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And what to do instead p60

Computer active

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Group Editor Daniel Booth
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Production Editor Graham Brown
Art Editor Katie Peat
Contributors Adam Banks, Dinah Greek, Jane Hoskyn, Jonathan Parkyn, Nick Peers, Nik Rawlinson, Wayne Williams

ADVERTISING
Group Advertising Director Andrea Mason
Advertising Manager Alexa Dracos

MARKETING AND CIRCULATION
Subscriptions Rachel Hare
Marketing Production Manager Gemma Hills
For subscription enquiries ring 0330 333 9493

PRODUCTION
Group Production Manager
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Production Controller
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MANAGEMENT
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From the Editor

What's your favourite thing about computing? For me, it's the anticipation of downloading a new program and exploring its features. I'm never satisfied with the software I use because I can almost always think of ways it can be improved. Every time I install a new program I hope it will provide these longed-for options.

We applied this criteria when selecting the software for our Cover Feature. Each program we recommend does something its rivals don't – or does the same thing but much better. They also serve a particular purpose for the year ahead, whether that's keeping your Wi-Fi free of neighbours' creeping interference or your files safe from the growing threat of ransomware.

If we've overlooked your own favourite software, please let me know so we can include it in Readers' Tips.

Daniel Booth
editor@computeractive.co.uk

PS Our 2018 Back Issue CD has sold out on Amazon, though we should have a new batch available soon. Please keep checking at www.snipca.com/30307.

THIS ISSUE IN NUMBERS

£85
Price of the Canon Pixma TS6250, our new 'Buy It' award printer – *p25*

200
Number of changes Ultimate Windows Tweaker makes to Windows 10 – *p74*

330ft
Maximum range of Bluetooth – *p65*

HOW TO USE SNIPCA URLs

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

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Put the squeeze on spammers

p35

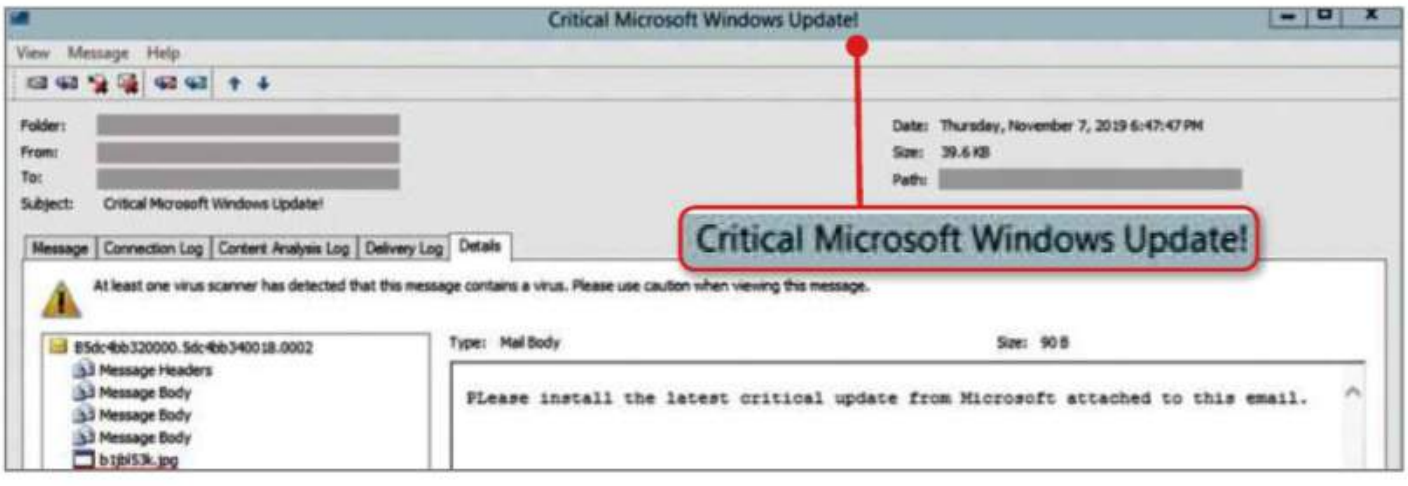
Ignore this Windows 'update' – it's devious ransomware

Scammers are sending emails that claim to contain links to an essential Windows update, but actually install ransomware on your PC.

The attack, which infects PCs with the Cyborg malware, appears to have been timed to coincide with Microsoft releasing the genuine November 2019 Update for Windows 10.

Like most scam emails, it has a subject line designed to panic you into action: 'Install Latest Microsoft Windows Update now!' or 'Critical Microsoft Windows Update!' (see screenshot).

However, the email contains just one line of text: 'Please install the latest critical update from Microsoft attached to this email'. This abrupt approach is unusual. Scammers normally use intricately worded emails that try to trick victims with persuasive phrases.



Another unusual aspect of the attack is the attachment, which claims to be a .JPG file. However, it's not a photo but an executable file, which is designed to perform tasks on a computer. Clicking it downloads the malware to your PC. It encrypts your files with its own extension (.777) and shows a ransom note, demanding $500 to be paid in the cryptocurrency Bitcoin.

Finally, it leaves a copy of itself called 'bot.exe' hidden in the infected drive, meaning it can be triggered again to lock your files.

US security firm Trustwave, which found and wrote about the attack at www.snipca.com/33370, said instructions to build Cyborg are easily available online. There's even a YouTube video showing hackers where to find them.

Trustwave's Diana Lopera said that anyone who follows the instructions can create and spread variants of the ransomware. She added that it can be attached in different forms to avoid spam filters.

Security experts expect the threat of ransomware to rise in 2020 (see page 56), as hackers develop new ways to lock computers. In 2019 their main target has been companies and public institutions like councils, schools and hospitals – particularly in the US.

But there's also a severe threat in the UK. In a recent survey from British security firm Sophos, two-thirds of IT managers in the public sector said their organisation had been attacked by ransomware in the past 12 months.

Ordinary computer users can't be complacent though. Cyborg shows that hackers will continue to devise new ways to trick them. It's likely they'll try a similar tactic when Microsoft launches the next Feature Update in the spring.

WHAT WE THINK

Scammers' ingenuity is matched only by our determination to expose them. They know that many Windows users fear missing out on updates, and so will fall for this cynical con. Remember, then, that Microsoft will never email you a link to download updates – they'll be added to your computer through the Windows Update process. Microsoft is now releasing the November Update to all computers. To get it, or set a time for it to install on your PC, follow Microsoft's instructions at www.snipca.com/33372.

RANSOMWARE LINK TO HEART DEATHS

A US study has linked ransomware to a rise in fatal heart attacks because it delays treatment for patients in hospitals that have been hacked. Researchers at Vanderbilt University's Owen Graduate School of Management in Nashville say doctors take an extra 2.7 minutes to treat patients with an electrocardiogram.

They claim that the delays could cause 36 additional deaths a year for every 10,000 heart attacks.

The data was provided by the Department of Health and Human Services, which runs healthcare in the US. Leo Scanlon, its former deputy chief information security officer, said a similar report should be done by the NHS to assess the damage caused by ransomware in the UK.

You'll like this...
The BBC iPlayer app has now been added to Sky Q (www.snipca.com/33374)

but not this...
Victims of bank fraud may be unprotected from 1 January (www.snipca.com/33373)

Diamond-edged cutters help villages get broadband

Openreach has started to make 1Gbps full-fibre broadband available to some of the UK's remotest villages and small towns, using new methods to lay cables in difficult terrain.

For the first time it's using a diamond cutter to dig trenches (pictured). This is a giant rotating circular blade embedded with diamonds at the edge, making it sharp enough to slice through carriageways and footways. It leaves a neat channel into which fibre-optic cables can be laid.

The specialist equipment can install 700 metres of cables in a day, which is 20 times faster than traditional excavation methods. It's also using a GeoRipper, a powerful digging tool that cuts narrow trenches across soft ground such as fields.

In addition, Openreach has installed remote fibre nodes into existing roadside cabinets to 'piggyback' on the existing network, greatly extending the number of premises that can be connected via full-fibre cables.

The work is part of a plan to bring full-fibre to 50,000 premises in 13 villages. Research from Thinkbroadband (www.thinkbroadband.com) shows that the project, which began in October, has already provided full-fibre residents in Kentford in west Suffolk, and West Calder in Lothian.

Work appears to have started in Cranfield, Flockton, Lundin Links, Mickle Trafford, Okehampton, Seal and Tarporley. The remaining four areas due to get full-fibre are Hesketh Bank, Lingfield, Ottery St Mary and Parbold.

Openreach said the locations were chosen to

represent a broad number of areas in the UK. It hopes to connect more than half of customers by the end of March 2020.

The company added that the trials will help it work out the "technical challenges" it faces in delivering broadband to rural areas throughout the country. Its target is to reach four million premises by March 2021, and then 15 million by around 2025.

Police dogs sniff out criminals' USB sticks and SIM cards

London's Metropolitan Police have trained dogs to sniff out phones, laptops, USB sticks and SIM cards in the battle against cyber-crime.

Two springer spaniels, named Bolly and Murphy, can locate devices that police officers miss during searches.

They've been trained to detect the chemical triphenylphosphine oxide, which is used to coat memory storage devices.

During trials, Bolly used her sense of smell to find a laptop that a paedophile had hidden down the side of his bed. In other cases, the dog found a SIM card concealed under laminate flooring, and a camera's SD card.

Daniel Hamburry/@stellapicsltd

Police in Devon, Cornwall and Dorset previously tested the technique in 2017.

Bolly's instructor PC Craig Calthorpe said: "Often suspects will give officers a laptop they claim to use to search the internet, but there's a second 'dirty' one they don't want us to see".

PC Brett France, Murphy's handler, said the dogs are "absolutely amazing and superb in what they do". He added that training the dogs was driven by a change in policing that focuses on recovering evidence, whether that's DNA or data.

"We're moving forward fast and anticipate we'll be training at least four dogs within the next year due to the demand," he said.

Bolly and Murphy are two of more than 100 sniffer dogs working for the Met, detecting explosives, firearms, drugs, and cash.

IN BRIEF

AMAZON MUSIC NOW FREE (WITH ADVERTS)

Amazon has made its music-streaming service free, letting you listen to playlists and "thousands" of radio stations – though you'll have to put up with adverts unless you upgrade to a paid-for version. As the company explains online (www.snipca.com/33360), the service is available through the Amazon Music app on iOS, Android and Fire TV, as well as on the internet at https://music.amazon.com.

REVISIT OLD TECH IN ARGOS CATALOGUES

Argos has published an online archive of its catalogues, featuring classic technology from years gone by. Called 'The Book of Dreams' (http://argosbookofdreams.co.uk), the collection contains every annual catalogue from 1974. Highlights include Atari games consoles from 1981/82 (www.snipca.com/33365) and the Vic 20 computer from 1983/84 (www.snipca.com/33366).

TOMORROW'S WORLD

Could this be the star striker at the 2050 World Cup? It's one of a team of 'Cheetah' robots built by scientists at the Massachusetts Institute of Technology. As this video shows (www.snipca.com/33367), they've got impressive ball control and can perform celebratory backflips Watch out for the vicious foul 40 seconds in.

IN BRIEF

BRITBOX BANS OLD 'INAPPROPRIATE' COMEDIES

Old TV comedies *Love Thy Neighbour, Till Death Do Us Part* and *It Ain't Half Hot, Mum* (pictured) won't appear on the new TV-streaming service BritBox because they're deemed inappropriate for modern tastes. There will also be messages before some episodes of *Fawlty Towers* and *Only Fools and Horses* to warn about "offensive" language.

SKY LETS YOU USE DNS SERVERS AGAIN

Sky Broadband is once again letting customers switch to third-party DNS servers. It removed the option in April when it launched its Sky Buddy app, which lets you control screens connected to the web. Sky will make the change in a firmware update sent to routers, starting with the Sky Q Hub (ER110 and ER115) and Sky Broadband Hub (SR203) models.

THE WORLD'S GONE MAD!

These aubergine and peach emojis may look innocent enough, but Facebook will now ban people who use them "suggestively". Apparently, members seeking and offering sex were posting them to get round the site's existing ban on explicit nudity (we'll leave the details to your imagination). How fruity!

Boris says 'vote for Corbyn' in fake election videos

Campaigners against fake news have released videos that appear to show Boris Johnson and Jeremy Corbyn endorsing each other, in a bid to raise awareness of disinformation online.

The videos, released by think tank Future Advocacy (www.snipca.com/33328), have been doctored using so-called 'deepfake' artificial intelligence that can manipulate people's faces and voices. The campaigners say the increasing accuracy of fake footage represents "a genuine threat to democracy and society more widely".

In the clip of Johnson he seems to refer to how "division has coursed through our country" since the 2016 Brexit referendum, adding: "My friends, I wish to rise above this divide and endorse my worthy opponent the right honourable Jeremy Corbyn to be prime minister of our United Kingdom. Only he, not I, can make Britain great again."

In the other fake video, Labour leader Jeremy Corbyn calls his rival "a prime minister that works for the many, not the few". He appears to say: "I'm urging all Labour members and supporters to consider people before privilege and back Boris Johnson to continue as our prime minister".

The video of Corbyn ends with him saying cryptically: "But do you know what? Don't listen to me. I'm not even sure who I am."

Deepfake videos are created by computers that have been programmed to mimic a person's facial expressions, mannerisms, voice and inflections. With enough footage, it could be possible to get them to say anything.

Future Advocacy says the videos use "shock and humour" to hammer home the risks of deepfakes. It called for political parties to work together to fight the threat, and also wants technology companies to develop systems for detecting and blocking videos.

Last year, Twitter banned videos that superimpose an individual's face on to another person's naked body. This type of deepfake has been used to make it appear that celebrities have appeared in porn videos.

Chrome will name and shame slow sites

Google has said it may label websites that typically load slowly in its Chrome browser as part of its campaign to move towards "a faster web".

It said there would be a system of "clear badging" to indicate how quickly sites load, punishing those that take a long time, and rewarding those that are quick.

Google didn't say how the labels would work, but said they could take "a number of forms". It plans to "experiment with different options, to determine which provides the most value to our users".

One option it's considering is showing the message 'Usually loads slow' (see left of screenshot) on a site's loading page (also known as a 'splash screen'), below a blue 'progress' bar indicating that the site loads slowly. It showed an example in a blog post (www.snipca.com/33297), next to a site loading quickly, which is illustrated by a green progress bar (see right of screenshot).

Google may also tell you how quickly a site loads when you right-click a link that opens the site, and whether a site is likely to be slow on the device you're using.

In future, Chrome will label websites that provide a "high-quality experience" in several areas, not just speed.

Upgrade your old PC to Wi-Fi 6 using Asus card

Asus has unveiled one of the first Wi-Fi 6 cards for desktop PCs, letting you upgrade an old computer so it can use the new, faster wireless technology.

The PCE-AX3000 (pictured) is a PCI Express expansion card that can hit speeds of 2.4Gbps when used with a compatible router. It also supports Bluetooth 5.0, letting PCs connect to peripheral devices like mice and keyboards.

Wi-Fi 6, technically called 802.11ax, boosts theoretical signal speed from 3.5Gbps to 9.6Gbps, though you'll never get close to this using routers in your home.

Its main benefit is that your signal can be split up across more devices. Previous Wi-Fi standards were designed when households had fewer devices – typically just one or two computers.

But it's estimated that by 2023 the average UK household will have 50 devices requiring Wi-Fi, ranging from computers, phones and tablets to fridges, speakers, thermostats and doorbells.

Wi-Fi 6 has been designed to cope with this increased demand, spreading the signal to maintain speed in homes where, for example, one person is using Skype, another is watching Netflix, and a third is playing online games.

Several routers and phones that support Wi-Fi 6 are already available, such as the Netgear Nighthawk AX8 RAX80 (£279 from Amazon www.snipca.com/33387) and Samsung's Galaxy S10 phone

(£649 from www.snipca.com/33388).

However, computers that work with Wi-Fi 6 have only just started to be released. Intel is making processors that work with the new technology, but it will take some months for new PCs and laptops to include them.

The PCE-AX3000 is on sale in the US priced $69.99 (£55), and is expected to be available in the UK soon.

Addiction to online shopping is 'medical condition'

Psychiatrists have called for addiction to online shopping to be recognised as a mental-health condition.

In a study published in the journal *Comprehensive Psychiatry*, researchers from Hannover Medical School in Germany claim that about five per cent of adults in developed countries – more than 2.5 million Britons - suffer from buying-shopping disorder (BSD).

Around a third of patients who had sought treatment showed signs of being addicted to shopping. The study links it to a "higher severity" of anxiety and depression, saying compulsive purchasing is "primarily used to regulate emotions, for example to get pleasure or relief from negative feelings".

It says the rise of online shopping has made the problem worse because the internet provides increased "availability, anonymity, accessibility, and affordability".

Signs of being addicted include rising debt, hiding purchases from family members, and breakdowns in relationships.

However, some experts disagree with the report's findings. Dr Richard James, a psychology professor at the University of Nottingham, said there is a danger of researchers being "over-zealous" in classifying behaviour as addictions. He said this shouldn't be done "without a lot of thought".

The World Health Organisation classifies some forms of addiction as a medical condition, including video-game addiction, but not online shopping. In November, the NHS opened a clinic in London to treat young people addicted to computer games.

Do you think addiction to online shopping is a medical condition? Let us know: letters@computeractive.co.uk

IN BRIEF

ZEN 'GUARANTEES' WI-FI IN EVERY ROOM

Zen Internet has launched a service that claims to guarantee Wi-Fi throughout your home. For £7.99 a month on an annual contract, the EveryRoom package gives you a Fritz!Repeater 3000 Wi-Fi extender (pictured) from German company AVM (you'll pay £9.99 postage for this device, which is worth £100). Zen says the extender can boost your speeds by up to 1733Mbps. If it doesn't give you a stronger signal, Zen says it'll send you a replacement. For more details visit www.zen.co.uk/broadband/everyroom.

GOOGLE TO CLOSE CLOUD PRINT SERVICE

Google has said it will close its Cloud Print service at the end of 2020. It launched in 2010 as a way to print over the internet (via Chrome) without having to install drivers on your PC, phone or tablet. Google urged people to switch to "native printing", which means using the cloud option on their own printers.

SEE GMAIL MESSAGES WITHIN OUTLOOK.COM

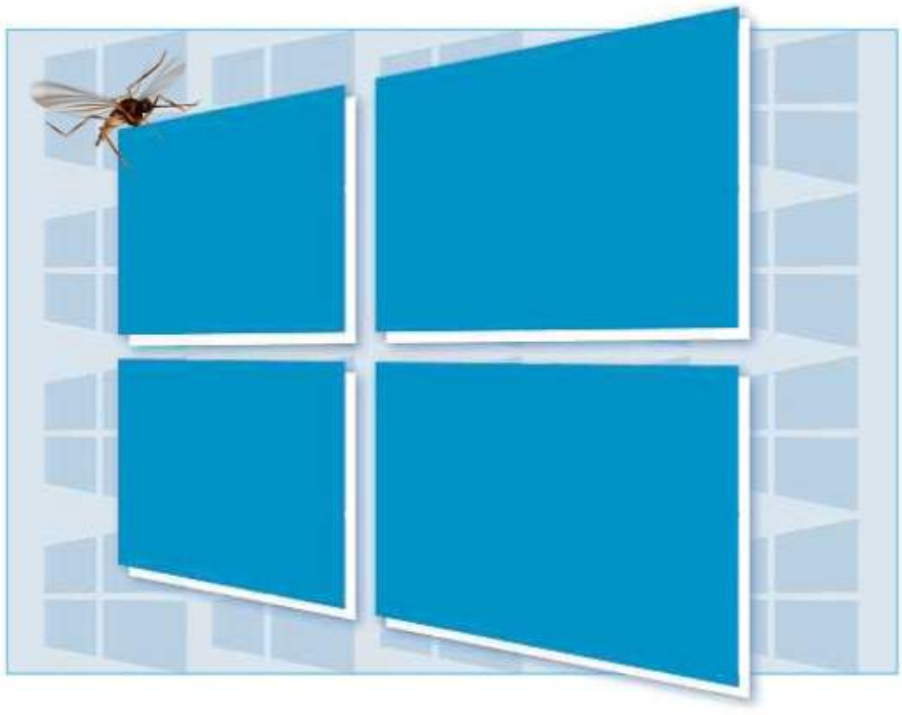
You may soon be able to use Google's Gmail, Calendar, and Drive within Outlook.com. It means you'll be able to see Gmail messages and open documents in Drive without signing out of Outlook.com. Microsoft confirmed that it's testing the service with selected users, but didn't say when (or if) it would be available to everyone. Look for this message telling you it's ready to try: www.snipca.com/33383.

Why is the Windows 10 November Update so small?

It installs in a flash, but may be just a one-off

Previous Windows 10 updates have been Jurassic-sized beasts, devouring drive space like sauropods munching through thick forests. But the latest update is a mere gnat, buzzing almost invisibly on to your system. It's just 180KB. Yes, that's *kilobytes*. Contrast that with its predecessors, weighing in at 3-4 gigabytes – about 20,000 times bigger.

For an update, 180KB really is microscopic. It's only about 10 times the size of a two-page Word document. Even on a sleepy 1Mbps connection, it would take just one second to download. So why the sudden decrease in update size? What's Microsoft up to?



THE FACTS

- The November 2019 Update for Windows 10 is just 180KB, thousands of times smaller than previous updates
- It's only this small if you already have the May Update installed
- Microsoft says this may be a one-off and future updates will return to around 3-4GBs

> For an update, 180KB really is microscopic – it's only about 10 times the size of a two-page Word document

Before we answer this, we should point out that the update is 180KB only on computers that have already installed the May 2019 Update (if not, it'll be the usual 3-4GB brontosaurus). Indeed, this is a crucial part of Microsoft's plan. When you installed the May Update (version 1903), you also installed all the files that the November Update (1909) needed to be activated.

This allowed Microsoft to release the latter as part of an 'enablement package'. It's the kind of method that's crying out for a dubious analogy, so how about this: the May Update renovated your house, laying electrical wiring throughout and installing a master switch. Along comes the November Update to flick the switch and turn the lights on.

This quick flick means the update is much faster than normal, and is less likely to cause problems. It also means it doesn't contain many new features. Microsoft announced this in July (www.snipca.com/33403), saying the update would prioritise performance over features – making it similar to its monthly security releases (available on the second Tuesday of every month), or the old service packs for previous editions of Windows.

Whether you approve of this will depend on your view of updates. You'll be disappointed if you treat them as an exciting opportunity to master new tools and discover new settings. But you'll be relieved if you fear the disruption they can cause, and just want to continue using Windows without constant changes.

Those in the latter camp would've been pleased when Microsoft suggested earlier this year that forthcoming updates would follow the 2019 pattern: a major Feature Update in the Spring, followed by a minor update in the autumn (known as the major-minor schedule).

But the company recently hinted that the November Update would be a one-off, describing the enablement package – and therefore the major-minor method - as a trial. "There isn't a formal plan in place to deliver future releases in the same way," it said. The November Update could end up being the smallest update Windows 10 will ever see.

This begs another question. If shrinking the November Update wasn't a sign of updates to come, what was the point? Look no further than Windows 10X, Microsoft's new operating system for foldable laptops (see 'Question of the Fortnight', Issue 565), with touchscreens above and below the hinge.

Some Microsoft sources say the smaller November Update was needed to reorder *next* year's updates so they coincide with the release of these devices. Industry analysts expect 'foldables' to be the next big breakthrough device, and Microsoft can't miss out on this lucrative market as it did with phones and tablets.

These are advanced, powerful, multitasking machines, requiring updates that are less insect, more dinosaur. It looks like tiny updates will be rendered extinct before we even got used to them.

Protect **your tech**

Scams and threats to avoid, plus new security tools

WATCH OUT FOR...

Fake Action Fraud emails

What's the threat?

Action Fraud – the UK's national reporting centre for fraud and cyber-crime – has become the subject of a scam itself. Criminals claiming to be from the organisation are emailing people in an attempt to get them to hand over personal and financial information.

It's a new and ironic twist on a familiar ruse, where victims are sent emails or letters informing them that they have been conned out of money, spinning some vaguely plausible yarn about how their recent claim for a PPI rebate was, in fact, a cyber-scam originating in Thailand.

The email claims that you can recover a large amount of lost money by contacting the sender, at which point you're persuaded to hand your financial details over by the scammers.

How can you stay safe?

At first glance, the letter looks official – its header (see screenshot) shows the logos for both Action Fraud and City of London Police, as well as a link to www.actionfraud.police.uk, Action Fraud's genuine website address.

But there are plenty of clues that give it away. Just look at the number of grammar gaffes in the opening sentence alone: "we, the Action Fraud confirms to you after all the investigation was successfully done that you have been unfortunately conned / scammed / cyber attacked by Cyber Criminals".

The key thing to remember is that – as we've said before – nobody would ever ask you to make a payment in order to recover money that you may have lost. Action Fraud is already working to close this scam down.

In the meantime, if you receive any such communication, you can report it to Action Fraud by calling its (genuine) number on 0300 123 2040, or by filling out the online form at www.snipca.com/33342. You can read the email on Action Fraud's site: www.snipca.com/33341.

ActionFraud
actionfraud.police.uk

CITY of LONDON POLICE

Ref. No.: [redacted]

Date: October 7, 2019

ATTENTION

[redacted]

Dear [redacted]

It is to bring to your notice that couple of months ago you were dealing with **Ministry of Justice** for your PPI and Bank Over Charges amounts which we, the Action Fraud confirms to you after all the investigation was successfully done that you have been unfortunately conned / scammed / cyber attacked by **Cyber Criminals.**

We took the investigation to the level with the cyber experts and monitored and traced all transactions and conversation you had with them. The total amount you paid to them is £ 24,035.00. Our tracking led us to the origin where all these scams were operating from and was surprised to learn that those criminals were from Thailand. We contacted the Thai Government and generously, they helped us to carry out the project to reach the criminals which we succeeded. Including your contact details with the banking information, we found thousands and thousands of the contact details of the British citizens with these criminals.

We have recovered 2.35 million sterling pounds and the cyber criminals are under arrest.

We shall be giving away the recovered money to all the victims of this case this month. Kindly contact us with the reference number [redacted] so we can give all details to you and successfully send you the money you have lost.

Thank you for your attention. We shall be looking forward to hearing from you.

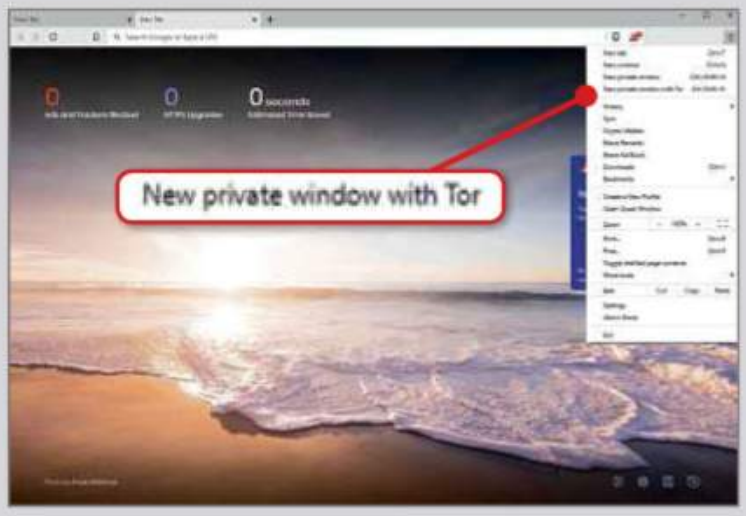
Warm regards,

Lin Homer
Action Fraud
Report Fraud & Cyber Crime UK
Contact: [redacted]

FAKE

New tools | Brave browser
www.brave.com

We're not big fans of the 'private' or 'incognito' mode offered by most web browsers. They don't hide your activity from your internet provider, nor the sites you visit. But there's a new browser called Brave (now out of beta) that offers a genuinely anonymous browsing mode, among other privacy-focussed features.



Brave is based on the Chromium browser engine, so it looks and works like Google Chrome – most Chrome extensions work, too. But it also has an ad-blocker that's turned on by default, so you won't be pestered by ads that grab your data and track what you do online. It's faster, too, because it doesn't have to waste time loading ads.

For even *more* privacy, click the top-right menu (three lines) and select 'New private window with Tor' (see screenshot). This uses Tor's network, which conceals your location and activity from prying eyes by routing your browsing through multiple servers.

ScamWatch
Readers warn readers

£50 Tesco offer isn't real deal

Look out for a scam on Facebook that tries to trick you into sharing a post to get £50 to spend at Tesco. It tells you that the offer is available "today only", and that the money will be sent to celebrate the supermarket's 100th anniversary (this bit is actually accurate – the company was formed in 1919, more than 80 years before Facebook!). My local paper, the *Eastern Daily Press*, reported the scam and published a picture of it (see www.snipca.com/33323). It also warned about similar scams promising money to spend at Morrisons and Argos.

Gordon McCann

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

Letters

Tell us what's on your mind

How can I keep running Windows 7 safely?

Your response in Issue 567 to Jack Isles' letter caught my eye, when you say you'll be publishing features on how to keep Windows 7 running safely. I assume many of your readers would welcome this information and guidance as soon as possible so that we can be fully set up by 14 January. While I could update to Windows 8.1, it's fair to say that operating system was/is universally disliked.

Updating to Windows 10 would involve considerable work and expense: a new computer plus, quite likely, scanner, printer and so on. My present computer (a Dell Dimension 9150) was bought in February 2006 and has been completely without fault. However, I doubt it would be capable of running Windows 10.

As a reader of *Computeractive* from the first issue, I would like your advice on how to continue using Windows 7.

Bill Smith

CA SAYS **Bill's probably right that his 2006 PC won't be able to run Windows 10, and there are bound to be many other readers in a similar dilemma. It will be possible to run Windows 7 safely after Microsoft ends support, but you have to be extremely careful. We're currently preparing a feature explaining what you need to do, and will publish it in Issue 570 (out Friday 3 January – two days later than normal because of print deadlines over Christmas).**

Upgrading to Windows 10 is too much hassle

I am one of the estimated 30 per cent of computer users worldwide who are still using Windows 7. Why? Because I am au fait with it, it gives me no hassle, and all my peripherals, some of which are a little old, work well with it.

If I upgrade to Windows 10 I will have to cope with a steep new learning curve, and I'll probably find that old software and peripherals won't work, forcing me to buy new ones.

The 30 per cent of Windows 7 users should all email Microsoft – preferably on the same day – to protest against their ending support for Windows 7, and demand that they at least continue to patch any major security flaws. I have already dabbled with Linux Mint and have been very impressed – it works out of the box, and comes with a free office suite plus all the drivers and codecs you need. It's free of all that licensing nonsense which stops you swapping hard drives between computers.

Keith Temple

Windows update ruined my talk

On 13 November I was about to give a presentation to a large group using my laptop and projector. I was not connected to Wi-Fi. To be sure no unwanted programs were running, I rebooted after adding some extra slides from an iPhone. Suddenly, without requesting permission, Windows began to update.

It was a disaster. I had to abandon everything as I dared not shut it down – the blue-screen instruction insisted not to. I'm sure I had not been warned about this. What a kick in the teeth!

I realise that one can disable updates and in future I will, but I thought others in these circumstances should be warned that updates can scupper plans without warning.

Andrew Stainer-Smith

No Media Centre means I'll stick with 8.1

I use a Windows 8.1 PC running Windows Media Centre as my main TV access. The flexibility of this means I rarely use my flaky Sony Android 'Smart' TV as a TV set, choosing instead to use it as a monitor. It's very good at this because the picture quality is excellent

Windows 10 does not run Windows Media Centre so I will lose all the benefits such as playing DVDs if I am forced to migrate from Windows 8.1. I can't find anything as easy to set up, nor with the same slick user interface – especially for live TV and browsing. I don't know whether I can make a scheduled recording in Windows 10, or if any software can wake the PC to record a programme.

I've looked at Media Portal (www.team-mediaportal.com), but life's too short to spend it getting all that working. It takes just five minutes to set up Media Centre. I can't see how moving from Windows 8.1 to 10 will ever be an option for this particular PC.

Roy Houghton

I activated Windows 10 using old product key

Shaun Glynn's letter (Issue 566) where he asks about the success of using a Windows 7 product key when building a new PC was certainly a great

Internet at care home makes my mother feel young again

I completely agree with Rod Turner (Letters, Issue 567) that internet access in care homes is crucial. My fiercely independent mother recently entered a home, and was upset about it. However, the nurses taught her how to stay in touch with her family using the internet – a skill she hadn't learnt before.

In short, she has learnt more about computing in the six months she's been in a home than the past 30 years living by herself. She swaps tips with fellow residents, and loves sending me interesting websites she's found.

Putting my mother into a home was heartbreaking, but the internet has made it more tolerable. She is like a young child again, eager to learn about this "magical stuff" (her words) that previously she had no interest in.

Carl Mount

help for me.

Having recently upgraded from an Intel-based PC to a newly self-built AMD Ryzen 5 3600 machine, I had some difficulty activating Windows 10 Home due to major hardware changes.

I already had a valid licence for Windows 10 Home, having taken advantage of Microsoft's offer of a free upgrade from Windows 7 in 2016. However, using the Windows 10 key associated with the old machine failed to activate it.

I then read Shaun's letter and used the key from the box of my Windows 7 retail copy. Microsoft then allowed activation. I have since written this number down somewhere safe. I am so glad I kept the original Windows 7 box. Note: this method is unlikely to work with OEM versions of Windows according to Microsoft's licensing terms.

Ian MacLachlan

STAR LETTER

Mozilla is 'arrogant' to call for a ban on web election ads

Who does Mozilla think it is, telling Facebook and Google to ban political adverts during the election campaign (News, Issue 567, page 9)? Talk about getting ideas above their station. This is a company that makes a browser (Firefox) for surfing the internet. That's all it is. It's not a charity, nor is it a faith or humanitarian group. Its arrogance in attempting to play a role in public life is staggering. If I wanted to really stick the boot in, I'd add that Firefox isn't a very good browser anyway.

More importantly, it's just plain wrong to say the British electorate are too feeble to cope with the rough and tumble of online political adverts. I'm old enough to remember the first party political broadcasts on TV, and there was a similar debate then about the public being 'lied' to. Of course, the people worried about us poor, stupid peasants wouldn't themselves fall for these lies. They're far too intelligent and well educated (joke).

People like Mozilla display a haughty, patronising attitude that assumes you have to be a tech whiz to distinguish real from fake. They should spend more time in the real world, where people share, mock and laugh at political ads all the time. People always treat them with a huge dollop of scepticism, whether it's a billboard poster, a TV ad or a Facebook message. The British public are veterans of democracy. They're a robust and cynical bunch. They don't need to be mollycoddled.

Jane Sexton

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

Computing analogies are in fashion

Tony Harris's hard-drive analogy in Issue 567 reminded me that when someone tells me they find computer terminology confusing, I used to say that it is really just like dressmaking.

The person at the machine is the processor. The machine is the program, and the workbench is the memory. If you are making a pair of trousers for a two-year-old, you can manage with a small one, but if then you start to make a pair for a six-foot hunk, the whole thing just crashes – on to the floor in this case. When you have finished your garment, you then store it away in your hard drive, aka your wardrobe.

Vanessa Cheek

As an analogy, I consider my computer to be my household pet. It does nothing without my prompting. I keep it warm, well fed, and train it to follow my commands – and it obeys.

Further, on a lateral note, I trained as an analytical chemist long before the invention of the computer, and at that time, in order to prove or disprove a hypothesis, one investigated by means of experiments in the real world.

While I recognise what a powerful tool the computer is, I am often somewhat amused by the way in which the results produced by the computer in the virtual world are interpreted as 'proof', when in fact all it has done is what it was told to do!

Ron Lobeck

'Old guy' solves TalkTalk problem

Jonathan Parkyn's 'Villain of the Fortnight' in Issue 566 (TalkTalk) about a customer having to climb the telephone pole near his home brought back memories of a similar episode between BT Openreach and my son.

His landline and broadband service had become flaky. I listened to the symptoms he described and, having been a BT engineer many years ago, I suggested it was probably a poor connection at the top of the pole outside his house because it was worse in wet weather.

He was sceptical, so I told him to contact Openreach about it, and he was a little concerned when they said "it will cost you if it's your wiring that's at fault".

So over the next few weeks/months they sent a procession of (mostly young) engineers who pooh-poohed my suggestion, and tested everything they could think of, but could find nothing and would clear off claiming it was "alright now".

My exasperated son reported the problem yet again, and this time an older engineer turned up. He checked everything in the house just to be sure, and then looked up at the pole and asked if any of the previous engineers had climbed it (they hadn't). He got his ladder and 10 minutes later had fixed what turned out to be a corroded connection. "Old guys rule!", I told my son somewhat smugly.

Bob Farish

Can WD charge me for recovering data from faulty drive?

LEAD CASE

Q I have a faulty Western Digital (WD) My Cloud 3TB external hard drive that's still well within the manufacturer's warranty period. I do back up the data on it, but I'm still worried that I might lose some of the files it stores. If so, I'll have to pay to recover it, but WD says it won't refund me this cost. I think WD should be responsible for saving and/or recovering this data without charging me. Am I right?

Graham Spicer

A Only if WD states in its contract that it will pay to recover data. If not, then it doesn't have to refund Graham the cost, and nor would it have to compensate him for the "unlawful destruction" of his data.

As harsh as it sounds, the Consumer Rights Act states clearly that it's the owner's responsibility to ensure that they have carried out adequate backups, even if the manufacturer agrees that the device they're using is faulty. Graham can of course get a refund for the drive, but not for the cost of recovering data.

He could consider claiming compensation for the loss of data because of the importance of the files erased, but it's unclear whether WD would be liable for this.

The only time Western Digital *would* be culpable for data loss is if it released a firmware update that corrupted the drive, making it unusable or wiping the files beyond repair.

Graham is also worried what would happen to the data on his drive if he has to send it to WD for repair. If it decides to replace the drive and keep the faulty one, either to refurbish it or recycle, then it must destroy all data stored.

