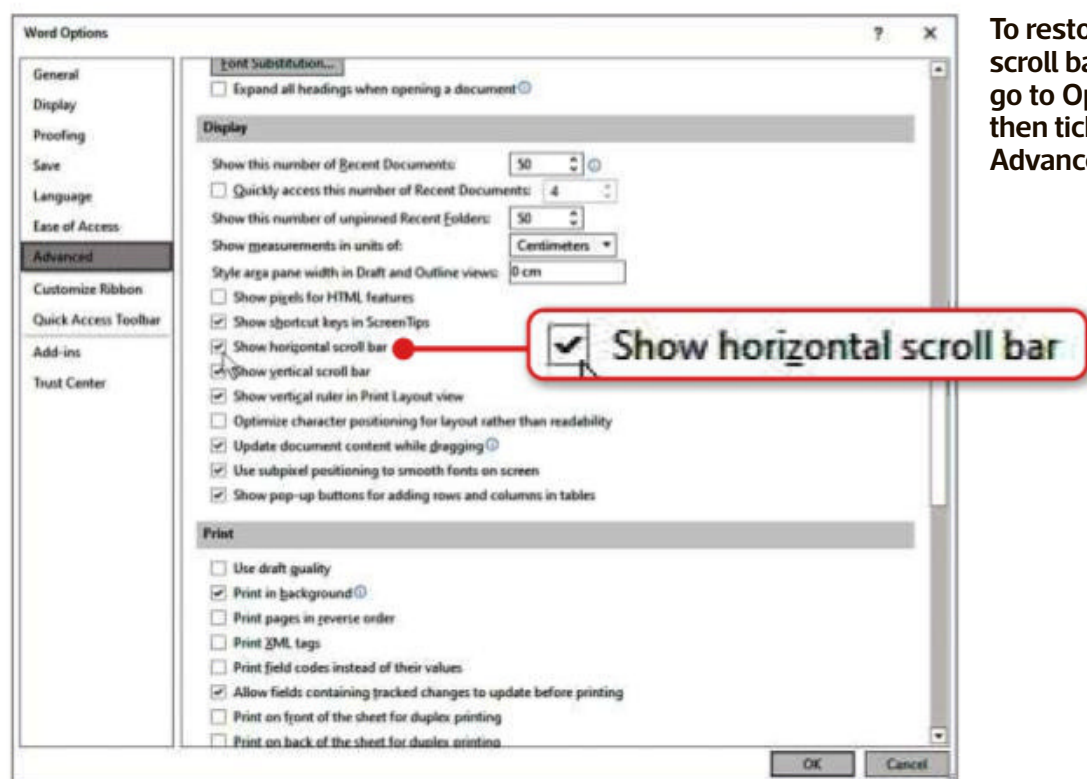
What's happened to my scroll bar?

Q My eyesight is deteriorating, so I often hold the Control (Ctrl) key and use the wheel on my mouse to zoom into documents so I can read them more clearly. This works well but it does mean I sometimes have to pan documents sideways to see both sides, or to centre my view. However, I noticed recently that the sideways scroll bar I use to do this in Microsoft Word (2016) has disappeared. I'm not sure when, why or how this happened, but I'd like it back. Can you help?

Please provide very simple instructions, because I'm not particularly good with computers – so I need every step explained!

Stanley Barns

A We can't tell you when, why or how this happened but we can tell you how to restore it – and



To restore a missing scroll bar in Word, go to Options, then tick the box in Advanced settings

it's pretty easy. However, like many obscure Word features, the option you need isn't all that easy to find.

First, in your Word document, click to open the File menu, then Options. This opens the Word Options box. In the left-hand pane, click Advanced. Then,

in the right-hand pane, scroll down to find the Display section. Finally, click to tick the box labelled 'Show horizontal scroll bar' (see screenshot), then click the OK button to apply the change. Your horizontal scroll bar should now be back where it belongs.

