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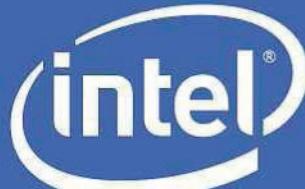
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IN 2018



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 Average sales, Jan-Dec 2016, 83,856 copies per issue.

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 Computeractive  
Printed in the UK

# From the Editor

I remember the first time I was hacked, about 15 years ago, when my bank told me they had spotted some strange activity on my account. I was shocked, having always assumed I'd be too clever to fall for any scams. Such youthful arrogance!

That experience humbled me. Never again would I skip blithely through the internet, complacently ignoring security advice. Now, if anything, I'm probably over-cautious, but it means I've not been hacked for 12 years. I want to make that 13, so I'll be following the advice in our Cover Feature. I urge you to do likewise.

On a more festive note, several readers have asked me how late they can order our 2016



Back Issue CD on Amazon so it arrives for Christmas. Fairly late, is the answer. Amazon's cut-off date last year was 20 December (see [www.snipca.com/26274](http://www.snipca.com/26274)). It's bound to be similar this year. When I last checked the CD was £11.70 ([www.snipca.com/23209](http://www.snipca.com/23209)), down from £15. A stocking-filling bargain!

**Daniel Booth**  
[editor@computeractive.co.uk](mailto:editor@computeractive.co.uk)



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Processing power of the world's fastest supercomputer - [p49](#)

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## HOW TO USE SNIPCA URLs

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

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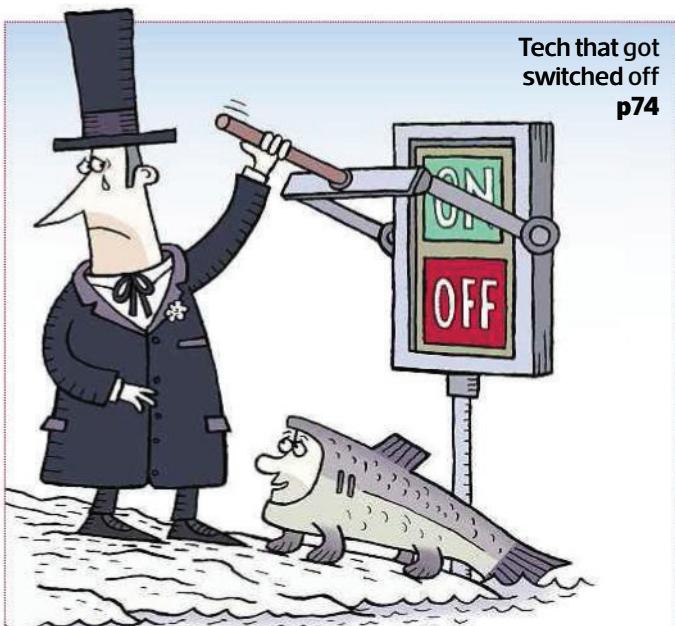
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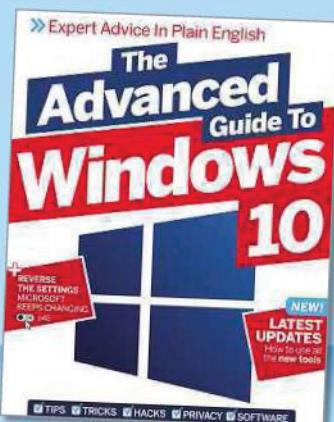
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[at www.snipca.com/21617](http://www.snipca.com/21617)

## Check your PC now! Intel flaw leaves millions at risk

**M**illions of PC users are at risk of being hacked after Intel admitted that its new processors contain severe security flaws. The fault is so serious that your antivirus would be powerless to block an attack.

The vulnerability appears in Intel's Skylake (6th generation), Kaby Lake (7th) and Coffee Lake (8th) processors, which have been built into some of the world's bestselling computers since 2015. Intel said that hackers could exploit it to install malware on affected computers.

Popular models at risk include laptop ranges such as Dell's Inspiron and Acer's Latitude, and desktop PCs including Lenovo's ThinkCentres. All three



manufacturers have listed those devices that are affected (see box below left).

The most significant flaws, discovered by researchers at US security firm Positive Technologies, are in the Management Engine (ME) of the processors. IT departments use this to remotely control employees' computers in order to fix problems and install updates.

Maxim Goryachy from Positive Technologies said it was important to test the security of the ME because it's "at the core of an enormous number of devices worldwide". He added that because ME

runs on a processor that's separate to the operating system, a hacker could strike right at the heart of a PC, evading detection by antivirus software. If the hacker installs **spyware**, running silently in the background, the victim would never know they had been infected.

But hackers wouldn't even need to install malware to harm your computer. ME has access to almost all data on a computer, allowing an intruder to change sensitive settings, or reinstall the operating system.

Intel has published a free tool that checks whether your

### COMMENT

While the magnitude of this flaw shouldn't be downplayed, it's reassuring to know there are thousands of security researchers eager to make their name by discovering such vulnerabilities. Every time they locate a security hole they actually make computing safer, giving manufacturers the chance to fix it before hackers strike. This is how technology evolves – flaw followed by fix. Problems only arise when the latter takes too long to arrive.

computer is at risk (see our Workshop on page 42 for instructions). It has also released a fix to computer manufacturers, which they can make available as a **firmware** update. So far only Lenovo has done this, but not for all its machines. Check its site for details (see box left).

#### CHECK YOUR PC

- Acer [www.snipca.com/26325](http://www.snipca.com/26325)
- Dell [www.snipca.com/26324](http://www.snipca.com/26324)
- Lenovo [www.snipca.com/26326](http://www.snipca.com/26326)

## New Windows 10 search box floats on screen

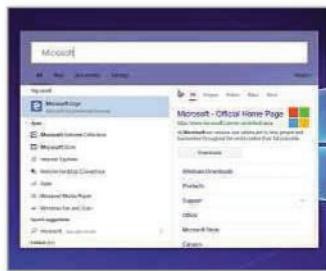
Microsoft is testing a new search box that 'floats' on your PC's screen (see screenshot), drawing comparisons to the Spotlight search in Apple Macs. It appears in the latest preview version of Windows 10 (17040), available to users on the Insider Program.

The box includes the same results you currently find in the Start Menu or by using Cortana. To open it, press Windows key+S, or click the Cortana button in the taskbar.

You can sort the results using several filters, including All, Documents, Settings and

Web (through Microsoft's search engine Bing). You can also search for files, pictures, videos, music, settings and apps.

The new search box is likely to be part of the next major Windows update, codenamed Redstone 4, due in March.



#### You'll like this...

Google is clamping down on scammers selling fake event tickets ([www.snipca.com/26334](http://www.snipca.com/26334))



#### ... but not this

Toys that connect to the web can be hacked 'by almost anyone' ([www.snipca.com/26333](http://www.snipca.com/26333))

# UK broadband costs more than Syria (but cheaper than US)

UK broadband is the eighth-cheapest out of 28 countries in western Europe, with lower prices (£30.70 per month) than the Netherlands, Spain, Belgium and Ireland, according to a new league table of global prices. Italy (£21.72) has the cheapest broadband, ahead of Germany (£25.62) in second.

The figures, from research company BDRC Continental and broadband-comparison site Cable.co.uk, show that the UK is the world's 63rd cheapest country, behind



several nations with worse infrastructure, including Syria, Kazakhstan, Bangladesh, Sri Lanka and Albania.

Iran is home to the world's cheapest broadband, at just £4.06 a month (see box). Five of the 10 cheapest are countries that were part of the Soviet Union: Ukraine,

Russia, Belarus, Kazakhstan and Georgia.

Many of the most expensive countries are in sub-Saharan Africa, Oceania, or the Caribbean, including Haiti, Papua New Guinea and Namibia. Prices shoot up at the very bottom of the list, with customers in Burkina Faso paying an average of £724.50, nearly six times the price of Laos (the fifth most expensive country).

Australia (£45.56) is cheaper than New Zealand (£48), while Canada (£41.28) is cheaper than the US (£49.94).

The research analysed 3,351 broadband packages from 196 countries from the period between 18 August and 12 October 2017. Visit Cable.co.uk's site for more details, including the list as a spreadsheet: [www.snipca.com/26299](http://www.snipca.com/26299).

## FIVE CHEAPEST COUNTRIES



1. Iran £4.06 a month
2. Ukraine £4.16
3. Russia £7.47
4. Moldova £8.15
5. Syria £9.17

## FIVE MOST EXPENSIVE COUNTRIES



1. Burkina Faso £724.50
2. Papua New Guinea £450.96
3. Namibia £330.78
4. Brunei £202.06
5. Laos £174.46

## Top teacher: block phone porn to protect teens

A leading teacher has said web companies have a "moral duty" to filter pornography from phones, warning that schools and parents need help to protect children from harmful images.

Charlotte Avery (pictured), president of the Girls' Schools Association (GSA), said that children are being robbed of their innocence by seeing inappropriate content, which is often "just three clicks away".

Talking to the *Daily Mail* ahead of the GSA annual conference in Manchester, Ms Avery, 47, urged tech companies to "get out advertising campaigns and work very closely with parents, maybe around national days aimed at

internet safety or anti-bullying".

She said anti-porn filters should be automatically turned on, because many parents don't know how to enable them, or even that they exist.

Ms Avery, head of the private St Mary's School in Cambridge, added that explicit images online give a distorted view of sex, which is "unhelpful" for young people "beginning to explore their sexuality". It also makes behaviour like 'sexting' seem normal, she said.

She acknowledged that phones are "an enormously powerful tool for learning", but warned of a generation of 'screenagers' who have a



worrying reliance on technology.

Her comments echo the concerns from many head teachers, some of whom have banned phones from their schools.

Cranleigh School in Surrey has banned phones in Year 9 and 10 (ages 13-15) – a move it said was popular with parents and pupils – while Brighton College asks students to hand them in at the start of the day.

Should phones be banned in schools? Let us know: [letters@computeractive.co.uk](mailto:letters@computeractive.co.uk)

## IN BRIEF

### OLD CASH CONVERTERS WEBSITE HACKED

High-street pawnbrokers Cash Converters has reported a security breach in which customers' usernames, passwords and addresses may have been stolen. These were exposed on the company's old website, which was replaced in September. Customers who have signed up only to the new site aren't at risk. No credit-card details were stolen. Read more at [www.snipca.com/26297](http://www.snipca.com/26297), or ring 01928 737410.

### GOVT: STOP USING 'UNSAFE' KODI BOXES

The Government has warned people not to use "illicit streaming" devices that illegally let users watch paid-for films and TV shows for free. It mentions set-top boxes containing TV-streaming software Kodi, which many people use to access such content. The advice, from the Intellectual Property Office, says some of these boxes have failed safety checks, and cause fires. Read the guidance at [www.snipca.com/26304](http://www.snipca.com/26304).

## Tomorrow's world

Spending a thousand pounds on an iPhone is enough to make anyone's palms sweat. That nervous reaction may soon be able to unlock the device, say researchers at the University at Albany in New York State. They are developing phone sensors that recognise the molecules in people's unique 'sweat prints'. They claim it could be more reliable and secure than fingerprint and facial recognition.

## IN BRIEF

### FIREFOX TO WARN ABOUT HACKED SITES

Firefox is working on a browser add-on that warns you when you visit a site that has been hacked. Called BreachAlerts, it will show a message containing a box in which you can enter your email address to see whether it was stolen in the attack. The add-on will search the database of hacked accounts from Have I Been Pwned? (<https://haveibeenpwned.com>).

### PUBLIC AVOID WEB GP APPOINTMENTS

A 15-month pilot scheme that let people submit their symptoms to their GP online was used by just two in every 1,000 patients, research has found. The eConsult system, which was trialled in 36 GP practices in Bristol, North Somerset and South Gloucestershire, was used mostly for requesting 'fit notes' or repeat prescriptions. NHS England is offering £45m to help GPs adopt online consultations.

## Misleading 'up to' broadband adverts banned (at last!)

Broadband adverts will finally become more honest under new rules forcing companies to state average speeds.

At present, providers can advertise 'up to' speeds – as in the Virgin Media advert pictured – as long as 10 per cent of customers can receive them. But from May 2018 companies will have to state the average speed that half of their customers can expect at peak times (8 to 10pm).

The rule change follows research by the Advertising Standards Authority (ASA) showing that many customers don't realise they won't get the 'up to' speeds advertised.

The ASA accused providers of exploiting "low levels of knowledge and understanding of broadband speeds" among customers. It passed its concerns to the Committees of Advertising Practice (CAP), which discussed solutions with providers, consumer groups and regulator Ofcom.

Most groups argued that the fairest option would be to use



the average peak-time speeds achieved by half of customers. This means speeds currently advertised as up to 38Mbps will drop to around 24 to 30Mbps, while speeds advertised as up to 76Mbps will fall to 45 to 55Mbps.

CAP also urged providers to mention speed-checking tools in adverts to help customers work out their likely speed.

Digital minister Matt Hancock called the move a "victory for consumers", and described current ads as "incredibly misleading".

Visit ASA's site to read more: [www.snipca.com/26314](http://www.snipca.com/26314).

### BT ADVERT BROKE RULES

The ASA has banned a BT broadband TV advert for burying the terms and conditions in hard-to-read text at the bottom of the screen. Broadcast in May, the ad promoted increased discounts, and a £100 reward card for signing up online. In its ruling ([www.snipca.com/26315](http://www.snipca.com/26315)) the ASA said the ad broke several guidelines, including presenting text in large blocks and using abbreviations, and was therefore "likely to mislead".

## Govt gives councils £190m for faster broadband

Chancellor Philip Hammond (pictured) has pledged £190m to help deliver full-fibre broadband around the UK.

Local councils will bid for a slice of the money, which was announced in November's Budget. The Government said children in 100 East Midlands schools will be among the first to benefit.

In full-fibre broadband, the fibre cables go all the way to the home, rather than ending in a street cabinet, where slower copper cables take over.

The money comes from the National Productivity

Investment Fund, and is part of £500m to be spent on "a range of initiatives" covering 5G and artificial intelligence, as well as broadband.

The Chancellor earmarked £160m to boost 5G infrastructure, including £10m on facilities to test its security of new networks. A further £35m will go on 5G trials on trains, starting with the Trans-Pennine route.

Mr Hammond said the investment will help the UK create companies "that will form the backbone of the global economy of the future".



### The world's gone mad!

If you live in a big house, drive an expensive car and go on luxury holidays, you might also "collect" people on Facebook as "digital possessions". Researchers at Ruhr-University Bochum in Germany say materialistic people use Facebook more frequently than others because they like to compare their lifestyle with those of other people, and use their friends to help them become more successful.

**facebook**

# Don't pay for bus journeys by phone? Then you'll pay more

A bus company has been accused of discriminating against pensioners by charging passengers more if they don't pay with a phone app.

It comes amid growing concerns that elderly people are being alienated by the number of everyday tasks that now require a smartphone.

First Bus in Bath is increasing the price of some tickets for customers who pay in cash, rather than use its m-Tickets app. Passengers buy electronic tickets through the app, then show it to the bus driver on their phone's screen (see screenshot). The app's FAQ says it's "your responsibility to ensure that your phone has enough battery power".

First Bus says the system makes boarding quicker and improves journey times. But it



has angered some locals, with one telling the *Bath Chronicle* that it "actively discriminates against the elderly, the blind and the poor – all the groups who are most likely to need to use public transport".

The company has already introduced the scheme in Aberdeen, Brighton, Oxford, Manchester, York and other locations. It claims in a survey

that 96 per cent of 1,500 respondents said they would recommend the app.

But it has an average rating of only 2.3 out of 5 on the Google Play Store ([www.snipca.com/26241](http://www.snipca.com/26241)), with nearly a half of users giving it just one star. Common complaints include tickets vanishing from phones and the app taking a long time to load, causing delays when boarding the bus.

Smartphone sales are rising among older people, but many say they feel 'forced' to buy one. Recent research from consultancy firm Deloitte shows that some over-55s reluctantly bought a phone in order to carry out tasks like ordering a taxi and paying for parking tickets.

Do too many everyday tasks require a smartphone? Let us know: [letters@computeractive.co.uk](mailto:letters@computeractive.co.uk)

## Bill Gates gives \$100m for dementia research

Microsoft co-founder Bill Gates (pictured) is donating \$100m (about £76m) of his £90bn fortune to the fight against dementia.

He will first give \$50m to the London-based Dementia Discovery Fund (DDF), which brings together industry and government to develop new treatments. This will be followed by another \$50m to new companies conducting experimental research.

The investment is a private one from Bill Gates, and doesn't come from the Bill and Melinda Gates Foundation, which pays to enhance healthcare and reduce poverty worldwide.

Despite years of study, no treatment can slow the



progression of dementia. Existing drugs can only ease the symptoms. The disease is expected to affect one million people in the UK by 2025.

Gates said it's a "growing problem", but is "optimistic" that well-funded innovation will lead to effective treatments. He acknowledged, however, that it will take "probably 10 years before new theories are tried enough times to give them a high chance of success".

He revealed on his blog ([www.snipca.com/26229](http://www.snipca.com/26229)) that some of his relatives have suffered from dementia. He



wrote: "I know how awful it is to watch people you love struggle as the disease robs them of their mental capacity, and there is nothing you can do about it".

Dementia charities welcomed the investment. Jeremy Hughes, chief executive of the Alzheimer's Society charity, said: "With Bill Gates now joining all those already united against dementia, there is new hope for advances in the care and cure of dementia".

## IN BRIEF

### SEE WHICH APPS DRAIN YOUR BATTERY

Google is adding information to Android to make it easier to see which apps are devouring your phone and tablet's battery life. A new section in the battery settings will show a red warning icon next to apps 'draining battery' (see screenshot below). It's likely to be part of the Android 8.1 update, expected in December.



### PRINCE WILLIAM FIGHTS WEB BULLYING

Prince William, tech giants and children's charities have teamed up to launch an anti-cyberbullying campaign that tells young people to 'Stop, Speak, Support' when chatting online. The aim is to encourage children to tell adults when they witness or experience bullying. The project, from the Royal Foundation Taskforce on the Prevention of Cyberbullying, brings together companies including Facebook, Apple, and Google and charities the NSPCC and Diana Award.

### 5G EDGES CLOSER FOLLOWING EE TEST

Mobile network EE has conducted the first successful UK test of ultra-fast 5G, hitting a "consistent" speed of 2.8Gbps (nearly 3,000Mbps). It brings closer the launch of a 5G network in the UK, which Ofcom wants to happen in 2020. Samsung recently said it will bring out 5G phones in 2019, a year earlier than expected.

# Named & Shamed

Darien Graham-Smith puts the boot into tech villains, jargon-spouting companies and software stuffed with junk



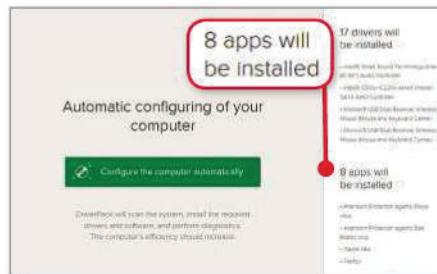
## WARNING: JUNK AHEAD

### Junk Offender: DriverPack Solution

Device **drivers** – don't you love 'em? Me neither. I know I should regularly check for updates, but it's a tedious task. So I was drawn to DriverPack Solution, a neat-looking little program that automatically downloads and installs the latest updates for your PC.

It's seductively easy to get started. Just visit the website (<https://drp.su/en>) and you'll see a big green button labelled 'Install all required drivers'. When you click this, your computer is scanned – there's no installer – and you'll see another big green button, which you can press to complete the process.

Here's where it gets sneaky. This button doesn't just update your drivers. Hidden at the edge of the window is a notification that clicking it will also install eight – yes, **eight** – additional bits of software



**17 drivers will be installed? Good. 8 apps will be installed? Bad**

that you were never asked about (see screenshot).

To be fair to DriverPack, these programs aren't **spyware**, or anything nasty. But you almost certainly don't want them. For a start, the list includes two web browsers, which is just a recipe for confusion and annoyance. It also includes Avast Free Antivirus, which is notorious for pestering you with pop-up adverts (and

underperforms in our latest antivirus test – see page 54). If you didn't ask for Avast to be installed in the first place, I can confidently predict that you're not going to appreciate this.

Luckily for me, I was on the lookout for such underhand behaviour. Instead of clicking the green button, I switched to the 'Drivers' tab and clicked the 'Install' button there, assuming this would apply the necessary driver updates without dumping additional software. I didn't get to congratulate myself on my cleverness for long, however: the complete set of junk was installed just the same.

If you like the idea of automatic driver updates, there are some decent alternatives, such as IObit Driver Booster ([www.snipca.com/26303](http://www.snipca.com/26303)). But definitely give DriverPack Solution a miss. A program this deceptive shouldn't be allowed anywhere near your system components.

### What are they talking about?

#### What they say

**Kathleen Hogan,**  
**Chief People Officer**  
**at Microsoft** ([www.snipca.com/26300](http://www.snipca.com/26300))



"Three years ago, we began a journey to evolve our culture at Microsoft, and in so doing redefine our relationship with employees, customers and partners. This journey started by grounding our aspire-to culture in a growth mindset."

#### What they mean

Microsoft wants to make its workforce more diverse, so its products appeal to a wider range of customers.

### Darien's villain of the fortnight

#### Amazon

This is only my third Named & Shamed, but you may have already twigged that I love a bit of online shopping. However, when my goodies arrive I'm often baffled and frustrated by the packaging. The other week I ordered a new **microSD card** for my Raspberry Pi – a tiny thing, smaller than my fingernail. Amazon, in their wisdom, delivered it in a box big enough to hold a hi-fi system.

I'm sure we've all had similar experiences. Paul Jacobs of Gosport (pictured) recently had a shock when a roll of bubblewrap he'd ordered from Amazon arrived in a box that was



nearly as big as he was – padded with crumpled brown paper (watch him unpack all 100 feet at [www.snipca.com/26301](http://www.snipca.com/26301)).

It's worth repeating that: Amazon's bubblewrap, arguably the best packaging material ever created, is itself protected by a ridiculous amount of packaging.

Come on, Amazon: you've created a home delivery service that's second to none. Surely you can apply some of that intelligence to your packaging? It's a villainous degree of wastage.

Want to nominate a villain of the fortnight?  
Email us at [editor@computeractive.co.uk](mailto:editor@computeractive.co.uk)

# Is Facebook addiction ruining the UK economy?

Economists say lazy employees are guilty of 'cyberslacking'

We're frequently told that productivity is falling throughout the world, but one area that's seen intense activity is the invention of clunky terms prefixed by 'cyber' - many of them describing the worst side of the web, such as cyberbullying, cybercrime and cyberstalking. Had that creativity been channelled more effectively, boosting economies and generating jobs, perhaps we wouldn't be so worried about the latest cyber curse: cyberslacking.

No prizes for guessing what it is. Every time someone checks their Facebook account when they should be working, they are cyberslacking. Reading Twitter, shopping online, chatting on WhatsApp - these are all classic traits. Who wants to fill in a boring sales spreadsheet when there's a funny video to watch online?

These may sound like the modern equivalent of cigarette



"crisis of attention", saying it's one of the greatest dilemmas of the age. Writing recently on the Bank Underground blog ([www.snipca.com/26335](http://www.snipca.com/26335)), where Bank of England staff comment independently, Dan Nixon said that "frequent distractions might lead to a persistently lower capacity to work". He claims the damage is greater than merely the time

'self-interrupt'. They stop what they're doing and switch to something else. Bombarded by numerous diversions, your mind is likely to "wander off on its own accord".

