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amazon



**BLACK FRIDAY
BARGAINS**

**WIN FIRE
HD 10
TABLET**



Just scan this

Secret tricks to grab ultra-cheap...

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WINDOWS 11 TASKBAR

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One of the biggest mistakes of my life, second only to leaving my iPhone within arm's reach of my toddler son in the bath, was going to Harrods on the morning of its Boxing Day sale. It took 20 minutes to get out of the Tube, a further 30 minutes queuing outside, and two hours inside to realise I had no idea what I wanted to buy.

That was over a decade ago. It didn't put me off browsing the high street, but for sales I stick to the internet – and in particular to Black Friday, which has quickly grown into a pre-Christmas

shopping bonanza.

You're less likely to get elbowed in the face by fellow shoppers, but there's still the problem of knowing which items will be discounted, and whether they represent *genuine* bargains. Robert Irvine has the answers in this issue's Cover Feature. His first recommended purchase is the Amazon Fire HD 10, which we're giving away in a special competition. Just scan the QR code on the cover to enter.

Daniel Booth

editor@computeractive.co.uk



THIS ISSUE IN NUMBERS



£699
Price of the first Windows 11 PC we've tested - [p22](#)

570,000

Size of next batch of rural homes to get 1Gbps broadband - [p8](#)

CR2032

Model for the battery on your PC's motherboard, available for £4 - [p67](#)

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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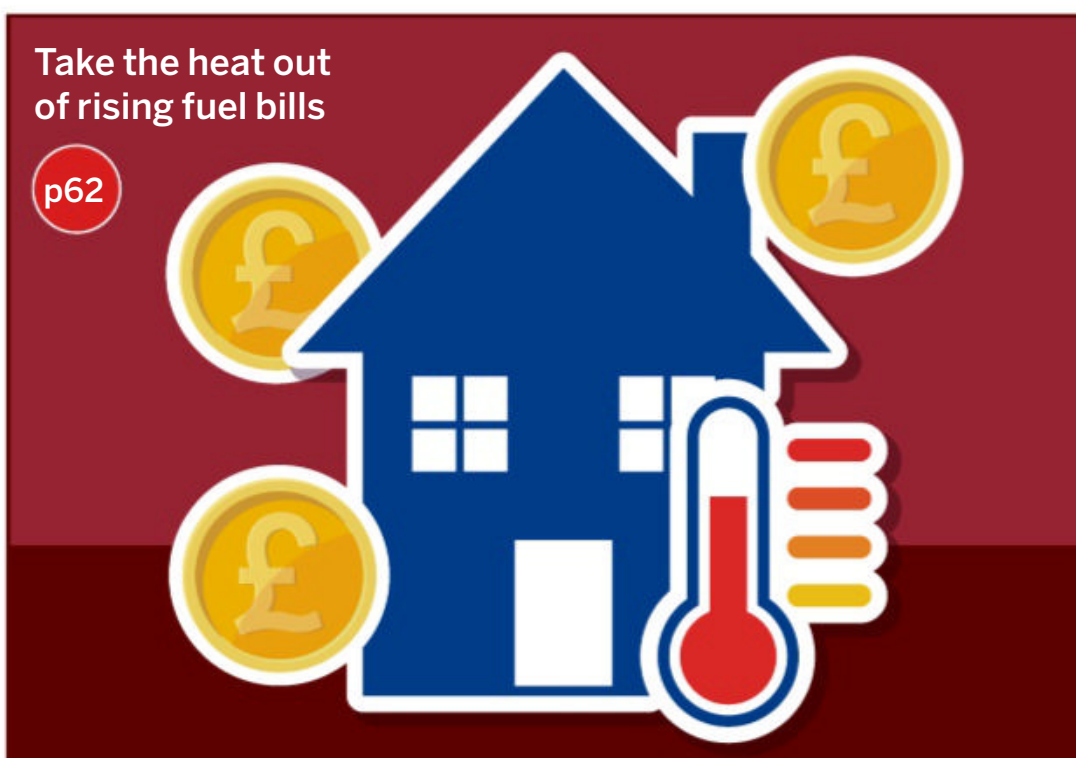
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Robert Irvine automates Windows dark mode



Microsoft lets more computers install Windows 11

Microsoft is releasing Windows 11 to more computers after deciding that they are ready to run the new operating system. It's using **machine learning** to

check which computers have the specifications required to run the system smoothly. The company said on its 'Release health' page (www.snipca.com/40002) that the upgrade will be offered "to an expanded set of eligible devices".

To check if you can install Windows 11, open Settings (press Windows key+I), then 'Update & Security' followed by Windows Update, then select 'Check for updates'.

You may also see an upgrade message appear on your desktop (see screenshot above right), giving you the option to 'Download and install' Windows 11 **1**, or 'Stay on Windows 10 for now' **2**.

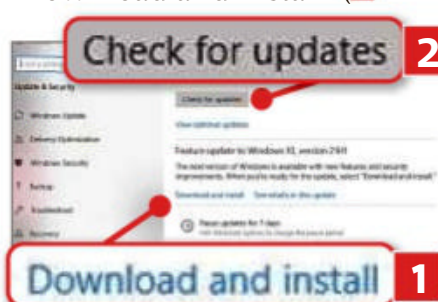
All PCs to get Windows 10 21H1

If you stay on Windows 10, your computer may soon automatically install the May Update after Microsoft



approved it for 'broad deployment'.

If it doesn't install, open Settings, then click 'Update & Security' followed by Windows Update. If you see the 21H1 update listed click 'Download and install' (**1** in



our screenshot below left). If not, click 'Check for updates' **2** and see whether it appears.

The update was released on 18 May to computers deemed by Microsoft to have the required hardware to run it without problems. It has staggered the release subsequently, and now considers it ready to be used widely.

It's a much smaller update than previous Feature updates, with the only major change coming in Windows Hello if you use both a built-in webcam and an external camera to recognise your face and sign you in.

Previously, Windows Hello would by default use your built-in camera to scan your face. The update changes this to use your external camera.

The full release of 21H1 paves the way for the 21H2 Feature update, which Microsoft is expected to make available in mid-November. This will also be a staggered release.

WHAT WE THINK

Windows 11 has so far been a successful release. The problems have been fixable glitches, not disasters forcing Microsoft back to square one. It makes sense then to roll out the system to more computers, particularly because Microsoft itself has explained how older machines without **TPM 2.0** can run the system (see Issue 618, page 38). There are plenty of reasons why you may or may not want to upgrade, but one thing you don't need to worry about is Windows 11 being too different to Windows 10 (see Star Letter, page 13).

BRING WINDOWS 10 START MENU TO WINDOWS 11

You can now bring the Windows 10 Start menu to Windows 11 by using Stardock's Start11 program, which has been released fully following several preview versions.

The tool – which costs £5.99 for one computer and £13.99 for five – lets you tweak the Start menu in "nearly every detail", such as changing its colour, transparency and

position. You can use it also to move the taskbar to the top of your screen (pictured).

Stardock offers a free 30-day trial to see whether you like the changes it can make. To



download the tool, visit www.snipca.com/40003 then click the green 'Get it Now' button.

You may also be able to upgrade to Start11 from Start8 or Start10 at a discounted price. To check your eligibility, visit the site, then scroll down to the light-green section and click the 'Upgrade' link next to 'Own Start8 or Start10?'.

• Hack the taskbar yourself – see page 38



You'll like this...

Roku's Voice Remote is now on sale in the UK (www.snipca.com/40010)



but not this...

Facebook Marketplace is to start charging sellers (www.snipca.com/40007)

Sell your old phones to Amazon in return for vouchers

You can now trade in old smartphones and games consoles on Amazon in return for vouchers to spend on the website. This is an expansion of the scheme that until now has let you trade in only Amazon products, such as Kindle, Echo smart speakers and Ring doorbells.

You need an Amazon account to use the service, though you don't need to pay for a Prime subscription. Visit Amazon's Trade-In page (www.snipca.com/39990, pictured) to select the device



you want to sell, then answer Amazon's questions about its condition.

Next, you'll be given an estimated quote, plus an indication of how much more or less you could get as your final quote once Amazon has

checked the device.

Any breaks, dents, cracks, missing buttons or other defects beyond acceptable wear and tear will reduce the price Amazon offers.

If you're happy with Amazon's estimated quote, send your device to the company for evaluation, printing the postage label it provides – though you'll need to provide the packaging yourself.

Amazon will then inspect the item and confirm how much it will pay you. If you agree with the amount, it will be added as a voucher to spend on the site within 10 years. If you reject the offer, Amazon will return the item to you for free.

It will then refurbish the item and sell it for a reduced price on its Amazon Second Chance store (www.snipca.com/39991) or recycle it.

FIRE TV DEVICES GET FOUR YEARS' SUPPORT

Amazon has said it will support all its Fire TV products with security updates for four years after they were last available

to buy on its site. It means that all Fire TV Sticks released since 2016 will receive updates until at least 2025.

Ofcom approves more phone boosters inside your home

Getting a decent phone signal inside your house may soon be easier after Ofcom said it will change the regulations that govern repeaters.

In 2018, the regulator approved the sale of indoor mobile repeaters, typically called 'signal boosters', as long as they met certain technical requirements so they don't cause electrical interference.

These devices work best when there is a good outdoor signal that can be boosted indoors. You're allowed to install them without a licence. However, Ofcom's rules are so strict that so far it has approved only Nextivity's Cel-Fi repeaters (pictured).

To address this, in early 2022 the regulator will "increase the range of devices you can buy and use legally".


This will cover two types of device: provider-specific repeaters and multi-operator repeaters. Both of these can amplify the frequencies of more than one mobile operator at a time. Before the change, Ofcom said repeaters could work over one network only.

It added that as well as providing more choice for people, the new rules "could also potentially bring down



the cost of devices".

Ofcom will publish a list of repeaters that meet the requirements after being tested, helping to deter some manufacturers that have misleadingly claimed their devices had been approved. It won't however "endorse" specific devices.

 How strong is the phone signal in your home? Let us know: letters@computeractive.co.uk

IN BRIEF

CURRYS DELIVERS SMALL ITEMS VIA UBER

Currys has teamed up with Uber to deliver products such as laptops and printer cartridges within around 30 minutes. A trial is running in 12 London boroughs, and has a £5 delivery charge. Currys said each of the 1,800 products available weigh under 7kg and could fit inside a courier's bag, citing the biggest item as a coffee machine. Read more at www.snipca.com/39987.

FULL EDGE BROWSER ARRIVES ON LINUX

Microsoft has released a full version of its Edge browser for Linux, after testing it for a year. It's available for many of the most popular Linux systems, including Ubuntu, Debian and Fedora, and shares most of the features available in the Windows version. To download it, visit Microsoft's Edge page (www.snipca.com/39992) then scroll down and click either the 'Linux (.deb)' or 'Linux (.rpm)' link.

TOMORROW'S WORLD

We already knew that robots can hop, skip and jump. Now they can dance like Mick Jagger. To celebrate the 40th anniversary of the Rolling Stones' single *Start Me Up*, Boston Dynamics taught its robot dog Spot to mimic the singer's moves, even down to lip-syncing. Its pout needs work though. Watch at www.snipca.com/39989.



IN BRIEF

AMAZON TO TEST BROADBAND SATELLITES

Amazon says it plans to launch two internet satellites in a low-earth orbit by the end of 2022. If the test is successful, it could lead to 2,000 more satellites being launched, as part of the company's \$10bn Project Kuiper. Long term Amazon wants to compete with Starlink's SpaceX satellites, which are already providing internet to parts of the UK.

EE 'SMART' CUSTOMERS GET MICROSOFT 365

EE customers on a Connected Device Smart Plan can now choose a Microsoft 365 Personal subscription as a 'Smart benefit'. This gives you access to Office tools across five devices, including computers, phones and tablets, as well as 1TB OneDrive storage. Other benefits include watching Netflix and the Roam Abroad Pass to use your call, text and data allowance abroad. Visit EE's site for details: www.snipca.com/39950.

THE WORLD'S GONE MAD!



Google has tricked us into thinking we're smarter than we really are. Researchers at the University of Texas in Austin found that people who regularly use Google to find information overestimate how much knowledge they'd be able to recall *without* using the search engine. Apparently, we can't help but think that details found online were actually lodged in our brain all along. Read more at www.snipca.com/39951.

570,000 more rural homes to get 'blistering' 1Gbps

The Government has revealed the latest areas in England to receive "blistering" 1Gbps speeds as part of its Project Gigabit to increase speeds across the UK. It claims more than 570,000 homes and businesses will benefit from the faster connections.

The areas covered are Cheshire, Devon, Dorset, Somerset, Essex, Herefordshire, Gloucestershire, Lincolnshire, East Riding and North Yorkshire, with specific locations to be named when providers bid for the contracts (as explained on Gov.UK: www.snipca.com/39953).

It's part of a £5bn investment to bring gigabit broadband to at least 85 per cent of the country by 2025,



which ministers say is "on track". Coverage is 57 per cent at present, up from less than six per cent in 2019.

Digital Secretary Nadine Dorries said the work will "help hard-to-reach homes and businesses out of the broadband slow lane and plug them into the fastest and most reliable connections available".

It follows £8 million being announced in the budget for gigabit speeds for 3,600 rural premises in northern Scotland.

In addition, more than 230,000 remote premises in Wales will be upgraded through Project Gigabit, while £150m is being spent in Northern Ireland's Project Stratum to "level up areas with slow speeds".

The Government has previously earmarked over 25 areas in England for gigabit upgrades, covering large parts of the country including Cornwall, Durham, Essex, Lancashire and Nottinghamshire.

170 MORE TOWNS TO GET OPENREACH FTTP

Bridgend, Forfar, Rugby and Trowbridge are among 170 towns and villages to be named in the next stage of Openreach's £15bn project to

connect 25 million premises to FTTP broadband by the end of 2026. To see the full list, visit www.snipca.com/39954 and scroll down.

Networks to block scammer calls that spoof UK numbers

Phone networks have agreed to block almost all internet calls coming from abroad if they disguise themselves as UK numbers.

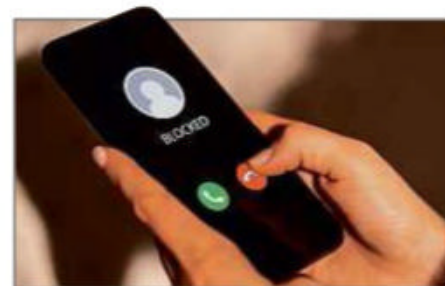
Scammers use VoIP to make it look like a call or text is coming from a real telephone number that's based in the UK – a practice called 'number spoofing'. Criminals hope that potential victims are more likely to answer a call if it appears to be from a UK number.

However, so far only TalkTalk has blocked such

calls. Other networks are exploring technical methods to make it work. The move follows months of talks between networks and the regulator.

Lindsey Fussell, Ofcom's networks and communications group director, said: "We expect these measures to be introduced as a priority, and at pace, to ensure customers are better protected".

She added that combating phone scams is a "complex problem" that required the



police, government and other regulators to work together.

In October, Ofcom reported that an estimated 44 million people were targeted by scams over the summer, with around one million following the instructions given to them by scammers.

• See 'Most depressing news story of the year' – page 12

Facebook to delete 1 billion ‘faceprints’ of users

Facebook has said it will delete the facial scans (‘faceprints’) of more than one billion users and axe its facial-recognition system that automatically recognises people in photos and videos.

The change means Facebook will no longer suggest a tag for a person when you upload a photo or video, though you can continue to do this manually.

It will also affect the Automatic Alt Text (AAT) system, which creates image descriptions for blind and visually impaired people. After the change, AAT will no longer include the names of people recognised in photos.

The site’s facial-recognition tool has proved popular, with around 640 million users – more than a third of Facebook’s 1.6 billion daily visitors – opting in to use it.

However, the company has

grown increasingly nervous about the threat of regulation over facial-recognition technology. It has also faced lawsuits, paying \$650m in the US to settle a case after users alleged it created and stored facial scans without their permission.

Announcing the decision in a blog post (www.snipca.com/39973), Jerome Pesenti, Facebook’s VP of Artificial Intelligence, acknowledged that there are “many concerns about the place of facial-recognition technology in society, and regulators are still in the process of providing a clear set of rules governing its use”.

He added: “Amid this ongoing uncertainty, we believe that limiting the use of facial recognition to a narrow set of



use cases is appropriate”.

The move came after the overall company Facebook renamed itself Meta, though the site will stay as Facebook. This has been widely seen as an attempt by the company to distance itself from intense criticism of its privacy policies, though boss Mark Zuckerberg said it reflected the firm’s ambition to focus on the ‘metaverse’ (see page 49).

500TB squeezed on to CD-sized glass discs

Computer scientists have developed storage technology that might be able to save 500TB of data on to glass discs the size of CDs.

A team at Southampton University used a method called ‘5D optical storage’ to store 10,000 times more data than Blu-ray discs. They etched holes into glass using lasers that send pulses every femtosecond, which is one quadrillionth of a second.

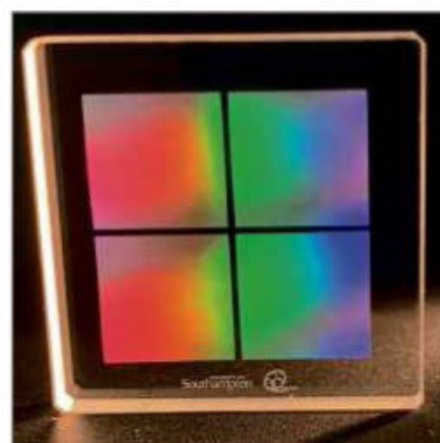
The technique is called 5D because it uses two optical dimensions, based on the polarisation and intensity of light, as well as the three usual spatial dimensions.

It’s been estimated that 5D

storage could withstand temperatures up to 1,000 degrees centigrade and last billions of years at room temperature without degrading, providing a permanent alternative to online storage.

In tests, the researchers managed to write six gigabytes of data on to a one-inch square of glass (pictured), and could read it with an accuracy of between 96.3 and 99.5 per cent. They claim this can reach 100 per cent using an algorithm that corrects errors.

Professor Peter G Kazansky, research team leader, said the technology can save so much data that it could be used to



preserve information from a person’s DNA.

Yuhao Lei, who also worked on the research, believes 5D could be useful for “longer-term data storage for national archives, museums, libraries or private organisations”.

However, the process takes so long that its practical use may be limited. Saving 500TB of data, for example, would take up to 60 days.

IN BRIEF

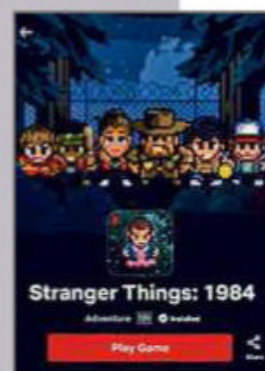
ZOOM SHOWS ADVERTS TO FREE USERS

Zoom is testing showing adverts on calls set up by users on its free ‘Basic’ package. Adverts will appear online at the end of calls, not during them. They’re being trialled in “certain countries”, though Zoom hasn’t said which. There’s no change on the 40-minute call limit for free users. Read Zoom’s blog for more information: www.snipca.com/39966.



NETFLIX OFFERS GAMES ON ANDROID

Netflix has launched its first mobile games to subscribers, available on Android only. It has updated its app to show five games you can download, two of which are related to its hit show *Stranger Things* (pictured). It promises no ads in games, and no in-app purchases. An iOS app will be available “in the coming months”. Read more at www.snipca.com/39968.



ASDA BOOSTS DATA FOR CHEAPEST DEALS

Asda Mobile (<https://mobile.asda.com>), which runs on the Vodafone network, has “permanently boosted” the data allowance of its cheapest packages, priced £5 and £7 a month. Customers paying £5 now get 3GB (up from 1GB), while those paying £7 get 5GB (up from 3GB).

Will the global processor shortage ruin Christmas?

Santa better start early this year to keep everyone happy

For some people Christmas is all about carols, mince pies, under-the-mistletoe kisses and glasses of sherry. For others it's the promise of the latest TV streamers, tablets or smart speakers waiting wrapped beneath the tree. The latter group are likely to be disappointed this year, as the worldwide processor shortage continues to slash supply of electronic goods.

Tech bosses have been lamenting the shortage all year, and now the head of British company Arm, which designs processor **architecture**, has warned that you may already have left it too late to guarantee delivery by Christmas.

Simon Segars said the mismatch between supply and demand is "the most extreme" he has ever seen. The "unprecedented" crisis may not be over even by Christmas 2022, he said, with the wait for some processors currently peaking at 60 weeks.

“The ‘unprecedented’ crisis may not be over even by Christmas 2022”

Talking to the Web Summit event in Lisbon, he explained that the global lockdown was the main cause of the shortage. Hundreds of millions of people being told to work from home sent demand sky high, as they looked for new computers and laptops, as well as devices to keep in touch with family.

Parents buying devices to help with home schooling was another key factor. And when



5.30 came and they logged off, they bought gaming consoles, TV sticks and smart TVs to stay entertained in the evening. There were no pubs, restaurants or cinemas to go to, after all.

Supply might have been able to meet this demand were it not for the car

industry. When lockdown began, car factories slashed production because they assumed nobody would be buying cars. They also cut orders for the processors modern cars require (about 50 in each model produced).

That seemed like a sensible move, but then demand for cars unexpectedly shot up when lockdowns began to ease. Manufacturers didn't

have enough processors to cope with this surge in demand, so they hurriedly re-ordered all the chips they cancelled just a few months earlier. They've been playing catch-up ever since.

Throw in the US-China trade war (forcing Chinese firms to stockpile processors), severe storms cutting the power to factories and container ships being delayed in ports, and you've got a shortage more serious than any in recent memory.

Segars said the processor industry is spending \$2 billion a week to boost production, but said that "just building factories" was not enough. He sees the crisis as a sign that the companies relying on the world's "complicated and expensive" supply chain needed to work better together.

THE FACTS

- The boss of a leading processor firm warned that the global processor shortage will leave many people disappointed this Christmas
- He said that the worldwide lockdowns led to unprecedented demand for home devices
- In some cases the wait for processors is over 60 weeks, suggesting the crisis might last until next Christmas

Other processor bosses also see the problem lasting all next year, though they sound more hopeful. In October Intel CEO Pat Gelsinger said: "We're in the worst of it now; every quarter next year, we'll get incrementally better".

Dr. Lisa Su, head of Intel's big rival AMD, agrees that the crisis will "get better next year, not immediately, but it'll gradually get better as more plants come up".

That's not much comfort if you're desperate to get your hands on the latest kit, particularly if you end up being thwarted by the Black Friday rush.

Mind you, 12 months ago we faced the far worse prospect of a Christmas without hugs from loved ones. Many people will simply be thankful that families can open presents together again, regardless that some won't get what they want.

Protect **your tech**

Scams and threats to avoid, plus new security tools

WATCH OUT FOR...

Doorstep Facebook Marketplace scammers

What's the threat?

Police have warned about a new type of scam in which fraudsters posing as Facebook Marketplace buyers meet you in person and show fake messages on their phone to claim payment has been sent.

A woman on Merseyside reported the crime after two women conned her into handing over a Nintendo Switch Lite gaming console, which she was selling for £130. The women arrived at the seller's home, and claimed they were the sisters of the same buyer she had been talking to online.

After inspecting the console to check it was in good condition, one of the women asked whether she could pay by bank transfer. The seller said she felt "put on the spot" when asked, so she agreed. The fraudster then pretended to



type her bank details into a phone app, and asked the seller to enter hers, before showing a message that seemed to confirm payment had gone through.

But the seller got suspicious as soon as she went back inside her home. She checked her account and saw the money hadn't been sent. She then went back to

her original Facebook chat to tell the buyer the money hadn't been processed, but he didn't respond. He also blocked her from accessing his profile on Facebook.

How can you stay safe?

Cases like this serve as a reminder that scammers can combine online communication with face-to-face meetings, and you should never assume that they're more likely to

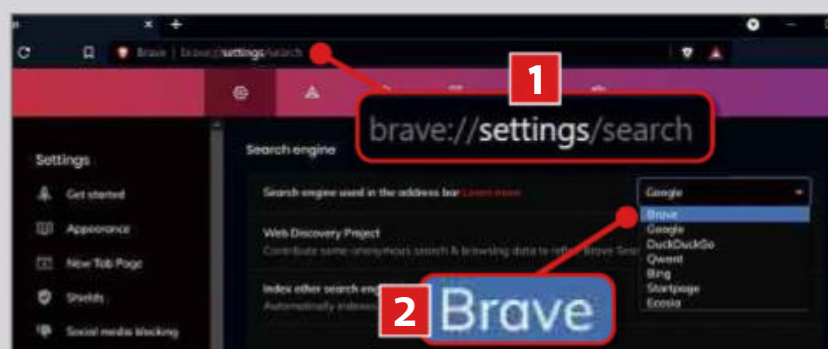
be genuine simply because they want to hand over money in person.

After the seller wrote about her experience on Facebook, several people responded to say they or someone they knew had been scammed in the same way. This scam is sure to spread now that criminals know it works, so be alert.

New tools | Brave Search <http://brave.com>

Brave doesn't just want you to switch to its browser – it also wants you to use its search engine, which it claims is just as focused on preserving your privacy. The difference, it says, is that unlike the main search tools of what it calls "Big Tech" (Google, Microsoft's Bing), Brave Search is built in a way that makes it impossible to build advertising profiles of users (read more on its blog: www.snipca.com/39838).

There will at some point be adverts on Brave Search, but it sounds like they won't be based on what you've previously searched for. You'll be able to pay for a premium version to



remove ads.

Brave is so confident its search engine is a decent substitute for Google that it recently became the default when you download the browser for the first time (<https://brave.com>). Existing users will have to change their default to Brave in Settings. Type **brave://settings/search** in the address bar (1 in our screenshot), then click the dropdown menu to the right of 'Search engine used in the address bar' and select Brave (2).

ScamWatch

Readers warn readers

Scammers posing as your kids

I recently read about people receiving WhatsApp messages claiming to be from their grown-up children, asking for money to pay a late bill, or for another urgent reason. The messages aren't like typical text scams. Instead, they're written as an informal conversation. You'd expect the parents to be suspicious of a message from an unfamiliar number, but the scammers try to get around this by claiming they've recently switched networks. I know a couple of parents who have received these messages. It was reported in our local newspaper: www.snipca.com/39798.

Sam O'Connell



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

Letters

Tell us what's on your mind

Microsoft should support Windows 10 until 2031

✉ Like Jonathan Parkyn (Issue 618, page 57), I have three Windows 10 machines (one purchased less than 18 months ago) that don't meet Microsoft's hardware requirements. Also, Nik Rawlinson's clear and comprehensive review of Windows 11 in the same issue leaves me in no doubt that there's nothing in the operating system that I desperately need, so I'll continue to use Windows 10 for as long as possible.

The Workshop (pages 38-39) on how to beat Microsoft's restrictions to install Windows 11 was equally useful. However, as a dyslexic I'll avoid any changes to the registry, where typing an illogical string of characters or following instructions is fraught with danger, so I won't be tempted to go down that route.

Surely it's not beyond the resources of Microsoft, now the richest company in the world, to provide security updates for Windows 10 for a reasonable period of time (10 years?) That would mean lower sales of new computers. The question is, does Microsoft put its profitability before its responsibility to the environment?

Colin Gray

✉ The introduction of Windows 11, which is designed to operate on only the most recent computers (although this can now be overridden) begs the question: why do we need all these changes? I'm not suggesting that change and innovation aren't good things – otherwise we'd still be living in the Stone Age.

However, I do question whether some changes are necessary. I'm a keen video photographer, and own a camera that films in Full HD (1920x1080). The quality is certainly better than my previous HD camera. The latest cameras film in 4K, which increases the amount of memory four-fold. This usually requires new SD cards, new software and often a more powerful computer. However, I don't have a 4K TV set and don't need the higher resolution. Who does need it?

John Watts

CA SAYS We're now seeing the Windows 11 debate settle into three similarly sized

camp: those who have upgraded and like that it's not too different to Windows 10; those who can't or won't upgrade; and those who are going to wait for early problems to be fixed. Where do you stand?

Don't let police officers 'go rogue' on social media

✉ I'm a recently retired police officer and still have lots of friends in the force, so I hope you won't mind if I don't provide my name. My answer to

Issue 618's 'Question of the Fortnight' ('Should the police use social media more?') is a resounding 'No!'.

I don't have a problem with departments within forces giving out crime figures, or distributing general advice. But we can't

allow police officers to go 'rogue' on social media.

A few years back I was involved with disciplining one officer for sending irresponsible and inappropriate (to put it mildly) messages on Twitter. His defence was that officers had been encouraged to use social media more, and he was just "following orders". Unfortunately, like in any profession, social media makes plonkers of us all. The same is true of police officers. The difference is that a badly worded tweet from an officer can

have a serious impact on public confidence.

Name and address supplied

✉ To me, the question isn't whether police officers should use Twitter and Facebook more. It's more that they should be taught how to use it intelligently. They should dispense with opinion and 'non-crimes' such as monitoring offensive speech. They should instead just stick to the facts. Give stats about crime in certain areas, comparing it with historical trends. That way they'll be able to tackle the misinformation that police commissioner Marc Jones wants to fight.

Martin Johnston

CA SAYS This question prompted one of the biggest responses of the year so far, with most readers being against the idea of the police using social media more often. It would be interesting to hear from more current and former police officers to see whether they agree with the anonymous former officer above.

I despair that so many follow scammers' instructions

✉ I've just read the most depressing news story in *Computeractive* this year. In Issue 618 (page 8) you quote figures from Ofcom saying that a million people followed instructions given to them by scammers. Yes, that's a tiny proportion of the 45 million adults who have been targeted by scams, but it's big enough to make the scammers happy,

What's the Issue...?

✉ I need to buy a new external SSD, but can't remember which model you gave a Buy It award to in your recent Group Test. Was it SanDisk?
Alan Maynard

CA SAYS It was – SanDisk's Extreme Portable SSD. The 1TB model costs £128 from Amazon (www.snipca.com/39115).

✉ I've always wanted to take scrolling screenshots on my Samsung Galaxy tablet. I seem to recall advice on doing so earlier this year.
Katie Dalston

CA SAYS Yes, in Issue 612 (page 45). If your tablet runs earlier than Android 11, you need to install LongShot (www.snipca.com/38996).

✉ When did you explain how to add special characters to documents and spreadsheets? I know it was within the past few months.

Dave Ballard

CA SAYS Yes, it was in our Workshop in Issue 614, page 38.




and to encourage them that there's money to be made from duping these poor victims.

I despair at this figure. Everywhere I read, including in your excellent pages, there are warnings about avoiding scams – and yet they're just not sinking in. All the time, scammers are getting more sophisticated. They quickly realise when a scam isn't working, and like a certain virus I'm sure you're all sick of hearing about, they develop a mutation that finds a new weak point. Is there a solution? I fear not

Simon Collings


There's no broadband competition in Hull

 While I agree with Oliver Downsend's point that we need more broadband competition (Letters, Issue 618), he should realise that if he lived in Hull or the East Riding of Yorkshire area, as I do, he would find he has a choice of not three service providers but only one, namely KCOM. I pay twice as much as Oliver for a download speed that is half the speed he gets. So look on the bright side Oliver – at least you don't live where I do.

Stefan Kuc




AM and FM radios can still be lifesavers

 In addition to keeping live radio on smart speakers (Issue 618, page 7), traditional AM and FM radios still have a vital role to play in people's lives. A disaster such as flooding or a terrorist attack could leave a region without power, internet or mobile-phone signals. In such a case, the only viable means of getting lifesaving news to people would be by AM and FM radios.


Alan Thomas

Bank expects me to enter 2FA code in 15 seconds

 I applaud Robert Irvine's attempt to make **two-factor authentication** (2FA) phone texts a thing of the past (see Issue 617, page 62). I abhor these texts. I had a severe stroke 23 years ago that left me with residual dysphasia. My bank

STAR LETTER

I like Windows 11 because it's so similar to 10

 Putting aside for the moment the question of whether Microsoft is right to insist on such high standards for hardware, I'd suggest that the key dilemma is whether users think Windows upgrades should be big or small affairs. I was surprised that my rather under-powered computer was still capable of running Windows 11, so I decided to upgrade. I've been using Windows 11 now for a week, and here's my key observation: not too much has changed.

Now, you can interpret that however you want. You may think that if hardly anything has changed, what's the point in upgrading? Or you may think that it's precisely *because* so little has changed that an upgrade is worthwhile. I lean towards the latter opinion.

I was always put off by earlier versions of Windows that deviated too much from what I was currently using. The obvious example is from Windows 7 to 8. I loved Windows 7 (still do, in

fact – I'm running it on an old laptop). There was no way I was going to upgrade to a system that looked as different as Windows 8. I waited until Windows 10, which doesn't look terribly different to 7.

I agree largely with your verdict in Issue 618's review of Windows 11, where you say that "at first glance, it may not look like it does much more than Windows 10". To me, that's a good thing. I like the learning curve for a new operating system to be gentle, not steep. It's like learning the subtleties of driving a new make of car, rather than making the leap from car to HGV driver.

It feels like I've been using it longer than I have, and I never noticed when it went from unfamiliar to familiar.

Liam Chilwell




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



(Santander) has started using 2FA, but with a strict time limit of 30 seconds! Its website starts the countdown, and I receive the text about 15 seconds later. I have to open my phone; find and open the messaging app; scroll down the text to find the code (which is not easy when one has dysphasia); and complete the request. All in 15 seconds!

Bob Stewart

Hackers can use hashed passwords in brute-force attacks


 I'd like to reply to Phil Verity's letter in Issue 617. He wondered how passwords can be hacked by going over combinations of letters when there are forced delays and automatic lockouts after a few attempts. Passwords are stored in databases not in their original text form, but in a mangled 'hashed' version. If the password entered matches the hash after calculation, entry to the website is allowed. But the reverse calculation is almost impossible if you don't know the

original characters.

It's common for passwords to be stored in websites' databases in the hashed form only, and it is these that frequently get stolen. So the thief ends up with a collection of email addresses with their corresponding hashes, but not the password. These hashes can then be broken very quickly in a trial-and-error **brute-force attack**.

Bill Angove

Gone with the mug

 In my best Clark Gable voice, I'd like to say: 'Frankly my dear I don't give a damn!'. That's the movie quote used for the password mentioned in Issue 618's Letters ('fmdidgad!5£/'). Am I early enough to win a mug?

Bob Chivers

CA SAYS Frankly Bob, yes, you were the first to send us the answer (ahead of several hundreds), and should now have received your mug. Any other readers got password initials to set as challenges?



We stand up for your legal rights

Will my phone warranty be reset after using it?

Q In May, I bought a Google Pixel 5 phone (pictured) from a private eBay seller. After it stopped working in October, Google replaced it because it was still under warranty. However, given the failure of the first phone, I'm worried that the replacement will also stop working at some time in the future. If that happens, will Google reset the warranty for another year? Or would that not happen, now that I've used it?

Paul Blackburn

A No, manufacturers don't reset warranties after they are used; nor when they are sold by private sellers on sites such as eBay, Gumtree and Facebook Marketplace. Whether free or paid for, warranties last only for the period defined when the device was bought or the contract began.

It's good news that Paul was able to use the warranty. Either the seller never registered the phone (and therefore never activated the warranty), or the warranty was transferable. Even if it were the latter, it's worth remembering that many warranties can't be transferred, meaning

only the original owner will be covered.

Normally we'd tell Paul not to worry about the warranty running out because he could rely on the Consumer Rights Act (CRA), which lets you pursue a refund if an inherent fault breaks a device within six years of purchase (five in Scotland). However, private eBay sellers aren't bound by the CRA, leaving Paul without protection should the phone fail again.

Paul's only option is to buy an extended warranty. He'll find plenty online. He should start searching at Compare Extended Warranties (www.snipca.com/39863).

LEAD
CASE



eBay

Can OnePlus keep sending replacement phones?

Q I bought a Nord 2 phone from OnePlus in July, along with accessories, for more than £400 (paying through PayPal). It's been faulty from the start and I wanted a refund, but OnePlus persuaded me to take a replacement. I've now had two further replacements, neither of which worked. OnePlus keeps saying the SIM card is at fault, but my network Vodafone tested the SIM and disagreed. Can OnePlus keep sending me replacements?

Winsome Durrant

A No. It must now refund Winsome without delay, as it should have done when the first replacement didn't work. Fewer than six months had passed since purchase, so this was the company's one and only opportunity to rectify the problem. By giving Winsome further replacements it has repeatedly broken the Consumer Rights Act.

OnePlus has now asked Winsome to send the phone back, but instead we've asked her to file a claim through PayPal. In the meantime we'll continue chasing OnePlus.

CASE CLOSED

CASE ONGOING

CASE UPDATE

D&G admits error and fixes Sky customer's TV



Customers can easily fall through the cracks when companies subcontract parts of their business to other firms.

As reader Brian Ford found out (Issue 617), it's not always clear which firm you should chase for help. He was paying for insurance with Sky Protect (www.skyprotect.com), so was baffled and angry when it refused to fix his broken TV.

After some digging, we realised that the insurance was actually provided by



Domestic & General (D&G) – under the name Sky Protect. In turn, they paid repair firm Equinox to fix broken devices.

D&G initially said the problem was with

the Sky Q box, not the TV, and therefore Sky was responsible for fixing it. But a Sky engineer sent to Brian's home said this wasn't true, and that the TV was broken. An Equinox engineer sent to repair the TV then arrived with the wrong part.

Thankfully, this mess has now been sorted. We explained the situation to D&G, which then told Brian that it had made several mistakes on his account. Two days later he received a new TV set, which is working perfectly.

My bill is higher – can I cancel my contract?

Q I upgraded my phone with EE at the end of my contract and was told I could have a free SIM card for my old phone. I was surprised to then find my bill had gone up from £35 per month to £50. I tried to return the new unopened phone the next day, but was told I couldn't cancel my contract. Is EE allowed to refuse my request?