Problems **Solved**

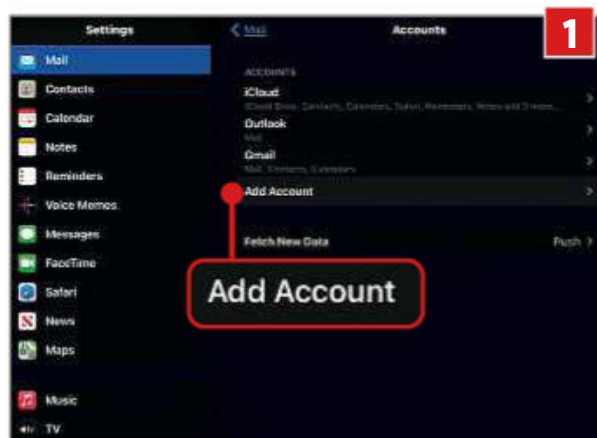
How do I sync three Outlook.com accounts?

Q My iPad, which runs iOS 10.3.4, won't display Hotmail in Safari. Hotmail works in the app, but I can't use it because I have three addresses. A related problem is that several apps won't update because they require iOS 12 or later, and my iPad won't update past iOS 10.3.4.

Why do manufacturers always make us upgrade? There's a worldwide shortage of computer chips but, even if there wasn't, it seems unsustainable to keep forcing upgrades that require us to throw away older equipment.

Bernard Gudgin

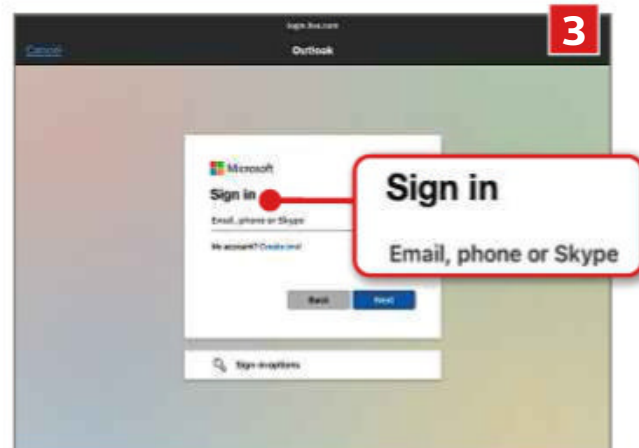
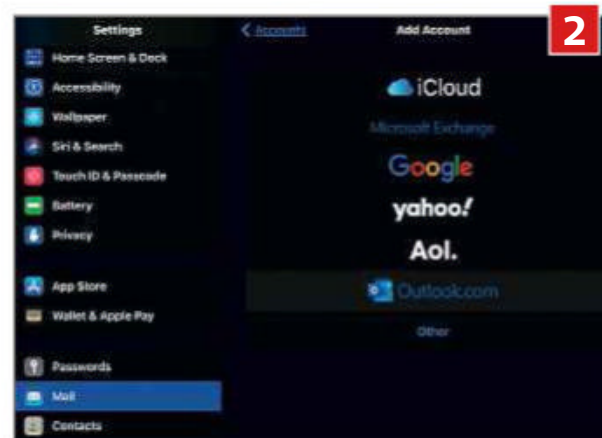
A By deduction, we think you have an original fourth-generation iPad, because the last version of iOS for this was 10.3.4. We're not defending Apple, as such, but that model



The iPad Mail app can handle multiple email accounts from different providers

is the best part of a decade old. In tablet terms, that's ancient. It's simply a fact that the hardware in such an early iPad won't be up to running later versions of iPadOS or the apps that require it.

Similarly, iOS 10.3.4's Safari web browser isn't up to running the modern Hotmail web interface – or Outlook.com, as the service is now known. However, you may not have realised that the default iOS Mail app lets you set up and use multiple email accounts, including Outlook.com accounts.