These theories seem to be supported by data showing how much we use our devices. A 2012 study from the US Chamber of Commerce Foundation found that people typically spend one hour of their working day on social media. This figure had increased to 2½ hours a day by 2016, according to a survey from the research app Dscout (which also included non-working days). On average, people touch their phones a staggering 2,617 times every day.

Nixon also points to evidence suggesting that being deluged by emails and phone calls can reduce workers' IQ by 10 points. He cites studies showing that distractions cause more distractions, and that workers overwhelmed by "external stimuli" - such as Facebook messages - are more likely to

lose checking Facebook, because it typically takes workers 25 minutes to resume the original task.

Many of those touches are on 'Confirm and pay' buttons. Marketing company intelliAd found that traffic to shopping sites surges between 2pm and 6pm on weekday afternoons. So what's the solution? Banning web access, or Facebook at least, is one answer, but unrealistic in many hi-tech industries. Nixon says some companies promote

**“Who wants to fill in a boring sales spreadsheet when there's a funny video to watch? ”**

breaks, five-minute interludes that cause no harm. But economists are increasingly concerned that cyberslacking is a permanent shift in behaviour that will weaken business in the long term. Could it be partly responsible for the slowdown in UK growth, from 2 per cent to 1.5, predicted by the Office for Budget Responsibility?

One analyst at the Bank of England calls the problem a

## THE FACTS

- Some economists say productivity is falling because workers spend too long using their phones
- It's estimated that people spend an hour each working day checking social media
- Online shopping surges between 2-6pm on week days

'single-tasking', whereby employees are told to focus on one job without being expected to respond to emails. Other firms have experimented with abandoning email for good.

There are many theories to explain falling productivity, including a lack of investment and 'zombie' companies being bailed out. But there's a chart on Nixon's blog ([www.snipca.com/26337](http://www.snipca.com/26337)) that shouldn't be ignored. As smartphone sales begin to rise in 2007, so productivity starts to fall. It has yet to recover. A coincidence? Maybe you could discuss it on Facebook.

# Letters



Tell us what's on your mind

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## GP video consultations? Public trust will take time

**✉** When I retired as a GP a few years ago, I remember remarking to my younger colleague that she would soon be seeing all her patients by video. According to your news story about the NHS video trial (Issue 515, page 9), that date is already here.



There will be many people unsure about this experiment, fearing it will weaken the relationship between doctor and patient. But if applied correctly, I believe it will prove greatly beneficial. As I'm sure all GPs will say, the simple truth is that we don't need to see some patients face to face to work out what's wrong. They are wasting their own time as well as ours by booking appointments.

The tricky part will be making sure nobody needing a one-to-one consultation feels 'fobbed off' by a video chat. There are bound to be many tabloid stories of patients dying because a GP couldn't spot a serious symptom by video. I suspect this will take many years of trial and error before the public trusts it.

Dr George Evans

**✉** The easier something is to use, the more it will be abused by irresponsible people. That will be the fate of video appointments with doctors. At the moment, a lot of timewasters are put off seeing the doctor by the process involved – phoning for an appointment, waiting in a germ-ridden surgery etc. But if seeing a GP is as easy as pressing a phone button, there will be nothing stopping them. The system will need to be carefully vetted.

Ian Hepworth

## Naïve? NHS staff take cyber-security very seriously

**✉** I feel that I must respond to the letter in Issue 515 accusing NHS staff of being "scared" of cyber-security. It doesn't surprise me that the writer wanted to remain anonymous because his/her opinion shows an acute ignorance of the reality of working in such a sprawling organisation.

All the NHS staff I've worked with have gone beyond the call of duty to teach themselves about cyber-security. It was through their recommendation that I started subscribing to *Computeractive!* They always seemed to be one step ahead, and claimed it was because of your magazine. Now it's *me* who's always ahead of the game.

The letter writer accuses NHS staff of "almost a criminal level of naivety". I disagree strongly. We all realise that if we don't keep our PCs healthy, we can't keep our patients healthy. Perhaps this wasn't the case 10 years ago, but the culture has changed now. I suggest the writer gets back in touch with his former colleagues and enquires how attitudes have improved.

Jane Collins

## Apple's tax avoidance isn't villainous

**✉** I welcome Darien Graham-Smith taking over from Jane Hoskyn in the Named & Shamed hot seat (she'll be a tough act to follow!). But I don't share his view that Apple's tax-avoiding antics are villainous (Issue 515, page 10). Surely every publicly listed company has a moral duty to increase profits for their shareholders. The most efficient way to do that is to shop around for the lowest tax rate it can find.

If I were lucky enough to be an Apple shareholder, I would want it to jump through every legal loop it could to avoid tax. Let's not forget that every penny a company saves is money it can reinvest in research and development, making better products and employing more people.

Don Kennett

## Slow rural broadband 'forces' graduates into cities

**✉** I showed my grandchildren 'Question of the Fortnight' in Issue 515 ('Is slow broadband killing the countryside?'), and they both nodded. They've both recently graduated

## Watch classic adverts on YouTube

**✉** Ken Rigsby's nostalgic fondness for the JR Hartley 'Fly Fishing' Yellow Pages advert (The Final Straw, Issue 515) made me wonder what other classic ads are lurking on YouTube. And there are hundreds. Goes to show that YouTube isn't just for teenagers seeking advice on make-up and clothes.

I'd like to recommend some ads to



my fellow readers. Sticking with Yellow Pages, I loved this ad about a boy buying a Hornby signal box for his dad ([www.snipca.com/26255](http://www.snipca.com/26255)). Here's a superb compilation of Hamlet cigar adverts ([www.snipca.com/26256](http://www.snipca.com/26256)), some Cinzano ads featuring the great Leonard Rossiter ([www.snipca.com/26257](http://www.snipca.com/26257)), and let's not forget the secret Lemonade drinker ([www.snipca.com/26273](http://www.snipca.com/26273)).

But my favourite is the 'water in Majorca' advert for Heineken ([www.snipca.com/26259](http://www.snipca.com/26259), pictured). The ads are all funny, heart-warming and very clever – truly a golden age. Lots of things are better these days, but you can't count TV adverts among them.

Terry Randolph

from university, where apparently students don't settle for anything less than 100Mbps (how times change – my student digs came with a kettle and a three-bar fire). They said that returning to the Suffolk village – where they grew up and where speeds are more like 2Mbps – felt like travelling back in time.

Here's the crucial point. It is *only* slow rural broadband that's "forcing" (to use their word) them to live in a city. They

would both love to stay in their home village, which gives them a lifestyle they enjoy. They're not put off by poor transport or expensive housing. But they rely on fast broadband for their specialised work. As one of them said, if they don't pursue this line of work, going to university would've been a waste of time. It's hard to disagree with that.

John Hunter

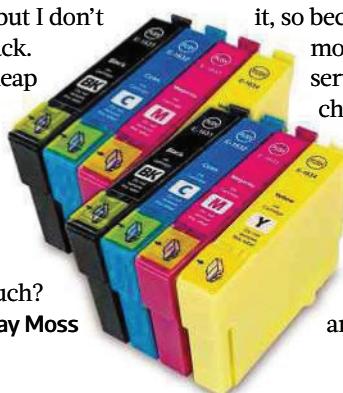
## Why do Epson cartridges cost so much?

**E**t's understandable that Epson doesn't like the sales of cheap ink cartridges, but, on the other hand, we can't all afford to buy originals (News, Issue 514, page 8). I have just bought cheap cartridges for my non-Epson printer and I can buy four sets for the price of one original.

Epson argues that unofficial cartridges damage loyal customers and they welcome legitimate competition. It could be argued that their customers are free to use cheap alternatives and Epson could compete by reducing its prices.

I am aware that using cheap cartridges invalidates my printer warranty, but mine expired 18 months ago. The only other problem is that I cannot tell which cartridge needs changing, but I don't consider that a major setback. Also, I find that modern cheap alternatives are as good as originals. If the competition can make them and sell them, obviously at a profit, for so much less, then why do originals have to cost so much?

Ray Moss



## STAR LETTER

# Closing Windows 10 loophole 'penalises disabled people'

**E**It's worrying that Microsoft is closing the so-called 'loophole' that gave free Windows 10 upgrades to people using accessibility tools like Narrator and Magnifier (News, Issue 515, page 8). You mention in your story that Microsoft warned people not to abuse the loophole (ie, don't use it if you're not disabled), but did nothing to block them. It now seems clear this warning was a feeble attempt at appearing to do the right thing.

By ending the offer, Microsoft is penalising disabled people. How can it be right to punish them just because non-disabled people have abused the system? And was it really beyond the wit of Microsoft to devise a method of checking whether someone was truly eligible? I get the impression they thought it was too much hassle, and decided to simply terminate it.

Microsoft's intentions may have been good. But I think they've been very naive. By not verifying whether a person really needed an accessibility tool, they have risked trivialising the



assistance disabled people rightly receive in daily life. The effect can be detrimental in society. For example, I can easily imagine a non-disabled user taking advantage of the offer, thinking it's not a big deal to bend the rules. But in his mind does that lessen the importance of disabled-only parking spaces at supermarkets? Or disabled-priority seats on trains? If he can beat the system online, why wouldn't he try in the real world too?

As a disabled person myself, I've noticed a troubling rise in the number of people who think that things like specialised parking spaces are little 'perks' that they should also be entitled to.

Robert Holmes



## The Star Letter writer wins a Computeractive mug!

Views expressed don't necessarily reflect those of Computeractive

## Share your PC knowledge for free

**E**Like Keith Taylor in Issue 515, I put my computing knowledge to good use by offering advice to people in my community. But unlike Keith, I don't work in a local PC-repair shop. I did ask them, but they said they couldn't afford it, so because I wasn't desperate for money I volunteered my services for free at libraries, church halls and so on. They say that nothing makes you happier after you retire than helping other people, and I can vouch for that. So, if you can spare an hour a week, and don't need any extra

money, I would encourage PC enthusiasts to spread their wisdom for free.

William Mitchell

## Three-day weekends? Been predicting it for years

**E**m writing to follow on from Ryan Briggs's letter in Issue 513 saying that automation should lead to a three-day weekend, and David Hodgson disagreeing in Issue 514.

David need not worry – it won't happen. I studied the effects of IT with the Open University in the 1980s. One prediction at the time was that we would all be on a three-day week, mostly from home, by the year 2000. I had to wait for retirement, in 2014, to get any more time off!

Colin South

# Consumeractive

## Can I get a refund for my watch strap?

**Q** I bought a Garmin Approach S1 watch over three years ago for £99 from American Golf ([www.americangolf.co.uk](http://www.americangolf.co.uk)), but about six months ago the strap broke. Being an integral part of the watch, I couldn't simply replace it. Online reviews indicate lots of people have had problems with the strap. However, Garmin refuses to acknowledge there's a problem. I'd have to pay £61.27 for a replacement watch, rather than buy a strap separately. What are my rights?

Bob Pudney

**A** We think Bob has a strong case for a free repair or replacement under the Sales of Goods Act, regardless of whether it's a problem specific to *his* watch or one that affects many. He should tell American Golf that his particular watch was inherently faulty. His biggest problem will be proving that after three years the strap didn't break because of fair wear and tear.

However, he may strengthen his case by pointing to the problems raised online by customers. He can claim this shows the watch's original design wasn't fit for purpose. It seems that newer versions of the watch don't come with an integral strap, which might suggest there was something wrong with it after all.

**CASE ONGOING**

## If I use online payment methods, do I lose Section 75 protection?

**Q** In Issue 505, you stated that if you link your credit card to your PayPal account, you automatically lose protection under Section 75 of the Consumer Credit Act (CCA), which safeguards transactions of between £100 and £30,000. More and more companies use PayPal-style payments, including Worldpay and Sage. Is your CCA protection also lost if you use these?

Howard Huett

**A** Yes, in most cases it will be. Section 75 of the CCA applies when a purchase is a single, seamless transaction, meaning there's a direct link between you, your bank and the retailer.

This link is broken if the purchase is made in two stages involving a third-party service. That service takes the money from you via your bank, then holds the cash while it sets up another payment process to transfer the money to the retailer.

However, not all purchases made by payment services use this two-stage method. Some are made directly, and therefore are covered by Section 75. Whether or not you're covered is



determined by the arrangement the retailer has with the service. This means you shouldn't assume your PayPal, Worldpay or Sage purchase isn't protected. It's worth checking with the retailer.

That said, with so many purchases now made by PayPal and similar services, the CCA is looking increasingly ill-suited to the digital age. We think it needs to be updated.

We've spoken to the Financial Ombudsman Services (FOS) on several occasions about this incredibly complex area of financial law. It told us recently: "Where there is a dispute on this point, consumers can contact us and we look at the specific payment mechanism used and decide whether Section 75 applies in the particular case". Get in touch with the FOS at [www.snipca.com/26201](http://www.snipca.com/26201).

**CASE CLOSED**

## Doesn't BT have to notify me of price rises?

**Q** Our BT broadband prices have increased. Can BT do this without notifying us? Do we have the right to cancel a contract if we haven't been told about the details?

John Teasley

**A** Yes, BT should have told John at least 30 days in advance of the price rise. Companies are allowed to do this by email as well as by letter, so it's always worth checking your Spam folder in case it ended up there.

John could ask BT for a deadlock letter

confirming its position, then take his case to the Ombudsman Services (Communications): [www.ombudsman-services.org](http://www.ombudsman-services.org). But this won't give him any extra rights. Legally, providers must let you cancel without penalty if prices rise above inflation (currently 2.8 per cent: [www.snipca.com/26203](http://www.snipca.com/26203)). You can do this within 30 days of being notified. This applies to BT customers facing the rise announced in early November, which kicks in on 7 January next year.

BT apologises for the price rises at [www.snipca.com/26202](http://www.snipca.com/26202), asking you to



get in touch so it can "make sure your bill is the best it can be for you". In other words, it's ready to haggle. So call it and say you want a better deal: 0800 085 7346.

**CASE CLOSED**



**✉ Contact us so we can investigate your case**

Email: consumeractive@computeractive.co.uk

Please include both your phone number and address.

We stand up for your legal rights

## Can I return unwanted Christmas presents for a refund?

**Q** Like many of us, I often get gifts from family and friends that I really don't want or need. Do I have any rights to return these to the retailer and get a refund?

Millie Sweet

**A** Strictly speaking – no, because the recipient of a gift doesn't have a contract with the company selling the item.

But there's a useful law that allows buyers to transfer their contract rights to the recipient of a gift. Using the Contracts (Rights of Third Parties) Act 1999, the buyer can make it clear when they purchase the item that they wish to "confer the benefit of the contract" to the recipient. The person receiving the gift



then has all the benefits of the Consumer Rights Act or Consumer Contract Regulations (CCR). This has to be done in writing – for example, on the back of the receipt. The buyer needs to give the recipient's name, address and personal connection (for example, 'family

member' or 'friend').

Even without this, most high-street retailers are fairly flexible, and will allow you to replace your item for one of similar value, providing you hand over the receipt. Some retailers also offer vouchers you can spend, but you should check the expiry date.

Online retailers are more likely to want to deal with the buyer only, but you can give it a go. You'll need to be quick about this because the time limit for returning unwanted goods under the CCR is 14 days starting from the day after the item was received by the buyer.

With faulty gifts, it's best to let the buyer return the item, unless they transferred the contract to you.



## CASE UPDATE



### Companies can only repair once, even if a further fault is different

Many readers have asked us whether the law giving retailers one chance only to repair a product (part of the Consumer Rights Act introduced in 2014) still applies if a second or third fault occurs that's different to the first. The answer is yes it does apply, letting you claim a refund or replacement no matter what the cause of subsequent problems.

It's a scenario we hope won't arise in Eileen Scott's case (see Consumeractive, Issue 515). Halfords' attempt to fix the suction pad on her Nextbase dashcam failed, allowing Eileen to claim her money back. Instead, she agreed to Halfords' offer of a new dashcam, with different suction pads. She told us she felt obliged to accept a replacement: "I don't know if I've done the right thing, but I felt I did not have a choice, because Nextbase have sent the new dashcam suckers to them".

Hopefully, this dashcam will work fine. But if there's another problem, whatever the cause, we would advise Eileen asks for her money back and tries a different make.

If that does happen and Eileen has to buy an alternative model, she may also be entitled to a refund of the £30 she paid to have the Nextbase dashcam installed so that the wiring went to the in-car charger. She would need to check whether a new dashcam would work with this installation. If not, it would be time to contact Halfords again.



## CREDIT WHERE IT'S DUE

YOU TELL US WHEN COMPANIES GET IT RIGHT



In Issue 511 (page 20), you reviewed the Wired2Fire Pyro VX PC. You could say that on impulse I ordered one, because my Mesh computer was showing its age (I got it on the day the company went bust in 2011!).



informed by email throughout the 15 days they built and tested the PC. The national courier service they use is also worthy of a mention because early

in the morning I received an email with the time of delivery together with a photograph of the driver.

Does the Pyro VX perform as per the specification? Yes, most certainly it does. It is how silently it runs that amazes me most. I have had many computers, but none running as quietly as this one. I'm also impressed by the boot-up time. Within 20 seconds of pressing the power button I can begin work on the PC.

Chris Witts

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

### HOW TO CONTACT WIRED2FIRE:

- Tel: 01306 88 22 11
- Email: sales@wired2fire.co.uk

# Protect Your Tech

Scams and threats to avoid, plus new security tools

## WATCH OUT FOR...

### Multi-stage malware in apps

#### What's the threat?

Malicious Android apps have been found on the Google Play Store that try to fool defences by waiting before doing anything nasty, thereby avoiding instant detection. Malware uses this 'multi-stage' approach to lurk under the radar of antivirus before striking.

The apps, spotted by Slovakian security company ESET, were designed to look like legitimate news services and junk-removing tools (see screenshot). Like all multi-stage malware, these apps didn't immediately display any suspicious behaviour, such as asking for permissions they don't need. They even appeared to perform the tasks expected. Like a disease without symptoms, there's nothing to suggest anything is wrong.

Having tricked the user and

antivirus, the apps move on to the second stage – connecting to a URL. This triggers the third stage – the download of an authentic-sounding update, such as 'Adobe Update' and 'Android Update'.

At this point there are the first signs of criminality. The update asks for access to your contacts, and to read your text messages. But anyone who fails to notice this and approves the update unwittingly begins the fourth and final stage, in which the app installs a banking **Trojan**, showing the victim fake login forms in order to steal credit-card details.

#### How can you stay safe?

First, bear in mind that not all malware strikes straight away. Stay vigilant for several minutes after installing an app or software, keeping an eye out for any



dubious updates.

Google has removed these apps, and none were downloaded more than a few hundred times, but there will be others that use similar tactics. In its blog ([www.snipca.com/26263](http://www.snipca.com/26263)) ESET says that multi-stage malware has a better chance of "sneaking" on to the Google Play Store than other, more common threats.

It adds that to stay safe you can't assume that an app is safe simply because it's been approved by Google. Instead, always check an app's rating and user comments, and pay close attention to the permissions it asks for.

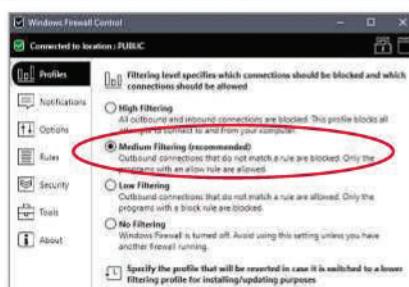
### New tools

As we explain on page 55, using a **firewall** is still essential. We think Windows 10's firewall is robust enough, but it's not easy to customise, and lacks some advanced options. Many antivirus suites offer tools to tweak it, but a simpler option is to install Windows Firewall Control (WFC), which has been updated.

One previously missing feature it adds is blocking outbound connections, stopping your computer accessing the internet. This prevents hackers from connecting to their servers should they infiltrate your PC, thereby thwarting their attempts to install malware.

WFC blocks all outbound connections by default, which is too severe because it will also stop safe programs on your PC connecting to the web. So the first thing you should do

#### Windows Firewall Control 5 [www.binisoft.org/wfc.php](http://www.binisoft.org/wfc.php)



after installing it is to select Medium Filtering (in the Profiles section, see screenshot), which allows only outbound connections that you've marked as safe. To approve a connection, click Manage Rules at the bottom, then click a program and select Allow.

To get WFC 5 click the link above, then click the black Download button on the right-hand side.

## ScamWatch READERS WARN READERS

#### iTunes purchase 'using my ID'

I got an email seemingly from Apple saying that someone in Indonesia had made a purchase using my iTunes ID. I pressed the large blue button to 'Cancel the purchase'. Realising I'd just been an idiot, I contacted Apple support ([www.snipca.com/26191](http://www.snipca.com/26191)). They said the email was a scam. I hadn't been directed to a site asking for personal info, so Apple said I had nothing to worry about. But after trying to scan my Mac with Avast, I couldn't get OS X to respond, and found no icons on my desktop. I force-closed it and restarted, and now all seems well.

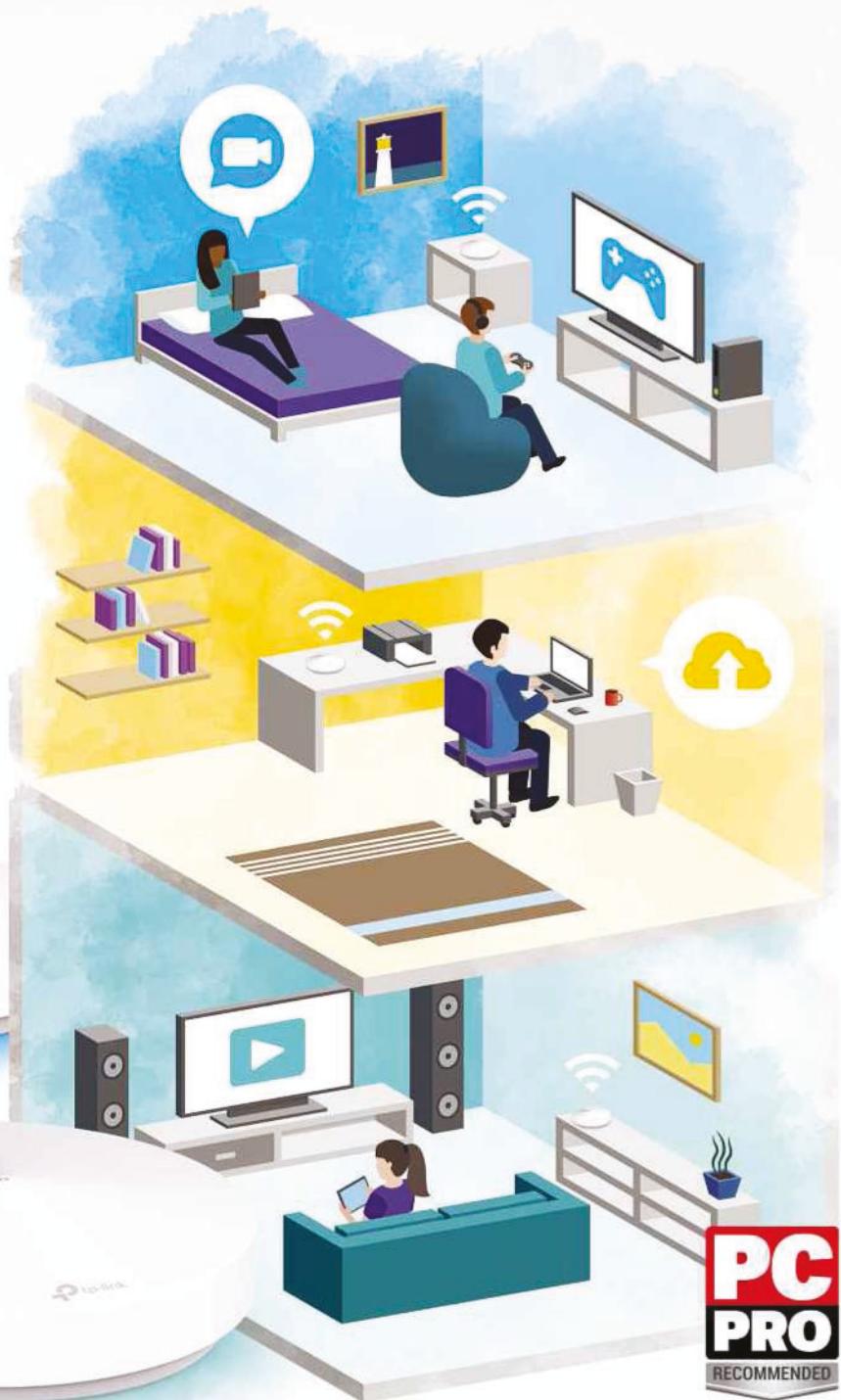
Rev Pam Crane

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# Best Free Software

Jonathan Parkyn recommends new programs that won't cost you anything

## VIDEO-EDITING SOFTWARE

### Avid Media Composer First 8.9.3



[www.snipca.com/26249](http://www.snipca.com/26249)

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

This isn't some flimsy tool for warping faces or adding cheesy animations to your home movies. Avid Media Composer First is an industry-level video-editing suite designed to provide you with complete control over your video projects – whether that's trimming clips, enhancing footage, adding audio, effects and transitions, or sharing your finished work.