Zara Josephs



A Yes it can, because Zara signed her contract in an EE store, in the presence of an employee.

The 14-day cooling-off period for contracts applies only to those signed at a distance, such as online or on the phone. This is true whether or not she's used the phone.

If Zara believes EE gave her misleading information about the amount she would pay, she

should tell the company and report it to Ofcom and the Communications Ombudsman. We've asked Zara whether she regards any other aspects of the contract to be unfair. If so, we'll investigate them.

Be aware that a free SIM means you still pay for data used and calls made on the phone. However, the advantage of a free SIM is that you're tied to 30-day contracts only, and can cancel at any time without paying a fee.

CASE ONGOING

My repaired TV is broke, so can I get a refund?

Q I bought a JVC Fire TV (pictured) from Currys last May, but it started to malfunction in August – with the screen repeatedly going blank. Currys repaired it, but the same problem started to recur after five days. The staff at Currys refuse to give me a refund, saying I must have it repaired again. Can I refuse this repair and demand a refund?

Les Hamilton



A Yes, Les can refuse because he's entitled to a refund. Under the Consumer Rights Act (CRA), retailers have only one attempt at a repair within six months of purchase, freeing them from the frustration of endless repairs.

We've been saying this in almost every

issue since the CRA was introduced in 2015, but retailers just aren't getting the message. Currys is a repeat offender, so we're not surprised Les was refused a refund. Many readers in the past few years have had similar complaints against the company.

In our experience, while Currys keeps making this mistake, it normally refunds customers quite quickly once we've bypassed the customer service team and spoken to managers higher up the corporate ladder. We plan to do that soon, and have also asked Les to quote the CRA to the staff who seem so ignorant of the law. Between us, we're confident he'll get his money back.

CASE ONGOING

CREDIT WHERE IT'S DUE

Microsoft helped us reinstall Windows 10



About a year ago we decided to buy a desktop PC to replace an ageing laptop. We bought an 'All-in-One' computer from a European supplier because it was absolutely outstanding value, but there was a snag: lots of system files in Chinese. We then started to experience pop-up advertising that gradually increased to nuisance levels, while the Edge browser froze completely.

We contacted Microsoft's support team, who clearly and patiently explained how to

get Edge going again, but this didn't work. Eventually we had to reinstall Windows 10, and all was progressing well, with Microsoft's help. That said, after the reinstall Edge was now showing the Chinese search engine Baidu. We deleted the tab showing Baidu, and since then the PC has been running without any problems.

Victor Sullivan



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



Contact
Microsoft

• **Online help** www.snipca.com/39801
• **Phone** 0344 800 2400

Grow Your Family Tree



Nick Peers dives into Electoral Registers and thumbs through old phone books in order to...

Find out who lived at a specific address

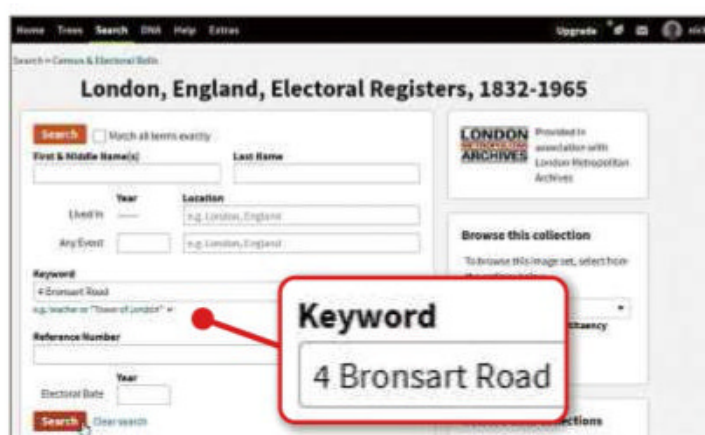
Readers David Parry emailed us to say he wants to find out who lived at a certain address in a certain year. He's surely not alone at wondering this, so we're happy to give instructions in this issue's column. Researching a property's recent history became easier when the Electoral Register was opened for commercial purposes in 2003. Ancestry subscribers can search the 2003-2010 records at www.snipca.com/39758.

Search in Ancestry and Find My Past

Electoral Register results before 2003 are fragmented, with databases covering regions and cities spread across Ancestry and Find My Past.

Ancestry leads the way for records after World War 2. Most of its 27 regional registers stretch from 1832 right up to the 1960s or 1970s. Search for 'Electoral' in Ancestry's card catalogue (www.snipca.com/39759) to find out which towns, cities and counties are covered. If your area is covered, select the database before typing your street address into the Keyword field (see screenshot above right) and clicking Search. This will show you who was living there at the time.

Find My Past's registers stop at 1932, but they do cover most of England. Search them alongside other relevant



Type your street address or house name into the Keyword field

appear if the property had a phone line at that time and the resident hadn't gone ex-directory.

Search census records and explore maps

Going further back, you can use the census records (including the 1939

Register) to see who lived at a specific property. The Genealogist (www.thegenealogist.co.uk) lets subscribers search specific censuses (from 1841 to the 1939 Register) for a county and a street name.

Ancestry users should go to the Census & Electoral Rolls card catalogue (www.snipca.com/39766) and select their chosen census from the 'Narrow by Category' menu on the right. Next, type the street address into the Keyword field before clicking Search.

Finally, the Genealogist's 'Diamond' subscription (£64.95 for four months; £139.95 for one year) lets you use the new Map Explorer tool, which combines historical maps of addresses with **geotagged** references to relevant documents. Try the 1910 Lloyd George Domesday Survey (primarily covering London, see screenshot below) and tithes (1837-1850s, covering a wider part of England).

property-based records, including the censuses, by visiting www.snipca.com/39764 and typing your street name into the 'Optional keywords' box. If too many results are returned, use the 'Where' fields to narrow the search to a particular town or county.

Ancestry holds another potentially useful resource: the BT phone books from 1880 to 1984. You can search these at www.snipca.com/39765, but there's a catch: you have to include a surname in your search, which has to match the person living at that address. As you're unlikely to know this, your only other option is to browse the relevant telephone directory for the year you're interested in. Use the options on the right of the search page to select a year range, then year and finally, phone directory by area. You'll then have to skim through each page searching for your address, which should

Your Genealogy Problems Solved

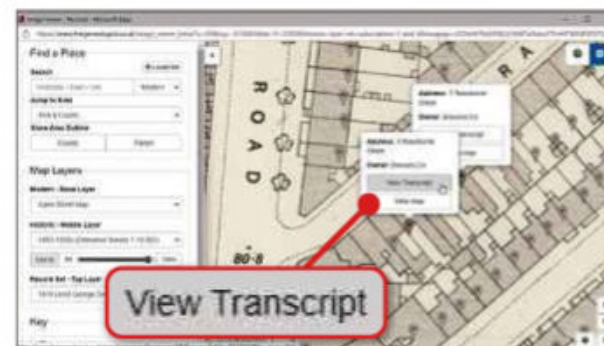
I see that RootsMagic 8 (www.rootsmagic.com) has been released. Is there some way I can try this version before paying for it?

Dan Fletcher

There's no free trial of the paid-for version, but you can install RootsMagic Essentials for free (www.snipca.com/39730). This

cut-down version works with your existing data file, and will give you a taste of the new interface in the full version. If you like it, you should consider upgrading to the full version, which costs from £29.95 as a one-off download.

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



Browse the 1910 Lloyd George Domesday Survey map and look for relevant documents



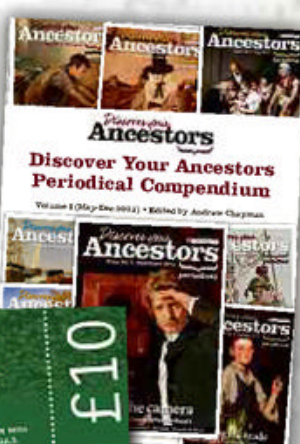
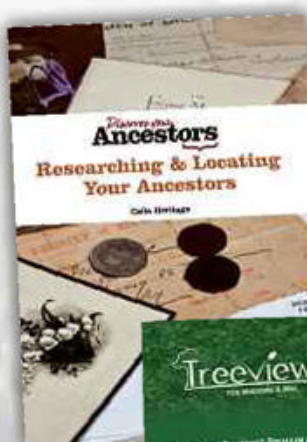
TheGenealogist

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Best Free Software

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

VIDEO EDITOR

MiniTool MovieMaker Free 3.0

www.snipca.com/39948

What you need: Windows 7, 8.1, 10 or 11

Microsoft hasn't included a video-editing tool in Windows since it ditched Movie Maker in 2017 and incorporated its features into Windows 10's Photos app. MiniTool MovieMaker Free is an excellent replacement for that much-missed program and version 3.0 is its best yet, with lots of useful new options for creating professional-looking videos.

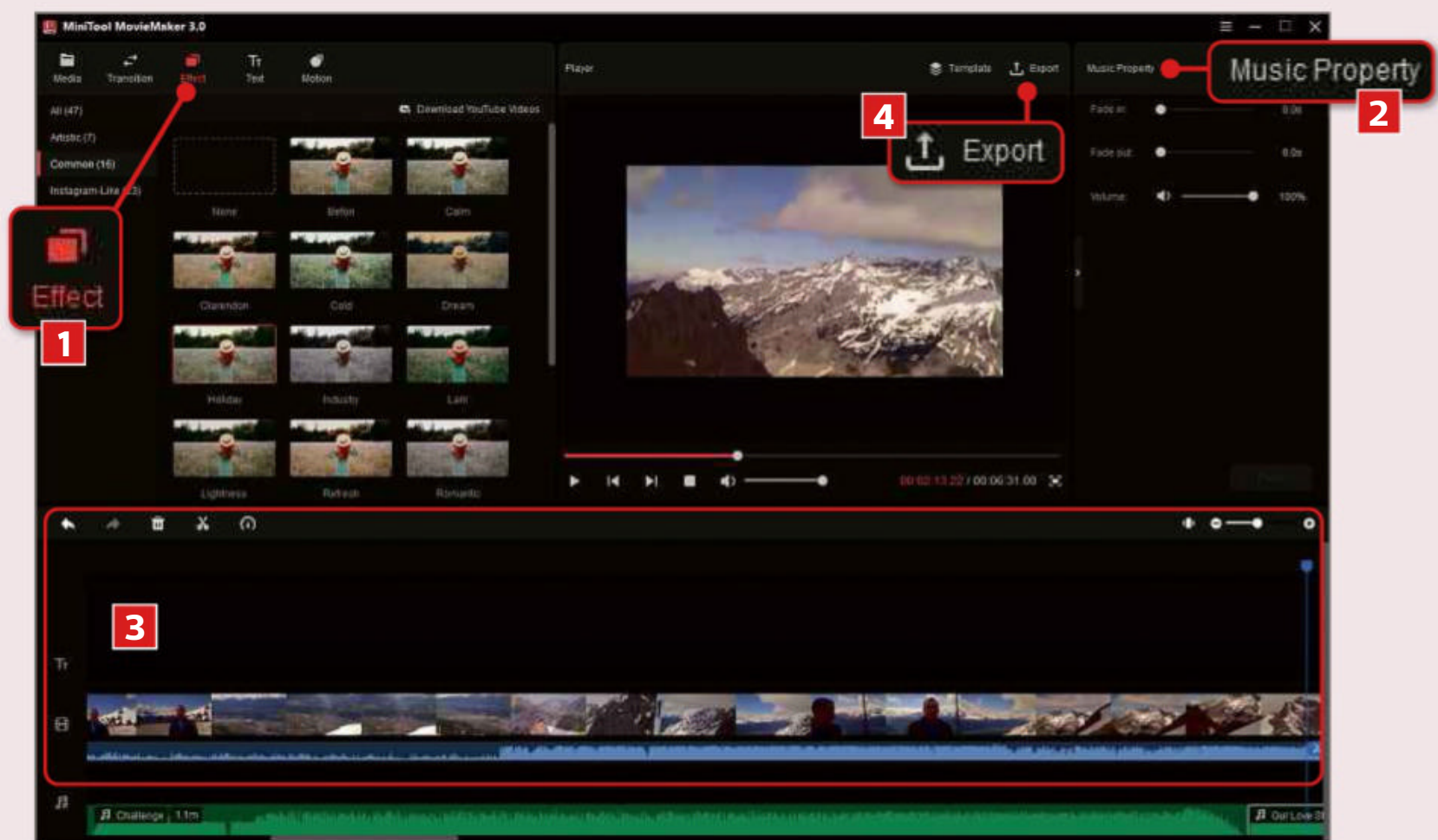
Notable additions include the ability to edit audio in every clip you import, by using sliders to adjust the volume and fade in and out. You can also add a soundtrack to your videos by clicking the audio track on your timeline and choosing one of MovieMaker's nine music options or importing your own audio files.

Simplicity has always been MiniTool MovieMaker's greatest strength and this latest version makes it easier to undo and redo edits to your videos by clicking dedicated buttons above your timeline. We also like that you can hover your cursor over its transitions to see how each will look,

and apply them with a single click.

This one-click functionality extends to the program's effects, such as Old Film, Lomo (oversaturated colours) and Dream, so you can experiment with different filters for your clip. It's also now possible to adjust the contrast, brightness and colour of individual clips or a whole video with a single click, as well as apply Motion options such as 'Pan down along and left' and 'Zoom in centre'.

Unlike rival free video editors, MiniTool MovieMaker supports a wide range of media formats and lets you export your videos as MP4, AVI and MOV files, and many more. Additionally, it can turn your photos into sophisticated slideshows using templates such as Challenge (a Hollywood-style movie trailer) and Our Love Story, though some options are currently unavailable. Projects are saved automatically after five seconds, so you'll never lose any work.



1 MiniTool MovieMaker offers dozens of effects and filters, which you can now apply to individual clips and entire videos with a single click.

2 You can use one of the program's music options in your videos or import your own audio files. You can also fade music in and out and adjust the volume in the Music Property section.

3 The timeline makes it easy to add clips, audio and transitions to your projects and now offers buttons for undoing and redoing the changes you make.

4 Click 'Export' to save your video in the media format of your choice. Usefully, there are presets for Android, iPhone and smart TVs.



OFFICE SUITE

SoftMaker FreeOffice 2021

www.snipca.com/39945

What you need: Windows 7, 8.1, 10 or 11; macOS or Linux

This free office suite is a cut-down version of SoftMaker Office NX Home (which costs £24.90 a year), but it still offers plenty of useful features. It includes a word processor, TextMaker;



a spreadsheet program, PlanMaker; and a PowerPoint alternative called Presentations. All of these receive updates in the 2021 edition of FreeOffice. For example, you can now insert both footnotes (see screenshot) and endnotes in your documents, use extended 'pivot tables' to analyse spreadsheet data, and include OpenGL-based animations and slide transitions in your presentations. FreeOffice 2021 improves the suite's compatibility with Microsoft products, and can open and save file formats including DOCX, XLSX and PPTX. All three of its programs can be used with either a 'ribbon' interface or classic menus and toolbars, and SoftMaker provides the useful option to install FreeOffice 2021 on a USB stick.

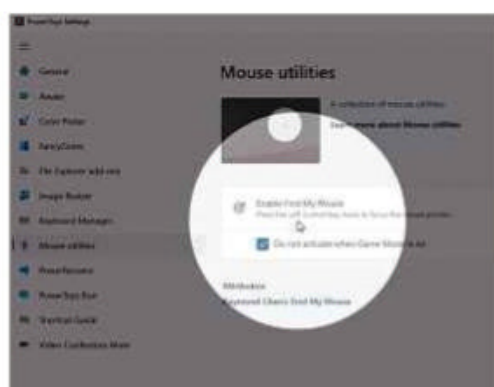
SYSTEM TOOL

PowerToys 0.49

www.snipca.com/39943

What you need: Windows 10 or 11

As we reported in Issue 618's News section (page 6), Microsoft has updated PowerToys with a clever new tool called 'Find My Mouse', which makes it easy to locate the cursor on your screen. Simply double-press the left Ctrl key on your keyboard to circle the cursor with a white 'spotlight' (see screenshot). This will disappear when you click your mouse or press Esc. Find My Mouse is enabled by default in PowerToys 0.49, and can be turned off by clicking 'Mouse utilities' and deselecting Enable Find My Mouse. It's particularly useful if you have a large, high-resolution monitor or suffer problems with your vision.



PowerToys has also added an option called Video Mute Conference, which lets you switch your camera and microphone off and on in video calls by pressing Windows key+N on your keyboard. This works regardless of which video-chat tool you're using.

WHAT SHOULD I DOWNLOAD?

We tell you what software & apps to use

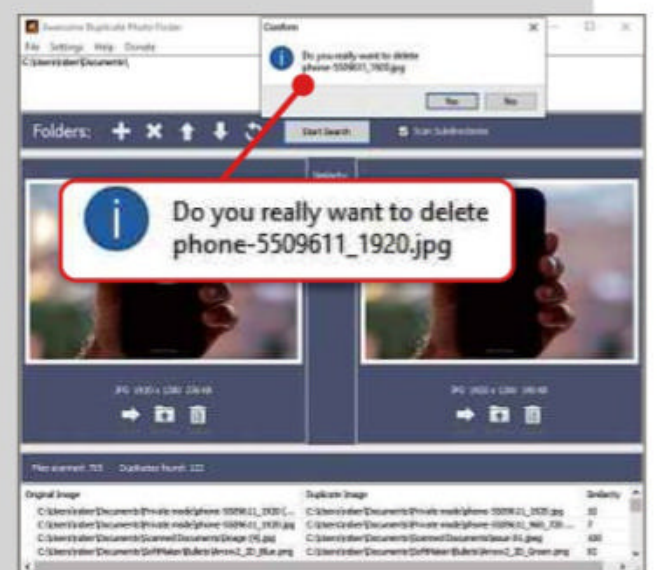
How do I remove duplicate photos from my PC?

Q I'm an avid photographer and over the years have amassed an embarrassing quantity of digital photos on my PC. A high proportion of them are duplicated and I would love to use a suitable program to identify the copies, but with my final say as to what is deleted. Can you recommend suitable cheap or free software that would do the job for me?

Graham Peacock

A In Issue 618's Best Free Software section (page 18), we recommended the excellent free program AllDup 4.5 (www.snipca.com/39806) as an effective way to find and remove duplicate files from your hard drive. You can use it to detect and delete copies of photos by clicking its Search Method tab and selecting 'Find similar pictures' in the dropdown menu. Click the Source Folders button, choose a drive or folder to check for duplicates and click Start Search.

Alternatively, if you want a tool that only finds duplicate *photos* and lets you preview them



before deletion, download Awesome Duplicate Photo Finder (www.snipca.com/39946). This free tool, which works with all versions of Windows from 7 to 11, scans folders and drives (click the plus button to choose which ones) for similar pictures then lets you compare the results. You can either delete images as you review the results (see screenshot), or move them to different folders.

To view only photos that are exactly the same, click the program's Settings menu and select 'Search only 100% identical pictures'. It's also worth enabling the option to 'Delete files without confirmation' and just have them sent straight to the recycle bin. The program also lets you save details of your duplicate photos as a CSV spreadsheet.

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

HOW I USE...

f.lux

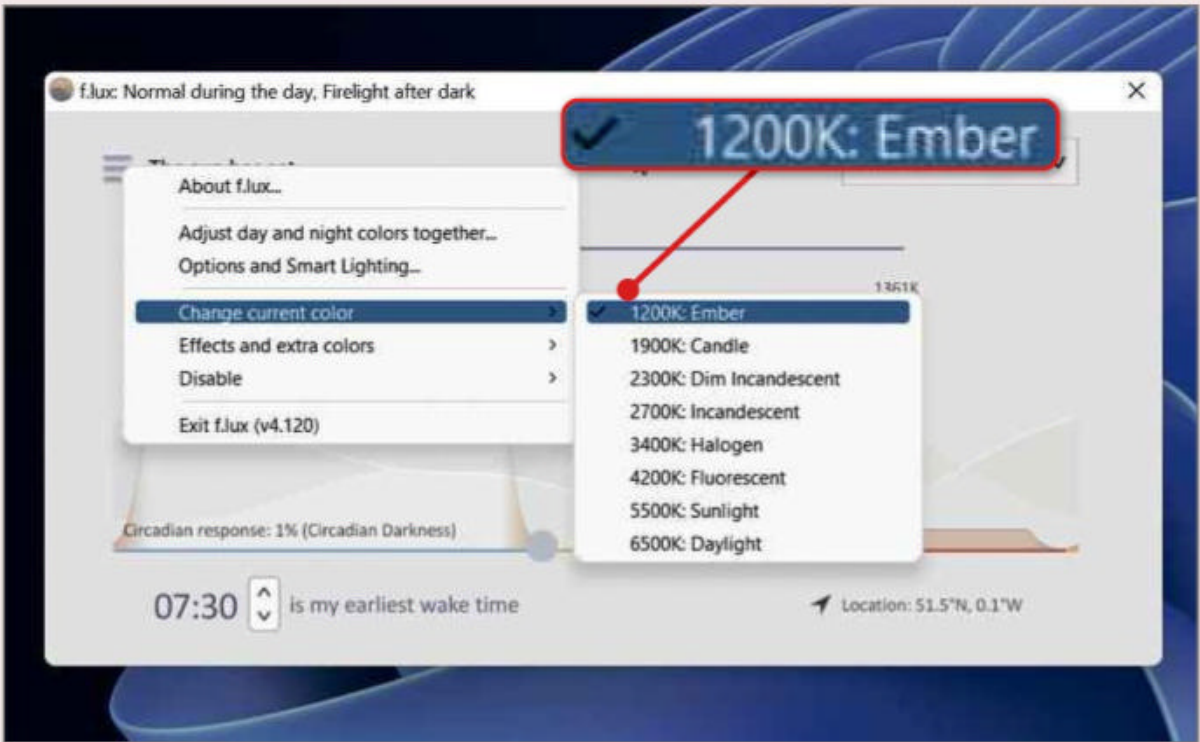
Spending hours working underground, **Wayne Williams** needs this tool to remain more human than mole



My home office is in the cellar. Years before we bought our house, the cellar was converted into a call centre. As a result there are fitted desks along the walls, with enough seating and phone points for six people. I like working down there because no matter what the temperature is elsewhere in the house, my office is always cool in summer and warm in winter.

The downside is that there are no windows and no natural light. I have LED spotlights above me and square fluorescent tube lights on the walls, which make the room bright and far-from easy on the eyes. This isn't helped by my glaring dual-monitor setup. To compensate, I use f.lux (<https://justgetflux.com>), but perhaps not in the same way most people do.

Typically, f.lux is for people who work in offices with natural light coming through windows. It changes the colour of your screen to suit the time of day – so it's bright in the daytime, and radiates a softer, warmer light (orange, in my case) at night.



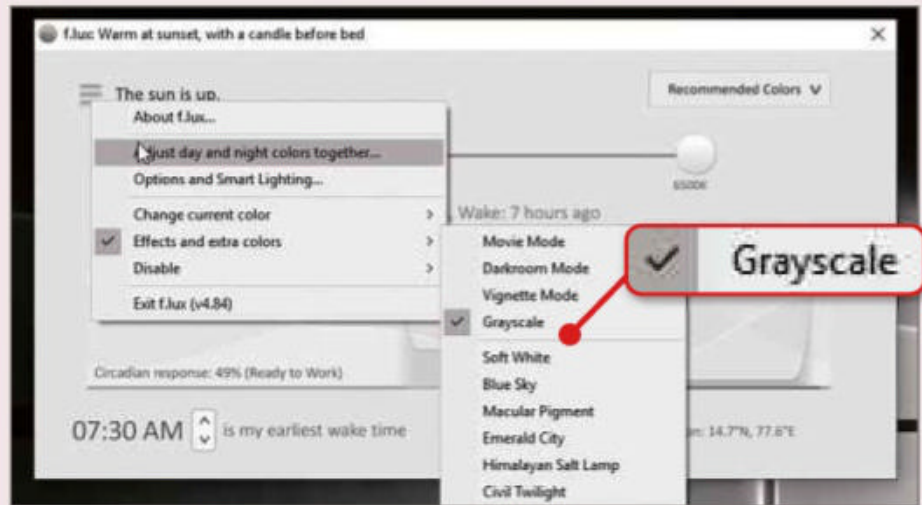
Wayne uses the Ember screen-colour setting in Flu.x to give his eyes a temporary break

You can tweak these tones in the settings to make the screen warmer (by selecting Reduce Eyestrain), or to dim the light much later than usual (select Working Late). I don't have any natural light in my grotto, however, so instead of using f.lux to reflect the passing from

day to night, I use other presets to get some respite from screen glare. I click the three lines at the top left and select 'Change current colour', then choose a dimmer option such as Ember (see screenshot above) or Candle. These don't change automatically during the course of the day. They're simply presets you can turn on and off.

As well as presets, I use themes from the 'Effects and extra colours' menu. The 'Grayscale' option removes colour from programs, making my PC screen look a bit like a Kindle. It's surprisingly soothing. I sometimes turn on 'Use Dark mode at sunset', but only so I have an idea of when it's getting late – because it isn't always obvious when you work in a cellar.

The only time f.lux gets in the way is when I'm editing videos and working in Photoshop (and I do both a lot). This work requires accurate colours that you don't get when using f.lux, so I go into Disable in the menu and pause it for an hour, or set it to turn off automatically when I'm using a particular program.



Turn on Grayscale mode to remove distracting colours from software

WHAT I'D LIKE TO SEE IN FLUX

Some of f.lux's colours are hideous, and I can't imagine anyone using them. It should ditch Emerald City (green), Himalayan Salt Lamp (pink) and Civil

Twilight (violet) and introduce shades that are more calming (to me, at least!). Also, it should let you set alerts that remind you to take a break or do eye exercises.

Named & Shamed



Barry Collins puts the boot into tech villains, jargon-spouting companies and software trying to trick you

SOFTWARE WARNING!

aTube Catcher's 'ironic' junk

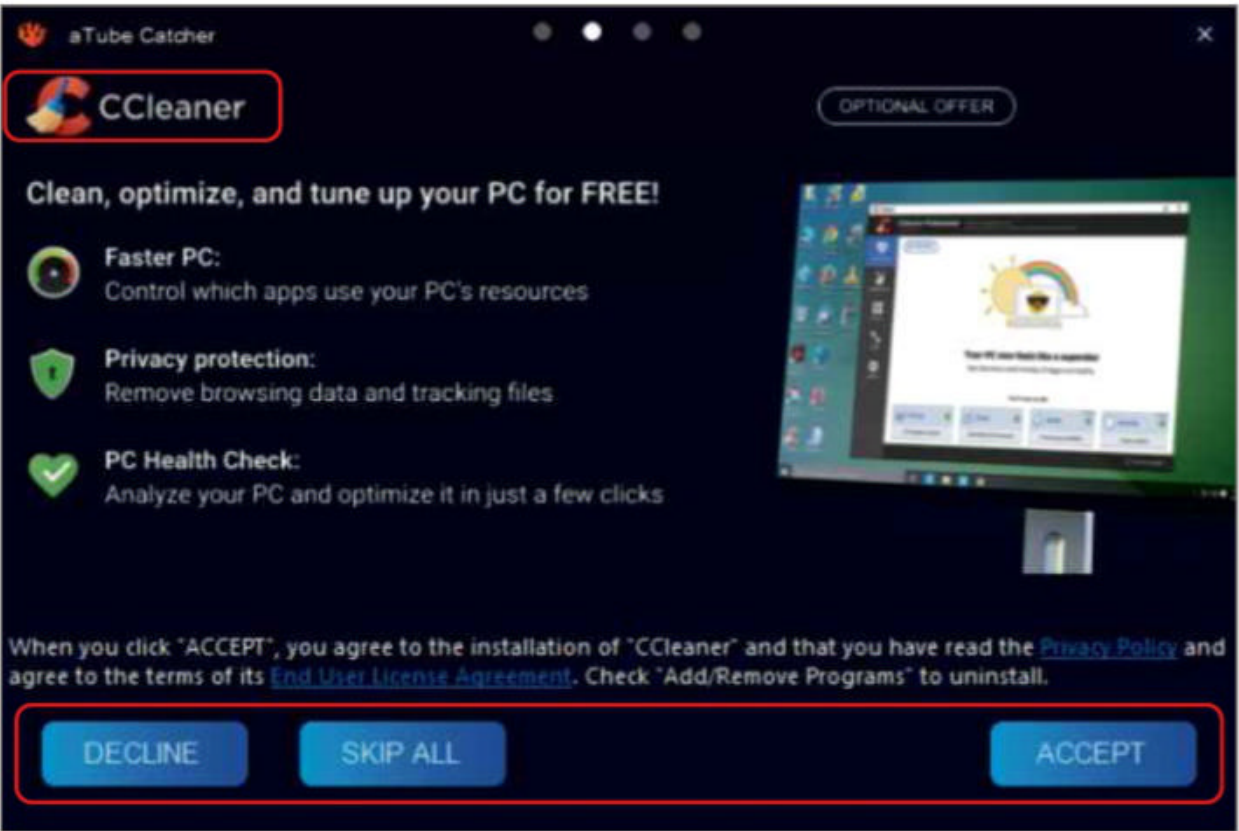
Let's be honest, downloading videos from YouTube is a bit iffy (what with the risks of breaking copyright), so it's not a massive shock to find the market for tools that help you do this is about as wholesome as a seven-day-old doner kebab.



The program aTube Catcher is another dubious example. When I first installed the tool it tried to add RAV Endpoint Protection, an antivirus suite that I've never heard of. Irony fans will be tickled that the next "optional offer" was for CCleaner – which of course is meant to help rid your system of junk.

In aTube Catcher's defence, it provides clear buttons to Decline or Accept these bundled apps, and there's even a Skip All button (see screenshot). Frankly, I was on the verge of letting aTube Catcher off with a clip round the ear and a warning not to do it again.

However, having completed the installation, I was taken aback to find not one but two new icons on my desktop – one for aTube Catcher and one for an app called Music Search MP3, which



aTubeCatcher installs CCleaner on your PC, which comes in handy when you then need to remove aTubeCatcher's other junk

wasn't mentioned at all during the installation process. This is a search engine that lets you type the name of any song or album and download an MP3 version of it. It's about as legitimate as

putting magnets on the electricity meter, which is why the software comes with a legal disclaimer that basically says "not our fault, guv". We'll give it all a very wide berth.

WHAT ARE THEY TALKING ABOUT?



WHAT THEY SAY

Microsoft designer Marianna Levant on Windows 11's 'Bloom' wallpaper (pictured above)

www.snipca.com/39830

"We all live in both a digital realm and in a natural realm. It was important for us to encompass both. We explored a very wide variety of concepts and the one that resonated was this union between mathematics and nature."

WHAT THEY MEAN?

Bloomin' heck – will people really believe this union between jargon and nonsense?

BARRY'S VILLAIN OF THE FORTNIGHT

David Kadanga



When I was a student, some time in the 18th century, the worst we got up to was nicking the odd pint glass. David Kadanga, who was studying computing and cyber-security at Leicester's De Montfort University, has upped the ante somewhat.

He sent almost 10,000 fake text messages, pretending to be from Virgin Media, Three and HMRC. He duped victims by sending them to convincing-looking websites and then used their bank-account details

to commit fraud, including the laundering of a £24,000 cheque.

Kadanga was kicked off his university course and appears to have narrowly avoided a custodial sentence. "He took an extremely grave and wrong turn when he went to university and lost any sense of a proper approach," the judge remarked.

I agree with the judge. I'd also like to take this opportunity to apologise to the landlord of The King's Arms in Brighton.

PC | £699 from Stormforce www.snipca.com/39939

Stormforce Onyx GTX1650

Welcome Windows 11, we've been expecting you

The Stormforce Onyx GTX 1650 is an affordable desktop PC that comes with Windows 11 Home installed – the first PC with Microsoft's new operating system we've reviewed in *Computeractive*. While Windows 11 is available as a free update that most PCs should be able to download and install, buying a brand new PC that already has the operating system installed is the easiest way to get your hands on it.

“It uses older components to keep the price down, but runs Windows and basic games well”

The Onyx is available for a very affordable £699. To keep the price low, it uses a 10th-generation Intel Core i3-10105F processor, which is a low-end chip that's already a generation out of date. It's about to fall even further behind with Intel's 12th-generation processors coming to more expensive PCs soon.

As you might expect, it fell some way behind PCs with more powerful and

up-to-date processors in our tests. However, these tests push PCs to their limits. If you're going to use the PC for just web browsing and office work rather than, say, serious video editing, you'll be pleased to hear that Windows 11 Home still flew along without any problems.

The processor isn't the only component that's getting a bit long in the tooth. The Onyx's GTX 1650 **graphics card** was launched in April 2019. If you're looking to run the latest games in high resolution with all their 3D settings turned up, you'll be disappointed. However, if you're willing to stick to **1080p** resolution (1920x1080 pixels), we found that it still ran smoothly when playing games that aren't too demanding.

That's all fine if you're looking for an affordable PC to run Windows 11 right now. However, if you find the hardware limiting in the future, there's still plenty of scope for upgrading. For example, only two of the four available **RAM** slots have been used, so doubling the memory from 8GB to 16GB would be a straightforward task. Likewise there's a second **M.2** connector for adding more storage, if the supplied 500GB **SSD** begins to fill up.

Remove the right-hand panel of the case and you'll find space for one 2.5in and two 3.5in hard drives for a more traditional storage upgrade. The power supply also offers plenty of headroom for upgrading the graphics card to a more powerful alternative.

Overall, this is an impressive Windows 11 PC for the price, and is an affordable choice for those thinking about buying a Windows 11 PC because their existing machine can't run it. However, if you

SPECIFICATIONS

Four-core Intel i3-10105F processor • Nvidia GeForce GTX 1650 graphics card • 8GB memory • 500GB M.2 SSD • 6x USB 3.0 ports • 2x USB 2.0 ports • 1x DVI Port • 1x HDMI port • Wi-Fi 5 • Ethernet • Windows 11 Home • 410x218x436mm (HxWxD) • Three-year warranty www.snipca.com/39939



have a higher budget we'd recommend buying a more expensive model with newer components.

VERDICT Although it uses older components to keep the price low, this is still a decent desktop PC and runs Windows 11 very smoothly

★★★★★

ALTERNATIVE

Inspiron Small Desktop
£705 This PC has a more powerful processor for a similar price. It comes with Windows 10, but is compatible with Windows 11 – so you can upgrade for free



LAPTOP-TABLET | £369 from Amazon www.snipca.com/39941

Microsoft Surface Go 3

Slowly does it

The Surface Go 3 is Microsoft's attempt to make an affordable Windows 11 tablet. It will be competing with Android tablets and iPads, albeit with the added benefit that it runs Windows 11, so you're not restricted to software from app stores. In fact, it should run anything you can run on a PC or laptop – in theory.

As with other Surface devices, there's a keyboard cover with a trackpad available, so you can use it as a simple laptop. The official Microsoft keyboard will cost you an extra £125. However, because it's a PC, it should work with any Bluetooth keyboard and mouse, or even with a plug-in model if you have a means to connect it via the device's **USB-C** port.

“Sadly, for a Windows 11 device, it doesn't run Windows 11 very well”

The tablet comes in a range of specifications. The basic £369 model comes with an Intel Pentium 6500Y processor, 4GB of memory and 64GB of storage. This simply isn't a high enough specs to run Windows 11 well. You can get 8GB of **RAM** and 128GB of storage, but the price climbs to £499. Swap in an Intel Core i3 processor, while you're at it, and the price nudges up to £569.

We tested the Intel Core i3 version,



but we weren't impressed with the performance. In our **benchmark** tests it ran at around a quarter of the speed of the Surface Pro 8, which we reviewed in Issue 618. The Pro 8 is twice the price, but we think it's more than worth it because of the speed benefits.

The tablet runs fine if you're only trying to do one thing at a time, such as browsing a single web page or attending an online meeting. However, as soon as you try installing an app or playing music in the background, the tablet starts to slow down. You don't expect this kind of performance on a modern Windows PC costing more than £500. We can only assume that performance is even worse on the cheaper models.

There are a few good sides – the screen is clear and bright enough, and we found the built-in webcam to be as good if not better than anything we've found on a Windows laptop recently.

However, when it comes to the crunch, we'd recommend going either side of this and opting for an Android model or iPad if you want a tablet, or a more powerful Windows device such as the Surface Pro 8 or a laptop if running Windows smoothly is important to you.

SPECIFICATIONS

Intel Pentium 6500Y or Core i3-10100Y processor
• 4GB or 8GB RAM • 64GB or 128GB storage •
AMD Radeon graphics • 10.5in 1920x1280-pixel
touchscreen • Wi-Fi 6 • Bluetooth 5.0 • 1x USB-C
port • 1x 3.5mm audio jack • Windows 11 Home •
8.3x245x175mm (HxWxD) • 544g •
One-year warranty www.snipca.com/39941



HOW WE TEST

Computeractive is owned by Future PLC, 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.

Future PLC also owns the magazines *Maximum PC*, *PC Pro* and *T3*, and the websites *Laptop Mag* (www.laptopmag.com), *TechRadar* (www.techradar.com) and *Windows Central* (www.windowscentral.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 In order to keep the price down Microsoft has used components that are too basic to run Windows 11 at top speed – which defeats the object



ALTERNATIVE

Lenovo Tab P11 Pro **£600**

A shade more expensive than the priciest Surface Go 3, but this Android tablet comes with a keyboard and stylus



HEAD TO HEAD

TV STREAMER

Amazon and Roku both have new TV streaming sticks, but which one is best?