CASE CLOSED

Who's responsible for refunding a double payment?

Q I paid £1.69 for some Hornby model railway track from an eBay seller at the end of September. EBay said it didn't receive my first payment so I sent another one (both were through my Sainsbury's credit card). Both payments have been charged to my card, so I'm due a refund for one of them. I didn't use PayPal because the seller was able to take cards, but eBay says PayPal must refund me. Is this right?

Richard Tiley

A No, because Richard hasn't got a contract with PayPal, even as a third-party payment provider. We're not sure if PayPal was even involved in either transaction, although it sometimes is behind the scenes: that is, it is used by the bank or seller to transfer payment.

Since first emailing us, Richard got back in touch to say Sainsbury's Bank has refunded him, having acknowledged *it* was responsible. However, that doesn't solve the mystery of why eBay didn't receive the first payment despite it being confirmed by Sainsbury's Bank. We've asked the bank to investigate.

CASE CLOSED

CASE UPDATE

Reader wins £1,325 after mediation fails

We often say that taking a company to the small claims court should be a last resort, and that mediation might produce a faster result. But that relies on the company cooperating with you. When they don't you can face months of frustration, as reader Mary Turner found out when she chased a refund of £1,325 from a local PC shop for a botched repair (see Issue 547).

We told her to consider mediation after the shop suggested it and the court advised her to agree. She followed every step to the letter, filing the required documentation and evidence (via Citizens Advice: www.citizensadvice.org.uk) to the mediators and the defendant. She was willing to be flexible, dropping her claim for interest and out-of-pocket expenses.

But the defendant misused this procedure, using it as a delaying tactic. It ignored the initial contact by the mediators, then asked for extensions. The mediators withdrew the case after it had dragged on for nine months and took it back to court, where Mary was awarded a full refund plus interest and expenses. The defendant didn't even appear.

Mary's advice to fellow readers is to be patient. If mediation fails and the case returns to court, the effort may not have been wasted. Many judges will appreciate your attempt to find an out-of-court compromise and smile favourably on your case.

Can new owners change your contract terms?

Q Back in the late 1990s I took out a reseller contract for web-hosting with a company called Donhost, which was perfect for my business. Since then Donhost has been taken over twice, and the latest owners TSOHost (www.tsohost.com) has removed functionality (additional domains and mail boxes) from what it calls "legacy accounts" such as those with Donhost.

What right did they have to alter Donhost's terms and conditions?

Martin Perret

A Sadly for Martin, Slough-based TSOHost probably has every right to change his terms. Tracking the path of the original company is complex because it was first taken over by Pipex in 2005 when it had 92,000 customers, but has since changed its name and merged with larger companies. With so many owners and changes, it's not surprising that Martin's original contract with Donhost no longer exists in its original form.

When companies buy a firm, they are allowed to change the terms of its customers. Companies buy brands, names and customer databases, but not liabilities, which is how a 20-year-old account would be viewed.

We realise it's a lot of work to change web host, but it's much easier now than it's ever been. Martin doesn't have a contract with TSOHost, so can leave without much fuss.

CASE CLOSED

Do I have longer to return Xmas presents?

Q I bought some Christmas presents online in early November to take advantage of the Black Friday sales. If the recipients don't like them, can they still return them even though the 14-day cooling-off period would have expired?

Della Pattison

A It's entirely down to the retailer in question, because Christmas isn't covered by different laws – the Consumer Contract Regulations apply all year round, giving you 14 days to return products bought online.

Some websites do extend the returns period because of Christmas, though not normally by more than a few weeks. This might exclude presents bought as early as November. To be sure, ask the retailer well in advance, and ask them to confirm it in an email. Even if you do buy the item in November, it may apply common sense and extend the period if you say the item will be given as a present, and therefore won't be opened until 25 December.

If an item is faulty, then a retailer only needs to give you a full refund within 30 days of purchase, though again it may choose to extend this for Christmas presents. After 30 days retailers can choose to repair or replace the item.

To avoid disappointment, you may want to check whether devices work before wrapping them. But be very careful when opening the box because retailers are allowed to deduct money from a refund if the packaging is damaged.

CASE CLOSED

CREDIT WHERE IT'S DUE

KelsusIT installed new hard drive for free

In February, I bought a reconditioned computer on eBay from the Surrey-based firm KelsusIT. It was a Dell Optiplex SFF PC, which has a Core i5 processor, 16GB RAM, 2TB hard drive, and an SSD. It cost £278 and came with a 90-day warranty.

In August, I had a problem with the hard drive not being found. I rung KelsusIT, who told me to send the PC so they could have a look, even though the warranty had expired. Not only did they examine the PC, they also installed a new hard drive free of charge.

In an age when a lot of companies just want your money, it's great to find one that is there to help. First class!

Peter Hingston

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

Contact:
KelsusIT

- **Email** customerservices@kelsusit.com
- **Phone** 0203 002 5558

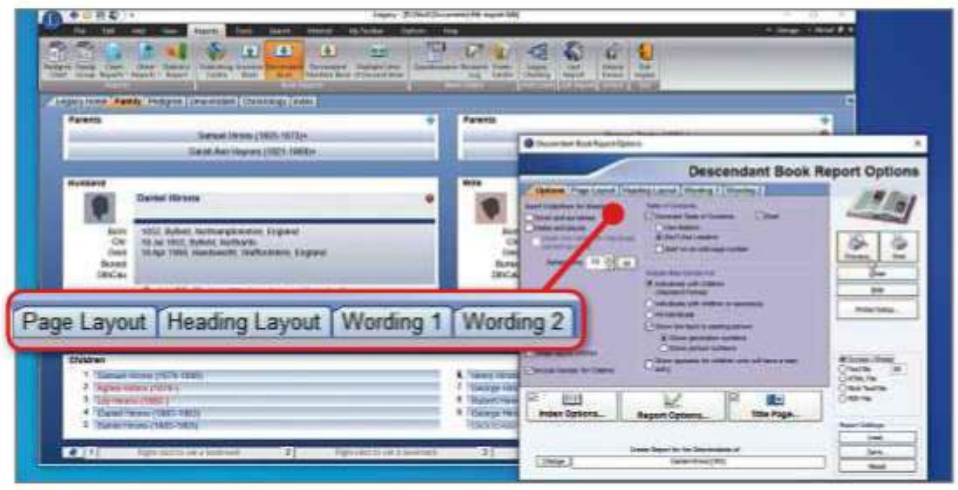
Grow Your Family Tree

Does your research lack the personal touch? If so, follow **Nick Peers'** advice to...

Create and customise your reports

Our readers continue to ask us excellent questions about refining and presenting their research. Alan Legg wants to know how to edit a PDF of data in Family Tree Builder (FTB) so he can add pages that show acknowledgments, links and images.

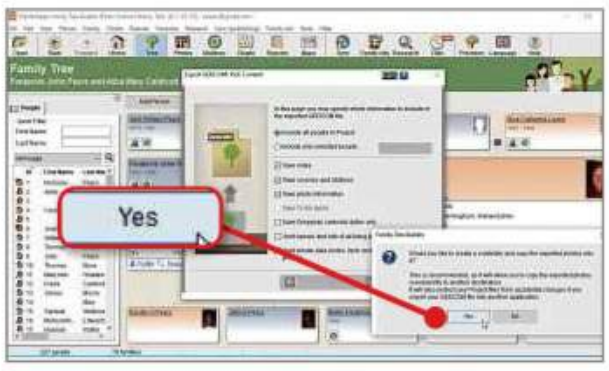
To create an FTB PDF you can edit, simply open it in Word. This is trickier in LibreOffice. You need to upload the PDF to PDF Pro (www.snipca.com/33124), convert it into a Word document, then import it into LibreOffice Writer.



Legacy's report and book tools are second to none – you can tweak just about every aspect

Publish reports using Legacy Family Tree

Another approach is to publish reports using the versatile Legacy Family Tree (https://legacyfamilytree.com). Once installed, return to Family Tree Builder and choose File, Export GEDCOM. Follow the instructions, saving the file to your Documents folder and making sure that 'Save photo information' is ticked. Click Yes when prompted to save your photos to a sub-folder (see screenshot left). Finally, click Finish.



Export your photos to a sub-folder to ensure they'll be loaded into Legacy for inclusion in your report

Now switch to Legacy and choose the free Standard Edition. Work through the setup instructions, choosing 'Import From Another Programme...' when prompted, then import your GEDCOM file.

Once imported, switch to the Reports tab on Legacy's ribbon and choose any of the book-report options (except Publishing Centre, which is restricted to the paid-for version). An options screen will appear – click Change next to the selected person at the bottom to choose which person to feature as the starting point for this report. Next, select how many generations to include in the Options tab, then click Preview. See how the default report looks, then click Close to make changes.

Customise your book report

Start by exploring the other four tabs (Page Layout, Heading Layout, Wording 1 and Wording 2 - see screenshot above) to tweak the basic wording and layout of the document. Click Preview again to see how this affects your document.

Under these tabs you'll see three other buttons: start with Report Options to choose exactly what the report contains (such as photos, sources, stories and so on). You can also change the report's design through the 'Report Fonts...' and 'Page Setup, Headers, Footers...' buttons. Practically everything can be tweaked to your personal satisfaction.

Finally, use the Index Options and Title Page buttons to set up these additional elements, again using the Preview button to see how your report will look. When you're happy with your changes, you can print the document, export it as a PDF, or save it in the RTF format for more editing. Don't forget to click Save under Report Settings to preserve your customised settings for further reports.

Your **Genealogy** Problems Solved

I'm thinking about buying the new Family Tree Maker 2019 (www.mackiev.com/ftm). What's the difference between its new £20-a-year TreeVault feature and continuing to upload my tree to Ancestry as per FamilyTree Maker 2017?

John Percy

TreeVault is an optional feature to back up your data online - you can still connect and sync your tree to Ancestry. You can access these backups, or on your phone or tablet using the free Family Tree Maker Connection app, but there's no option to sync to other PCs. The first year's subscription is included in the purchase of FTM 2019. Visit www.treevault.com for the latest upgrade offer from FTM 2017 (£49.95 instead of £79.95).

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

Next issue: Colour-code your research

SEASON'S READINGS

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Best Free **Software**

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

VIDEO CONVERTER

HandBrake 1.3

www.handbrake.fr

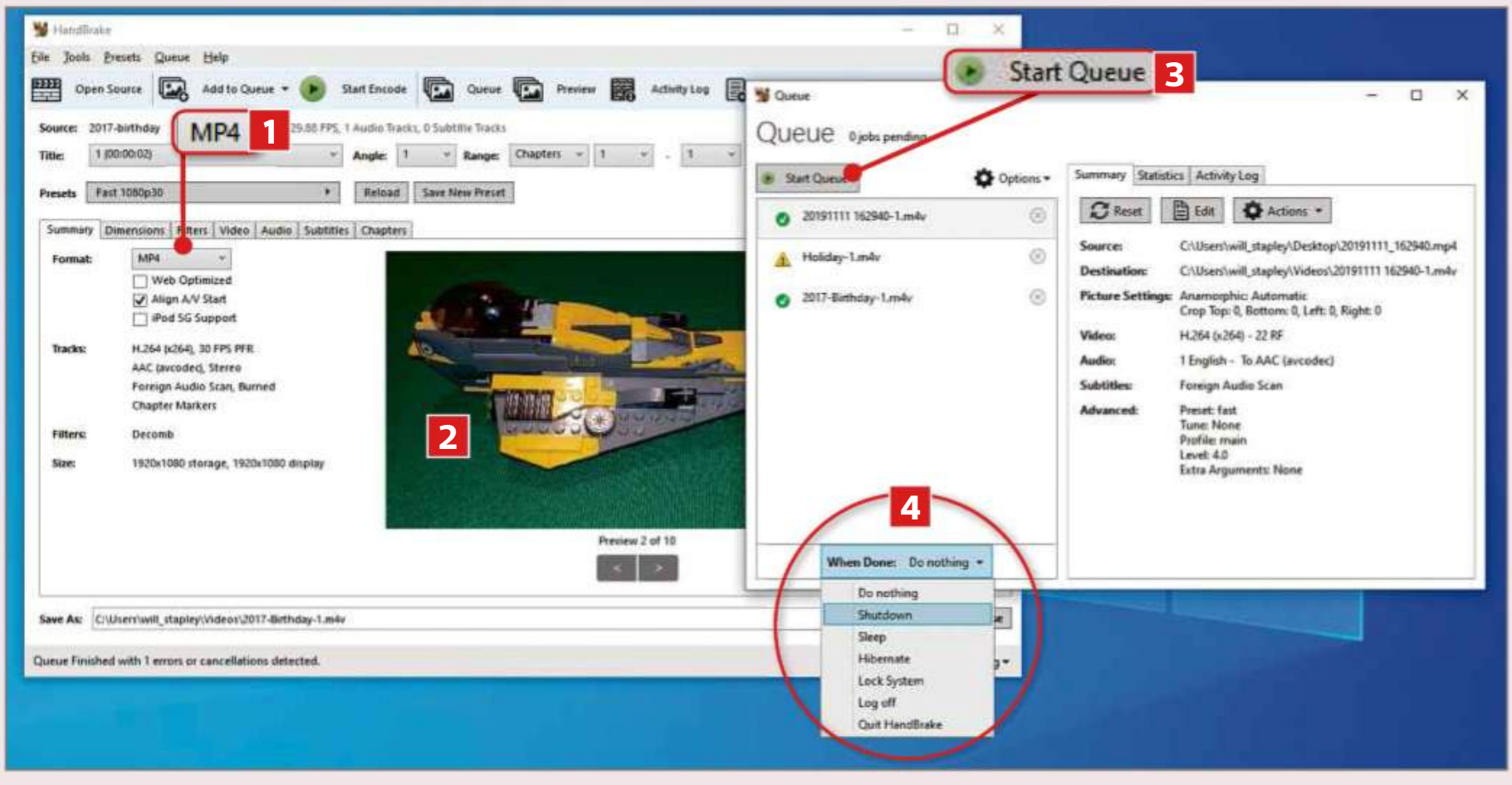
What you need: Windows 7, 8.1 or 10 (64bit only)

HandBrake is a powerful tool that lets you convert all your video files (including those from old camcorders) into MP4, MKV and WebM formats so they can be played on your PC, as well as on tablets, phones and smart TVs. If you have some home movies on DVD, HandBrake will convert these too, but it can't bypass copyright protection so can't be used with commercial DVDs.

If you have a large number of video files to convert, you can add them all to a queue then leave HandBrake to go through each one in turn. This version introduces a new design to the Queue window, providing detailed information about each queued video along with a complete log of the conversion process and any errors that occur.

At the bottom of the Queue window, you can specify what should happen once the last item has been converted. For example, if you want to run the queue overnight, select Shutdown – Handbrake will then switch off your computer as soon as it's converted all your videos. You can also choose to convert videos to a lower resolution, meaning they take up less space on your hard drive.

Other improvements in this version include new settings to convert video for sending via Gmail, as well as support for Ultra HD Blu-rays (again, excluding commercial discs). To avoid corrupted files, HandBrake also now pauses any active jobs if your laptop's battery is about to die or you run low on hard-drive space. HandBrake will then resume when you plug your laptop into the mains or free up space. The Preferences menu now includes an option to enable the new dark mode, reducing eye strain in low-lit conditions.



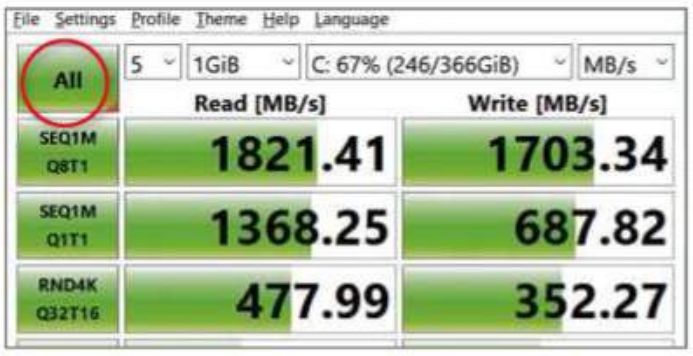
1 Click this box to select the output format for your video. The other tabs let you specify additional settings, such as video resolution.

2 The preview window displays up to 10 screenshots from the video you're converting, letting you check whether you've chosen the correct file.

3 If you're converting multiple files, the revamped Queue window lets you keep an eye on their progress. The Start Queue button lets you pause/resume the process.

4 You can select what you want HandBrake to do when it's finished all items in the queue, including close the program or shut down your computer.

HARD-DRIVE TOOL



CrystalDiskMark 7

www.snipca.com/33346

What you need: Windows 7, 8.1 or 10

If your hard drive isn't working properly, it can affect your PC's performance and even result in data loss. CrystalDiskMark (click the green 'Installer' link) lets you run performance tests to identify problems early and works with hard drives and SSDs. This version adds a series of new tests designed to replicate real-world use. You can run a one-off test, then compare the results with speeds cited on your drive manufacturer's website. However, we prefer to use it to run regular tests to see if speeds start dropping over time, which would indicate a problem. To run the default tests, click All (see screenshot). Don't use your PC while running the tests (they took just under five minutes on our Samsung SSD). Once finished, press Ctrl+S to save the results for future reference.

SYSTEM TOOL

Monitorian 2

www.snipca.com/33348

What you need: Windows 10

Most laptops let you quickly adjust your screen's brightness levels using the function keys. On desktop PCs, however, you often need to navigate your monitor's fiddly on-screen menus. Monitorian makes things easier by providing a quick-access slider control. Just click the tool's icon in your system tray (bottom-right corner of your desktop), then adjust the brightness. It also works with multiple-monitor setups, letting you quickly adjust screens to the same brightness level. We've read reports suggesting it may not be compatible with all makes of monitor, but it worked well with our Dell laptop and Philips 258B PC monitor (see screenshot). This version lets you adjust the sliders using your keyboard's arrow keys, as well as your mouse.

WHAT SHOULD I DOWNLOAD?

We tell you what software & apps to use

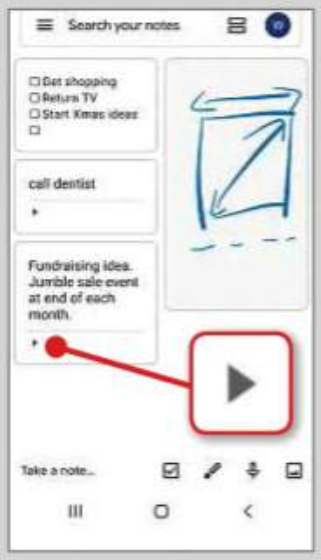
What app can I use instead of a dictaphone?

Q While clearing out my shed, I stumbled across my old dictaphone and thought I could put it to use. Sadly, it hasn't aged well and no longer works. Instead of buying a new one, could you recommend a phone app that will turn my phone into a dictaphone?

Miles Jenkins

A You may already have a basic voice-recording app on your phone. iPhones, for example, have a pre-installed Voice Memos app, which lets you start recording a voice memo by pressing the circular red button. You can name and rename each recording, but the app is otherwise fairly limited.

Instead, we recommend using Google Keep (Android www.snipca.com/33350; iOS www.snipca.com/33349). To record a new voice memo, open the app, press the microphone icon (bottom right), then start speaking. Tap the microphone button in the middle of the screen to stop recording.



Impressively, the app not only records your voice, but also transcribes what you say. The accuracy of the transcription depends on a number of factors (including the level of background noise), but we found it generally worked well.

This also means you can search your voice recordings by entering keywords in the search box at the top, letting you quickly hunt down and listen to specific recordings (press the play button under each recording to hear it – see screenshot). If you want to share a recording with someone, long-press it, then tap the three vertical dots, followed by Send.

Google Keep lets you add more than just voice memos. Using the buttons along the bottom, you can create to-do lists, add images (either new ones taken with your phone's camera or any already stored on your phone). You can also scribble drawings directly on your phone's screen (see top right of screenshot). Alternatively, tap 'Take a note...' to create a simple text-based note.

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

HOW I USE...

Google Drive

Once sceptical of online storage, **Will Stapley** explains why he now can't imagine being without it

The thought of storing my personal files 'in the cloud' (or to put it more prosaically, online) used to terrify me. It meant I was being asked to trust a company to not accidentally delete the whole lot, while also preventing hackers from spiriting them away.

These days I take a different view. For starters, I'm pretty sure Google's servers are backed up more regularly and reliably than the external drive plonked on my desk at home. And while I can never be dead certain a hacker won't infiltrate my Google account, there's a much bigger risk that they'll access them by breaching my PC's security software. Besides, as I've come to discover, the pros of using Google Drive far outweigh the cons.

Initially, I only used Google Drive to transfer large files to other people; uploading them to a new folder, right-clicking, selecting Share, then entering the recipient's address. But in recent years, I've started storing pretty much everything there - documents, photos, videos and more. This not only lets me back up things, but also lets me access them no matter where I am.

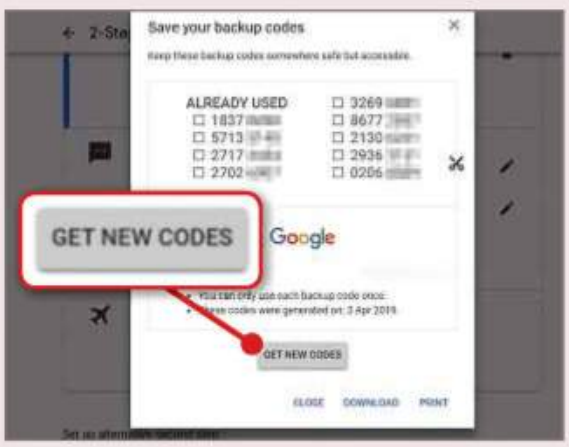
Using the Google Drive app, I can even access files and documents on my phone. The app also turns my phone into a portable scanner, which I regularly use to upload shopping receipts to Drive. I tap the '+' button, select Scan, then take a photo of the receipt. Drive then detects the edges of the document (see screenshot right) and resizes it accordingly. It doesn't always get it right, meaning I have to tap the Crop button at the top and tell it where the edges of the document actually are.

Before I set off on my holiday earlier this year, I used it to scan copies of all my travel documents (passport, tickets, insurance paperwork, etc). Had my documents been stolen or left in a restaurant, I'd be able to use the scans to persuade border control to let me back into the UK.

Given that I entrust so much personal data to Google Drive, I want to make it as secure as possible, so I enabled two-factor authentication (2FA) which means I need to use my phone to authorise logins from PCs I haven't used before. It occurred to me, however, that if my phone was stolen, I'd lose access to my stored travel documents. I'd need to use a public computer to access Drive, which would send a verification request to my missing phone.

Fortunately, Google Drive has a backup codes feature: a curiously archaic failsafe that involves printing a series of codes, which can then be used in place of phone verification. Go to your account's settings (www.snipca.com/33311), select 2-Step Verification, then click 'Set up' in the 'Backup codes' section. The codes only work once, and if you think they may have fallen into the wrong hands you can disable them all (return to the 'Backup codes' section, then click Get New Codes - see screenshot above left).

The Scan feature detects the edges of documents you want to back up



You can disable Google Drive backup codes if you fear they've fallen into the wrong hands

WHAT I'D LIKE TO SEE IN GOOGLE DRIVE

Google Drive lets me quickly share an entire folder with friends and family, which is great when I want to bore them with a barrage of holiday photos. However, the sharing options are limited. I can either grant view-only or full access permissions; the latter lets anyone rename, edit and delete the files in that folder. I'd prefer more nuanced control over this, for instance the ability to let people upload new files, but not change existing ones.

Next issue: How I use... Podcast Addict

Named & Shamed

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

WARNING: JUNK AHEAD

Junk offender:
IObit Uninstaller Free 9.1

I like to think of myself as a fair person and I'm usually happy to give something a second chance. That's why I thought I'd give IObit Uninstaller Free another go. IObit has a reputation for serving up a side order of junk when you install its free tools, and I've warned against Uninstaller in previous issues. But, with a new version of Uninstaller released last month, I thought I'd see whether IObit had taken the opportunity to change its dubious ways.

Short answer: no. If anything, Uninstaller Free is even more cunning than before. Run the installer and it immediately throws an 'optional offer' at you – namely another IObit tool, Advanced SystemCare. Many people will click 'Accept and Install' at this point thinking it's for the main program – the one you actually want to download. To avoid it (and you should), you need to click Skip This (see screenshot).

During the setup process, you'll see a screen that tries to bribe you into signing up for IObit's newsletter by offering even more junk as a "free gift". Once set up, a web page launches to bombard you with yet more offers you can safely refuse.

Open Uninstaller and you discover the free version is little more than adverts, which wouldn't bug me so much if I was getting something in return. But it turns out almost all the useful-sounding features of Uninstaller 9.1 – including the option to remove "stubborn" software and "malicious plug-ins" – are only available in the paid-for 'Pro' version. The tool's 'Action Center', meanwhile, is just a series of links (disguised as features) to install other IObit tools.

What gets me is the sheer hypocrisy. This is, after all, a tool that markets itself as a solution for keeping your PC "clean and light". On the Uninstaller's homepage, IObit even goes as far as criticising programs that contain junk. I've given you two chances, IObit – you won't get another one.

Here's some advanced system care from us: click Skip This to avoid this junk

WHAT ARE THEY TALKING ABOUT?

WHAT THEY SAY

Huawei www.snipca.com/33296

"NuSIM is an integrated alternative to existing SIM solutions, optimized for use in IoT networks. The rigorous downsizing of its SIM functionality combined with a straightforward digital provisioning process achieves significant advantages in terms of cost and overall efficiency. The low-footprint implementation allows the SIM functionality to be hosted within the communications chip."

WHAT THEY MEAN

There's a new, cheap SIM for smart devices.

JONATHAN'S VILLAIN OF THE FORTNIGHT

PayPal scammer

Here's a new eBay/PayPal scam to avoid. As reported at www.snipca.com/33356, Joanna Rose, a photographer from Liverpool, thought she had made £1,300 when she sold a camera, but just before she posted it she received a message from the buyer, asking her to send the camera to his daughter's address.

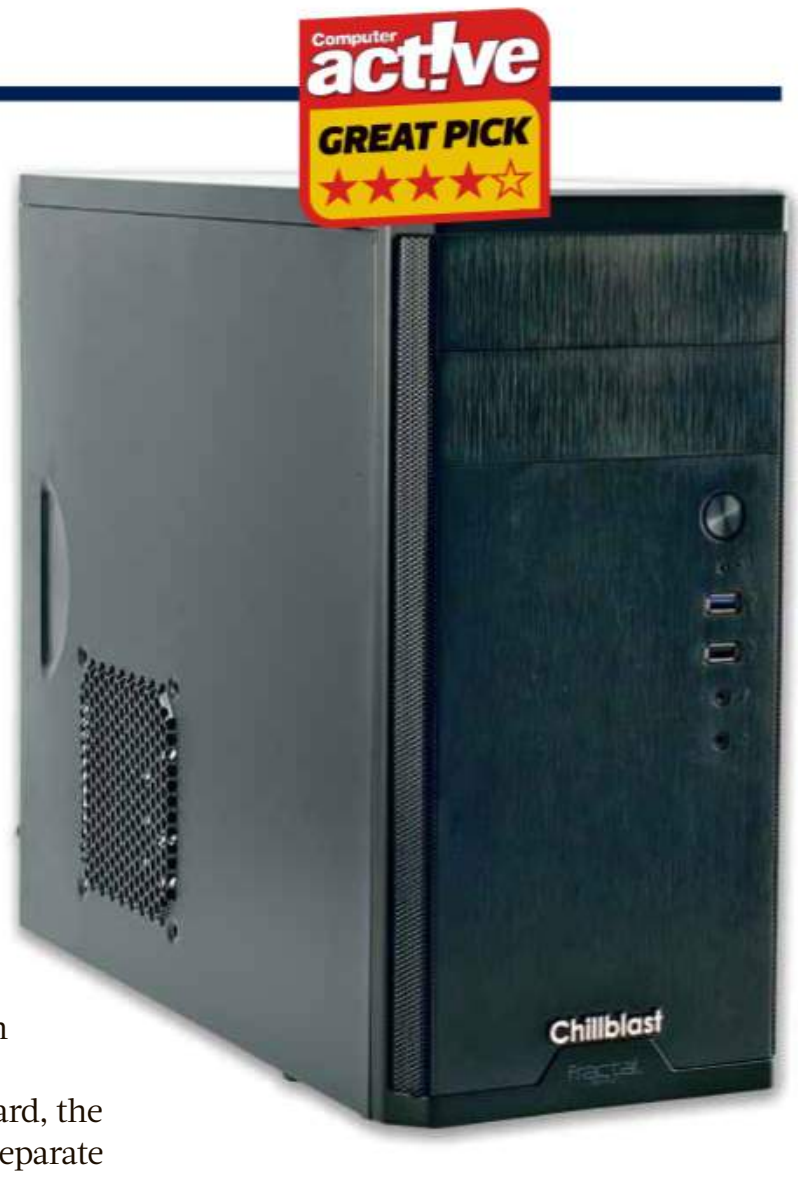
That seemed reasonable, so Joanna agreed. But the buyer later claimed he never received the camera, even though Joanna had used a tracked delivery service that gave her proof of receipt.

It turns out that the scammer had sneakily used a loophole in PayPal's terms and conditions that state items must be sent to "the shipping address on the 'Transaction Details' page". So, an honorary 'Villain of the Fortnight' award also goes to PayPal itself for upholding the scammer's claim and forcing Joanna to refund him.

PC | £500 from Chillblast www.snipca.com/33228

Chillblast Billet Core

One chip to run them all



There are two components every modern PC needs: a CPU and a GPU. The central processing unit, which we normally just call the 'processor', is the brains of the operation, the big fat chip that runs Windows and all your favourite programs. The graphics processing unit produces the screen display that shows you what's going on. Mainly thanks to the demands of 3D games, today's GPUs can be extremely powerful, so these are big chips too, and come mounted on a separate printed circuit board with its own cooling fans – known as a graphics card.

> "Not lightning fast, but a great all-rounder for this money"

In case all you have in mind is word processing, web browsing, email and the like, and you don't want to spend money on a graphics card, Intel incorporates a basic GPU into all its CPUs. So you can buy a PC with an Intel CPU alone, and add a graphics card later if necessary. Rival chip maker AMD has taken a different approach, and sells most of its CPUs without a GPU, which helps to keep prices competitive but means you do need at least a basic graphics card as well. It also offers what it calls 'APUs', which stands for 'accelerated processing unit' and includes both a CPU and something that's closer to the GPU on a proper graphics card than Intel's integrated graphics.

The AMD Ryzen 3 3200G APU in this small tower PC system has four CPU cores, each handling one program thread, which isn't especially impressive. But it also has enough graphics-processing ability to run many 3D games smoothly at up to 1080p Full HD resolution. It's helped along by Chillblast's clever decision to fit a budget PC with 16GB of memory, twice what we'd expect, installed as two matching 8GB modules in dual-channel mode for maximum speed.

Unlike a dedicated graphics card, the built-in RX Vega 8 GPU has no separate memory of its own, and has to borrow enough main memory for whatever it's trying to do. With 16GB to play with, that's fine, and the extra room also helps the CPU with multitasking.

It's not as clever as some rivals, however. Palicomp's AMD Impulse RYZ7 (£500 from www.snipca.com/32913, see our review, Issue 565, page 22), with an older Ryzen 5 2600 CPU and AMD's 2GB Radeon RX 560 graphics card, was up to twice as fast in our general tests as well as giving us about 50 per cent higher frame rates in games.

Both PCs come with equally fast 512GB SSDs, plus room for a couple of internal hard drives if you need more storage, and plenty of USB ports at up to 10Gbps speeds for external drives. Both are relatively compact; Palicomp's case is prettier, with a glass left side, but Chillblast's lets you fit a DVD or Blu-ray drive if you need it. And i7 uses a lot less electricity, ranging from 25 watts when idle up to 102W, compared to 55-150W for the Impulse RYZ7. So there are pros and cons, but Palicomp clearly offers more performance for your money.

SPECIFICATIONS

3.6GHz AMD Ryzen 3 3200G quad-core processor • 16GB memory • 512GB SSD • USB-C port • 2x USB 3.1 Gen2 ports • 3x USB 3.1 Gen1 ports • 2x USB 2.0 ports • PS/2 port • 802.11n Wi-Fi • Gigabit Ethernet • HDMI and DVI monitor outputs • Windows 10 Home • 411x175x355mm (HxWxD) • Two-year warranty
www.snipca.com/33228

VERDICT Not the fastest system for the price, but a great all-round budget PC with some room to expand

★★★★☆

ALTERNATIVE

Palicomp AMD Impulse RYZ7 £500 A six-core, 12-thread CPU plus low-end graphics card add up to more speed

LAPTOP | **£1,029** from HP www.snipca.com/33233

HP Envy 13 (2019)

Sweet spot

HP's Envy brand is all about the mid-range: it's not the cheapest, but something that'll do a decent job with no serious compromises. Last year's Envy 13 was particularly good value, and this update with the latest Intel processors offers even higher specs for the same money.

At £1,149, reduced at the time of writing to £1,029, our test model came with a quad-core i7-8565U chip, 16GB of memory, Nvidia GeForce MX250 graphics card with 2GB of dedicated video memory, and – impressively – a terabyte of SSD storage.

> "Improves on what was already an impressive model – and at no extra cost"

The other key component, the screen, was slightly disappointing last time around. HP have now fixed that. It's 1080p Full HD (not Retina or 4K) but that will be sharp enough for most people at this size. Our tests confirmed that the high-contrast IPS touchscreen panel covered 98.6 per cent of the sRGB colour space with a Delta E of 0.39, which equates to almost perfect accuracy.

So where have corners been cut? Not in battery life. Our video-playback test ran for over an hour longer than the previous model, at eight hours 30 minutes.

As before, the slim chamfered aluminium chassis feels well made, and the backlit keyboard is comfortable to type on, once you get used to the US-style single-height Return key. Even the built-in speakers are better than most. The touchpad is basic but responded smoothly when moving the cursor and carrying out Windows 10 gestures. There's a fingerprint reader for quick login and though the webcam isn't the best, we're not put off by it. In fact if you're looking for reasons not to buy this Envy 13, we're struggling.

One alternative is Dell's XPS 13 (www.snipca.com/31052, see Issue 551, page 22). When we tested this with the same i7-8565U processor, it was around 10 per cent faster, despite having only 8GB of memory, thanks to Dell's superior heat dissipation. Dell has now doubled the standard memory and storage on this configuration to 16GB and 512GB, but at £1,379 without a graphics card it's significantly more expensive than the Envy. It does manage two hours more battery life, and has Thunderbolt 3 to add fast external storage.

New XPS models with tenth-generation Intel processors start at £999 for an i3 chip, but these have been unwisely paired with just 4GB of memory, and still can't squeeze in a graphics processor.

SPECIFICATIONS

1.8GHz Intel Core i7-8565U processor • 16GB memory • 2GB Nvidia GeForce MX250 graphics • 1TB SSD • 13.3in 1920x1080-pixel touchscreen • Webcam • 802.11ac Wi-Fi • 2x USB 3.1 ports • USB-C port (HDMI adapter supplied) • Windows 10 Home • 14.7x307x212mm (HxWxD) • 1.2kg • One-year warranty www.snipca.com/33233

HOW WE TEST

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

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

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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 Great Pick award. We highly recommend these products, although they just fail to meet the high standard of our Buy It! winners.

PRICES

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

VERDICT A much-improved screen confirms HP's Envy 13 as the everyday laptop to beat

★★★★★

ALTERNATIVE Asus ZenBook UX433FA £999 A decent laptop that also comes with an i7-8565 chip, due to be replaced by new touchscreen models

SMART SPEAKER | **£60** from Amazon www.snipca.com/33290

Amazon Echo Dot with Clock

A time stitched in

Amazon's most affordable smart speaker, the Echo Dot, officially costs £50, but at the time of writing it's on offer at £35, and it also comes bundled with other products to make it even more of a bargain. Inevitably, that means they've made a fancier one to tempt you to spend more. Enter the Echo Dot with Clock (or, as we can't seem to stop calling it in the *Computeractive* office, the Echo Dock with Clot), which is exactly what it says on the tin. The clock consists of big LED digits that shine through the fabric cover – only available in off-white – and can also show a countdown timer, alarm settings or even the current temperature (taken from the web).

This is actually very handy, especially if you already have an Echo downstairs and are looking for an extra one to keep by the bed, where you'll be able to see it's 4am rather than waking your partner by asking Alexa the time.

This aside, the Dot works the same as before, serving both for access to Alexa services, via your Wi-Fi, and as a general-purpose mains-powered Bluetooth wireless speaker. There's a jack to attach a powered speaker or hi-fi if you want the Echo features with better audio, but the built-in speaker, as before, is surprisingly decent. You can pair two for stereo.

Currently discounted to £45, the Echo Dot with Clock is a great little smart speaker even at 60 quid, and more versatile than the Google Nest Mini (see below). If you have some experience of Alexa and Google Assistant, however, or accessories that favour one or the other, your preference between the platforms might swing your decision.

SPECIFICATIONS

802.11n Wi-Fi • Bluetooth 4.0 • 4x microphones • 40mm driver • Mains adapter • Requires Android 5.1 or iOS 11 or Fire OS 5.3.3 or higher device • 43x99x99mm (HxWxD) • 300g • One-year warranty
www.snipca.com/33290

VERDICT With rich sound for a small speaker, plus Bluetooth audio and wired output, this seems a better bet than the Google Nest Mini

★★★★★

SMART SPEAKER | **£49** from Google www.snipca.com/33306

Google Nest Mini

Words of a feather

Google has renamed its home automation products, and as often happens when tech companies name things, we're none the wiser. The Home Mini is now the Nest Mini, adopting the branding of the company Google bought five years ago. The Home Hub, which adds a screen, is now the Nest Hub, and the Home Hub Max is the Nest Hub Max. The original Google Home Mini still exists, reduced to £29, while the Google Home and Google Home Max remain available if you want a larger speaker, but the next versions of these will be Nest. All clear?