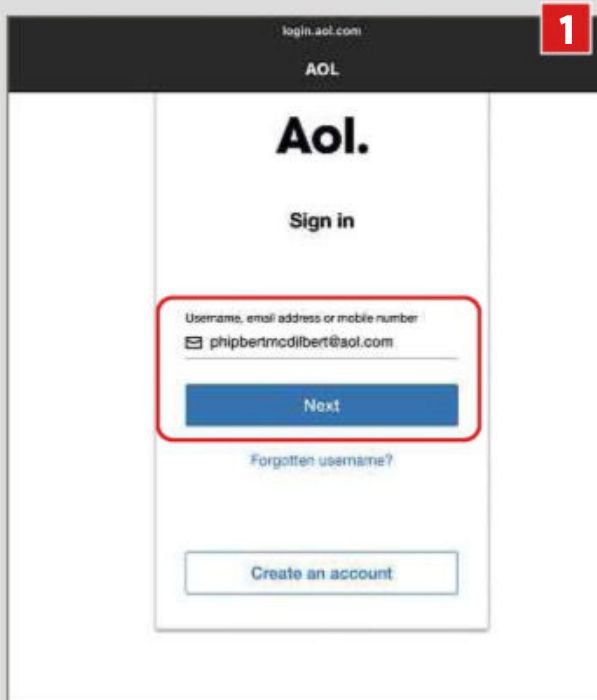
To set up a second or third account, go to your iPad's home screen and tap Settings, then Mail, Add Account (see screenshot 1). Select the type of account 2, then follow the prompts 3.

Why has my iPad stopped getting AOL emails?

Q A few months ago, my iPad stopped receiving emails from my AOL email account, with an error message warning me that my credentials were outdated. I can still log into my AOL account using a web browser, and I discovered that I could do the same using Safari on my iPad, so I've continued to access it that way. I assumed that perhaps my iPad is simply out of date (it's an iPad Mini 4), until I found out that a friend of mine still receives AOL emails on his iPad Mini 4, so I'm wondering what's wrong with mine. Any ideas?

Alice Frost

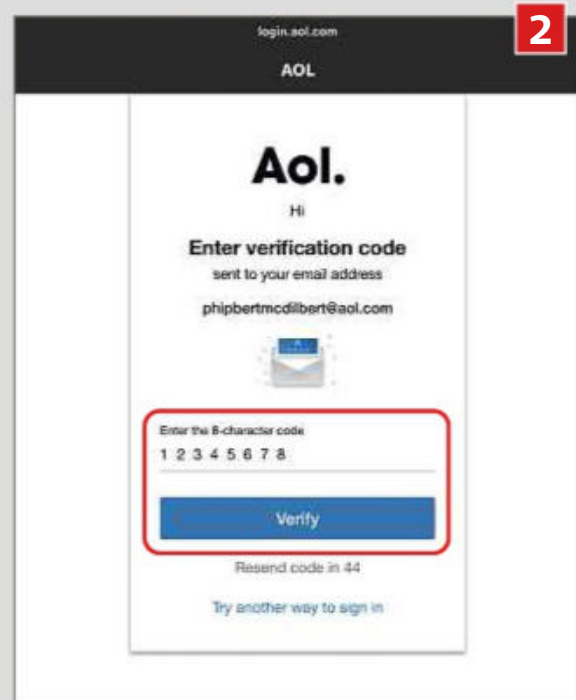
A Yes, this is due to a security change AOL made at the end of last year. The company really wants subscribers to use its own app, which is a free download from www.snipca.com/39354. However, if you'd rather stick with Apple Mail, the solution is to delete your iPad's existing AOL account profile, then set it up again so it uses the latest security method.



If AOL's security settings stop you getting mail on your iPad, delete then restore your account

To do this, launch the Settings app on your iPad, then tap Mail followed by Accounts. Next, tap your AOL account followed by Delete Account, then Delete Account again to confirm. Now tap Add Account, then 'Aol.'. Type in your AOL email address and tap Next (see screenshot 1).