Roku Streaming Stick 4K

Vs

Amazon Fire TV Stick 4K Max



£50 from Amazon www.snipca.com/39855

SPECIFICATIONS

2160p (3,840x2,160 pixels) at 60fps • HDR10, Dolby Vision, HDR10+ • Wi-Fi 5 • HDMI output • 95x21x11.5mm (HxWxD) • 26g • One-year warranty
www.snipca.com/39855



£55 from Amazon www.snipca.com/39856

SPECIFICATIONS

2160p (3,840x2,160 pixels) at 60fps • HDR10, Dolby Vision, HDR10+ • Wi-Fi 5 • HDMI output • 108x30x14mm (HxWxD) • 49g • One-year warranty
www.snipca.com/39856

If you've been looking for a streaming device to bring services such as Netflix and BBC iPlayer to your TV set, you're pretty much spoilt for choice. Both Roku and Amazon have recently upgraded their top-of-the-range streaming sticks, which now offer 4K resolution, the latest HDR standards and improved performance.

Both the Roku and Amazon devices look more or less the same, similar to USB sticks except with an HDMI connector. They plug into a spare HDMI port on the back of your TV set, receive power from a wall socket or a powered USB port on your TV, then deliver TV and film streams from every service you can think of.

If you're already familiar with Roku or Amazon's streaming devices, you won't see much of a change, because the upgrades on both devices are incremental improvements to the performance and the supported video standards, rather

than revolutionary changes to the interface.

Picture quality

The biggest difference from previous versions is support for both Dolby Vision and HDR10+, which both sticks now have. If you already own a 4K TV that supports one or both of these formats, and you subscribe to a streaming service that also supports it (Dolby Vision is available on Netflix and Disney+, while Amazon Prime Video supports HDR10+) you'll be able to get the best possible quality streams from these sticks.

If you don't have a compatible TV you won't be able to view streams in their full glory. However, it may still be worth buying one of these two devices, because they only cost a few pounds more than the previous generation of sticks and you won't need to upgrade your stick later when you need to buy a new TV.

We watched a range of streams on a 55in LG OLED TV and both devices produced superb quality sound and pictures. On this measurement, there's nothing between the two, so we need to dig further to find the key differences.

Interface

One significant difference between the two devices is the interface you use to control what you watch.

Roku's interface has hardly changed in recent years. It's a simple app-based system, arranged in columns of apps, similar to a smartphone's home screen. Once you've set up the device by downloading the apps for the services you want to use, such as Netflix and BBC iPlayer, you use the directional pad on the remote control to highlight the icon of the service you want and select it. At which point you leave the Roku interface and you're directed to the

Netflix, iPlayer or whichever service you've chosen. The right-hand side of the screen is occupied by an advert, but this is fairly unobtrusive and doesn't get in the way of selecting the app you're looking for.

The Fire TV Stick's interface is focused on Amazon content, most of which comes from Amazon Prime Video. If you don't have a Prime subscription, this will annoy you, because the various menus keep pushing content from the service to front and centre.

The Fire Stick's interface has three main tabs. Home has recommended apps and content; Find is where you search for content; while the Live tab hosts other streaming services, such as iPlayer, All 4 and ITV Hub.

In the Home screen, you'll see ad banners at the top of the screen, while promotions for sponsored content show up every four to eight rows in the home screen. In fact, there are significantly more intrusive ads here than on the Roku interface.

On the other hand, Amazon offers more than twice as many apps – around 10,000 compared with Roku's 4,500. However, quantity of apps doesn't guarantee quality and you'll tend to only use a handful anyway – mostly those belonging to the main streaming services.

And both devices accommodate every app you're likely to need, with all the main streaming services and terrestrial broadcasters represented. It's also worth noting that both sticks can be linked to voice assistants, but Amazon's only works with Alexa, while you can also control the Roku with Google Assistant.

If you have a router that's compatible with **Wi-Fi 6**, only the Fire TV Stick will connect to your fastest network. The Roku uses Wi-Fi 5, though Roku claims that its range has doubled compared with the previous model, thanks to a more powerful antenna. This may help if you're trying to stream to a TV that's some distance from your router, but if you have a Wi-Fi 6-compatible network (or think you might get one during the lifetime of

“The Fire TV Stick works with Wi-Fi 6, but Roku has fewer ads”

the device), the Amazon Fire Stick is more future-proof.

Performance

Both devices have new processors that run faster than their predecessors. The main benefit of these improved chips is that they slice a few seconds off the time it takes to load apps after you select them. In both devices, this improvement is around 30–40 per cent.

If your current streaming stick is taking a while to load Netflix or Disney+, then you'll certainly see an improvement. However, there isn't much difference in performance between the two devices once an app has loaded. How long it takes to launch a particular stream is likely to be affected more by the speed of your network than anything else.

Price

With only a fiver between them, both devices cost pretty much the same. If you're reading this before the last week of November it's worth checking prices around Black Friday (26 November), because Amazon often heavily discounts its own products, and Roku may well follow suit. See page 50 for more Black Friday deals.

Roku or Fire Stick?

With little to choose between them when it comes to performance, your decision may come down to your personal preferences or current setup. Anyone who's tied into Amazon's existing system, with a Prime subscription and Alexa smart speakers, will enjoy the deep integration of the 4K Max.

However, the Roku is our pick of the two, with a more open service that you can configure with the apps you want, and fewer adverts to distract you from the films and TV shows you love.

ROKU STICK

VERDICT The best all-round option for anyone looking to get the best quality TV streams with the fewest ads and distractions

★★★★★

AMAZON FIRE TV STICK

VERDICT The ideal TV streamer for anyone heavily invested in Amazon's services, but the adverts are a bit much for the rest of us

★★★★★

CHOOSE THE RIGHT SPECS

Fast Charging



What is it?

A technology that allows some mobile phones to charge faster than others. For example, the OnePlus 9 and 9 Pro offer OnePlus's own Warp Charge 65 technology (charger and cable pictured). OnePlus claims that a 15-minute charge can deliver enough battery power to run its phones all day.



How does it work?

How quickly a phone charges depends on the capacity of its battery (a larger-capacity battery takes longer to charge), and the limits that the phone and the charger put on the throughput of power to the battery.

What are the specs?

Look for the charging rate (in Watts) of a phone. If the phone's specification refers to voltage and current, multiply the two to get the power. For example, OnePlus's Warp Charge operates at 65 Watts, which is what you get when you multiply 10 volts by 6.5 amps. By comparison, the latest iPhones charge at a maximum of only 20 Watts. Apple states that 30 minutes of charge at this rate will only charge an iPhone 13 by up to 50 per cent.

Can I change it later?

The phone is the biggest limiter in the speed-charge calculation. If you don't have a fast-charging phone, there's no way to force it to charge any faster. However, your power adapter may be slowing the charging of your phone if it doesn't transfer enough power, which you often find with cheaper chargers and **splitters**. Make sure you choose a fast-charging phone in the first place, and buy full-powered chargers.

TABLET | £180 from Nokia www.snipca.com/39824

Nokia T20

Entertainment value

The Nokia T20 is a cheap and cheerful 10.4in tablet, designed for entertainment rather than serious productivity. There are no stylus or keyboard options, but it's perfect for slinging in your bag for watching a film on the go, or keeping the kids entertained in the back of the car.

The price is very competitive, albeit slightly higher than Amazon's Fire HD 10 (£160), though it's worth noting the Nokia has twice the storage space with 64GB. Another key difference between the two is that Amazon's devices are locked into the company's own Android-based Fire operating system, replete with its own app store, while the T20 has a standard Android installation. Android is better suited to smartphones than tablets, and Nokia hasn't added much to make usage any smoother.

One thing it has included, however, is a Kids Space app, so you can sit the tablet in front of a child and let them play suitable games or watch appropriate content. It also has Google's Entertainment Space, which is an easily accessible

catalogue of TV shows, films and games available with a single swipe from the main screen.

One handy component is a 3.5mm headphone jack, because many modern tablets eschew this in favour of Bluetooth connectivity. This will be welcomed by those who prefer wired audio, particularly as it means you can connect headphones and charge the device simultaneously.

There are two versions of the T20, one with Wi-Fi only (£180) and another that can accommodate a 4G SIM card for mobile internet access (£199). Both have 4GB RAM and 64GB storage, and are powered by a Unisoc T610 processor. This is a low-end processor and it returned a predictably modest score in our performance tests and means the T20 isn't particularly speedy to navigate.

Its 10.4-inch screen has a 2K resolution (1200x2000 pixels), which is decent enough for the price, particularly if you're only looking to stream films or TV, play basic games or browse the web. If you want to do more than the basics and are prepared to spend a little extra, it's



worth considering the Samsung Galaxy Tab S6 Lite (£318 from snipca.com/38606) or the basic 10.2in iPad for £319 (www.snipca.com/36178).

VERDICT A handy 10.4in tablet that's great for watching films and TV on the go at a very affordable price, but it's not powerful enough for much more than video and simple games



ALTERNATIVE Samsung Galaxy Tab S6 Lite **£318**

Better for a more all-round experience, particularly if you want a stylus and keyboard



SPECIFICATIONS

Eight-core Unisoc T610 processor • 4GB RAM • 64GB storage • 10.4in 1200x2000-pixel screen • 8-megapixel main rear camera • 5-megapixel front camera • Android 11 • 7.8x248x158mm (HxDxW) • 465g • One-year warranty www.snipca.com/39824

WHAT SHOULD I BUY?

We solve your buying dilemmas

Can you suggest a webcam with variable focus?

Q I looked carefully through your recent group test of webcams (Issue 608, page 24), but I couldn't see one with a variable focus that lets you focus on the user's head rather than see the whole room. Are there any on the market?

Peter Magill

A Most webcams come with auto or fixed focus, and we scoured the internet to try to find a webcam from a big name that offers

variable focus. However, we didn't manage to find one.

There are small USB cameras available, though, and while we haven't tested it yet, the ELP Zoom Webcam 1080P from Amazon for £66 (www.snipca.com/39825) might be worth a look. Both the zoom and focus can be adjusted manually on the camera itself, so you should be able to compose your image exactly how you want it, and ensure the picture is in focus and stays that way.

The one thing missing is a clip for



attaching it to a monitor, though it does come with a standard tripod mount, so you can screw in a small tripod such as a Joby GorillaPod (£20 from www.snipca.com/39826).



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

Finally you can get your PC or Apple Mac to do what you want

**Covers the new
Windows 11**

This unusual book makes using a computer easy and stress-free.

Find out how...

There are lots of books about PCs and Apple Macs. Page after page telling you all sorts of details...

But they don't explain in a simple way how to do it. Well, here are some books that are different – and for a good reason.

Books to help the author's dad

"Computers One Step at a Time and The Internet One Step at a Time started off as notes I wrote to help my Dad learn to use the PC. Believe me, he insisted they were clear and simple, in plain English. Techno-babble doesn't impress Dad!" says Tim Wakeling, author of the books.

"Where it was simpler to show him what to do, I used a picture of the screen, with arrows to show where to click. It takes you step by step through exactly what to do."

Fast forward a decade or so, and the books have been updated umpteen times – and the books about Windows computers and Apple Macs are still helping people today. All bang up to date for the very latest systems.

Vital facts & tricks you'll discover

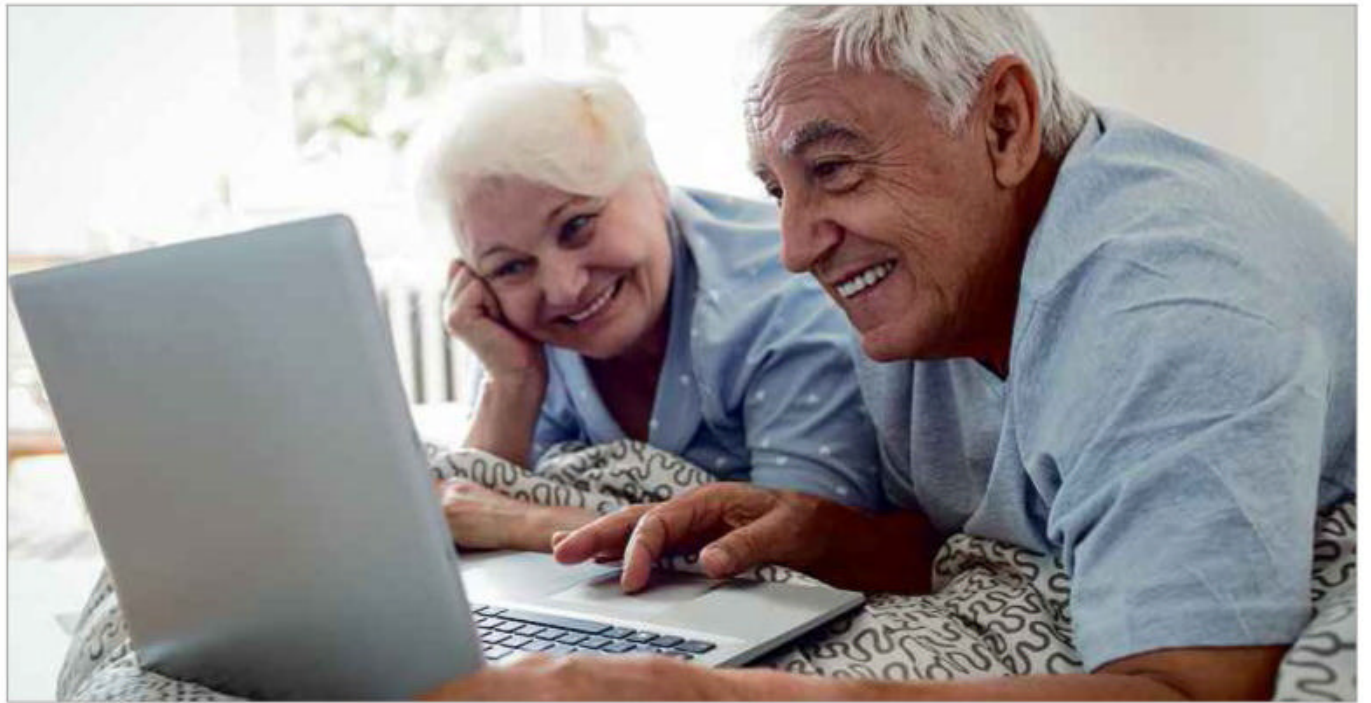
You'll discover everything you need to know in order to finally get the PC or Mac doing what you want.

- Using the keyboard & mouse
- Typing up letters, saving your work (and finding it again afterwards)
- Getting set up on the internet
- Emailing made easy
- Learn all about online shopping
- Find out how to make video calls to your family and friends

...it's all covered, plus all the other essential bits and pieces – some of which you might not even realise you're missing! It covers everything you need to know to master your computer – without the jargon.

Covers the brand new Windows 11

The new Windows 11 is hot off the press this autumn – and it looks very different from earlier versions. So it can be confusing if you've used an earlier one. But the latest edition of the books clearly explains



With these books there's nothing to fear about using PCs or Apple Macs – from emailing to online shopping to video-calling your family and friends.

Windows 11 from scratch. And we have versions for Windows 10 and 8/8.1 too.

Apple Macs work a bit differently from Windows PCs. So whether you're starting completely from scratch with a Mac or switching to a Mac from Windows, these books will show you all you need to know.

Plain English – without all the gobbledegook

"Thanks for saving my sanity"...

Here's what a few of the other people who've used the books have to say:

"The books are very helpful and simple to follow. They held my concentration unlike other books on computers" - Dennis Boot

"One hour and I had learnt more than 3 months hard struggle had taught me." - Jean Hayden

"Fantastic publications, and in English too. Absolutely delighted. Was on the point of giving up after wondering why Mac would make a computer but not print a manual to go with it... Thanks for saving my sanity." - W Soper (More quotes in the free info.)

Free gift? Find out more

I don't have room here to explain all about the books. So please send off the coupon for full info about them. What's more...If you reply now, I'll also include a **free gift** for you: a copy of "What You Should Know About Your Keyboard". It's a 24-page booklet that explains the things you should be told about computer and laptop keyboards – whether it's a PC or an Apple Mac. The booklet's yours to keep whether you order the books or not.

Act now: learn PCs like Tim's Dad

Reply now, while you think of it. The books aren't available in the shops or on Amazon – they're only available direct from the publisher (us).

Just ring 01229 777606...

(lines open weekdays 8am-6pm, Sat 9am-3.30pm). Or you can post the coupon to: **The Helpful Book Co, 13B Devonshire Rd Estate, Millom, Cumbria LA18 4JS.** Or email your name and address to us at PC1121@helpfulbooks.co.uk and ask for the computers info pack. We won't pass your details on to anyone else & we'll send your infopack & free booklet straight away.

Simply tear out this coupon and send it to the address below for full info on the PC and Mac books

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Or post to: The Helpful Book Company, 13B Devonshire Road Estate, Millom, Cumbria LA18 4JS.

We use the details you give us to send you information on the products mentioned. We store the details securely and only share them with the Royal Mail for posting the information.

Full privacy notice at www.helpfulbooks.co.uk/privacynotice

Reviews

USB STICK | £135 from Insight www.snipca.com/39808

Kingston DataTraveler Max USB 3.2 Gen 2 Flash Drive 1TB

Small outside, big inside

There was a time when USB sticks were only used for limited tasks, such as transferring files from one PC to another. If you wanted to carry out anything more substantial, such as a full-on backup, you'd need a USB external hard drive with a much larger capacity.

Nowadays, the line between USB sticks and larger storage devices is pretty much non-existent. The Kingston DataTraveler Max holds as much data as your average hard drive, yet it's small enough to slip into the tiniest pocket.

This stick uses a **USB-C** connection, but these ports are increasingly common on

SPECIFICATIONS

USB-C (3.2 Gen 2) • 256GB, 512GB or 1TB capacities
• 9x22x82mm (HxDxW) • 12g • Five-year warranty
www.snipca.com/39808

modern laptops and most recent desktop PCs. It even works with smartphones that use a USB-C charging port. However, to transfer files between old computers without a USB-C port you'll have to buy an adapter, like this one from Syntech for £6 from www.snipca.com/39845.

The drive performed impressively in our tests, with **read speeds** of 8.53Gbps and **write speeds** of 8Gbps. This matches many far larger portable **SSDs**, which usually require a cable to connect.

While it's not the cheapest of 1TB drives, its small size (9x22x82mm) combined with its simplicity of use and decent transfer speeds make it ideal for anyone who wants a capable, fast external storage option.



VERDICT A pocket-sized and super-fast 1TB USB-C stick, perfect for sharing files and backups

★★★★★

ALTERNATIVE WGii

1000GB USB Stick £18

A much cheaper 1TB USB stick that comes with clip-on tips for using with USB-C and **MicroUSB** ports



ITEM TRACKER | £30 from Amazon www.snipca.com/39813

Tile Pro

Lost and found

Tile has redesigned all its trackers, which you can attach to precious items to make them easier to track down should you misplace them. Our pick of the bunch is the Tile Pro, which has a new, slimmer design. It's also the only one with a replaceable battery, which should last for a year. Tile's other trackers – the Mate, the Slim and the Sticker – have also been updated, but these use non-replaceable batteries, so when they run (typically after about three years) you have to replace the device.

Tile devices use various methods to

SPECIFICATIONS

120m Bluetooth range • One-year replaceable battery
• IP67 dust- and water-resistant • Android and iOS compatible • One-year battery life • 7.5x32x58mm (HxWxD) • One-year warranty www.snipca.com/39813

help you locate your items. If an item is within 400 feet (120 metres) you can use the Tile app on your phone to find via Bluetooth. You can even make the Tile ring, which was audible throughout our home when we tried it.

If the tracker isn't within Bluetooth range, you can use Tile's Find Far Away tool, which marks your Tile's last known location on a map. Other Tile users can update this location using the Notify When Found option.

If all else fails, Tile devices now have a **QR code** stamped on the back. Should someone find the lost tracker (whether they're in the Tile network or not) they can scan the code to receive contact information you have provided to Tile.

The system requires other Tile users to pass by your lost item, so you have a

better chance if you lose your keys in a crowded area. The Tile network claims an overall success rate of over 90 per cent in returning missing items.

VERDICT The Tile Pro will increase your chances of finding your lost items and is the only Tile model that uses replaceable batteries

★★★★★

ALTERNATIVE Apple AirTag 4 £29

Apple's alternative can be found by any of the 1 billion iPhone users worldwide, 25 times larger than Tile's network



PHONE | £429 from ZTE www.snipca.com/39895

ZTE Axon 30

Hidden camera action

ZTE was the first smartphone manufacturer to hide its selfie camera under the screen. While most phone makers insert a hole or notch to let the camera peer out, ZTE's Axon 20 model and now the Axon 30 can take photos through the screen, without taking any space from the main display.

“An impressive screen, but the hidden camera isn't great”

As a result, the Axon 30's large screen is the star of the show. It's 6.92in across the diagonal, with a resolution of 2460x1080 pixels and an **aspect ratio** of 21:9. It uses **AMOLED** technology for perfect contrast and a **refresh rate** that can be turned up to 120Hz for an impressively fluid picture. It also goes bright enough to be readable in daylight, and overall it's the perfect phone for watching video and playing games.

We tested the £429 version with 8GB of **RAM** and 128GB storage (you can get 12GB of RAM and 256GB storage for £512). It comes with a Snapdragon 870 5G processor, which ensured it performed smoothly during our tests. Even the most demanding Android games ran without glitches, while productivity and processor-heavy apps are handled speedily and without problems.

The phone uses a **USB-C** port to charge and has a dual **SIM** slot (allowing two incoming phone lines). Alternatively, one can accommodate a **microSD card** if you're using a single SIM. There is no 3.5mm headphone jack, however.

Android has been replaced by ZTE's

SPECIFICATIONS

Eight-core Qualcomm Snapdragon 870 5G • 6GB or 8GB RAM • 128GB or 256GB storage • 6.92in 2460x1080-pixels 120Hz AMOLED screen • 64-megapixel main rear camera • 8-megapixel ultrawide camera • 5-megapixel macro camera • 16-megapixel front camera • MyOS 11 based on Android 11 • 7.8x170x78mm (HxDxW) • 189g • One-year warranty www.snipca.com/39895



own operating system – MyOS 11, though this is similar to Android 11, with barely any additional apps or bloatware.

The biggest problem with the phone is the quality of images taken with the hidden camera, which were blurred around the edges. If you're keen on selfies, this might be a deal breaker, but it's the price you pay for losing the cut-out lens hole in the screen. The main camera on the back, however, takes good quality photos, much more in line with expectations for a phone at this price.

If you want an uninterrupted full-screen experience, this phone is easily the most affordable way to get it, but it sacrifices quality in the photos taken using the front camera. If you don't mind having a hole in your screen, though, the Xiaomi Poco F3 (www.snipca.com/38395) offers similar specs and performance for less than £300.

VERDICT A solid phone with a perfect uninterrupted screen, but its hidden selfie camera doesn't take great pictures

★★★★★

ALTERNATIVE

Xiaomi Poco F3
£299 A similar phone with similar specifications and lower price, but without the hidden selfie camera



DO I REALLY NEED...

An 8K monitor

What is it?

As 4K monitors with a resolution of 3840x2160 pixels become more common, manufacturers are starting to look at the next step up. Dell has now launched an 8K monitor (7680x4320 pixels) on a screen that measures 31.5in across the diagonal.

What can you do with it?

High-resolution monitors are typically aimed at professional artists and video makers. If you're editing a 4K video, it makes life easier if you can preview it at full resolution, and still have space on your screen for the icons and toolbars that your video-editing software needs.

What's the catch?

The few that are available are very expensive. Dell's UltraSharp 32 PremierColor UltraHD 8K Monitor, for example, costs £3,478 (www.snipca.com/39920, pictured).



So can I do without it?

Yes. There aren't many ways you can make full use of such a high resolution with a home PC. If you do need more screen space, you could just buy a more affordable second monitor.

NEXT ISSUE

On Sale Weds 1 Dec

Huawei Matebook 14s

An ultra-fast laptop at a reasonable price



Amazon Kindle Paperwhite

Now with a larger 6.8in screen that's easier on the eyes

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

LAPTOP

Lenovo Yoga Slim 7 (256GB)
£599 from www.snipca.com/39635
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 £1,149 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 Create Zen** Fast Ryzen 5 CPU plus adequate GPU makes a superb work PC. £1,720 from www.snipca.com/35840

APPLE IPAD

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

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



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

ALTERNATIVE **Samsung Galaxy Tab S6 Lite** Slower than the Lenovo Tab P11 Pro, but the 64GB storage and decent 10.2in screen make it good value. £309 from www.snipca.com/38606

APPLE IPHONE

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
£289 from www.snipca.com/38395
Tested Issue 608



This Chinese-made phone is phenomenal 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 **OnePlus Nord 2 5G** Another Chinese phone, it's faster than most rivals at similar prices, has an excellent screen and a great camera. £399 from www.snipca.com/39146



£499.99

Impulse

AMD IMPULSE (RYZ7)

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

ASUS PRIME B450M-A

CORSAIR 8GB DDR4 3000Mhz

INTEL 512GB M.2 nVME 660P

AMD RX 560 2GB

GAMEMAX Expedition

MICROSOFT Windows 10 or 10 Pro



£599.99

mercury

INTEL i5 MERCURY (COF9)

INTEL Core i5 9600K (O.C 5Ghz)

ASUS PRIME Z390-P

CORSAIR 16GB DDR4 3000Mhz

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INTEL UHD 630 Integrated Graphics

KOLINK Stronghold

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Buy It

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

EBOOK READER

Amazon Kindle (2019)
£70 from www.snipca.com/31621
Tested Issue 555



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

ALTERNATIVE Kobo Clara HD

Not waterproof, but has more lighting options to avoid blue light. £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
£79 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

NEW ENTRY

Iiyama ProLite XU2492HSU-B1
£156 from www.snipca.com/39701
Tested Issue 618



This 23.8in screen is superb value, with a resolution of 1920x1080 pixels. Colour is good, covering 88 per cent of the sRGB colour range. Connect your computer via HDMI, DisplayPort or VGA, and there's a USB hub to connect your mouse and keyboard.

ALTERNATIVE AOC 27P2C

This also has a 1920x1080 resolution but it's 27 inches, so pixel density is lower. But you'll only notice if you look really closely. £250 from www.snipca.com/39700

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. £168 from www.snipca.com/37675

PRINTER

Canon Pixma TS8350
£140 from www.snipca.com/39641
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 1 of 4 Corel Painter 2022

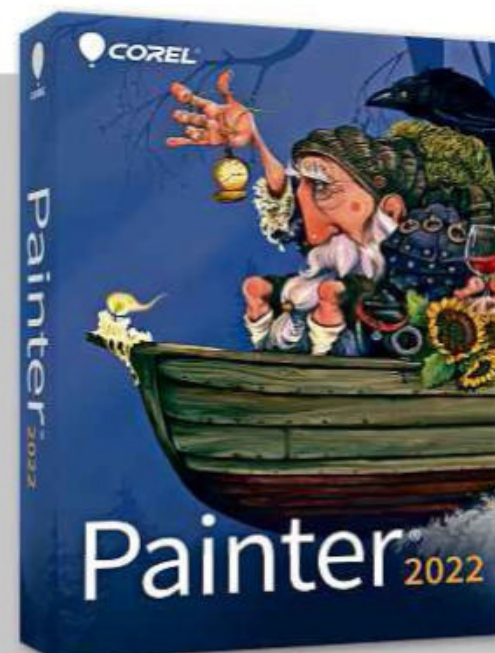
The 2022 version of Corel Painter, designed for Windows and Mac, adds enhancements that accelerate workflows, boost brush performance, and improve layer productivity.

The popular brushes are now more versatile than ever. You can change the shape and edge effects, as well as rotate and squeeze them.



You can also create your own dabs, and organise, import and export libraries from the 'Captured dab' panel. The new watercolour brushes make it simple to paint with dry media types, creating mixed-media styles.

The new Brush Size Selector makes it easier to choose a brush. You can add, reorder, delete and adjust the size preview to streamline your workflow – all within the Size Library. You can also run the improved Brush Accelerator so Painter 2022 takes full advantage of your computer's hardware for the best possible painting experience. Some brushes can be up to 50 times faster, while several popular brush engines can be twice as fast.



To enter this competition, answer the question at www.snipca.com/38742 and enter your details. It runs until midnight Tuesday 30 November. Good luck!

You can buy **Corel Painter 2022** for £359.99 from www.painterartist.com. If you have the 2021 version, you can upgrade for £179.99. For tutorials on how to use Painter 2022 visit www.snipca.com/39791.

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
£72 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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Workshops & Tips

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

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PLUS

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47 Make Office Better

48 In The Club: Create and share notes

HOW TO...

Reinstall Windows using your Android phone

by Nik Rawlinson

What you need: Android phone; Ventoy app; OTG cable; USB stick or external hard drive **Time required:** One hour

We've always recommended preparing a USB-based emergency toolkit, from which you can boot and reinstall Windows if your PC suffers a serious corruption. This isn't an alternative to maintaining regular backups, but a supplement: reinstalling the operating system usually means you'll lose everything on the drive your PC boots from. So, if you store important files there, they'll disappear unless you have duplicates.

The trouble is, without anticipating a system collapse and getting your toolkit

ready, a breakdown of this kind will plunge you into a Catch-22 situation: you won't be able to use your PC to compile the tools required to fix it.

But all is not lost if you have an Android phone or tablet. Here, we'll show you how you can use it to make a **bootable** USB stick and copy across the Windows 10/11 installation files. You can then use that to boot your PC and may be able to reinstall the operating system, depending on the state of your hard drive.

We'll be using software called Ventoy (www.ventoy.net), which lets you install

multiple operating systems on the same stick (it supports around 750, including hundreds of Linux systems). So, if you're confident working with anything other than Windows, there's no reason why you can't install a version of Linux on your stick, either instead of the Windows installation media, or alongside it. Doing so will let you start your PC in Linux without touching the hard drive. All your data will be left intact and, assuming the drive isn't encrypted or corrupted beyond repair, you may be able to recover some files this way.

1

Check whether your phone supports USB OTG

This process relies on your phone or tablet supporting USB OTG. OTG stands for On The Go, which is shorthand for its ability to interact with USB devices directly. OTG-compatibility is very useful, because it means you can connect a camera or hard drive directly, for example, and use them without relying on your PC. Not every phone has this ability, so your first task is to check that yours is compatible. Download 'USB OTG Checker' from the Google Play Store (www.snipca.com/39835) and, if it confirms your phone has the necessary



Use 'USB OTG Checker' to find out if your device supports USB OTG

components (as ours does in the screenshot above), you can continue.

You may also need to buy a cable or

adapter, depending on which ports are supported by your phone and the stick you want to use. Start by checking the USB socket on your phone, which will probably be a **USB-C** or **microUSB** port. You can buy sticks that have matching plugs, but most will be full-size USB. If yours falls into the latter category, you'll need to buy an OTG cable that has a full-size 'female' USB socket that you can connect the stick to, and a smaller 'male' plug to connect to your phone. You can pick up an OTG cable with microUSB (for example, www.snipca.com/39836) or USB-C (such as www.snipca.com/39837) for around £6 apiece.



We connected an OTG cable containing a USB stick to the USB-C socket on our phone

The picture above shows our OTG cable connecting a USB stick with a full-size USB plug to the USB-C socket on our Google Pixel 5 phone.

If you're tempted to skip the cable and just buy a USB stick with a plug that matches the port on your phone, bear in mind that you'll also need to be able to plug it into your PC. There's no point buying a USB-C stick for your phone if you don't have USB-C port on your PC, as you'll just be moving the problem from one device to another: you'll need an adapter for the computer instead.

2

Download the Windows 10 installation file

We'll show you how to set up your phone to recover a Windows 10 PC (the principle is the same for Windows 11). If we were showing you how to create a bootable stick using a regular computer, we'd direct you to the Windows 10 media-creation tool (www.snipca.com/39828). However, if you're reading this because that's not an option, instead open your phone's browser and go to www.snipca.com/39829 to download the installer directly.

Tap the 'Select edition' menu and make sure the most recent version of Windows 10 is chosen (version 21H1, the May 2021 Update). Tap 'Confirm', select the language you need from the same menu, then tap Confirm again. You'll now be prompted to download the 32bit or 64bit version of Windows. Tap '64-bit download' and make sure you're doing so over Wi-Fi (downloading over a phone network would take a lot longer, and eat into a large amount of your data – or even exceed data on some low-cost contracts).

3

Set up your USB stick

The download took around 20 minutes to complete on our phone (a Google Pixel 5) on a 35Mbps connection. While you're waiting for it to finish, you can start setting up your external drive.

How I use Ventoy

Ventoy greatly simplifies the process of booting into different operating systems. Installing it on a large USB stick and adding a selection of 'live' operating systems, which can run from the drive itself as efficiently as they would from a computer's hard

drive, means I can carry my preferred

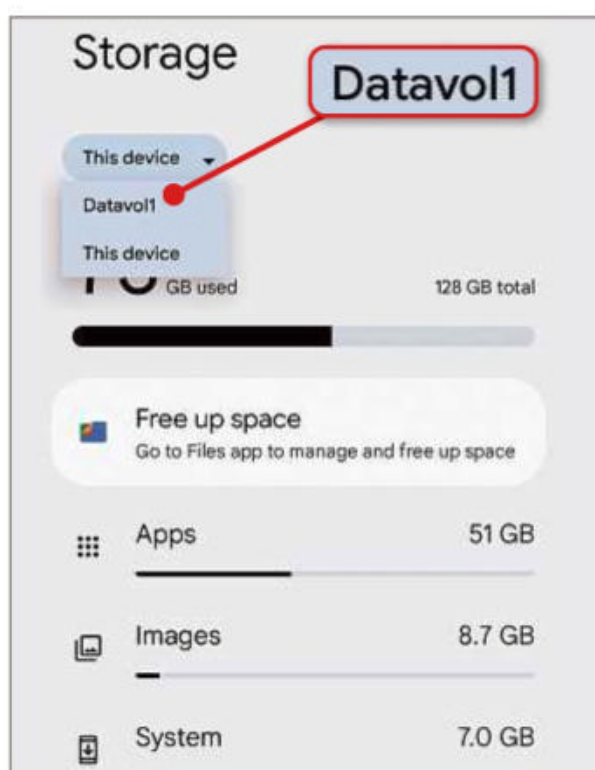


workspace around with me if I need to do a job on somebody else's computer. While it's easy to set up using your phone, as we've shown here, I prefer to work with it using the version for regular PCs, available at www.ventoy.net.

Nik Rawlinson



How do you boot into different operating systems? Please let us know: letters@computeractive.co.uk



In Android's Storage settings, tap the 'factory' name of your USB stick to switch to it...

The slight complication is that Windows' preferred drive format is NTFS, while Android phones use FAT32, ext3 or ext4 formats. Although you can format your stick using one of Android's preferred formats on a computer, the ability to do so isn't built into Windows – at least not through the graphical interface. In all likelihood, therefore, your phone won't currently be able to read your stick. Thankfully, this is easily fixed.

Connect your drive to your OTG adapter, then connect the adapter to your phone. Assuming your phone is compatible with OTG devices, it should detect it and connect it to the phone's internal file system.

Open 'Settings' then tap Storage, followed by the dropdown menu at the top of the list. There should be two options here: 'This device', which is the internal storage of your phone, and a second option, which is your USB

How will you use this USB drive?

Format this USB drive?

This USB drive needs to be formatted to store apps, files and media.

Formatting will erase existing content on the USB drive. To avoid losing content, back it up to another USB drive or device.

Cancel Format USB drive

... then tap Set-up followed by 'Format USB drive', but bear in mind it will wipe your data

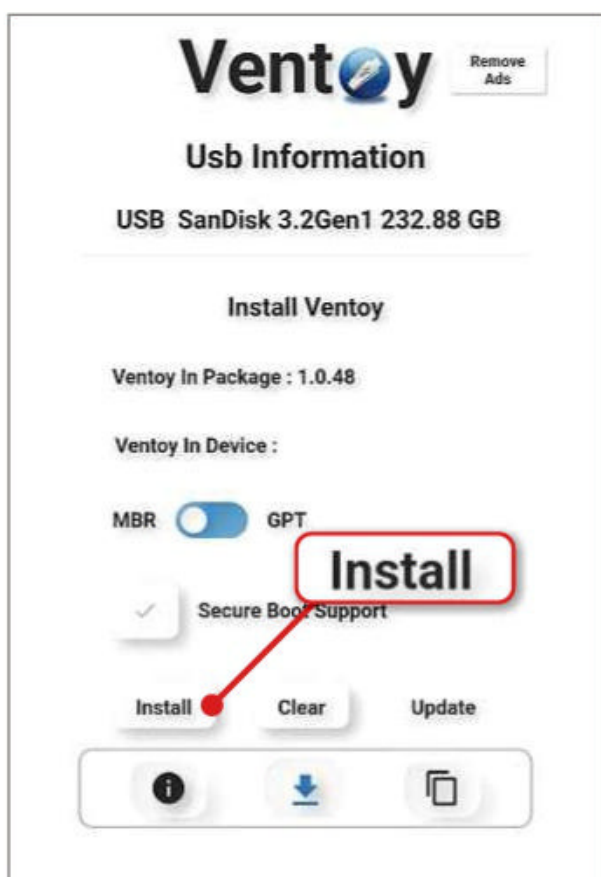
stick. This will have the name it was given when set up on your computer or when it was manufactured. In our case, it's Datavol1, as you can see from the screenshot above left. Tap the stick's name to switch to it.

At this point, Android warns you that your drive is corrupted. Tap 'Set-up', followed by 'Format USB drive' (see screenshot above). As with any formatting option, on any device, proceeding beyond this point will wipe the data on your hard drive and it may be difficult or impossible to recover, so only proceed if you have a copy elsewhere of anything you need to hang on to. Tap 'Done' when it notifies you that 'Your USB drive is ready to use'.

4

Switch to Ventoy

Install Ventoy from the Google Play Store (www.snipca.com/39842), and launch it. It will ask for permission to access your attached drive.