The Nest Mini is a decent update to the Home Mini. Available in four colours, the fabric-clad puck – now wall-mountable with a keyhole cutout – listens for your commands and plays your music. It doesn't accept Bluetooth audio input for use as a wireless speaker (you have to network it to your Wi-Fi), and doesn't have a jack output to connect a better-quality speaker.

Its own sound quality has improved, with a bit more power and stronger bass, but it's still not as good as Amazon's latest Echo Dot. Nor are its six indicator lights as sophisticated as the Echo Dot with Clock's digital display. But it's cleverer on the inside, with new chips that help it answer questions faster. Combined with more sensitive microphones, that makes it feel more responsive, and less like shouting at a robot and waiting to see if it understood.

In fact, Google Assistant has always felt a bit smarter than Alexa. But Amazon has more support from third-party services and accessories. Based on the hardware alone, we'd pick the Echo Dot with Clock.

SPECIFICATIONS

802.11ac Wi-Fi • Bluetooth 5.0 • 3x microphones • 40mm driver • Mains adapter • Requires Android 5 or iOS 11 or higher device (app required for setup) • 42x98x98mm (HxWxD) • 181g • One-year warranty
www.snipca.com/33293

VERDICT It's a better mini smart speaker at a fair price, but doesn't sound as good or do as much as the Echo Dot with Clock

★★★★☆

PRINTER | **£85** from Amazon www.snipca.com/33324

Canon Pixma TS6250

Common touch

Not to be confused with the completely different and much weirder-looking TS6350, this inkjet sits in the middle of Canon's current Pixma TS range, and while we haven't been convinced by some of its stablemates, the TS6250 achieves a happy medium. The rounded-rectangle styling is more elegant than most, with a front panel that tilts up to make the large colour touchscreen even easier to operate. That's particularly useful on a multi-function machine that can photocopy as well as print and scan, because you won't necessarily be operating it from your PC. Both USB and Wi-Fi connections are provided, with the usual support for Apple AirPrint, online services and HP's print and scan apps.

> "High-quality prints and scans in a well-designed package"

There's a hopper at the back for up to 100 sheets of plain paper, or 20 of photo paper (up to 300gsm), as well as the main 100-sheet cassette, plus an exension to catch the printed pages, which you can't always take for granted. You can print both sides of the paper (duplex), but the scanner has no automatic feeder, so you'll have to line up originals on the glass yourself.

Canon reckons this printer can churn out 15 black-and-white pages per minute (ppm), or 10 in colour, but our tests were evidently a bit more challenging, because our black text document only managed 12.7ppm, while colour graphics barely hit 4ppm. That's not very fast even for a basic inkjet, but a single borderless 6x4in photo took just 40 seconds, which is good. A mild scraping sound made printing slightly noisy. High-res scans were slow, taking a minute and 40 seconds for a similar photo at 1200dpi, but regular document scans and copies didn't keep us waiting, with a single A4 page copying in 12 seconds, or 22 for colour.

We were very happy with both print and scan quality generally, although the duplex mode used less ink to speed things up and avoid over-wetting, which compromised quality a bit. Otherwise, both glossy photos and plain-paper solid-colour business graphics came out well.

Refills come in five colours – a pigment black is used for crisper text, as well as a separate dye-based black to match the cyan, magenta and yellow inks – and, assuming you buy Canon's most efficient XXL cartridges, work out at about 8.7p per colour page, or 2.9p for black. That isn't the cheapest around, but could be worse.

SPECIFICATIONS

4800x1200dpi maximum print resolution • 1200x2400dpi maximum scan resolution • 100-sheet paper tray • 100-sheet rear feed • USB 2.0 • 802.11n Wi-Fi • 139x372x315mm (HxWxD) • 6.2kg • One-year warranty www.snipca.com/33325

VERDICT Although there's not much to wow you, this is a printer we'd be happy to live with at a fair price

★★★★★

ALTERNATIVE Brother MFC-J491DW £93 With a roughly similar spec, this was faster but pricier to run, and results were questionable

DO I REALLY NEED...

A gold iPhone?

What is it?

It's an Apple iPhone 11 Pro, but with more – you know – gold, plus titanium, onyx and 137 diamonds. Made by Russian company Caviar, it's called the Solarius Eclipse (pictured).

What does it do?

The same things as a normai iPhone 11 Pro. Plus, thanks to a mechanical watch movement built into the back, it tells the time.

The iPhone 11 Pro already tells the time.

Ah. Right. In that case, just the exact same things as an iPhone 11 Pro.

What's the catch?

It costs $137,000 (about £107,000).

So can I do without it?

At that price, you might have to. But if you want to cash in your pension, it might make a lovely Christmas present for the lady in your life.

And for the man in my life?

A mere $13,350 (£10,400) gets you the Discovery Mars (pictured below). This 'masculine' model, described somewhat menacingly as "militant and brutal", contains actual Martian rock.

PHONE | **£450** from Currys www.snipca.com/33258

Oppo Reno 2

Fulsome prism

You may well assume that the Oppo Reno 2 differs from the Oppo Reno 10x Zoom (£650 from Carphone Warehouse, www.snipca.com/32462) in that it lacks the 10x zoom of its stablemate. Well you'd be right and wrong because the Oppo Reno 10x Zoom actually only has 5x zoom. You get 10x by adding 2x digital zoom, which, as always, simply blows up the pixels. The more accurately named Reno 2 has a 2x optical zoom.

The 2x telephoto lens is just one of four cameras on the back (pictured below); the others being a regular lens, an ultra-wide, and a low-res black-and-white sensor that provides depth mapping for the blurred-background portrait mode. We found the latter barely worked, but in other respects the cameras do a great job. Google's slightly pricier Pixel 3a XL takes better pictures, but with only one focal length, giving you much less flexibility.

The Reno 2's front camera, as with the 10x Zoom, pops up from the top at a jaunty angle when required, leaving the front to the notchless 6.5in AMOLED screen, which looks superb – once you disable auto brightness, which we found erratic.

Inside, the Snapdragon 730G processor is faster than the Pixel 3a XL, but slower than the £549 OnePlus 7T, and struggled sometimes to keep up with advanced 3D games. It also limits 4K video recording to 30 frames per second (fps) and video stabilisation to 1080p resolution at 30fps.

Android 9 generally ran smoothly, and the battery (charged via USB-C) kept going for just over 20 hours in our video-playback test, outlasting most rivals. Both fingerprint (thanks to a sensor behind the screen) and face recognition are supported, and a huge 256GB of storage is included as standard.

Finished in Gorilla Glass 5 in a choice of gorgeous iridescent colours, this is a very attractive phone, but can't quite beat the cheaper Xiaomi Mi 9T Pro (£399 from www.snipca.com/33061, see our review Issue 566, page 28).

SPECIFICATIONS

6.5in 2400x1080-pixel screen • 48, 13 and 8-megapixel rear cameras • 16-megapixel front pop-up camera • 256GB flash storage • 802.11ac Wi-Fi • Bluetooth 5 • 3G/4G • Android 9 • 160x74x9.5mm (HxWxD) • 189g • One-year warranty www.snipca.com/33259

VERDICT At first glance you'd never guess this cost under £500. There are a few minor flaws, but nothing serious

★★★★☆

ALTERNATIVE

Xiaomi Mi 9T Pro £399

With its own pop-up selfie camera and three more on the back, it's great value

WHAT SHOULD I BUY? We solve your buying dilemmas

Is there an enclosure that fits my old hard drive?

Q My Dell Inspiron 545 PC blew up recently and I've replaced it with a Palicomp Abyss, which I'm very happy with. I was going to trash the Dell when I saw Simon Mellor's letter about converting internal drives into external storage (see Readers' Tips, Issue 537, page 42). The hard drive I've removed is a Seagate BarraCuda 500GB, dating from 2009. It measures 5¾x4in, but most enclosures on sale are described as either 2.5 or 3.5in. Is there anything still on the market to suit it, and will it be compatible with a SATA interface?

Dave Orchard

A Ten years is a long time in tech, but hard drives have developed slowly. While old, your drive is of the same 3.5in SATA variety as those in use now. '3.5in' refers to the magnetic platter, or disk, on which the data is stored inside. The nominal size of a 3.5in drive is 147x101.6mm (Wikipedia has a helpful list at www.snipca.com/33214), matching your imperial measurements. So a 3.5in SATA enclosure will be fine, connecting to your new PC via USB 3.0, which is comfortably faster than any hard drive. A quick search of Amazon finds options from around £10, with more durable and/or flexible enclosures at £20-25.

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

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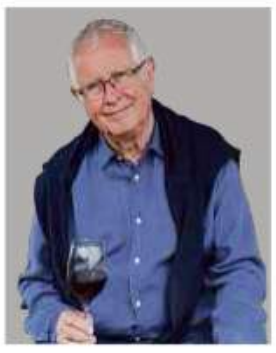

Who doesn't like a glass of wine at the end of a busy day or with friends over a meal? I know I do. And if, like me, you care about what goes into your glass … then I have a cunning plan to make sure you're never caught short of wines you can trust for flavour, quality and value.

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Tony Laithwaite, Founder

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IMPORTANT: YOUR FUTURE CASES – Every 12 weeks and at Christmas if eligible, you will be notified of the next Laithwaite's Wine Plan selection, which you will automatically receive unless you request otherwise. All future selections of the Season's Favourites Wine Plan will be charged at £107.88 plus £7.99 for delivery. By joining a Wine Plan, you authorise us to deduct such subsequent amounts from the credit or debit card that you used to pay for the introductory Wine Plan case. You're always in control; you can delay or stop your deliveries of Laithwaite's Wine Plan cases at any time – simply let us know.

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drinkaware.co.uk

KEYBOARD | **£100** from Logitech www.snipca.com/33334

Logitech MX Keys

Love island

Why would you pay £100 for a keyboard without mechanical switches or fancy LED lighting? The MX Keys does a pretty good job of answering that question. It's essentially a modern tile-style 'island' design (flat keys with gaps between), but instead of moving almost no distance with hardly any sense of having pressed anything, the contoured keys guide your fingers and let them feel what they're doing. The travel and click is just enough for comfort without making a clackety noise to annoy others. An optional palm rest adds a tenner to the cost.

The plain white backlighting adjusts automatically to ambient light, but you can also fiddle with the brightness yourself, or turn it off to increase the rechargeable battery's estimated life from 10 days to five months. The light will also dim when you step away from the keyboard. A charging cable is provided to connect the USB-C port to any USB charger, or your PC, but no charger is included.

The MX Keys works over Bluetooth with most computers and devices, and also comes with a tiny USB dongle containing a 2.4GHz radio transceiver that you can use instead, if your PC doesn't have Bluetooth or you find it more reliable. You can connect to three devices simultaneously, and if you use a Logitech mouse with the same feature (known as Logitech Flow), you can switch both between each system instantly. This is an unusual and pricey keyboard, but we enjoyed using it enough to consider paying for it.

SPECIFICATIONS

Wireless keyboard • Bluetooth requires Windows 8, macOS 10.12, Android 6, iOS 9 or later or Linux • 2.4GHz USB receiver requires Windows 7, macOS 10.11, Android 6 or later or Linux • 20.5x430x132mm (HxWxD), 810g • Two-year warranty www.snipca.com/33334

VERDICT A metal unibody case gives a solid feel to this unit, which brings traditional comfort to a modern format

★★★★★

ALTERNATIVE Logitech K375s £40 A more traditional-style keyboard that similarly supports Bluetooth, 2.4GHz and Flow

MESH ROUTER | **£129** from Amazon www.snipca.com/33338

Zyxel Multy U (pack of 2)

Loose connection

Zyxel's Multy X (£248 for two from Amazon www.snipca.com/27309) is one of our favourite mesh Wi-Fi systems, so we were keen to try this new, cheaper version. We tested the two-pack (three will cost you £179).

The boxes, which stand precariously on one corner, are neater, with a glowing 'x' on the front. Each has one Ethernet port to connect to your broadband router if it's the first unit, plus one more that you can use to connect a PC or other wired network device.

The Multy U has no web-browser interface, and has to be set up with Zyxel's app on an Apple or Android phone or tablet. It refused to talk to our Samsung Galaxy S8 (and also disliked our laptop's Wi-Fi), but was simple enough with an iPhone. You can test Wi-Fi reception across your home to work out where to put units. Other features are basic, but adequate, and a few simple Alexa commands are supported.

The Multy U incorporates one 2.4GHz and two 5GHz wireless networks, using one of the latter as a backhaul between units. Unlike with most mesh systems, though, if you add a third unit, it still connects wirelessly to the first, which is fine if your broadband point is in the middle of your house, but useless if you need to stretch coverage. Compared with the Multy X (which has the same limitation, but broadcasts a more powerful signal), we found the Multy U fast at short range, but slow over greater distances, and not helped by a third box.

SPECIFICATIONS

Pair of Wi-Fi routers with backhaul • Supports 802.11n and 802.11ac • Requires a mobile device with iOS 9 or later for setup and operation • 123x123x30mm (HxWxD) • 310g • Two-year warranty www.snipca.com/33339

VERDICT With 802.11ax on the way, it's a tricky time to invest in a mesh system, and the Multy U didn't impress enough to be a wise buy

★★★★★

ALTERNATIVE BT Whole Home Wi-Fi £170 As long as you already have a broadband router with Gigabit Ethernet ports, this trio of dishes is good value

ACTION CAMERA | **£299** from Amazon www.snipca.com/33344

DJI Osmo Action

Mini countryman

Better known for its drones, DJI is now muscling in on GoPro's action camera business, and the matchbox-sized Osmo Action arrives as a direct challenger to the GoPro Hero7 Black (£273 from Amazon, www.snipca.com/33343). Like its rival, it records in 4K resolution at 60 frames per second with advanced electronic stabilisation, and can be controlled by voice, so you don't have to fiddle with buttons or a touchscreen in ski gloves or with wet hands.

> "Easy-to-use touchscreen controls and an HDR mode for more video detail"

Unlike the Hero7 Black, the Osmo Action offers HDR for video, not just still photos, promising to pull more detail out of the lightest and darkest areas. And while GoPro mounts a small black-and-white LCD on the front to show the camera's status, DJI gives you a second colour screen, so you can see what you're shooting whether the camera is pointing towards or away from you. Unlike the larger rear screen, this doesn't respond to touch, and to save battery it doesn't stay on all the time – it's activated by a two-fingered double-tap on the back or a long press on the side button.

If you're new to action cams, you may find shooting feels clunky compared to a smartphone, but the camera is much more rugged, with a tough plastic case and a separate frame that wraps around it to provide a standard screw mount. It's rated waterproof to a depth of 11 metres, as long as you close the rubber flaps over the battery, USB charger and microSD card ports.

We found the Osmo Action simple to use, with a combination of clear touchscreen controls and easily accessed buttons. As you'd expect, there are slow-motion modes that reduce resolution to increase frame rate, up to 240 frames per second (fps, 8x slomo) at 1080p, plus time lapse, hyperlapse (speeded-up) and the HDR mode. One reason not to use this all the time is that it disables stabilisation, which otherwise does a great job of smoothing out the inevitable bumps. Image quality is fine in good light; when it's not so bright, you'll see a marked deterioration. The DJI Mimo phone app lets you download, edit and share footage quickly, but GoPro's is slicker.

SPECIFICATIONS
Up to 4K video at 60fps • 9-megapixel photos (JPEG/RAW) • 2x microphones (external mic adapter £39) • MicroSD card slot • MicroHDMI output • USB-C port • 42x66x35mm (HxWxD) • 134g • iOS and Android apps • One-year warranty www.snipca.com/33345

VERDICT The front screen arguably edges this ahead of the Hero7 Black, but recent GoPro price cuts make it a very close race

★★★★★

ALTERNATIVE GoPro Hero7 Black £273 A swappable battery and more accessories go up against the Osmo Action's extra screen – take your pick

GADGET GRAVEYARD

Devices that never caught on

Amazon Dash Button

What was it?

Launched in 2015, the Amazon Dash Button was a sticky-backed Wi-Fi fob that connected directly to Amazon and place a repeat order for a specific product. Buttons were available for brands from washing-up liquid (pictured) to beauty, but the user could choose exactly what to order.

Why did it die?

In January 2019, a German court found that Dash buttons violated the EU's consumer protection laws, which require that shoppers are told they're incurring a payment. Germany is Amazon's second biggest market, and its third, the UK, would probably have followed suit. Amazon announced in February it would discontinue Dash Buttons, promising to honour orders placed using the millions already sold. But in August, it stopped doing so. Amazon Prime members can still set up virtual Dash Buttons (see www.snipca.com/33340). As with the physical devices, you use the big round white button to re-order, but it takes two presses, not one: the first lets you know the price.

NEXT ISSUE

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Our pick of products that have won the Buy It award

LAPTOP

NEW ENTRY

HP Envy 13 (2019)
£799 from www.snipca.com/33308
Tested Issue 568

Thanks to eighth-gen Intel processors and dedicated Nvidia MX250 graphics, this sleek aluminium laptop offers a practical combination of all-round processing power and portability, topped off by 8 hours 30 minutes battery life – and the touchscreen is now excellent too.

ALTERNATIVE Dell XPS 13 Gets the most out of Intel CPUs, now tenth-gen, but there's no GPU option and the cheapest sensible configuration is £1,199. www.snipca.com/33309

DESKTOP PC

Palicomp AMD Impulse RYZ7
£500 from www.snipca.com/32913
Tested Issue 565

This could be the best £500 you've ever spent. It's fast, has a powerful SSD and dedicated graphics card – something its budget rivals lack. There's room for expansion, with two bays for internal hard drives and plenty of USB 3.0 ports.

ALTERNATIVE PC Specialist Inferno R1 Budget-beating performance from a Ryzen 5 3600X and 8GB GTX 2060. £1,199 from www.snipca.com/26306

APPLE iPAD

Apple iPad 10.2in
£349 from www.snipca.com/24022
Tested Issue 566

This enlarged edition of the basic iPad is superb value. With a great screen and plenty of processing power, it supports Apple's Pencil stylus (£89) and Smart Keyboard (£159). The 32GB storage could be tight, so consider 128GB at £449.

ALTERNATIVE iPad Mini With 64GB, the improved Mini has an even better, but smaller, screen than the otherwise similar 10.2in iPad at a similar price. £399 from www.snipca.com/33050

ANDROID TABLET

Samsung Galaxy Tab S3 9.7
£357 from www.snipca.com/30707
Tested Issue 501

Now discounted and with a stylus included, this full-size HDR tablet is a better deal than the new Tab S4 (see Issue 540). Apple's faster £319 iPad with optional £89 Pencil is superior, but lacks microSD expansion.

ALTERNATIVE Amazon Fire HD 8 Fewer apps work with Fire tablets, but you get the essentials plus hands-free Alexa. Now just £80 (16GB) or £100 (32GB) from www.snipca.com/29340

APPLE iPHONE

Apple iPhone 11
£729 from www.snipca.com/32938
Tested Issue 565

At over £300 less than the iPhone 11 Pro, this has two rear cameras rather than three, but it's a superb phone for the money and takes fantastic photos and video. With full-day battery life, the only flaw is its 64GB of unexpandable storage – 128GB is £50 extra.

ALTERNATIVE iPhone XR Feels much more up to date than the £479 iPhone 8, lacking little except the iPhone 11's enhanced cameras. £629 from www.snipca.com/32947

ANDROID PHONE

Samsung Galaxy A70
£345 from www.snipca.com/32856
Tested Issue 564

This eagerly awaited phone hasn't let us down. The cameras are great, taking photos with a clarity to rival Google's Pixel phones, while the screen is exceptional. Battery life is staggering – 25 hours in our video-playback test. An outstanding phone.

ALTERNATIVE Xiaomi Mi 9 This year's surprise mid-range phone, with superb screen and triple camera. £399 (64GB, or £39 extra for 128GB) from www.snipca.com/31683

COMPETITION

Win 1 of 4 TP-Link KC120 Kasa Cam security cameras

TP-Link's KC120 security cameras give you crystal-clear video 24 hours a day, seven days a week. It has a 130-degree wide-angle view; accurate, balanced lighting; and 1080p resolution for rich, sharp colours.

Its night-vision mode works at up to 25 feet, while the two-way audio with built-in microphone and speaker lets you keep in touch with your family. It also works with Amazon's Echo Show or Fire TV, letting you watch live video stream with a simple voice command.

It records a clip every time it senses motion or detects a sound. These are stored online, so you can watch and download them from anywhere.

To enter this competition, email your home address to **cacomp@dennis.co.uk** with 'KC120' in the subject line by Tuesday 17 December. Good luck!

You can buy **TP-Link's KC120 Kasa Cam** security cameras on Amazon for £103 each: www.snipca.com/33082. For information on more TP-Link products, including routers, Wi-Fi extenders and smart bulbs, visit www.tp-link.com and follow @TPLINKUK on Twitter.

SECURITY SOFTWARE

Kaspersky Internet Security 2020
£16.99 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, three-device licence for just £34.99.

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

PRINTER

NEW ENTRY

Canon Pixma TS6250
£85 from www.snipca.com/33324
Tested Issue 568

At up to 12.7 pages per minute, this nicely designed USB/Wi-Fi inkjet isn't the fastest, but print and scan quality are good and the five-ink system is no pricier than average to run. There's no automatic feed for the scanner, but you can print both sides of the paper.

ALTERNATIVE HP OfficeJet Pro 6960
Decent speeds, plenty of features (including automatic document feed) and reasonable running costs make this a solid buy. £130 from www.snipca.com/28483

ROUTER

D-Link DIR-1960
£105 from www.snipca.com/32849
Tested Issue 564

Giving us download and upload speeds of 460Mbps and 375Mbps respectively, this is phenomenal value. Even two floors away we got 329Mbps and 284Mbps. It has four Ethernet ports for wired devices and a USB 3.0 socket to share storage via your network.

ALTERNATIVE Synology RT2600ac
Comprehensive sharing features, controls and plenty of add-on apps complement excellent long-range performance. £211 from www.snipca.com/30710

Part 1

Christmas Gift Guide 2019

Want some ideas for tech presents this Christmas? This sponsored feature will help you...

FOR AUDIOPHILES

Creative Outlier Gold

Where to buy www.uk.creative.com
UK RRP £94.99

Go on wild adventures without worrying about sub-par audio quality or short-lived battery life. The Outlier Gold, with its impressive 39 hours of battery life, ensures that you'll always be on your A game while on the go. Together with Software Super X-Fi®, experience unmatched audio clarity even while you're out and about.

FOR CHARACTERS

Razer Kraken Kitty Edition Headset

Where to buy www.amazon.co.uk
UK RRP £149.99

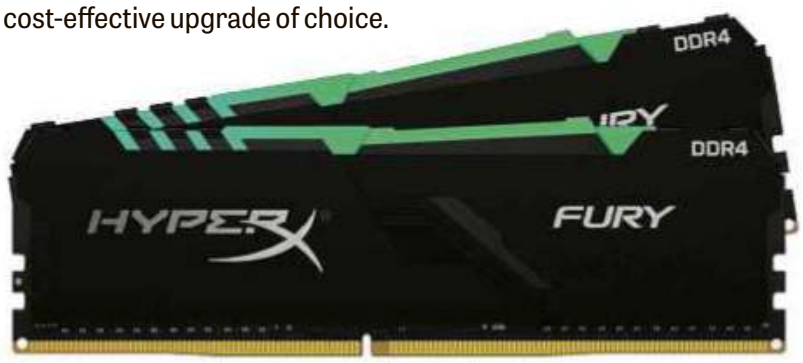
Whether you're looking to stream, make photo ops pop or just be immersed in your favourite movie or game with killer audio, the Razer Kraken Kitty Edition allows you to fully express your own unique personality with glowing earcups in addition to kitty ear lighting.

FOR UPGRADERS

HyperX DDR4 FURY RGB

Where to buy www.ebuyer.com
UK RRP £60.11 for kit of two

HyperX® FURY DDR4 RGB delivers a boost of performance and style with speeds of up to 3,466MHz, aggressive styling, and RGB lighting that runs the length of the module. FURY DDR4 RGB is XMP-ready and available in 2,400MHz to 3,466MHz speeds, CL15–16 latencies, single module capacities of 8GB and 16GB, and kit capacities of 16GB to 64GB to give you a performance boost for your gaming, video editing and rendering. It features plug-and-play automatic overclocking at 2,400MHz and 2,666MHz and is compatible with the latest Intel and AMD CPUs. 100% tested at speed and backed by a lifetime warranty, FURY DDR4 RGBs are your worry-free, cost-effective upgrade of choice.

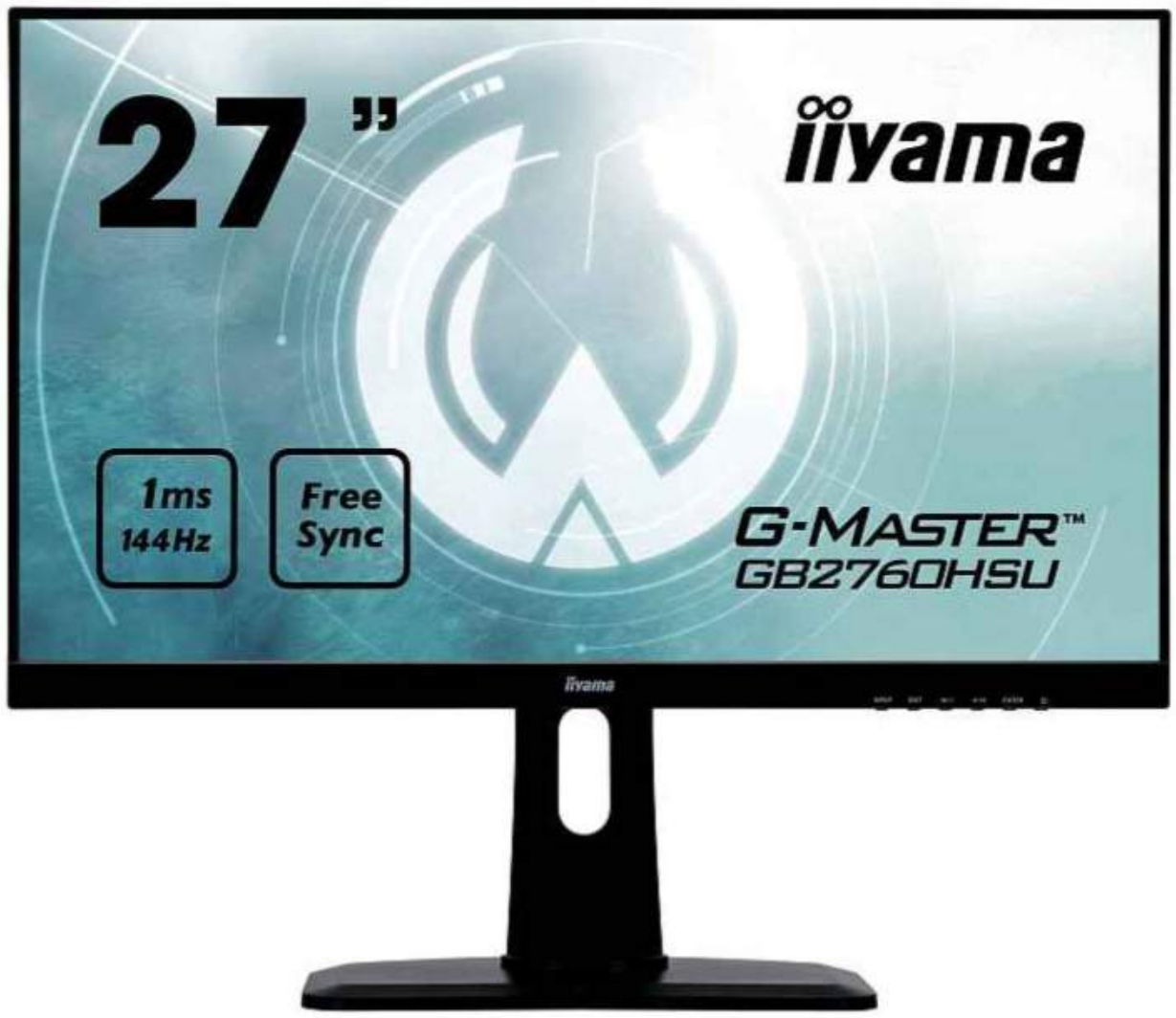


FOR MOBILE GAMERS

Nintendo Switch 1.1

Where to buy www.johnlewis.com
UK RRP £279.99

The Switch is now more tempting than ever, thanks in part to Nintendo quietly updating its mobile gaming device with a longer-lasting battery. As ever, games look glorious whether viewed on a big-screen TV or the 6.2in screen, and if you can live without detachable controllers there's the Switch Lite for £199.99.



FOR **TRUE GAMERS**

iiyama G-Master GB2760HSU-B1

Where to buy www.amazon.co.uk
UK RRP £259.99

Looking for a monitor that gamers will love? Then iiyama has the answer with the sleek, black 27in G-Master GB2760HSU-B1. It doesn't just look good: it's built for gamers, with a Full HD resolution, 1ms response time and a smooth 144Hz panel. Add support for AMD FreeSync™, HDMI and DisplayPort, and it has the lot.

FOR **PROFESSIONALS**

iiyama ProLite XUB2792UHSU-B1

Where to buy www.amazon.co.uk
UK RRP £399.99

If you want a screen packed with detail, look no further than the 4K ProLite XUB2792UHSU-B1. It stands out from the crowd thanks to an ultra-slim bezel, built-in USB hub and 3860x2160 glorious pixels. It's versatile too, with HDMI, DisplayPort and a height-adjustable stand.

FOR **PHOTOGRAPHERS**

Lowepro ProTactic 350 AW II

Where to buy www.amazon.co.uk
UK RRP £209.95

Keep all your camera kit safe and close at hand with this pack from pro photography specialist Lowepro. The outer shell is tough and solid, yet somehow Lowepro has managed to create an exceptionally light backpack. During testing, we found it far more comfortable than lugging around a DSLR in a shoulder bag.

FOR **BETTER FITNESS**

Fitbit Versa 2

Where to buy www.fitbit.com
UK RRP £199.99

While true fitness freaks will be better served by a smartwatch with GPS, the Versa 2 is a superb choice for anyone who wants a stylish watch, heart-rate tracking and the option of an always-on screen thanks to its AMOLED display. Add Fitbit's superb app and community, and you have a highly attractive device.

FOR **INQUIRING MINDS**

Sphero RVR

Where to buy www.amazon.co.uk
UK RRP £249.99

This is a superbly versatile programming device. It's an instant hit thanks to point-and-drive play, but from the you can develop children's coding skills using a Scratch-like programming language right up to JavaScript. You can even add a Raspberry Pi (or BBC micro:bit), giving you the opportunity to turn the RVR into a roving, programmable device. Think of it as a Mars rover for your living room. There are plenty of education-based activities already available too, which helps to justify that rather chunky price.

Continued on page 70

Computer active

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Workshops & Tips

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

35 Report spammers to their ISPs
38 Combine old hard drives to keep files safer
40 Add Hollywood-style green-screen effects to your videos
42 Readers' Tips

PLUS
44 Phone & Tablet Tips
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47 Make Office Better
48 In the Club: Manage tickets for a club event

HOW TO...

Report spammers to their ISPs

by Nik Rawlinson

What you need: Web browser; email account **Time required:** 10 – 30 minutes

The best advice, where spam is concerned, is often to ignore it. Certainly don't reply to it – and don't click unsubscribe, either, unless you're sure it's from a legitimate sender.

What do we mean by legitimate? Generally, someone with whom you have an existing relationship, like a shop you've bought from, or a broadcaster whose competition you've entered by email. If a message is from someone you don't know then, however enticing that 'Unsubscribe' link might be, resist the urge to click it. Doing so would just confirm that the spam was received by an active inbox, which makes your address all the more valuable when it's sold to the next highest bidder.

But what should you do if you have unsubscribed from a seemingly reputable sender and the messages just keep on coming? Or you've received a particularly nasty message that needs to be reported? That's what we'll explain here.

When working with the sender is a lost cause, you need to escalate your complaint to their service provider. By understanding a little more about the way email works, finding out who that is can be surprisingly easy.

Note: In the examples below, we use marketing-style emails sent between addresses we control (including the domain 'galleywood.net'). None of the service providers named, including 34sp.com and Hutchison 3G UK Limited, were involved in the tests. Neither should it be assumed that they are involved in any spam-based or spam-like activities.

1 Check the email service provider

Before doing anything else, check the very end of the email to see if it's been sent by an email service provider (ESP) or newsletter-management tool like Mailchimp or Substack. If it has, you can usually click Unsubscribe safely, because these manage the removal process on your behalf and take unauthorised use of their service seriously. They'll act to make sure everything is kept above board. If it isn't sent through such a provider, you need to go to the next level.

Emails consist of far more than the From and To addresses, subject line, contents and attachments. A large block of data – known as the email header – that describes the email's route from its sender to your inbox is hidden by default. Every server the message touches on its journey adds an extra line to the headers, so by the time it arrives on your PC, the full block of headers can be fairly lengthy.

You need to extract this information if you want to find out who is really sending you spam – see box at the bottom of page 36 for doing this in Gmail, Outlook (both online and the downloadable version) and Thunderbird.

If you're using another email program, check the View menu, or any menu that appears when you click a button or series of dots at the top of the message. The exception is Windows 10's default Mail program, which doesn't include an option to expose an email's headers.

In the first three examples pictured on page 36, the header is the block of confusing text that appears at the very top of the email, before the main body of the message begins. In Outlook, the headers appear in the box labelled 'Internet headers'.

Previously, picking the headers apart

required a fair amount of manual forensic work, reading backwards so you could identify from where each server received the message until you reached its origin point. Fortunately, that's no longer necessary, because Google's Message Header tool does the job for you.

Go to www.snipca.com/33217, then copy the headers from your email and paste them into the box. Click 'Analyse the header above'.

The screenshot below shows the results that we received when analysing an email from our inbox with the suspicious subject line 'Business opportunity' and a From address of **free-money@galleywood.net**.

We can see from the first line of the results that the email was written using a webmail service hosted at galleywood.net, then passed through a server at xenserve.com to Plusnet. A few seconds after arriving on Plusnet's servers it was sent to our inbox, ready for us to pick up. This journey was fairly short, but more complex routes can involve half a dozen or more servers, depending on network congestion and broken physical connections.

How I deal with spam

My server is better at spotting spam than I am, which is why I give it free reign to filter unwanted emails. It does this with impressive levels of accuracy. I'm also careful to maintain a few email addresses that I use when signing up for mailing lists and, when using a service I know I won't want to return to, a disposable address from www.sharklasers.com.

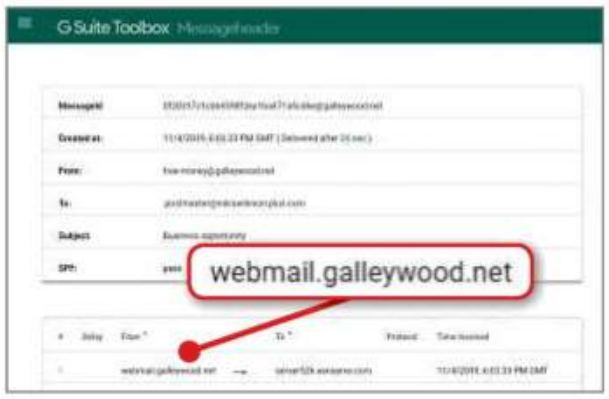
Nik Rawlinson

What are your tips for battling spam? Let us know: letters@computeracting.co.ukii

In this instance it looks like we can trust the From address to at least reflect the actual sender's organisation, because the webmail service in which it was written was hosted at the galleywood.net domain. You could visit the organisation's site (www.galleywood.net in this case) to see whether it has a policy on abuse of its services. However, when the From address and the originating server match, we'd recommend skipping at least to the next level, because approaching the organisation from which the email was sent merely confirms that it scored a direct hit.

Instead, let's see who owns the galleywood.net domain by using WHOIS (pronounced 'who is'). This is a web-based tool for interrogating the various databases that keep track of the identitity of the owner, administrator and technical contact of each web domain. Companies that register domain names (registrars) for their customers (registrants) have access to the databases relevant to the kinds of domains they offer, so very few of them have access to a complete set of records for the web as a whole. Instead, visit https://who.is and type the domain from which the email was sent – in this case, galleywood.net.

Unfortunately, here we hit a brick wall, because the galleywood.net domain's details have been redacted for the sake of privacy (see screenshot left). Notice, though, that the results do reveal a



Use Google's Message Header tool to track how spam emails were sent to you

Information about a domain name's owner can be obscured for privacy

REVEAL HEADERS IN SPAM EMAILS

Gmail

Open the email, click the three dots to the right of the email addresses, then click Show Original.

Hotmail and Outlook.com

Open the email, click the three dots to the right of the email addresses, then click 'View message source'.

Thunderbird

Open the email, then click the More button in the box showing the email addresses within the message itself. Click View Source.

Outlook program

Double-click the email to open it outside of the reading pane, then click File, followed by Properties.

WHAT ABOUT THE 'FROM' ADDRESS?

More often than not, a spam's From address is a red herring, because nobody wants to be caught sending spam. That's why the servers listed in the headers are more useful, while From addresses are best ignored.

However, if you're certain that the From address has been spoofed (perhaps because you know the person it purports to have come from), drop them an email to warn that their domain is being misused.

Don't simply click reply, as spammers frequently make use of the option to set a separate Reply-to address, meaning your response won't go back to the victim in the From field, but the person who sent you the message in the first place (once again confirming that your address is both valid and active). Instead, click Forward and type the original From address into the To field and add a short covering note explaining why you're sending the message. That way it won't look like you're sending spam yourself.