AOL will send a verification code to



your email address, so use a web browser to log into your account and retrieve the code. Return to your iPad's Settings page and type in the verification code you just received, then click Verify (see screenshot 2). Finally, follow the prompts to complete the setup, and your email account will be back in business.



WHAT'S THE DIFFERENCE BETWEEN...

Pasting and attaching images?

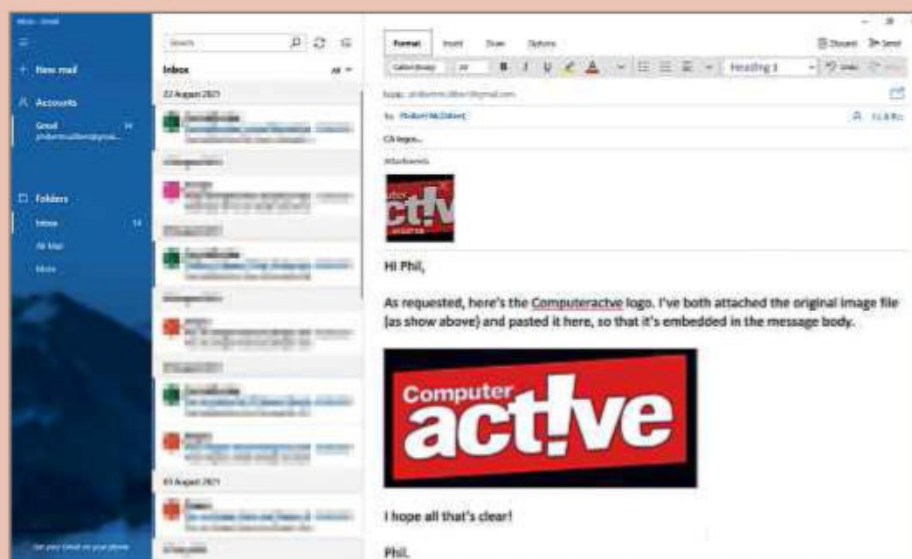
Q When I send photos to friends, I sometimes drag the original files into the message. Other times, I right-click an image I'm viewing and choose Copy, then paste it into the email. Both methods seem to work, but does it matter which I choose? I ask because two friends recently sent me messages, one after the other. In the first message, the photos were ready to view, but in the second message I had to double-click the files to see the images.

Scott Grant

A The answer is both simple and complicated. The simple answer is that it doesn't really matter how you add images to an email. The recipient should be able to view them one way or another.

The complicated answer is that it depends. There are so many variables involved, not least which email programs and services you and your recipients are using, that we can only give some general advice.

With that in mind, the choice boils




Embedded images appear in the body of your email, while attached images look like files

down to whether you attach or embed your images in emails. If you use the Control (Ctrl)+V shortcut or right-click menu option to paste an image into the body of an email message, in most cases it is 'embedded' at that point. This means the recipient will usually see the image where you pasted it, which can be useful when you're referring to the images in your email, for example.

If you drag and drop an image file into a message window or add it using the paperclip icon, it usually becomes an attachment. This is a bit like a digital

appendix – the image is sent with the email but is not part of the message. It also retains its file name, which isn't always the case with embedded images.

Some email services – such as Gmail – can reduce the quality of embedded images, but this doesn't happen to attached files. So if maintaining image quality is important, send photos as attachments.

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

Are iPads safe from microwaves?

Q I've just bought a new iPad to replace my old one. I'm very pleased with it, even though I can't transfer information from the old to the new one. However, my question is about where to store it when I'm not using it. I have the perfect location on top of the microwave oven, but is this safe? Could microwaves damage my iPad when the oven is working? Can I use my iPad safely near the microwave?

Bill Ellis

A We wouldn't recommend storing your iPad inside a microwave oven, but we wouldn't worry too much about storing it on top – and not at all about using it in the vicinity.