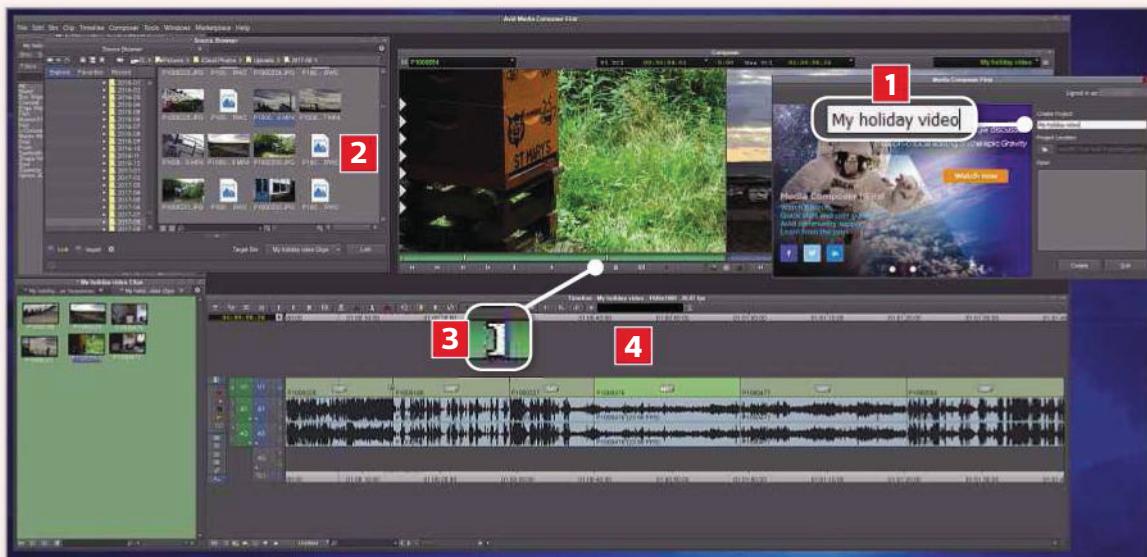
As Avid is keen to point out, around 95 per cent of all mainstream movies are edited using the full version of Media Composer, including recent Hollywood hits like *Baby Driver* and *The Martian*. This free version imposes a few restrictions. Editing is limited to four video tracks and eight audio tracks, for example, and output quality is capped at 1080p (so no 4K). There are a few other professional features missing too, such as support for some formats. But, other than that, this is the real deal. It's really quite incredible, especially when you bear in mind that Media Composer sells for £1,100.

Don't be put off if you find the program a little tricky at first. Professional video-editing tools tend not to oversimplify

their powerful tools. Thankfully, Avid supplies not only a useful Quick Start guide ([www.snipca.com/26250](http://www.snipca.com/26250)), but also a series of handy video tutorials ([www.snipca.com/26251](http://www.snipca.com/26251)) to encourage new users to learn the ropes. Our mini-guide below will also help you get started.

You'll have to jump through a few hoops to get the free software – Avid requires you to create an account, verify your email address and share some information about how you're planning to use the program before you can actually get your hands on the tool. When you do eventually reach the download page, click the PC version of the Media Composer First installer, then extract and run it.

To launch the program, sign into the Avid Application Manager (you'll find an icon in your notification area), click Apps, then Open. If you see an error message when you first launch it, click your email address in the Avid Application Manager, select Preferences, then click Clear Cache Files and relaunch the tool.

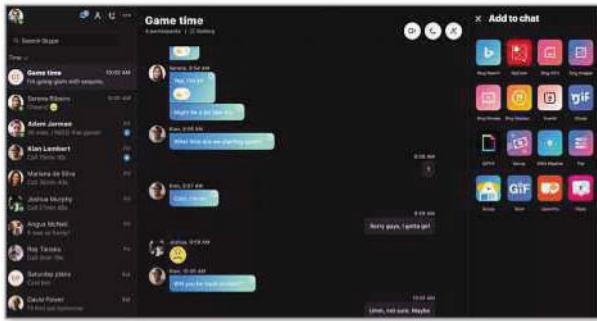


**1** Launch Media Composer First, type a name for your new project when prompted and select the Project Location – by default this is your Documents folder but you can change this. Click Create.

**2** Click Tools, Source Browser, then use the file browser to locate video clips (or photos) you want to use. Drag and drop them into the Clips window at the bottom left.

**3** Drag a clip into the Source window. Click and drag in the green bar to where you want the clip to start, then click Mark In 'I'. Drag to where you want it to end and click Mark Out 'F'.

**4** Drag the trimmed clip from the Source window into the timeline below. Repeat the process with any other clips you want to add, dragging them into the order you want in the timeline.



## COMMUNICATION

### Skype 12.8.487

[www.snipca.com/26253](http://www.snipca.com/26253)

**What you need:** Windows 7, 8/8.1 or 10

The latest version of Skype for desktops features a pretty radical redesign. You can now select from a light or dark theme, or opt to match it to the Windows theme – click your account icon, Settings then scroll down to ‘Choose a mode’ for the new setting. There’s also a new notifications panel (click the bell icon to access it), and a Chat Media Gallery, where you can quickly locate files and links sent to you in messages. **Emoji** reactions can be added to messages in conversations and video calls. And you can use @mentions (@ followed by their name) to get someone’s attention in a group chat. Skype also now supports Bots – artificial-intelligence tools from the likes of Skyscanner that automatically answer questions. Click Contacts, then Bots for a list.

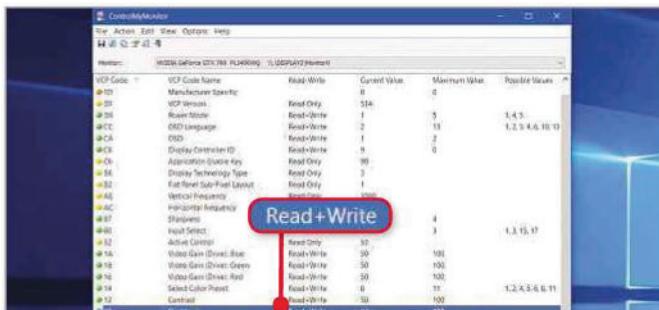
## SYSTEM TOOL

### ControlMyMonitor 1.0

[www.snipca.com/26252](http://www.snipca.com/26252)

**What you need:** Windows Vista, 7, 8/8.1 or 10

Yet another brilliant tool from NirSoft, ControlMyMonitor lets you do just that – control all your PC screen’s settings via a user interface. Among the settings you can change are brightness, contrast, **colour temperature**, sharpness and black level. Click a ‘Read+Write’ setting (Read Only settings can’t be changed), then tap F7 to decrease the value, or F8 to increase it. If you have one of those screens whose controls are in an inconvenient place or are just awkward to use, then this tool is an absolute must. It’s portable too, so you don’t have to install it. Just extract it from the ZIP file and run it. ControlMyMonitor won’t display any information when you first launch it. Make sure your screen is selected in the dropdown menu at the top of the window, then press F5 to refresh the view.



## WHAT SHOULD I DOWNLOAD?

We tell you what software to use

### How can I get a dual-pane File Explorer view?

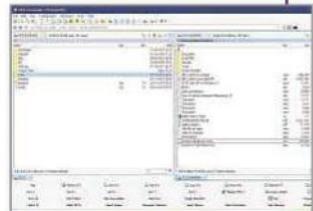
**Q** I often find myself moving files from one location to another, so the ability to view two locations at once in the same File Explorer window would be very useful. Is there any way of enabling this? Or perhaps an alternative I can use instead?

Chris Poole

**A** We agree – having the option to switch to a dual-pane or a browser-like tabbed view in File Explorer would be useful, but Microsoft hasn’t seen the light. You can crowbar features like tabs into File Explorer using an extension called Clover 3. But we don’t recommend it, because it can make other Windows tools stop working.

Instead, try installing a non-Microsoft alternative to File Explorer that supports the features you need. Free options include Explorer++ (<https://explorerplusplus.com>). Double-click the tab bar or press Ctrl+T to open a new one. If you prefer a dual-pane layout, you can try AB Commander ([www.snipca.com/26254](http://www.snipca.com/26254)) and WinNC ([www.winnccom](http://www.winnccom)), but they aren’t free. AB Commander is £30 and WinNC will set you back £25.

Our favourite free option is Multi Commander (<http://multicommander.com>, pictured). It has a customisable interface – you can choose from a Windows-like look, or a more Multi Commander style (or a blend of the two). With a dual-pane layout, it includes powerful file-management tools, such as folder comparison, a built-in compression tool, and the ability to add colours to quickly identify types of files or recent additions. There’s even a portable version of Multi Commander, if you prefer.



**✉** Do you need our advice on what software to use?  
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# Reviews

New products tested by our experts

PC | £1,015 from Wired2Fire [www.snipca.com/26219](http://www.snipca.com/26219)

## Wired2Fire Pyro Reactor

Burn a smaller hole in your pocket



We've often spoken in these pages about the appeal of the £1,000 PC – the magic price point at which, down the years, manufacturers have been able to put together a desktop machine with the best possible performance per pound.

Today, with that pound beset by geopolitical pressures of all kinds, there's a danger that the £1,000 PC will creep up to more like £1,200, which feels considerably less appealing. But here's one that only breaks the budget by the price of a night down the pub and still delivers state-of-the-art excellence.

**“It outperforms many more costly desktop PCs”**

The heart of the machine is an AMD Ryzen 5 1600X processor that's been **overclocked** from 3.6 to 3.8GHz. Given AMD's history of processors that unintentionally double as room heaters, and the rather basic cooling fan fitted here, we were worried the Wired2Fire Pyro Reactor might live up to its name and incinerate our test laboratory. On the contrary, core **CPU** temperature remained within its safe range and the only thing it burned through was our **benchmark**

tests, showing exceptional ability in photo and video editing and – unsurprisingly for a processor with no less than six **cores** – multitasking. This is performance to beat a stock Ryzen 7 1700 and most Intel i7 processors.

3D games and creative software benefit from a dedicated **graphics card** – a GeForce GTX 1060, which brings 6GB of its own memory to the table. Despite sitting just below the middle of Nvidia's current range, this is a very powerful card, and we had no trouble running the most demanding games on very high quality settings in Full HD.

As is often the case with £1,000 PCs, **4K** resolution was a step too far, but even that was possible with settings turned down a bit. A score of 7.9 out of 11 in **SteamVR** also beat similarly priced – as well as more expensive – PCs we've seen recently, so if you are interested in virtual reality you won't be disappointed.

Unsurprisingly, Wired2Fire didn't have much budget left for anything beyond these key components. The hard drive is a typical 1TB unit, but Windows 10 Home does come installed on a faster 250GB **SSD**. The Samsung 850 Evo achieved more than 500 megabytes per second in our sequential **read-speed** test, which reveals the highest speed you can expect in actual use. Writing was nearly as fast.

The motherboard has another **PCI-E** x16 slot (although it's limited to x4 speeds), two PCI-E x1 slots for basic upgrades such as Wi-Fi (which doesn't come as standard), and two more **RAM** sockets to expand the reasonable 16GB already included. Six of the eight USB ports are USB 3.1, and there's a comprehensive set of monitor connections to choose from.

You also get an unused **M.2** slot for the fastest SSDs, but space for other internal drives is restricted somewhat by the case, Cooler Master's angular MasterBox Lite 5. There's no room for a 5.25 drive (such as a DVD or Blu-ray drive) at all, and you

could only realistically install one extra 3.5in and one 2.5in unit. That's disappointing for a pretty chunky tower, but probably won't limit most users in reality. We'd have expected to see more fans installed, but since the Pyro Reactor managed fine without them in our tests, which have broken more than one overclocked PC in the past, we can't fault Wired2Fire's choices.

### SPECIFICATIONS

3.8GHz AMD Ryzen 5 1600X six-core processor  
• 16GB memory • 6GB Nvidia GeForce GTX 1060 graphics card • 1TB hard drive • 250GB SSD • 6x USB 3.1 ports • 2x USB 2.0 ports • Gigabit Ethernet • 2x HDMI ports • 3x DisplayPort • 2x DVI ports • VGA port • Windows 10 Home • 469x200x455mm (HxWxD)  
• Two-year warranty [www.snipca.com/26219](http://www.snipca.com/26219)

**VERDICT:** AMD's Ryzen chips really are giving Intel a run for their money at the moment, and this PC is great value for general and gaming use



### ALTERNATIVE: CCL Reaper £1,225

With a 3.4GHz Ryzen 5 1600 processor and Radeon RX 580 graphics card, this looked good a few months ago, but the Pyro Reactor overtakes it



LAPTOP-TABLET | £200 from Currys [www.snipca.com/26224](http://www.snipca.com/26224)

## Linx 12X64

A bigger smaller laptop

There's no shortage of Windows 10 tablets competing with Microsoft's Surface Pro – many at lower prices. It's not hard to offer a lower price than a machine that starts at £799 without a keyboard and can rise to two-and-a-half grand with all the bells and whistles. But the Linx 12X64 doesn't even cost two-and-a-half hundred – and that's *with* a keyboard included. In short, it's one of the cheapest and most portable PCs you can buy. So should you buy it?

“A great-value little two-in-one, but don't expect supercomputing”

We're used to seeing low-cost Windows tablets with tiny 10-inch screens, such as the Asus Transformer Mini (£320 from Amazon [www.snipca.com/22760](http://www.snipca.com/22760), see our review, Issue 491). The 12X64 has a Surface-like 12.5in format, giving you enough room to work comfortably. And while it's not the sleekest or lightest design it feels fine, with a folding kick stand.

The Full HD resolution is plenty at this size, and although it's not very bright, the IPS LCD screen displays very dark black pixels, which gives it excellent contrast. Covering just 63 per cent of the sRGB colour range, and with poor accuracy as well, it's not suitable for serious photo or video editing, but for general Windows use and watching videos it's quite acceptable.



Inevitably, processing power is not a strong point. The Intel m3 chip in the most affordable Surface Pro model is quite slow, but it might as well be a quantum supercomputer compared to the 12X64's 1.44GHz Atom, which is accompanied by just 4GB of not very fast memory. It's good enough to run everyday programs, check your emails and watch YouTube. If you want to make it grind to a halt, you won't need to attempt 4K video editing – just open a few web browser tabs at the same time.

Of course, we did run our 4K video processing tests, because we're cruel. The 12X64 performed similarly to the Transformer Mini, which has the same processor, but lagged way behind pricier laptops. And it only lasted seven hours 10 minutes in our video-playback test, compared with the Mini's 11 hours 19 minutes. But it is significantly cheaper – currently discounted to just £200 if you shop around.

The magnetic keyboard works well, with comfortable typing, while the trackpad responds reliably. 64GB of storage isn't a lot, but enough if you keep your photo and video collections elsewhere. Overall, as long as you don't need more performance and battery life, the 12X64 is good for the money.

### SPECIFICATIONS

1.84GHz Intel Atom x5-Z8350 quad-core processor • 4GB memory • 64GB flash storage • 12.5in 1920x1080-pixel screen • 2-megapixel rear camera • 2-megapixel webcam • MicroSD slot • USB 3.0 port • 802.11n Wi-Fi • Bluetooth 4.0 • Windows 10 Home • 189x315x10.7mm (HxWxD) • 930g (without keyboard) • One-year warranty  
[www.snipca.com/26225](http://www.snipca.com/26225)



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Computeractive is owned by Dennis Publishing, which owns a hi-tech facility for testing the latest technology. 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 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](http://www.expertreviews.co.uk)) and Alphr ([www.alphr.com](http://www.alphr.com)). This means we can test thousands of products before choosing the most relevant for Computeractive.

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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:** This isn't a Microsoft Surface at a fraction of the price, but it is a usable Windows 10 laptop-tablet



**ALTERNATIVE:** Asus Transformer Mini T102HA £320 The smaller screen won't suit everyone, but this tablet is nicely made and lasts a full day on one battery charge



# Reviews

PRINTER | £119 from Amazon [www.snipca.com/26245](http://www.snipca.com/26245)

## HP OfficeJet Pro 7720

This inkjet is the business

We're a fan of A4 printers like this, which feed the long side of the paper, meaning you can also use A3, at least for occasional jobs. An A3 poster is much more eye-catching, and fitting two pages on each side of an A3 sheet lets you print out, fold and staple an A4 magazine or brochure. You wouldn't want to attempt a print run of thousands with an inkjet like the OfficeJet Pro 7720, but it's a very practical format for the home or small office, and for most people it'll work out cheaper to run than a laser.

“ Print quality is generally good, and scans are sharp and accurate ”

HP's revamped case design has everything in familiar places, but looks notably neat and professional, though relatively large. It has clean lines and a striking combination of white and glossy black finishes. The touchscreen at the top left is a lot smaller than the black area around it, and although it looks like it might tilt up for easier access, it doesn't. Still, options are clearly presented.

On top is an A4 scanner with a 35-sheet Automatic Document Feeder (ADF), which you can lift up to place thicker originals on the scanning glass. Either way, you can only scan one side at a time, which is a pain for big jobs. The printer can print both sides (duplex) automatically.

The OfficeJet Pro 7720 connects to your PC and other devices via Ethernet, USB



or Wi-Fi, and HP's Windows 10 software has been improved enough not to irritate us too much. Our 25-page text document came out at 22.7 pages per minute (ppm), which is great for a basic inkjet, and colour graphics only slowed it down to an acceptable 8.6ppm. Five A3 pages came out in 26 seconds, or a minute with heavy graphics. An A4 scan at a sharp 300 dots per inch took 10 seconds.

Single photocopies were a bit slow, at 16 seconds in black and white or 22 in colour, while the ADF copied long documents at just over 7ppm. Print quality is generally good, although there are better choices for top-quality photos. Similarly, scans are sharp and accurate but didn't find all the detail in shadows.

HP offers a choice of ink-cartridge capacities, with the biggest bringing running costs down to a reasonable 5p per standard colour page. You can also subscribe to its Instant Ink service to get replacements delivered automatically, which it reckons will work out cheaper.

### SPECIFICATIONS

- 4800x1200dpi maximum print resolution
- 1200x1200dpi maximum scan resolution
- 35-sheet ADF • USB • Ethernet • 802.11n Wi-Fi
- 306x585x445mm (HxWxD) • 15.5kg • Three-year warranty [www.snipca.com/26245](http://www.snipca.com/26245)

**VERDICT:** If documents rather than photos are your priority, this is an attractive and flexible machine that's reasonably cheap to run



**ALTERNATIVE:** Canon PIXMA MG5750  
£69 If you don't need the document feeder, we recommend this – and it's better for photos



## Do I really need... Android Oreo?

### What does it do?

Named after the popular US biscuit (pictured), Oreo is the official nickname of Android 8, the latest version of the phone and tablet operating system that's developed by Google and licensed to hardware makers (along with the Google Play Store and other extras). As you'd expect of an update, it does the same things as before, but better.



### Why would I want it?

That's not immediately obvious: there are no big visible changes this time. Behind the scenes, though, Google has tried to make Android work more smoothly, and people who've tried Oreo – only available on Google's Pixel phones at the time of writing – are impressed. You may notice the Settings page is simpler, with options nested into categories, and notifications have been tidied up. Restarting your device could be up to twice as fast, and efficiency improvements may increase your battery life and decrease mobile data used in the background. Picture-in-Picture lets you see video content as you perform other tasks (see screenshot).



### What's the catch?

Like previous updates, Android 8 will be available as a free update to many recent Android devices, but it's not clear exactly which ones and when. And because manufacturers customise it, not everyone will get the same experience. It's all very different from Apple's iOS, which only runs on Apple devices. Everyone with an iPhone or iPad made within the last few years is offered each update at the same time. It's a shame things can't be so straightforward for Android users.

### So can I do without it?

You'll probably have to, at least for a month or two longer.

**PROGRAMMABLE ROBOT** | £200 from Amazon [www.snipca.com/26143](http://www.snipca.com/26143)

## Anki Cozmo

Christmas present for the kids?

New to the UK, this robot is small enough to sit on an adult's hand – although he'll seem bigger to kids. We're not sure how robot gender works. Anki calls Cozmo 'he' – your kids may beg to differ. He looks like a digger, with mechanical arms to lift the three light-up cubes supplied (pictured). But Cozmo's unique attraction is his personality, expressed through the big blue pixelated eyes displayed on his front screen. If you have younger members of the family, these remind you of another well-known robot. And that's no coincidence: an animator from Pixar, the studio that made animated sci-fi film *Wall-E*, helped design Cozmo, and his expressions and reactions – including sounds – feel endearingly real.

Cozmo works with an app on your phone or tablet. His built-in video camera and sensors can recognise faces, so he'll respond to people he knows – and even to pets. You can tap his blocks to tell him to stack them, and he'll do it while showing you how he feels about it. He's even prone to the odd tantrum if pushed too hard.

His 'artificial intelligence' (AI) really comes into play when you challenge him to a game, which revolve around pattern-matching, memory and fast reactions. He'll be overjoyed when he wins and cross when he loses, and will improve his ability along with you.

For all the talk of AI, it seems more like Cozmo is pre-programmed with behaviours that he slowly reveals over time. A less endearing aspect of this is the Loyalty Tracker, which rewards you with extra features when you 'feed' and play with him sufficiently. It's meant to draw kids in, but having paid for the thing,



you'll want to use all its capabilities when you choose.

Playing with Cozmo really is a lot of fun, even once the appeal of the very simple games begins to wear off. You can leave him to play by himself or do tricks with his blocks, and the camera can be used in Explorer mode to drive Cozmo remotely, seeing what he sees on your phone or tablet screen.

**“A lot of fun for small kids and big kids alike, but Cozmo needs some looking after”**

Through the Code Lab software kids can program his abilities, although this really just amounts to lists of commands. There's also a software development kit (SDK) for more experienced coders, using the Python language.