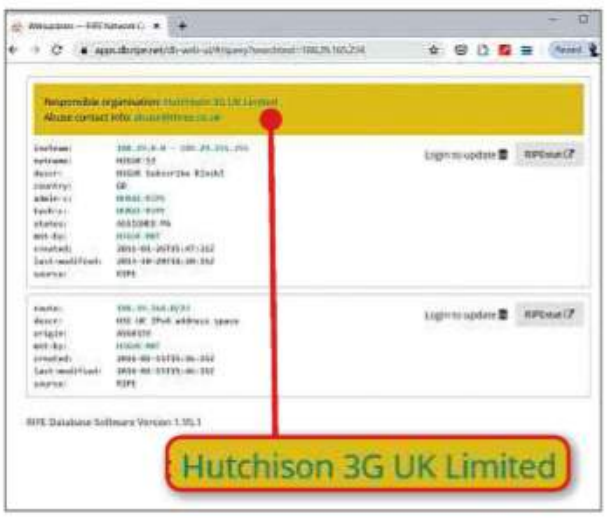
useful piece of information: the name of the servers that manage data moving between the galleywood.net domain and the internet. In this case, they are 'ns1.526.xenserve.com' and 'ns2.526.xenserve.com'. You'll notice that the xenserve.com domain also appeared in the Message Header tool results returned by Google.

Typing www.xenserve.com into a browser doesn't get us anywhere, but dropping the 'www.' and typing what remains into the search box at http://who.is reveals that xenserve.com uses name servers maintained by 34sp.com, which does have a website (www.34sp.com) and, as a responsible web host, a dedicated email address that we can use for reporting abuse.

2 Find the ISP used by the spammer

In our example above we quickly identified the company to which we could report a spammer. This was largely because the email was sent using webmail, so we could skip straight to the provider of the sender's domain services. However, where a spammer has used email *software*, rather than webmail, it's usually more appropriate to complain to their ISP, which provides their physical connection to the internet.

If the first server in the list of results returned by Google's Message Header tool includes four blocks of numbers separated by dots (something like 192.168.1.1), looking up who this has been assigned to will reveal who provides the spammer's internet connection, whether that's a corporate network, broadband provider, mobile-data connection or old fashioned dial-up service. This block of numbers is known as the IP address.



Identify a spammer's ISP by tracing who has been assigned the first IP address in the headers

To work out who is responsible for an IP address, visit www.ripe.net, click in the box labelled 'Search IP Address or ASN' and paste the address in. Our screenshot left shows the results of typing 188.29.165.234, which appeared in the headers of an email sent using the email program on an iPhone.

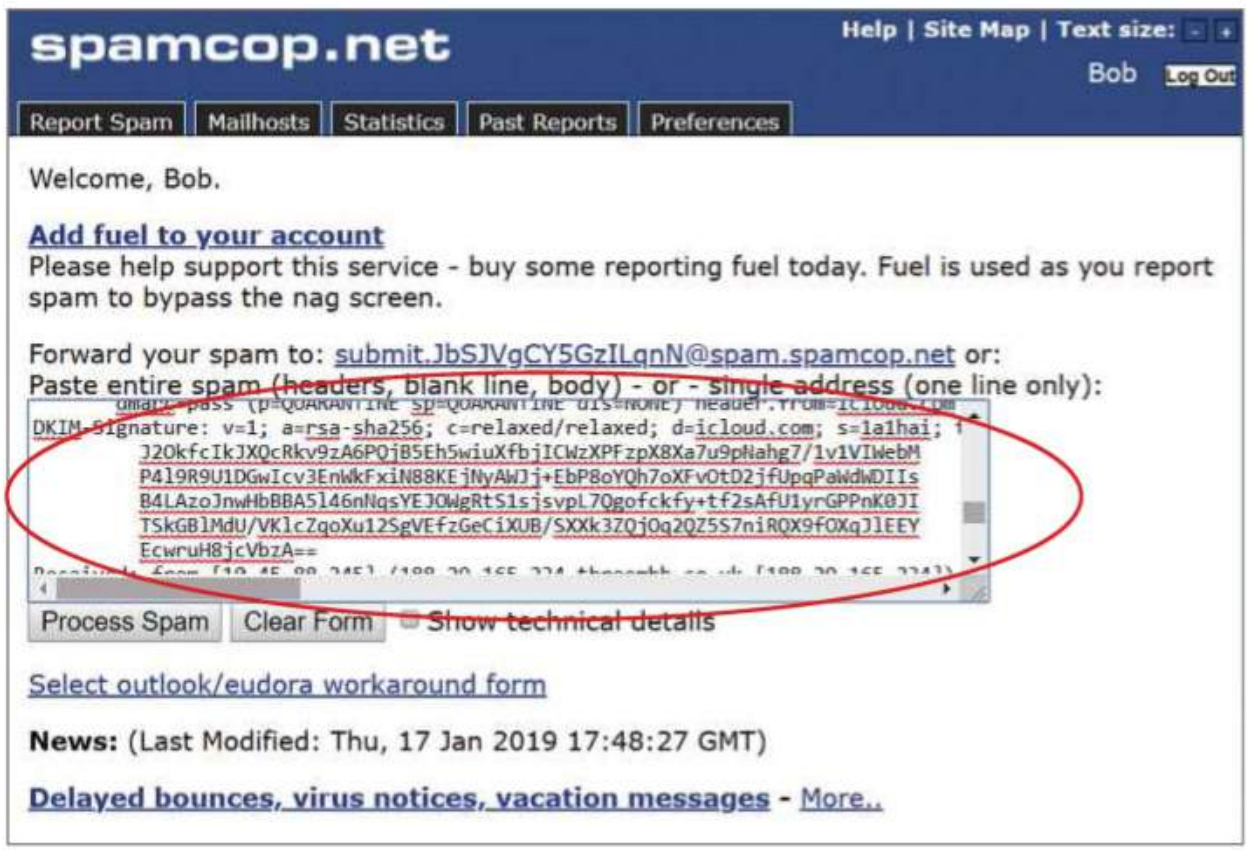
As you can see from the yellow block, that IP address is assigned to Hutchison 3G UK Limited (the full name of Three) which, like 34sp, maintains a dedicated inbox for reporting misuse of its services: **abuse@three.co.uk**.

ISPs maintain records of who was assigned an IP address at any particular time. So, by forwarding them the complete headers of the offending email, they'll be able to cross-reference the two, and take up the matter with whoever sent you the spam.

3 Call in the SpamCop

If you can't track down the details you need, try SpamCop (www.spamcop.net). When you feed it a spam email, it checks the headers – as we've just done – and reports the culprit to its various service providers. At the same time, it notes which servers are responsible for allowing spam and adds them to blacklists to protect other internet users.

When SpamCop reports a spam email, it does so on your behalf, not its own. You therefore need to register before using it. Once you've set up your account, log in and paste in the complete message, including its full headers, to trigger the report (see screenshot left).



SpamCop can report spam on your behalf

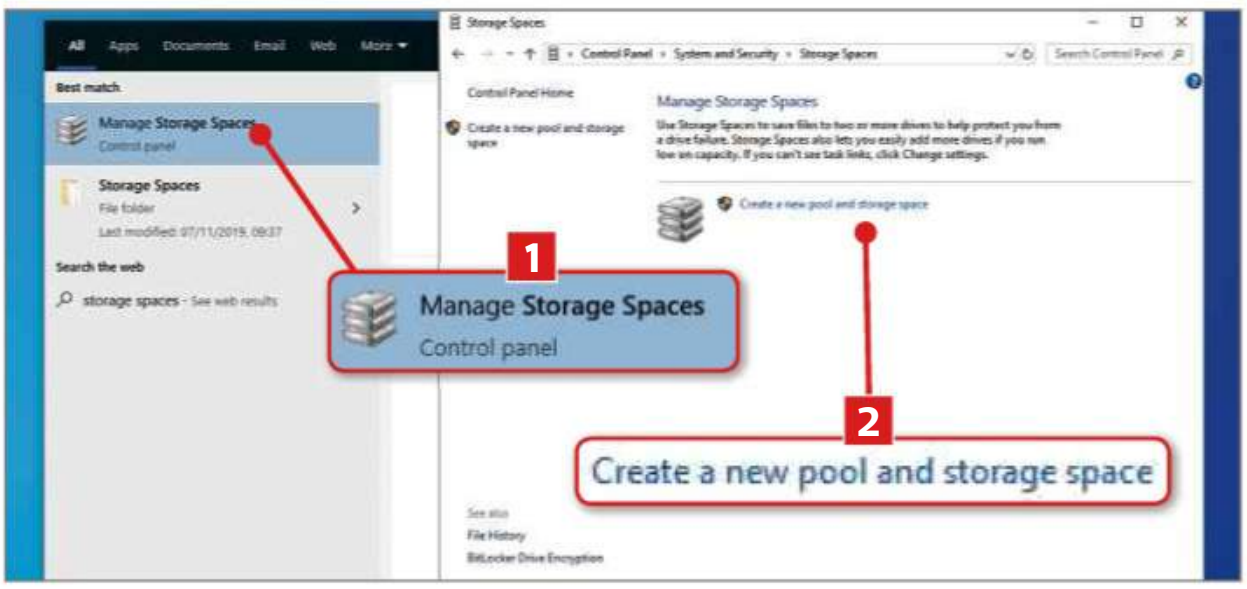
Workshop 1

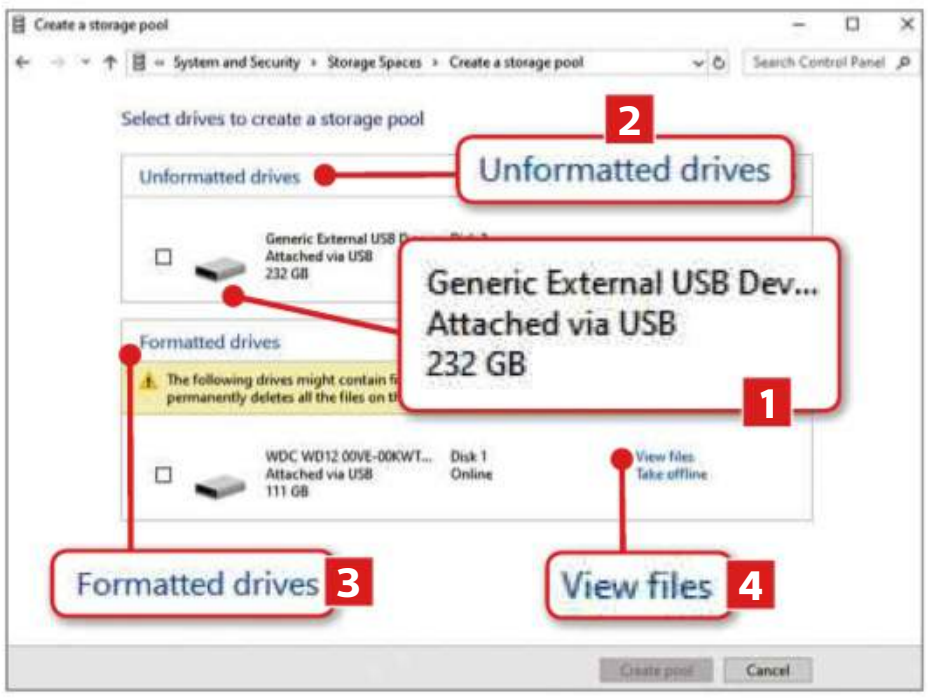
Combine old hard drives to keep files safer

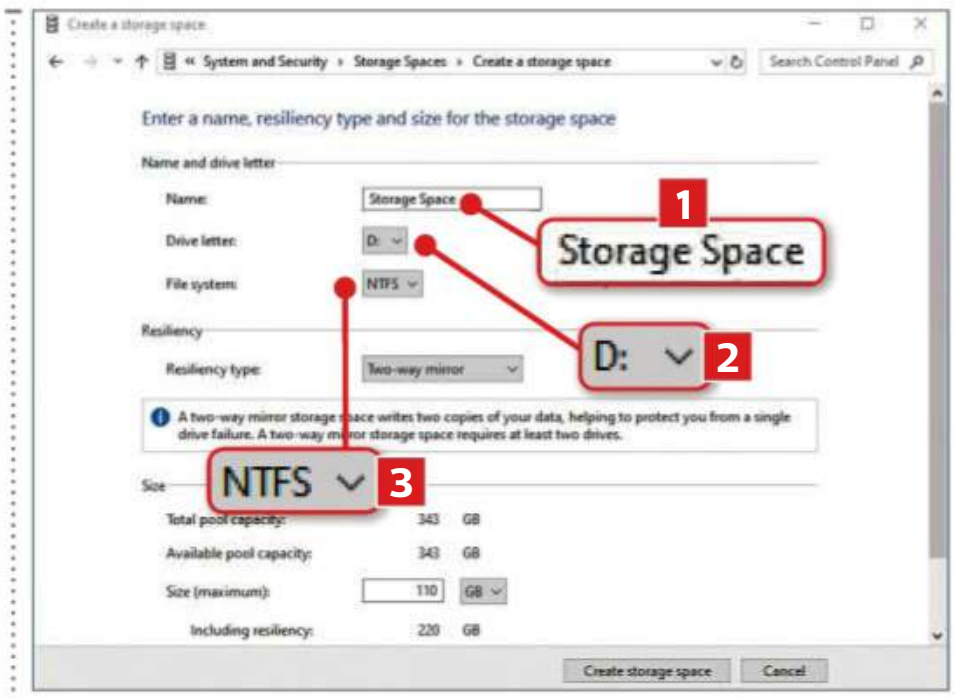
What you need: Windows 10; two or more spare hard drives
Time required: 30 minutes

If the hard drive on which you store personal files fails, you could be scrabbling around for backups that are up-to-date. Using free Windows tool Storage Spaces and a couple of old hard drives, you can avoid this palaver. Storage Spaces uses a process known as mirroring to combine two or more hard drives into a 'storage pool', which appears on your PC as a separate drive. All data in the pool is copied (or mirrored) across each drive, so if one fails, you can still access your files. Bear in mind Storage Spaces doesn't work with USB sticks or your main hard drive (the one on which Windows is installed).

STEP 1 First, make sure all the hard drives you want to use in your storage pool are attached to your PC (you can use USB or internal hard drives). Click Start, type storage spaces, then select Manage Storage Spaces 1 from the list of results. In the Storage Spaces window, click 'Create a new pool and storage space' link 2. If Windows displays a User Account Control warning, click Yes to continue.

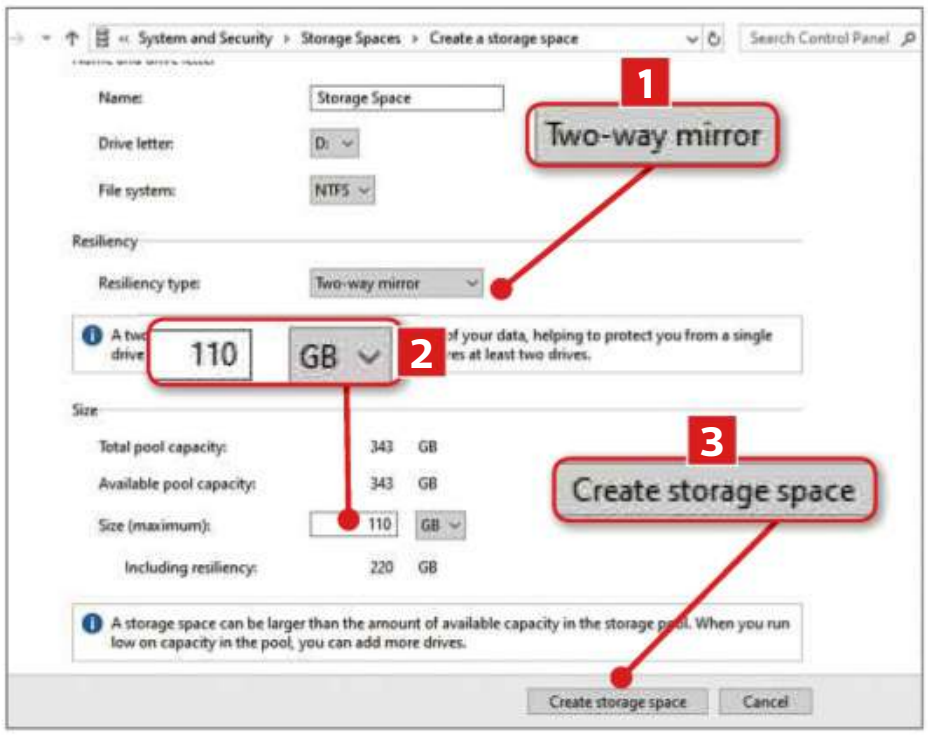




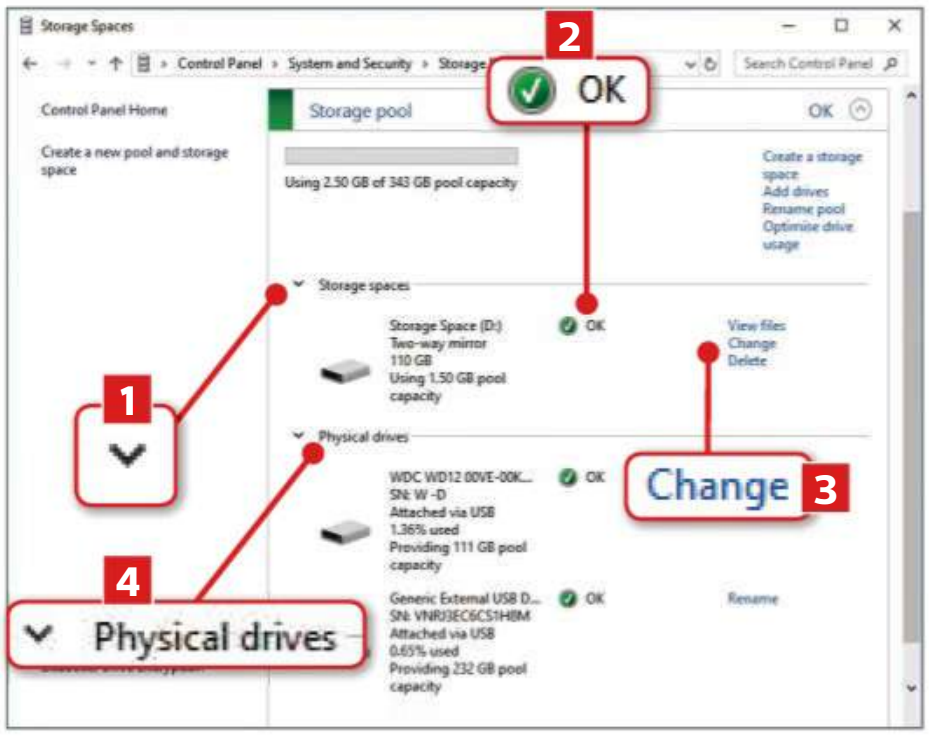


STEP 2 Storage Spaces will now list all the hard drives that it can use. You'll see the name of each drive, how it's attached to your computer and its size 1. In our example, we're using two external USB drives. One is listed under 'Unformatted drives' 2, which means it doesn't have any data. However, the other is under 'Formatted drives' 3. Because Storage Spaces formats all the drives you select, it's vital to move any files off them before you start. Click the 'View files' link 4 next to each formatted drive to view and copy files to your main hard drive.

STEP 3 Once you've copied your personal files off the drives, tick those you want to use (you need to select at least two), then click 'Create pool'. Storage Spaces will now format the drives – this shouldn't take more than a couple of minutes. When it's finished, you need to give your storage pool a name 1 and choose the drive letter 2 you want it to use in File Explorer. You can also select the type of file system 3, but since Windows selects the most appropriate, it's best not to change this setting.

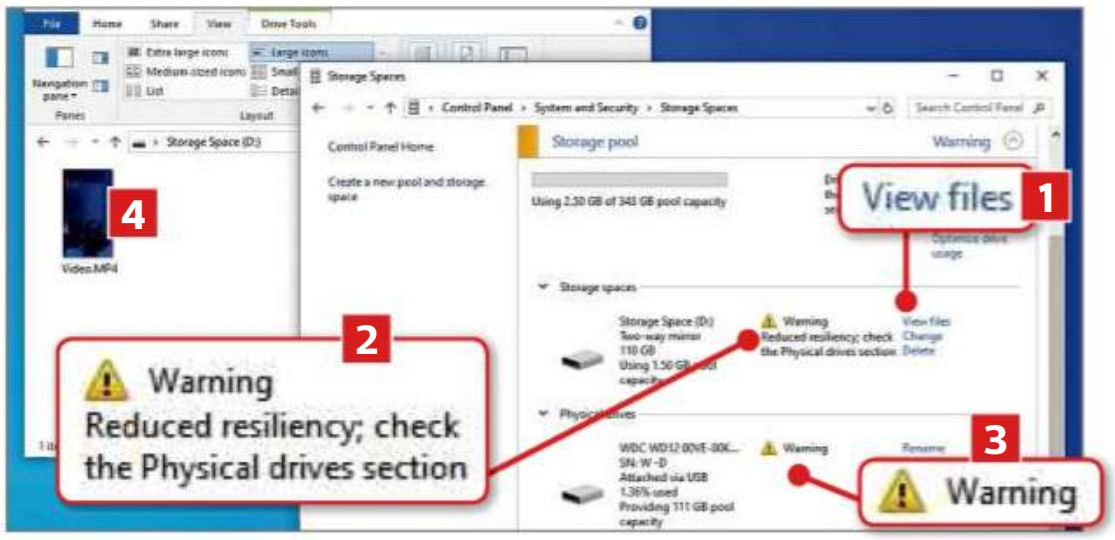


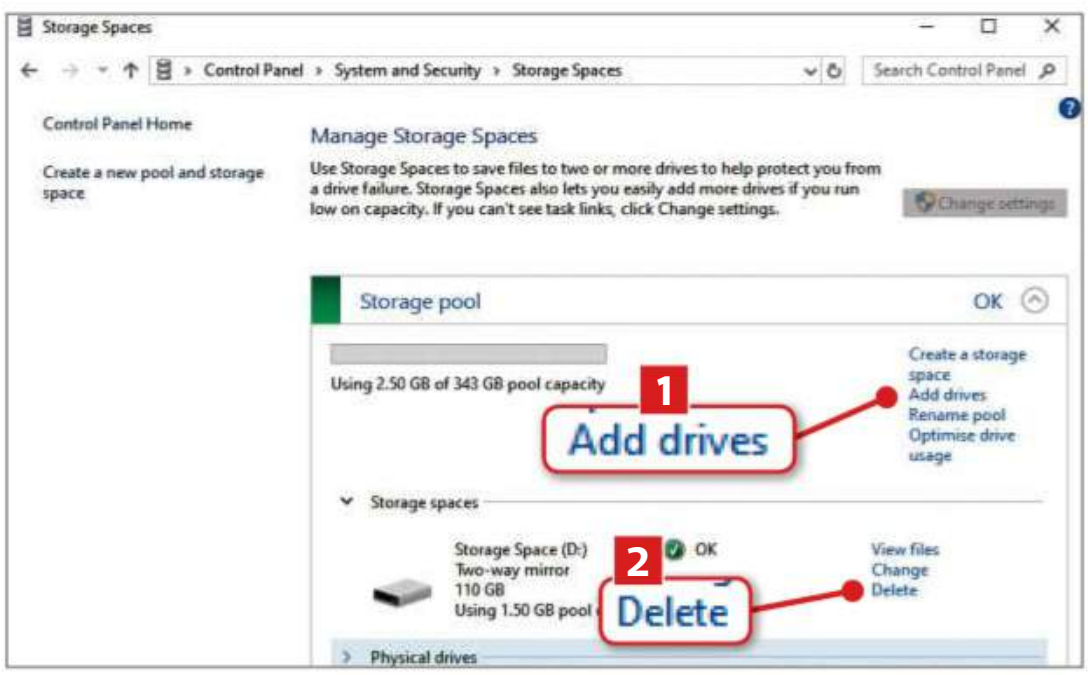
STEP 4 Under 'Resiliency type', select 'Two-way mirror' 1 – this means all drives will store the same data, making sure it's always available – even if one of the drives fails. By default, the size of the storage pool will be set to the maximum available (this is the size of the smallest drive in your pool). If you want to reduce its size, enter the new value in the box next to 'Size (maximum)' 2. Once you're happy with your chosen settings, click 'Create storage space' 3. A "Creating the storage space" message will appear, followed by "Formatting the storage space".



STEP 5 You'll now be returned to the main Storage Spaces window. If the 'Storage spaces' section isn't visible, click the arrow next to it 1 to reveal your new storage pool and its current status – if everything's running properly, you'll see an 'OK' message 2. You can change its name, drive letter and size by clicking Change 3. In the 'Physical drives' section 4 you'll see the status of each hard drive in your storage pool.

STEP 6 To test your storage pool, click 'View files' 1 (or open File Explorer and select the drive letter you chose in Step 3), then copy a file to it. Next, disconnect one of your drives (if it's an internal drive, turn off your computer, then unplug the drive's power cable and restart). A warning message will be displayed for your storage pool 2 and the drive affected 3. However, the file you copied to your pool will still be available 4. Plug the drive back in, and the warnings will disappear.





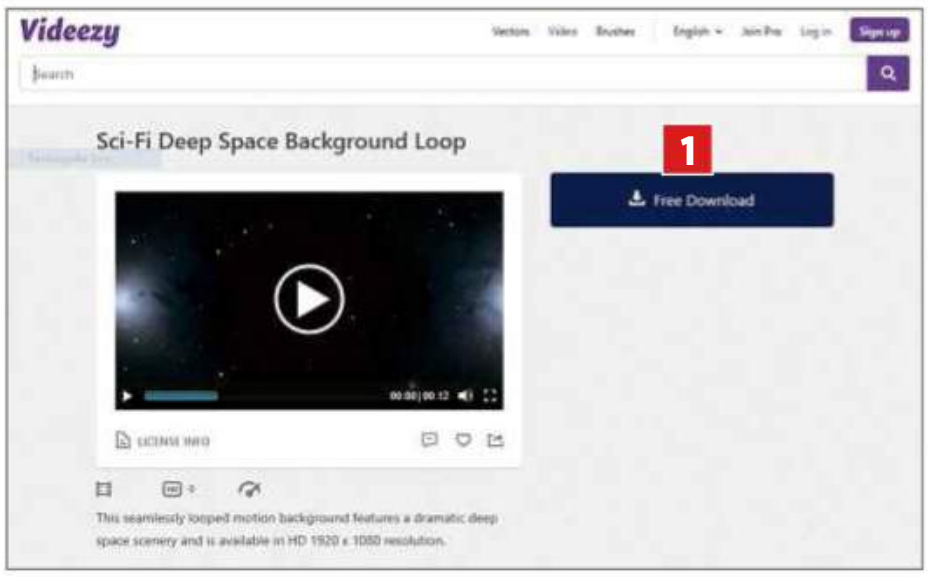
STEP 7 If your storage pool starts running out of space, you can add additional drives. To do this, click 'Add drives' 1, then select the new drives (the data already in your pool won't be affected by adding drives). If you want to delete your storage pool – for example to use the drives for other purposes – click Delete 2, then 'Delete storage space'. This will permanently delete all files in the pool, so be sure to first copy any files from it to your main hard drive.

Workshop 2

Add Hollywood-style green-screen effects to your videos

What you need: Windows 7, 8.1 or 10; OBS Studio
Time required: 30 minutes

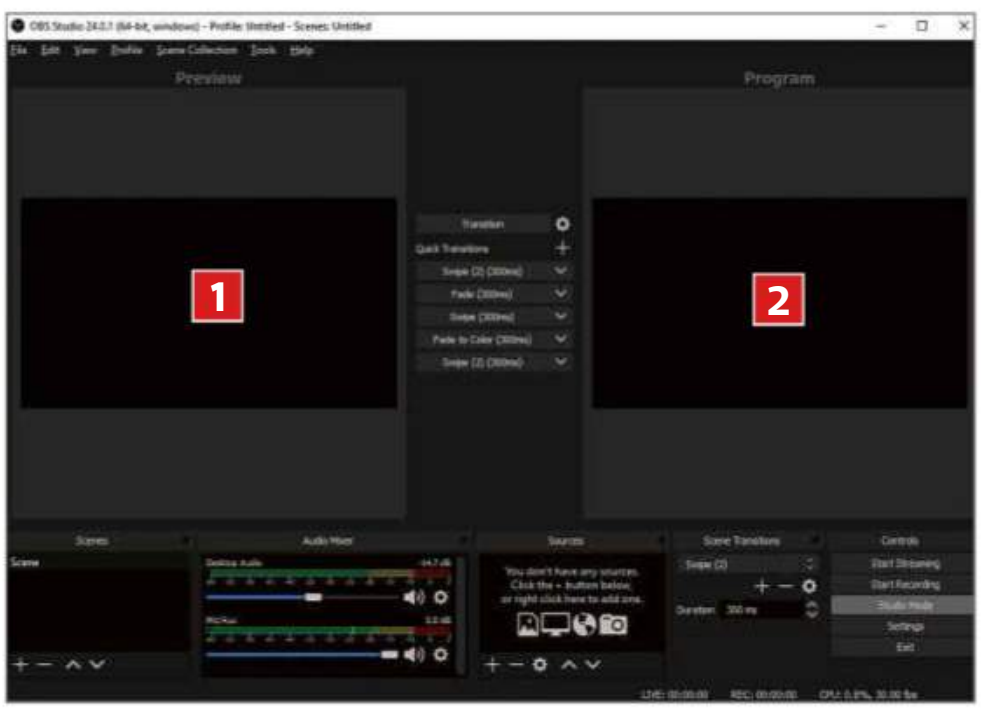
Ever wanted to create those Hollywood-style green-screen effects where actors are superimposed on to an exciting backdrop? Using OBS Studio (https://obsproject.com) and a coloured sheet or piece of card, you can do it for free. Once you've got it set up, you can use it to place yourself into a presentation or video guide for a local club, or just have fun with the kids or grandkids, letting them appear in front of a range of weird and wonderful backgrounds.



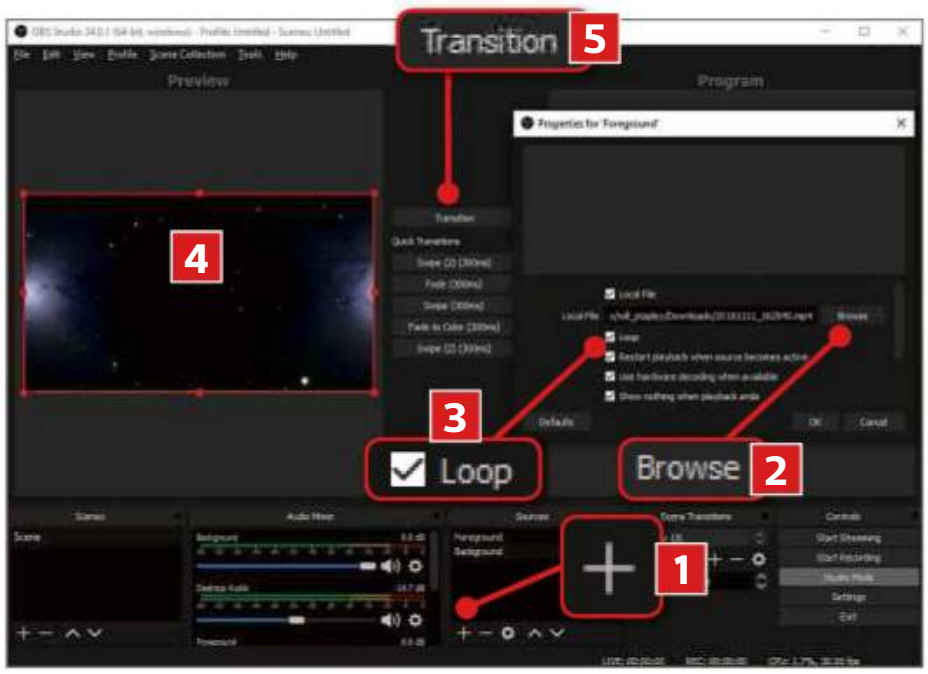
STEP 1 You first need to decide what you want to use as your background. You could use a static image, such as a snow scene for a Christmas greetings video or footage of a moving backdrop. This could be a PowerPoint presentation of yours, or one from the range of impressive, free background videos designed for use with green-screen effects on websites such as Pixabay (www.snipca.com/33266) and Videezy (www.snipca.com/33267). We've chosen to download a space-themed background from Videezy 1.

STEP 2 Now to the foreground. If you have a webcam on your PC, you can use it to capture live video directly. Alternatively, use your phone or tablet, then send the recording to your PC. Whichever method you use, you'll need to film in front of a solid colour (green works best). You can use green card for smaller objects, but if you want to put yourself in the foreground consider buying a large green-screen cloth (around £14 from Amazon www.snipca.com/33268). Here, we've improvised, by placing a toy spaceship on the green felt of a small pool table 1.

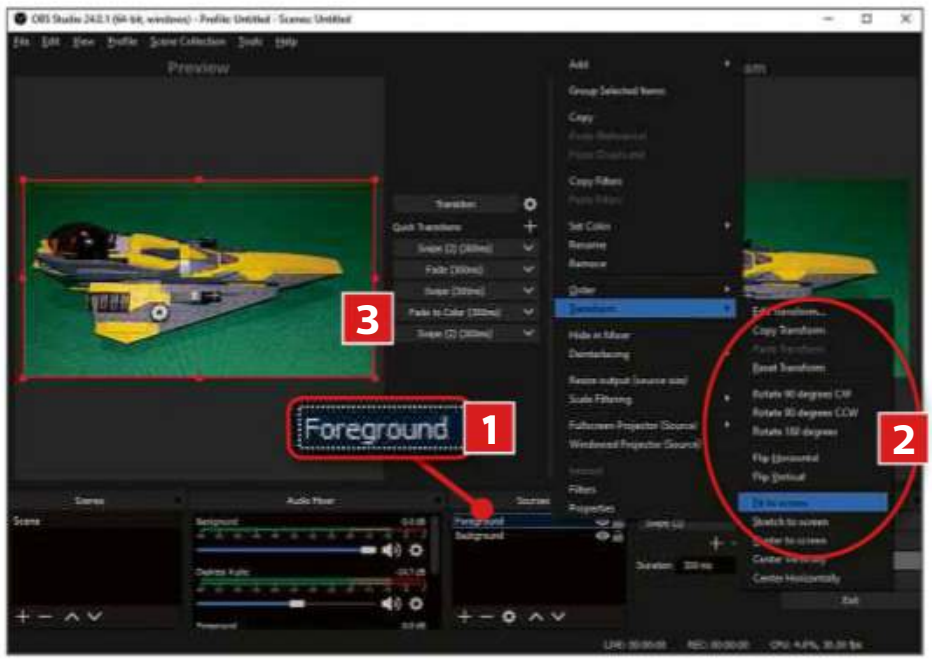
STEP 3 Next, open OBS Studio. It's primarily designed to be used for broadcasting live video and has two video windows: Preview 1 and Program 2. This lets you load video and other media, such as images and audio files, into the Preview window, then transfer them to the 'live' Program window when you're happy with everything. Although we're not planning to broadcast live, we can still use the Preview and Program windows to create our recording.

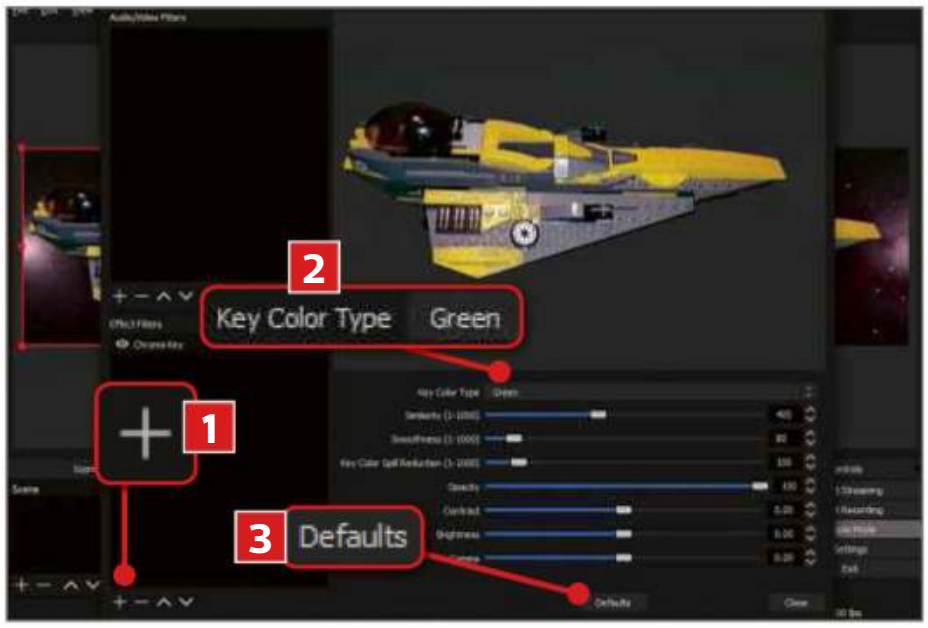


STEP 4 Click the '+' button 1 in the Sources pane, select Media Source, name it 'Background', then click Browse 2 and locate your background video/image from Step 1. Tick Loop 3 to ensure the background is constantly playing. Now repeat this to add your foreground video from Step 2. If you're using a webcam to capture the foreground, select Video Capture Device in the Media Source section, then select your webcam from the list. You should see your video playing in the Preview window 4. If not, click Transition 5.



STEP 5 If it's not there already, drag your foreground video to the top of the Sources list 1 (this makes it appear on top of the background video). You may also want to resize or rotate your foreground and background videos. To do this, right-click the video you want to alter in the Sources pane, then select Transform. Next, select the appropriate resizing or rotation option 2. You can also adjust the size of each video by selecting it in the Sources pane, then dragging its edges 3 in the Preview window.





STEP 6 Now it's time to apply the green-screen effect. In the Sources pane, right-click your foreground video, then select Filters. Next, click the '+' button 1 at the bottom of the Effect Filters section, select Chroma Key, then press OK. In the Key Color Type box 2, select the colour of your background (in our case, Green). If you can still see some background colour, use the sliders to fine-tune the effect. If you want to reset these at any time, click Defaults 3. When you can no longer see your background, click Close.