You may find that the iPad's Wi-Fi connection is unreliable if you use it near a microwave while it's heating something, but it won't cause any

harm to the tablet. Similarly, while very small amounts of microwave energy may leak from an operating oven – assuming it's not faulty – the amount shouldn't be nearly enough to affect an electronic item stored on top or used nearby.

In fact, the bigger risk might be to the microwave. If the iPad blocks any vents at the top, for example, this could result in damage to the oven – and of

course prolonged heat or vapour emitted from those exhaust slats could also harm your iPad.

You don't seem concerned about your inability to transfer data and didn't explain the nature of the problem, but if you want to get back in touch with details, we'll try to help with that too.



Microwave emissions won't harm your iPad, but heat and steam might not do it any good

Next Issue

ONSALE
Weds
20 Oct

- Can I copy my MiniDiscs to a PC?
- Is this old keyboard useless?
- Should I install an unsigned driver? ...And many more

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Can I search for symbols?

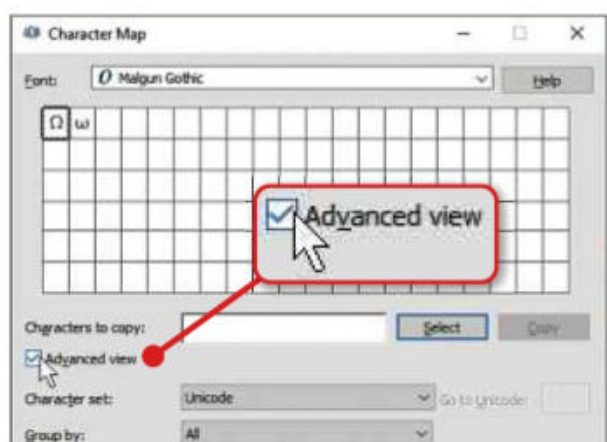
Q Issue 614's Workshop (page 38) on inserting special characters was excellent, but it didn't say how to search fonts for the symbol I want. It took me ages to find a paperclip, for example. Is there a way to search a font for a particular symbol? Can I be sure all my company colleagues who use Outlook email will see the symbols I insert? Thanks for one of the few magazines I wait for impatiently.

John van Someren

A We'll answer in reverse, because there's never any guarantee that fancy symbols typed into the body of an email message will make it through to the recipient. Common ones generally will, but once you get into the long grass, as it were, there are so many variables that it's impossible to give a definitive answer. However, if you're all using the same company-issued computers and software, it'll probably work, as the corporate equipment will probably all share the same font selections.

Searching for symbols can also be tricky. The Character Map tool that comes with Windows (under Windows Accessories in the Start menu) has a search tool, but you have to tick the 'Advanced view' box (see screenshot below) to activate it. However, the search system isn't great.

Instead, in Windows 10, try the little-known **emoji** panel, which is summoned by pressing Windows key+.



Tick this box to activate the search tool in Windows' Character Map tool

(that's a full stop). This overlays itself on top of any app and has a great search tool. Just type what you're looking for and, if found, just click to insert the symbol.

Why can't I set up Thunderbird?

Q I thought I'd try Issue 613's Best Free Software recommendation – Thunderbird 91 email **client** (page 18). However, I cannot get past the setup page. I enter my details correctly, but I'm met by a message that reads: 'Unable to login at server. Probably wrong configuration, username or password'. I have a Sky.com email address and can't see where I'm going wrong, as I've checked my password. Please can you throw any light on this?

Ralph webster

A We think this is due to the Yahoo email service Sky uses, which deems some email tools and technologies as less safe. There are some legitimate technical reasons for this, but also some spurious ones. Either way, when this happens, Yahoo's servers won't allow the program to log in using your normal password. Instead, you'll have to log into your Sky Yahoo email account and generate a unique 16-digit password that Thunderbird can use to log in.