Cozmo is clearly aimed at children, with a design reminiscent of Fisher-Price toys, although a plain grey Collector's Edition (£200 from [www.snipca.com/26145](http://www.snipca.com/26145)) is also available. But he's not quite simple enough for kids to use on their own. Even after setting him up and pairing him with your phone or tablet via

Wi-Fi, you have to go through a fiddly initialisation process every time you get him out, as well as charging him in the supplied dock. It's a bit of a hassle to keep track of all his bits and bobs (a carrying case costs £30 extra), and annoyingly you're expected to provide your own USB mains power adapter.

Assuming your adapter has a decent power output, charging Cozmo for 20 minutes gives you about an hour and a quarter play time. A full charge takes about half an hour, and should last an hour and a half.

The cubes each take a replaceable alkaline LR1 battery – the one that looks like a shorter AA – which is reckoned to last 20–40 hours. There are also several maintenance routines that need running regularly to keep the moving parts working smoothly.

We loved Cozmo as a character, but for £200 we'd have liked him to be simpler for younger users and offer more scope to older ones.

**VERDICT:** Despite the high price, limited features and fiddly operation, it's hard to resist the charm of this characterful little robot



**ALTERNATIVE:** Sphero SPRK+ £120 This see-through ball rolls around under your command. It's less impressive than Cozmo, but good fun



### SPECIFICATIONS

Requires Apple, Android or Amazon Kindle Fire device (see [www.snipca.com/26144](http://www.snipca.com/26144)) • 128x64-pixel screen • Video camera • 70x55x100mm (HxWxD) • 1kg [www.snipca.com/26146](http://www.snipca.com/26146)



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# Reviews

SOLID-STATE DRIVE | £186 from Amazon [www.snipca.com/26247](http://www.snipca.com/26247)

## Samsung T5 500GB

Win the space race

Samsung's T3 external SSDs are deservedly popular, and here's the next edition, called the T5, because where would we be if tech companies numbered everything in logical order? The smart metal finish has changed from monochrome to a stylish blue, at least if you opt for 250GB (£123) or this 500GB model. Shell out for a terabyte (£369) and it's black, while 2TB (£727) gets you black plus a raised eyebrow from your bank manager. As before, it's slim and durable enough to take anywhere.

**“The T5 is slim, fast and durable, with built-in encryption”**

The NAND chips from which SSDs are made come in various types that trade off price against performance and reliability. Samsung uses TLC, storing three bits per cell, which is cheaper than MLC (two bits) or SLC (one bit). The T5 isn't intended for heavy-duty users where you'd constantly be writing huge amounts of data, but it's likely to last a good few years of normal use. Encryption is built in, and if activated no data is



readable without a password, entered via your PC.

Samsung claims a **read speed** of up to 540 megabytes per second (MB/s) for the T5, and 515MB/s for **write speed**, which is fast for an external drive. The write speed is helped along by a **cache**, so larger writes may slow down. Now, the maximum speed of the first generation (Gen1) **USB 3.1** interface is five gigabits per second, so to avoid any bottlenecks Samsung has fitted a **USB Type-C** port that supports USB 3.1 second generation, which is twice as fast.

Most PCs still only support Gen1, whether they have the blue Type-A USB

### SPECIFICATIONS

500GB 1.8in SSD • **USB 3.1 Gen2 Type-C port** • Type-C and Type-C to Type-A cables included • Optional software for Windows 7 or higher, Mac, Android • 10.5x74x57mm (HxWxD) • Three-year warranty [www.snipca.com/26247](http://www.snipca.com/26247)

3.1 sockets or the new Type-C. Only Type-C ports described as 'USB 3.1 Gen2' or '**Thunderbolt 3**' (an even higher standard) go faster. In our tests, via Gen2, we reached around 450MB/s read and 370MB/s write. We were surprised to find that switching to a Gen1 port made little difference, so for this generation of drives it's still not a critical issue.

**VERDICT:** This is the fastest external drive we've tested, and also one of the priciest, but only a few pounds dearer than most alternative brands



**ALTERNATIVE:** SanDisk Extreme 510 £143 We haven't tested it yet, but this cheaper 480GB drive's speed will be limited by its **USB 3.0** interface



## WHAT SHOULD I BUY? We solve your buying dilemmas

### How can I cast from my iPad to my TV set?

**Q** My iPad is good for watching films in bed, but I feel daft watching it in the living room with a much bigger TV screen sat in the corner. I know one solution is to buy an Apple TV, but at £149 it seems expensive. Is there any other way to send the picture to the telly? I have a Full HD TV with **HDMI** sockets.

Eric Simonite



**A** Apple TV is the best answer, but you're right, £149 is pretty steep. You could pick up a third-generation model on eBay for around £85, although you won't get the new Siri remote control, which lets you find content on iTunes and other services by saying aloud what you want.

Another option is Google's Chromecast (pictured). This costs £30 from shops like Currys (but not Amazon – they don't sell Google's rival to their own Fire TV) and hangs off your HDMI

port. Some recent TVs even have it built in. Unlike with Apple TV, your iPad doesn't automatically have the ability to send anything from its screen to Chromecast, so you'll need to use apps that support Chromecast. These include BBC iPlayer, Netflix, Now TV, YouTube, Google Play Movies & TV and a few others. Just tap the Chromecast icon to **cast** to your TV.

Do you need advice on what you should buy? Email us at [letters@computeractive.co.uk](mailto:letters@computeractive.co.uk)

# nuu metal body

## Pay for things you need, not things you don't



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HERE AT NUU MOBILE, we believe in spending money where it matters. When we design our phones, we want them to look good, to speed through everyday tasks and to be affordable.

That philosophy is obvious through our pair of new phones, the all-metal M2 and M3 (the only key difference is the size of the screen). Based on Android 7, with no additional bloatware or overlays, they're simple to use and boast a slim, stylish design.

As always with NUU Mobile phones, they include space for two SIMs. If you're holidaying abroad, that means you can buy a local SIM and not have to worry about how much data you're using – and you can keep your normal SIM in place so you don't miss calls or texts.

Or perhaps you want more storage than the 16GB built into the phone? No problem. Just slip a microSD card (up to 64GB) into

the dual-purpose slot.

These phones haven't just been designed to appeal to consumers. Complete with SOTI certification for business, they're designed to fit in with your mobile strategy – especially if part of that strategy isn't to pay over the odds for features you don't need.

You can buy from NUU Mobile with confidence, too. We offer a two-year warranty with all our phones and provide a UK-based 7 days a week support centre you can call or email about any setup, hardware or repair issues.

We've also created two special offers for PC Pro readers. First, we're offering great bundles for business customers ordering multiple handsets or accessories. Email [sales@uk.nuumobile.com](mailto:sales@uk.nuumobile.com) for details.

Plus, if you buy a phone before 31 December 2017, we'll give you a free case! To claim your case, visit [nuumobile.com/pcpro](http://nuumobile.com/pcpro).



Sleek metal body design



Android 7 Nougat



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microSD

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## AG352QCX

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**TV-STREAMING STICK** | £79 from Amazon [www.snipca.com/26260](http://www.snipca.com/26260)

## Roku Streaming Stick Plus

Stick your TV to the internet



Roku's video-streaming boxes compete with the likes of Amazon Fire and Apple TV, but aren't tied to a branded content store. The range of its various boxes with illogical numbers has vexed us in the past, but the Streaming Stick Plus is a direct rival to the Amazon Fire TV (see our review, Issue 515). There's also an Express version (£29.99), which we'll have a look at in the next issue. This could save you quite a lot of money if you don't have a TV with 4K resolution or HDR colour, but it lacks some other features too.

**“A tidy interface and broad choice of channels - all in 4K”**

Those features are, however, supported by the Streaming Stick Plus, which, like the new Fire TV, slots straight into your TV's HDMI port. Unlike the dangly designs of the Fire TV and Google Chromecast Ultra, the Streaming Stick Plus sticks out, like, well... a stick, with a miniUSB cable dangling off it to supply power. This in turn has a long bulge in it for the Wi-Fi aerial. It all feels a bit awkward, and you might want a short HDMI extender (£4.99 from Amazon [www.snipca.com/26261](http://www.snipca.com/26261)) so you can gaffer-tape the stick to the back of your

### SPECIFICATIONS

802.11ac Wi-Fi • MiniUSB port (USB mains power adapter may be required) • HDR UHD up to 60fps • Bluetooth 'point anywhere' remote control • 15x20x12mm (HxWxD) • One-year warranty  
[www.snipca.com/26262](http://www.snipca.com/26262)

TV out of sight.

The little gizmo responds very smoothly to commands from the supplied remote control, and the on-screen menus are easy to use, even if the purple colour scheme is a bit garish. You can also speak the name of the show or actor you want to find, but voice control isn't as good as Amazon's Alexa or Apple TV's Siri.

Apps are included for BBC iPlayer, other terrestrial channels, Now TV, Netflix and so on, plus both Amazon and Google's video services, but not Apple iTunes or BT Sport. There are dedicated buttons on the remote for Netflix and three other channels we'd never heard of, which is annoying. You can also play simple games like Solitaire, but there's nothing like the Amazon Fire or Apple TV's ability to install thousands of high-quality apps and games.

We had no complaints about video or audio quality, and Wi-Fi reception was good. Unlike the Express, the Stick supports 2.4GHz and 5GHz wavebands. The tidy interface and broad choice of channels make it a decent choice for TV, films, radio and music.

**VERDICT:** It's not as advanced as Amazon's similarly priced dongle, but works very nicely and adds access to Google Play Movies & TV



**ALTERNATIVE:** Amazon Fire TV (2017) £70 This dangly dongle has a similar choice of services – no Google, but it has Alexa, apps and games



That was then...

## This is now!

How technology has changed

### Macintosh Portable

#### WHAT WAS IT?

The Apple Macintosh Portable, released in September 1989, was one of the first mainstream laptops with an LCD screen that folded against a keyboard. Flat screens were extremely expensive at the time, and not yet in general use as desktop monitors. It cost \$7,300 (£11,000) with a hard drive and there was a slot on the side for 3.5in floppy disks.



#### HOW HAVE THINGS CHANGED?

The Macintosh Portable was built around three lead-acid cells, essentially a car battery, that could power it for up to 12 hours. Unfortunately, that meant it weighed around 7.5kg, about the same as six modern laptops.

The 9.8in screen displayed 640x400 pixels, one-twelfth the resolution of a current 9.7in iPad, in one-bit black-and-white LCD, like a calculator. With no backlight, it was only visible under good lighting. Rather than a touchpad, it had a trackball, which sat to the right of a full mechanical keyboard. While today's laptops often have just one USB Type-C port, the Macintosh Portable had eight contemporary desktop connectors.

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## NEXT ISSUE

ON SALE  
Weds  
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Our pick of products that have won the Buy It award

## LAPTOP

**Asus ZenBook UX310UA**  
£700 from [www.snipca.com/26126](http://www.snipca.com/26126)  
Tested: Issue 503



Gradually being replaced by the 410 (which we haven't tested yet), the i5 processor version of this is now harder to find, but the i3 version is more than good enough for general use. The highlight is the super-sharp QHD screen.

**ALTERNATIVE:** **Dell XPS 13** This premium laptop starts at £1,149, but our pick is the i7 with QHD touchscreen. £1,379 from [www.snipca.com/26123](http://www.snipca.com/26123)

## DESKTOP PC

**Wired2Fire Pyro Reactor**  
£1,015 from [www.snipca.com/26219](http://www.snipca.com/26219)  
Tested: Issue 516



AMD's six-core Ryzen 5 1600X is overclocked to a blazing 3.8GHz in this well-balanced system, paired with a GTX 1060 graphics card, 16GB memory, 250GB SSD and 1TB hard drive. The case is limited but there's plenty of ports.

**ALTERNATIVE:** **Palicomp i5 Titanium** Good all-round performance from a Kaby Lake Intel i5 processor with a 250GB SSD and 1TB hard drive. £500 from [www.snipca.com/24543](http://www.snipca.com/24543)

NEW ENTRY

## APPLE iPAD

**Apple iPad 9.7in**  
£339 from [www.snipca.com/24079](http://www.snipca.com/24079)  
Tested: Issue 500



The replacement for the iPad Air 2 is slightly bulkier and has a downgraded screen but remains the best mid-sized tablet, with a sensible 32GB of storage. You'll need the £619 iPad Pro if you want to use the Pencil stylus (£99).

**ALTERNATIVE:** **iPad Mini 4** The smaller 7.9in iPad is excellent, but Apple's decision to sell it only with a huge 128GB makes it unreasonably expensive. £419 from [www.snipca.com/24080](http://www.snipca.com/24080)

## ANDROID TABLET

**Samsung Galaxy Tab S3 9.7**  
£600 from [www.snipca.com/24140](http://www.snipca.com/24140)  
Tested: Issue 501



Samsung's new mid-sized tablet has a wonderful HDR screen and comes with a pen included, unlike Apple's iPad Pro. But its processor isn't the fastest and it's disappointingly expensive, especially compared to the £339 iPad 9.7in.

**ALTERNATIVE:** **Asus ZenPad 3S 10** With eight-hour battery life and 4GB of memory for fast multitasking, this iPad-like 9.7in tablet is great value. £270 from [www.snipca.com/24858](http://www.snipca.com/24858)

## APPLE iPhone

**Apple iPhone SE**  
£349 from [www.snipca.com/24854](http://www.snipca.com/24854)  
Tested: Issue 474



Hanging on for a third year, Apple's smaller phone is deservedly popular, challenging Android rivals with decent processing power, a great screen and camera, fingerprint recognition and Apple Pay. 32GB of storage should suffice, but there's no microSD.

**ALTERNATIVE:** **iPhone 8** Expensive and a bit fragile, but superbly equipped. If you can manage with 32GB, consider the iPhone 7 at £150 less. £699 from [www.snipca.com/25789](http://www.snipca.com/25789)

## ANDROID PHONE

**Motorola Moto G4**  
£170 from [www.snipca.com/21685](http://www.snipca.com/21685)  
Tested: Issue 479



With an attractive 5.5in screen, an excellent 13-megapixel camera, a 13-hour battery and decent performance, the G4 is the best budget option.

**ALTERNATIVE:** **Samsung Galaxy S8** The wraparound screen looks stunning and this top-end phone has no real flaws. Now that it's getting discounted a bit, even the price might not put us off. £575 from [www.snipca.com/24857](http://www.snipca.com/24857)



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## COMPETITION

### Win 1 of 3 Devolo GigaGate Wi-Fi bridges

Winner of a Great Pick award in *Computeractive*, devolo's GigaGate Wi-Fi bridge delivers lightning-fast internet around your home. Comprising a base and satellite, it provides an effective, targeted connection between your router's location and your devices using the 5GHz band. The gigantic 2Gbps transmission capacity makes for a fantastic multimedia experience. To enter, email your address to [cacomp@dennis.co.uk](mailto:cacomp@dennis.co.uk) with 'gigagate' in the subject line by midnight 19 December.



The devolo GigaGate Starter Kit is sold in selected high-street shops and online, including on Amazon ([www.snipca.com/25979](http://www.snipca.com/25979)). It has an RRP of £219.99. Extra satellite units cost £129.99 each ([www.snipca.com/25980](http://www.snipca.com/25980)). For more information visit [www.devolo.com](http://www.devolo.com)

## HOMEPLUGS

### TP-Link AV1200 Powerline Wi-Fi Kit WPA8730

**£110** from [www.snipca.com/23766](http://www.snipca.com/23766)  
**Tested:** Issue 495



HomePlug adapters use your mains wiring to extend your network where Wi-Fi won't reach. This kit provides Wi-Fi at the far end too, so phones and tablets can connect as well as PCs and other Ethernet-equipped devices.

**ALTERNATIVE:** D-Link PowerLine AV2 1000HD Gigabit Starter Kit Fast (speeds of up to 1000Mbps), much cheaper and very easy to set up, but the lack of a passthrough socket is frustrating.  
**£24** from [www.snipca.com/21691](http://www.snipca.com/21691)

## SOLID-STATE DRIVE

### Samsung 960 Pro 512GB

**£283** from [www.snipca.com/23389](http://www.snipca.com/23389)

**Tested:** Issue 491



Made for the fast M.2 interface that's increasingly common inside PCs, this is not a cheap option, but if you want an SSD you want speed, and this has it in spades. Samsung's 850 Evo (£150 for 500GB) is a good budget choice.

**ALTERNATIVE:** Kingston SSDNow UV400 480GB Much slower, but still faster than a hard drive, this gives you more GB per pound. £139 from [www.snipca.com/22127](http://www.snipca.com/22127)

## WEB DESIGN

### Xara Web Designer Premium 365

**£70** from [www.snipca.com/26200](http://www.snipca.com/26200)  
**Tested:** Issue 453



This visual web-design program makes creating sites more like laying out a document than writing HTML code, and sites can be responsive, meaning they look right on both big and small screens without extra work. A basic version is also available for half the price.

### ALTERNATIVE: Incomedia WebSite X5

**v13 Evolution** It may feel a little basic, but this straightforward program outputs efficient HTML code and responsive pages. £60 from [www.snipca.com/19440](http://www.snipca.com/19440)

# How to stay safe in the cloud

The cloud has brought a myriad of great software services to our fingertips wherever we want them, but with the immense benefit comes potential risk

**O**ne of the benefits of ubiquitous internet connectivity has been the rise of cloud services. From an experience that revolved around locally hosted data, a large proportion of our activities now involve information that resides primarily online. From email to multimedia, and even whole application suites, virtually any task can now be achieved with as little as a browser or internet-connected app.

It's truly liberating to be able to access your files and software anywhere you need to, on any device - notebook, tablet or smartphone, but this also poses a new set of problems for keeping your data secure. Cloud security is only as good as the way you use your apps and devices. Whether it's by hacking into your home network via an insecure router or having one of your mobile devices stolen, there are many ways that access can be obtained to your data on the cloud.

In mid-2017, routers from one of the UK's leading broadband vendors were found to have been shipped with a simple default password. Keeping the default router password is never wise, even if the default isn't so simplistic. You should also ensure that your router's firewall is turned on, although it should be automatically, and properly configured.

There are also good habits to get into when using any service that's internet connected - particularly when it comes to phishing emails. It's a good rule of thumb to never click on any email link unless you're sure it's legitimate. You can usually preview the URL of a link without following it by hovering your mouse over it, and if you don't recognise the website the email claims to be from, stay clear!

## Smarter passwords

Password management is another area that's increasingly problematic. We now rely on umpteen different cloud services, each with their own login credentials. It's very tempting to write down passwords on paper, in locally stored files, or on cloud-based services. But they are potentially very insecure, particularly if you rarely change your credentials.

It's nearly impossible to remember complex auto-generated passwords. However, a great way to create passwords that you can remember is to use a memorable sentence



and take the first letter or letters from each word, followed by a number sequence of your choosing. This will have similar strength to a completely random string, but much easier to recall.

## Be safe outdoors

When you are using a mobile device, there will be many times when you're accessing cloud services in public spaces. It's a good rule of thumb to make sure your device isn't discoverable on a public network. Also, be very careful before you connect to public Wi-Fi. Criminals have increasingly been creating rogue access points with SSIDs that have been copied from ones nearby, so users unwittingly join them thinking they're the real ones - thereby giving access to their devices.

It's recommended practice to change passwords regularly, so having a system for creating passwords that are hard to guess but easy to remember is essential. You should also keep track of all the services for which you have supplied credentials, as having one compromised could mean someone has a means to impersonate you and gain access elsewhere. To help with this, Kaspersky's Security Cloud includes a secure vault where you can store all your passwords.

By keeping an eye on security news you can act quickly if a breach occurs with a service you use. You shouldn't put complete faith in a cloud backup, either, or your internet connection. It's a good idea to keep at least one local copy of your most

important data on a home desktop or NAS device on your home network, and ensure it's as up to date as possible.

## Cloud security

Fortunately, security isn't just about you and your cloud habits. There are tools to help you spot new dangers and provide protection for your devices automatically. For example, the aforementioned Kaspersky Security Cloud adapts to whatever you're doing and enables the protection you need, such as keeping your connection safe on public Wi-Fi.

Kaspersky Security Cloud also runs in the cloud itself, so doesn't put a heavy load on your device like some locally-based services. It includes a built-in advisor that provides context-sensitive advice about steps you can take to remain secure in your current environment. There's a portal for managing all your devices, too. A Personal account protects up to three or five devices, and a Family account can protect up to 20 devices from multiple users at once.

It's hard to stay out of the cloud these days, we live our lives online though one device or another, but by taking the right precautions and arming yourself with a safety net like Kaspersky Security Cloud, you can enjoy all those cloud-based benefits without worrying.