STEP 7 With the green-screen effect applied, you can now record your finished video. Click Start Recording 1 in the Controls pane, then Transition 2 to move what's in the Preview window into the Program window. Click the Stop Recording button to end the recording. By default, the recording is saved to your Videos folder as an MP4 file. To change the output settings (including the file format, save location and video resolution), click Settings 3, then adjust the options in the Recording section.

Readers' Tips

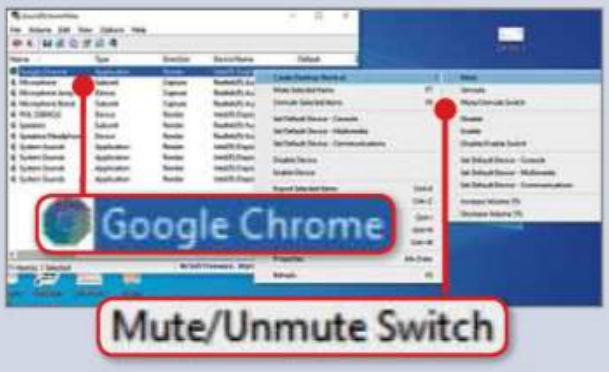
TIP OF THE FORTNIGHT

Add mute volume shortcuts to your desktop

Like *Computeractive*, I love the little programs created by NirSoft. They always seem to solve a particular problem that's been making me swear loudly and scare the cat.

My latest discovery is the tool SoundVolumeView, which shows information about audio volume in Windows – download it by visiting www.snipca.com/33231, then scrolling to the bottom and clicking the correct link for your computer (32bit or 64bit).

A recent update to version 2.0 lets you add desktop shortcuts to quickly



mute and unmute the sound in programs. Once you launch the program you'll see all the programs and devices (such as speakers and headphones) producing noise. Right-click one, then select Create Desktop Shortcut at the top of the menu that appears. You'll see 11 shortcuts you can create.

I think the most useful is a simple 'Mute/Unmute' switch (see screenshot) to turn the volume on and off. As the screenshot shows, I've done this for Chrome. If I want to pause a video in YouTube, for example, I just click the desktop shortcut. To find the resultant shortcut on your desktop, look for the logo of the program or device you're creating it for.

Paul Austin

Paul wins a copy of our 2018 Back Issue CD **Buy it on Amazon www.snipca.com/30307**

CHROME

Disable 'irritating' tab boxes

Following on from Daniel Booth's entertaining "midlife crisis" column in Issue 567 (page 74), I'd like to suggest another use for using Chrome's Flags: to turn off those new, irritating boxes that appear whenever you hover over a tab.

If you've updated to Chrome 78, you'll know what I mean. Just move your cursor over a tab and you'll see that web page's headline in a 'floaty' box. I find them hugely irritating.

Type chrome://flags into your browser bar, press Enter, then type tab hover cards in the search box. Click the dropdown menu then change Default to Disabled (see screenshot below left). Finally, click the blue Relaunch button that appears at the bottom right. Job done.

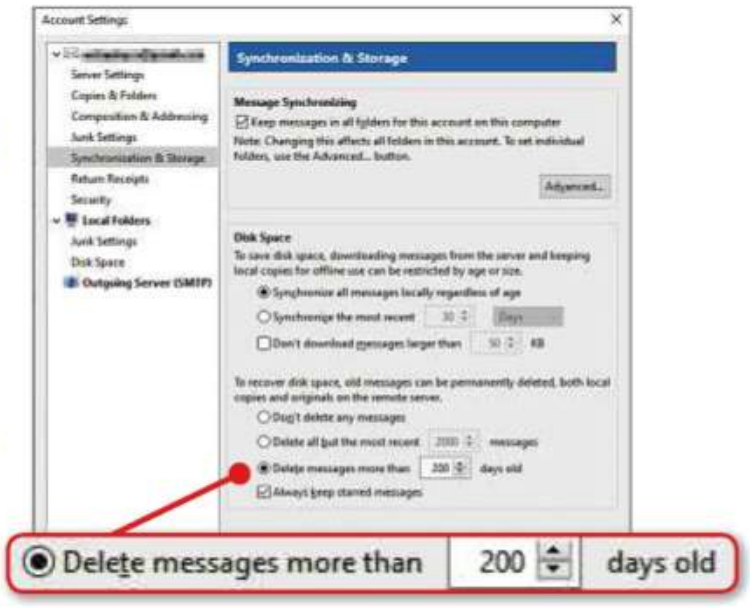
James Franklin

EMAIL

Automatically delete Gmail messages using Thunderbird

In Issue 565 (page 64) you advised Tim Wesley how to clear out his Gmail inbox. While your advice was, of course, correct, I am surprised you didn't inform him that he can 'tweak' his account settings to automatically delete old messages.

I have several different email addresses (including Gmail) and manage them all through Mozilla Thunderbird. In its 'Synchronization and Storage' setting I can delete all emails older than a specified number of days, or when I have reached a certain number of emails (I have my accounts set to auto-delete messages older than 200 days – see screenshot above).



Why I stopped using...

TalkTalk

Jonathan Parkyn's 'Villain of the Fortnight' in Issue 566 on TalkTalk reminded me of a problem I had with the company (and before them Orange).

During bad weather my line speed often dropped below 1Mbps and voice calls sounded like the phone was next to a deep fat fryer cooking chips.

And what I use instead...

These problems went on for about five years until I joined **Sky**. The first time I called them, they tested the line and decided all was not well. A few days later an Openreach engineer duly informed me the cable from the telephone pole to my house was over 30 years old and was split, letting in water. Once replaced, my line speed shot up from around 2Mbps in good weather to 8Mbps at all times. So basically, cheers Sky and well done.

J M Peake

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

This prevents my folders from getting clogged up with too many messages and avoids the risk of going over any limit that may be imposed.

Peter Daniels

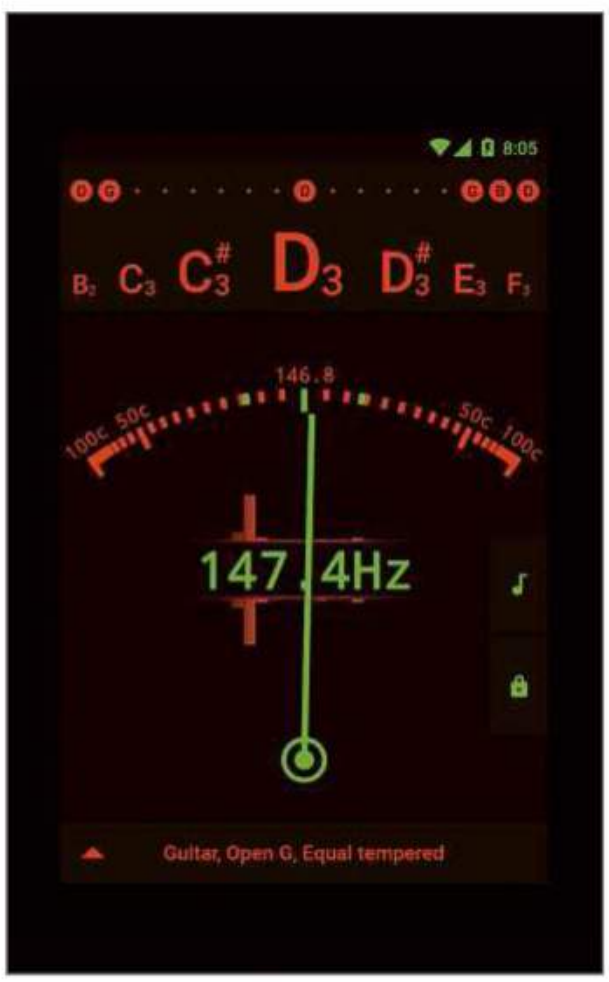
OFFICE

Remove double spaces in Excel spreadsheets

In Issue 565's Make Office Better (page 47) you explained how to remove unwanted spaces from cells in Microsoft Excel and LibreOffice Calc. I think there's an easier way of doing this in Excel (and Word), though I don't know if it works in LibreOffice.

Select (highlight) the cells you're interested in, then click 'Find & Select' at the top right, followed by Replace (see screenshot above). In the 'Find what' field type two spaces; in the 'Replace with' field type one space. Finally, click 'Replace all' until no more double spaces are found.

Richard Bale



Reader recommends...

USB 3.0-to-SATA adapter cable

£5.90 from Amazon
www.snipca.com/33229

Having read Issue 566's Cover Feature on hard drives and SSDs, which was very useful and informative, I thought you may be interested in a device I have been using to connect my spare SSD to my computer.

It's a simple cable USB at one end and a SATA connection on the other. It allows me to easily access my SSD.

It's inexpensive (under £6) and available from Amazon, where 85 per cent of its 246 customer reviews give it five stars (at the time of writing). It's made by the Californian company Benfei, who sell lots of other affordable adapters on Amazon (see them all at www.snipca.com/33230).

However, it won't connect to a SATA hard drive, possibly due to the power limitations of USB?

Peter Grundy

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

ANDROID

Tune your guitar using gStrings app

Following the 'What can I use to tune my guitar?' question in Issue 565 (page 19), I'd like to recommend the free Android app gStrings (www.snipca.com/33226, see screenshot below left). On opening the app you're given the range of notes for standard-tuning a six-string guitar.

The app uses the built-in mic on your phone, so all you need to do is pluck the strings in turn. A pointer indicating the frequency (in Hz) will move left or right depending on the pitch and point vertically when the string is in tune. Because of the sensitivity of the mic, it's best if you tune up without much background noise.

Although this free version contains adverts, I haven't found them intrusive. All in all, it's a decent app which you can take anywhere with your guitar.

Cliff Bannister

OFFICE

Press 9986 to insert scissors symbol into Word docs

Regarding your tip in Issue 566 (page 47) about adding a snipping line to Word documents, I have a simpler method that works in Windows 10 with Word 2013 and above.

Do as you suggest in the tip, then when you want to insert your scissors icon hold down the ALT key, press 9986 on the numeric keypad, then release ALT. The scissors symbol will appear. If this doesn't work, press ALT then 0 then 9986 on the numeric keypad. This method only works on a numeric keypad on the right, not the numbers along the top of a keyboard.

Fraser Drummond

SOFTWARE

Save your scans to a folder of your choice

I always like it when you recommend a program I've been using, and so I was pleased to see WinScan2PDF mentioned in Issue 566 (page 19). I've been using it for years to scan PDFs - it's a great little program.

Newcomers may not realise that you can change the folder where scans are saved (the default is **%TMP%/WinScan2PDF_Tmp**). It's very easy - just click Options, 'Change the folder' (see screenshot above), then browse to your desired folder on your PC.

Louise Cole

Phone and Tablet Tips

ANDROID

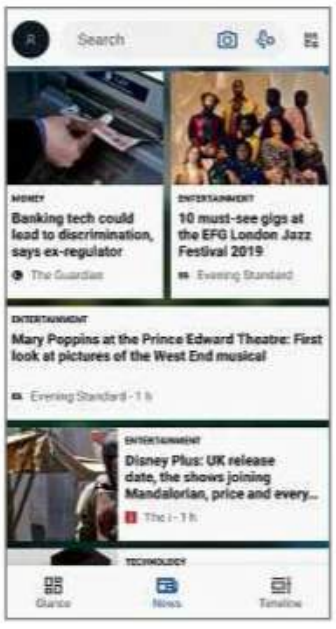
Make your phone more Windows-friendly

Microsoft's support for Windows 10 Mobile, its operating system for smartphones, comes to an end on 10 December. Fortunately, though, since it stopped trying to compete with Android and iOS, Microsoft has been doing some great work on Google and Apple's platforms. The mobile Office apps are among the best on any app store, and Microsoft Launcher (www.snipca.com/33269) has long been one of our favourite alternatives to the default interface of many Android phones.

It's just been updated with a more convenient search bar, and a new darker interface that automatically kicks in if you've set Android to use dark mode. However, the biggest draw is likely to be the 'Continue on PC' tool, which lets you switch between editing documents on your phone and any PC running Windows 10.

Install it, then open Settings and tap 'Apps & notifications' followed by Advanced. Next, tap 'Default apps', then 'Home app' and select Microsoft Launcher from the options.

The launcher is no-nonsense and unfussy, with a fresh, uncluttered home screen that makes way for a series of information cards if you swipe to the far left. These include trackers for screen time, a shortcut to Cortana (if you prefer that to Google Assistant), sticky notes, tasks and more. You can switch this for a timeline, showing what you've recently been up to if you need to revisit a document, website or appointment, and can add a personalised news feed (see screenshot below left). This is a clever option, letting you dismiss some updates while still reading about cars, travel, technology and so on.



ANDROID

Make your wallpaper useful

Modern art isn't just unmade beds and sharks in formaldehyde – it can also be both beautiful and useful. Meter (free from www.snipca.com/33270) is an app that replaces your Android wallpaper with a simple graphic: a circle to represent your battery level, rectangles for notifications (see screenshots above right) and a triangle for Wi-Fi. It's a handy but simple tool that changes the active graphic whenever you wake your phone from sleep.

Look closely, though, and you'll spot that these are more than just blocks of colour. The circle is actually one ring inside another, with the outer perimeter representing 100 per cent charge and the inner showing your current power level. The more divisions you have in the blue notifications block, the greater the number of alerts you need to deal with (49 in our case), and the proportion of the Wi-Fi triangle that's filled shows the strength of your signal.

iOS

Share your time of arrival

Not only is using your phone while driving illegal: it's also dangerous. Fortunately, with the latest updates to iOS, that's less of a problem because you can share an estimated time of arrival (ETA) with whoever you're going to visit automatically. Your ETA will update as you progress along the route, so if you hit traffic they'll know to delay the souffle.

To use it, open Apple Maps (it doesn't work in other mapping apps) and plan a route. Make sure you've selected 'car' as your mode of transport, then tap Go. As soon as Maps switches to directions

BEST NEW APPS What you should install this fortnight

Photoshop

iPadOS www.snipca.com/33271
£9.99 per month after one-month free trial

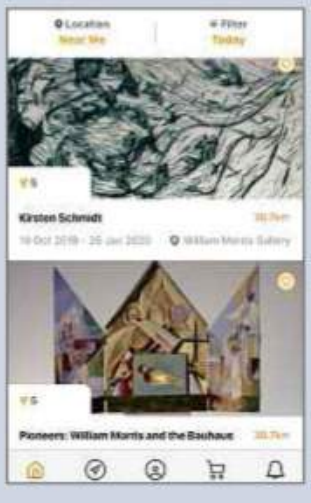
Photoshop is free to download but pricey to maintain when you consider that its closest competitor, Affinity Photo (www.snipca.com/33275), is £20, one-off.

However, as well as Photoshop's powerful tools, your subscription buys you 100GB of online storage, which makes swapping work back and forth between your PC and iPad easy.

gowithYamo

iOS www.snipca.com/33273
Android www.snipca.com/33274
Free

From exhibitions to life drawing classes, this app is packed with great artistic events within striking distance of your home. Using the app to check in at an exhibition earns you points, which you can spend on experiences like pottery classes, gallery tours, tote bags, poster prints and more.

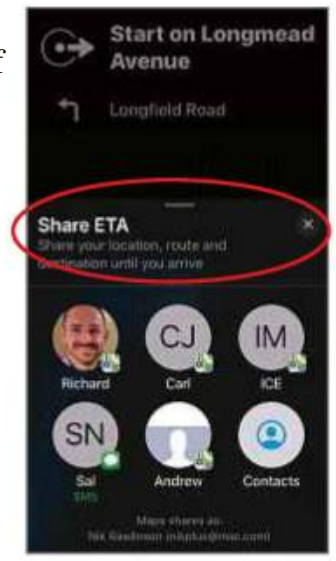


Candide

iOS www.snipca.com/33277
Android www.snipca.com/33276
Free

Point your phone at a plant and Candide will name it – or at least give you a shortlist to pick from. We found it accurate at identifying house plants, and we can well imagine snapping shots of friends' foliage to inspire future purchases. Allow it to see your location, and it will also direct you to nearby gardens and garden centres you might like to visit.

mode, swipe up from the bottom of the screen and tap Share ETA (see screenshot right). You'll then see a list of your most common contacts, which you can tap directly, and a link to your Contacts list for everyone else. Anyone you select who's using Apple Maps will receive live updates in that app on their own phone. For everyone else, including Android users, updates are sent by text.



As creatures of habit, we all travel to a handful of places frequently – home, work, the gym and so on. Add them to your Apple Maps favourites and you can set your phone to automatically update certain contacts whenever you're heading in that direction.

Start by searching for a location and, when it turns up a hit, swipe up on the overlay until you reach 'Add to Favourites', near the bottom of the card. Tap this, then close the overlay card by tapping the 'x' at the top. You'll be returned to the regular map view, with the search box visible and, immediately below the box, your Favourites. Tap See All, then tap the 'i' beside the one for which you'd like to set up automatic tracking and swipe down to Share ETA. Tap Add Person, followed by the name of the contact who should be allowed to track your movements.

If they're not included in the shortlist on the first page, use the search box to find them. Tap Done to finish and, when you next navigate to the saved location, they'll be kept abreast of your progress.

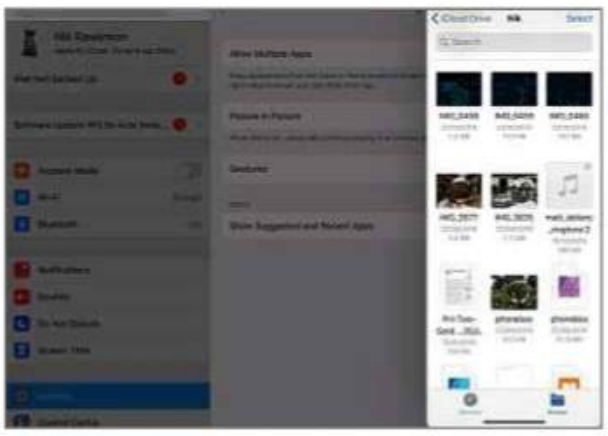
iPadOS

Use two apps at the same time

Slide Over lets you use two apps at the same time in iPadOS, without going as far as splitting the screen. Here's how it works: open one app, then swipe up from the bottom of the screen to reveal the Dock and, rather than tapping the second app, long-press its icon then drag it on to the screen. It slides up and sits on the right of the screen, floating over your first app, which remains full-screen (see screenshot above right).

This is a great way to quickly check an appointment or read a message while in the middle of something else. If you find you want to use the second app for more than grabbing a reference, hold on to the bar at the top of its window and drag it to the edge of the screen. The primary app will slide to one side and you can drop the second one; they'll now sit side by side in regular split-screen mode.

But Slide Over can be confusing. If you've used it to peek at a website in Safari, subsequently tapping links in an email will open them in Slide Over mode rather than the full-screen Safari app. To get around this, either open another app in Slide Over by making sure one app is full-screen and repeating the process of dragging another from the Dock – for example, drag up the Files



app – so that Safari is no longer the app most recently used in Slide Over view. Or, disable Slide Over altogether.

Do this by opening Settings, tapping General, then 'Multitasking & Dock'. Tap the slider beside Allow Multiple Apps so that it slides to the left and goes grey.

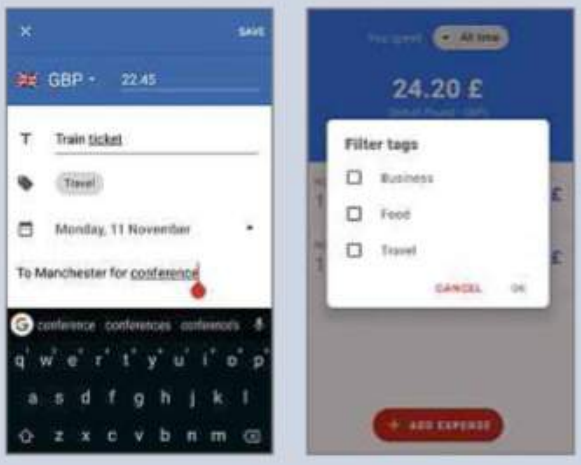
BEST APPS FOR... Tracking expenses

Expenses: Simple Tracker

Android www.snipca.com/33278
Free

Entering expenses is easy: tap in the value, add some tags and provide a description. If you need to claim your money back, you can export your entries as an Excel spreadsheet or, if you're catching up after a busy trip, import a spreadsheet instead. Dollars is the default currency, so be sure to switch to Sterling in the settings.

Best For Working with Excel

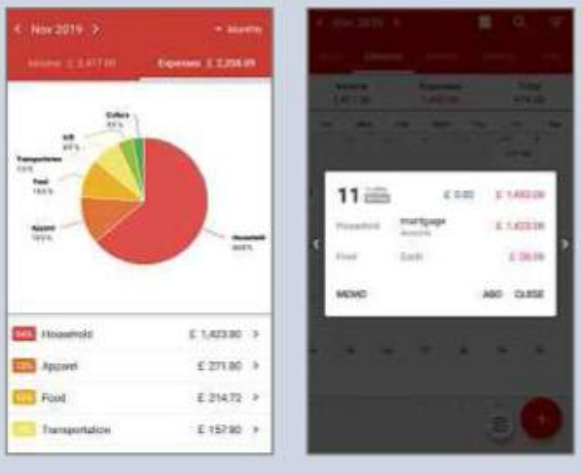


Money Manager*

iOS www.snipca.com/33281
Android www.snipca.com/33282

Slice and dice your cash flow with daily, weekly and monthly views of your spending, and a calendar overview for broader oversight of your income and expenses. Entering transactions is a breeze: assign a category, tap in the value and add a quick description.

Best For Managing spending over time

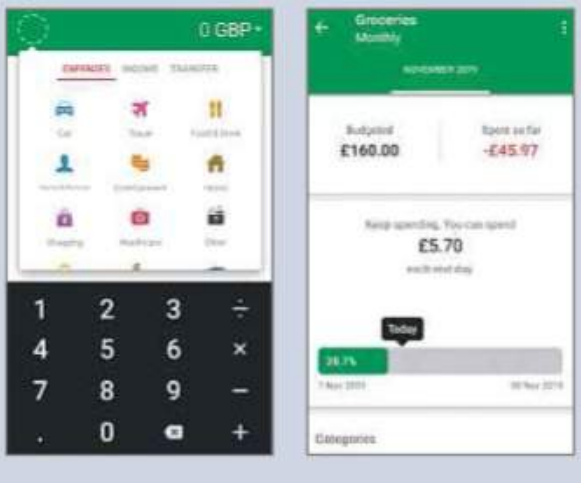


Spendee*

iOS www.snipca.com/33280
Android www.snipca.com/33279
Free

Spendee makes it easy to keep track of your spending. Set a budget for common expenses like groceries, transport or entertainment, and any spending you apply to that category will be deducted from what you have left for the month. Track one budget on the free plan, and upgrade to unlimited on Plus and Premium.

Best For Everyday expenses



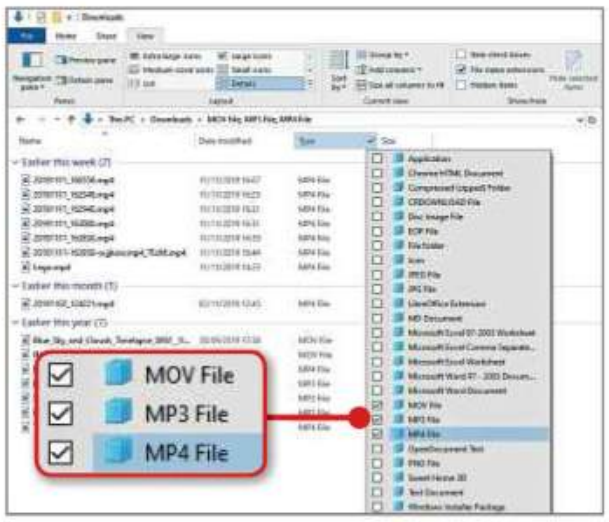
*Contains in-app purchases

WINDOWS 7, 8.1 & 10

Sort files in large folders

File Explorer lets you organise folders by name, type, size and more (just click the appropriate column heading). However, it also has a keyboard shortcut that lets you quickly sort what's displayed.

Open a new File Explorer window (Windows key+E), then go to a folder with multiple files (for example, your Downloads folder). Next, make sure you're using the Details view (click the View menu, then Details). Press the Tab key until the column heading bar is selected - at which point the Name heading will be highlighted light blue. Use the left and right arrow keys to select the column you want to use to sort the folder's contents (such as Name, Type or Size).



Next, press the down key and you'll see filter options relevant to that column. For example, press the down key with the Type column selected and you'll see a list of all file types in the folder – simply tick the ones you want to be displayed (see screenshot above).

You can apply filters to more than one column. If you navigate away from the folder (or close File Explorer), the filters will be lost, meaning you'll see all files when you return to that folder.

WINDOWS 7, 8.1 & 10

Delete multiple files quicker

If you only want to keep a couple of files in a folder that's full of them, holding Ctrl and clicking all but the ones you want to keep is a hassle. Instead, select the files you want to keep (holding Ctrl as you click them), then select the Main tab at the top, followed by 'Invert selection' (at the far right of the toolbar - see screenshot above right) - if

you're using Windows 7, you'll find this option by holding Alt while opening the Edit menu. Clicking this changes the selection to all but the files you want to keep. Now either move the selected files to a new folder, or press Delete to send them to the Recycle Bin.

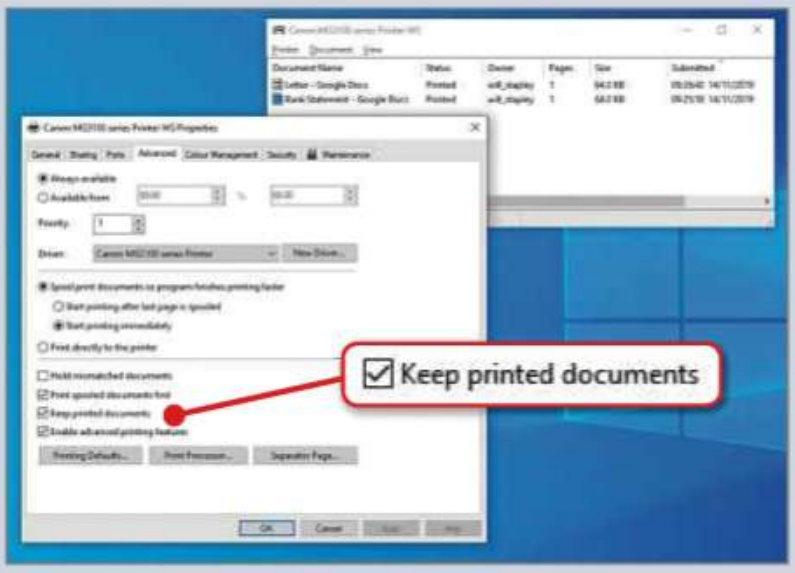
WINDOWS 7, 8.1 & 10

View your print history

When you blaze through costly printer ink at a rate of knots, you might be left wondering exactly what (or who) is to blame. Windows has a hidden setting that lets you store your entire print history, letting you see exactly what's been printed, by whom, and when.

To start recording this information, open Settings (Windows key+I), go to Devices, then 'Printers & scanners'. Select your printer from the list on the right (if you have more than one, you need to set each one up in turn), click Manage, then 'Printer properties'. The settings window for your printer will now open. Select the Advanced tab, then tick the 'Keep printed documents' option near the bottom (see screenshot) and click OK to save the changes.

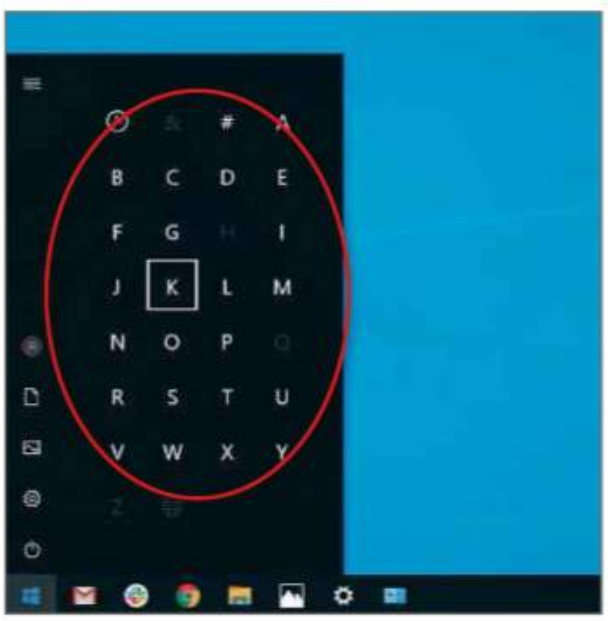
From now on, whenever you print a document, photo or anything else, the print job will be saved in the printer's queue. To view what's been printed, return to the 'Printers & scanners' section in Settings, select your printer, then click 'Open queue'. You'll now see all printed items (with a Status of Printed), along with their file names (Document Name), who printed them (Owner), how big they were (Pages and Size) and when they were printed (Submitted). This print history is kept even if you restart your PC. If you want to remove an item from the list, right- click it and select Cancel. Alternatively, to remove all items, click the Printer menu, then Cancel All Documents.



WINDOWS 10

Find Start menu items faster

The Start menu can feel daunting at times, displaying all your programs in one long list. You can find programs by typing the first few characters of their name after opening the Start menu, but this also displays similarly named documents, photos and



more. Instead, try pressing the Tab key twice after opening the Start menu (this highlights the 'Recently added' option). Next, type the first letter of the program you want to open or press the Space key and click the appropriate letter (see screenshot above). The Start menu will now show all programs beginning with that letter.

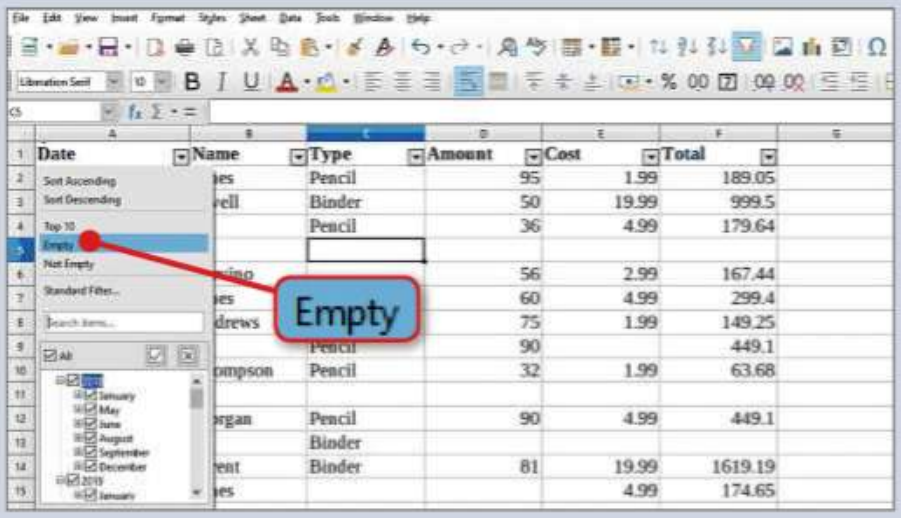
LIBREOFFICE CALC

Delete empty rows in Calc

If you've spent time compiling and editing a spreadsheet and ended up with a lot of empty rows, the whole thing can look messy. One option is to select each row in turn, then right-click and click Delete Rows, but this isn't practical on large spreadsheets. Instead, use Calc's AutoFilter tool to do the job for you.

Open your spreadsheet, press Ctrl+A to select all cells, then open the Data menu, followed by AutoFilter. A filter will now be applied to your spreadsheet, allowing you to sort the data by specific columns and more. In this case, however, we want to use the filter to only display rows that are empty. Click the down arrow at the top of the first column and select Empty (see screenshot), which tells Calc to only show empty cells in that column. Now repeat this for the remainder of the columns in your spreadsheet.

When you've done this, you'll end up with what looks like a blank spreadsheet apart from the column headers.



Press Ctrl+A to highlight all cells, then keep Ctrl pressed and click Row 1 (or the row containing your column headers) to deselect it. With only the empty rows now selected, right-click within your spreadsheet, select 'Delete...', then 'Delete entire row(s)'. Finally, turn the AutoFilter off (go back to the Data menu and click AutoFilter) to reveal your original spreadsheet, minus those pesky empty rows.

LIBREOFFICE WRITER

Use advanced PDF options

If you want to quickly create a PDF from a LibreOffice Writer document, click File, Export As, then 'Export Directly as PDF' and choose where to save it. This creates a PDF with the default settings. However, you can control how your PDF is viewed by selecting 'Export as PDF...' instead. Doing so gives you more options on how it displays when it's opened.

For example, in the Initial View tab you can set the PDF to open with either the Bookmarks pane (select 'Bookmarks and page') or with thumbnails of each page visible alongside the main PDF ('Thumbnails and page'). Below this, you can change the initial magnification level. In the User Interface tab, you can set options such as centering the PDF on your desktop or opening it in full-screen mode (see screenshot below). When you're ready to create the PDF, click Export, then choose where to save it.

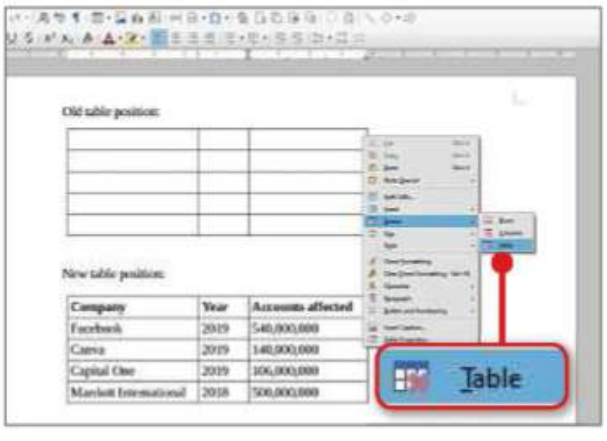
Bear in mind that most PDF readers (such as Adobe Reader) comply with these settings when opening PDFs, but some browsers (including Chrome) will ignore certain settings, such as opening in full-screen mode.

LIBREOFFICE WRITER & MICROSOFT WORD

Move tables within a document

LibreOffice is as good as Microsoft Office in most respects, but there are some simple actions that it doesn't manage as well. Moving tables within a document is one example.

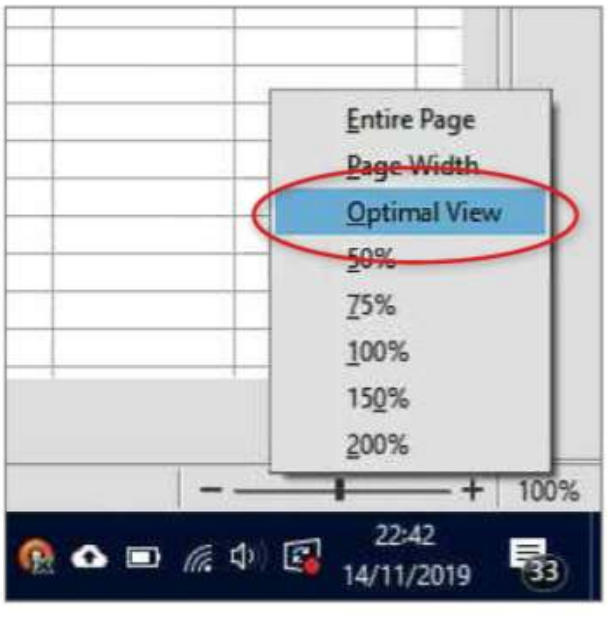
In Word, you hover over the top-left corner of the table, then click and drag it wherever you want in the document. In Writer, however, there's no way to drag tables, so you have to use a different method. First, select the entire table by clicking anywhere within it, then pressing Ctrl+A twice. All cells in the table should now be highlighted. Next, press Ctrl+X to cut the cells from the table, move the cursor to wherever you want the table to be, then press Ctrl+V to paste the cells (preserving the original format). Finally, you need to delete the original table, which now has empty cells. Right-click anywhere within the table, then select Delete followed by Table (see screenshot below left).



LIBREOFFICE CALC & MICROSOFT EXCEL

See a close-up of selected cells

When you have a large spreadsheet open, it's often useful to zoom into the cells you're working on. In Excel, first highlight the relevant cells, then select the View tab at the top and click 'Zoom to Selection'. In LibreOffice Calc, highlight your cells, right-click the zoom percentage in the bottom-right corner of the window, then select Optimal View (see screenshot below).



In The Club

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

Advertise and manage tickets for a club event

You've spent hours planning an event, now comes the hard part: getting people to attend. Not only that, but you want to keep tabs on how many people are coming. Eventbrite is a great online tool that lets you do both: your event will be advertised to other Eventbrite users and will appear in Google searches, and anyone interested can reserve a ticket online. As long as you don't charge for tickets, the service is free.

Create your event page

First, you need to create an Eventbrite account at www.snipca.com/33244. Once you've registered, return to the home page and click Create Event. In the Basic Info section, give your event a name. Make sure you include the type of club you run so that it appears in any relevant searches – we're running an open day for an archery club, so have gone for Arncott Archery Club Open Day.

You can further promote your event in search results by selecting categories and adding up to 10 tags (keywords that describe your event – see screenshot above right). Once you've done this, give the name of the event organiser (this will be displayed on your Eventbrite page).

Next, scroll down and enter the event's address in the Location box. Alternatively, if you don't yet know, select 'To be announced' in the Venue box. Set the date and time for both the start and end of your event, then click 'Save & Continue' (your event won't be published yet). The next page lets you add an image for your Eventbrite page and a more detailed description of the event. Once you've done this, click 'Save & Continue'.

It's now time to set your ticket prices. Because we want to attract new members (and avoid Eventbrite charges), we're not charging for our open day, so we select Free. If you decide to charge, you'll pay fees starting at 3.5 per cent of the ticket price, plus 49p per ticket sold. You also need to specify how many tickets are available. By default, the number of tickets remaining won't appear on your event page (we explain how to change this below) and you can always add more tickets later if needed. Bear in mind, there's no guarantee everyone who's reserved a ticket will attend, especially if your tickets are free. Next, scroll down to select a start and end date for ticket availability (ending ticket sales the day before the event helps avoid a surge of unanticipated attendees on the day), then click Save.