To do this, first log in to your Sky Yahoo email at <https://skyid.sky.com/signin/email>. Next, click your account icon and then click 'Account info'. Click 'Account security' followed by 'Generate app password'. Type a name for the app that needs the password (**Thunderbird**, in this case) then click 'Generate password'.

You'll now see the password (see screenshot above right). Click 'Copy' and use it instead of your normal password when setting up Thunderbird, pressing Control (Ctrl)+V to paste it in.

Was your EML advice off target?

Q Your advice to Ian Egerton in the Problems Solved pages of Issue 613 (page 66), about saving



Generate a random 16-digit password within Yahoo email to use the service with Thunderbird

emails, wasn't as helpful as it could have been. In fact both Windows Mail and desktop Outlook allow you to save an email with full formatting, and not just as **plain text** or **EML** (with a .eml file extension). The method isn't in plain sight, which is why it's so often overlooked. In desktop Outlook you have to open the email so that the File option is available, then click File, and choose Print followed by 'Microsoft Print to PDF'.

In Windows 10 Mail it's even easier, because you click the three dots, followed by Print, then 'Microsoft Print to PDF'. There is no need to go messing about with EML files or online conversions!

John Tanzer

A Ian asked us if EML files could be changed into different formats, like HTML or DOC, and we answered accordingly. However, on reflection, we think we focused too literally on Ian's question, rather than what he wanted to achieve.

So, while our answer was accurate, we think we missed what you spotted – which is that Ian just needs a way to store emails in a readable format. PDF is indeed a great way to do this, and your tip is perfect.

We're sure Ian and other readers will be grateful for your suggestion.

Jargon Buster

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

32bit/64bit A measure of how much data a PC can process at once. Most older computers are 32bit, more modern ones are 64bit.

3G/4G/5G Technologies that deliver faster mobile broadband.

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

7z Also known as 7-Zip. A free, open-source file archiver.

8K Video with a resolution of 7680x4320 pixels.

ADK Assessment & Deployment Kit. Microsoft's system for evaluating overall computer performance and automatically installing Windows on to new PCs.

Administrator Someone who can make changes to a computer that will affect others who also use it.

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

Aspect ratio A measurement of the shape of a display. Traditional PC screens are 4:3. Widescreen displays are 16:9 or 16:10.

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

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

Benchmarking Comparing software and products with an accepted standard.

BIOS Basic Input-Output System. Software built into every PC that connects the vital components.

Bookmarklet A small, very simple program stored as a bookmark in your web browser.

Bootable Describes a device or disc with system files on it so it can be used to start up your computer.

Brute-force attack A method of breaking encryption by simply guessing all possible passwords until the right one is found.

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

Client A program that acts as an interface between a computer and server.

Core Units on a processor that carry out program instructions.

Dark mode Showing white text on a black background.

Dark web Websites that can only be accessed using the Tor privacy program.

DirectX A Microsoft technology required to run many games in Windows.

DNS Domain Name System. A technology that associates computers with their addresses on the internet.

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

DSLR Digital single-lens reflex. A digital camera that uses a moving mirror so its viewfinder looks out through the lens.

Dual boot To set up a PC with two operating systems, so that one must be chosen each time it starts.

E2EE End-to-end encryption. Ensures that messages can be seen only by the sender and recipient.

EML Emails saved as a file.

Emoji A small graphic that can be inserted into a text message or email.

Emulator A program that makes one computer act like another, allowing it to run that computer's software.

Encryption key A random string of characters used to encrypt and decrypt sensitive data.

EPUB Popular ebook file format, but you need to convert it to use on a Kindle.

Firewall Software or hardware that prevents unauthorised access to a computer over a network.

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

Fps Frames per second. Used to indicate gaming performance.

Frame rate The number of still images, or frames, shown per second to create a moving image.

FTTP Fibre to the premises. Fibre broadband that goes straight to the doorstep. Faster than FTTC (fibre to the cabinet).