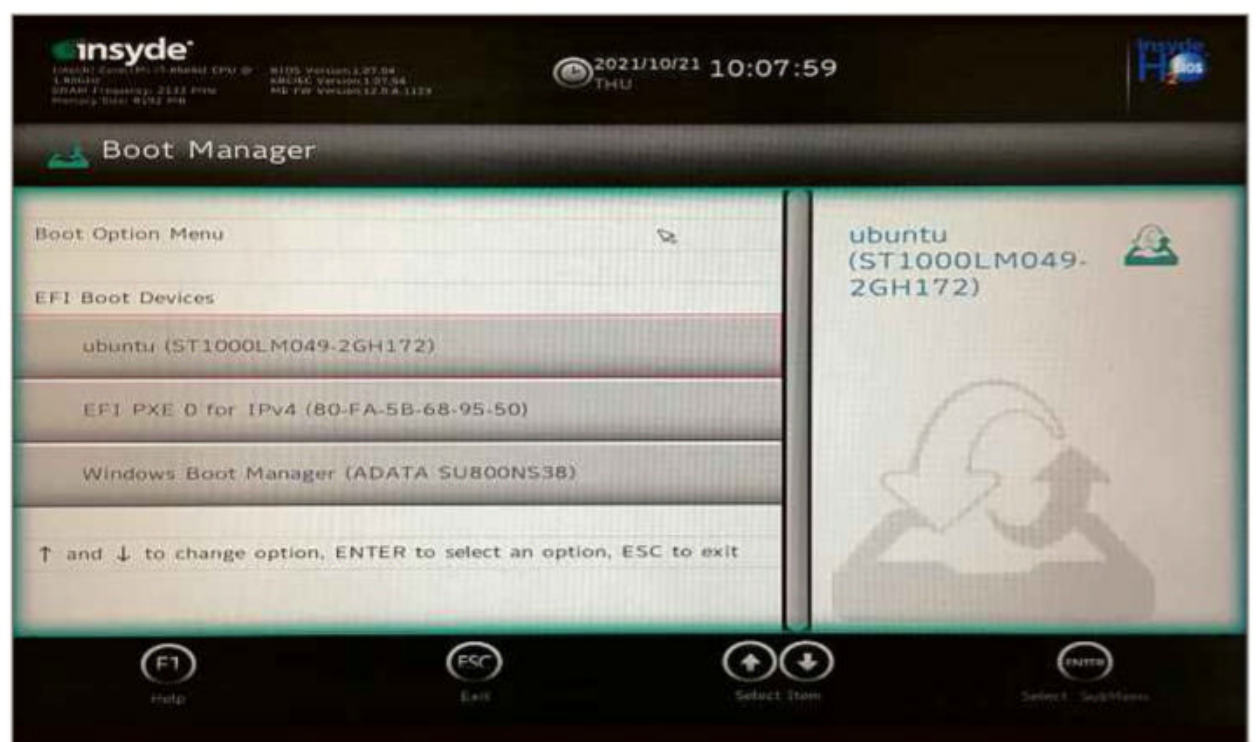
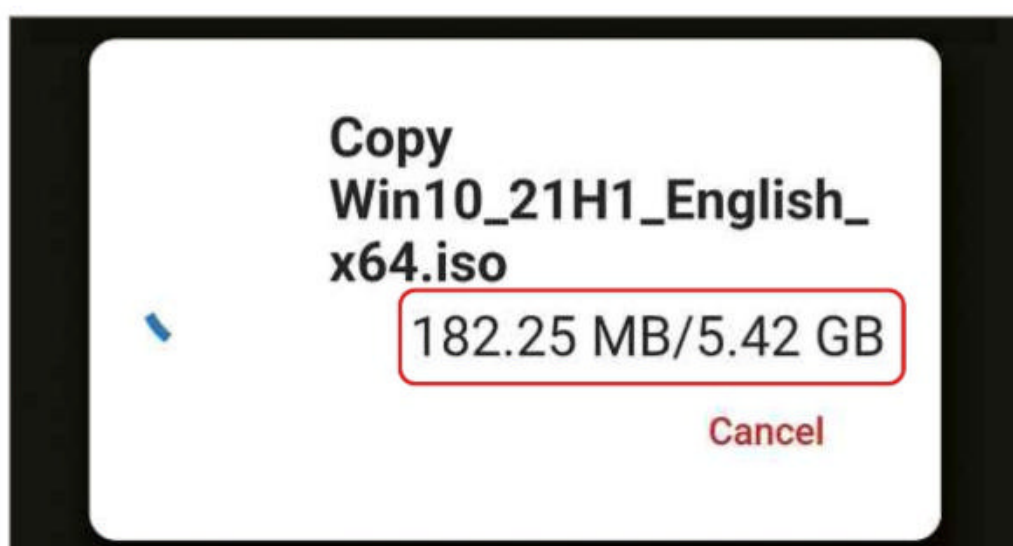
Tap the Install button on the Ventoy home screen

Tap OK to permit this, then tap the Install button on the Ventoy home screen (see screenshot above). This copies across the core Ventoy files, which make your stick behave like a bootable stick when connected to your PC. These also let you choose between the different operating systems you add to the drive in the next step.

The time it takes to install Ventoy (and to copy your operating system) will depend on the speed of your flash storage, your phone's port, and the cable between the two. In our tests, we experienced significant differences when installing on a 256GB SanDisk USB stick and a 500GB Kingston SSD, with the latter being significantly faster.

Both of these are overkill for this kind of job: an 8GB stick should be sufficient if you want to copy across only a single operating system, so you may be able to recycle an old stick you no longer use.

Ventoy copies your Windows system file to your USB stick and shows its progress



Access your BIOS or UEFI, look for a boot sequence, boot order, or similar option

When Ventoy has finished installing its core files on your stick, tap the two overlapping rectangles on the right of the Ventoy toolbar, followed by '+'. On the next screen, which shows the folders in your phone's internal storage, open Downloads, then tap the Windows file you downloaded through the browser.

Ventoy will immediately start copying this file to your stick, and display its progress throughout, as you can see in our screenshot below. As soon as it's finished, quit Ventoy, then disconnect the USB stick.

5 Boot from your USB stick

Make sure your computer is turned off. Connect the USB stick and start it up, then watch the screen for any message about the key you need to press to access the BIOS or UEFI. This is the code built into the machine itself, which tells it how to access external drives and other components before Windows gets up and running. If it isn't displayed, check any documentation that came

with your PC, or support forums. Many manufacturers use F10, but some also use F1, F2 or F12.

When you access the BIOS or UEFI, look for a boot sequence, boot order, or similar option, as in the screenshot above. This is used to specify which drive the computer should try booting from first, and it's usually set to go straight to the internal hard drive. You want to pre-empt this, so change the setting to use external USB first, and the internal drive second. With this done, save your settings and exit, and your computer will reboot.

This time, rather than trying to start from your damaged hard drive, your PC will boot from the attached USB stick and, in doing so, launch Ventoy. Ventoy will display a list of all the operating systems copied to the drive (which will be Windows only at this stage, unless you downloaded a version of Linux). Highlight the one you want to launch, then press Enter.

When the Windows installer starts, work your way through the prompts that appear, selecting languages and locations as appropriate. As long as your internal drive isn't physically damaged, it should be able to wipe it and reinstall the operating system. When it completes, remove the external drive and let the system reboot into Windows. Make running Windows Update one of your first tasks.

It's worth keeping your bootable stick somewhere safe. Now that you've created a Windows-installation tool, it might come in handy again – although hopefully for someone else, next time.

Workshop1

Make changes to the Windows 11 taskbar

What you need: Windows 11

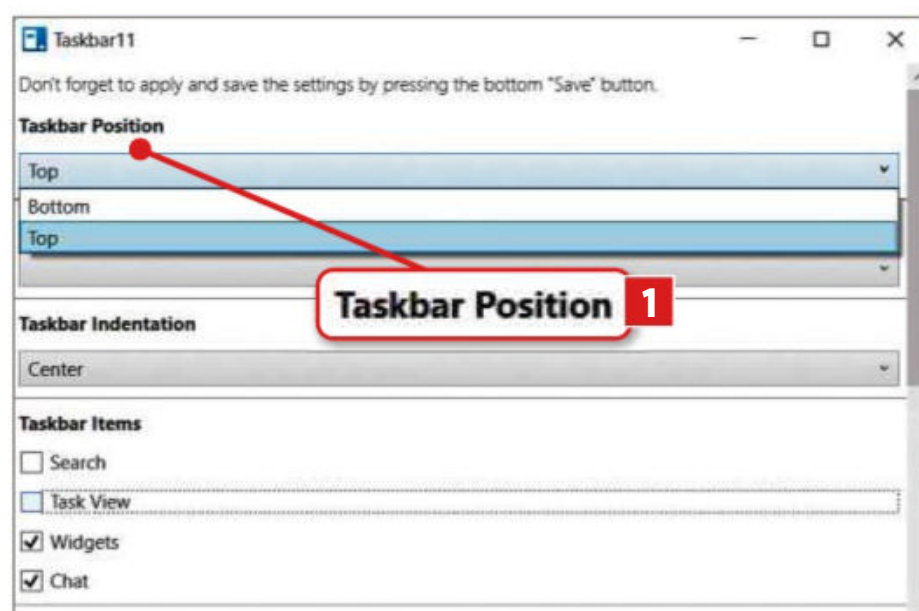
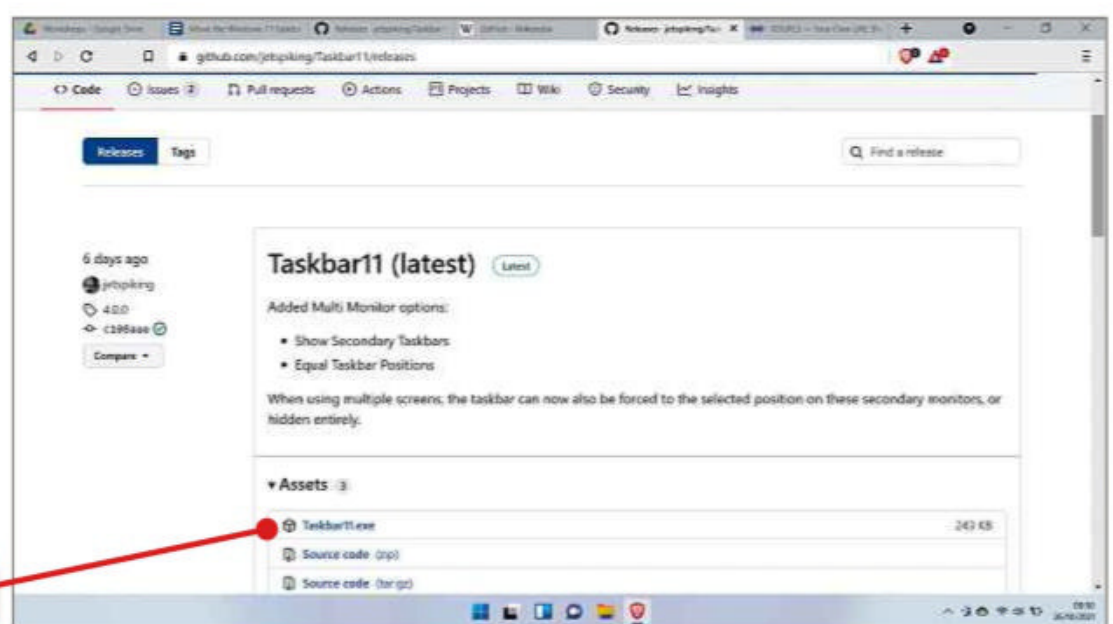
Time required: 20 minutes

The most radical and obvious change in Windows 11 is Microsoft's decision to move the Start menu and essential icons to the centre of the taskbar. You can shift these back to the left-hand side if you prefer, but one handy feature in Windows 10 – the ability to move your taskbar to the top of the screen – has gone. In many

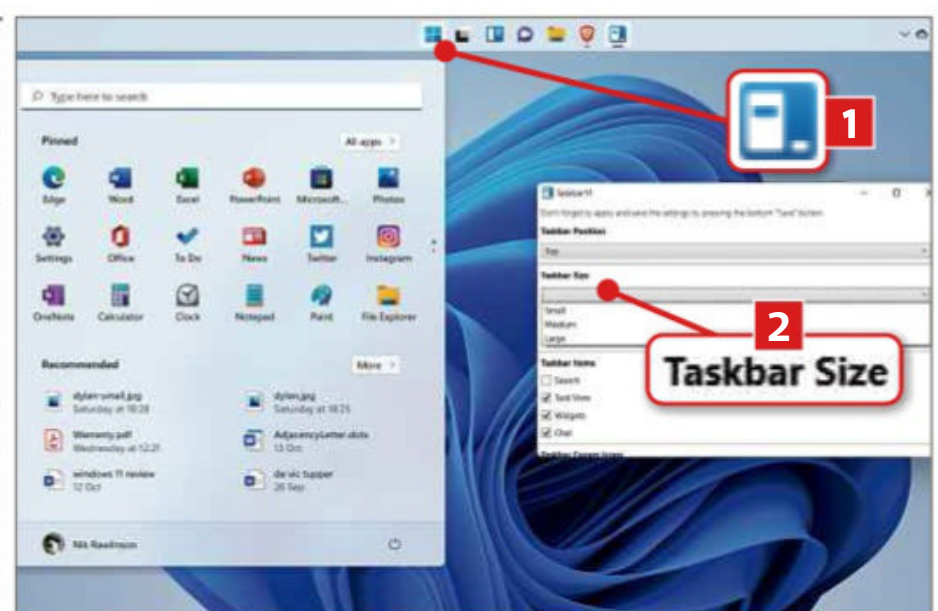
ways, a top-of-screen taskbar makes a lot of sense, because we're all already used to looking to the top of a window to open menus and find options, such as in our browsers. Thankfully, a new **open-source** tool called Taskbar11 restores this ability. We also reveal other taskbar tweaks you can make in Windows 11 Settings and the registry.



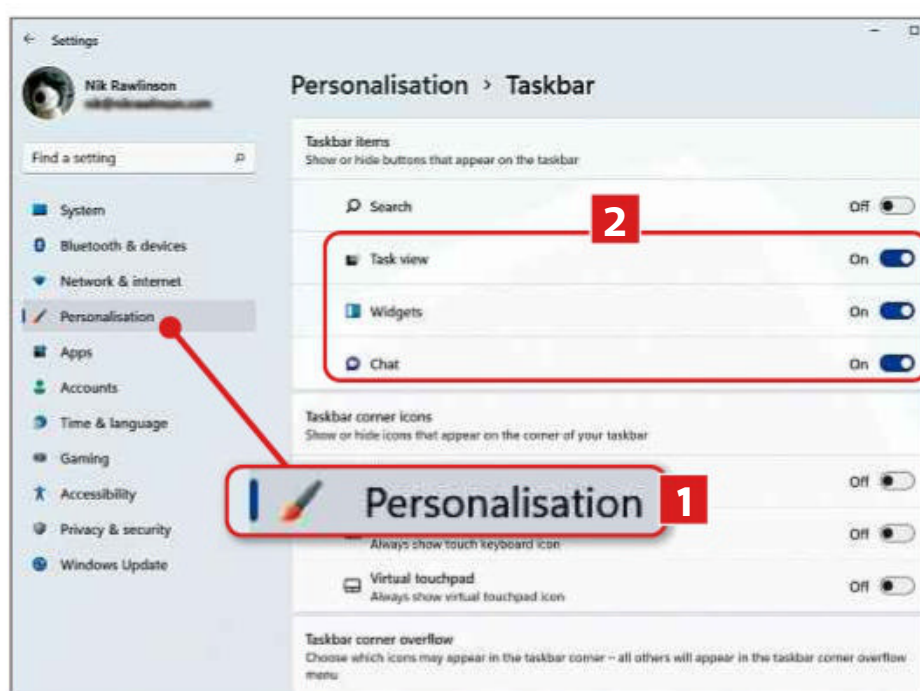
STEP 1 Go to Taskbar11's GitHub page at www.snipca.com/39878, then, in the section headed 'Taskbar11 (latest)', click 'Taskbar11.exe' **1**. When the program has finished downloading, launch it. Windows will pop up a SmartScreen alert warning you that it has prevented an unidentified program from launching and that running it could put your PC at risk. The program is completely safe to use, so click 'More info', followed by 'Run anyway'.



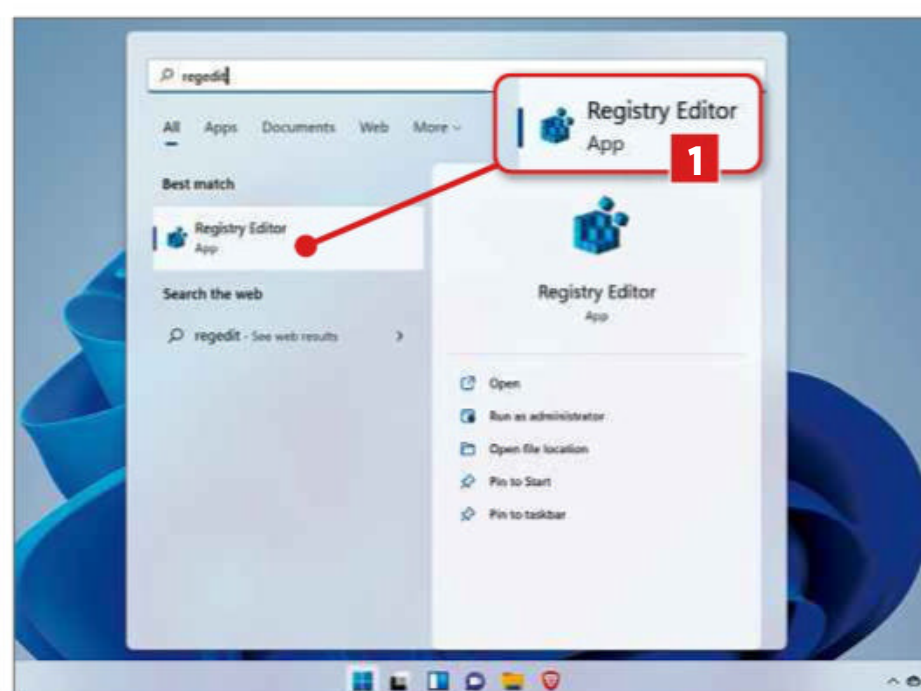
STEP 2 Taskbar11's simple interface is easy to navigate, and has dropdown menus and tick boxes that alter the way the taskbar behaves. To move the Windows 11 taskbar to the top of the screen, select Top in the Taskbar Position menu **1**, then scroll to the bottom of the window and click Save. The taskbar will disappear and, after a few seconds, reappear in its new position.



STEP 3 When you click the taskbar's Windows icon **1**, the menu still opens at the bottom of the screen, though it leaves a space below it where the absent taskbar used to be. However, you'll notice that when you minimise a window it will zoom up to the top of the screen, and your cursor will move closer to the taskbar, making it easier to click whatever you want to use next. Restoring a window by clicking its taskbar icon makes it reopen on your desktop. Another useful option lets you change the depth of your taskbar – click the Taskbar Size menu **2**, then choose from Small, Medium and Large.

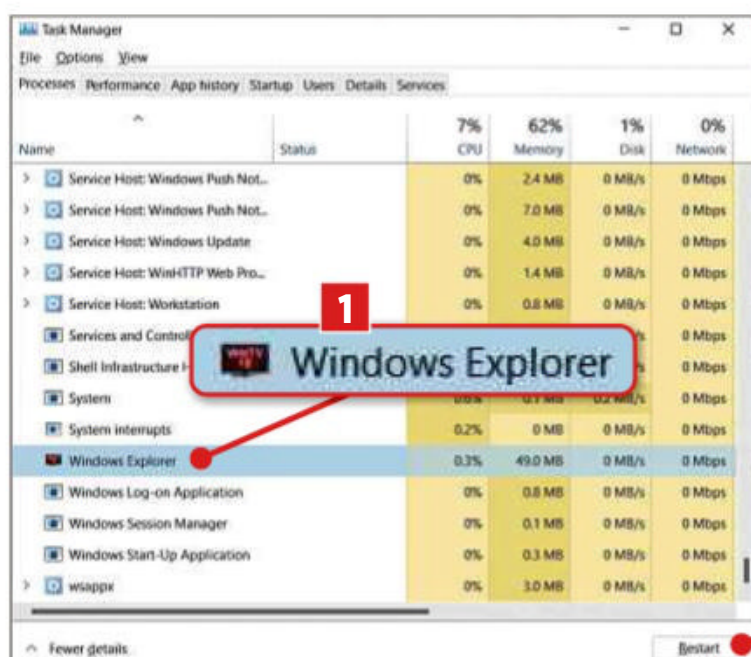
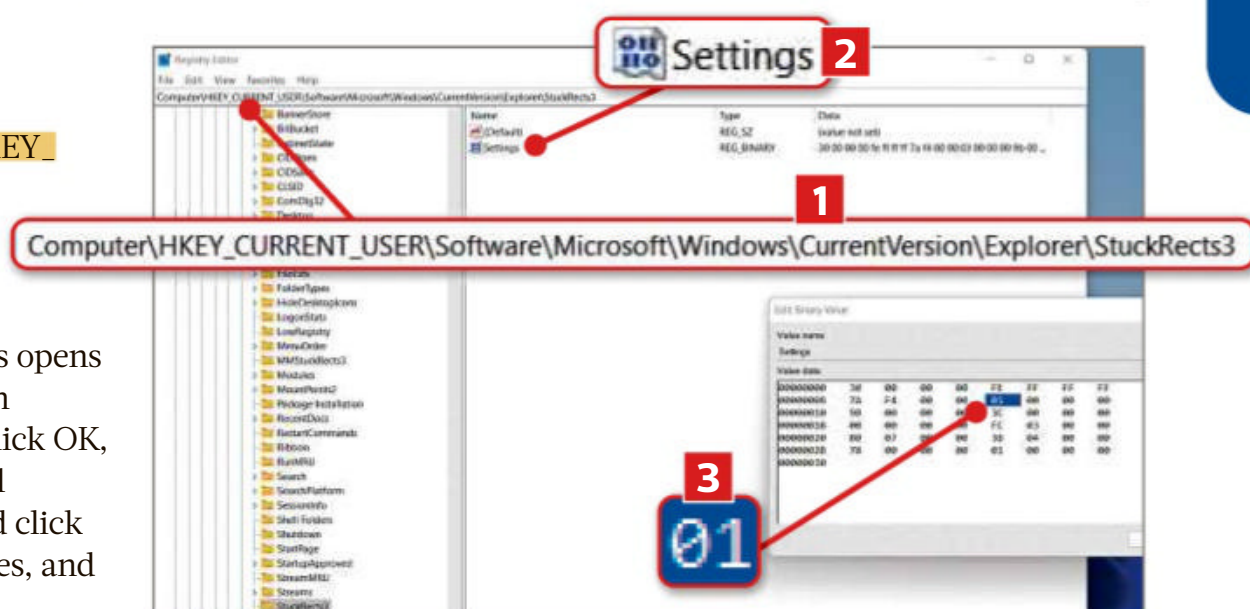


STEP 4 You can make other taskbar tweaks using Windows 11 itself. Press Windows key+I to open Settings, then click Personalisation **1** in the sidebar, and Taskbar in the main section of the window. Here, you can enable and disable common taskbar icons, like the task view, **widg**ets and chat **2**. You can also set the taskbar to automatically hide when it's not being used, and move the Start menu to the left, where it was in all previous versions of Windows. The one function you can't replicate here is Taskbar11's ability to move the taskbar to the top of the screen.



STEP 5 However, you can achieve this by editing the registry. As always before you make changes to the registry, make a complete backup of your PC from which you can reinstall everything should anything go wrong. Once that's done, press the Windows key and type **regedit**, then click Registry Editor **1**. Windows will ask if you want to make changes to your device. Click Yes.

STEP 6 Click in the address box at the top of the Registry Editor window, delete anything it already contains and type **Computer\HKEY_CURRENT_USER\Software\Microsoft\Windows\CurrentVersion\Explorer\StuckRects3** **1** (or copy and paste it from our pastebin account at www.snipca.com/39923). Press Enter and, in the main section of the window, double-click Settings **2**. This opens a small spreadsheet. Double click the 03 in the sixth column on the second row and change it to 01 **3**. Click OK, then close the Registry Editor window. Nothing will appear to have happened, so press Ctrl+Alt+Del and click Task Manager. Scroll down the list of active processes, and click Windows Explorer, followed by Restart.



STEP 7 Your taskbar will disappear and reappear at the top of the screen. If you decide that this new position isn't right for you, you can easily change it back by returning to the Registry Editor and typing (or copying and pasting) the the long file path from Step 6 into the address box. Double-click Settings again, and this time change the 01 on the second row, sixth column, back to 03. Once again, restart Windows Explorer by selecting it in Task Manager **1** then clicking Restart **2**.

Readers' Tips

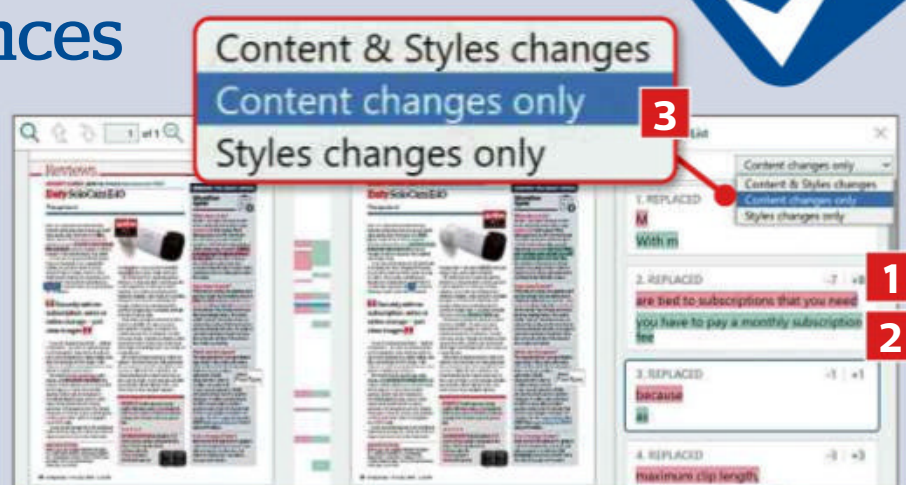
TIP OF THE FORTNIGHT

Compare PDFs to see differences

My part-time job requires me to compare PDFs side by side and spot differences that solicitors have made. It's not the most exciting job in the world, but a site called Draftable (<https://draftable.com/compare>) at least makes it easier.

It's simply a case of dragging the original PDF into the left box, the newer version into the right, then clicking the green Compare button underneath. This brings up both PDFs, with the changes displayed on the right. Original elements are highlighted in a salmon-pink colour (1 in screenshot), with changes in a pale green (2). You can use the dropdown menu at the top right (3) to show only content changes (words); only style changes (design); or both. I do content changes first, then style.

One final point. The free version limits you to 300 pages.



That's normally enough for me, though my company does pay for unlimited pages. It's priced in US dollars, but I'm told it costs about £90 a year.

Maureen Dwyer

Maureen wins a copy of our 2020 Back Issue CD Buy it on Amazon www.snipca.com/38164



WI-FI

Print log-in details for events

✓ I run regular events at our village hall that often require visitors to bring their laptops and go online. An efficient way to allow this is to print Wi-Fi cards showing the network name and password. I do this for free through <https://wificard.io>, which adds a QR code (see screenshot below) that visitors can



scan to sign in. I stick the printouts to card and hand them out to attendees.

Dick Armishaw

WINDOWS

Install several updates via PowerShell

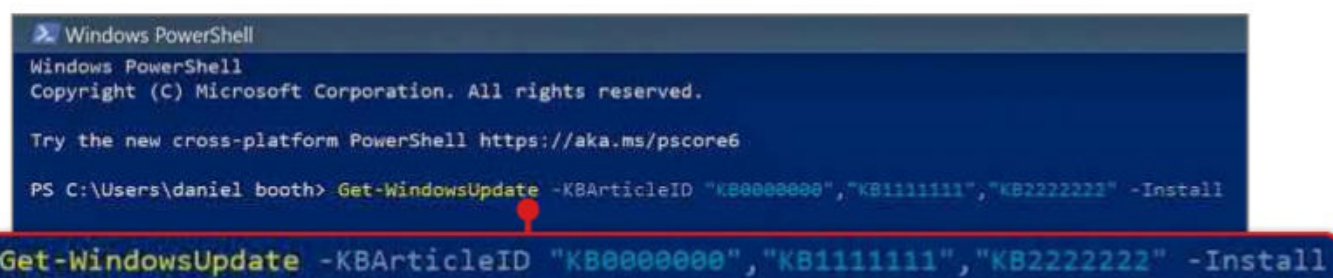
✓ Like Wayne Williams (Issue 618, page 20), I also use PowerShell to control how Windows updates are installed. One tip he didn't mention was how to install several updates at the same

time. It's a similar command (or 'cmdlet') to the one he used – you just need to add more KB numbers separated by commas. So, for example, type this command to install three updates, replacing the dummy numbers with real KB numbers:

```
Get-WindowsUpdate -KBArticleID "KB0000000","KB1111111","KB2222222" -Install
```

It's not easy to type, so cut and paste it from www.snipca.com/39844.

Mary Sheridan



Why I stopped using...

Out of Milk

✓ I like an organised life, but shopping is a chore and creating a list just adds to this. To help, I've used a couple of shopping apps on my iPhone, including 'Out of Milk' (www.snipca.com/39804). But earlier this year it stopped working in the UK.

And what I use instead

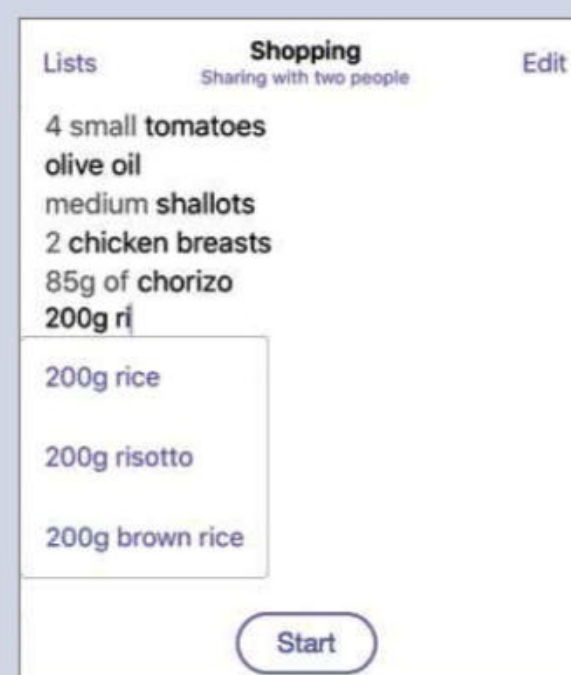
I searched online for a replacement app, and found Shopping UK (<https://shoppingukapp.com>, pictured). That sounded good, meaning it would

focus on UK products (no more Graham's Crackers) and use UK-English (aubergine, not eggplants).

The app is easy to use. After you have compiled your list, tapping the Start button sorts it into categories. It's free, though you do have to put up with adverts. You can pay to remove adverts (49p a month; £4.99 a year). It works on iOS only, so I don't know if any other readers use an Android equivalent.

Stephen Hocking

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



OFFICE

Open and save Excel spreadsheets online

✓ I've recently had some strange errors when opening spreadsheet files, such as no data being shown on the viewable page. More recently, a lifetime's worth of contacts simply refused to open because of the notorious 'Fixed Objects will move' bug. It is locking Excel and the machine, and no source on the internet has a correct solution for this.

Faults like these have been increasing in Office 2019. In every case it's been because the spreadsheet I've opened has been an old .xls file running in some form of **compatibility mode**, not an .xlsx.

I fixed the locked sheet by opening it in LibreOffice, or opening in Excel on the web (www.snipca.com/39843), then saving as an .xlsx file. I'd advise anyone with old .xls spreadsheets to do the same.

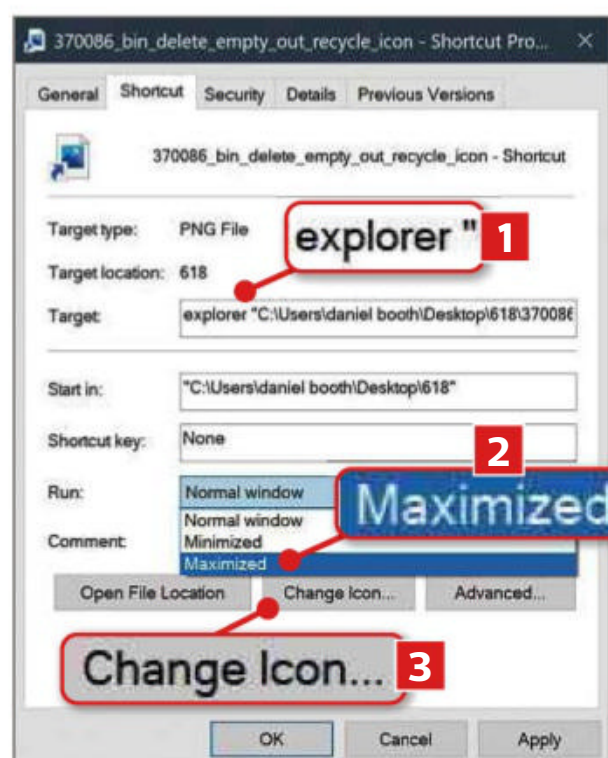
Cliff Grover

WINDOWS 11

Create your own icons to pin to the taskbar

✓ I upgraded to Windows 11 and the first thing I noticed was: no Quick Launch! However, I've found a way to create icons pinned to the taskbar for any folder or file. First, I downloaded an icon for free from www.iconfinder.com, choosing the .ico format. If the icon isn't exactly what you want, you can edit it (or create a new one) in Photoshop (it must be 8bit, and no bigger than 256x256 pixels).

I then saved the new icon to a folder and created a shortcut to the target folder or file, placing the shortcut in the same folder as the .ico file. Next I right-clicked the shortcut and selected Properties.



Reader recommends...

Palicomp Intel Mercury

£600 from www.snipca.com/34223

✓ When the first lockdown revealed the inadequacies of my ancient Windows 7 PC, I naturally turned to *Computeractive* for advice on what I should buy next. Your review of the Palicomp Mercury PC (Issue 576, page 22) showed it was just the right machine for me.

Palicomp's site (www.palicomp.co.uk) is a joy to use, especially for a silver surfer like myself. You pick your machine, then scroll down the extras, clicking buttons as you go, watching the cost rise at the side. I could add extra memory, a Blu-ray drive and an upgrade from Windows 10 Home to Pro and still keep the price under £750.

The PC boots and closes extremely quickly, and handles everyday tasks



superbly. As an unexpected bonus the Blu-ray drive plays Region 1 DVDs (Canada and the US). As it's only 15 months old and Windows 11 has very few new features, I'll be keeping it for some time to come.

Chris Walters

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

Before the target name I typed **explorer** (1 in screenshot below left – note the space after 'explorer'), and changed the Run option to Maximized 2.

I then clicked Change Icon 3 and navigated to the new .ico file in the folder and selected OK. The shortcut icon should now change – otherwise right-click the file and select Refresh. Finally, I right-clicked the shortcut and chose 'Add to taskbar'. It's not simple, but it gets easier each time. Of course, Microsoft may bring back a version of Quick Launch later on!

Steve Bown



through Settings, 'Device options', 'Advanced options' and finally selecting Update Your Kindle (pictured above).

Joyce Young

EBOOK READERS

Install Kindle software by connecting it to your PC

✓ In Issue 614 (page 8), you told us about an update to the Kindle Paperwhite ebook reader (version 5.13.7) that adds a large search bar. I couldn't install this because the button to update software was greyed out.

Thankfully, I found another way to install updates. Search online for 'Kindle e-reader software updates' and you'll see a link to Amazon's help page with details (www.snipca.com/39760) for how to download software by connecting the Kindle to your computer. You can then drag the update on to your Kindle. Disconnect the Kindle from your computer and you should be able to update it by tapping

SPAM

Report unwanted emails

✓ Regarding Steve Valentine's question in Problems Solved ('Why do I get unwanted emails?', Issue 617, page 66), I also get many unwanted emails every day and now routinely forward them to report@phishing.gov.uk. So many people are now doing this and enabling the authorities to remove or block the websites that support the sending of spam. Yes, the spammers will soon set up other sites to work from, but hopefully the speed of deletion will soon get to the point where they no longer spend their time spamming and all their time setting up new sites! Then they will have to find some other way to pester us.

Tim Boddington

Browser Tips

CHROME

Access Outlook email faster

Formerly bitter rivals, Microsoft and Google play nicely together these days, from Edge's rebirth as a Chromium browser to the upcoming ability to run Android apps in Windows 11.

Now Microsoft has released a new extension that lets you access your Outlook emails in Chrome. Install the Microsoft Outlook add-on from the Chrome Web Store (www.snipca.com/39848), click its toolbar button and sign into your Outlook account. This will open a fly-out panel that lets you check your Inbox and other folders without opening Outlook in a new browser tab.

To compose a new email, click the plus sign in the top-right corner of the panel (see screenshot below) to open a 'New message' box. You can then address, write and send your email in the usual manner, and attach files and photos.

The extension also gives you easy

access to your Outlook contacts, calendar and to-do list. Unsurprisingly, it was already available for Edge (www.snipca.com/39849), but it's a great addition to Chrome if you prefer Outlook to Gmail, or have accounts with both services.

EDGE

Continue reading PDFs from where you left off

The PDF viewer in Microsoft Edge offers more features than the equivalent tool in other browsers, including an option for reading documents aloud and tools for highlighting elements, adding text and scribbling on the page with a virtual pen. The latest improvement, in Edge 95, is the ability to resume reading a PDF from the point you left off, which is handy if you close the browser while perusing a long document such as an ebook, manual or contract.