Use appropriate keywords to make sure your event appears in relevant searches

Publish your event page

Before publishing your page, click Preview at the top to see how it looks and make sure all the details are correct (see screenshot below). To make edits, return to your event's setup page (if you can't find it, click your profile image top right, then Manage Events) and use the editing options down the left side of the window. Here you can make the event private, so only people you send the link to can access it (via Privacy Settings, Privacy), as well as opt to show the number of tickets remaining (Privacy Settings, Display), which can help ticket sales by creating a sense of urgency.

Once you're happy with everything, click Publish Event at the top, followed by Publish Now. You can still make changes to your page once it's published, and even remove it by selecting On Sale at the top, then Unpublish Event.

Spread the word

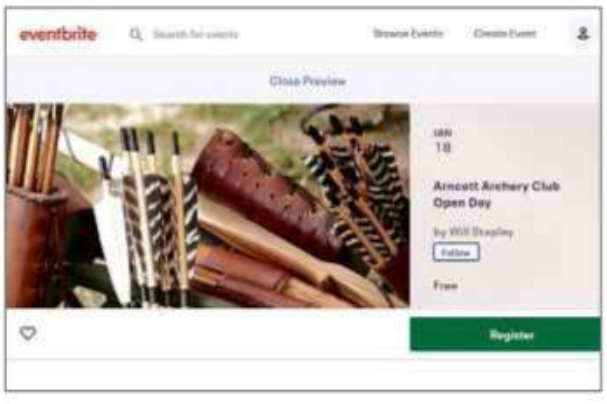
As we mentioned above, your event will show up in both Eventbrite and Google searches. If your club has a Facebook page, you can also sell tickets from there. Click 'Invite & Promote' on the left within Eventbrite, then 'Add to Facebook' to link your account.

To send invites to your existing club email list (or create a new list), click Email Invitations. Once you've sent the invites, you'll be able to track who's opened and clicked them.

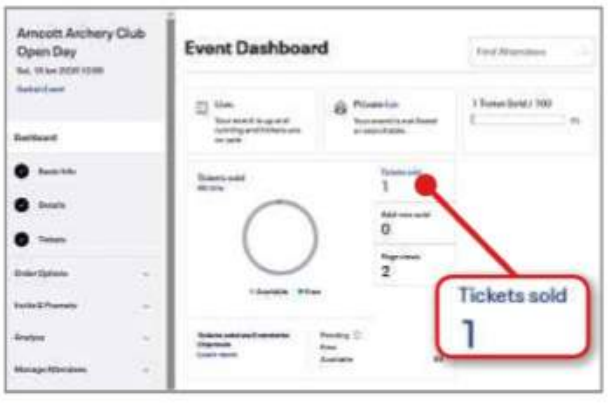
Monitor ticket sales

Click Dashboard on the left to see how your tickets sales are going (see screenshot below) – you'll also see how many people have viewed your page (if you've had plenty of views but few ticket sales, try making your event description more appealing). Two days before your event, Eventbrite sends a reminder email to attendees. You can view and edit this, as well as send your own emails (to notify people of a time change, for example) – just click 'Emails to Attendees' on the left.

On the day of your event, it's a good idea to print a list of attendees by going to Manage Attendees on the left, then Attendee List. You could also use the Eventbrite app (www.snipca.com/33245) and use your phone check people off as they arrive.



Preview your event page to make sure all details are correct before publishing



Use your event page's dashboard to keep an eye on ticket sales

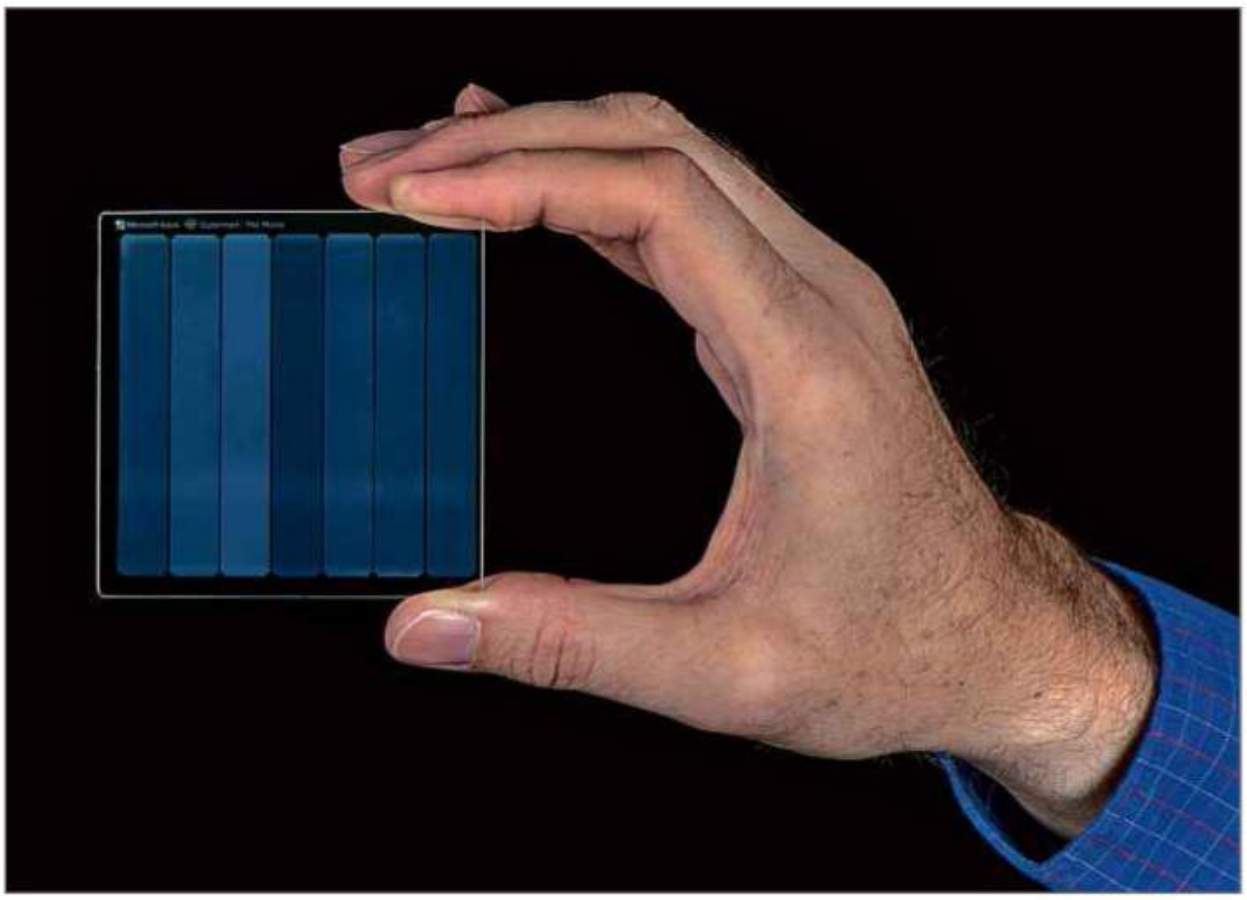
Next issue: Create a new club logo

What's All the

Fuss About...

Project Silica

Not a bird, nor a plane, but a cutting-edge new storage system



What is it?

Microsoft's new way of storing data for thousands of years without it degrading. A laser burns multiple bits of data on to quartz glass, which emits images and patterns when polarised light is shone through. Artificial intelligence can read these in order to retrieve and play the data. It must work because it's been tested on Superman.

The Man of Steel himself?

Well, the 1978 film, starring Christopher Reeve. Warner Bros, which owns the film, asked Microsoft whether it could help create a storage system for its productions that could survive natural disasters like floods, earthquakes and solar flares, and wouldn't need to be kept at a specific temperature. Microsoft appears to have created a technology that's as indestructible as Superman himself.

So it can withstand anything?

Apparently. In a blog post (www.snipca.com/33236), Microsoft says it could be "boiled in hot water (pictured below), baked in an oven, microwaved, flooded, scoured, demagnetised" without damage. It doesn't mention Kryptonite, but we bet it would cope with that also.

Where is the film stored?

On a piece of silica glass measuring 7.5cm x 7.5cm x 2mm - roughly the size of a drinks coaster (see main picture). Unlike fragile wine glasses or light bulbs, it's surprisingly difficult to destroy. Warner Bros will be pleased because the technology could slash the cost of preserving their vast film, radio and TV archive.

Superman survived being boiled in water

Is it expensive then?

Very. At the moment Warner Bros moves content every three years to keep it in good condition. They face a constant battle to transfer data on to newer types of storage before the information is lost, or the formats become obsolete. It keeps three copies of each piece of content stored in different locations around the world. Two of these are digital copies, while the other is the original saved on whatever medium it was created on – for example, celluloid film.

Why is silica glass cheaper?

Because you need to save the data to glass just once. The changes the lasers make to the structure of glass last forever. In previous years, media companies preserved physical content such as film reels by digitising it. Now that most content is created digitally, they're looking for ways of storing it physically. Currently, Warner Bros does this by converting it to analogue film. It splits footage into cyan, magenta and yellow then transfers each colour on to black-and-white film negatives. These are kept in tightly controlled vaults where air-detection devices look for signs of chemical decomposition.

Blimey. Isn't that a lot of effort?

Yes, the company takes the job of preserving its content "very seriously". Vicky Colf, its chief technology officer, says it would be "unimaginable" if content "like the *The Wizard of Oz* or *Friends* wasn't available for generation after generation to enjoy".

Could it also preserve our own videos for our great-great-great-great-grandchildren to enjoy?

Sadly not. Microsoft researcher Ant Rowstron says the technology is not something "you put in your house or play movies from". It's being built on a much bigger scale, aiming to preserve "cold data", which is information that may have huge value or needs to be maintained by law, but doesn't need to be regularly accessed. This may include medical data or legal contracts, but not videos of your weekend break in Rome.

BEST FREE SOFTWARE for 2020

Don't get caught out by technological changes. **Jonathan Parkyn** reveals the free tools you must install now to help you face the year ahead

We might not be able to predict precisely what joys and disappointments the coming year will bring you, but we do have a pretty good idea about the key technology trends that will dominate 2020.

In the short term, we know that January will see the demise of Microsoft's much-loved Windows 7 operating system – an event that will have significant repercussions for the way that many of us use our PCs. We know that 5G mobile network connections will (finally) start to speed up our phone signals. Malware makers and hackers will find new ways to break into our devices and steal our data. But there's so much more happening, too.

Over the longer term, many industry analysts believe we're on the cusp of a fourth industrial revolution. This involves emerging tech such as artificial intelligence, super-powerful quantum computing, tiny nanotechnology devices and ultra-fast wireless connections - all creeping into our home, work and leisure time and affecting the way we live our lives.

The world of technology moves so quickly, we wouldn't blame you for feeling a little anxious about what the future has in store. But computing should be fun, not frightening, which is why we've used our expertise and knowledge about upcoming tech trends to compile the ultimate list of software you can install *now* to prepare your PC – and yourself – for whatever the coming year has to throw at you.

Over the next few pages, we'll reveal the 10 tools that you must have installed on your computer for 2020. Along the way we'll also name check those you can probably do without.

WHAT YOU SHOULD INSTALL

- Programs that analyse your Wi-Fi to boost signal strength and cut dead spots
- Tools that wipe junk from your system and securely shreds unwanted files
- Microsoft's revamped PowerToys for tools that add handy little features to Windows 10
- Backup programs that will protect your files from the rising ransomware threat

1 Wi-Fi Analyzer

www.snipca.com/33239

In what is largely good news, the price of Wi-Fi mesh routers has recently started to plummet, making it more affordable to switch from the standard single-router setup to a multi-node wireless network that can significantly improve coverage around your home and reduce the problem of dead zones.

It's a trend that's likely to continue into 2020, as price wars in this competitive area of the market heat up. You can already pick up a basic starter kit online from big-name brands such as Google (www.snipca.com/33240) and Netgear (www.snipca.com/33241) for around £100. And some broadband providers are now offering as standard mesh systems as an alternative to a router. BT (www.snipca.com/33242), for instance, currently has a superfast-fibre deal that comes with a Complete Wi-Fi mesh system for £39.99 per month.

But there's a downside to all this. If your neighbours decide to upgrade to more powerful Wi-Fi, you could suffer drop-outs, thanks to interference caused by the stronger wireless signals from nearby properties.

That's why you need WiFi Analyzer installed in 2020. It can be used to scan for and view neighbouring networks that could be interfering with your connection, and diagnose potential problems with networks that are overlapping on the same channel.

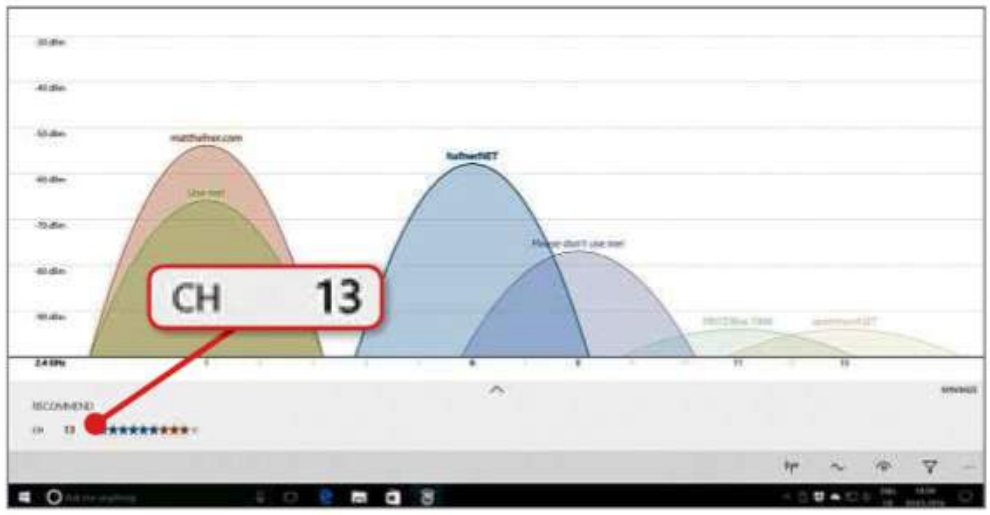
Launch it and, on the Connected tab, you'll find a detailed analysis of your current Wi-Fi network, including the current channel it's using, as well as the wireless protocol and the type of encryption employed.

Click the Analyze tab to see a visual representation of the surrounding networks – you'll instantly be able to see whether the channel your Wi-Fi is currently set to is overcrowded, because it will overlap with other networks. Click the 5GHz button at the bottom of the window to switch bands, or click Graph to view a real-time line graph.

At the bottom left, under Recommendation, you'll see a channel number with a star rating. This is the channel that WiFi Analyzer recommends you switch your Wi-Fi to (13 in the screenshot above) – one that's far away from any frequency-hogging mesh networks in your area. Now all you need to do is log into your router's configuration tool and switch your Wi-Fi to the suggested channel.

You can also use WiFi Analyzer's Networks tab to turn your Windows 10 laptop or tablet into a tool for discovering the optimal place for your router, based on the strength of the signal shown. Click Show More at the bottom of this tab to reveal detailed info on each of the available networks in range, such as which band it uses, how long it's been active and more.

WiFi Analyzer is a Microsoft Store app, so it won't come with any nasty PUPs. The Pro version (£2.49 as an in-app purchase) adds a few extras, such as an audio beeper for signal strength and a handy Live Tile in Windows 10's Start menu. But the free version provides everything you need to make sure your Wi-Fi signal remains unobstructed by neighbouring networks.



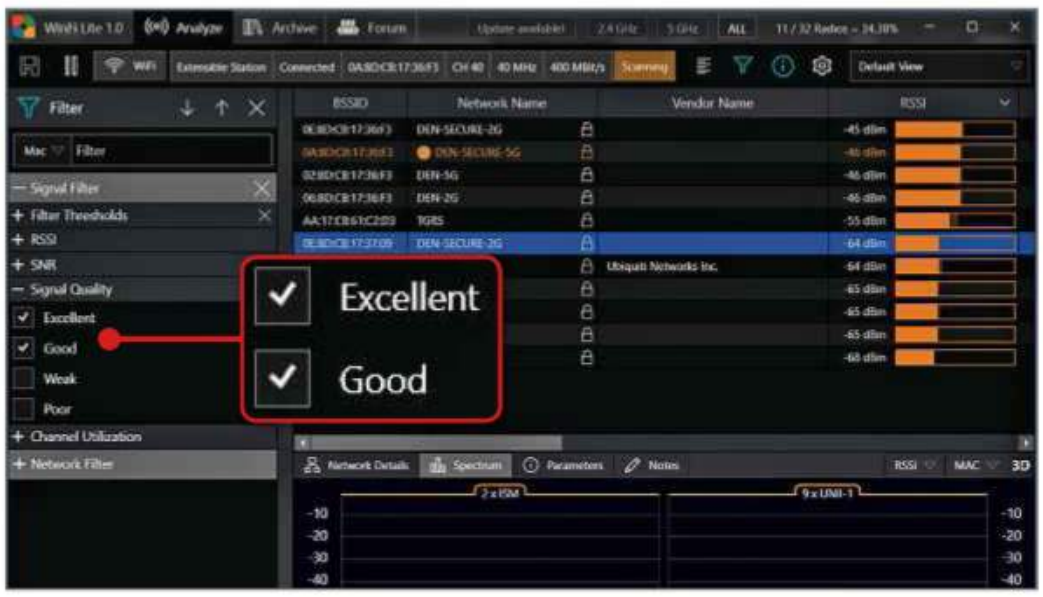
WiFi Analyzer helps you improve your wireless signal by recommending the best channel

Also try...
WinFi Lite

www.snipca.com/33243

WiFi Analyzer's straightforward approach makes it our favourite tool for diagnosing Wi-Fi problems. But if you crave a little more technical detail or expert-level controls, try WinFi Lite. The Microsoft Store version is currently offline, so you'll need to download the standard desktop version from the link above. If you see a SmartScreen warning when installing, click 'More info', then 'Run anyway' – the tool is perfectly safe.

WinFi Lite provides some advanced tools that the free version of WiFi Analyzer lacks, including filtering networks by different factors, such as network protocol or signal quality (see screenshot below left). It's still fairly new and therefore receiving plenty of updates - definitely one to keep an eye on in 2020.



Use WinFi Lite to filter networks by signal quality

Don't use...
Ekahau HeatMapper

This tool offers the useful option of viewing your Wi-Fi coverage as a heatmap around your home. But we don't appreciate the way it asks for personal information – including your phone number and the number of routers on your network – before you can even download it. Further privacy warning signs include a disclaimer on the download page, stating that your information "may be shared with third party Ekahau distribution partners who may contact you on behalf of Ekahau".

2 BleachBit 3

www.snipca.com/33283

Hackers will inevitably devise new ways to try and steal your personal data in 2020. Meanwhile, sneaky organisations will continue to use dubious tactics to exploit your private data for their own profit.

This year, for example, has seen a rise in so-called cookie walls, where websites attempt to subvert the EU's privacy laws by blocking access unless the visitor agrees to accept tracking cookies. In November, the EU issued an updated draft of its new ePrivacy regulations (www.snipca.com/33284), which will now eventually rule that the use of cookie walls is unlawful. But the new regulations aren't due to come into law until sometime next year – and they may never apply to the UK if we leave the EU without a deal.

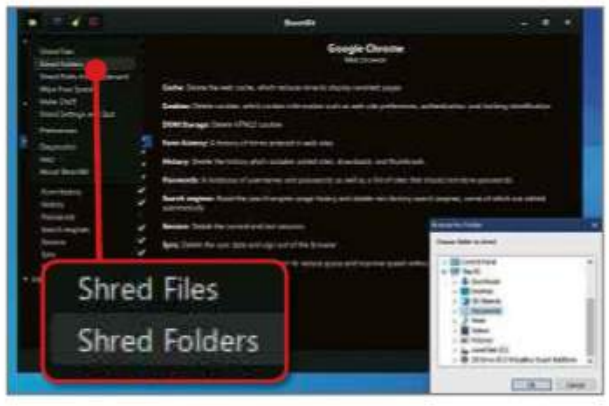
In the meantime, it remains your responsibility to monitor your own privacy and prevent it being eroded. Thankfully, there are tools to help – and BleachBit is one of the best.

You can, of course, use Windows' built-in tools for cleaning up drive space (see our 'Also try'). But, while these tools have improved in recent versions of Windows 10, they simply don't go as far as BleachBit, which lets you not only clean up your hard drive by deleting temporary files, unwanted cookies and other junk, but also lets you securely delete files, shred empty drive space and more.

BleachBit is open-source software, and therefore unhampered by the commercial concerns that often plague rivals such as CCleaner. It's free of PUPs and there are no adverts or nags to upgrade to a premium version. Better still, there's a portable version of BleachBit available, meaning you don't even need to install the tool to use it – just extract the ZIP file and run the program. It's straightforward to use, too. Select the programs or individual components that you want to clean (your browser's cache, cookies and history, for example) by ticking the boxes in the left-hand pane. You'll see an explanation for each one on the right. When you're ready, click the brush icon in the top toolbar to clean your selection.

For further options, click the menu button (top left). Here, you can securely erase files by selecting Shred Files or Shred Folders (see screenshot above), then browsing to the items you want to delete. Click Open, then click Delete to confirm. Alternatively, click Wipe Free Space to overwrite any hidden files that might still be recoverable from your hard drive, even after deleting them. BleachBit doesn't offer any options to clean the Windows registry, but this is actually something of a plus point since registry cleaners rarely improve performance and can do more harm than good.

Recently updated to version 3.0, BleachBit now includes the option to generate "chaff" – a kind of digital haystack to make sensitive files on your hard drive more difficult to find. Other new features include improved scanning speeds, a useful Stop button on the toolbar and an option to run the program in 'dark mode', saving your eyes at night.



Use BleachBit to quickly (and permanently) delete files or entire folders

Set Storage Sense to regularly check for and remove junk from your PC

Also try...
Windows Storage Sense

Microsoft has steadily improved the storage-management tools included in Windows 10. Storage Sense won't purge junk from your PC securely or allow you to shred sensitive files like BleachBit does, but it provides a useful way to manage unnecessary junk and automatically free up valuable hard-drive space.

To access Storage Sense's settings, open Settings (Windows key+I), then go to Settings, System, Storage and click 'Configure Storage Sense...'. Here, you can select the types of file you want removed and how frequently, such as every day, every week, every month or just when you're running low on storage (see screenshot above).

Don't use...
CCleaner

This once-respected PC-cleaning tool has been rocked by disaster after disaster in recent years. In 2018, for example, CCleaner was found to be taking users' data without their consent, though more recent versions have at least provided a way to opt out of this. The software has also been victim to a series of major security breaches – the most recent occurring just a few weeks ago, when hackers stole login details for CCleaner's servers and tried (albeit unsuccessfully – see www.snipca.com/33295) to insert malware into the program.

Jonathan's software predictions for 2020

Demise of the Microsoft Store
Loaded with gimmicky apps, the Microsoft Store – and the platform behind it known as UWP – hasn't been as popular with developers as Microsoft hoped. Earlier this year, one senior Microsoft executive went as far as to say "UWP is dead". It will still be around in 2020, but we don't envisage many new big-hitting apps.

End of the road for 32bit
If you're still using a 32bit PC, 2020 could be the year you need to upgrade. We expect more software to go 64bit only (such as Darktable – see page 57), meaning they won't run on older computers.

More software you don't install
Google's new Stadia gaming service, which launched last month, heralds a big shift in software – and it's a trend we see continuing in 2020. Unlike with traditional PC games, you don't install Stadia games, but rather stream them from servers. This means you don't need a powerful computer to run them, but you're also at the mercy of the provider, who may increase costs or shut the service down without warning.

SYSTEM TOOLS

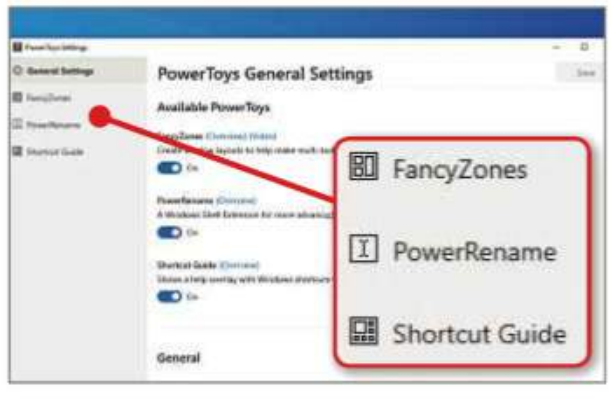
3 Microsoft PowerToys

www.snipca.com/33286

The original PowerToys was a selection of extremely useful Windows 95 enhancements from Microsoft – such as shortcut menus and tools for altering your screen resolution quicker – all bundled together and avidly downloaded by savvy computer users.

In 2002, Microsoft issued a second version of PowerToys for Windows XP, but things went very quiet for a few years until, in September this year, the company launched a brand new incarnation of PowerToys for Windows 10. To get it, just download and install the latest version of the 'PowerToysSetup.msi' file from the link above, then right-click the new PowerToys icon in your taskbar and select Settings. Here you can enable or disable individual toys (see screenshot), change settings for each one and more.

We reviewed the initial batch of tools – including a handy keyboard shortcut guide and an advanced window manager called FancyZones – in Issue 563 (page 18). Since then, PowerToys has been updated to include a very useful batch-renaming tool called PowerRename (right-click any folder then select PowerRename to launch this) and Microsoft has stated its intention to introduce more soon.



PowerToys currently comprises three useful tools, with more to come in 2020

As part of the re-launch, Microsoft made PowerToys open source, meaning anyone can suggest and create new tools for it. Tools in the pipeline for 2020 include one to kill unresponsive tasks and a shortcut to send programs to a new virtual desktop (see page 60 for more on virtualisation).

Also try...
NirLauncher

www.snipca.com/33287

NirSoft is one of the most prolific and reliably brilliant developers of handy Windows tools. The company's NirLauncher provides 200 of these free tools, all accessible from a single portable dashboard. There's plenty of excellent stuff here, including network-monitoring tools and a SMART data viewer for checking your hard drive's health. Some of the tools are pretty technical, but they're great for anyone who enjoys tinkering with their PC.

Don't use...
Auslogics Duplicate File Finder

Finding and removing duplicate files is a good way to keep your system slimmed down and efficient – as long as the tools you use to achieve this don't end up slowing down your PC by needlessly running in the background all the time and attempting to add junk on your PC. That's precisely what Auslogics Duplicate File Finder does when you install it.

OFFICE SUITE

4 SoftMaker FreeOffice

www.snipca.com/33288

Microsoft will stop supporting Office 2010 on 13 October 2020, meaning it will no longer release security fixes for the suite, which could quickly become an easy target for hackers and malware. When that happens, users will need to switch to an alternative. Thankfully, there are plenty of available options.

Microsoft is pushing users toward Office 365, its subscription-based option costing £60-£80 per year. For those who prefer paying a one-off fee for downloadable software, there's still Microsoft Office 2019 (from £120). But this has a much shorter lifespan – seven years compared with 10 for previous versions – meaning it will receive updates only up to October 2025. And the company has strongly hinted that its aim is to kill off its non-subscription Office products altogether.

If you don't like the idea of committing to an Office 365 subscription, 2020 is the year to jump ship. There are plenty of free options, but our current favourite is SoftMaker's FreeOffice 2018 because it works entirely offline (unlike Google Docs). It's ideal for anyone switching from Office because it supports all Microsoft file formats and offers layout options that resemble Microsoft's Ribbon and Classic interfaces (see screenshot left).

FreeOffice lets you change its layout to something that's similar to Microsoft Office

The latest version, released in January, adds features to the free version that were previously paid-for, such as direct support for scanners.

Also try...
LibreOffice

www.snipca.com/33289

While FreeOffice provides a seamless transition from Microsoft Office, our old favourite LibreOffice is still worth considering. Its design takes a bit of getting used to, but it's not a massive leap for Office users. And unlike FreeOffice, which holds some features back for its paid-for version (£60), LibreOffice is open-source and free. It also benefits from more regular updates – version 6.3 was released just a few months ago, and includes improved AutoCorrect functions and better support for Word documents.

Don't use...
OpenOffice

Apache's OpenOffice used to be a popular free office suite, but when its developers fell out, half of them stormed off and set up its rival LibreOffice. Both suites are based on the same original source code and offer the same core tools. However, while the nature of the software licences allow LibreOffice to adopt improvements that OpenOffice comes up with, this doesn't work both ways. The upshot is that OpenOffice struggles to keep up.

Computer active

READER OFFER!

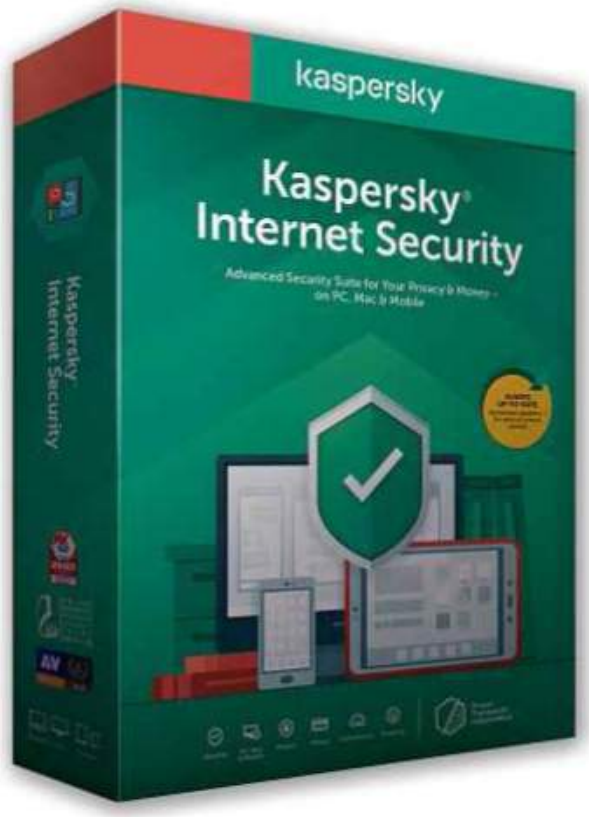
NEW!

Kaspersky Internet Security 2020

Kaspersky has now released the new and improved 2020 version of its multi-award-winning antivirus software. Computeractive readers can download it now at a specially discounted price

WHAT'S NEW IN KASPERSKY 2020

- ☑ **Finds and removes dodgy browser extensions**
- ☑ **Identifies software that needs to be updated**
- ☑ **Gives you more control over which adverts are blocked**
- ☑ **More advanced options to keep malware off your PC**



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VIRTUAL PC TOOLS

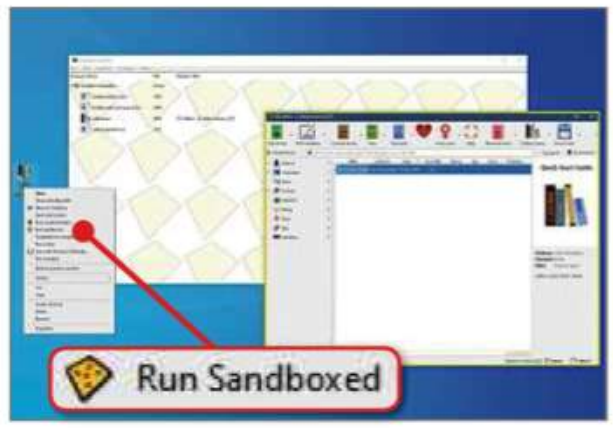
5 Sandboxie

www.snipca.com/33299

Along with Microsoft ending support for Windows 7 early in 2020, many other older programs will meet their maker next year. Continuing to use them could put your PC at risk even if you're using Windows 10. It's therefore worth checking the support sections of websites for older programs you regularly use. In some cases, you may simply be able to update any affected software to the latest version. But if these are paid-for, you may prefer to stick with the older version. Thankfully, there is a safe way to do this: using sandbox software.

A sandbox is an isolated safe zone on your PC that's ringfenced so that any activity you carry out within it can't affect anything else on your PC, meaning hackers can't exploit vulnerabilities to access your files or data, for example.

In the Windows 10 May 2019 Update, Microsoft introduced a built-in sandbox tool but it's only available in the Pro edition, not Home. The good news is that Sandboxie does a similar and, in some cases, better job. The developer recently made it available for free with all premium features unlocked and the previous nag screens banished. Once installed, you can right-click any program and select Run Sandboxed (see screenshot) to use it safely. You'll know whenever a program is running in a sandbox because it will be framed in a yellow border.



Right-click a program and click Run Sandboxed to quarantine it from the rest of your PC

Also try...
VirtualBox

www.snipca.com/33300

Some older software simply isn't compatible with Windows 10. In these cases you may need to run Windows 7 within Windows 10 as a virtual PC. Sounds complicated, but Oracle's excellent VirtualBox software makes it easy. Download the latest 'Windows hosts' version from the above link, then click New to create a virtual PC and follow the instructions. Bear in mind you'll need your old Windows 7 installation disc to set up your virtual PC.

Don't use...
Windows Virtual PC 2007

Support for this Microsoft virtualisation tool came to an end in July 2017, meaning it's no longer safe to use. Microsoft updated it with Hyper-V, but that's only available in the Professional edition of Windows 10.

HARDWARE DIAGNOSTIC TOOLS

6 SiSoftware Sandra Lite 2020

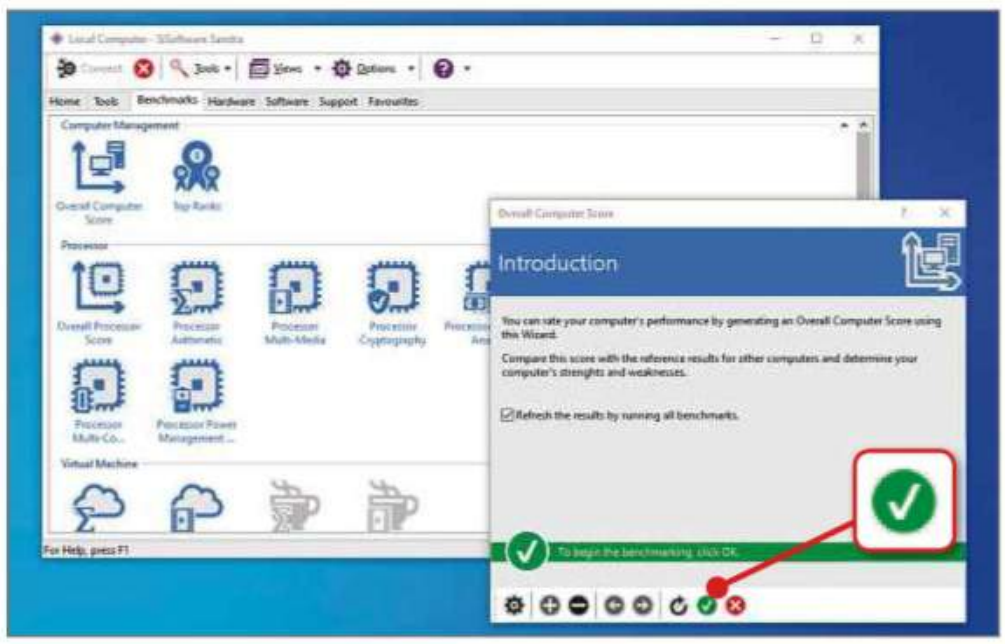
www.snipca.com/33301

If, like many people, you bought a new PC when Windows 10 launched, it will be coming up to five years old when 2020 dawns. Sadly, a lot of tech isn't built to last these days, and chances are components such as your hard drive will start to develop problems. Instead of buying a new computer, we suggest you install a hardware-analysis tool to help you monitor your PC's health and diagnose any potential problems that might be just around the corner.

SiSoftware's System Analyser, Diagnostic and Reporting Assistant (or Sandra, to its friends) has long been one of our favourite tools, and the Lite version is free of adverts. It offers a comprehensive range of benchmarking and diagnostic tests for the components inside your PC.

Open it and you'll see a tabbed dashboard of options. Click a tab – Benchmarks, for example – to see which tools are available. You can get a quick overview of your PC's health here by selecting the Overall Computer Score tool, then clicking the tick icon at the bottom (see screenshot) to run a series of tests.

The Hardware and Software tabs give you detailed information about the devices and tools that make up your PC – useful if you need to update drivers, for example.



Sandra gives your PC a health check at the click of a button

Also use...
CrystalDiskInfo

www.snipca.com/33302

Of all the components in your PC, your hard drive is probably the most fragile. CrystalDiskInfo is a simple tool that lets you keep an eye on its operating temperature and overall health, and will even email you if a problem is detected. You can also run performance tests on your drive using its companion tool, CrystalDiskMark (available from the same link).

Don't use..
Hard Drive Inspector Professional

Basic, poorly designed and without an update in years, this is one tool you should definitely stop using in 2020. It doesn't do an awful lot beyond providing a few details about your drive and, when we tried it, it couldn't even do that terribly well, showing a spate of error messages.

BACKUP

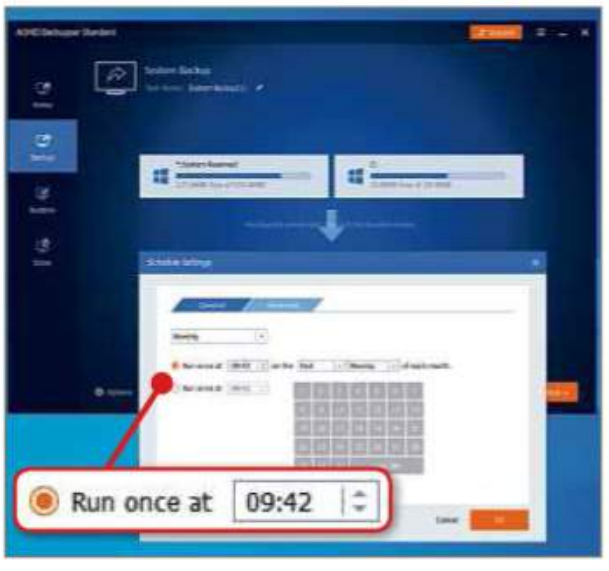
7 AOMEI Backupper Standard

www.snipca.com/33305

According to security firm Check Point, ransomware could be taken to a whole new level in 2020 (www.snipca.com/33303). The company believes we'll start seeing more targeted attacks, in which hackers take time to gather information on you, in order to maximise the disruption they can inflict.