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

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

Gorilla Glass Victus The latest screen-protection material which its makers claim protects against falls of two metres.

HTTPS Hyper Text Transfer Protocol Secure. The secure version of HTTP, the technology that sends data between your browser and the web.

Hz Hertz. Measures the frequency something happens: 1Hz equals once a second.

IP address Internet Protocol address. A unique set of numbers used to identify computers and websites on the internet.

IP54 International Protection marking. Protected against dust that could interfere with normal operation of a product, but is not fully dust tight. Also protected against water splashing from any angle.

IP68 The '6' denotes that a device is resistant to dust, general dirt and sand. The '8' indicates that it can be placed underwater for 30 minutes at depths of up to 1.5m without effect.

IPS A screen technology. Monitors that use it have wider viewing angles and more accurate-looking colours than monitors that don't.

IPX8 Official industry rating. IPX8 means a device is suitable for continual submersion in water.

ISBN International Standard Book Number. A 13-digit code used to identify books.

ISO file A type of image file that contains all data from a CD or DVD.

LED Light-emitting diode. An electronic device that emits light. Used on almost all electronic devices, and to provide the backlight for some LCDs.

M.2 A standard specification for internal PC expansion cards and connectors.

Machine learning The science of teaching computers how to learn by themselves, without further human input.

Micro HDMI An HDMI connector measuring 6.4x2.8mm. Micro HDMI cables are used to connect Raspberry Pi PCs and GoPro cameras to larger screens.

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

MicroUSB A miniature version of USB, often found on smartphones, tablets and portable hard drives.

Mini HDMI An HDMI connector measuring 10.42x2.42 mm. Mini HDMI ports are often used by digital cameras, as well as some tablets and laptops.

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

Partition A large hard drive can be split into two or more partitions or 'virtual' drives.

PCI Express Peripheral Component Interconnect Express. A faster version of PCI – a slot on the motherboard for expansion cards, such as for sound and memory.

Phishing A form of internet fraud that tries to trick you into revealing personal details.

Plain text Text in a document that doesn't contain any formatting, such as bold characters and italics.

PNG Portable Network Graphics. A format for images that shrinks file sizes using compression but without discarding any data.

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.

Ransomware Malware run by hackers who lock files on your PC and demand a payment to release them.

RAR Roshal Archive. A format for storing compressed files.

Refresh rate Measured in Hertz (Hz), the number of times per second that the image on your monitor is redrawn.

SCART A standard connector for video and audio signals.

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

sRGB A standard RGB colour space for use on monitors, printers and the internet.

SSD Solid-state drive. Storage that, unlike a traditional hard drive, uses no moving parts.

Temporary file A file created by a browser to store website data. In the days of limited main memory, temporary files were the only way to store large amounts of data that the program was generating.

TPM Trusted Platform Module. A computer chip that allows your hardware to perform security-related tasks.

Two-factor authentication A system that uses two different means to identify the user when signing into a server. For example, a code sent to your phone in addition to a password.

UEFI Unified Extensible Firmware Interface. A modern replacement for the BIOS.

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

USB 2.0/3.0/3.1/3.2 Faster successors to USB.

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

USB security key A USB device that lets you sign into and lock a PC.

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

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 to use older programs.

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





Widget A small program that runs on the Windows desktop.

Wi-Fi 6 Wi-Fi standard with speeds up to 10 times faster than 802.11ac. Also called 802.11ax.

ZIP file A file that contains compressed documents or files.

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Password-protect a USB stick

I have so many ancient, broken, gadgets stashed around my flat that I could feasibly start my own technology museum. Come and see the wonders of the Google Nexus 7 tablet, which booted its last in 2015; the iPod Classic from the days when it was the iPod contemporary; and the Windows XP laptop that I ‘borrowed’ from work in 2005, and is believed to be the heaviest ever made.