To activate this feature, click the three-dot menu button in the top-right corner of Edge, choose Settings and select 'Cookies and site permissions'. Scroll down to 'PDF documents' in the 'All permissions' section, click that option and switch on 'PDF view settings' (see screenshot below). This will ensure that

PDFs always reopen at your last viewed location, rather than at the top of the first page.

You can use Edge as your default PDF viewer, without making it your default browser, to make the most of its superior tools. See our Workshop below to find out how.

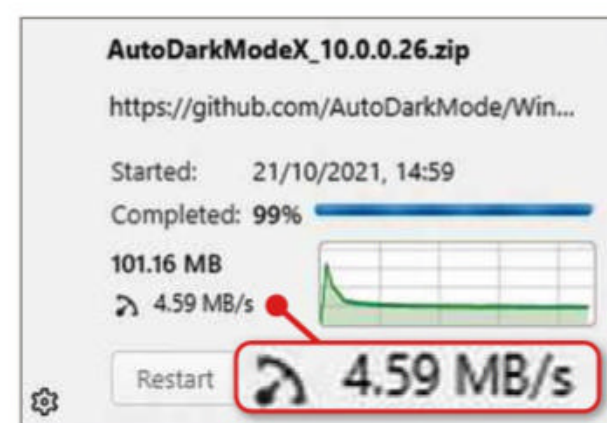
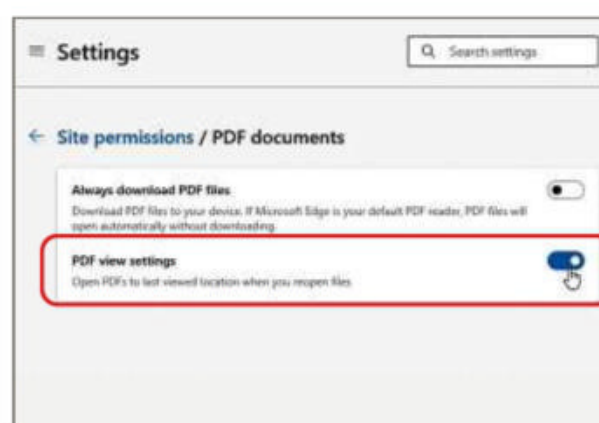
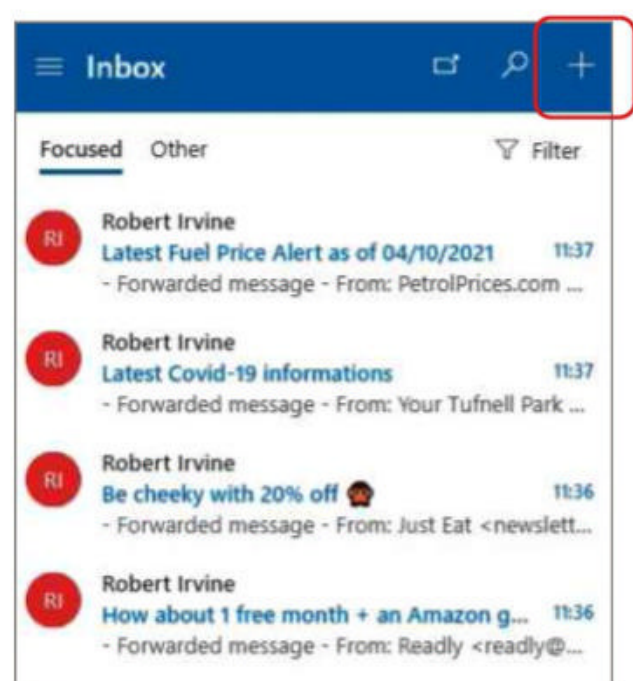
VIVALDI

Track your download speed

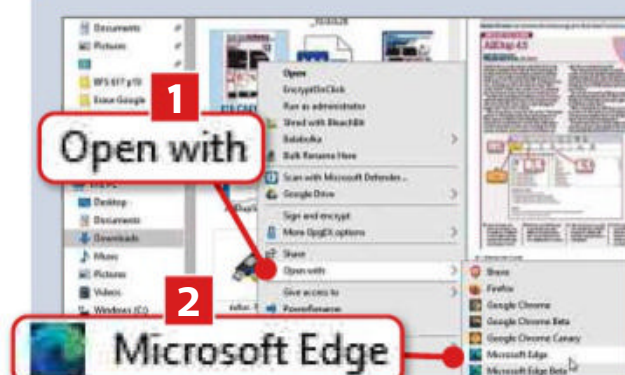
In Issue 618, we covered two useful new features in Vivaldi 4.3: the ability to resize screenshots you capture, and support for PWAs (see page 60 for more on this subject).

The latest version of the browser also improves its Download Panel by adding information about your download speeds. When you download a file from the web, you'll now see a graph and a figure (in megabytes per second) at the bottom of the panel (see screenshot below), which chart the data-transfer rate during the download process.

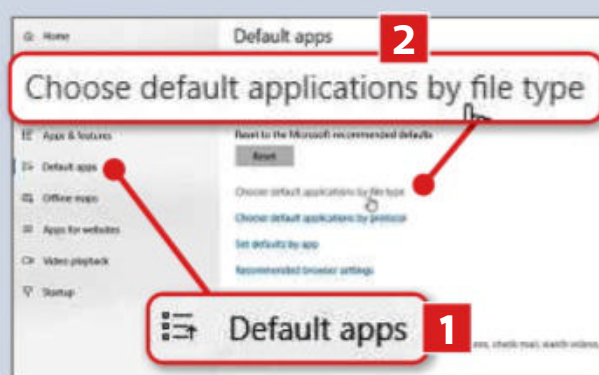
These are accompanied by details of the time the download started (and finished), the file size and a progress bar. Once the download is complete, you can either click Restart if you need to download the



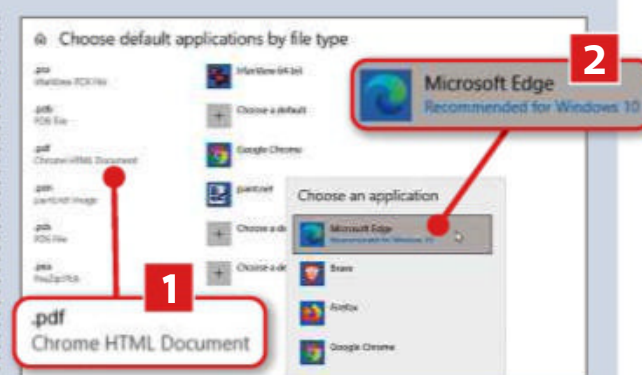
WORKSHOP Always view PDFs in Microsoft Edge



1 The easiest way to open PDFs in Edge, without making it your default browser, is to right-click a PDF file on your desktop or in a folder on your PC. Move your cursor to 'Open with' 1 and select Microsoft Edge in the sub-menu 2.



2 To set Edge as your default PDF viewer in Windows 10 and 11, open the Settings app and choose Apps, then 'Default apps' 1. Scroll down to the bottom of the window and select 'Choose default applications by file type' 2.



3 Scroll down the list of file types to '.pdf' 1 (or just search for pdf in Windows 11). Click the current default for viewing PDFs and choose Microsoft Edge 2 in the 'Choose an application box'. You can switch to another PDF viewer in the same way.

BEST EXTENSION FOR...

Recording your screen

ScreenCastify

Chrome

www.screencastify.com

ScreenCastify goes much further than other screen-recording tools. As well as letting you record the current tab (see screenshot), including any videos you're playing, it has options for capturing your entire screen and your webcam – including audio. While recording is in progress, there are tools for annotating your screen, capturing your cursor and applying stickers, which makes the extension useful for creating your own video tutorials.

Recordings can then be edited directly within ScreenCastify, so you can trim the video, merge clips and blur confidential elements. You need to sign in with your

Google account to use the extension, which allows it to save your videos to Google Drive. They can also be downloaded in MP4 format. The free version of ScreenCastify lets you record and edit videos of up to five minutes. For unlimited use, you'll need to upgrade to the paid-for version for \$49 (£35) per year.

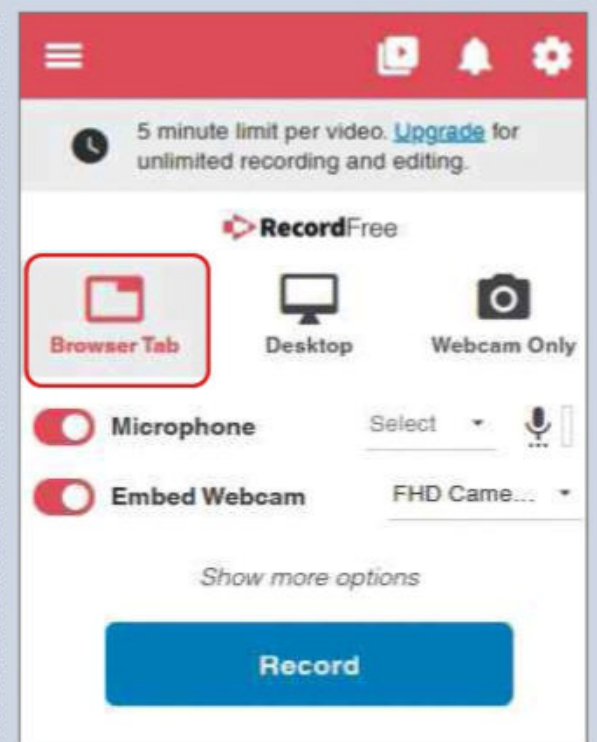
If you don't like that, try...

CloudApp Screen Recorder

Chrome

www.snipca.com/39857

Although it lacks ScreenCastify's editing tools, this extension offers a simple way to capture screenshots and videos of your browser tabs, desktop and webcam, and instantly share the results with other people.



file again for some reason, or 'Open in Folder' to quickly locate it on your hard drive.

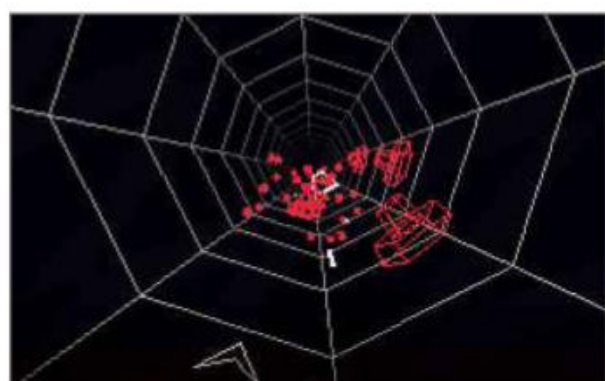
Vivaldi offers several ways to open the Download Panel: click the 'download' arrow icon (the second one down) in the main side panel; click the Vivaldi menu and choose View, then Download Panel; open the Quick Commands box (by pressing Ctrl+E) and start typing **download panel**; or press Ctrl+Shift+D on your keyboard.

OPERA GX

Play a retro offline game

Several browsers have hidden games that you can play when you lose your internet connection, or to kill some time when you're bored.

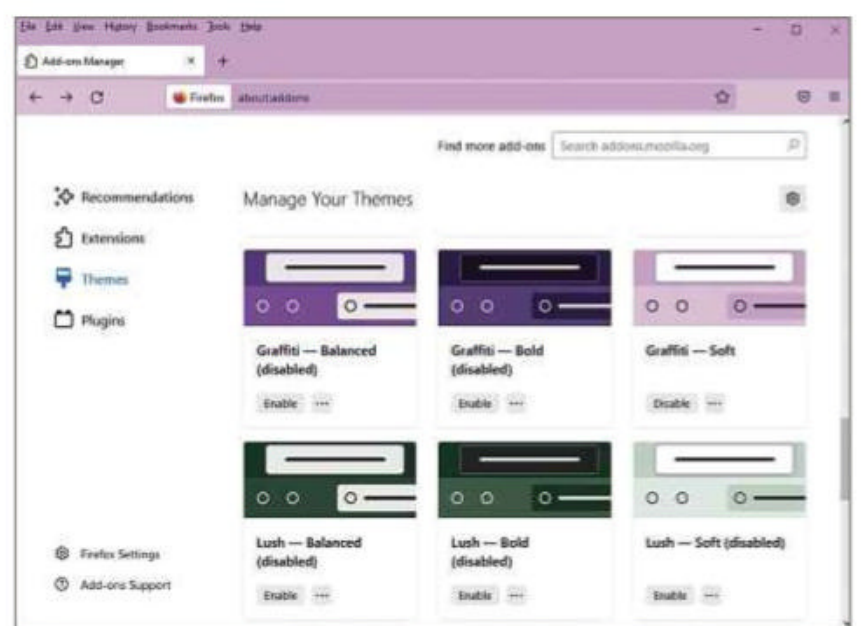
Type **chrome://dino** into Chrome's address bar then press Enter to access its dinosaur game; and in Edge, type **edge://surf** to play the addictive surfer game. Now Opera has added a game, but only to its GX browser (www.opera.com/gx), which is designed for gamers, rather than its standard browser.



The game is called Operius and, as in Chrome and Edge, it's intended to be played when you go offline, but you can access it at any time by typing **opera://operius** into Opera GX's address bar. It's set in a world in which all computers have lost their internet connection, and a UFO appears to be the cause of the outage.

To restore the planet's internet, you need to take the UFO down from the inside, a task that involves flying through a tunnel, shooting alien invaders and dodging obstacles to advance to the next level.

Operius is more sophisticated and much trickier than guiding a dinosaur or surfer, and features great retro graphics (see screenshot below left), sound effects and music. Use the W,A,S and D keys or the arrow keys on your keyboard to control your spacecraft, and try to survive for as long as you can.



FIREFOX

Apply colourful new themes

Customising your browser with themes makes it look more interesting and can reflect your current mood, but Firefox's default options limit you to dark, light or the slightly garish 'Alpenglow' modes. The latest version of

the browser (94) gives you more choice by introducing 'Colourways' themes, a set of vibrant new designs for Firefox that change its colour scheme and apply different backgrounds to the main toolbar. There are 18 Colourways themes to choose from, including Cheers (yellow and black), Graffiti (various shades of purple) and Lush (a sort of greyish green) – see screenshot above.

You should see a prompt to try a Colourways theme when you upgrade to Firefox 94, but if not click the three-line menu button, choose 'Add-ons and themes' then select Themes. Scroll down to the new Colourways section and click Enable to activate a theme.

Mozilla says Colourways themes are "available for a limited time", but perhaps if enough users apply them, they'll become a permanent feature.

Phone and Tablet Tips

ANDROID & iOS

Encrypt your chat backups in WhatsApp



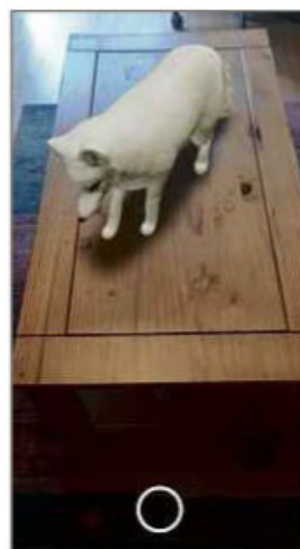
WhatsApp encrypts your messages automatically so that nobody except you and the people you're talking to can read them. Previously, this encryption didn't apply to its 'Chat backup' feature, which saves your conversations to Google Drive or iCloud so you can restore them if you buy a new phone, or reset your device, but thankfully that's now changed.

The latest version of WhatsApp for Android (www.snipca.com/39927) and iOS (www.snipca.com/39926) adds the ability to encrypt your chat backups so you can keep them completely private.

To activate this feature, open Settings in WhatsApp – in Android, tap the three-line menu button, then Settings; in iOS, tap the Settings cog in the bottom-right corner – and select Chats. Tap 'Chat

backup', select the 'End-to-end encrypted backup' option, then tap Turn On. You'll be prompted to create a password or generate a 64-digit encryption key to protect your chats (see screenshot below left) – a password is much easier to remember, so we'd advise choosing that option. Choose a password or generate a key, then tap Create and WhatsApp will prepare your end-to-end encrypted backup.

You can create further backups by tapping Back Up on the 'Chat backup' screen or schedule them by choosing 'Back up to Google Drive/iCloud' and selecting Daily, Weekly or Monthly. Don't forget or lose your password or encryption key, or you won't be able to restore your encrypted chat backups.



on your screen (see an Arctic fox in our screenshot left), complete with sound effects. Tap 'View in your space', point your phone at the floor or another flat surface, and move it around slowly. The 3D animal will then appear in your living room, or wherever else you happen to be, where you can resize it and move it around.

The endangered species

were suggested by the Swedish Society for Nature Conservation and join more than 100 other 3D animals (including dinosaurs) that were already available, on devices running at least Android 7 (with ARCore) or iOS.

ANDROID

Add Chrome's new widgets to your home screen



Widgets offer a great way to access content and features in mobile apps without opening the apps themselves, and Google has now added some new ones to its Chrome browser for Android.

To try these, you'll first need to ensure Chrome is updated to version 95 on your Android phone or tablet. You can check by tapping the three-dot menu in the top-right corner of the app and choosing Settings, then 'About Chrome' and looking under 'Application version'. Next, type `chrome:flags` into Chrome's address bar/search box and press Enter to access



ANDROID & iOS

View endangered animals in your living room



Google has added five endangered species to its augmented-reality feature, which lets you view realistic 3D creatures on your phone and project them on a space in front of you. Search for **Arctic fox**, **lynx**, **white-backed woodpecker**, **harbour porpoise** or **moss carder bee** in the Google app, Chrome or Safari, then tap 'View in 3D' in your search results. This will display an animation of the creature

BEST NEW APPS

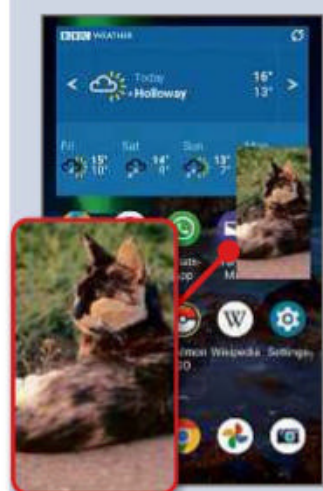
What you should install this fortnight

Anything to PIP

Free

Android www.snipca.com/39930

This app lets you view any image or video stored on your phone or tablet, or in Google Drive, in **picture-in-picture** mode.



Tap 'Pick image or video' to select the file, crop or rotate it if necessary, and tap the icon in the bottom-right corner. It will then appear in a small floating window while you're doing other things on your device.

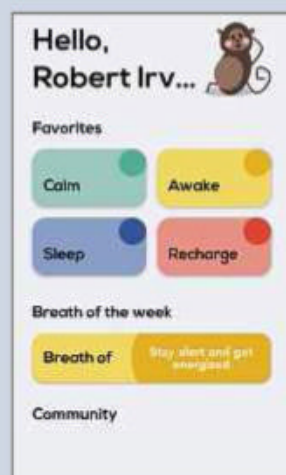
Breathwrk

Free*

Android www.snipca.com/39928

iOS www.snipca.com/39929

You don't need an app to remind you to breathe, but Breathwrk offers useful breathing



exercises to reduce anxiety, relax your muscles and help you sleep. Follow its instructions to inhale, exhale and hold your breath for different lengths of time, and customise the app to suit your habits. It also suggests a 'Breath of the week'.

Veil

£1.79

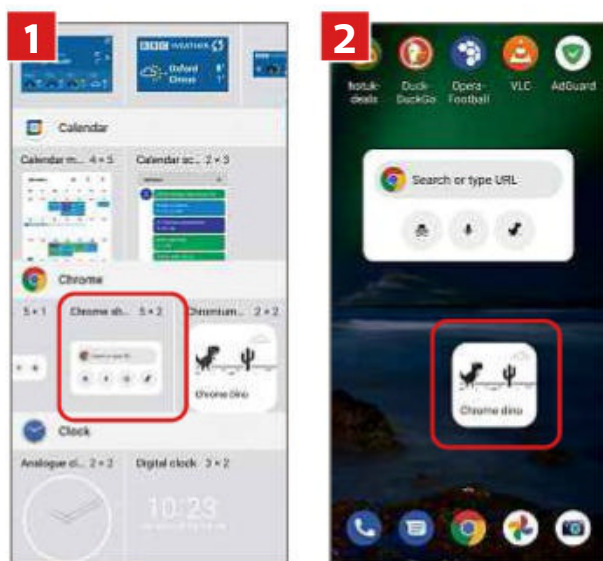
iOS www.snipca.com/39931

Whether you want to remove someone from a video to protect their privacy or because you'd prefer to focus on the



background, Veil has you covered. This 'human-filtering' app offers several ways to filter people (and pets) from mobile videos, including blurring, pixelating and cutting them out completely, and it works in real time.

*Contains in-app purchases



the browser's Experiments page. Search for **widget** and select Enable in the dropdown menus below both of the Quick Action Search Widgets entries, then relaunch Chrome.

With that done, you can add the new widgets to your Android home screen. Long-press a blank area of the screen and select Widgets to access the available options. Swipe down to the Chrome section and choose either 'Chrome shortcuts 5 x 1' to add a search box, incognito mode and voice search shortcuts to your home screen, or 'Chrome shortcuts 5 x 2' (see screenshot 1 above), which also includes a shortcut to the Chrome dinosaur game 2. Additionally, there's a widget just for the dino game, while some Android devices get an extra shortcut to Google Lens.

Long-press a widget to drag it to the desired position on your screen, then tap it to open the relevant Chrome feature. You can delete widgets by long-pressing them and selecting Remove.

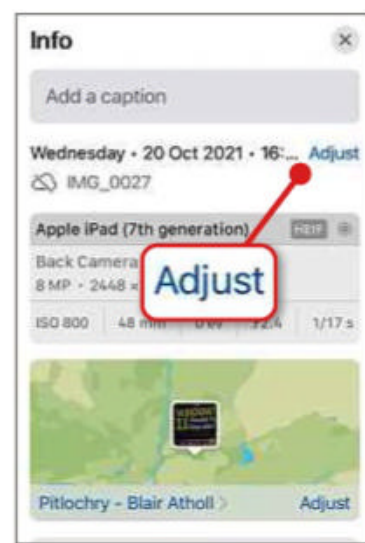
iOS Change a photo's time, date and location

In Issue 618, we explained how to edit **metadata** in Google Photos, so when you want to change the date and time that photos were taken. Following the recent iOS 15 and iPadOS updates, this feature is now also available in the Photos app on your iPhone and iPad, with the added option to alter a photo's location.

Open a photo in the Photos app and tap the 'i' information icon at the bottom (on an iPhone) or top (iPad) of your screen, or swipe up on the image to show the Info panel. Tap 'Adjust' next to the date and time (see screenshot above right) to open a calendar, and choose a different day. Tap the clock to select a different time. Usefully, you'll be told exactly how long the original photo will be adjusted by – in

days, hours, minutes and seconds. Tap 'Adjust' in the top-right corner to save your changes.

To change a picture's location, tap Adjust below the map in the Info panel. Search for a new location in the bar at the top of the screen and suggestions will appear below. Tap one of these and it will replace



the original location in your photo's metadata, accompanied by an updated map. Alternatively, choose No Location to hide where the picture was taken.

If you change your mind about the updated metadata, tap the Adjust options again, and choose Revert in the top-right corner. This will restore the photo's original information.

BEST APPS FOR...

Identifying songs

Shazam

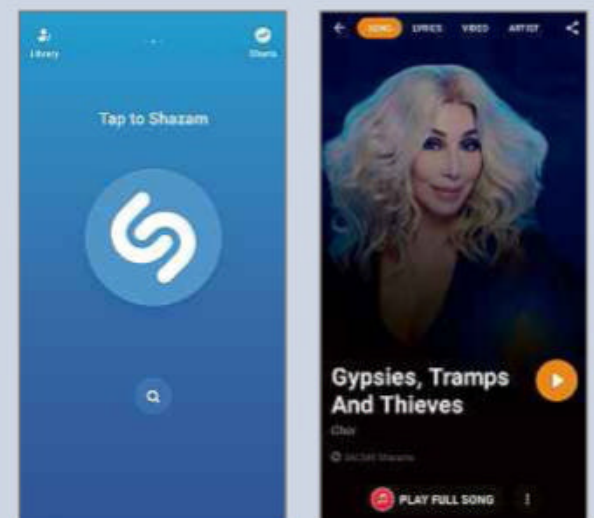
Free

Android www.snipca.com/39932

iOS www.snipca.com/39933

Shazam is the best-known – and simply the best – app for identifying songs that are playing on the radio, in shops or anywhere else. Simply tap the button on its home screen and it will listen for music and tell you the name of the track. It's fast and accurate, and provides lyrics, videos and related songs for matches.

Best For Identifying music when you're out and about



SoundHound

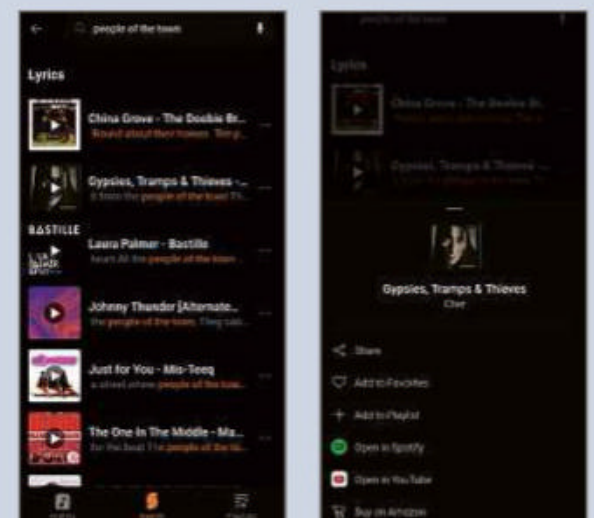
Free*

Android www.snipca.com/39934

iOS www.snipca.com/39935

SoundHound offers many of the same song-recognition features as Shazam, but we particularly like its Lyrics option. Enter a few words from an unknown track that's been stuck in your head and it will find matches. You can then play each one at the point the lyrics appear to try and identify your mystery tune.

Best For Identifying songs from lyrics



Google

Free

Android www.snipca.com/39936

iOS www.snipca.com/39937

The Google app now offers a name-that-tune feature that identifies songs you hum, whistle or la-la-la into your phone. Tap the microphone icon in the search box, choose 'Search for a song', then warble away. Google will present you with a list of possible matches, with the most likely track at the top of its results.

Best For Identifying songs from a vague melody



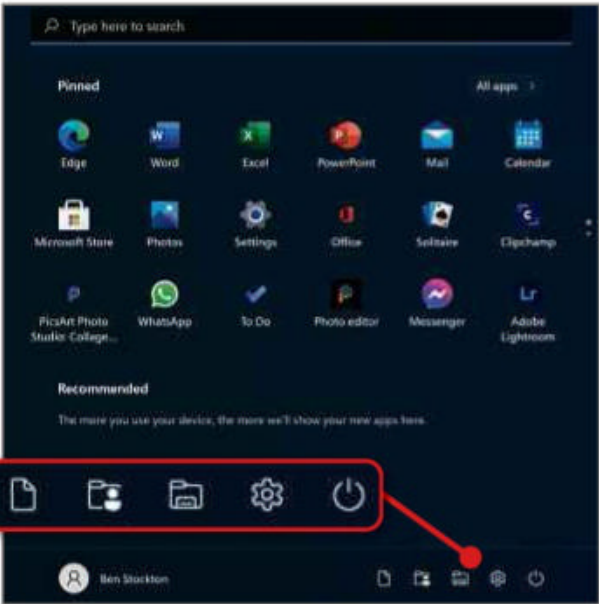
*Contains in-app purchases

WINDOWS 11
Add quick-access icons
to the Start menu

Microsoft has simplified the Start menu in Windows 11 by removing icons for certain folders, such as Documents and Downloads, as well as the icon for the Settings app.

To bring these back, open Settings (press Windows key+I), then click Personalisation on the left. Now scroll through the options on the right until you see Start, then click Folders.

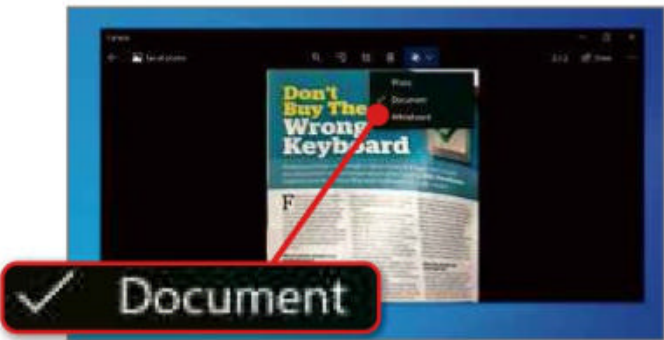
You'll now see several options for Windows sections. Click the slider next to any to add its icon to the Start menu. Check they've appeared by opening the Start menu and looking at the bottom right. In our screenshot below we've added (from left to right) icons for Documents, Personal folder (ie, the user folder, C:\users\your name), File Explorer, and Settings. The Power icon is always visible.



WINDOWS 10 & 11
Take document photos
using the Camera app

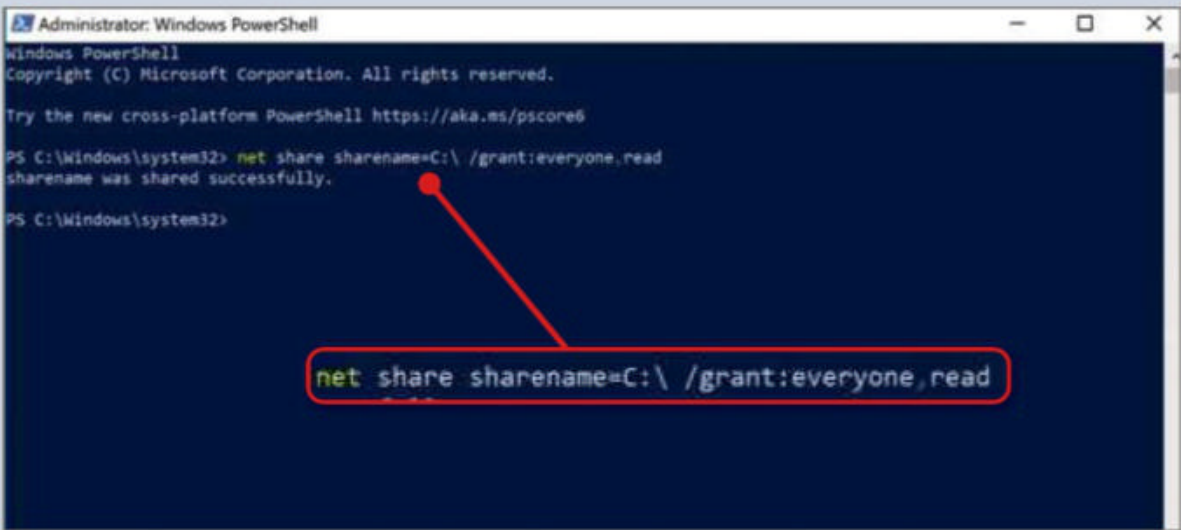
The Camera app has a hidden feature that lets you quickly create scanned copies of your documents. It automatically crops, resizes and rotates the image, removing other areas of the photo to focus only on the document.

Press Start, type Camera, then click the Camera option to launch it. Place your document in front of your camera lens,



WINDOWS 10 & 11

Share folders on your network



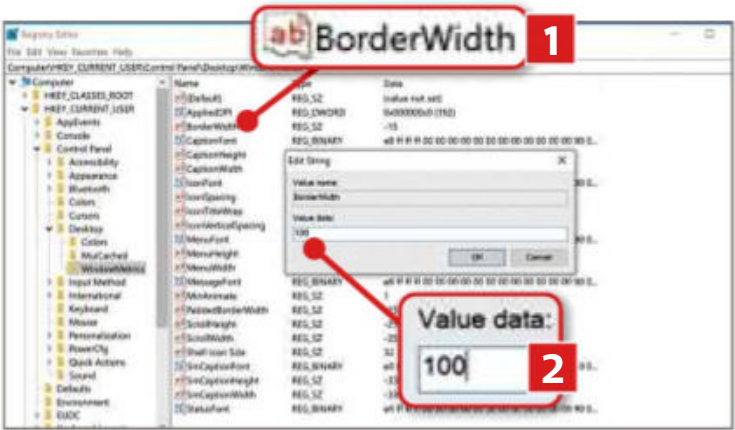
The quickest way to create shared network folders is to use the 'net share' command in Command Prompt or PowerShell.

Press Start, type cmd or powershell, then select 'Run as administrator' on the right. Now type a command such as this: net share images=C:\Pictures /grant:everyone,read (see screenshot). This will create a network share called 'images', and shares the Pictures folder on your C: drive. Typing everyone gives access to everyone on the network, but we've restricted this access to read only.

Replace read with change for the ability to edit files or full to grant full control, including the ability to change permissions - for example, grant:ben,change or grant:ben,full.

So, to clarify, when you type the command, you need to give your share a name, and specify the folder you're sharing. You then need to type either everyone or the name of the person you're sharing with. You also have to set the type of access: read (view but not change files); change (alter permissions) or full (complete access).

then click the Take Picture button. Next, click the 'Camera roll' icon in the bottom left, and your image will appear. Now click the top Filters tab (two overlapping circles), followed by Document (see screenshot below left). The image will automatically adjust to focus on the page you've captured.



WINDOWS 10
Make it easier to move and
resize open windows

You can use a Windows theme and a registry tweak to add a thicker border around any open windows, making it much easier to resize them on your computer.

First, visit www.snipca.com/39938 then download the file using the 'Click here to download the file' link. Extract it, then double-click the 'aerolite.theme' file. Your theme should change after a few seconds.

Next, open the Start menu, type regedit,

then click 'Run as administrator' on the right. In the registry editor, find the HKEY_CURRENT_USER\Control Panel\Desktop\WindowMetrics key using the left-hand menu. Look for the BorderWidth sub key (1 in our screenshot above) on the right and double-click it.

In the Edit String box, increase the value data 2 to increase the border size. The accepted values range from 15 twips (one pixel wide) to 150 twips (10 pixels wide). Choose what you think is best. Repeat these steps for the PaddedBorderWidth sub key. Click OK to save, sign out, then sign back in to apply the change.

MICROSOFT EXCEL

Quickly share spreadsheets using a link

There are plenty of ways to share a spreadsheet, such as by emailing it as an attachment or saving it online, but both of these methods require the other person to have an Office account. You can bypass this restriction simply by emailing a link to the spreadsheet.

To create this link, visit <https://quickxls.com> then enter the spreadsheet's name at the top (1 in our screenshot below), then copy and paste the spreadsheet data into the box below (2), and tick the box below (3) if the first row is a header. Next, click the green Submit button, then look at the browser bar for your unique link (it will be [https://](https://quickxls.com/)

JAN		FEB		MAR		
2021001	2021002	2021003	2021004	2021005	2021006	2021007
1	2	3	4	5	6	7
Tue 31 Dec	Wed 13 Jan	Wed 27 Jan	Wed 10 Feb	Wed 24 Feb	Wed 10 Mar	Wed 24 Mar

quickxls.com/ followed by a mix of upper- and lower-case letters). Copy this, then paste it into an email and send it.

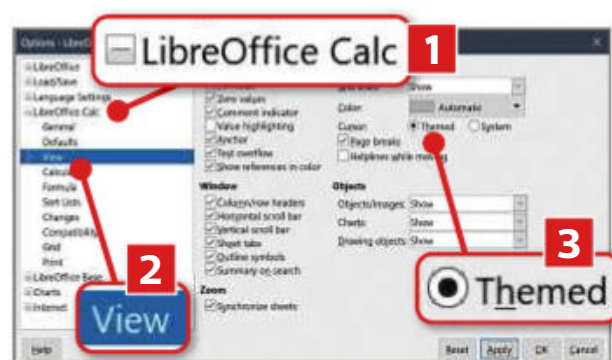
The recipient can access the spreadsheet by clicking the link, whether or not they have an Office account.

LIBREOFFICE CALC

Make the cursor 'fatter' and easier to see

If you find yourself struggling to see your cursor in Calc, switch to the new, chunky 'fat-cross' cursor, which was added in version 7.2 (released in August).

Open a spreadsheet, then click Tools at the top, followed by Options. Now click LibreOffice Calc in the left-hand menu (1 in our screenshot below), then View (2), and select the Themed option (3) under the Visual Aids heading. Finally, click Apply to save the change and leave the box open, or OK to save and close the box.

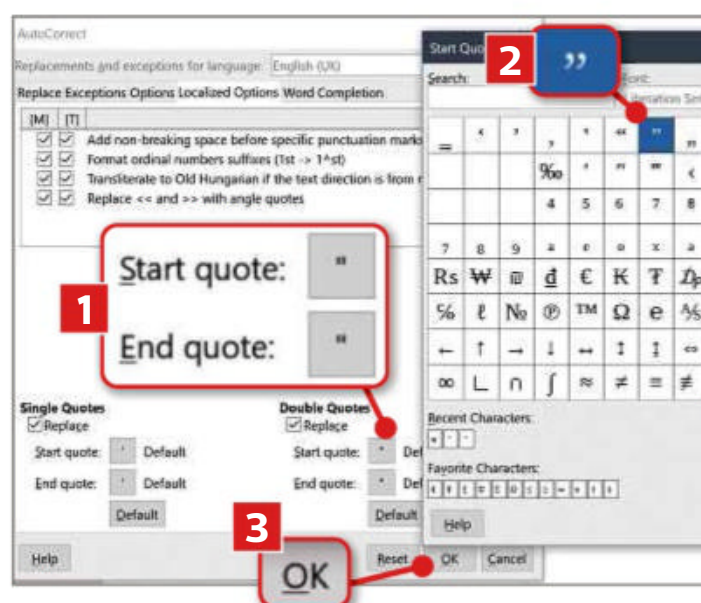


LIBREOFFICE WRITER

Set speech marks as straight or curly

Do you like your speech marks straight or curly? They're straight by default in Writer, but you can change them in the AutoCorrect options.