The only sure way to protect yourself from being locked out of your own files by such an attack is to make sure you have copies of them all, which means backing them up as regularly as you can. Not only that, but we also recommend having a second backup – one that includes all your system files and programs. Windows has a built-in backup utility, but its system image backup tool dates back to the Windows 7 era – it's even referred to as 'Backup and Restore (Windows 7)' in the Settings app. As such, we'd recommend using a more up-to-date tool.

AOMEI Backupper is great because it offers both file-and-folder backup and system-image backup from the same interface, which makes the whole process much easier.



Use AOMEI Backupper to schedule backups

Both can be run on a schedule, too – just click the clock icon at the bottom of the screen when you're setting up your backup, then select when the backups should run (see screenshot). That way, you can simply let the tool do its job, safe in the knowledge that your files or your entire system can be restored in the event of a disaster.

Also try...
Google Backup and Sync

www.snipca.com/33304

There's something to be said for backing up your most important files to online storage. Doing so provides an extra layer of protection against fire, flood, theft or any other event that could wipe out both your PC and the external hard drive you use to back up to.

This little tool from Google puts your free Google Drive allowance to excellent use as backup storage space for any folders you choose to sync – just click Choose Folder during setup. As a bonus you can also use the tool to sync an unlimited amount of high-quality snaps with Google Photos (see page 57 for more).

Don't use...
EaseUS ToDo Backup Free

This used to be one of our favourite free backup programs but, recently, it has become much more aggressive when it comes to pushing its paid-for version. We're also not fans of the PUPs it tries to force on you.

SECURITY

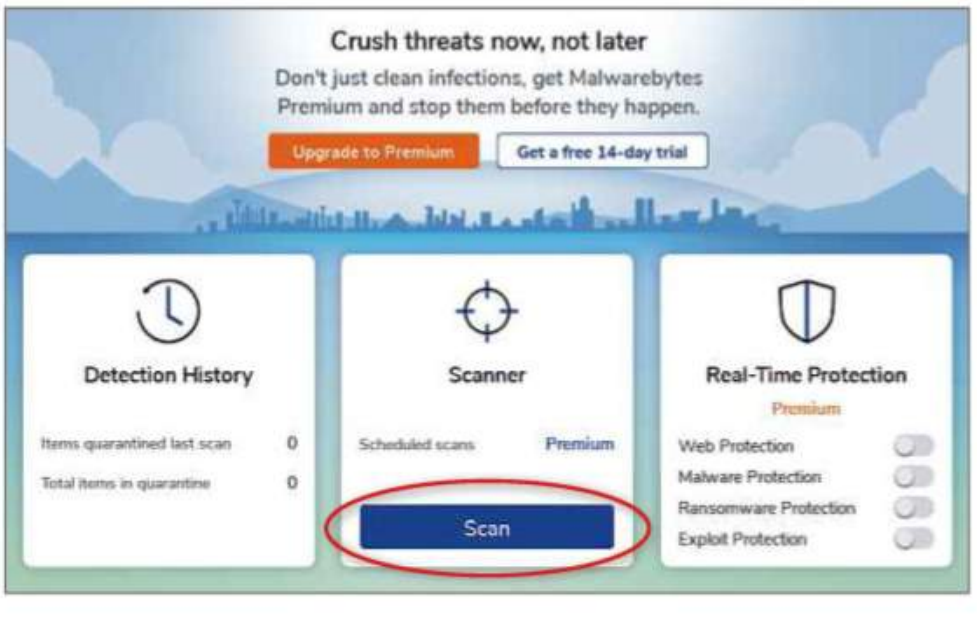
8 Malwarebytes Free

www.snipca.com/33312

We'll give you the good news first: malware actually appears to be on the decline. In a recent report (www.snipca.com/33313), security software company SonicWall noted that overall malware volume reached 7.2 billion in the first nine months of 2019, which represents a 15 per cent drop compared to 2018. The bad news, however, is that malware attacks are becoming more targeted (as mentioned above) and are reaching us from a variety of new sources. According to the same report, malware in Internet of Things (IoT) devices (smart speakers, thermostats and so on) jumped a staggering 33 per cent this year. All this means we need to become more vigilant when it comes to protecting our PCs and data.

Malwarebytes Free is not a replacement for your current antivirus software, but as a secondary line of defence. Because it doesn't run constantly in the background (you have to run scans yourself), it won't conflict with your main antivirus.

To use Malwarebytes alongside your existing antivirus software, click Use Malwarebytes Free when prompted during the setup process. Once installed, click Scan (see screenshot) to get a second opinion on the security status of your PC.



Run Malwarebytes alongside your main antivirus software

Also Try...
Chrome Password Checkup

www.snipca.com/33314

We've no doubt massive data breaches will continue in 2020. Install Chrome's Password Checkup extension and it will warn you if any of your passwords are known to have been stolen (if so, change them immediately).

Don't use...
McAfee WebAdvisor

This browser extension tries to make the web a safer place by warning you about potentially dangerous websites before you visit them. However, it's got a history of producing false positives, marking perfectly safe sites as dangerous. Worse still, it often gets foisted on you as a PUP when you install other programs. Definitely one to avoid in 2020.

PHOTO MANAGEMENT & EDITING

9 Darktable

www.snipca.com/33317

Increasingly high-quality lenses and larger-than-ever storage capacities means we're all going to be using our smartphones to take more photos than ever in 2020, resulting in even more precious memories scattered around our various devices.

Previously only compatible with Linux, Darktable is now available for Windows and helps you organise and improve your photos. Start by importing your existing photos (click Import, then Folder and browse for locations on your hard drive containing your photo files). Your photos will then be added to the program's virtual light table, where you can browse them. Click 'Image information' in the left slide-out panel to view EXIF information, which you can edit directly within the program. Double-clicking an image opens it in the Darkroom tool (see screenshot), where you can edit and improve it. All edits are non-destructive, which means your original photos will be preserved.

Darktable lets you organise your photos, then apply impressive edits with its Darkroom tool

There's just one downside: it's only available for 64bit systems.

Also try...
Google Photos

https://photos.google.com

Google's photo management tools are vastly superior to the Photos app built into Windows. However, there's no installable version, so everything's done in a web browser. Use it alongside Google's 'Backup and Sync' tool (see page 56), which will upload any photos on your computer to Google Photos. Its main benefits include free online storage and seamless syncing across all your devices, which is exactly what you need from a modern photo browser in 2020 and beyond. Plus, the mobile version has been recently updated with new album sorting tools, manual face tagging (letting you tag people in your photos, making them easier to search) and more.

Don't use...
Adobe Photoshop Express

Adobe Photoshop might be the industry leader for image editors, but this free version (available via the Microsoft Store) bears little resemblance. It offers precious few interesting effects and we're not fans of having to create an Adobe account just to use the program.

VIDEO EDITOR

10 VSDC

www.snipca.com/33319

Microsoft introduced video-editing tools to Windows 10 in 2017's Creators Update, but they were a bit of a letdown. And, if preview versions of the next Feature Update (due in the spring) are anything to go by, they won't be enhanced in 2020. If you use your smartphone or digital camera to record videos, your device's storage is probably bursting with unedited footage. Trimming this down using video-editing tools could help you reclaim space and share short, punchy clips with friends and family online.

Look no further than VSDC. It's a cut-down version of a paid-for product (VSDC Pro, £18) but it still has plenty of great features – including HD and 4K support and built-in video stabilisation tools that help improve footage captured with a shaky hand.

VSDC is easy to master and lets you quickly create home movies by dragging and dropping clips and adding transitions (see screenshot), but there's a library of excellent tutorials (www.snipca.com/33321) if you want to learn how to use its more powerful features.

VSDC is great for creating quick home movies from a series of clips

Also try...
DaVinci Resolve 16

www.snipca.com/33318

If you need something a bit more advanced, try DaVinci Resolve 16. It's a free version of a professional program (DaVinci Resolve Studio 16, £233) and is missing a few high-end features, such as multi-user collaboration tools and stereoscopic 3D support – but it's unlikely you'd ever need these for your home movies. Be warned: it takes a while to master, but training videos are available at www.snipca.com/33320.

Don't use...
HitFilm Express

HitFilm Express is a decent, if complex, free video-editing program. but we don't like the way it requires you to sign up for an account before you can download the tool. You also need a powerful computer to use it, including a graphics card with a minimum of 1GB of memory.

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15 things you're doing wrong in Windows

Even long-time Windows users can make the same mistakes over and over. **Nik Rawlinson** highlights the ones you need to eradicate, and explains what you should do instead

1 Stop re-arranging your desktop

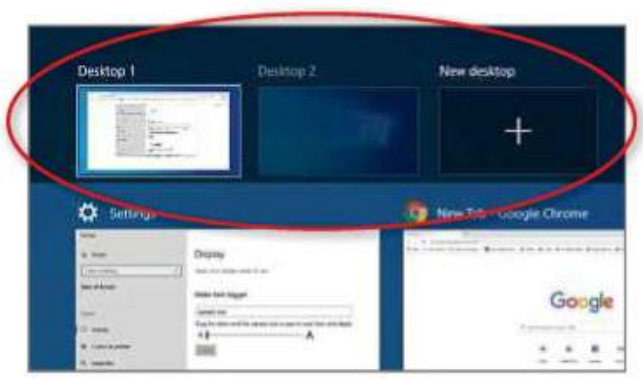
Even the largest screen can feel cramped when running several programs simultaneously. Rearranging them can help, but it's not an ideal fix for software that works best in full-screen, such as video-editing tools.

That's where Windows' virtual desktops can help. Click the Task View icon (film strip beside the Cortana and Search icons on the left of your taskbar) to reveal a timeline of recent activities, two virtual desktops and a 'New desktop' button (see screenshot below). Each desktop acts like a separate screen, letting you use different programs on each and switch between them quickly by pressing Alt+Tab. Alternatively, hold the Windows and Ctrl keys then press the left and right arrow keys to move between desktops.

2 Avoid long filenames

Creating long, descriptive filenames can help you find them at a later date, but it can be a laborious process. Instead, leave the filenames as they are and attach tags instead. These tags are short descriptive terms that explain the content of the file and are used with filenames and file contents when using Windows Search.

To tag a file in Windows, right-click its icon, then click Properties. In the Details tab, double-click in the Value column beside the Tags heading and enter relevant descriptive words. Windows automatically adds semicolons after each one. Click Apply to save your tags, and Windows will use them to help index your files so they show up next time you carry out a search in Windows.



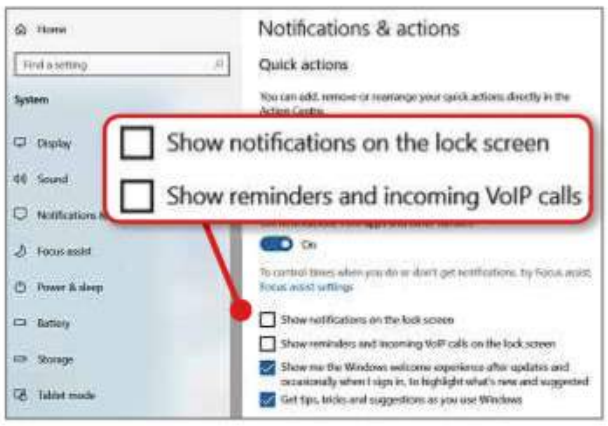
Use virtual desktops to run multiple programs in full-screen mode

3 Don't use your mouse to control the Start menu

Reaching for the mouse moves your focus from the keyboard and slows you down. The next time you want to launch a program, press your keyboard's Start button and type the first few characters of its name. The menu will quickly show matching results, highlighting the most likely one. If it's the one you want to use, press Enter to launch it. If not, use the arrow keys to select the desired program.

4 Stop showing personal info on your lock screen

Windows alerts are useful when you're sitting in front of your PC and need to respond immediately. But when you're away from your desk and they're popping up on your lock screen, they can reveal personal information to whoever might be passing by.



Stop your Windows lock screen revealing personal information

Keep them away from prying eyes by opening Settings (Windows key+I), clicking System, then 'Notifications & actions'. Clear the tickboxes beside 'Show notifications on the lock screen' and 'Show reminders and incoming VoIP calls on the lock screen' (see screenshot above).

5 Don't pay for a Windows DVD player

Microsoft caused quite a stir when it dropped DVD playback capabilities with the launch of Windows 10, and then demanded £12.49 for its new Windows DVD Player app. Instead, download VLC Player (www.videolan.org), which is free and can handle a wide range of media formats, including DVDs.

6 Ditch default settings in Windows search

Windows' search tools have been getting more efficient with every major release, but if you're still searching with the

default options you're missing out on the most advanced and helpful file-hunting features in Windows 10.

Open Settings, click Search, then Searching Windows. The Classic search option is pre-selected, but this only includes your desktop and libraries (folders containing your documents, pictures and so on). To search *everywhere*, select the Enhanced option. Alternatively, click 'Customise search locations here' to add specific folders, such as an external drive.

7 Don't click through endless folders

Rather than clicking through several levels of folders and sub-folders to access the one you regularly work in, pin it to your taskbar and open it with a single click. Open a File Explorer window (Windows+E) and navigate to the folder containing the one you want to pin, then click and drag the relevant folder on to your taskbar to create a quick-access shortcut.

8 Stay off unsafe hotspots

It's often easy to find available Wi-Fi hotspots when you're out and about – and tempting to connect to them to send emails and more. But it can also be a risky business. Connect to the wrong hotspot and you may have someone spying on your activities, logging your keystrokes or recording your credit-card details.

Previously, Windows used to automatically connect laptops to free Wi-Fi hotspots - even potentially dangerous ones. This feature has since been removed, but only if you've been keeping Windows up to date. If you've fallen behind with your Windows updates (which we don't recommend), you'll need to turn this hotspot feature off. Open Settings, select 'Network & Internet', Wi-Fi, then make sure 'Connect to suggested open hotspots' is switched off.

9 Stop using the basic Windows clipboard

Simple cut, copy and paste commands are useful, but don't limit yourself to the basic Windows clipboard, which doesn't allow you to sync your saved items across your other PCs.

Last year, Microsoft added a feature that shares your clipboard across all your computers, letting you copy text on one, then paste it on another. To turn this feature on, open Settings, click System, Clipboard, then 'Sign in' to link your clipboard to your Microsoft account.

10 Never leave your PC unlocked

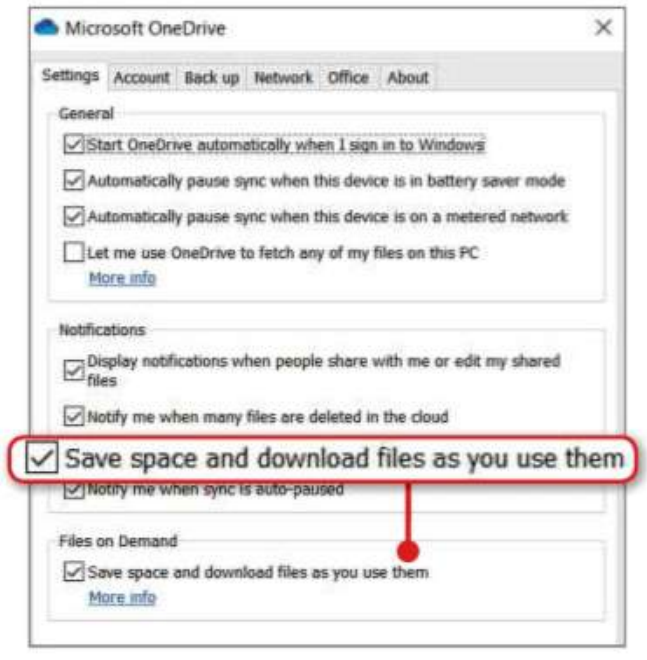
You can quickly lock your PC by pressing Windows+L, but it's all too easy to wander off without doing so, leaving your data vulnerable.

If you tend to carry your phone around with you, Windows 10's Dynamic Unlock can help. Pair your phone with your PC over Bluetooth (go to Settings, Devices, then click 'Add Bluetooth...'). Next, go to the Accounts menu in Settings, click 'Sign-in options', then check the box beside 'Allow Windows to lock your device...'. Now, whenever Windows detects that your phone is out of range, it will lock your computer.

11 Don't sync every file with OneDrive

With the contents of your OneDrive account synced to your PC you can access all your documents, even without an internet connection. But constant syncing of OneDrive can eat into your hard-drive space and it's unlikely you need to access your files that often. So, save space on your PC by only synchronising files you're working on, and creating shortcuts to the rest. Your data will remain on Microsoft's secure servers and you can still retrieve them whenever want.

Right-click OneDrive's cloud icon in the notification area (far right of the taskbar), followed by Settings. Click the Settings tab, tick 'Save space and download files...' (see screenshot below), then click OK. Now, when you open your OneDrive folder, you'll see a mixture of cloud icons (files stored *only* on Microsoft's servers) and ticks (files store on Microsoft servers and on your PC) beside your files. If you want a copy of file that's currently only stored online, right-click it and select 'Always keep on this device'.



Free up space on your hard drive using this OneDrive setting

12 Don't lose important downloads

Downloading a large file takes precious time and if it's deleted, there's no guarantee it will be available to download in the future. So don't leave those important big files in the Downloads folder because Windows' Disk Cleanup feature has an option to wipe the folder's contents when reclaiming drive space, which is tempting to select when you're short of space.

Instead, move important downloads to a separate folder. Better still, use a download manager like EagleGet (www.snipca.com/33257) to change the location of downloads depending on the file type.

13 Prevent personal info appearing in screenshots

You may be used to pressing the PrtScn (print screen) key to take screenshots, but this will capture the entire screen, which can mean you share more than you intended. Instead, go to Settings, 'Ease of Access', Keyboard, then enable 'Use the PrtScn to open screen snipping'. When you next press PrtScn to take a screenshot, Windows' Snip & Sketch tool will launch and you can use the toolbar at the top to switch between full screen, single window and other capture modes.

14 Stop zooming into programs

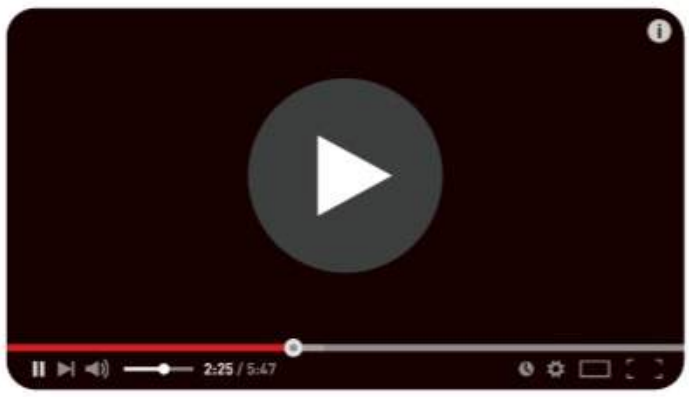
High-resolution screens are great, but they often result in smaller text. Rather than zooming each program individually, set the zoom level in Windows and it will be applied to everything. Open Settings, then 'Ease of Access'. With Display highlighted in the sidebar, use the slider below 'Make text bigger' to enlarge only displayed characters, or the dropdown menu below 'Make everything bigger' to zoom into the entire interface.

15 Avoid emailing photos

Emailing photos from (or to) your phone is a hassle and clutters your inbox. If you have an Android phone, install Your Phone (www.snipca.com/33264) on your PC and Your Phone Companion (www.snipca.com/33265) on your phone. Make sure you're logged into the same Microsoft account on both. You can now drag photos from your phone directly to your desktop using the Your Phone program in Windows. ca

Amazing ways to use PICTURE-in-PICTURE

Want to watch a YouTube video while browsing? Or have your security camera feed always visible? **Will Stapley** reveals the best ways to use picture-in-picture on all your devices

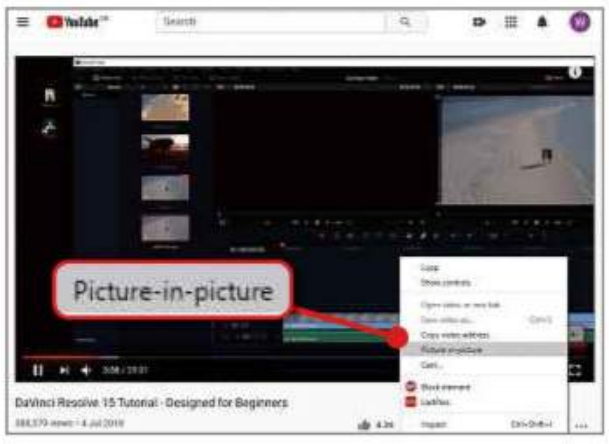


Browsers

Google Chrome

Last year, Google introduced a picture-in-picture (PiP) mode in Chrome that lets you watch video in a PiP window.

To use it, you need to right-click the video twice. In the second right-click menu, select 'Picture-in-picture' (see screenshot – we'll explain what to do if you don't see this option in a moment). The video will now appear in a small window at the bottom-right of your desktop. Click this window to reveal play/pause controls, as well as adjust the size by dragging the edges of the window.

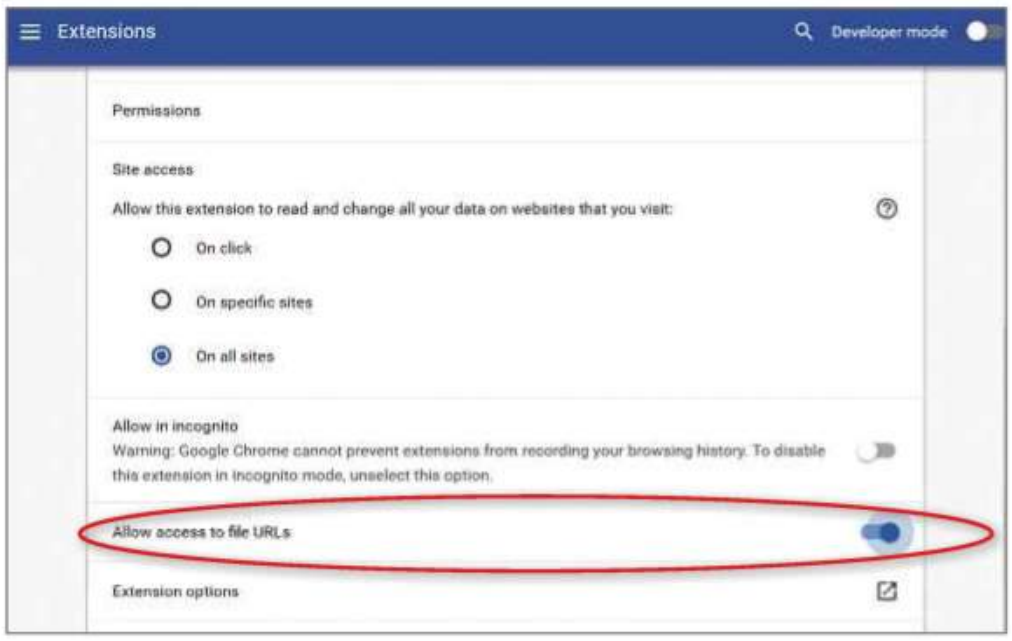


Want to follow a YouTube video tutorial? Right-click the video twice to reveal the PiP option

To move the window to another part of your desktop, simply click and drag it. Like most PiP windows, it's set to be always on top of other windows, meaning you can run other programs without blocking the video. To exit PiP mode, hover over the video and click the small box with a diagonal arrow (bottom-middle of the PIP window).

Chrome's PiP mode works on most sites (including YouTube and the BBC's), but not on Vimeo and Dailymotion. To use PiP on these sites, install Google's Picture-in-Picture extension (www.snipca.com/33249). When you come across a video online that won't display in PiP mode, click the extension's icon (small rectangle within a larger one) in the top-right of the Chrome window.

Thanks to a little-known setting, you can also use this Chrome extension to view your own videos in a PiP window. To do this, right-click the extension's icon, then select 'Manage extensions'. Scroll down and switch on the 'Allow access to file URLs' setting by clicking its slider (see screenshot below left). Next, find your video file on your hard drive, then drag and drop it into your Chrome browser window (or right-click it, select 'Open with', then Google Chrome). When the video starts playing in your browser, press the Picture-in-Picture extension icon to move your video into a small PiP window.

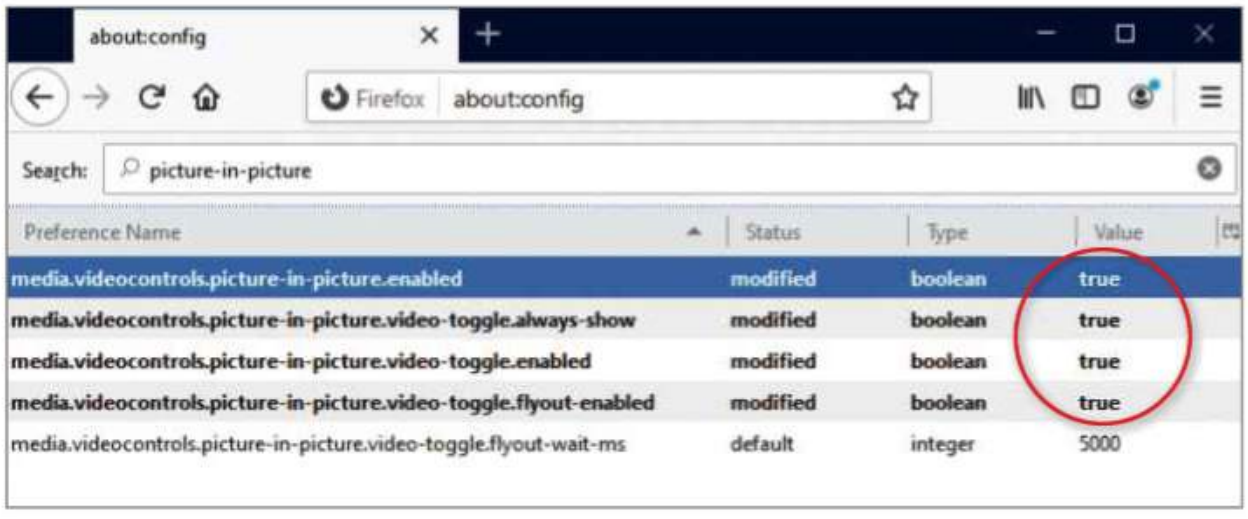


Switch on this setting in Chrome's PiP extension so it also works with your own videos

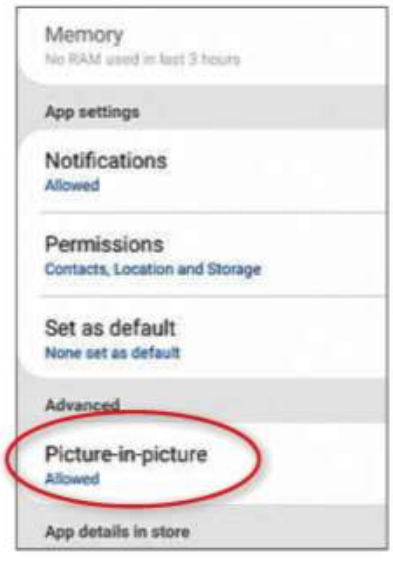
Firefox

Firefox recently introduced a PiP mode, but this is currently still a beta version that you need to activate.

To do this, open Firefox, type about:config, then press Enter. Ignore the warning message that appears and click 'Yes, I accept the risk' to continue (as we'll explain, it's easy to reverse any changes you make). Next, type picture-in-picture into the search box at the top. You'll see four PiP-related settings with a



Firefox has a PiP mode, but you need to enable it



To run an Android app in PiP mode, check this setting is set to Allowed

Value setting of 'false' (meaning they are disabled). To change this to 'true' (and thereby enable them), double-click each in turn (see screenshot above).

Firefox's PiP mode will now be enabled and works in a similar way to Chrome's - right-click any video, then select 'Picture-in-Picture'. Being a beta version, it may be prone to glitches, but we didn't experience any problems when testing. If you want to turn the feature off, go back to the about:config menu as before and double-click the PiP tools to disable them.

Edge

Microsoft has added PiP to the new version of Edge that launches on 15 January. It works in a similar way to Chrome, which isn't surprising because the revamped Edge has been built using Google's Chromium source code, which also powers Chrome. You can try this PiP mode in the beta version of the new Edge, available at www.snipca.com/33254. We'll explore Edge's other new features early next year.

Windows 10

Windows 10 includes a PiP mode, but it doesn't work with *all* programs. Instead, it's restricted to certain Windows apps downloaded from the Microsoft Store and certain built-in tools.

The 'Films & TV' app is one of the few that supports PiP - to enable it, click the small box within a box at the bottom (this displays 'Play in mini view' when you hover over it). As with other PiP windows, you can move and resize it using your mouse.

Other programs offer alternative ways to display a PiP window. In the video player VLC (www.videolan.org), for example, you need to first select 'Always on top' from the View menu, then press Ctrl+H to hide all menus and buttons.

Take a look at the box below to find out how to create your own PiP mode for all your programs.

Phones and tablets

iOS/iPadOS/Android

You might think your phone's screen is too small for apps to run in PiP mode, but it can still have its uses. For example, if you're using the Directions feature in Google Maps, when you press the Home button on your phone Maps will shrink to a small PiP window and continue to guide you while you use other apps (for example, your messaging app to explain why you're running late). You can move the PiP window by dragging it with your finger.

If you're using an Android device, you may need to turn on PiP mode for the app you're using. Go to the settings page for your apps (how you do this varies depending on your phone - on a Samsung Galaxy, for example, tap Settings, then Apps), then tap the app you want to use in PiP mode. Swipe down to the Advanced section and make sure 'Picture-in-picture' is set to Allowed (see screenshot above). If this mode isn't displayed, that app can't be viewed in PiP mode.

While some apps aren't designed to work in PiP mode, others restrict it to paying customers only. YouTube is one example, requiring you to subscribe to its Premium service (£11.99 per month). Google, YouTube's owner, appears to be making changes to this, though. In the US, the latest Android phones can now use PiP mode without a Premium subscription. This is currently not the case in the UK, but there is a way around the restriction. Instead of viewing videos using the YouTube app, open them in your phone or tablet's browser, then play in full-screen mode before pressing your home button and shrinking it to a PiP window (in iOS devices, you need to press the PiP button at the top left of the YouTube video). ca

Use PiP in *any* Windows program

If a program you're using doesn't offer a PiP mode, why not create your own? Having a program run in the corner of your desktop on top of all the others lets you keep an eye on it while doing something else on your PC. For example, you could monitor nearby Wi-Fi interference using programs such as Wi-Fi Analyzer (www.snipca.com/33253, see page 51) in a PiP window, or keep a constant eye on your security- camera video stream.

To create your own PiP mode, first download and install the free shortcut creator AutoHotkey (AHK) from www.autohotkey.com. Next, right-click an empty section of your desktop and select New, then AutoHotkey Script. A Notepad window will now open. At the very bottom of this AHK text file, create a new line and type !+SPACE:: Winset, Alwaysontop, , A (you can copy this text from our Pastebin account at www.snipca.com/33251). The first section of the text (!+SPACE) sets the keyboard shortcut to Alt (!), Shift (+) and Space, but you can change this to something else if you want (see AHK's shortcut key list at www.snipca.com/33252).

Save and close the text file, then return to your desktop and double-click the New AutoHotkey Script icon (you can change the name of this if you like). Now run any program on your computer, resize it to a small window in the corner of your desktop, then press Alt+Shift+Space (or whichever shortcut you set). The window will now run on top of all others, just like a PiP window.

Use the same shortcut to return the window to normal mode.

Problems **Solved**

Our experts solve all your tech problems

PROBLEM OF THE FORTNIGHT

Is my system 32 or 64bit?

Q I upgraded Windows 7 to Windows 10. I assumed that as my processor is dual core then my PC was a 64bit model. However, the System page in Windows 10 tells me it's a 32bit operating system, but an x64-based processor! In addition, the shining Windows logo is always visible on the desktop, unlike on my other Windows 10 PC. Apart from that everything seems OK. Would you recommend I go back to Windows 7, or leave well enough alone?

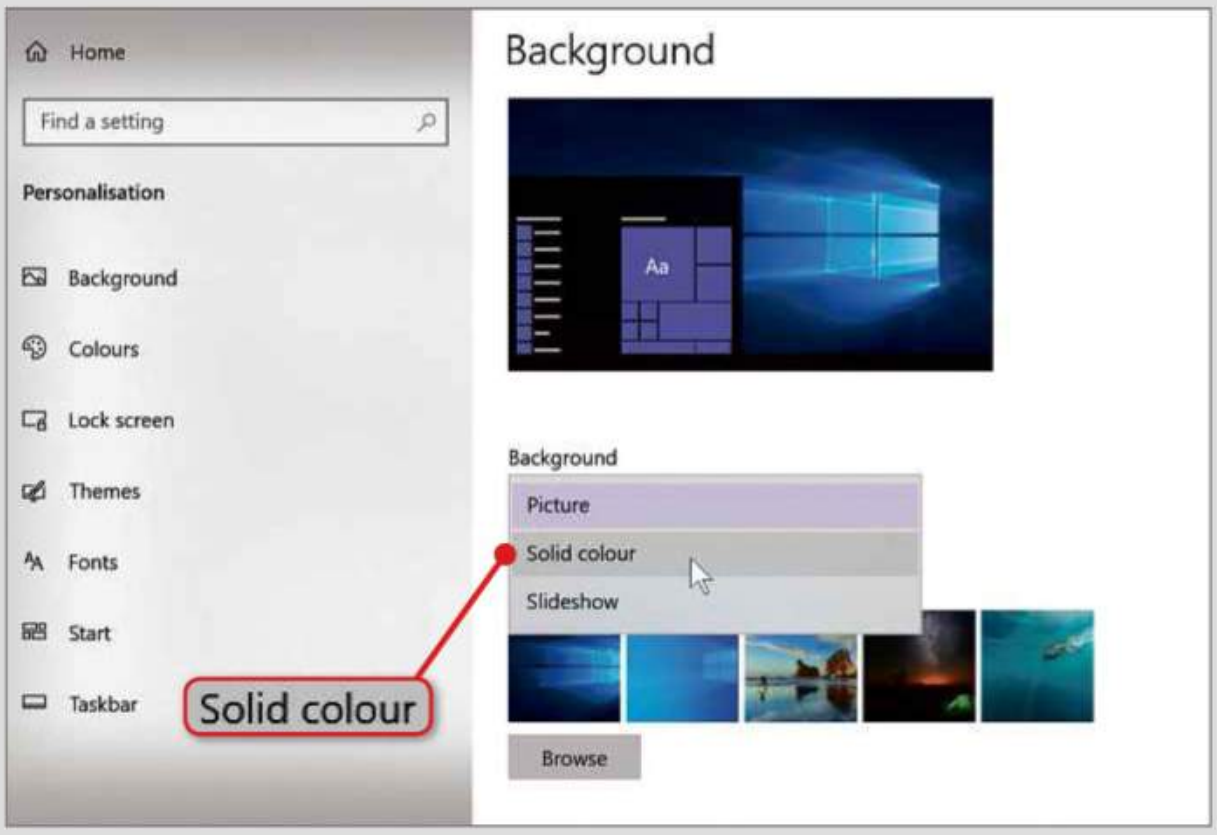
Phil Bridges

A Going back to Windows 7 would be a bad idea because support for that version is about to end. Nor do you need to, as there's nothing untoward here.

Your PC is indeed a 64bit machine but, for whatever reason, you have upgraded from a 32bit edition of Windows 7 – so you automatically get a 32bit edition of Windows 10 in exchange.

This is because it's not possible for Windows 10 to upgrade an existing 32bit installation to a 64bit system. Instead, to upgrade to 64bit now you would have to perform a 'clean' install, which means wiping everything on your system.

We'll explain how to do that but, for the most part, it's unlikely you'd notice much difference in day-to-day use. Yes, 64bit Windows 10 and apps will generally run faster but, unless you're a 'power' user, you might decide that your 32bit setup is operating fast enough for you.



In Properties you can choose a new desktop background, including a photo or solid colour

If you do decide to press ahead, you'll need to begin by grabbing Microsoft's media-creation tool, which is a free download from www.snipca.com/32994 (click the 'Download tool now' button – see screenshot below). Launch the tool and, when you reach the 'What do you want to do?' box, select 'Create installation media...' and click Next. On the next screen, clear the tick from the 'Use the recommended options for this PC' box, then open the Architecture dropdown menu, choose '64-bit (x64)' and click Next.

Next, choose whether to create a bootable USB stick or an ISO file. For the former, insert a USB stick and follow the prompts; with the latter, pick a location to save the ISO file. The ISO method also requires the file to be burned to DVD. CDBurnerXP (www.snipca.com/32995) is a popular freebie for doing this.

To perform a clean install, download Microsoft's media-creation tool

The last step is to restart your PC with the USB stick or DVD inserted and begin a clean installation of Windows 10. To do this, at the 'What type of installation do you want?' screen, choose 'Custom: Install Windows only (advanced)', and then follow the prompts.

As for the shining Windows logo, that's just the default Windows 10 wallpaper – a static background image, basically. The manufacturer of your other PC might have applied a different wallpaper, or you may have done this previously yourself and have forgotten. But if you don't like the shining Windows 10 logo as your background image, it's easy to change.

First, right-click any blank part of the Desktop, then choose Properties. Now, on the left, click Background and then, on the right, under Background, open the dropdown menu and choose something different – a solid colour, say (see screenshot above), or click Browse to choose an image of your own.

How do I increase Bluetooth range?