To Find out more about Kaspersky Security Cloud, and try it out for free go to:  
<https://www.kaspersky.co.uk/security-cloud>

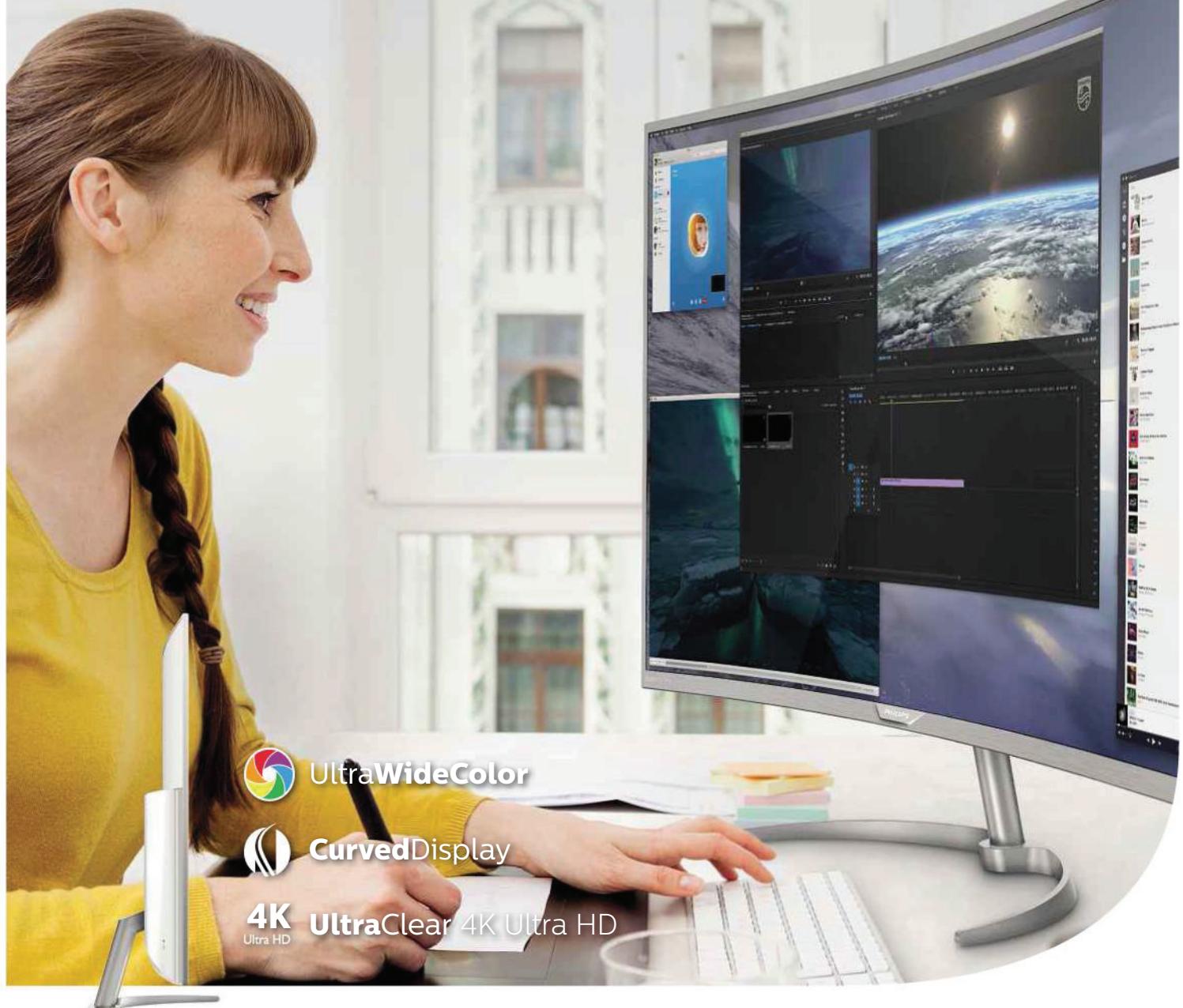


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**PHILIPS**

# Workshops & Tips

PULL OUT & KEEP  
Issue 516

Edited by Sherwin Coelho

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



**35** Create restore points better than Windows  
**38** Upgrade to W10 for free before loophole closes

**40** Send files from tablet to PC quickly  
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**47** Make Office Better  
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Online photo archives

## Create restore points better than Windows

**What you need:** Restore Point Creator; Windows Vista, 7, 8 or 10

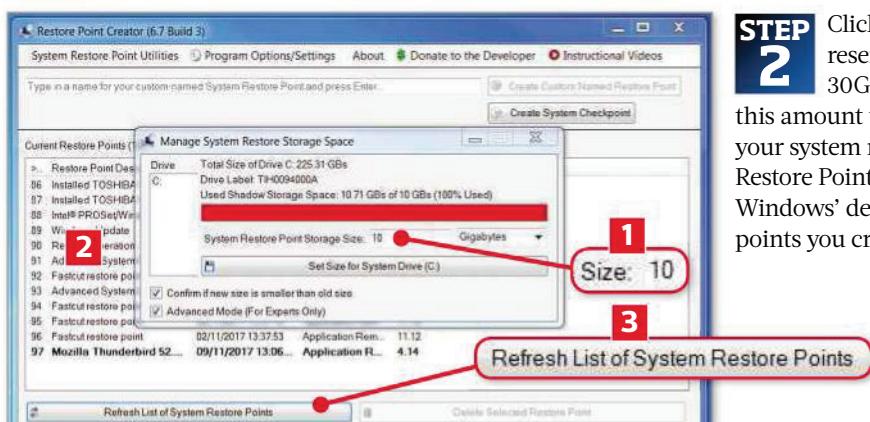
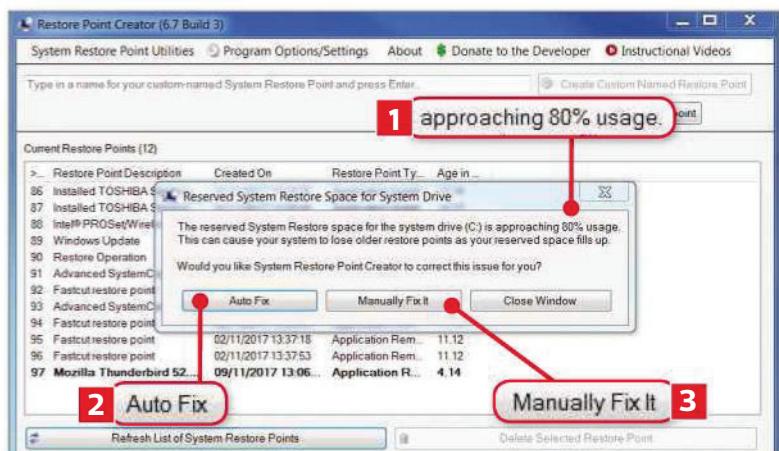
**Time required:** 40 minutes

Windows' System Restore tool is the first choice for many people who roll back their PC to an earlier point when they have a problem with it. Restore Point Creator is a brilliant free alternative program that has lots of useful

features that you won't find in Microsoft's default tool. For example, you can set your PC to create **system restore points** on a schedule and automatically delete older restore points so that they don't consume storage space on your PC.



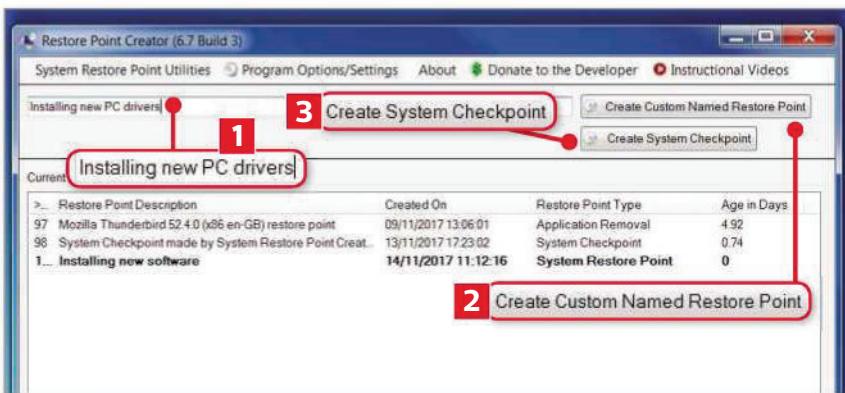
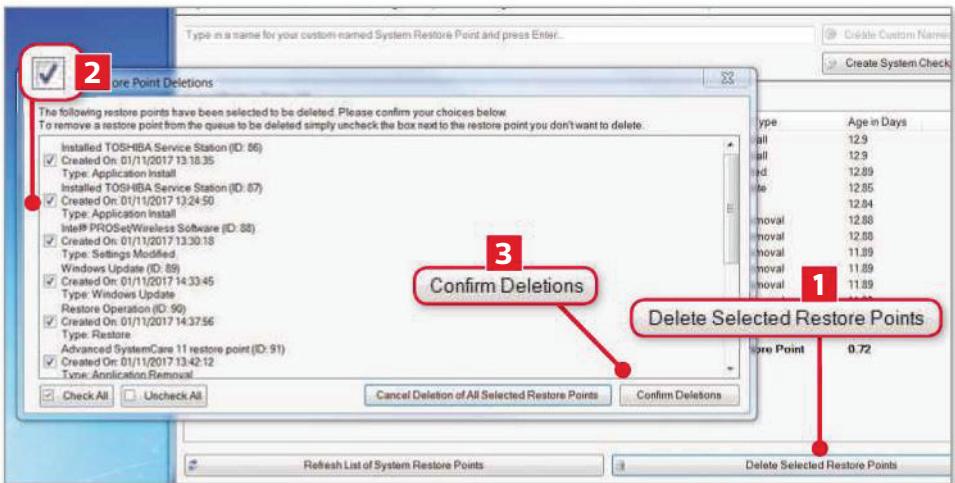
**STEP 1** To install the program, go to [www.snipca.com/26216](http://www.snipca.com/26216), click the Download Restore Point Creator Installer link near the top of the page, then run the downloaded setup file (the installer doesn't contain any unwanted extras). Open the program by clicking its desktop icon. Your PC reserves a certain amount of storage space (around 10GB) for any restore points you create. Unlike Windows' tool, when we opened the program, a message informed us that we'd used around 80 per cent of this reserved storage space **1**, and suggested two remedies: Auto Fix **2** and Manually Fix It **3**.



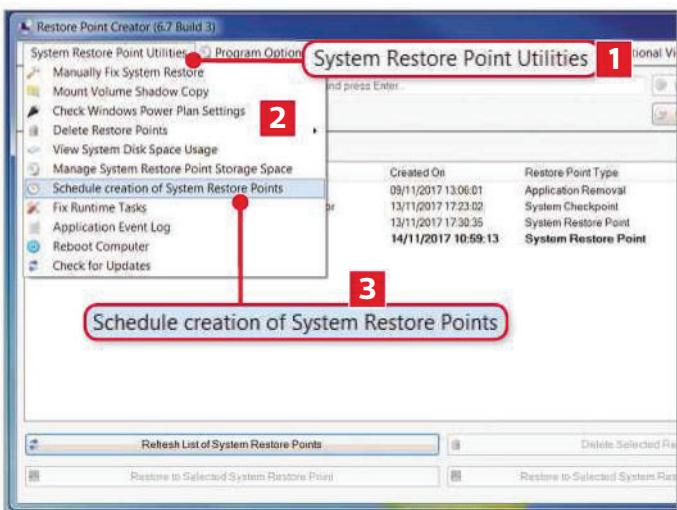
**STEP 2** Clicking Auto Fix increases the storage space reserved for system restore points from 10GB to 30GB. If you choose to manually fix it, you can set this amount to whatever you want **1**. The program lists all your system restore points **2**. Click 'Refresh List of System Restore Points' **3** if you don't see this list. In comparison, Windows' default tool only displays the last three restore points you created.

# Workshops

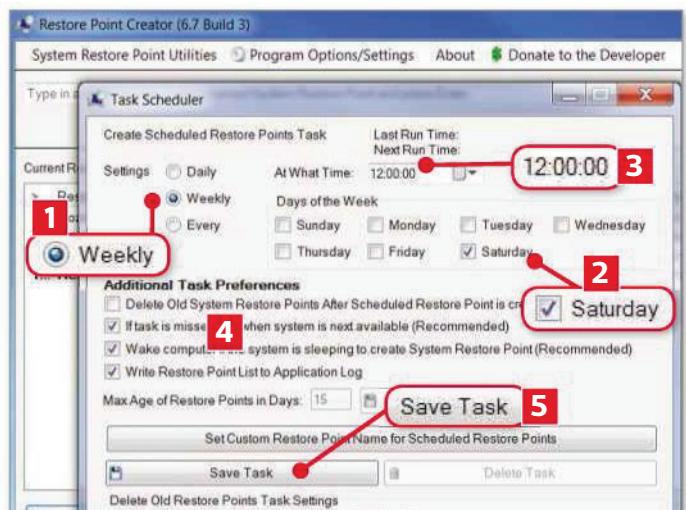
**STEP 3** Old restore points take up storage space on your PC, but there's no easy way to delete them using Windows' default tool. Restore Point Creator lets you delete multiple restore points easily. To do that, press the Ctrl key, click to select the restore points you want to delete (leaving only the most recent ones), then click Delete Selected Restore Points **1**. You'll see a pop-up menu with the restore points you selected ticked **2**. Click Confirm Deletions **3**.



**STEP 4** We'll now show you two ways to create a restore point using the program. You can name your restore point **1**, then click Create Custom Named Restore Point **2**. Alternatively, clicking the Create System Checkpoint button **3** gives it a generic name – 'System Checkpoint made by System Restore Point Creator'. Both these methods take a few minutes, after which the program will close.

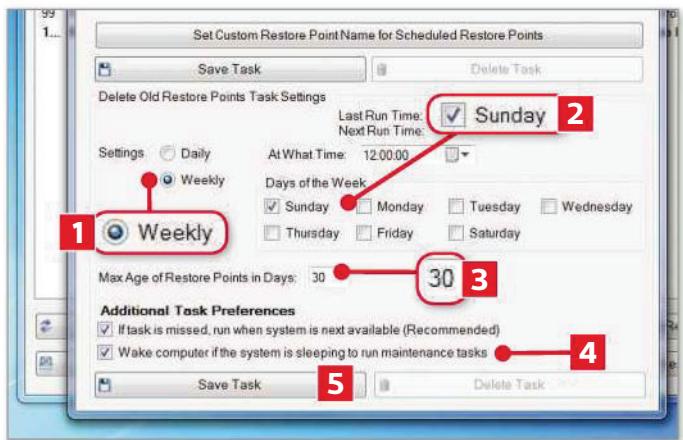


**STEP 5** Reopen the program, then click the System Restore Point Utilities button **1** to see 11 options **2**. Rather than manually creating restore points, you can automate the process (a feature Windows' default tool doesn't offer). To do this, first click 'Schedule creation of System Restore Points' **3**, then click OK on the pop-up message that appears. This will open a new Task Scheduler window.

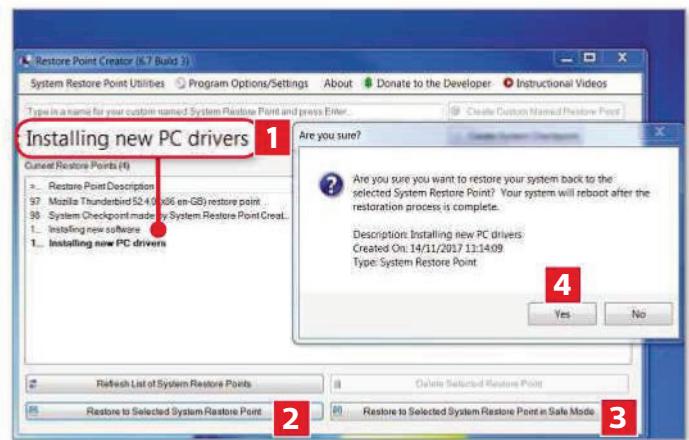


**STEP 6** You can create restore points daily, weekly or every few days. We recommend weekly, so select that option **1**, tick the day you want **2** and set a time when your PC is likely to be switched on **3**. In the Additional Task Preferences section **4**, tickboxes let you delete old restore points after creating your new one, create a restore point when you next turn on your PC (if it is switched off at the scheduled time) and wake your PC (if it is in Sleep mode at the scheduled time). You can also name these scheduled restore points by clicking the 'Set Custom Restore Point Name...' button at the bottom. Click Save Task **5** when you've finished.

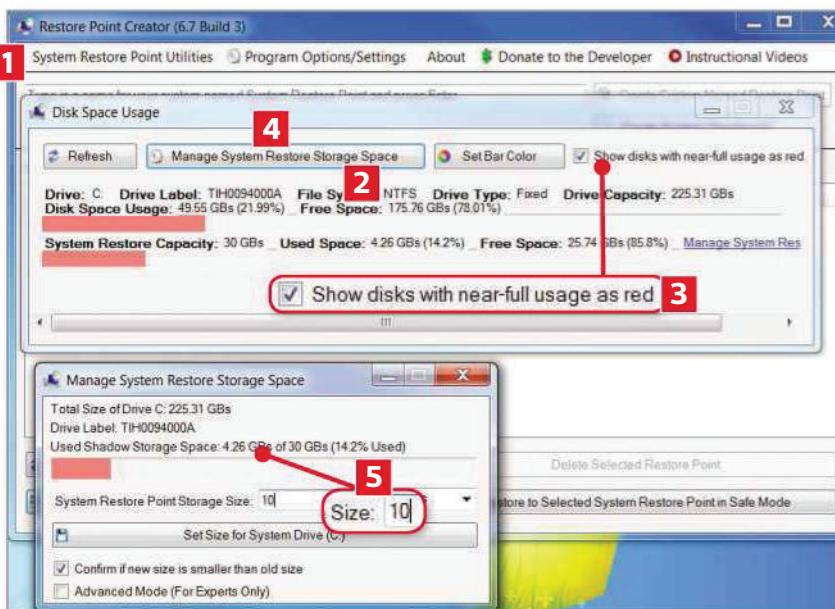
# Create restore points better than Windows



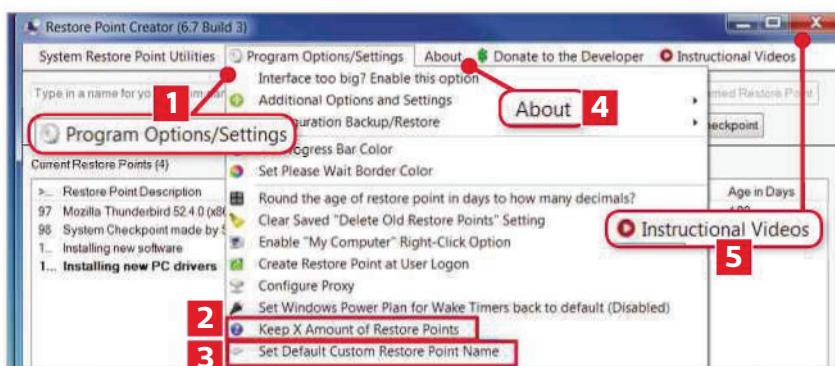
**STEP 7** At the bottom of the Task Scheduler window, you'll see options to delete your older system restore points automatically (again, Windows doesn't offer this). You can set this deletion to run daily or weekly 1, setting a day and time 2. You can also set a time limit (in days) on saved restore points 3 and tick options to delete restore points older than this when you next turn on your PC (if your PC is off at its scheduled run time) and to wake up your PC (if it's in Sleep mode) to run the task 4. Click Save Task 5 when you've finished.



**STEP 8** If you need to roll your PC back to an earlier restore point, select the last restore point you created 1, then click the 'Restore to Selected System Restore Point' button 2. If that option doesn't work, click 'Restore to Selected System Restore Point in Safe Mode' 3 (this option is not present in Windows' tool). Click Yes 4 to confirm your action, then accept any permissions to restart your PC and roll back your PC. The process can take 10 to 15 minutes, depending on the changes you're rolling back.



**STEP 9** Next, click System Restore Point Utilities 1, then click View System Disk Space Usage. Here, you'll see a breakdown of how much of your PC's storage space is being taken up by your system restore points 2. Tick 'Show disks with near-full usage as red' 3. If you see any red bars, you should delete older restore points. Click Manage System Restore Storage Space 4. Here, you can set the storage space you want to reserve for system restore points 5.



**STEP 10** Click the Program Options/Settings button 1 to see 18 more options. These include options to create system restore points automatically whenever you log into your PC, keep only a certain number of system restore points 2, change the default name of your custom restore points 3 and change the program's default notification settings. The About button 4 opens a web page with Frequently Asked Questions about the program and there are also instructional videos 5 if you need further help.

## Upgrade to W10 for free before loophole closes

**What you need:** Windows 7 or 8.1

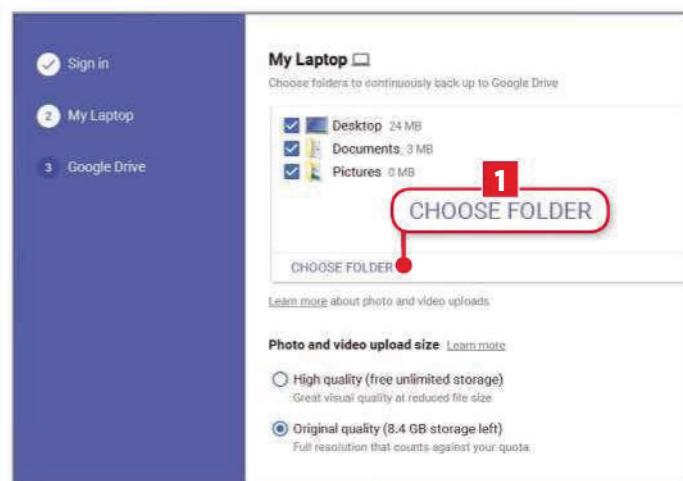
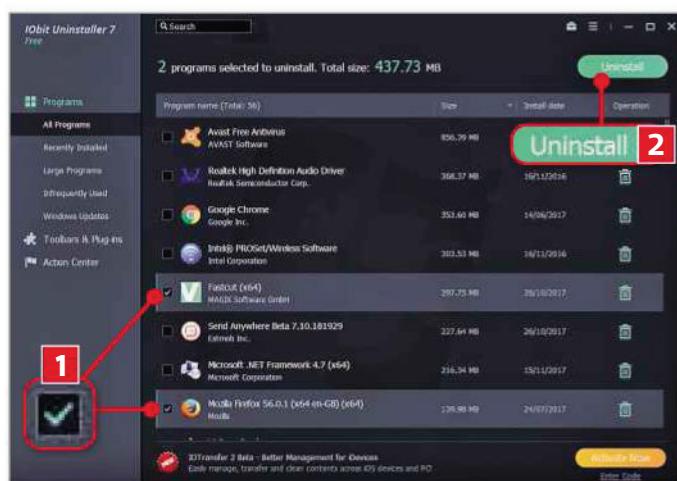
**Time required:** 3 hours (mostly for downloading Windows 10)

For the past year Microsoft has left open a loophole that allows anyone who uses assistive technologies (such as your PC's Magnifier or Narrator tools) on Windows 7 and 8.1 to upgrade to the latest version of Windows 10 for free. Controversially, Microsoft doesn't check

whether you actually use these tools (see Star Letter, page 13). This upgrade option closes on 31 December, after which you'll need to buy a Windows 10 license (£119 minimum). We'll show how you upgrade from 7/8.1 to 10 using reliable free programs.



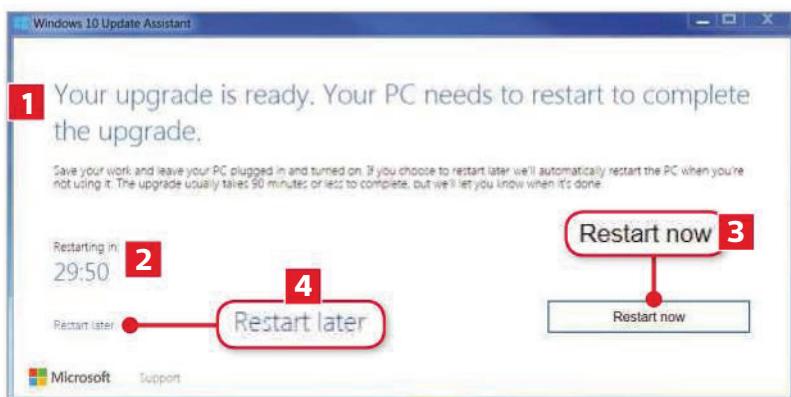
**STEP 1** While we had no trouble when we carried out this upgrade process, a small number of readers have reported problems. Therefore, we always recommend three precautionary measures before upgrading: check you have enough storage space, back up your important files, and save a copy of your **product keys**. Open My Computer 1 to see how much storage space you have remaining (you'll need at least 30GB 2). If you need to recover storage space, delete any large redundant files (for example, from your Downloads and Videos folders 3).



**STEP 2** Free program WizTree ([www.snipca.com/26264](http://www.snipca.com/26264)) lets you identify and delete space-hogging items on your PC (see our Workshop in Issue 511, page 35). Another way to recover space is to uninstall programs you no longer use. We're using iObit Uninstaller ([www.snipca.com/26265](http://www.snipca.com/26265)) in this Workshop, but we also recommend Wise Uninstaller ([www.snipca.com/26266](http://www.snipca.com/26266)). Both programs do a similar job of uninstalling multiple programs in one go, then removing junk that those programs leave behind. In iObit, select all the programs you want to uninstall 1, click Uninstall 2, then follow the onscreen instructions.

**STEP 3** Next, back up your important files to an external hard drive or online storage service, such as OneDrive (which comes pre-installed on Windows 10). Alternatively, you can use Google's new 'Backup & Sync' tool ([www.snipca.com/26269](http://www.snipca.com/26269)), which lets you specify folders 1 to back up to Google Drive. To get missing product keys for your paid-for programs, we recommend the free versions of Magical Jelly Bean KeyFinder ([www.snipca.com/26270](http://www.snipca.com/26270)) or Belarc Advisor ([www.snipca.com/26271](http://www.snipca.com/26271)). Save your product keys to a safe place.

**STEP 4** We'll now show you how to upgrade your Windows 7 or 8.1 PC to Windows 10. First, go to [www.snipca.com/26272](http://www.snipca.com/26272) and click the Upgrade Now button **1**. Open the downloaded setup file **2**, click Yes, then Accept. The Upgrade Assistant will check that your PC is compatible with Windows 10. If it isn't, you'll see a list of problem areas (perhaps low storage space, or incompatible CPU or RAM) that you might be able to remedy. If compatible, click Next to begin downloading the Windows 10 installation files. These files are around 6GB, so can take up to two hours to download.