Click the Tools menu at the top, then choose AutoCorrect followed by



AutoCorrect Options. You'll see the defaults at the bottom, for both single and double speech marks. Click in one of the 'Start quote' and 'End quote' boxes (1 in our screenshot above) and you'll see a variety of options you can use, including 'curly' speech marks (2).

Click OK (3) when you've chosen, and make sure the Replace boxes are ticked. Click OK to return to your document. You should now see your preferred speech marks when you type in Writer.

MICROSOFT WORD

Bold up every instance of a specific word

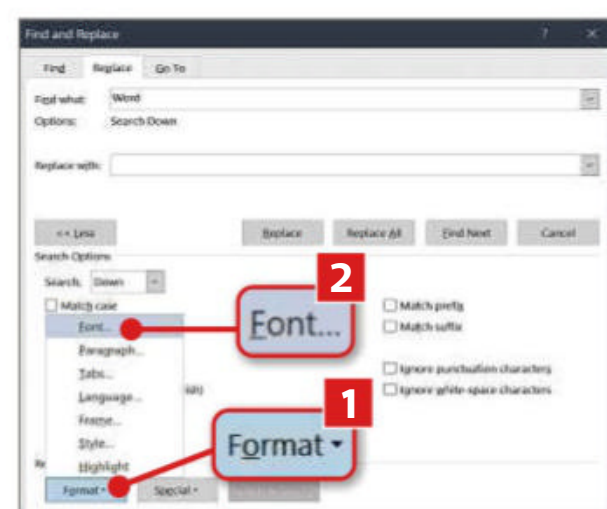
You can use the 'Find and Replace' tool in Word to make every instance of a specific word bold, saving you the hassle of having to

change each one individually.

Press CTRL+F then type the word into the search box. You'll see every instance of this word highlighted in yellow. Next, click the dropdown arrow at the right of the search bar and choose Replace to bring up the 'Find and Replace' box, with your word in the 'Find what' box. Now click in the 'Replace with' box so your cursor is flashing, but don't type anything.

Next, click the 'More>>' button, then Format (1 in our screenshot below) followed by Font (2).

Select 'Bold' in the 'Font style' box at the top, then click OK at the bottom. Finally, back in the 'Find and Replace' box, click Replace All and you'll see how many changes Word has made. Go back to your document and every instance of your word should now be in bold.



In The Club



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

Create and share notes to generate ideas

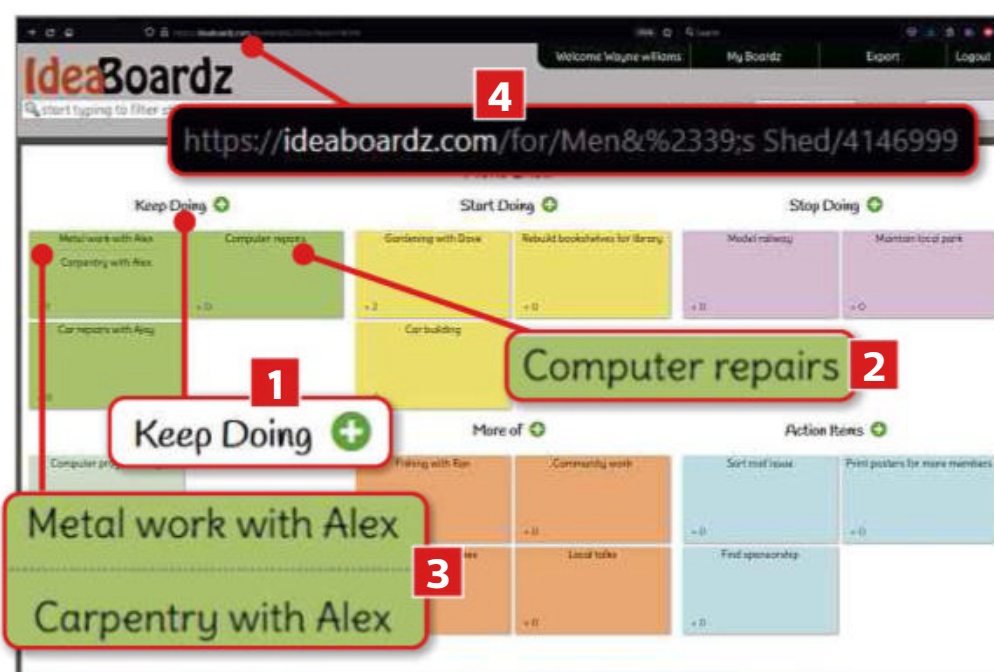
Coming up with ideas and events for your club – over Zoom or face to face – can sometimes get messy. IdeaBoardz (<https://ideaboardz.com>) solves this problem by providing an online space where anyone can put forward suggestions for activities (anonymously if you prefer), and modify and vote on any proposals made by others. This lets you see at a glance which ideas are the most popular.

Choose the most suitable board and headings

On the home page click the link in 'Create my own IdeaBoard' in the yellow How box. The box will expand, letting you enter a name and description for your board. Click the dropdown menu and you'll see five ready-made boards, and the option to create your own board with up to 10 sections.

Each of the default boards contains section headings designed for different needs. Some, like Todos and 'Pros and Cons', are self-explanatory – while the 'Retrospective' board is for reviewing events (for example, what went well and what could be improved next time).

Here we'll choose Star Fish Retrospective, which contains default headings that are well suited to a busy club (Keep Doing, Start Doing, Stop Doing, Less Of, More Of, and Action Items), though it's easy enough to change any of them – simply click a



Build up your board by adding, modifying, moving and merging stickies

section, delete the existing text and start typing.

Tick the 'I'm not a robot' box and then click the Create button below to agree to the terms and conditions. Your board will open ready for use.

Add stickies and share with members

The title of the board appears at the top, with headings for the sections. To add something to a section, click the green plus sign next to a heading (1 in our screenshot above) and a coloured 'sticky' – a resizable note – will appear. Click this and you can type the first activity, which in our case is 'Computer repairs' (2). Click the plus sign again and another sticky note of the same colour will

appear. Notes for each section will be assigned a different colour.

You can drag stickies from one section to another – so we could move something from Less Of to More Of – and the note's colour will change accordingly. You can also merge notes by dragging one on top of another. The text they contain will appear in the same box, split by a horizontal line (3).

Each board is assigned a unique URL (4) that you can copy from the address bar in your browser and share with anyone. Everyone with this address will be able to view and edit the board just as you can. This means they can add their own stickies, or change, move or merge existing ones.

Clicking on a sticky will open it so more information can be added. The note can also be deleted here. Anyone you share your board with can add a vote to a note by clicking the thumbs-up button.

Once you have a lot of stickies on your board it can be hard to find specific ones, but you can sort them by typing a key word into the search box above. Any boxes that don't contain that text will be hidden. Clear the search box to show every box once more.

There's also a View Section dropdown menu (1 in our screenshot left) at the top right that lets you show only a particular section – such as More Of (2). The 'Sort By' box (3) next to this lets you order the stickies in each section by when they were created, or how many votes they've received.

Click the Export button (4) at the top and you'll be able to download your board as a PDF or spreadsheet. The Login button next to this lets you sign in with an existing Google account. It's optional, but doing so lets you access all of the boards you create in one place.



Use the View Section dropdown box to show only a specific section and any notes it contains

What's All the Fuss About...



The metaverse

Ditch the real world for a virtual one – Mark Zuckerberg's expecting you

What is it?

The metaverse is a shared virtual environment, which people can access via the internet. Traditionally, the term has been used by gamers to refer to gaming worlds, in which their characters walk around and interact with other players, but the metaverse is now being envisioned for other purposes, including education, entertainment and conducting business.

Okay. What's the web address?

Oh, the metaverse isn't a website, it's a network – or virtual universe – of 3D spaces. Whereas the current web is largely based on pages of text, images and video, you don't merely visit the metaverse, but immerse yourself in it, using virtual reality (VR) or **augmented reality** (AR). By creating your own **avatar**, you can explore the metaverse as if you were really there, meeting other people, buying virtual items and engaging in everyday experiences – such as attending concerts – but in a digital form.

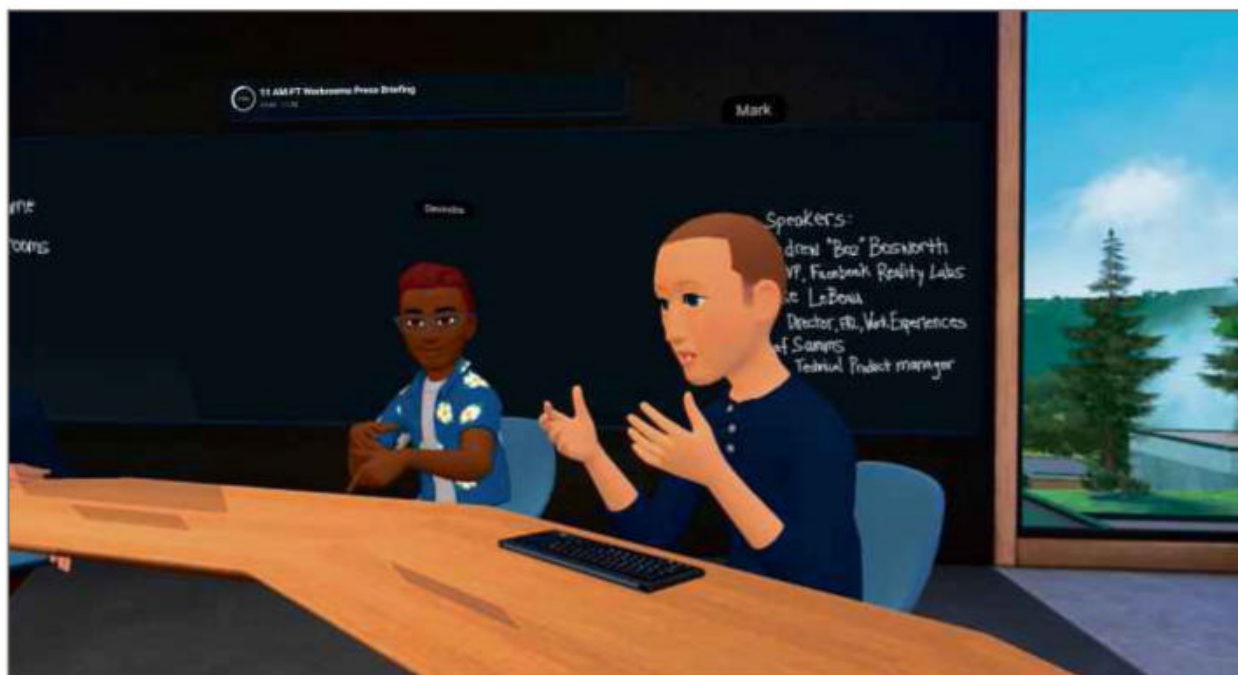
Isn't that just like Second Life?

Sort of. The virtual world Second Life (<https://secondlife.com>), which launched in 2003, is an early example of a metaverse. Popular community-based games such as Fortnite (www.snipca.com/39840), Minecraft (www.minecraft.net) and Animal Crossing (www.snipca.com/39841) can also be classified as metaverses.

However, the concept of the metaverse now being touted by the tech community is broader and more complex than those examples, because it will let you traverse different, interlinked virtual worlds. And



The metaverse will be similar to Second Life (pictured) but larger and with nicer furniture



rather than access the metaverse through your browser or an app on your phone, you'll wear a VR headset such as the Oculus Quest 2 (www.snipca.com/39831) or HTC Vive (www.snipca.com/39832).

The term 'metaverse' was first used by author Neal Stephenson in his 1992 science-fiction novel *Snow Crash*. Characters in the book interact as avatars in a virtual environment that's projected onto special goggles.

So why all the fuss about it now?

Although tech companies have been discussing the metaverse for several years, the restrictions imposed by the Covid pandemic have accelerated interest in the idea. With so many of us now used to interacting remotely via video calls, the notion of creating more sophisticated virtual spaces in which we're represented by avatars no longer seems like science fiction. Think of "a magical Zoom meeting that has all the playful release of Animal Crossing", as one US academic puts it (www.snipca.com/39833).

The subject has also been in the news because Facebook is now turning its attention to the metaverse.

Oh no. So is Facebook going to ruin it?

Possibly. In July, CEO Mark Zuckerberg revealed his intention to turn Facebook into a "metaverse company", and last

month announced plans to hire 10,000 new employees in the European Union to achieve that aim.

"The metaverse has the potential to help unlock access to new creative, social and economic opportunities," said Facebook in a blog post (www.snipca.com/39834). But it also admitted that: "No one company will own and operate the metaverse". Indeed, numerous other tech companies, including Microsoft, are said to be working on their own metaverse platforms.

There are lots of business benefits to Facebook joining the metaverse, such as promoting its digital currency, Diem, and the potential to target users with adverts based on their virtual activities. Facebook has already launched a virtual office tool called Horizon Workrooms (see our main picture above) as its first step towards the metaverse.

How can I get into the metaverse, then?

You can't, because it doesn't exist yet. Although there are already games and online services with metaverse elements, the interlinked virtual universe is still 'under construction'. However, the technologies it will use do exist, or are currently being developed, and – in theory – these will gradually combine and form the building blocks of the metaverse. Watch this (virtual) space.

Find the best... amazon



BLACK FRIDAY BARGAINS

Don't miss the biggest tech bargains this Black Friday. Robert Irvine rounds up the 20 best deals to expect from Amazon and reveals how to find even more brilliant discounts

WHAT YOU CAN DO

- Add items from other stores to your Amazon wishlist
- Discover if Amazon is selling a product for less
- Set up price-drop alerts so you don't miss any bargains
- Receive notifications about new deals
- Save money by applying discount codes automatically
- Avoid being scammed by 'too good to be true' deals
- Get price-match guarantees from stores that undercut Amazon

Over the last decade, Black Friday has overtaken Boxing Day as the biggest sales event of the year.

Traditionally the day after Thanksgiving in the US, Black Friday is now inescapable across the world and we have Amazon to blame – and thank. The company imported the idea to the UK in 2010, when it ran its first Black Friday promotion here, and British stores soon followed suit – both online and on the high street – offering time-limited discounts on thousands of products.

This year, Black Friday takes place on 26 November, though many retailers began their sales early, to avoid complications caused by the current

supply-chain crisis and potential delivery delays. Amazon was already cutting prices on tech products a month before Black Friday, which was ideal for our needs because it has allowed us to preview and predict the best bargains you can expect on the day.

In this feature, we've picked 20 of Amazon's most likely deals on Black Friday (and on Cyber Monday the following week), though you may find even bigger savings on similar items. Naturally, you're not limited to buying these amazing laptops, smart devices and other gadgets during this crazy Christmas shopping event, and can purchase them at any time of year for their usual prices.

20 MOST LIKELY BLACK FRIDAY DEALS**TABLET****Amazon Fire HD 10**www.snipca.com/39883**RRP: £149.99****Expected discount: £99.99 (£50 saving)**

Amazon's latest Fire tablet (pictured below) combines a large (10.2in) high-resolution screen with 3GB of RAM and 32GB (or 64GB) of storage to provide a sharp, speedy and affordable way to enjoy your favourite apps. It also offers an impressive battery life of 19 hours, which helped it gain a five-star rating when we reviewed it in Issue 610 (page 24). The Fire HD 10 is slimmer and lighter than previous models, and delivers superior sound through its dual Dolby Atmos speakers. You can enter a competition to win one by scanning the QR code on our cover



Expect Black Friday discounts on Amazon's other tablets, too. We predict that the smaller and older **Amazon Fire HD 8** could be reduced to as little as £49.99. All Fire tablets include a three-month subscription to Amazon Music Unlimited, which usually costs £7.99 (for Prime subscribers) or £9.99 a month.

SMART SCREEN**All-new Echo Show 8**www.snipca.com/39882**RRP: £119.99****Expected discount: £89.99 (£30 saving)**

Launched in June, the second-generation Echo Show (pictured above) is a big improvement on its predecessor. Its 13-megapixel camera makes video calls much clearer and it can pan and zoom to follow your face as you move. This is complemented by a 1280x800-pixel touchscreen, which lets you use some functions without talking to Alexa. However, it doesn't work with Zoom, which brought its rating down to four stars when we reviewed it in Issue 611 (page 28). The **All-new Echo Show 5** (RRP £75, www.snipca.com/39901), which only has a 2-megapixel camera, is likely to be heavily discounted too.

SMART DOORBELL & SPEAKER**Ring Video Doorbell Wired + Echo Dot**www.snipca.com/39881**RRP: £88.99****Expected discount: £49.99 (£39 saving)**

Amazon's bundle of its newest and cheapest Ring doorbell and an Echo Dot smart speaker (pictured above right) was one of the best Amazon Prime Day bargains in June, so we're sure we'll see a similar deal for Black Friday. The Wired version of the doorbell needs to be installed in place of an existing doorbell and there's



no battery-operated option. However, for such a low price it's worth snapping up, as it still offers 1080p HD video, Two-Way Talk and Advanced Motion Detection. The Echo Dot is the 3rd-generation model, rather than the spherical 4th-gen device, which launched earlier this year, but we expect to see that discounted too, from its RRP of £49.99 (www.snipca.com/39904). The bundle includes a 30-day free trial of Amazon's Ring Protect Plan.

E-READER**All-new Kindle Paperwhite**www.snipca.com/39879**RRP: £139.99 (without ads)****Expected discount: £109.99 (£30 saving)**

Amazon usually cuts the price of its Kindle e-readers for Black Friday, and this should include its latest Paperwhite (pictured below), which launched on 27 October. Offering a bigger (6.8in) screen, thinner borders and 20 per cent faster page turns compared with previous models, the All-new Kindle Paperwhite also offers 8GB of storage, an adjustable warm light and up to 10 weeks of battery life. There are also bound to be discounts on older Kindles, and probably Amazon's other two new devices: the **Paperwhite Signature Edition** (RRP £179.99 from www.snipca.com/39902) and the **Paperwhite Kids** (RRP £139.99 from www.snipca.com/39903). You can save an extra tenner if you're willing to put up with adverts on your e-reader.

**Should you buy a new PC on Black Friday?**

Unlike Black Friday last year, manufacturers have spent most of 2021 experiencing a huge global shortage for PC components, particularly of silicon processors (see www.snipca.com/39900). And while it's still been fairly easy to get your hands on a new computer, the scarcity of parts means they haven't been going on sale very often.

There are likely to be some great PC deals going live on Black Friday, but we're not expecting anything truly amazing from Amazon and other online stores.

You'll probably be able to save a hundred pounds here or there, but we wouldn't advise holding out for a miracle half-price deal, as in previous years.

Additionally, the computers that do get those tempting 50 per cent discounts probably won't be worth your time or money. They'll be using old hardware that will slow you down, especially if you plan to use Windows 11 – assuming they even support it. Unless you're desperate for a new PC, it may be better to wait – though we're happy to be proven wrong!



STREAMING DEVICE

Fire TV Cube

www.snipca.com/39880

RRP: £119.99

Expected discount: £64.99 (£55 saving)

Last Black Friday saw the Amazon Fire TV Cube (pictured above) reduced to its lowest price ever, £70, and this year could see it slashed even more. It's still the most powerful Fire TV streaming media player, with a **hexa-core** processor that delivers a fast, fluid 4K viewing experience, 16GB of storage and eight microphones, which let you easily control your TV and compatible set-top box using your voice.

Big discounts on Amazon's Fire TV sticks, such as the new Fire TV Stick **4K** Max (RRP £54.99 from www.snipca.com/39856), are also a given, but – as we explain in our head-to-head comparison on page 24, you may prefer to buy a Roku stick instead (see next page) to avoid Amazon's ads.

SMART SPEAKER

Echo Flex

www.snipca.com/39897

RRP: £24.99

Expected discount: £9.99 (£15 saving)

One of Amazon's early Black Friday deals is an absolute steal, as the Echo Flex (pictured below) has never been cheaper than this. This tiny gadget turns any plug socket into a smart socket, so you can use Alexa to turn on lamps, adjust your thermostat, and lock your front door. The Flex connects to external speakers to play music, and its USB port lets you charge your phone. It's a great stocking filler or useful little present to yourself.



ANDROID TABLET

Lenovo Tab P11 Pro

www.snipca.com/39896

RRP: £599.99

Expected discount: £499.99 (£100 saving)

Can't decide between an Android tablet and a laptop on Black Friday? Then snap up a Lenovo Tab P11 Pro (pictured above) for £100 less than the usual price, and get the best of both worlds. We gave the device a five-star rating when we reviewed it in Issue 609 (page 24) and praised its outstanding 11.5in screen, which has a 2560x1600-pixel resolution; comfortable keyboard, which easily attaches and detaches to switch between laptop and tablet mode; and battery life of more than 17 hours. The Lenovo Tab P11 Pro also impressed us with its 8-megapixel camera and speedy processor. It may be even cheaper by the time you read this, but could sell out fast.

WINDOWS LAPTOP

Asus VivoBook S 15

www.snipca.com/39889

RRP: £699.99

Expected discount: £599.99 (£100 saving)

One of last year's best Black Friday deals was Asus knocking £120 off its 14in **VivoBook M413** laptop (now sold out, unsurprisingly). This November, there's already an early discount on the even more powerful Asus VivoBook S 15 (pictured below), which launched in February. Its amazing specifications include a 15.6in screen, 16GB of RAM, a 512GB **SSD** and a 4.2GHz Intel quad-core processor. If you can bag this lightweight (1.7kg) laptop for under £600, you won't be disappointed – and, though it comes with Windows 10 Home, it can be upgraded to Windows 11. Alternatively, the next model down, the **Asus VivoBook 15** (www.snipca.com/39890), costs £100 less and offers 8GB of RAM and a 256GB SSD.



**Best
Black
Friday
laptops**



CHROMEBOOK

HP Chromebook 14

www.snipca.com/39885

RRP: £239.99

Expected discount: £189.99 (£50 saving)

Chromebooks were among the most popular Black Friday deals last year and we expect to see similarly big discounts this time round. This HP model (pictured above) features a powerful (for a Chromebook) 2.2GHz processor, a 32GB SSD, which is ample when you consider that most of your files will be stored online, 4GB of memory, Bluetooth, USB and Wi-Fi connectivity, and a 14in screen. Chromebooks from Asus, Lenovo and Samsung are also likely to be reduced – just check that the device is new and not 'renewed' before purchasing, if you want a completely untouched laptop.

APPLE LAPTOP

2020 Apple MacBook Air

www.snipca.com/39892

RRP: £999

Expected discount: £895 (£104)

MacBooks are notoriously expensive, so we were pleasantly surprised to spot an early Black Friday deal on this stylish Air model (pictured below), which launched almost exactly a year ago. With an eight-core Apple M1 Processor, a 13.3in screen with a fantastic resolution of 2560x1600 pixels, 8GB of memory, a 256GB SSD and a 19-hour battery life, it definitely doesn't skimp on specifications, yet weighs a mere 1.29kg. The discount above is for the gold MacBook Air – the silver and space grey versions cost slightly more.



EARPHONES

Apple AirPods with Wireless Charging Case

www.snipca.com/39884

RRP: £199

Expected discount: £139 (£60 saving)

Apple has just released an updated version of its AirPods, with **spatial audio**, so we expect to see big price cuts to its older earphones on or before Black Friday. This pair from 2019 (pictured below) comes with a wireless charging



case, which costs £79 when sold separately, so you can boost their battery life to 24 hours by placing them on a Qi-compatible charging mat. We also predict savings on the **AirPods Pro** (www.snipca.com/39905), which feature **active noise cancellation** – at the time of writing, these had already been reduced from £219 to £189. And Amazon's **All-new Echo Buds** (RRP £109.99 from www.snipca.com/39893), which went on sale 11 November, are very likely to be one of its own deals.

STREAMING STICK

Roku Streaming Stick 4K

www.snipca.com/39855

RRP: £49.99

Expected discount: £34.99 (£15 saving)

If our review of the new Roku Streaming Stick 4K (see page 24) has convinced you to buy one, Black Friday is the perfect time, because Roku invariably offers time-limited discounts on its latest devices.

Last year, there was a £15 saving on the **Roku Streaming Stick** (www.snipca.com/39876, pictured below), so hopefully this will be repeated for its successor. The **Roku Express 4K** (www.snipca.com/39877), which launched in April but lacks an Ethernet port and voice remote control, should be cheaper too, possibly bringing its price down from £40 to £25 – a brilliant bargain for a 4K streaming device.



FITNESS TRACKER

Fitbit Charge 4

www.snipca.com/39888

RRP: £129.99

Expected discount: £89.99 (£40 saving)

Fitbits and other fitness-tracking

smartwatches flew off the virtual shelves last year as many of us tried to work off our lockdown bellies. We're confident that wearables will also be heavily discounted this Black Friday and some devices are already available for less than usual. The Fitbit Charge 4 (pictured right) is Amazon's current best seller and offers built-in **GPS** (so you can use it without your phone), swim and sleep tracking (as well as measuring your walking, running and cycling), a heart-rate monitor and a seven-day battery life. It also includes a 90-day free trial of Fitbit's Premium fitness plan. Amazon has the device in black, rosewood and storm blue – check all three to see which is cheapest.



SMART TV

Sony Bravia KD50X80J

www.snipca.com/39886

RRP: £849

Expected discount: £689 (£160 saving)

TV sets are always popular purchases on Black Friday, and if you buy from Amazon you won't have to fight for one, as tends to happen on the high street. You'll find some impressive discounts, too, whether you're looking for an 'average' -size smart TV (of between 30in and 40in) or want a huge 4K **Ultra HD** one like this Sony Bravia model (pictured below).

Although it only went on sale in May, this 50in set was heavily discounted as an early Black Friday deal, and its price could go even lower, depending on demand. It's a Google TV device, which supports streaming services like Netflix, Disney+, Prime Video, Apple TV, and Now TV (though not currently BBC iPlayer, All 4 or ITV Hub). Its stunning screen is augmented by **Dolby Vision** and Atmos for a cinematic audio-visual experience. Smart TVs from LG, Samsung, Sharp and other big manufacturers are also sure to be reduced.



WEBCAM

Logitech C925e Business Webcam

www.snipca.com/38385

RRP: £75.74

Expected discount: £59.99 (£15.75 saving)

Winner of our webcam round-up in Issue 608 (page 24) and included in our Buy It section since then, the five-star rated Logitech C925e (pictured below) was already reduced to £66.95 at the time of writing, and should be even cheaper for Black Friday. It's a Full HD model, with a 78-degree field of view and two microphones, and automatically adjusts to keep your picture looking sharp.



SMARTPHONE

Apple iPhone 12

www.snipca.com/39887

RRP: £679

Expected discount: £579 (£100 saving)

Black Friday is a great time to upgrade your smartphone, and Amazon is certain to have **SIM**-free deals from all the main manufacturers. High-end new phones such as the Google Pixel 6 and iPhone 13 are less likely to be discounted, but you can often save huge sums on slightly older devices, which will still support iOS 15 and (eventually) Android 12.

We spotted early savings on the **Samsung Galaxy A12** (reduced from £169 to £134.95; the **OnePlus Nord 5G** (down from £469 to £359) and the **Google Pixel 4a** (slashed from £349 to £299). But, based on an excellent Amazon deal last year, which cut the price of the iPhone 11 by £150, we're going to predict a big saving on the iPhone 12 (64GB version, pictured below). It may not be the very latest Apple handset, but it's still an excellent choice and a discount of £100 will make it even more appealing.



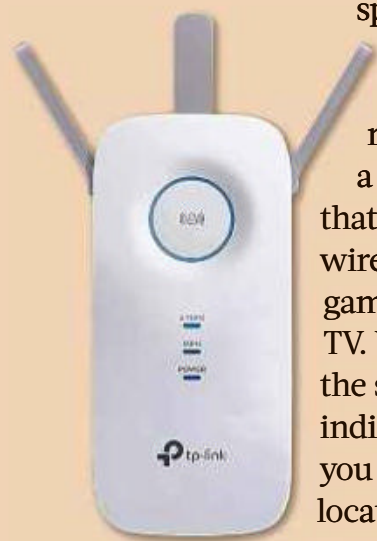
Wi-Fi EXTENDER TP-Link AC1750

www.snipca.com/39898

RRP: £74.99

Expected discount: £49.99 (£25 saving)

Compatible with any Wi-Fi router or wireless access point, the TP-Link AC1750 Wi-Fi extender (pictured below) has three antennas to eliminate Wi-Fi weak spots in your home,



so you can stay connected in every room. It also features a 1GB Ethernet port that lets you connect wired devices such as a games console or smart TV. We particularly like the smart signal indicator, which helps you find the best location for speedy Wi-Fi coverage by showing the signal strength.

GAMES CONSOLE Nintendo Switch Lite

www.snipca.com/39891

RRP: £199.99

Expected discount: £179.99 (£20 saving)

The Nintendo Switch has disappointed



Black Friday shoppers for the last four years, because it's seldom discounted and rarely in stock. But 2021 should see some deals on the handheld-only Switch Lite version (pictured above), which features a 5.5in screen, 32GB of storage and a battery life of up to nine hours. Look out for bundle deals that include games, and check different colours to see if they're cheaper. It is possible that the original Nintendo Switch *will* be cheaper this year, as a new version – the Nintendo Switch OLED – has just launched.

ROBOT VACUUM CLEANER iRobot Roomba Combo 111840

www.snipca.com/39894

RRP: £349.99

Expected discount: £279.99 (£70 saving)

Reduced by 20 per cent at the time of writing, this robot vacuum-cum-mop provides the perfect way to clean both your carpets and hard floors with the minimum of effort. It can be controlled with your voice using Alexa, so Amazon

suggests you buy one of its Echo devices too, but you can operate the iRobot Roomba Combo 111840 (pictured right) perfectly well without one via an app on your phone.



SOLID-STATE DRIVE SanDisk Extreme 1TB Portable NVMe SSD

www.snipca.com/39899

RRP: £221.99

Expected discount: £104.99 (£117 saving)

With a massive saving of 53 per cent, this early Black Friday deal certainly caught our eye, and is a great investment if you're looking for reliable and speedy portable storage. The SanDisk Extreme (pictured right) adds one terabyte of extra space to computers and games consoles, and transfers data at speeds of 1GB per second. It's water- and dust-resistant, offers password protection and comes with a five-year warranty.



Computer **active** READER OFFER!

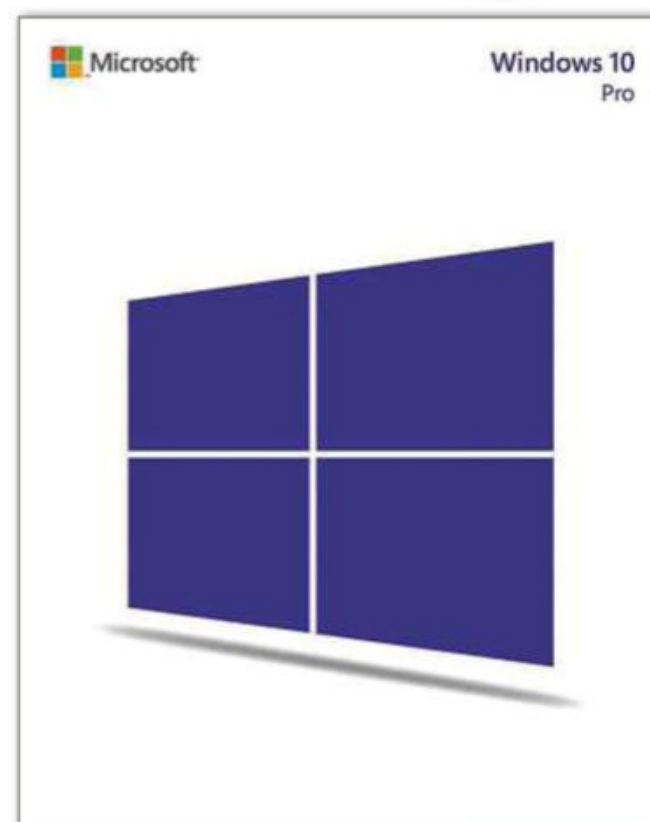
Buy Windows 10 Pro for just £69.99!

In this special offer you can buy **Windows 10 Pro** for £69.99 – that's £150 cheaper than Microsoft's full price of £219.99!

To buy **Windows 10 Pro**, visit www.snipca.com/39559 and click the red Buy Now button on the right

JUST SO YOU KNOW...

This offer can be used by one person only, and expires at midnight on **30 November, 2021**. It's a lifetime licence for one computer.



HOW TO BAG A BLACK FRIDAY BARGAIN

Sign up for Amazon Prime's free trial

Amazon Prime now offers so many benefits that its £79 annual membership fee is actually pretty good value. But if you only want Prime to bag Black Friday bargains, and get early access to Amazon's Lightning Deals (time-limited offers of variable quality), there is a workaround that won't cost you a thing.

Simply sign up for Prime's 30-day free trial (www.snipca.com/39910, see screenshot above right) and cancel before Amazon charges you. This will let you enjoy exclusive discounts and free, speedy deliveries on Black Friday and Cyber Monday, without committing to a full subscription. Choose the option to pay monthly when you start the trial, and you'll only be charged £7.99 rather than £79 should you forget to cancel in time. Be aware that Amazon only lets you sign up for the free trial once.

Alternatively, you can ask a family member or close friend to share their Prime membership with you via Amazon Household (www.snipca.com/39909). This lets you add another adult (and up to four children) to your Prime account, so they can reap the shopping benefits on Black Friday without paying separately. You don't need to live at the same address, but you must use the same payment method for purchases.

Track Amazon prices using CamelCamelCamel

Prices on Amazon fluctuate throughout the Black Friday and Cyber Monday shopping events, which means an item you buy now may be several pounds cheaper tomorrow. The best way to keep on top of these changes is to track price drops using CamelCamelCamel (uk.camelcamelcamel.com) – the odd name refers to the hump-shaped graphs the site uses to depict price rises and drops. It's



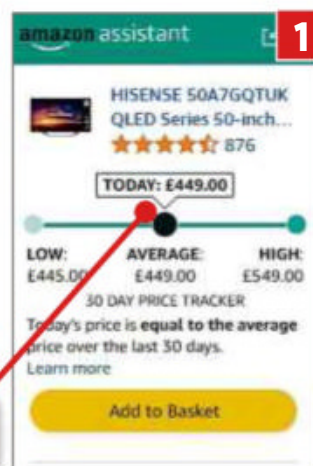
CamelCamelCamel tracks a product's price on Amazon and can alert you as soon as it drops



Get exclusive deals and fast delivery on Black Friday with Amazon Prime's 30-day free trial

The Amazon Assistant extension tells you when Amazon sells a product for less than the online store you're viewing (1), and lets you save it to your wishlist (2)

TODAY: £449.00



particularly handy for identifying 'fake' bargains on Black Friday, when a product is promoted as being significantly reduced, but actually costs the same as – or only slightly less than – it did last week.

Search for an item you'd like to buy, or copy and paste its Amazon URL, and CamelCamelCamel will produce a price-history chart that tracks its cost over the last month, three months, six months or year. It told us, for example, that the Motorola Moto G50 smartphone, which Amazon was currently selling for £199.20, cost only £166.66 in July – so any price higher than that won't really be an 'exclusive' Black Friday bargain.

Specify how much you're willing to pay for the item, and CamelCamelCamel will monitor its price and alert you via email as soon as it drops to or below your desired amount. Usefully for Black Friday, the site lets you import your Amazon wishlist to create automatic price watches for saved products, and lists the biggest price drops in each Amazon department over the last 24 hours.

CamelCamelCamel also offers a browser extension called The Camelizer (www.snipca.com/39917), which works with Chrome (and other Chromium browsers), Firefox, Edge, Safari and Opera. Just click its toolbar button when viewing an Amazon product page to see a price-history graph and create a Price Watch alert (see screenshot left).

Save money and time using Amazon Assistant

Even if you plan to do most of your Black Friday shopping at Amazon, you're sure to find lots of great deals on other online stores. Rather than switch back and forth between browser tabs to compare prices, you can create a 'universal' wishlist using the official Amazon Assistant extension (www.snipca.com/39918). This lets you save items from other sites to buy later, and also tells you when a product can be bought for less on Amazon. That may seem unfair on smaller retailers, but on Black Friday it's every store for itself!

Install the extension in Chrome, Firefox, Edge or another Chromium browser such as Brave or Vivaldi, then click the 'a' icon on your toolbar and tick the option to 'Show product matches from Amazon when browsing other retail websites'. Start shopping and, when you view an item that Amazon also sells, the extension will display a pop-up in the top-right corner of your browser, which shows Amazon's current price for that product (see screenshot 1 above). You can then either click the link to visit the item's page on Amazon, click 'Add to basket' to buy it, or save it to your wishlist by clicking the 'a' button and choosing 'Add to List', then 'Add to Wishlist' 2.

Amazon Assistant also gives you one-click access to Amazon's Vouchers page, its Lightning Deals section and your Amazon order history – all of which are very handy on Black Friday.

Jump the Black Friday queue using Hotukdeals

Hotukdeals (www.hotukdeals.com, see screenshot right) is an essential bookmark for beating other online shoppers to the best Black Friday bargains and bagging them before they disappear. As well as listing the ‘hottest’ deals of the day, as voted for and commented on by its knowledgeable shopping community, it provides voucher codes to save you even more money at hundreds of stores.

The site lets you filter its content by category, so you can focus on Electronics deals, and by retailer – just click the Menu button and select a ‘merchant’, such as Amazon. Refresh the New page frequently throughout Black Friday to see offers as they’re added.