Q I have recently purchased a set of bathroom scales that connects to my iPad via Bluetooth. Upstairs, where the bathroom is located, the iPad and scales will communicate just fine. However, if I take my iPad downstairs then it'll no longer 'talk' to the scales. Can you please recommend a solution to increase the strength of the Bluetooth signal?

Trevor Edwards

A We don't know what iPad model you have, nor which set of bathroom scales you've purchased. There are numerous Bluetooth generations – each a little better than the last – with the latest being Bluetooth 5.0. This version is able to dynamically alter its speed to improve range, and vice versa. If you have a recent iPad model then it's likely to benefit from Bluetooth 5.0, but your scales probably have an older version of the technology.

However, when it comes to range, what really matters is the Bluetooth 'class': this dictates the potential power output – and therefore the maximum reach – of any Bluetooth device. There are fundamentally three classes. Class 1 devices consume up to 100mw (megawatts) of power, and can broadcast a signal up to 100m (about 330ft). Class 2 gadgets manage up to 10mw (10m/33ft), and it's 1mw for Class 3 (1m/3ft).

Many recent iPad models support Bluetooth 5.0, at Class 3, but the crux is that many other consumer devices max out at Class 2 (and usually with older, generally slower, Bluetooth versions). That almost certainly includes your bathroom scales.

Now, you might expect a Class 2 device with a 10m/33ft range to reach from an upstairs bathroom to your iPad downstairs – but these figures are theoretical maximums, not real-world certainties. Factor in the ceiling and a wall or two to disrupt the Bluetooth radio signal and we're not surprised that the two devices won't communicate.

Most Bluetooth devices need to be in close proximity to communicate

So, with all that clear, we're afraid there's no fix here. The latest and best Bluetooth devices, in ideal conditions, can communicate with each other at distances of up to 100m. However, currently, and in most situations, any two Bluetooth gadgets will need to be pretty close in order to 'talk'.

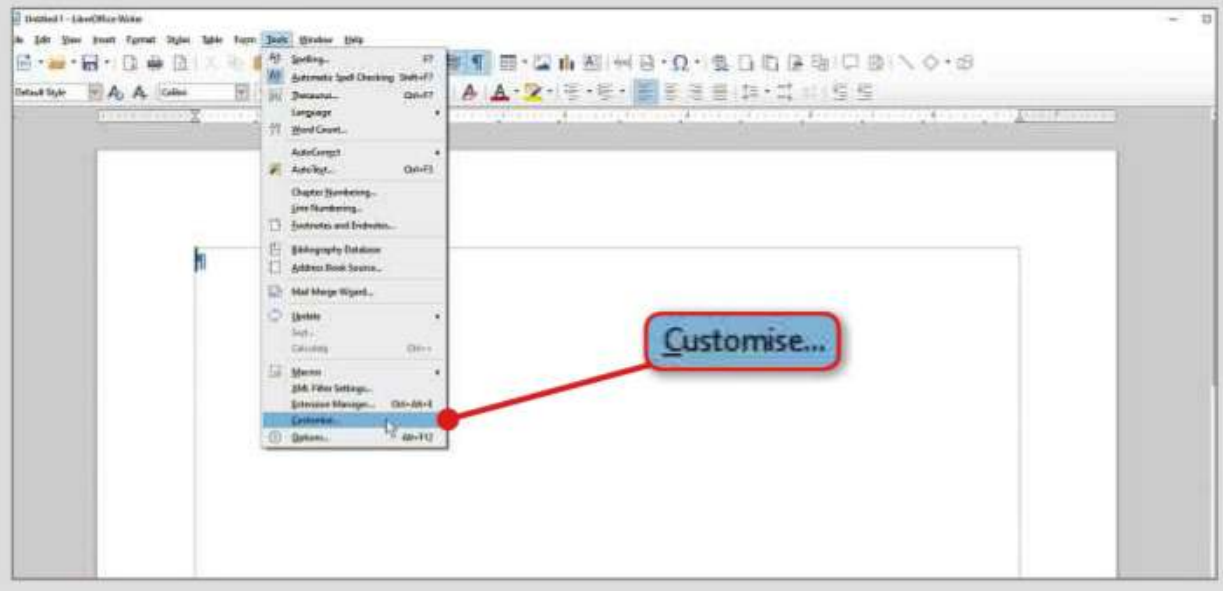
The only solution, then, is to take a walk upstairs when you want to connect to your bathroom scales. If nothing else, the effort involved will mean a few more calories burned!

Why aren't my LibreOffice misspellings underlined?

Q I've recently upgraded from LibreOffice 5 to 6. That seemed to go well, but now, when I'm creating documents in Writer, any misspelled words are no longer highlighted. Prior to the upgrade, errors were underlined with a red wavy line.

I've looked online for solutions and found many suggestions, including clicking a button that isn't even on my Writer toolbar! Instead, I now have to check my work using the Spelling dialogue box, which takes me much longer. Can you help?

Robin Sinclair



You can choose to display the Auto Spell Check box on your toolbar by selecting Customise

A It sounds like that the upgrade switched off Writer's automatic spell-checker. We can't say how that happened but you can enable (or disable) it at any time by pressing Shift+F7. Indeed, it's possible that you accidentally executed this keyboard shortcut while attempting one that uses similar keys. So, that's the easy fix.

As for the missing button, you can remedy this by customising your toolbar. First, open the Tools menu and then click Customise (see screenshot).

Next, in the Customise box, click to select the Toolbars tab. Now, from the Target dropdown menu, choose Standard. Then, under Function, scroll through to find and then tick the Auto Spell Check box. Click OK to close the Customise option.

The button will now appear on the Standard toolbar, at the top of the Writer window – so you can turn the red wavy lines on or off with a simple click.

Does 5G signal the end of my phone?

Q Will I be able to use my present 4G phone when 5G is fully operational, or will I have to change my mobile?

Dr P Karri

A Eventually, 4G (and 3G and 2G) networks will be disabled. But that's not happening any time soon! Bear in mind that the first 2G phones have been around since the early 1990s, and 2G signals are still supported by all major UK networks.

The first UK 5G mobile system was launched in the UK only back in May of this year, by EE (www.ee.co.uk), in just a handful of cities. It'll be a good couple of years yet before there's anything even approaching national coverage. But even when that process is complete across all networks, there's absolutely no immediate prospect of the 4G (or 3G or even 2G) services being disconnected.

Of course, eventually all older systems will be terminated. However, we can say with absolute certainty that, when it comes to 4G, this won't be for very many years yet. We'd predict confidently that this will be at least a decade, but likely many more years besides.

EE was the first network to offer 5G coverage in a handful of cities earlier this year

Can I get PAYG data that won't expire?

Q Many people these days don't carry cash, so a charity I work with has invested in an iZettle (www.izettle.com) device that allows us to take card donations connected via a smartphone. As not all of our collectors have a smartphone, and Wi-Fi isn't always available, I have a spare phone that I wanted to dedicate for use with the iZettle. However, as this handset would be used only occasionally I want to use a pay-as-you-go (PAYG) tariff in the same way I use a PAYG tariff for phone and text messages – so topping up every few months as needed. But I need this for data, obviously. Is there a data PAYG out there that I have not found that runs in the same way, or am I asking for the impossible?

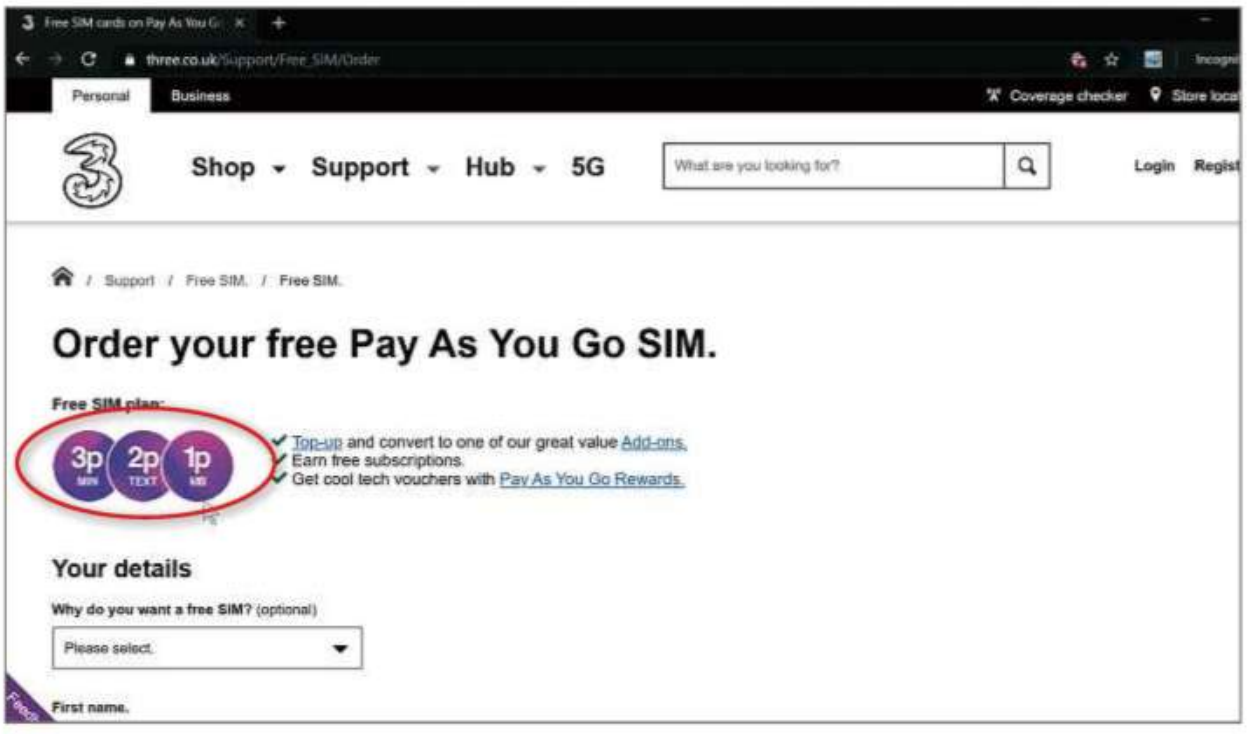
Martin Beecher

A Your options are limited, but there are plans that'll suit your needs.

In particular, we'd draw your attention to Three's 321 deal (www.snipca.com/33153, see screenshot below). The company doesn't shout about this tariff like it once did but this is a PAYG plan that'll see you paying 3p per minute for calls, 2p per text and 1p per megabyte of data. Each iZettle transaction uses just a few kilobytes of data, so your per-transaction cost will be a fraction of a penny.

Most importantly, 321 top-ups expire only if the account has been dormant for more than six months. So, as long as you use the SIM to make a call, send a text or use some data at least twice a year, any added credit is effectively endless.

The iZettle card reader accepts credit card and contactless payments



Three's 321 offer is a cost-effective PAYG deal if you're mainly interested in data usage

Q: Is Microsoft downloading porn to my PC?

A: Issue 531, page 65 – find it on our 2018 Back Issue CD

Buy it from www.snipca.com/30307

How do I stop my iPad ringing?

Q I've had an iPhone for several years, and recently purchased a new iPad to use as my main computer because I struggle with Windows 10 and all I do is a bit of email and web surfing. I'm enjoying my iPad, but one thing that's causing me grief is that whenever I receive a phone call on my iPhone, my iPad now 'rings' as well. I understand this is meant to be helpful but, as I always have my phone in my pocket, for me this is an unwanted intrusion. It also confuses and panics me a bit when the iPad's screen changes to a phone display, and more than once I've accidentally hung up on the caller. How do I make it so that calls only come through to my iPhone?

Eleanor Montgomery

A This is happening because of an Apple feature called Continuity, which is intended to let you move between different Apple devices. For example, Continuity allows you to start viewing a website in Safari on your iPad and then, if you have to head out, continue doing so on Safari on your iPhone.

But you can disable the bits of Continuity you don't need. In this case, you need to disable the 'Calls on Other Devices' feature. To do that, on your iPhone tap Settings followed by Phone (see screenshot right), and then 'Calls on Other Devices' (see screenshot above). Now tap to slide the 'Allow Calls on Other Devices' switch to its Off position and you'll no longer be bothered by iPad calls.

You can opt to stop getting calls on your iPad in 'Calls on Other Devices'

The first step to halting calls on your iPad is to choose Phone in Settings

Why is What3Words showing different words?

Q I've read about What3Words (www.what3words.com), so thought I'd give it a try. However, the app regularly gives me three different words, even though it names my road correctly. Should it not show the same three words every time? If so, what am I doing wrong? I'm on a pay-as-you-go (PAYG) phone, if that makes any difference?

John Smith

A Let's start by stating that your PAYG mobile contract makes no difference to the phrases displayed by What3Words. Rather, What3Words takes a GPS-location signal and turns this into three words, so what matters mainly is the accuracy of the GPS coordinates determined by your phone.

What3Words has divided the globe into trillions of squares, each measuring three square metres. However, the GPS chip in a typical smartphone is accurate to only about five square metres. In addition, the GPS system itself – at least the signal available to normal humans, versus the US military – is accurate only to about four square metres.

Stacking up these factors explains why What3Words displays different words, even when you physically stay still. Yes, the map shows your road correctly, but your smartphone's detected position will 'shift' based on the GPS signal accuracy to a square or two up, down, left or right. This, in turn, will affect the terms displayed by What3Words.

So, there's nothing wrong here. Nor, incidentally, is the usefulness of What3Words reduced by the ever-changing phrases.

Your literal position in the world might result in, say, 20 or 30 different What3Words constructions, but all will pinpoint your position on Earth to within a few metres. That's sufficient for emergency services to locate you in any conceivable circumstance.

What3Words divides the world into three-metre squares to pinpoint your exact location

WHAT'S THE DIFFERENCE BETWEEN...

Standard and gaming PCs?

Q *Computeractive* regularly carries adverts for different computers, which makes me ask whether there's a difference between gaming PCs and what I call a 'standard' unit. The cost of gaming PCs seems to be higher. Could you advise?

Ken Wright

The MSI Nvidia GeForce RTX 2080 Ti Gaming X Trio graphics card – a snip at £1,120

A Fundamentally, there's no difference – a PC is a PC. But such a superficial take masks a multitude of factors that make any one PC more or less suited to different tasks than another.

With gaming the key difference is graphics. What you call a 'standard' PC is of course able to display graphics: the very basis of Windows is that it is a graphical operating system. However, the latest games make much heavier visual demands, and those are served only by dedicated graphics hardware.

A 'standard' PC relies on so-called 'integrated' graphics. We covered this in Issue 564's 'What's the difference between... APU and a CPU?' section, but, to summarise, many PC processors also include graphics facilities, all on the one chip. This keeps things simple for computer manufacturers, and reduces costs.

Integrated graphics are fine for Windows, and even for simple gaming needs – Solitaire will run perfectly well, for example. However, by nature, integration limits how advanced the graphics can be. For serious visual oomph, a PC needs a separate (or 'discrete'), dedicated graphics card – like the current top-of-the-range Nvidia GeForce RTX 2080 Ti.

Such discrete cards have graphics chips that run incredibly fast and hot, but they also have room for good cooling equipment (like fans). And the latest and best games, of course, benefit from the faster, smoother graphics such cards can serve up. However, the pictured MSI version of the 2080 Ti costs close on £1,120 (www.snipca.com/33080) – more than many people would consider paying for an entire new PC!

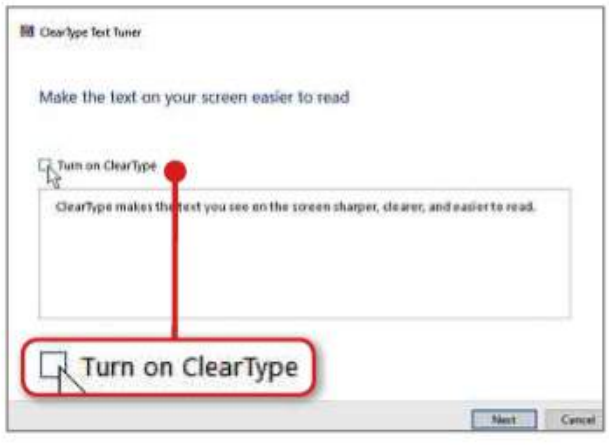
There may be other differences, too, including keyboard layouts optimised for gaming, and integrated multicolour LED lighting, which is fashionable in gaming circles. But we'll return to where we came in. A PC is a PC. A 'standard' model will run games, though perhaps not the most demanding titles, just as a PC designed for gaming also happily runs Windows – so you should choose the 'type' that suits what you want to do.

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

How do I make text bigger in ClearType?

Q I recently tried to adjust ClearType for Windows. However, I've been left with a font size in some of my programs that's miniscule, making them impossible to use. I've tried to reverse the situation, including a System Restore, but with no success. I am running Windows 10 Home. Any ideas?

David Maclachlan



To see if ClearType is affecting older apps, try removing the tick from 'Turn on ClearType'

A ClearType shouldn't make text smaller, as such, but it can have an unpredictable effect on some older programs. So, in the first instance we'd suggest simply turning it off.

To do this, click Start, type cleartype, then click 'Adjust ClearType text'. Now click to remove the tick from the 'Turn on ClearType' box (see screenshot), then close the tool by clicking the cross at the top-right of the box.

If ClearType was indeed the cause, then this should fix the problem. If not, you'll need to delve into Windows 10's display settings. Click Start followed by the Settings cog, and then Display. Next, under the 'Scale and layout' heading, check the value in the 'Change the size of text, apps and other items' dropdown menu. The default is '100% (Recommended)', but it might be that you previously had something greater than this set. So, open the dropdown and then pick a larger figure.

If this still doesn't get you back to where you were, then return to the main Settings screen. Click 'Ease of Access', followed by Display. Here, under the 'Make text bigger' heading, drag the slider to the right until the 'Sample text' field becomes legible for you, then click Apply.

Next Issue

ON SALE Weds 18 Dec

- Do I need to partition my new drive?
- Why won't Disk Cleanup delete my temporary files?
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Was your Ditto advice incorrect?

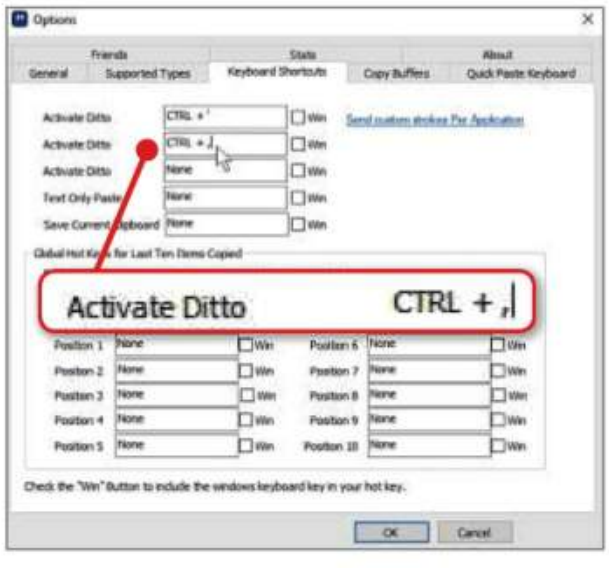
Q In Issue 565 (page 38) you included a Workshop about Ditto, as an alternative to Windows Clipboard. In Step 2 of this you stated that the shortcut to open the Ditto panel is Ctrl+, (comma). However, this is wrong. The correct shortcut is Ctrl+' (apostrophe).

Frank Chammings

A Yep, you're quite right. Unfortunately, we tripped ourselves up precisely because the comma and apostrophe symbols look very similar. Somewhere during proofing we 'corrected' one to the other, thus actually creating a mistake!

A little ironically, as we later explained in Step 6 of that same Workshop, it is possible to change Ditto's default shortcut. So, if you want the keyboard combination to be Ctrl+, (comma) – or practically any other two keys – then you can do that.

To recap, right-click the Ditto icon in the taskbar's notification area, choose Options, then click the Keyboard Shortcuts tab. You can now use the Activate Ditto boxes (see screenshot below) to set up to four different shortcuts for the tool: just click in one of the boxes, perform your desired keyboard shortcut, then click OK.



Click inside the Activate Ditto boxes, then press your chosen keyboard shortcut

Will Windows 7 Ultimate upgrade to 10?

Q I read Issue 564's 'Upgrade to Windows 10 for free' article (page 60) but found no reference to Windows 7 Ultimate. Does this mean the methods in this feature won't work for Windows 7 Ultimate? Thank you for an informative and interesting magazine, incidentally – I found plenty of new things to try in Issue 565!

David Ashton-Reader

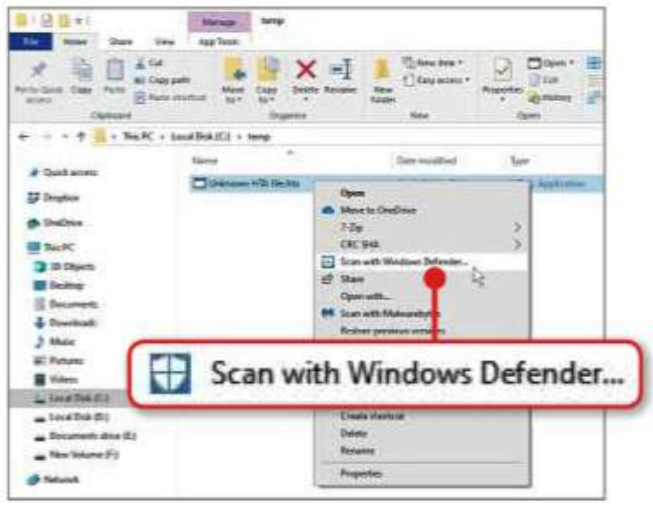
A Our promise to readers is that they will learn something new in every issue, so we're glad that we've not disappointed you.

As for your question, the answer is short and sweet: you can upgrade from Windows 7 Ultimate using any of the methods we described, free of charge. Well, at least until Microsoft switches off its free-upgrade tap. However, the company hasn't so far shown any real intention to do that.

Note that because there is no 'Windows 10 Ultimate', your Windows 7 Ultimate edition will be updated to Windows 10 Pro, as indicated on Microsoft's Windows 10 'upgrade paths' box (www.snipca.com/33212). But don't worry, as you won't be missing out on anything meaningful: Windows 10 Pro is the best version of Windows 10 for consumers, in the same way that Ultimate was in the more-confusing line-up of Windows 7 editions.

Should I uninstall HTA files?

Q After reading Protect Your Tech in Issue 565 (page 11), I took your advice and used File Explorer to search my PC for 'HTML Application' files (which use the '.hta' extension). I was surprised to find four such files on my hard drive. These all seemingly relate to Microsoft Money Plus, and they purport to be tutorial files. What you didn't say is what should one do with these HTA file types if one does find them, as I obviously did. Scanning these with Kaspersky revealed no threats. Should I just delete them? Are they dangerous to run?



Scan any HTA files you find using your PC's security software

Alan Stevens

A We should have been clearer in stating that not all HTA files are dangerous, but that it is HTA files that *could* harbour the emerging Nodersok/Divergent attacks. So, to clarify, not all HTA files are cause for concern. However, there may be reason to be suspicious about some HTA files.

In your case, we have high confidence that the HTA files you discovered are indeed legitimate parts of Microsoft Money Plus, which is a program that we assume you've knowingly installed on your PC at some point in the past. You're right that these files relate to tutorials. You would launch these electronic lessons from within the Money program, via the Help menu.

So, you have nothing to worry about here. However, you did do the right thing in having your security software scrutinise these files (see screenshot above), and that's what we'd advise other readers to do should they discover any HTA files. By now, all good security tools will have been updated to be aware of the threat, and should therefore quarantine or otherwise remove the problems using their own specific methods.

Part 2

Christmas Gift Guide 2019

FOR 'LOSERS'

Tile Pro (2020)

Where to buy www.amazon.co.uk
UK RRP £29.99

You know the Tile concept by now: add this to your luggage, key ring or other valued item and always be able to locate it. Even if it's out of range, the Tile community can help you find it. The Tile Pro now has a range of 400ft and an incredibly loud ringer, and you can replace the CR2032 watch cell battery yourself – batteries last for at least a year. As we say above, it's perfect for the 'losers' in your life.

FOR THE MEMORIES

The C64

Where to buy www.amazon.co.uk
UK RRP £109.99

Indulge your Commodore 64 nostalgia with this full-size replica, complete with joystick, 64 games (how appropriate) and a keyboard that will transport you right back to the days of 8bit computing. And if you want to go even further back into history, you can flip The C64 into VIC 20 mode, allowing you to explain to your children just how low-resolution computers used to be in the early 1980s.

FOR TV LOVERS

Roku Streaming Stick+

Where to buy www.amazon.co.uk
UK RRP £59.99

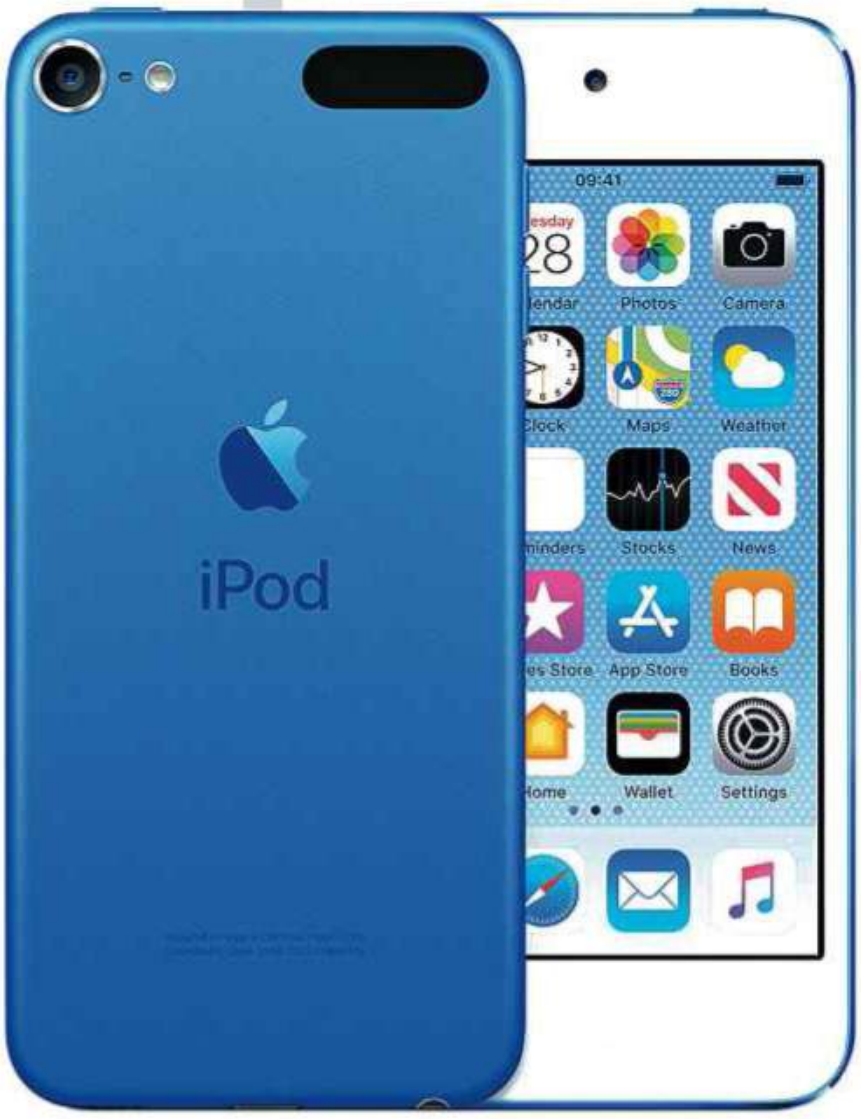
Simply the best streamer if you want to access both Amazon and Google video services: just slot it into your TV's HDMI interface and supply power via the USB cable. There's no voice support, but the remote control is easy to use while the interface itself is incredibly responsive.

FOR COMMUTERS

Apple iPod touch

Where to buy www.apple.com/uk
UK RRP From £199

Not everyone wants – or can afford – an iPhone, but there's nothing quite like the slick Apple interface or range of apps if you're after some light entertainment. The iPod touch is fast, ranges from 32GB (£199) to 128GB (£299) to 256GB (£399), and comes in six attractive finishes. There's a 3.5mm headphone jack, too...



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Lenovo Chromebook S340

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4	Virgin media	Virgin Media: Big Bundle + Fibre Broadband + Weekend Calls	£33.00 (£54 after 12 months)	12 months	54Mbps avg. speed	∞ unlimited	£396.00

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Jargon **Buster**

32bit/64bit A measure of how much data a PC can process at once. Most older computers are 32bit, more modern ones are 64bit.

3G/4G/5G Technologies that deliver faster mobile broadband.

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

720p/1080p/1440p Common types of high-definition video of 1280x720, 1920x1080 and 2560x1440 pixels respectively.

802.11ax Wi-Fi standard with speeds up to 10 times faster than 802.11ac. Also called Wi-Fi 6.

Action camera A digital camera designed to record action while attached to a person's body or equipment.

AMOLED Active-Matrix Organic Light-Emitting Diode. An alternative technology to LCD for creating flat-panel displays.

Backhaul The process of sending data to a wired access point to reach the wider internet.

Beta A version of software that's being tested.

Cache A temporary space for storing information.

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

Cookie A small text file stored on your computer by a website.

Core Units on a processor that carry out program instructions.

Cryptocurrency An online currency not backed by any country.

Delta E A measurement that shows how the human eye perceives different colours.

Depth mapping Working out the distance between the surface of objects from a given viewpoint.

DNS Domain Name System. A technology that associates computers with their addresses on the internet.

dpi Dots per inch. A measure of printed image quality, or the size an object will be shown on screen.

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

EXE or **Executable file** A program file designed to run in Windows.

EXIF Exchangable Image File Format. A method for storing extra data in photo files.

False positive When an antivirus program wrongly detects a malware infection.

Firmware Software stored on hardware to control its operation.

Frame rate The number of still images, or frames, shown per second to create a moving image.

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

Gesture Finger movements on a screen that perform an action, such as pinching to zoom.

GHz Gigahertz. A measure of how many instructions a chip can process per second.

Gorilla glass Scratch-resistant glass that's used to protect the screens of tablets and phones.

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

HDR High-dynamic range. A camera that takes more than one photo with different levels of colour and contrast.

Hotspot A public area covered by a Wi-Fi network that allows you to access the internet.

IP address Internet Protocol address. A unique set of numbers used to identify computers and websites on the internet.

IPS A screen technology. Monitors that use it have wider viewing angles and more accurate colours.

ISO file A type of image file that contains all the data from a disc.

LCD Liquid-crystal display. The technology used to create almost all flatscreen monitors.

LED Light-emitting diode. An electronic device that emits light.

Mesh Wi-Fi Wireless network solution that uses multiple, connected routers to stretch Wi-Fi further than a traditional router.

MicroSD card A small type of memory card.

MKV Matroska. An open source type of video file.

OEM Original Equipment Manufacturer. Components or software installed by the manufacturer.

Open source Software that can be modified by anyone.

PCI Express Peripheral Component Interconnect Express. A faster version of PCI – a slot on the motherboard for expansion cards.

Plug-in A small program that adds extra features to software.

Product key A unique serial number that must be typed in by the user before a program will launch for the first time.

PUP Potentially unwanted program. A program that may not be desired, despite the user consenting to it being downloaded.

Ransomware Malware run by hackers who lock PC files and demand a payment to release them.

Retina Apple's marketing term for extremely high-resolution displays. Typically above 300 pixels per inch (ppi).

RTF Rich Text Format. A file format used to transfer files between word-processing programs.

SATA Serial ATA. An interface for connecting hard drives to a PC.

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

SIM Subscriber Identity Module. The smart card used by all digital mobile phones.

SMART Self-Monitoring Analysis and Reporting Technology. PC-testing tech developed by IBM.

Source code Program instructions written in a high-level language.

Spoofing A technique whereby hackers pose as legitimate websites, emails or IP addresses to gain access to sensitive data.

sRGB A standard RGB colour space for use on monitors, printers and the internet.

SSD Solid-state drive. Storage that, unlike a hard drive, uses no moving parts.

Switch Mechanism under a keyboard that determines whether a key has been pressed.

System image A backup of your operating system drivers, PCs settings, programs and files.

System Restore A Windows feature that reverts your computer's system files to an earlier point in time.

Tag A keyword used to describe a file or web page.

Temporary file A file created by a browser to store website data.

Thread Smallest sequence of instructions that can be managed by your processor.

Thunderbolt A very fast port for connecting external storage to a computer.

Tor browser A web browser designed for anonymous surfing.

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

USB 2.0/3.0/3.1 Faster successors to USB.

USB-C A new connector that's reversible.

WebM Video file format supported by major browsers and software.

ZIP file A file that contains compressed documents or files.

Easy when you

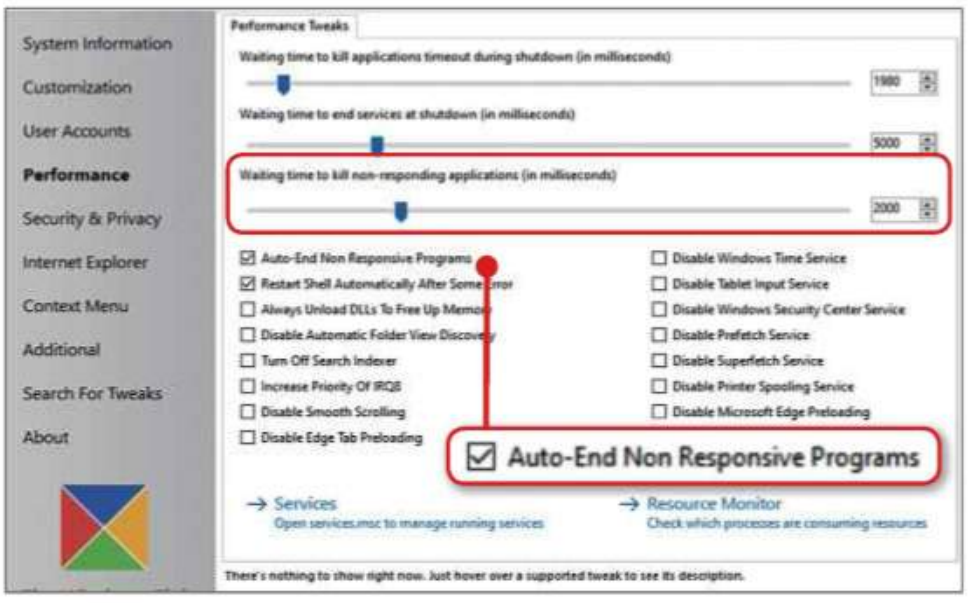
Know How

Inspired by one of TV comedy's finest philosophers, **Daniel Booth** sees whether he can...

Tweak Windows 10 to make it better

How many tweaks make a transformation? It's a question not dissimilar to the Trigger's Broom paradox you may remember from *Only Fools and Horses*.

In one of the show's most memorable scenes (watch it at www.snipca.com/33298), the nation's favourite road sweeper proudly tells Del, Rodney and Boycie that he's been honoured by the council for using the same broom for 20 years, though it has had "17 new heads and 14 new handles". Even writing this now, I can't help chuckling.



Ticking this box will thaw frozen software

> Windows definitely feels snappier and smoother, a spring in its step where before it was limping

This conundrum has many other forms, most notably the mythical Ship of Theseus, well known to philosophy students. I'm more interested in whether my version of Windows 10 counts as the same after I apply several tweaks to it.

I'm using the program Ultimate Windows Tweaker (UWT). It claims to provide more than 200 "meaningful" ways to improve Windows. 200! I have two young kids, a busy job and a long commute (sympathies by email please), so I'm hoping a mere 20 will be enough to make a difference.

Install the program from www.snipca.com/33310: scroll down and look for the small dark blue download button (it's easily missed – something the developers should tweak themselves). Before you do anything else, create a system restore point on your PC. This is something UWT "insists" you do, just in case those tweaks backfire like Onslow's car in *Keeping Up Appearances*. You know it makes sense.

Launch the program, then look at the left-hand category menu. If you know what you want to change, go straight to that section and click away. I took a more casual approach, strolling through the settings as though deciding which sourdough bread to try at a farmers' market.

I opened the Customization section, then clicked the File Explorer tab at the top to reveal two rows of tools waiting to be switched on and off. I'm the kind of desktop slob who scatters folders, screenshots and documents all over the place, so I chose two options to make life easier. First, I ticked Restore Last Opened Folders At Startup, which does exactly what it says on the tin.

Next, I ticked Make Taskbar Button Switch To Last Active Window. This helps when you have lots of windows open in one program, such as documents in Word. Before, I used to press Ctrl, then click the Word icon on the taskbar and find the document I needed from those that popped up. But once tweaked, clicking the icon takes me straight to the last doc I was working on. Sure, you'd measure the time saved in seconds not minutes, but it does give my brain one less thing to think about when print deadlines approach.

Other settings seem too petty to bother with. Are the double blue arrows from compressed files really so infuriating that they need to be removed? For more useful options, open the Taskbar tab and resize your icons using the sliders, or remove any you don't need from the notification area.

Going back to the menu on the left, click Performance for speed boosts. I ticked the first option 'Auto-End Non Responsive Programs' (see screenshot) because my software freezes more often than an Alaskan lake. I also moved the 'Waiting time' slider to 2000 milliseconds so Windows would now wait only two seconds before closing frozen programs. Lovely jubbly.

In the 'Security & Privacy' category I disabled all the options that tell Microsoft how I use my computer (Telemetry, Feedback Requests, Update Sharing), while in the Context Menu section I added right-clicks for Command Prompt, Windows Calculator, Snipping Tool and Registry Editor.

So, tweaks made, Windows definitely feels snappier and smoother, a spring in its step where before it was limping. One last thing: after every change make sure you click the blue Apply Tweaks button at the bottom right. I didn't notice this for ages, and so couldn't work out why nothing was changing. What a 24-carat plonker!

Need help tweaking Windows? Let us know: noproblem@computeractive.co.uk

Next issue: Daniel deliberately installs malware on his PC – find out why!

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