**STEP 5** After that's finished, you'll see a 'Your upgrade is ready. Your PC needs to restart to complete the process' message **1**. It's set to automatically restart in 30 minutes **2**, but click 'Restart now' **3** to do that instead. Alternatively, click 'Restart later' **4** if that's more convenient. The restart process took about half an hour on our PC. When it's complete, you'll see a 'Welcome to Windows 10' screen. Log into your PC when prompted, then click Next.



**STEP 6** On the 'Choose privacy settings for your device' screen, you'll see sliders **1** for various PC features (Location, Speech Recognition, Relevant Ads, and so on). These are switched on by default, but you can switch off any you don't want. Click Accept **2**, then click Next to finalise your Windows 10 settings. When that's complete, you'll need to log into your PC again. It can take a few more minutes until you see the Windows 10 desktop.



**STEP 7** After updating your PC, open the Start Menu, click the cog (settings) icon at the bottom left, 'Update & Security' **1**, then click 'Check for updates'. This installs any pending updates, after which you might be prompted to restart your PC. If you used a personal password that isn't linked to a Microsoft account to log into Windows 7 or 8.1, Windows 10 will nag you to sign in with your Microsoft account. To stop these nagging prompts, click Accounts **2** in Settings, click 'Sign in with a Microsoft account instead' and log in with your Microsoft account or register for one. ●

## Send files from tablet to PC quickly

**What you need:** Android phone or tablet **Time required:** 25 minutes

Microsoft recently overhauled its Android launcher app with several useful new features. The best of these is 'Continue on PC'. This lets you instantly send photos, documents and web pages from your phone and tablet to your Windows 10 PC (as long as

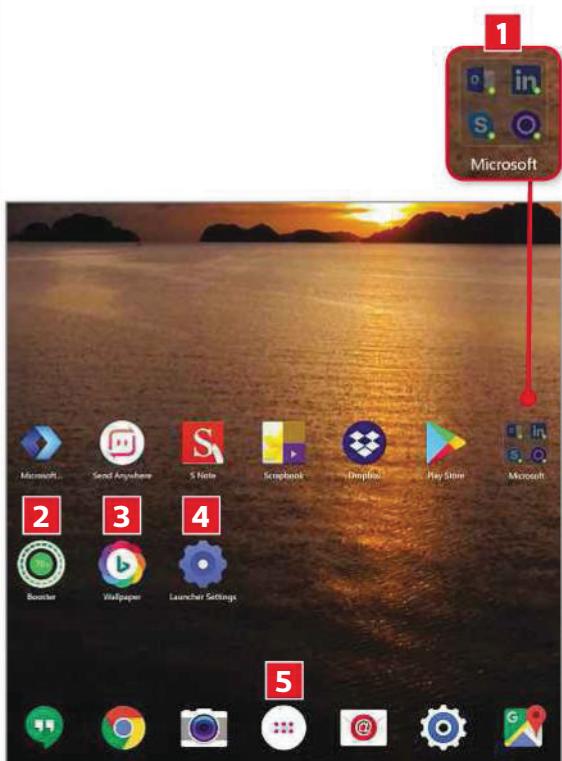
you're running the Fall Creators Update). The launcher also lets you hide apps on your homescreen and app drawer so others can't see them, use swipe gestures to launch apps, and force-close background apps to prolong your battery life.



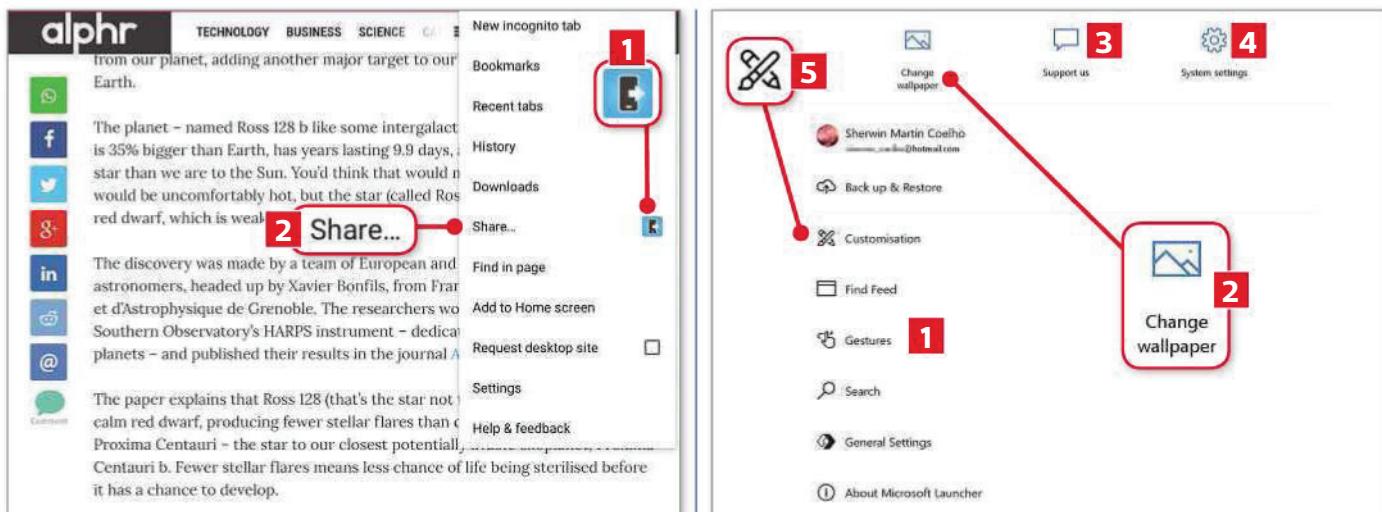
**STEP 1** Install and open the Microsoft Launcher app ([www.snipca.com/26246](http://www.snipca.com/26246)) on your phone or tablet, then tap the 'Get started' button at the bottom. You now need to choose from five theme colours 1 (the colour of text and icons 2) and two wallpaper options 3. Tap Next 4 twice, log into your Microsoft (Hotmail or Outlook) account when prompted, then tap 'Let's go'. If you see a pop-up window at the bottom prompting you to select your device's default launcher, tap Microsoft Launcher.



**STEP 2** You'll now see a widget displaying the date, time and weather 1 and a search bar 2. As well as web searches, you can look for apps, contacts, documents and emails on your device. Tap the QR code icon 3 to scan QR codes and bar codes with your device. Alternatively, tap the mic icon 4 to speak your search term. Swipe in from the left of your screen to see helpful cards (info notifications), including upcoming calendar events, breaking news stories, your latest photos and apps you've recently used. Scroll to the bottom of this screen, then tap 'Customise feed' to change what cards you see.



**STEP 3** Microsoft Launcher adds four icons to your homescreen. The Microsoft folder 1 contains 12 Microsoft apps (including Outlook, Skype, Cortana, SwiftKey and Word). Tap any app to open it in the Google Play Store, from where you can install it. The Booster app 2 instantly closes background apps, prolonging your battery life. Tap the Wallpaper icon 3 repeatedly for multiple wallpaper options. We'll cover Launcher Settings 4 from Step 5. Open the app drawer 5 to see all your device's apps in alphabetical order.

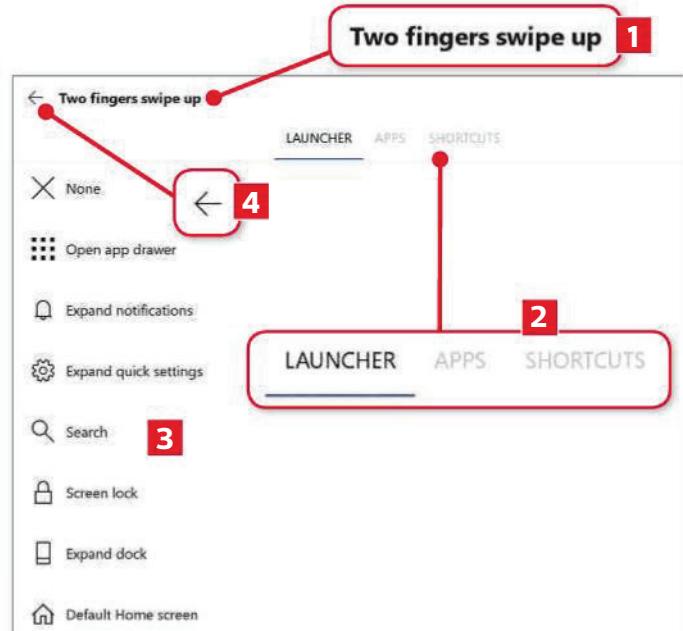


**STEP 4** We'll now explain how to send documents, web pages and photos from your device to your Windows 10 PC (running the Fall Creators Update). Open any web page in your browser app (we're using Chrome), tap the three dots at the top right, then the 'Continue on PC' icon **1** beside Share **2**. You'll see two options. Select your PC's name to open the web page in Microsoft Edge on your PC, or tap Action Center to send the web page to your PC's Action Center (from where you can open it in a web browser of your choice). To send photos or documents to your PC, open the relevant file, tap the 'Continue on PC' icon, then select your PC's name.

**STEP 5** On your homescreen, tap the Launcher Settings icon. You'll see three options at the top with more options below **1**. Tap 'Change wallpaper' **2** to choose from a range of wallpapers (similar to those available for Windows 10's lock screen). Tap the top-left button to return to the main section. Tap 'Support us' **3** to rate the app, report a problem or suggest a new feature. 'System settings' **4** opens your device's default Settings app. Next, tap Customisation **5**.



**STEP 6** Here, tap Theme **1** to choose from three themes (Light, Dark, Transparent) and change your text and icon colours (see Step 1). Next, tap 'Customise app icons and layout' **2** to increase the size of your homescreen icons and change its grid layout. You can also enable vertical scrolling **3** on your homescreen (instead of swiping right). Another handy feature lets you hide apps away from your homescreen and app drawer so others can't access them. To do this, tap 'Hidden apps' **4**, tap the 'Hide apps' button then select the apps you want to hide. They will only be accessible from this section from now on.



**STEP 7** Tap the Gestures option in the main Launcher Settings section to see its default *gestures*. For example, swiping down with one finger brings up the search bar and swiping down with two fingers opens Launcher Settings. Tap any gesture to change what it does. You'll see the gesture you selected **1** and three tabs **2** - each has a list of options **3** that you can tap to select. Next, go back **4** to the main section and tap the Search option. Here, you can change your default search engine from Bing to Google or Yahoo UK, hide the search bar on your homescreen and delete your search history. ●

## Scan your PC for the new Intel flaw

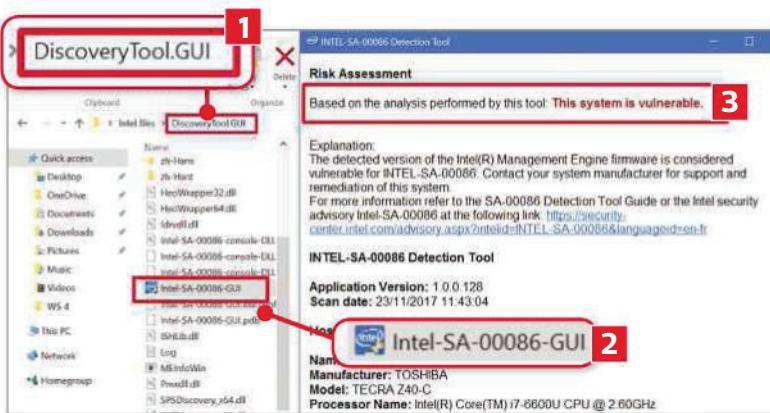
**What you need:** Windows 7, 8 or 10 **Time required:** 20 minutes

On page 6, we reveal details of the Intel security flaw that affects millions of PCs worldwide and allows hackers to take control of your computer. Here we'll show you how to install and use Intel's Detection Tool to find out whether your PC is at

risk. Intel has released a fix to PC manufacturers, including Dell, Lenovo and Toshiba, but they have yet to update their PCs with it. We show you how to update your PC's **firmware** once your manufacturer has released the fix.

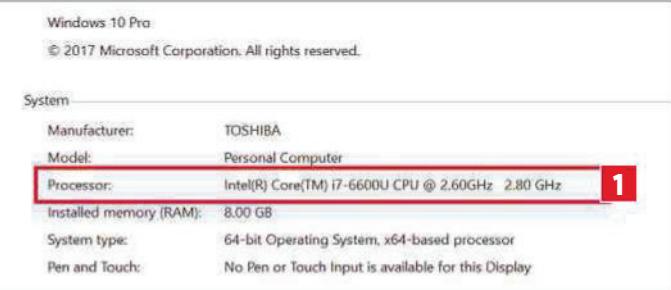


**STEP 1** You should first check your PC's specification to see if it has an Intel processor. Right-click This PC/My Computer (on your desktop or the Start menu), then click Properties and look for the Processor field **1**. If it's not Intel, your PC is safe, and Intel's Detection Tool won't work. If you have an Intel processor, create an empty folder on your desktop to extract Intel's Detection Tool. This arrives as a zipped file, so you'll need a file-archiving program such as PeaZip ([www.peazip.org](http://www.peazip.org)) to extract its contents into the folder you've just created.

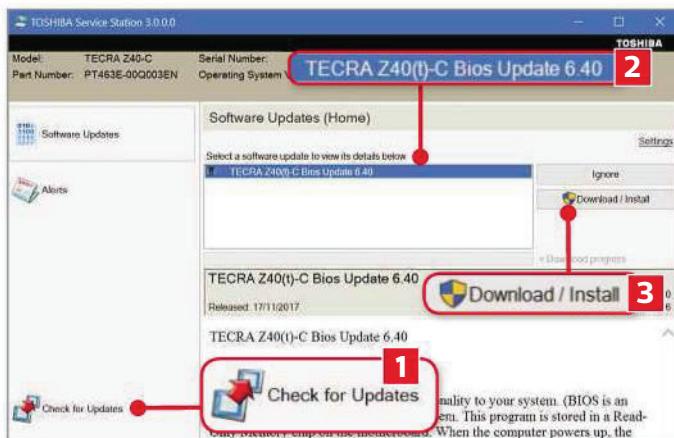


**STEP 3** To find out if your manufacturer has released a firmware update for your PC, go to Intel's website [www.snipca.com/26310](http://www.snipca.com/26310), scroll to the 'Resources from system manufacturers' section, then click the Support Information link next to your PC manufacturer's name. If a fix is available, follow these instructions to update your PC's firmware. (At the time of writing, no manufacturer had released any fixes.)

Press the Windows key, type the name of your PC manufacturer (eg Dell, HP or Toshiba) and open its default program, which should appear in the search result. For example, if you use a Dell or Toshiba PC, open Dell



**STEP 2** To download Intel's Detection Tool, go to [www.snipca.com/26309](http://www.snipca.com/26309) and click the blue 'SA00086\_Windows.zip' button in the bottom-left of the screen. Click to accept the terms in the licence agreement, then open the downloaded file (it will open in PeaZip by default). Double-click the DiscoveryTool.GUI folder to open it, then click PeaZip's Extract menu at the top. Select 'Extract all to', choose the folder you created in Step 1, then click OK. Finally, open the folder on your desktop, then the DiscoveryTool.GUI folder **1** and run the Intel-SA-00086-GUI setup file **2**. Click Yes, and a message will tell you whether your PC is vulnerable or safe **3**.



SupportAssist or Toshiba Service Station (see screenshot). Click 'Check for Updates' **1**, then select the available update **2**. Finally, click Download/Install **3** and follow the prompts to update your PC.

## NEXT ISSUE

ON SALE  
WEDS  
20 Dec

- Pinpoint programs making your PC start slowly
- Add advanced tools to File Explorer
- Free up space on your tablet
- Use a PayPal group to collect money

Subscribe to Computeractive at [getcomputeractive.co.uk](http://getcomputeractive.co.uk)

## TIP OF THE FORTNIGHT

### Get paid-for programs for free

Some websites let you download paid-for programs for free providing you promote them on Facebook. Take the example of the brilliant website Giveaway of the Day ([giveawayoftheday.com](http://giveawayoftheday.com)). Every day it displays different paid-for PC programs (up to £50) that you can download and use without paying a penny.

However, in order to install these programs, you need to promote the website's offer on Facebook. I found an easy way to take advantage of this offer without annoying your Facebook friends with



your posts. Open the website, then click the 'Proceed to download page' button below the daily free program you want

to install.

Next, click the green Download Now button on the right. Now click 'Share & Download' inside the Facebook icon. When the 'Share on Facebook' pop-up window appears, simply change the audience from 'Public' (default) to 'Only me' (see screenshot). Finally, click 'Post to Facebook'. The software will now download and you'll be the only person that will be able to see its Facebook advert.

Nick Haysom



**Nick wins a copy of our 2016 Back Issue CD**

**Buy it on Amazon** [www.snipca.com/23209](http://www.snipca.com/23209)

#### DESKTOP

##### Launch desktop items with two key presses

✓ Inspired by Issue 509's Cover Feature ('50 Best New PC & Web Shortcuts), I've got another one, which involves selecting and opening desktop items quickly. First, click any blank area of your desktop, then press the key of the first letter of the desktop icon's name you – you'll notice that it gets selected.

In our example, pressing M selected Mozilla Firefox (see screenshot below



left). If there are multiple desktop items starting with the same letter, press the letter key again to cycle through all those items. Press Enter to open your selected item.

Ray Lyon

his device, too.

If you simply tilt the device forward a little, so it's in a more vertical position, it automatically corrects itself to the appropriate orientation. I imagine this tip would also work for Windows 10 laptop-tablet devices, such as Microsoft's Surface Book.

Stephen Murchieson

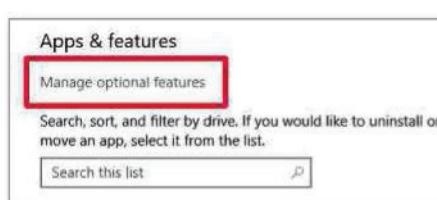
#### WINDOWS 10

##### Restore Windows Media Player to the Fall Creators Update

✓ The only problem I had with the Windows 10 Fall Creators Update was that it uninstalled Windows Media Player on my PC. Thankfully, there's an easy way to get it back. Open Settings, then click Apps. Under 'Apps & features' click the 'Manage optional features' link (see screenshot below), then click 'Add a feature'.

In the 'Optional features' list that loads, scroll down to Windows Media Player, click to select it, then click Install. After that's done, you'll find Windows Media Player in your Start menu, from where you can launch it.

Dave Cooke



#### PHOTO EDITING

##### Enlarge photos without losing quality

✓ I received some large photo frames, for my birthday, but my local print shop advised me that the photos on my phone would look blurry if I enlarged them to fit the frames. After some research, I discovered a new website called Let's Enhance that enlarges photos without compromising their resolution and quality.

Go to [www.letsenhance.io](http://www.letsenhance.io), click Login at the top right and create a free account (you need this to download your enlarged photos). Drag and drop your images (maximum of five at any one time) into the 'Drag and drop your stuff' section.

You'll see an estimated time for enlarging your photos (it can take a few minutes). Once that's done, you'll see three versions of your file to download. Click the 'magic' option (see screenshot below) to download your enlarged image.

Ken Hardacre



#### PHONES & TABLETS

##### Change your device's screen orientation quickly

✓ I could never figure out how to get my Android tablet to switch from portrait to landscape mode. The device often seemed to have a mind of its own and ignore what mode would be most appropriate – regardless of how I held it. Recently a friend gave me an invaluable tip which I've since passed on to an iPhone user, who found it worked for

# Phone and Tablet Tips

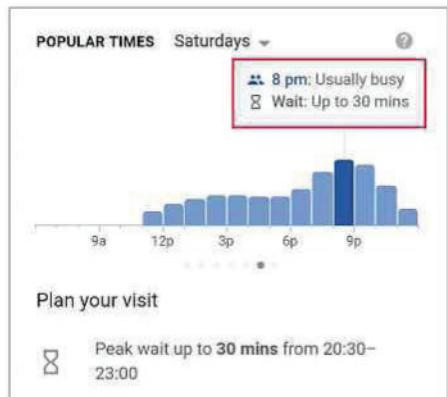
## Brilliant things to do on your device

### ANDROID

#### Find out waiting times at restaurants

 Google has added a new feature to its default Search app that can help you if you plan to eat out but don't have a table reservation. Now whenever you search for a restaurant and tap the time you're planning to visit it, you'll see a pop-up telling you whether the place is likely to be busy and approximately how long you may need to wait to get a table.

Open the default Google search app (white circular icon with multicoloured 'G'), type the name of the restaurant you plan to visit, tap to select it in the results, then scroll down to the 'Popular times' section. The time bars feature (introduced last year) gives you an indication of the restaurant's peak times. Tap the time bar that equates to your planned visit to see a new pop-up option at the top (see



screenshot below) giving you a status and approximate waiting time.

### ANDROID

#### Translate text without leaving your messaging app

 Google Translate has a lesser-known feature called 'Tap to Translate' that lets you instantly translate text within any app on your device. This is especially useful if you use messaging apps such as WhatsApp Messenger, Facebook Messenger and Skype to chat with people in foreign languages. If you're not entirely fluent in that language, you can translate text without leaving the app.

First, open Google Translate ([www.snipca.com/26280](http://www.snipca.com/26280)), tap the three lines at the top left, Settings, 'Tap to Translate', then tap the Enable slider to switch it on.

Now open any messaging app on your device, tap and hold any text you want to



translate, then tap the copy icon (rectangular stack) at the top. You'll now see a floating Google Translate icon. Tap this to open a Translation window with the text you copied at the top. You can translate this text into any language using the dropdown menu below (see screenshot below left). You can also tap the speaker icon to listen to its pronunciation.

To copy your translated text, tap the three dots beside the translation dropdown menu at the bottom, then tap Copy. You can then paste this into WhatsApp's reply field.

### ANDROID

#### Transfer files to and from your PC via Bluetooth

 In our Workshop on page 40, we show you how to send files from an Android device to your PC using Microsoft's new Launcher app. While that method is great for transferring a single file, you can't send multiple files. Nor can you send files from your PC to your phone or tablet. If you need to do these tasks, it's a good idea to use Bluetooth to transfer files between devices.

First, open Settings on your Android phone or tablet, tap Bluetooth, tap the slider to switch it on, then tap the Visibility slider to switch that on (this ensures that other Bluetooth devices can find and connect to your device).

Next, open Settings on your Windows

## Best New Apps

### Seeing AI

Free

iOS: [www.snipca.com/26281](http://www.snipca.com/26281)

Designed for blind people and those with impaired vision, Microsoft's Seeing AI



recently launched in the UK. It recognises any text or barcodes you point your camera at, and speaks the text or product name back to you. You can also teach it to recognise your friends.

### The Guardian - VR

Free

Android: [www.snipca.com/26284](http://www.snipca.com/26284)

iOS: [www.snipca.com/26285](http://www.snipca.com/26285)

Created by *The Guardian*, this virtual-reality app lets you view the world from the point of view of a toddler and an Arctic explorer (among other experiences). You'll need a new phone (2016 and later) and a VR headset (like these at [www.snipca.com/26286](http://www.snipca.com/26286)).



### What you should install this fortnight

### Temi Recorder - Speech to Text

Free

Android: [www.snipca.com/26282](http://www.snipca.com/26282)

iOS: [www.snipca.com/26283](http://www.snipca.com/26283)

This app lets you record audio of any length, then transcribes it for you in a few minutes.



You can then download your transcript as a PDF or Word document and share it with others using compatible apps, such as messaging apps or email.

10 PC, click Devices, the Bluetooth slider to switch it on, the ‘+Add Bluetooth or other device’ button at the top, then select Bluetooth. Your PC will scan for Bluetooth devices nearby. Select your device’s name when you see it in the list, then click Connect.