You can sign up for the Hotukdeals daily newsletter to stay abreast of the latest Black Friday offers, and set up price alerts for specific products to be notified as soon as they’re discounted. It’s also worth installing the Hotukdeals app for Android (www.snipca.com/39915) and iOS (www.snipca.com/39916), so you can browse Black Friday bargains on the move, and get push notifications as soon as new deals appear. We recommend switching off ‘Show expired deals’ in the app’s settings, so you can focus on what’s still available.

Look out for ‘price match’ guarantees

One way to ensure you get the best possible deal is to check which retailers



Stay abreast of the latest tech bargains on Black Friday with Hotukdeals

are offering a Black Friday ‘price match’ guarantee and then shop early. This guarantee means that retailers will match the price of a product if you’re able to find it cheaper elsewhere – and that includes on Amazon.

Price-match guarantees can be important when deciding whether to go with one store over another, because it’s easy to get swept up in an impulse purchase.

Stores offering a price-match guarantee this Black Friday include John Lewis (www.johnlewis.com), which will refund the difference for up to 28 days after you’ve bought an item that costs less on another site; and Currys (www.currys.co.uk), which has confirmed that its Price Promise applies to Black Friday deals. It even provides a ‘Compare prices’ option for popular products such as smartphones to prove that it undercuts other retailers – ‘You won’t get it cheaper. Full stop’, says

the Currys Price Promise information page (www.snipca.com/39913).

Get deal notifications from tech sites

Push notifications from websites are usually an annoyance, but on Black Friday they can prove very useful, alerting you to the latest deals as soon as they become available.

Our sister site TechRadar, for example, will be updating its round-up of tech bargains throughout the event. You can view TechRadar’s Black Friday articles at www.snipca.com/39911, but to ensure you’re notified when it adds a new discount, you’ll need to enable the feature in your browser

In Chrome, click the menu button and choose Settings, then ‘Privacy and security’. Click ‘Site settings’, select Notifications and make sure that the ‘Sites can ask to send notifications’ option is switched on. Scroll down to the ‘Allowed to send notifications’ section, click the Add button and type techradar.com/uk (see screenshot below). Click ‘Add’ to save the site to your allowed list, along with other handy sources of Black Friday deals, such as T3 (www.t3.com), What Hi-Fi (www.whathifi.com) and Tom’s Guide (www.tomsguide.com/uk). You can turn notifications off once Black Friday is over.

In Firefox, you can allow notifications for specific sites by going to Settings, ‘Privacy & Security’, Permissions and clicking Settings next to Notifications. In Edge, go to Settings, ‘Cookies and site permissions’ and click Notifications.



Allow notifications in your browser from sites that round up Black Friday bargains

Essential browser tools for Black Friday

As well as Amazon Assistant and The Camelizer (see page 55), there are several other browser extensions that save you money on Amazon on Black Friday.

Amazon Discount Finder (www.snipca.com/39919), for example, provides a quick way to find the biggest reductions. Install it in Chrome, then click its toolbar button, choose ‘United Kingdom’ in the Select Country menu, specify a department and enter keywords relating to the item you want to buy. Use the sliders to set a discount range, enter a minimum and maximum price, and choose whether to sort the results by price, popularity or customer rating. Finally, click the Search Discount button to create a custom ‘bargain basement’.

You can save extra money on Black Friday by installing Honey ([\[joinhoney.com\]\(http://joinhoney.com\)\). Available for all the main browsers, and as a mobile app, this tool finds voucher codes for products on Amazon and thousands of other stores, and applies them automatically. Sign up for a free Honey Gold account to earn cashback on your purchases, which you can trade for Amazon gift cards.](http://www.</p></div><div data-bbox=)

Before you snap up a Black Friday bargain because it has lots of positive reviews, use the Fakespot extension (www.fakespot.com) in Chrome or Firefox to ensure you’re not being conned. Click the Analyze This Page option when viewing an Amazon product, and the extension will scan the reviews and tell you if they can be trusted. It provides an overall reliability grade and details of anomalies and ‘deception’.

DON'T MAKE THESE BLACK FRIDAY MISTAKES

Not preparing for the day

Rather than browse endless pages of discounts on Amazon and other sites, it's sensible to decide what you want to buy before Black Friday begins. Tech items can sell out quickly, so any delay could mean missing out on a brilliant bargain.

For example, if you're looking for a new smart TV, research different models and note their specifications, such as screen size and resolution, supported apps and number of **HDMI** ports. Sites such as TechRadar, What Hi-Fi and Tom's Guide (see page 56) are good sources of recommendations. That way, if the exact model you want sells out or isn't reduced in price, you'll have some good backup options to choose from.

Falling for Black Friday scams

Unfortunately, Black Friday and Cyber Monday inevitably bring scammers and fraudsters out of the woodwork, so be sure to use your common sense when shopping. Always aim to buy from trusted retailers, such as Amazon, Argos and Currys, and pay securely using a debit/credit card or PayPal, so you can get your money back should anything go wrong or you have to return something. If you haven't already, set up **two-factor authentication** for your accounts with online stores to get extra peace of mind.

You should also be wary of 'too good to be true' offers and links on social media, and in unsolicited emails, as well as phishing messages disguised as order confirmations (see screenshot below left).



Beware phishing emails disguised as Amazon confirmation emails

Should you wait for Cyber Monday?

Cyber Monday always falls on the Monday after Black Friday, which this year is 29 November. Whereas Black Friday deals are traditionally on expensive tech products such as TVs, laptops and smartphones, Cyber Monday's online-only discounts were once focused on household items such as coffee machines, microwaves and furniture, but the two shopping events are now virtually indistinguishable. Last year, Amazon began its Cyber Monday sales at 12.01am on the Saturday - one minute after Black Friday ended!

Inevitably, some Black Friday bargains will be sold out by Cyber Monday, while

other items will have their prices slashed further by retailers hoping to clear out stock. But if you're not looking for a specific product, you'll find plenty of great tech deals in both the extended Black Friday sales and the early Cyber Monday ones.

If you see a fantastic Black Friday deal that meets all your requirements, such as a hugely discounted laptop, we recommend going for it. Products can sell out fast, and you can usually return the item if you see a better deal on Cyber Monday. But for non-tech items, such as clothes and kitchen appliances, it's worth waiting for the second event.

Last year, Action Fraud launched a campaign warning shoppers to be extra careful during Black Friday and Cyber Monday - read its advice at www.snipca.com/39921.

Prioritising savings over price

Some retailers artificially increase the prices of their products just before they apply Black Friday discounts, making deals look better than they really are.

We've already mentioned CamelCamelCamel for tracking Amazon prices over time, but PriceSpy (<https://pricespy.co.uk>, see screenshot below) lets you view the price histories of products on hundreds of other sites, too. This will help you spot if a Black Friday saving is nothing of the sort, and tell you the



PriceSpy offers an impartial comparison of product prices and tracks how they've changed

cheapest place you can currently buy the item. You can also set up price-drop alerts through the site, and access PriceSpy on the move using its mobile app.

Not checking the warranty

It's easy to get so excited about a tech bargain that you forget to check how long the product's warranty lasts. John Lewis is a reliable choice because it provides a minimum two-year guarantee on all electrical items and a five-year guarantee on TVs - at no extra cost. But products on Amazon are usually only covered by the manufacturer's warranty and it doesn't always provide this information, so you should check the manufacturer's website. However, Amazon does state that: "If your item appears to be defective more than 30 days after the receipt of the order, it might be eligible for the repair service", and refers you to its Return Support Centre (www.amazon.co.uk/returns).

Additionally, some credit cards offer extended warranties beyond that offered by the manufacturer or retailer. They'll also refund you if an order of over £100 doesn't arrive. **ca**

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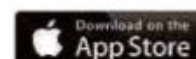
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Ditch websites for **PWAs**



Progressive web apps turn websites into apps that you can install on your computer, phone and tablet. **Robert Irvine** explains how PWAs work and why you should use them

Progressive web apps – or PWAs for short – provide a way to access your favourite websites without opening your browser, whether you're using your desktop PC or your phone or tablet. By converting websites into apps, PWAs give you the best of both worlds, and they're currently being touted by Google – with support from Microsoft – as the future of the web.

As with traditional PC and mobile apps, you can launch PWAs from your desktop or home screen, but they have the additional benefits of working offline and taking up very little space. Most browsers now support them and an increasing number of websites offer PWA functionality. Here we'll explain how to install PWAs and what you can do with them.

Install a PWA on your PC

Installing a PWA on your computer is very straightforward, provided you're using a Chromium browser such as Chrome, Edge, Brave or Vivaldi.

In Chrome and Brave, when you visit a website that has PWA functionality, such as Argos or YouTube, you'll see an 'Install [site name]' button at the end of your address bar. This looks like a monitor with a down arrow in front of it. When you click the button (see screenshot above right), Chrome or Brave will display an 'Install app?' pop-up. Click 'Install' to install the website's PWA on your PC. The app will automatically open



Install PWAs in Chrome by clicking a button in its address bar

in a new window and a shortcut will be added to your Start menu and desktop. Click or double-click this to launch the PWA without opening your browser first. You can also pin the app to the Windows taskbar for easy access.

Edge also displays an install button for PWAs in its address bar – this looks like a square of three blocks and a plus sign, and is labelled 'App available. Install [site name]'. As in Chrome and Brave, once you install the PWA it will open in a new window, but Edge also provides options that let you decide what the app can do (see screenshot right). Choose whether to pin it to your taskbar and Start menu, create a desktop shortcut for the app and launch it automatically when you log into your PC, then click Allow.

As we explained in our Browser Tips section in Issue 618 (page 42), the latest version of Vivaldi (<https://vivaldi.com>) goes further than other browsers by letting you turn *any* website into a PWA, even when it doesn't offer that feature.

Right-click a site's tab and, if you don't see an 'Install [sitename]' option, choose 'Create shortcut'. Tick the box 'Open in new window' and click Create to launch the site like an app. Vivaldi automatically adds PWA shortcuts to your desktop, Start menu and its Apps page (<vivaldi://apps>).

Frustratingly, Firefox dropped support for PWAs in its desktop browser at the start of the year, though you can still use them in its Android version (see next tip). There is a workaround involving an extension called 'Progressive Web Apps for Firefox' (www.snipca.com/39940), but this requires installing Microsoft's Visual C++ Redistributable package, and is rather fiddly.



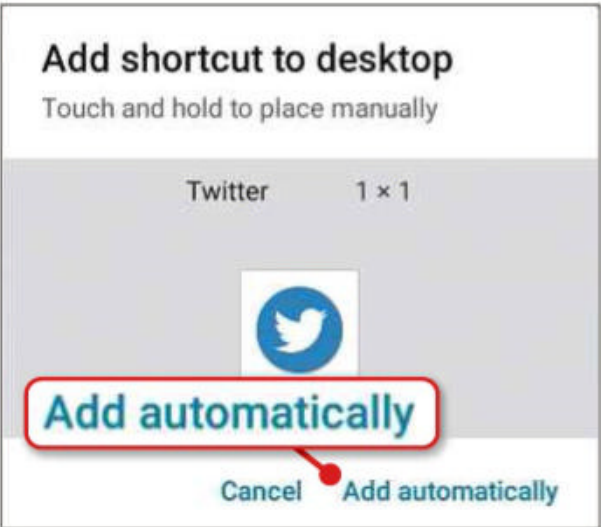
In Edge, choose whether to add a PWA to your Start menu, taskbar and/or desktop

Uninstalling a PWA couldn't be easier – simply click the three-dots in its top-right corner, choose 'Uninstall [app name]' and click Remove. All associated shortcuts will also be deleted.

Install a PWA on your phone or tablet

The main advantage of using progressive web apps on your phone or tablet is that they're more lightweight than standard apps. For example, the Twitter PWA uses only three per cent of the storage required by its Android equivalent; while the Spotify PWA doesn't take up valuable space by **caching** all the songs you listen to – unlike its Android and iOS app.

You can install a PWA through your mobile browser in much the same way as on your PC – visit a compatible site, tap the browser's menu button and select 'Install app' to add it to your home screen. In Firefox for Android, you'll see a blue dot on the menu button when the browser detects a PWA. Open the menu, choose Install, then long-press the PWA icon and drag it to your device's home screen – or just choose 'Add automatically' (see screenshot below). It will have a small Firefox logo in the bottom-right corner to differentiate it from standard apps.



Install PWAs via the Firefox app for Android and add them to your home screen

Unlike in macOS, the Safari browser for iPhone and iPad lets you install PWAs. Tap the up-arrow Share button while viewing a PWA-compatible website, select 'Add to Home Screen' then tap Add. You can uninstall PWAs by long-pressing them and choosing Remove (on Android) or Delete Bookmark (on iOS).

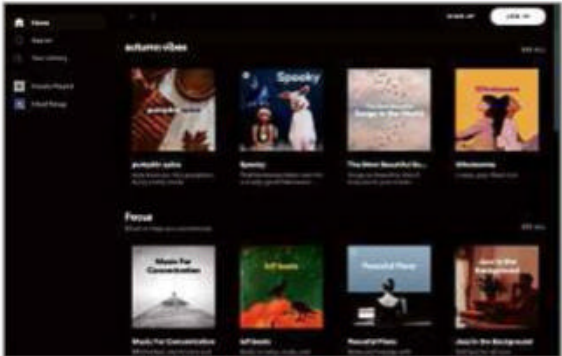
What are the benefits of PWAs?

When you view a website in your browser, it's easy to get distracted by toolbars, notifications and other tabs. A PWA window, in contrast, focuses solely on the site, without any clutter to divert your attention. There are a few options in

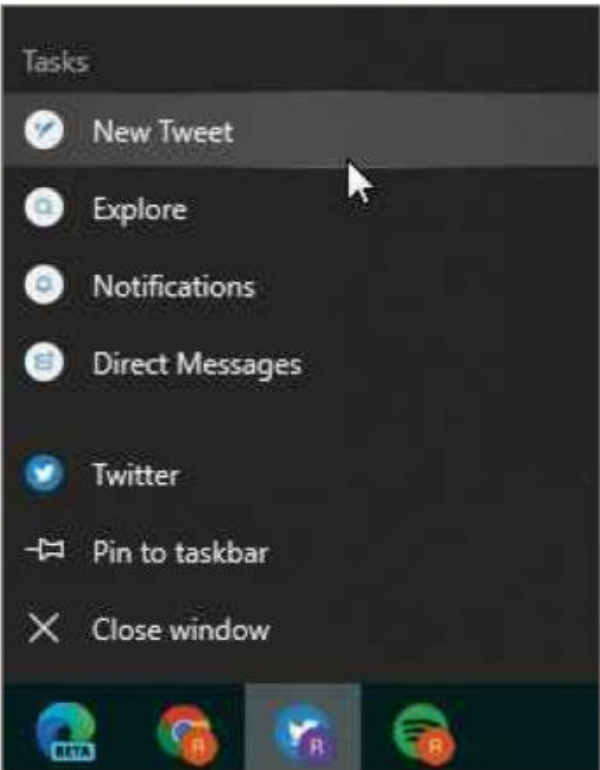
Which websites provide PWAs?

In the last few years, plenty of websites have introduced PWA functionality, and more are adding it all the time. Here are 10 of the most useful sites you can run as apps.

- Argos www.argos.co.uk
- Google Photos <https://photos.google.com>
- Outlook <https://outlook.live.com>
- Pinterest www.pinterest.co.uk
- Spotify Web Player (pictured) <https://open.spotify.com>
- Telegram Web <https://web.telegram.org>
- Tinder <https://tinder.com>
- Twitter <https://twitter.com>



- Unsplash <https://unsplash.com>
- YouTube www.youtube.com



PWAs such as Twitter let you access website features by right-clicking their shortcuts

the top-right corner, such as a zoom tool, an Extensions button and a menu that lets you print and search, but otherwise it's just whatever's on the original website.

In fact, some PWAs offer more features than their equivalent mobile apps because they retain everything from the site rather than redesigning it for phones and tablets. Usefully, some PWAs let you right-click their shortcuts to access features unique to the original site – for example, the Twitter app lets you compose a new tweet (see screenshot above) and read direct messages.

The 'progressive' part of a PWA means it's optimised for whichever device you're using and can take advantage of **hardware-accelerated** graphics. This means you won't have any problems displaying content and may find it loads more smoothly than on the website.

PWAs consume less memory than standard apps, and – as we mentioned in

our introduction – they even work when you lose your internet connection. Additionally, they let you use apps on your mobile device without the hassle of installing them from an app store.

What are the downsides to PWAs?

Currently, the biggest problem with PWAs is that most websites still don't support the feature, so you need to keep an eye on your browser's address bar – or menu – to see if an Install option appears. See our box above for a list of popular sites that provide PWAs.

Although you can run multiple PWAs at the same time, this can lead to your screen becoming crowded with windows, whereas sites in your browser are neatly organised in tabs. There's also the annoyance that if a website requires you to sign in each time you use it, then its PWA will too, whereas standard desktop and mobile apps usually open straight to their content – or only ask you to log in the first time you use them.



Visit PWA Stats to follow how companies around the world are using the technology

However, as PWAs are completely free to use, and are quick and easy to install, it's worth giving them a go to see if they work for you. You can follow the latest PWA news at PWA Stats (www.pwastats.com, see screenshot above). **ca**

Save money

WITH A smart thermostat

If you're worried about the cost of your energy bills this winter, smart heating provides an affordable and reliable way to keep your home warm.

Nik Rawlinson explains how it works and why you should switch now



Smart thermostats have been around for a decade, but if you've never been inclined to fit one, it's time to think again. In October, the cap on domestic energy prices was lifted, and regulator Ofgem warned that a typical home's gas and electricity costs could climb by £139 if paid by Direct Debit, and £153 via pre-payment. That lifts the average annual bill to £1,277 and £1,309 a year respectively.

To cushion the blow, first compare your current tariff against available alternatives using a site such as MoneySavingExpert.com's Cheap Energy Club (www.snipca.com/39874), and if you're not still under contract, consider a more competitive plan. You can then turn to the latest technology to maximise your savings.

What is smart heating?

Smart heating combines a digital thermostat, a control box wired to your boiler and a hub plugged into your router, which connects the whole system to the internet. As long as the system's online, you can control your heating via a web browser, a smartphone app or a voice assistant such as Siri, Alexa or Google Assistant.

Better still, if you let the app track your location, it can automatically shut down the heating when you go out and switch it on when it detects that you're heading back home, so you don't waste energy heating an empty house or flat.

More recently, smart-heating systems have started to integrate with other smart



Hive sensors switch your heating on and off automatically when you close or open a door or window

devices installed around your home. So, if you have a Hive thermostat, for example, you can install door and window sensors (£29 from www.snipca.com/39869, pictured above) that detect when they're open or closed. Should any of these report an opening, the thermostat assumes the house is warm enough, and turns off your heating.

Likewise, if you have an electric heater plugged into a compatible smart plug and the thermostat detects that the air temperature has reached 25 degrees Celsius, it can cut power to the plug to turn off the heater. This not only saves energy: it could also avoid a fire if you've gone out and forgotten to switch it off.

Things get really clever when you combine two or more devices with your thermostat. Hive's range includes both thermostatic radiator valves and motion detectors (priced from £29, www.snipca.com/39870). By installing these in, say, a home office, you can make sure that a

room you might not use at the weekend is only heated when there's someone in there. If you have a large, or poorly insulated property, heating only areas you're actively using can deliver significant savings.

What are the cost benefits?

Smart heating is an investment, and you need to be sure that the return will outweigh the costs: especially if you already have a functional thermostat and you always remember to turn off the heating before you head out.

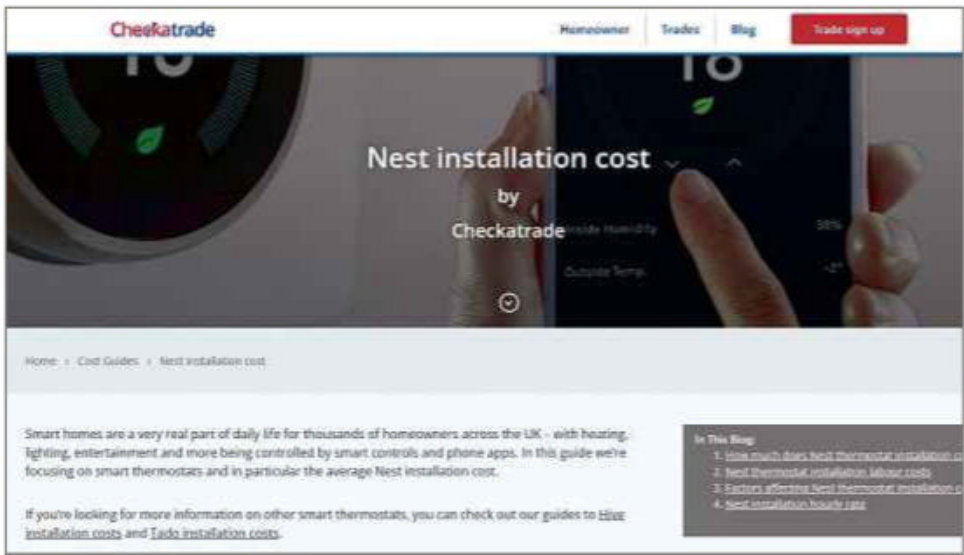
The Hive Thermostat (www.snipca.com/39871, pictured below), from British Gas owner Centrica, costs £249 (reduced to £224 at the time of writing). The Hive Hub that connects to your router is an additional £50, and installation is £70 (you could do it yourself if you're confident, but don't take any risks). This makes a total price of £369.

Optional extras such as motion detectors, smart plugs and radiator valves



The Hive Thermostat costs £249 but you'll also need to buy a hub that connects to your router

Checktrade provides guides on the cost of installing smart heating systems, such as Nest's



are charged separately. Although Hive's current thermostat has been on the market for eight years, it still works well and does all you could want, with optional sensors, cameras and valves adding significantly to the abilities of its integrated system.

Nest's third-generation Learning Thermostat (www.snipca.com/39872, pictured below) costs £219. Installation prices vary depending on your local contractors, but Checktrade's guide prices (www.snipca.com/39862, see screenshot above) are £60 to £200, depending on complexity and any additional work that needs doing.

Assuming you pay £130 (half way between the two), the cost of getting set up with either Nest or Hive is roughly the same – around £350.

More recently, Nest introduced the £199 Thermostat E (www.snipca.com/39873), which is designed for self-installation and allows you to control your heating from your phone, but doesn't have the learning features of the full-fat thermostat.

How much can I save?

Ideally, you'll want to offset those purchase and installation costs as quickly as you can. Any gas and electricity price rises will help you maximise your return, as your savings will be greater, but you'd be lucky to recoup your outlay in less than a couple of years. Fortunately, the longer you live with your system, the

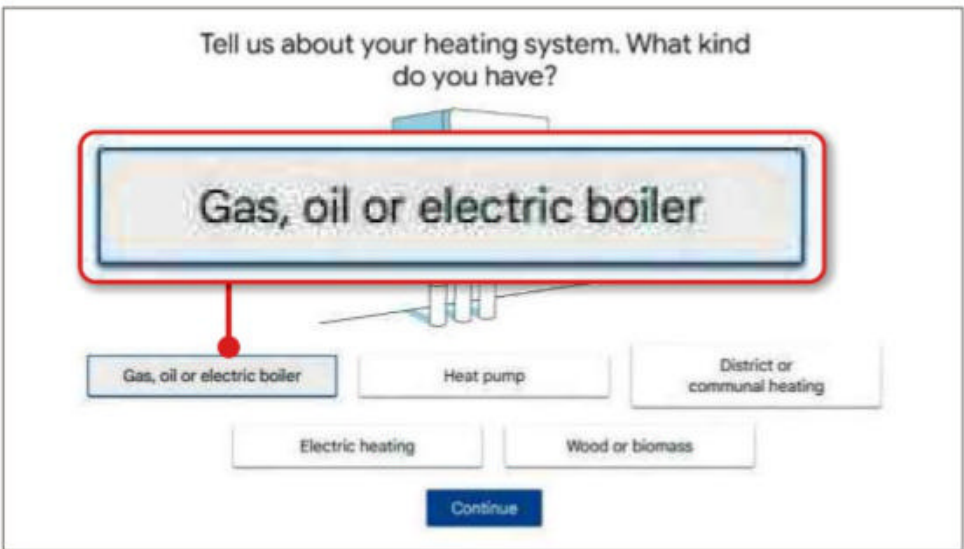
more efficient it will become, allowing the savings to stack up over time. That's because 'smart' heating gets smarter: being linked to apps and servers means it can gather information about how long it takes your home to reach your preferred temperature.

With a traditional, manual thermostat, if you wanted the house to be at 24 degrees when you got up at 7am, you might set your heating to come on at 5.30am, even though – unbeknown to you – it only takes an hour to reach your desired temperature. As a result, you end up burning more gas than you need. A smart thermostat would spot that, and start switching on the heating 30 minutes later. If you later invest in double glazing or better insulation, it will reduce the settings once more, meaning the heating will come on even later, and the house will still reach your desired temperature at the appointed time.

Nest estimates that its smart thermostat can reduce heating bills by an average of 10 to 12 per cent per year (www.snipca.com/39866). But how much of your overall bill does heating account for? In January this year, Ovo Energy estimated (www.snipca.com/39865) that the average UK energy bill was £1,042, of which heating comprised £453 (43 per cent). If the average energy bill has since risen to £1,300, heating costs will be around £565. Assuming you achieve Nest's optimum 12 per cent saving, you



Nest claims its smart thermostat can reduce heating bills by 10 to 12 per cent on average



Nest's compatibility checker will tell you whether its devices will work with your heating system

Living with smart heating

Keep an eye out for offers. I bought a Hive thermostat, with hub and installation for £159 in Amazon's 2017 Black Friday sale. At that rate,




I'll have made back my money in just over two years, and been in profit since spring 2019. Every time my tariff is hiked, I save a little more. Having lived with Hive for close to four years, I'd still recommend smart heating, even if the savings were marginal. The convenience of voice and app control – especially when away from home – isn't something you really appreciate until you've experienced it. It's one of those instances where, once you have something, you won't want to lose it.

Nik Rawlinson

can trim that by £68 a year, so will make your money back in a little over five years.

The higher energy prices rise, the more quickly you'll break even. Analysts are warning of a 30 per cent hike next year, to £1,660 (www.snipca.com/39864). If they're right, you'll earn back your outlay in four years.

Is my boiler compatible?

It's easy to check if your current heating system supports a smart thermostat. Hive works with electric, gas, oil and combi boilers, but not storage heaters. It has a handy checklist at www.snipca.com/39867, which includes a list of incompatible boilers. Nest has a step-by-step compatibility checker at www.snipca.com/39868 (see screenshot below) where you can click through an illustrated list of options for an on-the-spot verdict. 

Problems Solved

Our experts solve all your tech problems

PROBLEM OF THE FORTNIGHT

What are these entries in Outlook?

Q Recently, I was exploring the Settings pages in Outlook.com for something related to junk email. I found what I wanted but, while poking around in there, I also looked in the 'Mobile devices' section and was alarmed to find several entries that I didn't recognise. My iPhone and iPad are both listed there, but so too are a couple of more items that are labelled as 'UniversalOutlook'. I have no idea what these are, and my iPhone and iPad are the only two mobile devices I own. My only other machines are a desktop PC and a laptop. I'm really not sure what to think or do. Could you perhaps enlighten me?

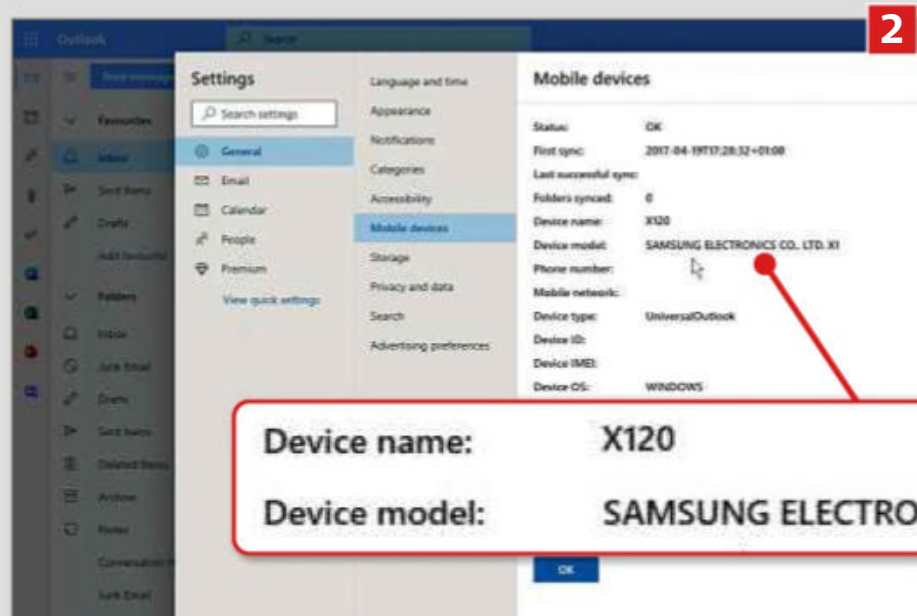
Michael Benson

A Certainly. First, for the benefit of other readers we should explain that you found this list by clicking the Settings cog followed by 'View all Outlook settings', and then General followed by 'Mobile devices'.

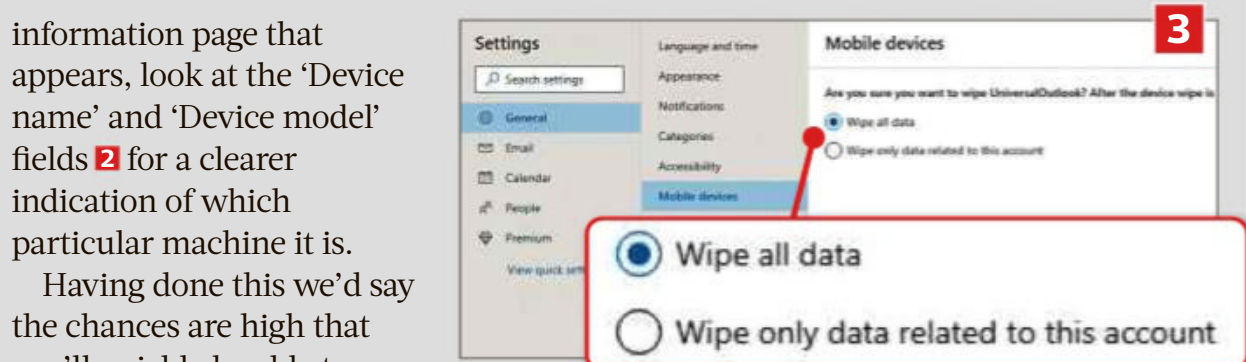
Next, it's useful to understand that 'Mobile devices' is a misnomer. Rather, this section lists devices that connect to access your Outlook.com account – but from outside the Outlook.com website itself. As such, it is likely to include mobile devices, but it can also track connections made by any device, including laptops and desktop PCs.

That last bit is key here, because the UniversalOutlook label is Microsoft's term for the Windows 10 Mail app. We're sure it makes sense to the company's software engineers, at least! So, any computer you own that runs Windows 10 is likely to have connected to your Outlook.com account to sync emails to the Mail app, and will be listed here as UniversalOutlook.

That's not remotely obvious. Nor is the fact that you can find out more about the particular devices by first hovering the mouse pointer over an entry and then clicking the Edit icon (a pencil, see screenshot 1). In the



Click the edit icon (1) to open the information page. Here, you can see which devices are linked to Outlook.com (2). Remove a device by selecting 'Wipe all data' (3)



information page that appears, look at the 'Device name' and 'Device model' fields 2 for a clearer indication of which particular machine it is.

Having done this we'd say the chances are high that you'll quickly be able to recognise and therefore identify all the devices labelled as UniversalOutlook, all of which will be Windows 10 PCs. If there are any you that wish to remove from the list, then you can click the adjacent Delete (dustbin) icon to erase them. However, note that deleted entries will return the next time the related Windows 10 PC connects to your Outlook.com account.

If there's one you don't recognise, or wish to remove permanently, then you can take the nuclear option of clicking the 'Wipe all data' icon (it looks like a

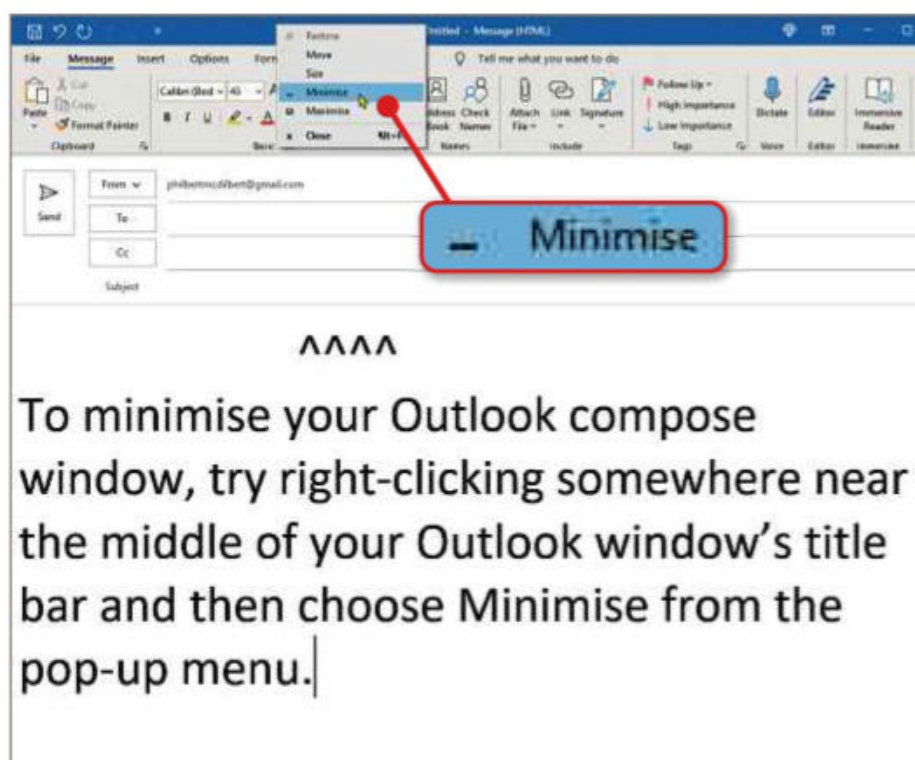
document with an eraser in the corner). You can choose either the 'Wipe all data' or 'Wipe only data related to this account' option 3. If you choose the second option then, when the connected machine next syncs with your Outlook.com account, Windows 10 Mail will wipe all the connection details but retain the related mailboxes and so forth. But if you choose the first, everything will be wiped from the connected device – messages and all – so use with supreme caution. Make your choice and then click Save.

Why won't my Outlook window minimise?

Q I run Windows 10 with Office 2019 and Outlook as my email client. When I'm composing a new email and need to come out of it to find information to include, Outlook will not let me minimise the window in order to view another screen. Instead, I save the unfinished email into Drafts, collect my information from another screen and then resume from Drafts. This is annoying. Do you have a solution or is this just a quirk of the program that has to be endured?

Allan Drever

A This is rather mysterious! We assume it's just Outlook that's affected? Regardless, we'd suggest trying one of a couple of alternative shortcuts for minimising any window. First, right-click somewhere near the middle of your Outlook window's title bar (the blue strip, along the top) to open a pop-up menu: from this choose Minimise (see screenshot above right). The other option is to hold



Right-click the middle of the Outlook window's title bar (the blue strip, top) and choose Minimise

down the Windows key and then tap the down arrow (cursor) key.

Still, even if these work neither is actually a fix for the non-working button. So, we'd suggest the Office repair tool. Click the Start button followed by the Settings cog, and then Apps. Now scroll

through to find and then click Microsoft Office, followed by the Modify button.

Next, select the Quick Repair option and then click Repair. If the problem persists, repeat this procedure, but second time around choose the Online Repair option instead.

Why won't my screen turn on after going to sleep?

Q I have set the screen and computer power to go to sleep after 15 minutes. If I've been away for more than 15 minutes I just press any key and the computer comes back to life – no problem. However, sometimes the screen will not come on, even though I know the computer has reactivated because I can hear the cooling fan kicking in. I have to reset the power and restart, and then it's fine again. My system is a home-built desktop PC, with an Nvidia GeForce GTX 1050i graphics card. Any ideas?

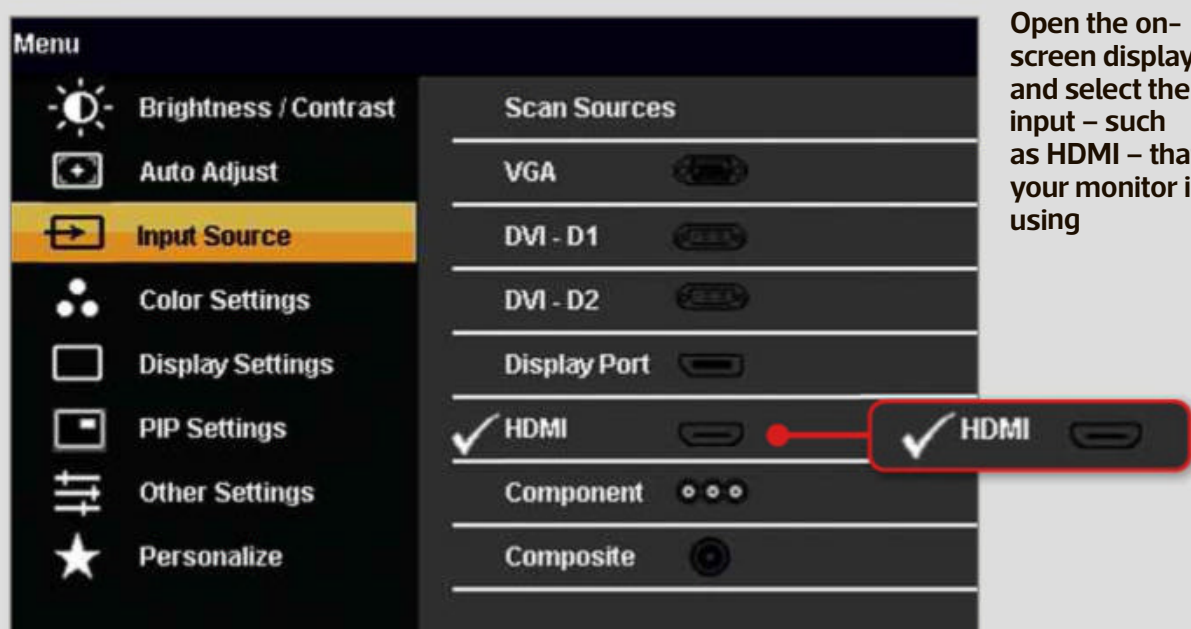
Roger Squires

A We doubt this has anything to do with your PC or graphics cards. Rather, some displays have modes that automatically scan for or switch input modes, and this can cause hiccups for features like sleep and wake in Windows – because your monitor might be scanning a

different input when Windows sends its wake signal.