However, I was still surprised, and even misty-eyed, when I came across my first USB stick at the bottom of an old rucksack. This giant thumb drive (pictured below) revolutionised my way of working all those years ago, with its then generous 512MB of memory. Excited to find out what secrets might be stored on it, I plugged it into my laptop (after removing all other cables to accommodate its girth) only to find it as empty as a looted pyramid.

While the USB stick’s data was lost, the device itself wasn’t – in fact, it would be hard to lose something that big. That’s more than I can say for my latest 64GB memory drive, which may be much smaller and offer 125 times more storage than my old one, but could easily go astray and have its contents ransacked by strangers. To protect my sensitive files, I decided to secure my stick with a password.

The simplest way to do this is to use BitLocker, the encryption tool that’s built into Windows 10 Pro. Except it wasn’t on the laptop I was using, which was running Windows 10 Home (my Pro machine was busy installing Windows



Discovering his big old USB stick (right) inspired Robert to password-protect his new one (left)



VeraCrypt is quite fiddly to use but Robert encrypted his USB stick in the end

11). So I turned instead to the powerful free encryption program VeraCrypt (www.snipca.com/39417), which, unlike much-missed forces sweetheart Vera Lynn, I’ve always found slightly intimidating.

I downloaded and installed VeraCrypt, shuddered at its unfriendly interface, and clicked the Create Volume button to open the VeraCrypt Volume Creation Wizard. I selected the option ‘Encrypt a non-system/partition drive’, which helpfully (as I wouldn’t have guessed otherwise) mentioned ‘flash drive’ in its description. I clicked Next, allowed VeraCrypt to “make changes to my device” and chose to create a standard VeraCrypt volume.

The next step was easy: I clicked Select Device and selected my device. I then chose ‘Encrypt partition in place’ – as the other option would have formatted my USB stick and erased all its data – and clicked Yes when asked if I’d created a backup of my files (I hadn’t, but this was taking long enough already).

VeraCrypt now prompted me to specify an encryption method and ‘hash algorithm’. I left these at the default settings, as I only wanted to protect some work documents, not classified MI5 files.


Eventually, I reached the Volume Password screen, where I entered and re-entered my chosen password. VeraCrypt wasn’t happy that my password contained fewer than 20 characters, but I ignored it and continued. I was now asked to move my mouse around randomly to “increase the cryptographic strength of the encryption

I only wanted to protect some work documents, not classified MI5 files

keys” (I think VeraCrypt was taking the Mickey by now). But I did as instructed, and selected ‘None (fastest)’ when VeraCrypt offered to thoroughly wipe my data if I deleted it.

Finally, I clicked Encrypt, chose Yes to confirm, and after watching a progress bar for 10 minutes (see screenshot above), breathed a sigh of relief when VeraCrypt said that my volume was successfully encrypted. There was one more step, which was to ‘mount’ my encrypted USB stick from VeraCrypt’s home screen. This prompted me to enter my password, then took another few minutes to do its mounting.

Now, the only way anyone can access my USB stick is to mount it in VeraCrypt and enter my password, which they won’t be able to do. Personally, I think the prospect of dealing with VeraCrypt would be enough to put anyone off.

 Need help protecting your USB sticks? Let us know: noproblem@computeractive.co.uk

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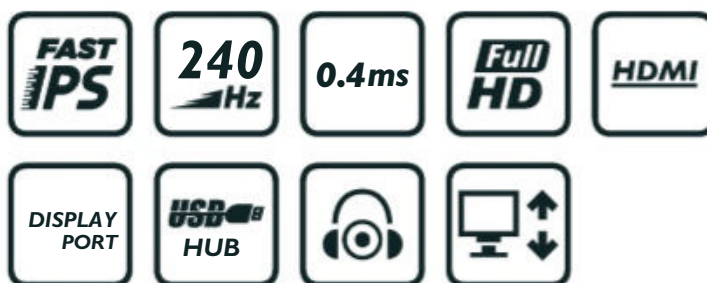
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