On your device, tick your PC’s name to connect, then tap Pair. You’ll now see a message on your PC informing you your phone and PC have been paired. To exchange files between devices, you’ll need to ensure that both have Bluetooth switched on.

To send files from your PC to your Android device, open Settings on your PC, click Devices, the ‘Send or receive files via Bluetooth’ link on the right, then select ‘Send files’. Next, select your device’s name, navigate to the relevant files on your PC, then click Send. Click Accept on your Android device to begin downloading the files.

To send files from your Android device to your PC, navigate to and select the files you want to send, tap the Share icon, select Bluetooth, then your PC’s name. Your files will now be sent to your PC.

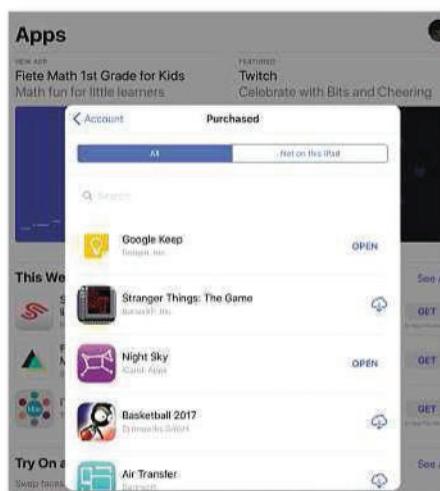
#### iOS

### Reinstall paid-for apps for free

 Apple has redesigned the App Store in iOS 11. It now has five categories at the bottom – Today, Games, Apps, Updates and Search. It has also changed how you reinstall all the apps you’ve previously downloaded. This includes paid-for and free apps that you may have uninstalled on your current device, as well as those you’ve installed on older or other Apple devices you own.

To see these apps, you now need to tap the Apps tab, tap your profile photo at the top right, then tap Purchased. Here (see screenshot above right), you’ll see a list of all the apps (paid-for and free) that you’ve downloaded using your Apple account. Apps not on your device have a download icon you can tap to install them for free. The ‘Not on this iPhone/iPad’ section only lists apps you’ve downloaded on other/older iOS devices.

Some apps in iOS 11’s App Store have short promotional videos that start playing automatically when you open their listing. This can eat into your mobile data if you have a limited allowance, but there’s an easy way to stop these playing.



### iOS Adjust your ringer volume

 By default, the volume buttons on the side of your device can also be used to change the volume of your device’s ringtone and notifications. But if you’ve upgraded to iOS 11, the buttons may only change your phone’s speaker volume. To fix this, open Settings, tap Sound, then tap the ‘Change with Buttons’ slider to switch it on (see screenshot below). The slider at the top still lets you adjust your phone’s ringer volume, but you can also adjust this using the buttons on your device from now on.



Open Settings, tap ‘iTunes and App Store’, then tap Video Autoplay. It’s switched on by default, but you can switch it off or select Wi-Fi Only

## Games With Kids

What to play together on your phone and tablet

#### AGES 0-5

### Meet the Alphablocks

**Free** [www.snipca.com/26287 \(iOS\)](http://www.snipca.com/26287)

Based on the popular CBeebies TV show, this game will teach your kids to identify letters and how they sound. Simple activities include selecting the letters they hear and tapping objects that begin with a specific letter.



#### AGES 6-10

### Plato

**Free** [www.snipca.com/26288 \(Android\)](http://www.snipca.com/26288)

**Free** [www.snipca.com/26289 \(iOS\)](http://www.snipca.com/26289)

This app can be played by every member of your family using their own devices. It has over 20 games (including Uno, Chess, Pool and Ludo) and you can also chat with opponents within the app. It’s a great way to play with your kids when you’re away.



#### AGES 11-16

### Words With Friends 2\*

**Free** [www.snipca.com/26290 \(Android\)](http://www.snipca.com/26290)

**Free** [www.snipca.com/26291 \(iOS\)](http://www.snipca.com/26291)

The rules of this Scrabble-style game are similar to the original. However, it has new modes including a Lightning Round where each person has a set time to complete their word. It also has a Solo Challenge mode where you can play against the app even when offline.



\*Contains in-app purchases

### WINDOWS 7, 8, 10

#### Launch specific programs when you start your PC



It can be very handy and time-saving to have the programs you use regularly launch automatically when you boot your PC – such as your browser and email program. You shouldn't set it to launch more than three items because this can slow your PC's startup.

First create desktop shortcuts of the programs you want to launch at startup. The quickest way to do this is to open your Start menu, then drag them on to your desktop.



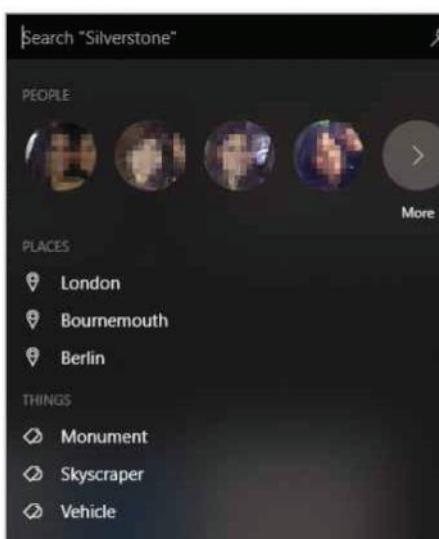
Next, press the Windows key+R to open the Run box, type **shell:startup** into it (see screenshot above), then press Enter. Doing this opens an empty folder on your PC. Drag and drop the desktop shortcuts you created into this folder, then close it. From now on, these programs will open when your PC boots.

### WINDOWS 10

#### Find photos faster in Windows 10



Microsoft has added some useful features to the Photos app in the Fall Creators Update. It now has three tabs at the top left – ‘Photos & videos’, Creations and Folder. The first tab



### WINDOWS 10

#### Delete unwanted installation files



Over the last few issues, we've explained how to install the Windows 10 Fall Creators Update (FCU). For the first 10 days after you've updated, Microsoft saves a copy of your previous Windows installation files (the Creators Update, CU), which is around 30GB. This is useful if you're having problems with the Fall Creators Update and want to revert to its predecessor.

To do this, open Settings, click ‘Update & security’, then Recovery on the left. Now click the ‘Get started’ button below ‘Go back to the previous version of Windows 10’ and follow the onscreen prompts to revert to your earlier Windows version.

If you don't see ‘Go back to the previous version of Windows 10’ within Recovery, it means the 10-day ‘cooling off’ period has elapsed. After 10 days, Microsoft automatically deletes the previous Windows installation files.

#### Free up space now

If you're low on space, we can try to clean up files now using the settings on this page.

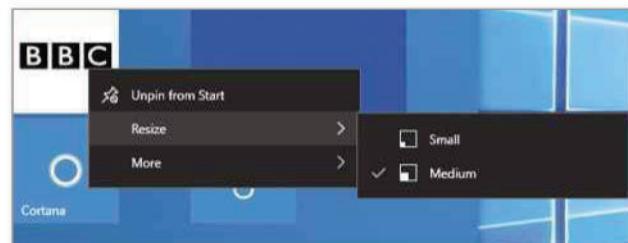
Delete previous versions of Windows

These let your PC go back to a previous version of Windows. We delete them automatically after 10 days.

**Clean now**

If you're still within the 10-day period, you can recover around 30GB of storage space by deleting the unwanted CU files. After 10 days, you can still recover about 2–3GB of any residual CU files that weren't removed by Microsoft.

To recover this space, open Settings, click System, Storage on the left, scroll down to the ‘Storage sense’ section and switch on its slider. Next, click the ‘Change how we free up space’ link. Here, tick ‘Delete previous versions of Windows’ in the ‘Free up space now’ section at the bottom, then click the ‘Clean now’ button (see screenshot).



lists all the photos and videos in your PC's Pictures folder and in your OneDrive account. The Creations tab displays any photo albums you've created. The Folder tab gives you the option to import any other folders containing photos and videos.

Now click inside the search bar at the top right (see screenshot left). Previously, you could only search for your photo/video files by name. The tab now recognises people's faces within your photo collection. Tap a thumbnail to see all photos featuring that person.

Below this, you'll see a list of places. Tap any place name to see all photos taken there. Alternatively, you can also type the name of a place (**barcelona**, for example) into the search box. At the bottom, you'll see a list of things that the Photos app has identified in your photos. Click an item to see the photos they

appear in, or simply search for the relevant item.

### WINDOWS 10

#### Pin websites to the Start menu



There's an easy way to pin your favourite websites to the Start menu.

To do this, open Microsoft Edge, then go to the website you'd like to pin. Now click the three dots at the top-right of Edge, ‘Pin this page to Start’, then Yes. You'll now see the website's tile in your Start menu. You can click and drag this to reposition it, and right-click the tile to see options to resize and unpin it (see screenshot above).

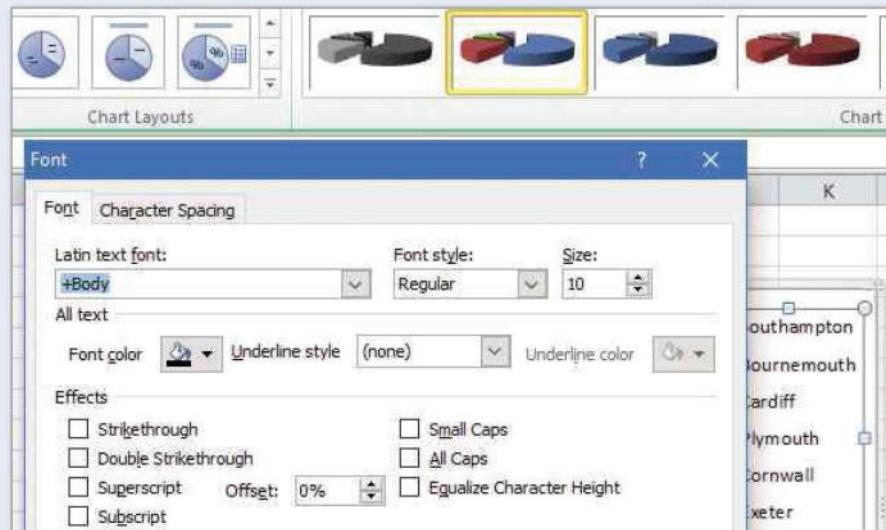
## EXCEL

### Customise your charts to suit your needs

 Excel offers a great selection of chart-customisation options. We'll show you how to create a chart, customise it and change the default font to one of your choice. To create a chart, highlight the Excel data you want to include, click the Insert tab, select one of the chart dropdown menus in the Charts section at the top, then select the chart style you want (we opted for the Pie dropdown menu and chose '3-D Pie').

To customise it, click the Design tab. The Chart Layouts and Chart Styles sections include one-click customise options (see top of our screenshot). Click the dropdown menus at the bottom right of either section to see more options.

To change the default font style, right-click any text in the chart, then click the Font option in the pop-up



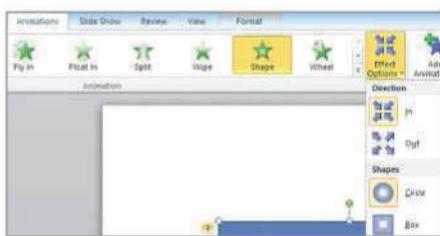
menu that appears. In the window that opens (see screenshot), you can choose a different font, and change its style, size and colour. Click the Character Spacing

tab to see options to add spacing to each character within your font. You can't preview the changes you make to your font, so click OK to apply them.

## POWERPOINT

### Add animated effects to items in your slides

 You can make your presentation more visually interesting by adding animated effects to items (charts, shapes, photos, etc). We'll show you how to animate images, but you can use this method for other items. First, select the image you want to animate, then click the Animations tab.



You'll see a selection of effects (Appear, Fade, Fly In, Split, and so on) in the Animation section at the top. Click the dropdown menu at the bottom right of this section to see more effects. Move your cursor over any animation option to see the effect on your image. Click to select the one you want.

To customise your effect, click the Effect Options dropdown menu (see screenshot above), move your cursor over an effect to see how it looks with your

image, then click to select it.

At the top right, you can set a time delay for the start of the animation (optional) and change the duration of the effect (two seconds by default).

## WORD

### Select text and type from anywhere in a blank document

 Word lets you select text in several ways. The most common method is to double-click a word to select it and triple-click a word to select the entire paragraph. A lesser-known feature lets you select rectangular sections within your text, which is great for highlighting key passages. To do this, press the Alt key, then click and drag your cursor to select the section (see screenshot below).

And did you know you can start typing anywhere in a new blank document? Including the very centre of the page if you want. Most of us put our cursor in

the top-left corner and press Enter to jump lines. But you can simply double-click anywhere in the document to start typing from that point.

## OUTLOOK.COM

### Try the new version of Outlook.com

 Microsoft is in the process of revamping Outlook.com with a new look and several new features. It's inviting users to try this new version (currently in beta) and give their feedback. If you're interested in trying it, log into Outlook.com using your Microsoft account. Check if you have the 'Try the beta' slider at the top right, then turn it on (see screenshot below).

You'll see a description of the new features in this version. To give Microsoft feedback, click the ? icon at the top right, click the 'Give feedback' link, select a feedback category on the right (Calendar, Photos, etc), then type your feedback.





# Online photo archives

Find photos by colour or size, use Google filters to find copyright-free images, and fine-tune searches with operators

## Search Getty for exact phrases

Getty's photo archive, at [www.snipca.com/26240](http://www.snipca.com/26240), is easy to use but search terms aren't always handled how you expect. If you type just a couple of words – golden and temple, say – then every result will include those two words. However, if you search for golden, temple and india, the results will include entries that contain any two of those terms, so might include Indian temples other than the Golden Temple. The more words you type, the more that might be discarded.

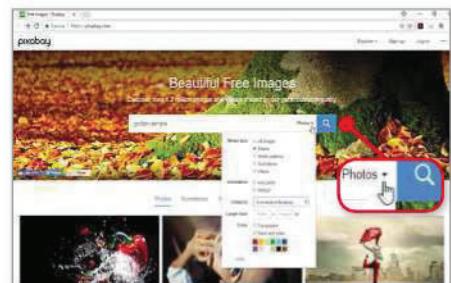
To prevent this, put phrases in double quotes (so type “golden temple”, see screenshot above right) and add a plus sign to stop particular search terms being dropped – “golden temple” +india, for example. Use a minus symbol to exclude certain words: so typing -golden +temple +india would show results only for Indian temples that aren't golden.

## Force photos for all results

Getty also has a useful tickbox that's easily missed, in a tiny font just to the right of the search bar – ‘Only records with images’. Tick this to ensure that you only ever see search results with photos, rather than the many records that exist about images but that lack an actual picture to go with them.



Double quotes around phrases and the + and - symbols offer more accurate Getty searches



Click the down arrow on Pixabay's search bar to access loads of handy filters

## Find where photos are used

Want to see where else online a particular photo is used? In Chrome you can just right-click any image and choose ‘Search Google for image’. This is known as a reverse lookup. You can use the TinEye website (<https://tineye.com>) to do the same with any image, including those you've already downloaded. Just paste an image's URL into TinEye's box and hit Enter or, to upload an image, click the up arrow to the left of the search box, navigate to the photo on your PC, click to select it and then click Open.

## Search by colour, size or orientation

The popular Pixabay ([www.pixabay.com](http://www.pixabay.com)) archive has a similarly straightforward search bar. But look closely at the

right-hand side of that bar, where it says ‘All images’, and you'll spy a little down arrow. Click this to access loads of filtering options (see screenshot above) that'll let you focus your search on images that match a certain colour, size or orientation. Also notice the ‘more’ link at the bottom of this menu: clicking it reveals a summary of the **search operators** – AND, NOT and OR – that can be used in search terms. For example, type chocolate AND cake to find images of chocolate cakes, but cake NOT chocolate to find cakes that aren't chocolate.

## Search Google for copyright-free images

Finding photos with Google is as simple as typing a search term and then clicking the Images tab. But with hidden filters you can do much more – including restricting results to images labelled ‘for reuse’, which usually means they're free for you to use however you want.

To do this, carry out a normal image search and then click the Tools button: this reveals a line of filtering controls. Click ‘Usage rights’ followed by ‘Labeled for reuse’ if you want images for your personal use, or ‘Labeled for commercial reuse’ if you looking for photos you can use for commercial purposes. Also, read the box left to learn how to find and insert copyright-free images into Microsoft Office documents.

## Get free photos in Microsoft Office

Office 2013 and later editions include a tool that lets you search for and insert photos without leaving your document (or spreadsheet or presentation). It also has an option to limit results to photos tagged with a Creative Commons licence, so the search shows only images that should be free to use.

To use this feature go to the position in your document where you want to insert the image and then, on the ribbon at the top, select the Insert tab.

Now, in the Illustrations category, click Online Pictures. Type your search term into the box alongside Bing Image Search and then hit Enter.

To the left of ‘Clear filters’, click All and then select Creative Commons to filter the list to show only photos with that tag. Finally, click to select one or more images and then click Insert, prompting the photos to be downloaded and automatically inserted into your document.



# Supercomputers

China is leaving the US in the slow lane – for now, at least

## What are they?

Phenomenally powerful computers especially built to perform specific tasks very quickly.

## Doesn't that describe all computers?

In a sense, yes. But what makes supercomputers different is that they've been designed to perform specialised calculations and create simulations at the fastest speed possible. This makes them different to mainframe computers, which are used to store vast amounts of data – speed isn't the priority. Think of supercomputers as explorers breaking new ground, and mainframes as the backup team lugging the equipment.

## So which do I have?

Neither, sadly. Mainframe computers are used by large companies to store billions of records, while supercomputers are run mostly by governments and scientific organisations. Your new Windows 10 PC may feel fast – even super – but it can't compete with China's Sunway TaihuLight (see main picture).

## What's that?

The world's most powerful supercomputer. It maintained first place in the latest Top500 list ([www.snipca.com/26217](http://www.snipca.com/26217)), a project run by computer scientists to rank the power of machines. That was expected. What was more significant is China overtaking the US, contributing 202 supercomputers to America's 143. In the previous list, published in June, the US led by 169 to 160.



America's Titan supercomputer is a fifth as fast as China's Sunway TaihuLight



## So what's happened since?

China has invested vast amounts of money in research, equating to around 20 per cent of the world's total computing development according to a study released in August. Overtaking the US is highly prestigious for a country that, just 16 years ago, didn't have a single supercomputer in the top 500. But national security is vital too. Increasingly, supercomputers are used to develop weapons systems. It's why the computing battle between China and the US has been described as the new space race.

## Is that what Sunway TaihuLight is used for?

No. It actually makes long-term weather forecasts, mapping how climate change is affecting Earth. But it can also be used for oil prospecting and researching drugs. In August, it even went back to the beginning of time to simulate the Big Bang and early expansion of the universe, breaking it into 10 trillion digital particles.

## How can it do that?

By using its 10 million processor cores to hit a speed of 93 petaflops. That's staggeringly fast. For each petaflop a computer can perform a quadrillion (one

thousand trillion) calculations per second.

## So how fast is America's top computer?

That's Titan (pictured below left), which reaches 17 petaflops, more than four-fifths slower. It's been used for a range of scientific projects involving molecular physics, nuclear reactions and thermodynamics.

## Could the US regain top spot?

It hopes to early next year. The US Department of Energy is working with IBM to launch Summit, which is twice as fast as Sunway TaihuLight. Long term it wants to beat China in the race for an 'exascale' computer, performing a billion billion operations a second (a thousand petaflops – or an exaflop). But China aims to hit this by 2020, a year before the US.

## What about the UK?

We have 15 supercomputers in the list, behind Japan, Germany and France, but ahead of Italy, South Korea and Russia. The fastest is the Met Office's Cray XC40, 15th in the list, achieving seven petaflops. Armed with that kind of processing power back in 1987, even Michael Fish may have forecast a hurricane.

# Don't Get HACKED IN 2018



**Hackers have evolved for 2018. Jonathan Parkyn reveals the latest tricks cyber-criminals will use to steal your data and your money – and shows you how to beat them**

In an ideal world, we wouldn't have to warn you of the threats facing you next year. But anyone who has caught even the faintest whiff of recent headlines will be aware that, in terms of cyber-security, the situation is about as far from ideal as you can get.

## WHAT YOU CAN DO

- Fix a massive flaw that makes all Wi-Fi networks unsafe
- Learn to spot fake bank texts and other new scams
- Stop the latest ransomware from destroying your files
- Prevent your accounts from being hijacked by criminals

If you're in any doubt, here are some deeply uncomfortable statistics for you. Data from the most recent Crime Survey for England and Wales ([www.snipca.com/26238](http://www.snipca.com/26238)) estimates there were 3.3 million incidents of fraud in the 12 months leading up to June 2017, with more than 57 per cent cyber-related.

The global cost of damages caused by **ransomware** alone will have exceeded £3.8 billion in 2017, up from £247 million in 2015, according to research firm Cybersecurity Ventures ([www.snipca.com/26237](http://www.snipca.com/26237)). And there's more to come – the terrifying consensus among security experts is that ransomware crooks are just getting started. Meanwhile, Google recently revealed that between April 2016 and April 2017, around 250,000 user

logins were stolen every week, via **phishing** and malware attacks.

But we're not just in the business of trying to scare the pants off readers here, though. When it comes to defeating security threats, awareness is one of the most effective weapons in your arsenal, and our chief aim is to continue providing you with the knowledge and the defences you need to stay one step ahead of the hackers and scammers.

Over the following pages, we'll reveal the latest security threats and show you new ways to beat them. The overall message here is: don't be complacent. And on page 54, we reveal the results of our latest antivirus test. We were surprised and disappointed by how badly free software performed.

# HACKERS' NEW TRICKS FOR 2018 - AND HOW TO BEAT THEM

## ■ THE HACK...

### Ever-evolving ransomware

We can all agree that 2017 was a bad year for ransomware, thanks to devastating widespread outbreaks like WannaCry in May and NotPetya in June. But in its 2018 Malware Forecast ([www.snipca.com/26232](http://www.snipca.com/26232)), security firm Sophos says that cyber-criminals may have only been “experimenting” with recent attacks like these, and predicts that the worst is yet to come. “We’re expecting cyber-criminals to build upon WannaCry and NotPetya and their ability to replicate,” says SophosLabs researcher Dorka Palotay.

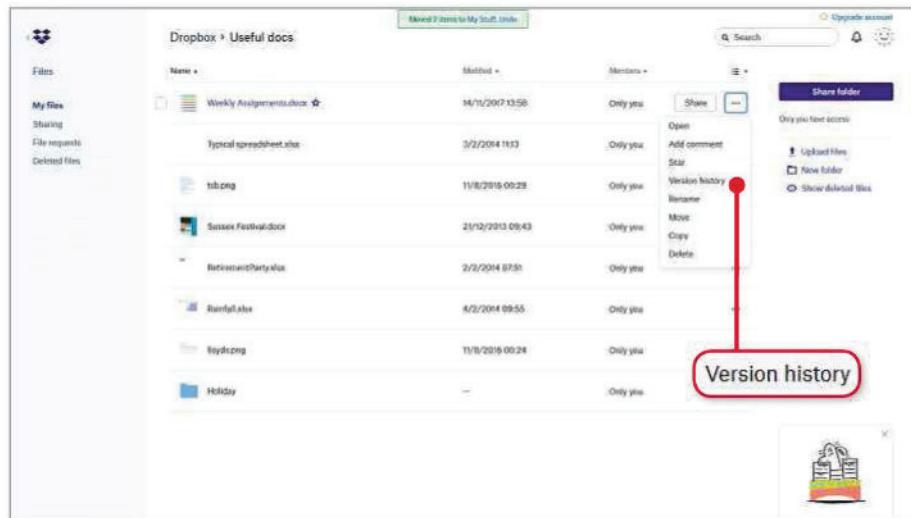
## ...HOW TO BEAT IT

### Back up... the right way

In addition to preventative techniques, such as using an effective antivirus tool (see page 54), backing up can be one of the most effective ways of preventing a ransomware infection – but only if you do it right. Do it wrong and a ransomware attack could end up scrambling your backups along with your originals.