We don't know which monitor you're using, but begin by accessing its on-screen display (OSD) menu, using the physical buttons on the bezel. Now look for an option or tab labelled Input or Input Source, or similar. Within that, we

think you'll find that it's currently set to an auto-selection option, labelled something like Auto Input Switch or Scan Sources. Use your monitor's physical buttons to select the input that the display actually uses to connect to your PC, which is most likely HDMI or DisplayPort (see screenshot above).



Open the on-screen display and select the input – such as HDMI – that your monitor is using

How do I remove my wife's name from emails?

Q I have an annoying problem that I need help with. I use the Windows 10 Mail app and whenever I send or forward an email it comes attached with my wife's name on it, as you'll see from this email. It's driving me mad. Please advise me of a way to stop it happening.

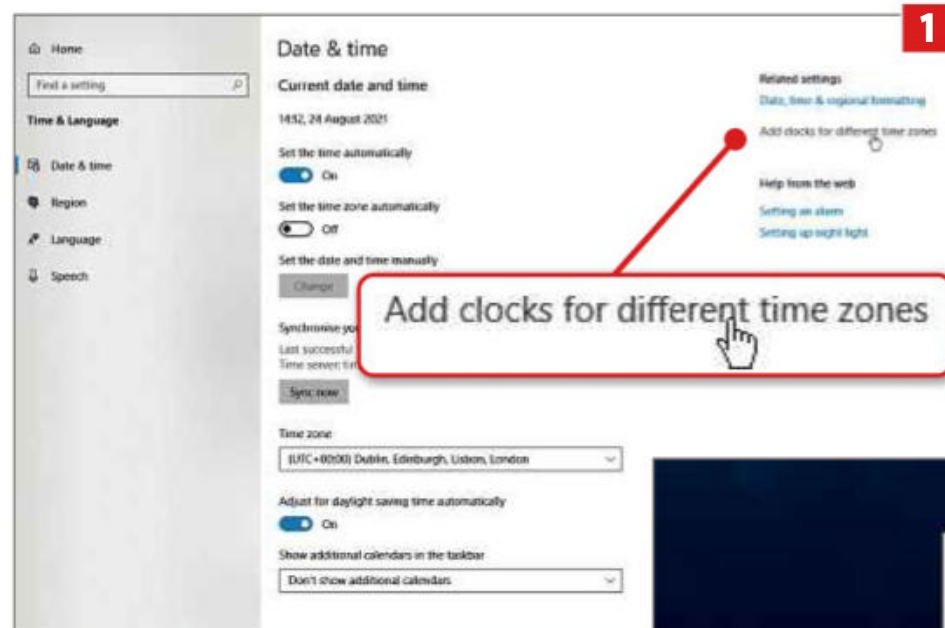
Bernie Back

A What's happening is that an attribute that's often referred to as the 'display name' has been set as your wife's name. We don't know how or why this might have happened originally, but it's easy enough to change in Windows 10 Mail. Well, it's easy when you know where to look. First, in Mail, click the Settings cog at the bottom left and then, under Settings, click 'Manage account'. Now click to select the relevant account followed by 'Change mailbox sync settings'. Finally, under 'Send your messages using this name', type your name in place of your wife's, and then click Done (see screenshot below).

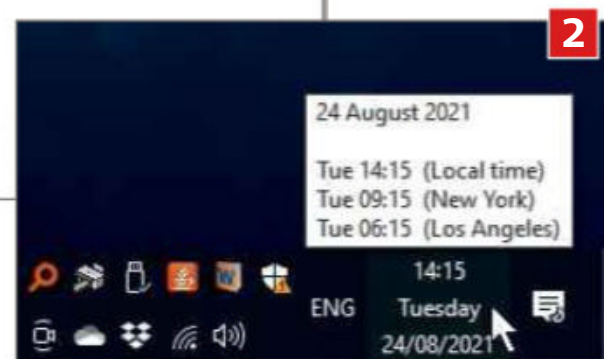


You can change the name in the 'Send your messages using this name' box

Can I add world clocks in Windows 10?



To add world clocks to the notification area, select 'Add clocks for different time zones' (1). To see times on the world clocks, as well as here in the UK, hover your mouse over the notification area clock (2)



Q Our son has moved to America for work, and now switches between the west and east coast every few weeks. This is a great opportunity for him and, while we're a bit sad that he's so distant, we're pleased for him. However, the flitting of locations is causing havoc for my mind. When I call him, I first have to remember where he is and then look up his local time. Back in the days of Windows XP, I had some little **widget** that displayed a world clock. I had no use for it then, but it would be handy now. Is there something similar for Windows 10?

Jane Hill

A There are actually a couple of options included with Windows 10.

If you want something sweet and graphical that you can keep open as a window somewhere on your desktop, then there's a built-in app called Alarms & Clock – you can search for it in Start.

With the app launched, adding world clocks is a simple matter of clicking the plus ('+') icon at the bottom right, before typing a location and pressing Enter. Repeat for additional time zones.

For something less obtrusive, and in our opinion more practically useful for your specific purposes, you can add a couple of extra clocks to the notification area, which sits at the far right-hand side of the taskbar – at the bottom of the Windows desktop.

To do this, right-click the notification area clock and, from the pop-up menu, choose 'Adjust date/time'. Next, under the 'Related settings' heading, click the 'Add clocks for different time zones' link (see screenshot 1). Then, in the 'Date and Time' menu that appears, on the Additional Clocks tab, click the first 'Show this clock' box and then click to open the first 'Select this time' dropdown menu. Scroll through to find and then click the relevant time zone. Now type a name for this zone in the 'Enter display name' box. Repeat for the second clock, then click OK.

Whenever you wish to see times in both zones, as well as here in the UK (assuming that's where you are), just hover your mouse pointer over the notification area clock 2.

Q: Can I make old software run on Windows 10?

A: Issue 579, page 69 – find it on our 2020 Back Issue CD

Buy it from
www.snipca.com/38164



Why does my PC BIOS show every time?

Q When I turn on my Windows 10 desktop PC I keep getting a BIOS message. I'm not very technical so I just press F2 and it starts up as normal. Any idea what's causing this, and how I can stop this message being shown?

Jim Fraser

A Your photo was too grainy for publication, but the BIOS is telling you that the time, date and other settings are not being saved, and thus need to be set up afresh. That, in turn, tells us that the CMOS backup battery on your computer's motherboard has died. This is very common, though people often replace their computers before the little button cell runs out of power. By pressing F2 you're declining to set the date and time, so the message duly reappears whenever



Pop out the dead CMOS battery (inset below) from the motherboard with a screwdriver and slot in a new one



your PC is powered up.

We don't know your specific PC make or model but it doesn't really matter. To fix this you'll need to open your computer, locate the battery on the motherboard and replace it.

This is pretty simple to do, and usually no more difficult than using a flat-headed screwdriver to pop out the dead cell before

slotting a new one in its place.

The battery type will almost certainly be a CR2032, which you can buy cheaply. Amazon, for example, sells a Duracell two pack for about £4 (www.snipca.com/39792, pictured left).

Then, next time you switch on, at the BIOS message tap F1 to enter the BIOS and use the cursor (arrow) keys and Enter to find and then set the correct time and date.

Press Escape (Esc) to exit, choosing Yes to save your changes and that should be the last time you see this message – for a few years, at least.

Can I run two anti-virus programs?

Q I have an HP Pavilion laptop with Windows 10. I recently had an offer from my bank to download Malwarebytes for free. I think it's the full version.

I subsequently downloaded it and have been pleased with the results that are displayed as it seems to be doing its work. I noted that in Issue 616's Best Free Software section you mentioned the new Avast One Essential, which is free.

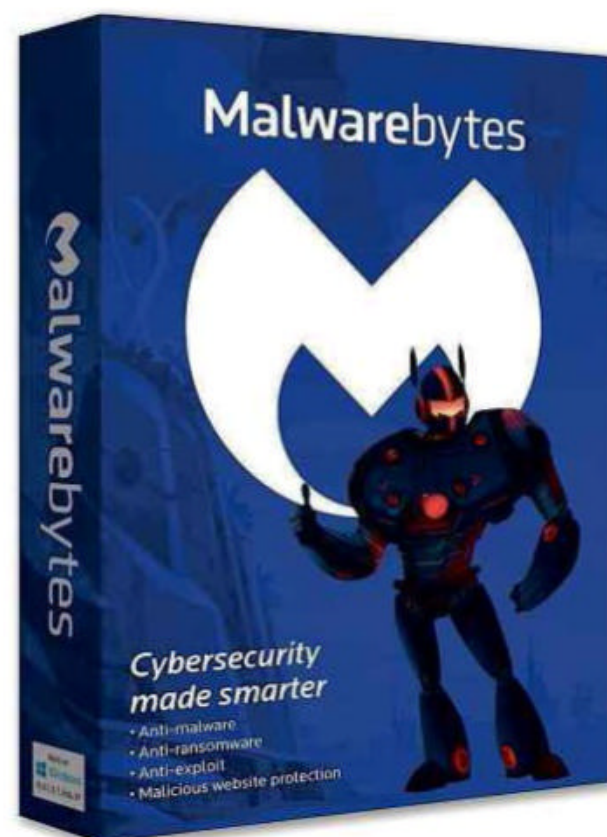
I find this very attractive. Should I go for this? Will it clash with Malwarebytes? If I do go for Avast, should I ditch Malwarebytes?

If I decide on this, would you advise I go for the full paid-for Avast One Essential software?

James H Sutherland

A Running two anti-virus programs might seem like a belt-and-braces approach to security, but it's rarely a good idea – if it's even possible. Because of the way such programs work, attempting to install a second is likely to cause the first to warn you of a threat. Even if you do find that you're able to install a second anti-virus tool, it won't be long before it's clashing with the first. These conflicts could even cause your PC to crash. So, no – don't do it.

Here is not the place for a detailed evaluation of these two programs, but both have their pros and cons. However, we'd say that if you've been gifted the full version of Malwarebytes and you're happy with it, we don't see why you'd pay to change.



A free full version of Malwarebytes will offer you a good level of protection

Which Linux for my little machine?

Q I've read many times your advice to use the Linux operating system on old and less-capable laptops, but I'm not clear on all the variations to choose from. I have a 2009-vintage Dell Inspiron Mini 10. This has an Intel Atom Z530 processor running at 1.6GHz and 1GB of soldered-in memory. It's a delightful little 10in device that was released before many tablets, but the inability to upgrade the processor or RAM has always been frustrating. It'd be a shame to lose its use. Which Linux version would you recommend?

Andrew Shaw

A We imagine that if you asked a dozen *Computeractive* readers which version they'd suggest

then you'd get a similar number of different answers. So, with that in mind – and knowing that we'll receive letters and emails telling us why there are better options – we're inclined to direct Linux first-timers to Mint, which is a free download from <https://linuxmint.com>.

It has pretty modest demands and should run reasonably well on your Mini 10. Moreover, you can create it as a 'live bootable' DVD or USB stick – the latter in your case. This means you can launch Mint straight from a USB stick, so you can see how well it runs and how you feel about it before you commit to a full install. For full



Linux Mint would be our suggestion for giving a new lease of life to an old Dell Inspiron Mini 10 like this one above

instructions on doing this, see Mint's own detailed guide at www.snipca.com/39736.

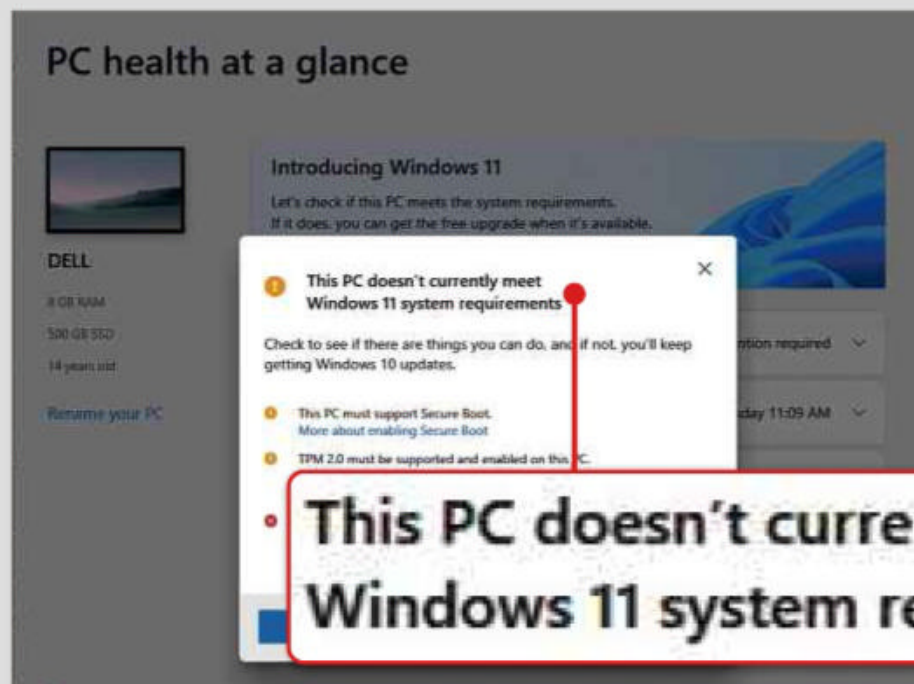
Will my processor ever work with Windows 11?

Q When checking my computer's compatibility with Windows 11, I was amazed to be informed that the processor isn't currently supported! It's an AMD Ryzen 5 1600 six-core processor, and I don't think it's all that old. Is this a permanent block?

John Lindley

A Possibly not, but probably. While Windows 11 will doubtless be welcomed by millions of PC users around the world, there will be millions of others cursing its arrival – or, at least, will be excluded by current hardware from upgrading. We're afraid that your computer's current processor puts you in the latter camp.

Despite your particular chip being a little under five years old – which is hardly ancient in PC terms – it didn't make the cut for the list of processors Microsoft will support for Windows 11. Specifically, it uses AMD's first-generation 'Zen' architecture, which between them the two firms have decided is not compatible. There are likely to be many technical reasons for this, but neither Microsoft nor AMD are saying much about the particulars. You can read more about this in the

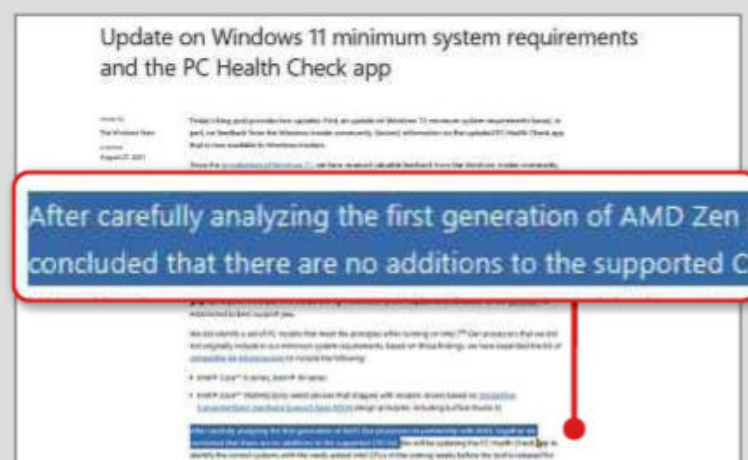


The message stating that the PC is not compatible with Windows 11 (left). The Windows team's blog post (below) makes it clear that first-generation Zen chips are incompatible

Windows team's blog post at www.snipca.com/39727.

The blog notes that the compatibility list has been updated before, so we wouldn't completely discount it being updated again. However, it is also explicit about first-generation Zen chips being incompatible, so we doubt those will ever be added.

The only solution, if you want to upgrade to Windows 11, will be a new processor. That's likely to be possible, but we would need more information on your current computer to



advise with any certainty.

Feel free to get in touch again with those details, if you would like further guidance.



WHAT'S THE DIFFERENCE BETWEEN...

Bluetooth and Wi-Fi?



Q Not that it really matters much, I suppose, but I don't really understand the difference between Bluetooth and Wi-Fi. I mean, I do understand that my mouse connects to my laptop via Bluetooth and that the laptop connects to the router via Wi-Fi – but I don't understand why different technologies are required. Why can't we just have one wireless technology and name for all this stuff?

Daniel McIntosh

A This is an interesting question because, on the surface, it does seem daft to have different wireless technologies – not least because there is overlap.

In fact, in a literal sense there's no real difference between either of them because both are just radio technologies.

Moreover, originally at least, Bluetooth and Wi-Fi both operated on the same 2.4GHz part of the spectrum – though many newer Wi-Fi devices now make use of the 5GHz and even

6GHz bands as well.

However, what each technology is designed to do with those radio waves is where the differences arise. In simple terms, Bluetooth exists to transfer small amounts of data over short distances, while Wi-Fi was created for the wireless exchange of larger amounts of data over longer distances.

Now, even within the two standards there are lots of different versions but, in essence, Bluetooth tends to use much less power – making it ideal for use in smaller (typically mobile) devices, where battery life is often a concern. Its speed tops out at about 2Mbps, while its range generally extends to just a few metres.

By contrast, a good Wi-Fi router will offer top transfer speeds measured in the hundreds of megabits per second (Mbps), or even low gigabits (Gbps). Connections should be good for tens or even hundreds of metres.


We did mention that there is some



Amazon Echo devices use Wi-Fi to connect to home networks as well as Bluetooth to link to smartphones

overlap. Some wireless speakers, for example, connect via Bluetooth while others use Wi-Fi.

Some devices even juggle both. Amazon Echo devices, for instance, use Wi-Fi to communicate with your home network, but Bluetooth to connect individual smartphones and tablets, when you wish for an Echo to act as a speaker for those devices.

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

How do I delete an old email address?

Q I recently had to fill some boxes in an online form when applying for a new driving licence. When doing this, I saw a very old email address of mine turn up in the list. Is there any way of solving this problem? Needless to say I look forward to receiving my fortnightly copy of

Computeractive, especially because of the timely warnings of scams.

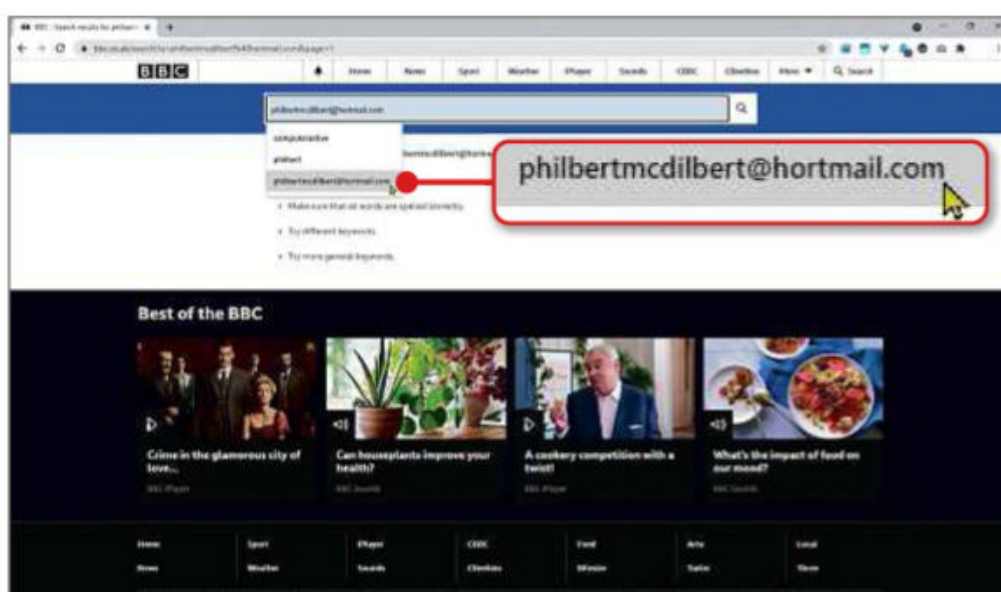
Don Robinson

A This will be autofill information that your browser has stored to save you time when filling in forms. You didn't tell us the browser but

in almost all cases the same method can be used to delete an individual entry.

First, click in the form field and press the down arrow (cursor) key to open the list of data. Now tap the down arrow until you reach the offending item (see screenshot left), then hold down the Shift key before pressing Delete (Del).

Click in the form field, scroll down to the address you no longer need, then hold down the Shift key before pressing Delete (Del)



Next Issue

ONSALE
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- Must I pay hosting fees for email?
- Why has Chrome gone dark?
- Why won't Windows 7 activate? ...and many more

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Why didn't your recovery instructions work?

Q Spurred on by your comments to Morley Pecker in Issue 615's Problems Solved (page 67), I attempted to update the recovery drive I created a few years ago. However, I saw a message telling me that it couldn't be done, because some required files were missing. What did I do wrong?

Paul Dredge

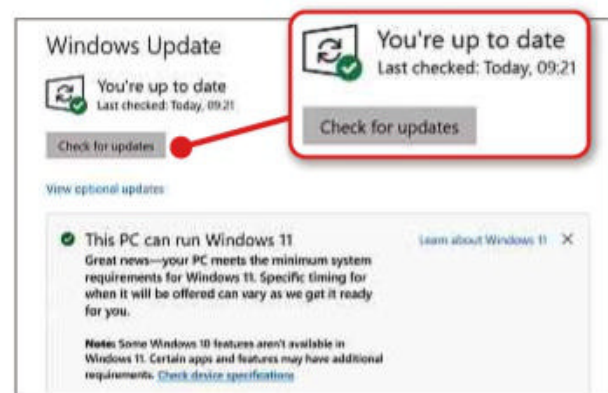
A Nothing, but this is probably the result of corrupted files on your system. The System File Checker tool that's part of Windows is a reliable way of fixing such problems, so we'd suggest giving that a try.

First, press the Windows key+X to open the Quick Link menu and click 'Windows PowerShell (Admin)'. Next, to check for problems, type `sfc /verifyonly` and press Enter. To fix any problems that are found, type `sfc /scannow` and press Enter.

Why did Windows Update change to say I was ready for Windows 11?

Q While following the instructions in Issue 616's Cover Feature to check if my laptop can run Windows 11, I was about to try the final step when I noticed my Windows Update page had changed – informing me that it was now ready for Windows 11. This wasn't present when I first visited the page to check if an update was available or possible. Was it something I did?

Graham Longden



Click the 'Check for updates' button to see if Windows 11 is available to download

A To an extent, yes. By running the PC Health Check app, as advised in our feature, you effectively told your computer to check in with Microsoft's servers. However, Windows Update itself regularly contacts those same servers, so this could just be a simple coincidence. Either way, there's nothing to worry about: the message is telling you that Microsoft now knows your PC is ready for Windows 11 and that you'll be offered the download when its servers have capacity to do so.

That's also normal – because even Microsoft can't handle hundreds of millions of users all downloading simultaneously. By the time you read this, however, we're confident Windows 11 will be available for you to download and install on your PC. In the unlikely event you are still waiting, click the 'Check for updates' button within Windows Update (see screenshot below left).

Why does Word on my Mac look different?

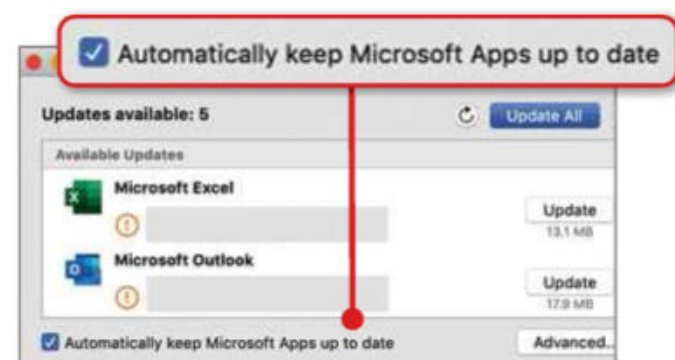
Q I'm an Apple Mac user and a subscriber to Office 365. My Mac is set to receive automatic updates and I install them as soon as they arrive.

In Issue 616's News pages you reported that Office 365 is now available as a one-time download, having been released on 5 October. The screenshot you published shows the Draw tab in Word, but it does not correspond to what I see in Word on my Mac.

My version of Office 365 is 16.53 (21092100). With some imagination, the bracketed figures can be interpreted as a date – 21 September 2021. Why does my Word look different, and how can I tell whether I've received the latest updates?

Alastair Rutherford-Warren

A There's a lot to unpack here. First, Microsoft's branding means you're actually a subscriber to what the company now calls Microsoft 365. Of course, most still think of it as



Tick this box to ensure Microsoft 365 is always up to date

Office 365.

With that clear, you should also understand that the Apple Mac versions of the Office tools have and always will look a little different from their PC counterparts, because the two run on different operating systems – that's macOS on Apple Macs, and Windows on PCs.

Now let's consider the version number. For Office for Mac, version 16.53 also has what Microsoft calls a 'build number'. That build number is 21091200 – not 21092100. We're certain you made a small typing error here, because these are indeed dates in YYMMDD format, with the two digits on the end for Microsoft's own reference. At the time of writing to us, then, you were indeed using a version built on 12 September, though actually released to users on 14 September.

Next, it's also important to understand that the Office 2021 we wrote about in Issue 616 is a 'standalone' release, and is not the same as Microsoft 365. It will be updated regularly for years, but not necessarily at the exact same times as the Office tools in Microsoft 365.

Since you wrote, Office 365 for Mac has been updated again. If you check the Microsoft page at www.snipca.com/39796 you'll see a list of all versions and builds. At the time of writing, it's now at 16.54, released on 12 October. To update, in any Office app, click Help followed by 'Check for Updates' then click the Update button. Finally, ticking the 'Automatically keep Microsoft Apps up to date' box here (see screenshot above) will ensure your Microsoft 365 is always the latest version.

Jargon Buster

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

2K A screen with 2048x1080 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.

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

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

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

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

Architecture A set of rules and language that govern how hardware and software work.

ARCore A software development kit from Google for building augmented-reality tools.

Aspect ratio A measurement of the shape of a display. Traditional computer screens are 4:3. Widescreen displays are 16:9 or 16:10.

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

Avatar A graphic or icon used to represent a computer user, either online or in a video game.

AVI Audio Video Interleave. A type of video file. AVI is known as a container format, as it can hold many types of audio and video.

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

Benchmarking Comparing software and products with an accepted standard.

BIOS Basic Input-Output System. Software built into every PC that connects the vital components. It's visible for a few seconds when the PC starts.

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.

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

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

Client A program that acts as an interface between PC and server.

CMOS Complementary metal-oxide semiconductor. Can refer to both a type of image sensor chip used in some digital cameras and another chip on computer motherboards that stores the date and time.

Compatibility mode A setting in Windows that allows you to run programs that would otherwise only run in older versions of Windows. Not all programs will work with this mode, though.

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

Core Units on a processor that carry out program instructions.

Cryptocurrency An online currency not backed by any country. The most popular is Bitcoin

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

DisplayPort A new socket for connecting monitors.

DOCX The default file format used by Word 2007 and later.

Dolby Atmos New surround-sound technology that adds 'height' to the audio through speakers built into the top of devices.

Dolby Vision Dolby's HDR (High Dynamic Range) screen technology.

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

EPUB Popular ebook file format, but you need to convert it to use on a Kindle.

Ext3/Ext4 Ext4 is the default file system on most Linux distributions. It's more stable than its predecessor, Ext3.

FAT32 An old system used for formatting hard drives, and still used for some portable drives.

FTTP Fibre to the premises. Fibre broadband that goes straight to the doorstep. Faster than FTTC (fibre to the cabinet).

Geotag A tag that assigns a geographical location to a photograph or video, or a posting on a website.

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

Hardware acceleration Using a graphics card to radically improve video and games performance.

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

HDR High-dynamic range. A camera that takes more than one photo with different levels of colour and contrast. These images are then combined to create a better-quality image.

HDR10+ High-dynamic range 10. Current industry standard for TVs.

Hexa-core A processor containing six cores.

M.2 A standard specification for internal PC expansion cards and connectors.

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

Machine learning The science of teaching computers how to learn by themselves, without further human input.

Mesh Wi-Fi Wireless network system that uses multiple, connected routers to stretch Wi-Fi further than a traditional router.

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

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

MicroUSB A miniature version of USB, often found on smartphones, tablets and portable hard drives.

MOV A type of video file that can be played using Apple's Quicktime software.

MP4 A type of digital movie file often used for portable players.

NTFS New Technology File System. A file system used by all recent versions of Windows.

OLED Organic light-emitting diode. A thin-film organic light-emitting diode used in computer and TV screens.

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

Picture-in-picture Shows video in a small moveable screen while you browse the web or watch TV.

ICO file An image file format for PC icons in Windows that can be scaled appropriately.

PWA Progressive web app. A website that looks and works like an app, which can be opened on both desktop and mobile devices. PWAs don't need to be installed and are supported by Chrome, Safari and Edge.

QLED Quantum Light-Emitting Diode. Screen technology that uses nanoparticles called quantum dots to boost brightness and colour.

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

RAID Redundant array of independent drives. System for storing data efficiently and automatically backing up computer hard drives.

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.

Read speed How long it takes a hard drive to 'read' data, and respond to it.

Refresh rate Measured in Hertz (Hz), the number of times per second that the image on your monitor is redrawn. Slight changes in the image each time it is updated combine to give the illusion of movement. For a steady image, the higher the refresh rate, the less flicker you will see.

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

Security certificate A file used by banking and shopping websites to verify the identity of the company running the website. Issued and guaranteed by third-party security companies.

SIM Subscriber Identity Module. The smart card used by mobile phones. The SIM card carries the user's identity and phone number for accessing the network.

Spammer A person who sends junk emails.

Splitter Divides one power line into two, so they can be connected to two different devices.

SSD Solid-state drive. Storage that, unlike a hard drive, uses no moving parts.

TPM Trusted Platform Module. A computer chip that allows your hardware to perform security-related tasks.

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

Twip Standing for 'Twentieth of a point', it's a standard for ensuring fonts are the same size across all screens: approximately 0.0176 mm.

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

UEFI Unified Extensible Firmware Interface. A modern replacement for the BIOS, designed to get a PC into a state where it can launch an operating system.

Ultra HD Ultra high definition. Resolution of 3840x2160.

USB 2.0/3.0/3.1 Faster successors to USB.

USB-C A new connector that's reversible.

VoIP Voice over IP. The routing of voice conversations over the internet, which is cheaper than the telephone network.

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

Wi-Fi 6 Wi-Fi standard with speeds up to 10 times faster than 802.11ac. Also called 802.11ax.





Widget A small program such as a calendar that runs on the Windows desktop.

Woofers A speaker designed to produce low-frequency bass sounds.

Write speed How long it takes a hard drive to save data.

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Easy when you **Know How**

With the nights drawing in, **Robert Irvine** seeks to protect his eyes by trying to...



Automate Windows dark mode

The radio-controlled wall clock in my kitchen has a mind of its own, frequently displaying the wrong time, no matter how often it's 'tuned' to the waves. I guess that's the Argos 'value range' for you. At the end of last month, when Halloween coincided with the clocks going back, it became particularly demented, spinning its hands for several hours like a thing possessed, before settling on 10 to three – at half-past nine in the morning.

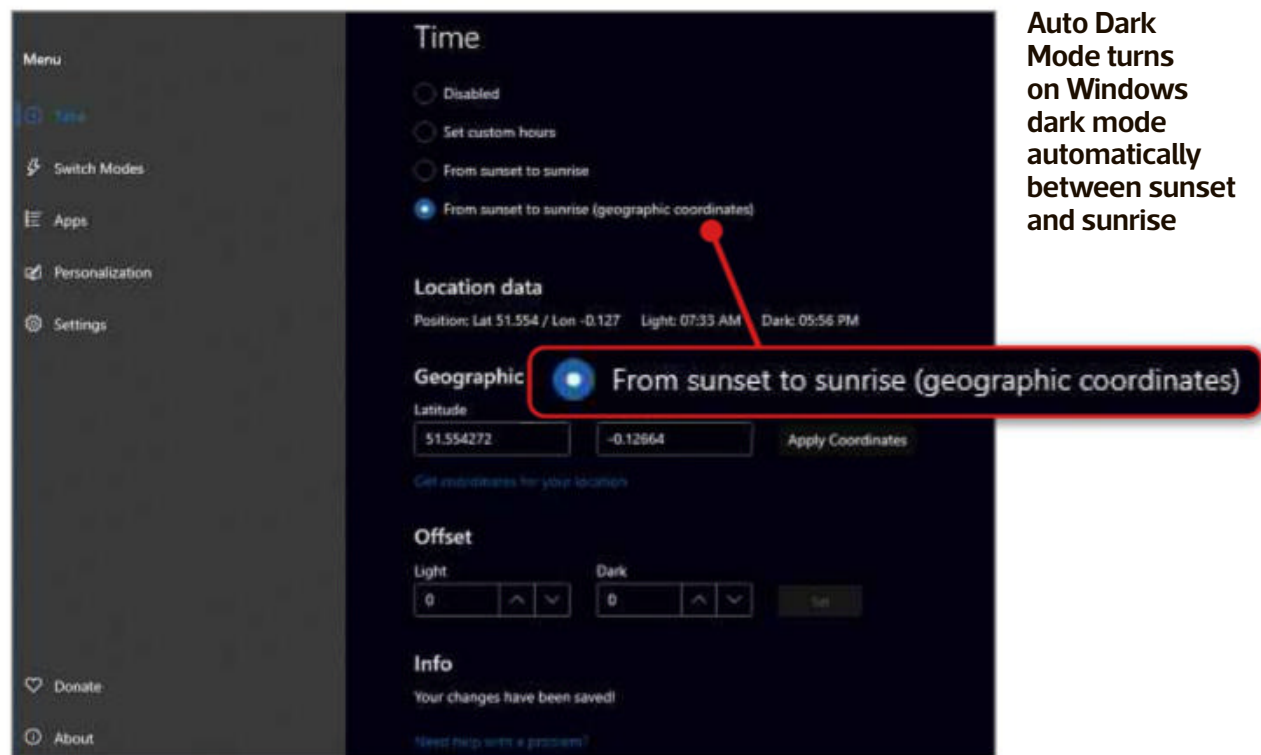
“

At least this way I wouldn't be placed in Iceland and get six months of night

”

If only my kitchen clock was as reliable as the one on my Windows PC, which adjusts automatically to the start and end of British Summer Time, and never loses a second – you can literally set your watch to it. With the nights now drawing in, which means my eyes get wearier earlier when I'm working, I wondered if the taskbar clock could help me protect my peepers. Rather than go through the hassle of enabling Windows dark mode manually – by going to Settings, Personalisation, Colours and choosing Dark under 'Choose your colour' – perhaps I could automate the process of switching it on and off?

I first tried to do this using Task Scheduler, by typing **schedule** into the Windows search box and selecting that option. I chose Create Basic Task, named the task 'Turn on dark mode' and specified that I wanted it to run daily at 4pm. But I then discovered that Task



Auto Dark Mode turns on Windows dark mode automatically between sunset and sunrise

Scheduler offers only a single action, 'Start a program', and because dark mode isn't a program, this made things more difficult. I did find a workaround online, which involves using PowerShell scripts and code, but this looked far too complicated – see www.snipca.com/39821 for proof – and I was sure there must be an easier way.

Thankfully, there was, in the form of a free tool called Auto Dark Mode (www.snipca.com/39822), which “switches between the dark and light theme of Windows at scheduled times”. Hurrah! I downloaded the latest version, Auto Dark Mode X, from www.snipca.com/39823 and installed it in Windows 10. It's also available as a Windows 11 app from the new Microsoft Store.

The program opened with its Time settings displayed. These included the option to 'Set custom hours', so I could choose the times to switch to dark mode and back to light. But as the days are gradually getting shorter (before getting longer again from 22 December), I selected 'From sunset to sunrise' to future-proof my dark-theme activation. This opened Windows 10's Location settings, which were mysteriously greyed-out on my PC – perhaps because of a privacy tweak I'd made – so I was

unable to share my location with Auto Dark Mode. Undeterred, I chose 'From sunset to sunrise (geographic coordinates)' and clicked the 'Get coordinates for your location' link to look up my latitude and longitude. At least this way I wouldn't be placed in Iceland and get six months of night. I entered the location data, clicked Apply Coordinates and the program told me the times it would turn on Windows' dark and light modes.

Next, I clicked the Apps tab to further configure Auto Dark Mode's settings. This let me apply dark mode to Windows apps and programs between sunset and sunrise, but keep system elements such as the taskbar and Start menu permanently dark, which is how I like it. You can personalise your dark and light themes with different wallpapers, but as my desktop is always obscured by browser windows, I didn't bother with this.

Come the evening and Auto Dark Mode worked as promised, turning on dark mode automatically, then switching back to light mode first thing in the morning. If only my kitchen clock would similarly obey the laws of time, because it's really starting to tick me off.



Need help with activating your dark and light modes?

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