The best backup method is actually to use multiple methods simultaneously. Run a daily backup to an external hard drive using Windows File History (found under Start, Settings, ‘Update & security’, Backup) or a free tool, such as EaseUS Todo Backup Free ([www.snipca.com/26222](http://www.snipca.com/26222)). The key thing here is to disconnect your drive when each backup is complete. Leaving it attached to your PC lets ransomware lock you out of its contents, along with the files on your system drive.

Secondly, also back up ‘to the cloud’ – that is, to an online-storage service. Even cloud-based files can be claimed by ransomware, however, so make sure you



Click 'Version history' in Dropbox to restore a previous version of a file

choose a service that uses versioning, which means previous versions of your files are kept as shadow copies. That way, if ransomware infects any of your cloud backups, you can simply restore the previous version of the file to unlock it.

Both Dropbox and Google Drive support versioning, though Dropbox will only keep previous versions for 30 days unless you pay for Dropbox Business (from £10 per user per month).

To restore a previous version in Dropbox, log into [www.dropbox.com](http://www.dropbox.com) and browse for the file, then click the three dots on the right and select ‘Version history’ (see screenshot above). You’ll see the latest version at the top and earlier versions below, with the newest first. Move your mouse to the right of a previous version and a Restore button will appear, which you click.

Finally, it’s also worth running a **system image** backup every month or so. Connect your external hard drive and click ‘Create a system image’ (see screenshot below)

under Start, Settings, ‘Update & security’, Backup, ‘Go to Backup and Restore’. Again, unplug the drive when the backup has completed. In the event of a ransomware attack, use your system image to restore Windows to its pre-infected state.

## ■ THE HACK...

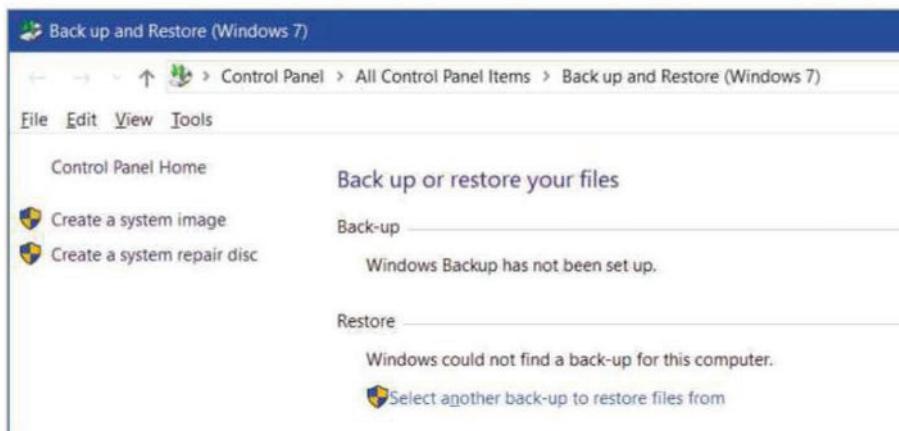
### Hiding malicious activity in image files

Cyber-crooks are starting to use image files to cover their tracks, according to Kaspersky ([www.snipca.com/26235](http://www.snipca.com/26235)). This deception technique is inspired by an old espionage trick called steganography, which involves concealing hidden messages within pictures (and even tattooed on to people’s bodies). An attacker could infiltrate a computer using malware, then send stolen data back to their server disguised as an innocent-looking image file. Current security software is unlikely to detect this activity. You can read more about steganography and see examples of data hidden within images on Kaspersky’s site: [www.snipca.com/26236](http://www.snipca.com/26236).

## ...HOW TO BEAT IT

### There isn’t one... yet

The news isn’t great on this one. Kaspersky admits that the security industry has yet to reliably detect this threat. Most steganography attacks so far have targeted large companies and financial institutions, rather than individuals. However, Kaspersky says that it has seen these techniques being used in updated versions of common **Trojans**, which could be a sign hackers will soon attack the public.



Run a system image backup every month just in case ransomware strikes

## ■ THE HACK...

### New ways to scam you

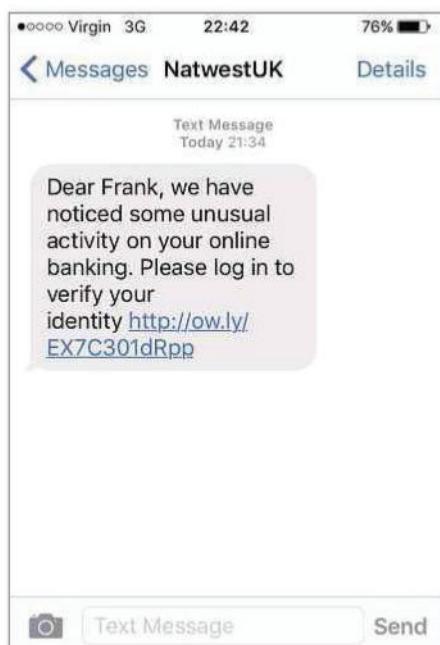
Phishing is always evolving, with scammers constantly employing fresh tricks to hoodwink their victims. Among the latest scams to watch out for, according to Police cybercrime reporting centre Action Fraud ([www.actionfraud.police.uk](http://www.actionfraud.police.uk)), are fake online job adverts and bogus RSPCA websites advertising fake premium-rate numbers for their cruelty line (see News, Issue 515, page 7).

Another recent scam emails Netflix users to tell them their accounts have been suspended. The link to restart your membership takes you to a fake site that steals your account and billing information.

In smishing (or 'SMS phishing') scams fraudsters send messages or texts to your phone, hoping you'll click the link contained within. They are a growing threat says Kaspersky, which saw a 300-per-cent rise between April and June in 2017. Many scams target banks' customers with texts suggesting that suspicious activity has been detected on their account (see screenshot above right). They urge you to click a link to confirm your account, but doing so leads to a fake site, from where scammers can steal your online-banking details – and then all your cash.

### ...HOW TO BEAT IT Don't trust ANYTHING

These latest scams simply highlight the need to be hyper-vigilant when it comes to spotting fakes, whether they appear online, in an email or on your phone. You should never assume any unexpected



Beware smishing scams like this – they just want to steal your money

communication is genuine until you've been able to verify it independently. Call your bank if you receive a text message, for example. Never click links in emails, never disclose any personal details and don't reply to any suspicious texts you receive.

Also, remember that unencrypted text messages can be intercepted by just about anyone. It's much safer to use messaging tools that employ end-to-end encryption (E2EE), such as WhatsApp. Just make sure you install the real WhatsApp, not the recent fake one – cunningly named 'Update WhatsApp Messenger' on Google Play (see screenshot left). This tricked more than a million people into downloading it, then bombarded them with adverts. Yes, this is another type of scam to watch out for, and worrying proof that not all Google Play apps are safe (see Protect Your Tech, page 16, for more evidence).

## ■ THE HACK...

### Malware goes mobile

Ransomware and other threats are predicted to thrive on phones and tablets in 2018, according to experts. SophosLabs processed 10 million suspicious Android apps in 2017 (up from 8.5 million in 2016) – 77 per cent of these turned out to be malware. "In September alone, 30.37 per cent of malicious Android malware processed by SophosLabs was ransomware," warned the security firm's Rowland Yu in a November blog post ([www.snipca.com/26218](http://www.snipca.com/26218)).

Apple devices won't be immune from

## WHY SCAMMERS LOVE CHRISTMAS

New research from Barclays shows that just over a quarter of all online fraud takes place in the run-up to the big day. In the rush to beat delivery deadlines, many shoppers let their guard down. According to Barclays the proportion of people who feel confident when shopping online at Christmas falls to 58 per cent, down from 78 per cent at other times.

Barclays estimates that £1.3bn will be stolen in scams this Christmas, with victims losing an average of £893. Worryingly, 38 per cent of adults said that when shopping online they didn't realise they could check a website's authenticity by looking for **https** and a padlock icon in their browser bar.

the threat of infection next year. At a recent phone-hacking contest run by Trend Micro, contestants showed off a vulnerability in the latest version of iOS (11.1), that allowed them to install a rogue app called KeenLab on an iPhone 7 over a local Wi-Fi connection. Details of how this was achieved are unclear, but Apple is said to be working on a fix.

### ...HOW TO BEAT IT Update your OS

We realise we're beating a pretty old drum here, but it's essential to apply the latest operating system updates for your mobile device as soon as they become available. It's also worth noting that, with mobile devices, the vast majority of infected software arrives via apps obtained from non-official sources. Most – though not all (see previous fix) – mobile malware can be avoided by ensuring you only install apps from the Google Play Store and Apple's App Store.

## ■ THE HACK...

### Hacking into your home Wi-Fi

Proving that there really is no room for complacency, security researchers at KU Leuven University in Belgium recently discovered a whopping great flaw in the encryption used to protect many wireless networks.

Until now, **WPA2** has been considered one of the safest wireless encryption protocols. But its newly revealed vulnerability to something known as a Key Reinstallation Attack (or Krack – see Issue 515, page 49) means any would-be



More than a million people downloaded this fake version of WhatsApp

hackers within range of your wireless network could gain access to and steal your data or inject malicious files, such as ransomware, on to your devices via your own home Wi-Fi connection. There are no reports of the exploit being used yet, but it's only a matter of time.

## **...HOW TO BEAT IT**

### **Update all your devices**

It's important to keep using WPA2 to protect your wireless network. Switching it off will only make you more vulnerable. And you'll need to do more than simply change your Wi-Fi password. In fact, the only way to protect against Krack is to wait for manufacturers to issue updates for your devices. Most manufacturers are racing to release fixes for Krack, and many, including Microsoft, have already done so – Windows was protected via an automatic update in October.

The vulnerability affects all your wireless devices – PCs, phones and tablets – but it's especially important to protect your router. If you're not sure whether your device has received – or needs – a patch against Krack, then contact your router's manufacturer.

Netgear, for example, provides a list of all affected devices at [www.snipca.com/26215](http://www.snipca.com/26215) (see screenshot above right). If your internet service provider supplied your router and there's no new firmware available for it, contact the company and ask when a Krack fix is due. If it's soon, ask for a newer replacement router for free – one that has been (or will imminently be) secured against Krack.

**Associated CVE IDs:**

- CVE-2017-13077
- CVE-2017-13078
- CVE-2017-13079
- CVE-2017-13080
- CVE-2017-13061
- CVE-2017-13082
- CVE-2017-13084
- CVE-2017-13066
- CVE-2017-13067
- CVE-2017-13068

**Associated CERT/CC VU number:** VU#228519

**This article applies to:**

- Aro (3)
- Wireless AC Adapter (2)
- Wireless N Adapter (2)
- Range Extender N (3)
- Range Extender AC (13)
- Range Extender AC Nighthawk (1)
- WiFi Range Extender (1)
- Wireless AC Router (8)
- Wireless AC Router Nighthawk (9)
- Hotspots (2)
- Access Point AC (8)
- Access point N (8)
- Oriol (3)
- Mobile Router (1)
- Business Wireless (1)

**How to Find Your Model Number >**

**Looking for more about your product? >**

**Netgear has released a list of its devices affected by the Krack Wi-Fi flaw**

## **THE HACK...**

### **Hijacking your accounts**

Though account hijacking itself is nothing new, recent research commissioned by Google, in collaboration with the University of California, Berkeley, revealed how billions of passwords are stolen every year. The research, which tracked activity on the internet's black markets over the course of 12 months, discovered that around 788,000 logins were stolen via malware, (such as **keyloggers**), while 12 million passwords were obtained via phishing scams.

Furthermore, a staggering 3.3 billion logins were obtained via big-scale data breaches, such as the recent Computer Exchange hack, which affected two million customers of the tech trade-in store. You can read the somewhat depressing research for yourself at [www.snipca.com/26226](http://www.snipca.com/26226).

## **...HOW TO BEAT IT**

### **Use two-factor verification**

Passwords will continue to be how most of us protect our services and data in 2018. More secure **biometric** log-in methods, such as 3D facial recognition, are reserved for expensive devices like the £1,000 iPhone X. Even these might be vulnerable to attack, if a recent claim to have beaten Apple's security measures using a mask is to be believed. Watch the video at [www.snipca.com/26228](http://www.snipca.com/26228).

Google's own conclusion from its research is one we'd agree with – using a password manager or **two-factor verification** (or preferably both) is the only way to minimise the threat. Two-factor verification is a hassle because it adds an extra log-in step, such as typing a numerical code texted to your phone. But it does make it virtually impossible for hackers to get into your account without the code.

To set it up on your Google account, sign in at [www.snipca.com/26230](http://www.snipca.com/26230) and click Get Started (see screenshot left). Our password manager of choice, meanwhile, remains LastPass, free from [www.lastpass.com](http://www.lastpass.com).

**Google 2-step Verification**

[Home](#) [Features](#) [Help](#)

**Stronger security for your Google Account**

With 2-Step Verification, you'll protect your account with both your password and your phone

**Why you need it**

**How it works**

**How it protects you**

**Get Started**

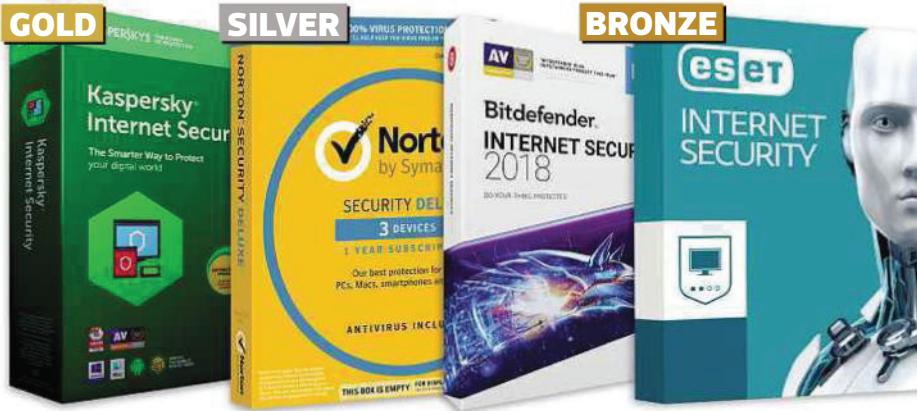
**Get Started**

**Signing in to your account will work a little differently**

- You'll enter your password**  
Whenever you sign in to Google, you'll enter your password as usual.
- You'll be asked for something else**  
Then a code will be sent to your phone via text, voice call or our mobile app. Or, if you have a Security Key, you can insert it into your computer's USB port.

**Click 'Get Started' to set up two-factor verification on your Google account**

# WHICH ANTIVIRUS SHOULD YOU USE IN 2018?



## GOLD

### Kaspersky Internet Security 2018

Kaspersky claimed top spot for our ninth consecutive test, delivering flawless results. It was the only program to get full marks in all five categories across both tests. It blocked everything it should have, producing just one false positive (in AV-Test's analysis) from 1,437,401 samples, which was crucial in pipping Norton. Its impact on our standard PC was minimal, slowing file-copying by just four per cent (the average is 16) and program launches by 10 per cent (the average is 13). SE Labs awarded it the "rare privilege" of a 100 per cent rating.

As well as Kaspersky's superiority in avoiding false positives, it has several tools Norton lacks. These include webcam protection, to prevent hackers accessing it, and a safe browser, which blocks malicious websites. But its chief asset is

## SILVER

### Norton Security Deluxe

One day Norton may beat Kaspersky, but yet again it misses out by a tiny margin. Like its great rival it blocked every threat, but – across both tests – misidentified three safe programs as malicious. It also slowed computers more than Kaspersky. But it's still an exceptionally powerful antivirus that came "very close" (in SE Labs' words) to stealing the crown.

## JOINT BRONZE

### Bitdefender & ESET

Our confidence in recommending Kaspersky and Norton comes from their excellent performance in both tests.

## BRONZE

### ESET INTERNET SECURITY

a software updater that automatically installs the latest (and theoretically safest) version of programs. Norton's only point of supremacy is in offering a password manager, but we prefer LastPass anyway.

## HOW WE TESTED

We collated recent results from two of the world's leading antivirus testers, Croydon-based SE Labs and the German AV-Test. Both tested for protection and accuracy (number of **false positives**), with AV-Test adding scores for performance (the impact on a PC's speed). To see the results in full, including those for other programs tested (such as BullGuard, McAfee and Trend Micro) visit [www.snipca.com/26293](http://www.snipca.com/26293) (SE Labs, July to September) and [www.snipca.com/26279](http://www.snipca.com/26279) (AV-Test, July to August).

No other antivirus excelled across the board, but two products performed outstandingly well in one test, less so in the other. ESET's 100 per cent protection rating in SE Labs wasn't matched in AV-Test, which gave it 96.9 per cent in July. That 3.1 per cent failing could be fatal for your PC. In contrast, Bitdefender scored 100 per cent in AV-Test, but only 91 per cent in SE Labs. Both are good products, but you only need one antivirus on your PC, and it should be Kaspersky or Norton.

## ...AND FREE SOFTWARE?

Avast and AVG are the only two you should consider, though we can't recommend them. In SE Labs AVG's protection score of 90 per cent is far too low for comfort. Avast's was even worse (88 per cent). They both blocked more in AV-Test, but also slowed down the PCs more than we'd like, particularly when launching software.

## IS IT STILL SAFE TO USE KASPERSKY?

We know what you're thinking: is it still safe to use Kaspersky, given the accusations thrown at the Russian company? To recap, both the United States' General Services Administration (GSA) and the Department of Homeland Security has banned the US government from using Kaspersky products, in the wake of an investigation into Russian interference in the 2016 presidential election.

There have been allegations of ties between Kaspersky staff and Russian intelligence, while in October *The Wall Street Journal* claimed Kremlin-backed hackers used Kaspersky to hack into a computer owned by a National Security Agency employee.

Kaspersky has dismissed the claims as

a "witch hunt", and we're inclined to agree. Banning Kaspersky within US government systems feels like an overreaction borne from nothing more than a vague mistrust of Russia. Are Russian hackers engaged in cyber-warfare? You bet. Are US and UK hackers doing the same? No question. Do either care what you do on your PC? Almost certainly not. They have much bigger targets. You need to worry far more about ordinary cyber-criminals, not hackers supported by foreign governments.

My contacts in the security industry are sceptical about Kaspersky's reported links with Russian authorities. They say it would be "commercial suicide" for the company, and that such an extraordinary claim needs extraordinary evidence. None has been

provided. They also point out that many Russian security experts work for US companies, and vice versa. The antivirus industry is a small world – everyone knows everyone. Maintaining a conspiracy would be formidably difficult.

So when people ask me, as they often do, which antivirus to use, I recommend Kaspersky without reservation. It's what I use on all my devices. Should you want to switch, then I suggest Norton, owned by US company Symantec.

**Daniel Booth**  
Editor,  
Computeractive



You can buy Kaspersky and Norton at exclusive reader discounts.  
Kaspersky: [www.snipca.com/21532](http://www.snipca.com/21532) Norton: [www.snipca.com/25004](http://www.snipca.com/25004)

## 5 QUESTIONS TO ASK BEFORE CHOOSING ANTI VIRUS

### 1 Do I really need security software?

It's a fair question: back in the days of Windows 98, it was horribly easy to get a virus. All you had to do was open a dodgy email attachment, click a malicious web link or plug in an infected USB flash drive. Nowadays, Windows 10 has all sorts of protections built in, and receives regular security updates.

Sadly, it's not enough to guarantee your safety. Microsoft's Windows Defender Antivirus is a simple tool that blocks the most common threats, but it's not as effective as third-party security software.

### 2 Should I buy standalone antivirus or a security suite?

Many security products are offered in two flavours: a basic antivirus tool or a more extensive (and expensive) internet security suite. Both do the same basic job of detecting and removing malware. The difference is typically the suite's extra features.

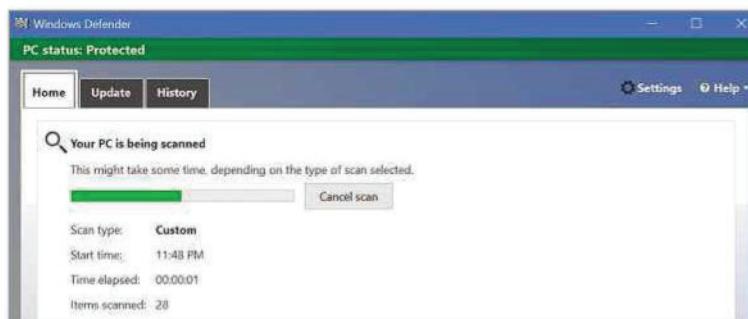
Some 'antivirus' products come with more extra features than you'd expect, like browser extensions and password managers. Conversely there's no guarantee that a given security suite will include a particular feature. Many security suites no longer even include a firewall.

It's understandable then that certain security companies – including McAfee and Symantec – have ditched the traditional 'antivirus' and 'security suite' distinctions altogether. When choosing, we suggest you simply check the software has features that are important to you.

### 3 Is a firewall necessary anymore?

A decade ago, every security suite came with its own firewall, designed to put you in control of who (or what) could connect to you over the internet – and to ensure nothing nasty could spread through your network.

This was always a bit odd because



Windows Defender will only stop the most common threats

Windows has had a firewall since 2004, when it was added to Windows XP. It provided solid protection, and over the years it has only got stronger. At the same time, the rise of the household router has also made it much harder for hackers to connect directly to your PC over the internet.

Many security experts agree, therefore, that the Windows 10 firewall is nowadays all you need. It's not easy to use though. Some security suites address this by including firewall-management tools, which automatically apply certain settings, or help you configure rules and exceptions. But you may prefer the free program Windows Firewall Control (see page 16).

### 4 How does safe browsing work?

You never really know what's behind a link until you click it. Some hacks can even lead to malware being distributed by reputable sites. Most security suites, therefore, monitor your browser to alert you to dangerous downloads.

Most suites check the code running on a web page to warn you if something's amiss, regardless of which browser you're using. Companies often offer browser extensions that place warnings on the page and block dodgy content.

These extensions are a mixed blessing though: they can slow things down and may include intrusive toolbars or adverts. Some will even filter your web searches, to ensure that only safe results are

returned. The catch being that your results will not come from Google, but inferior rivals like Yahoo or Ask.com.

Finally, several suites also include a dedicated 'safe browser'. Typically, this is a modified version of Chrome that has minimal features and won't accept extensions or customisations of any type. This makes it all but impossible for a hacker to hijack your browser and spy on sensitive activities, such as online banking. It's a feature worth considering.

### 5 Are password managers worth it?

Several security suites include a password manager, which can be used to generate unique passwords for every online service you use, and automatically fill them in as needed. Generally speaking, this is an excellent idea. If you're guilty of using the same password for everything, then one data leak (from any site) could allow a hacker to hijack all your personal services. Using an easily guessable password is just as bad.

If your choice of security suite depends on the presence of a password manager, check the small print. You might be allowed to use it only for as long as you use that particular security suite. You might even have to pay extra for it once you reach the end of a trial period. The big feature to look for is the ability to synchronise your password database across all the operating systems you use, including Android, iOS and Windows. **ca**

**NEXT ISSUE** On sale Wednesday 20 December

ON SALE  
Weds  
20 Dec

## What You Must Download In 2018

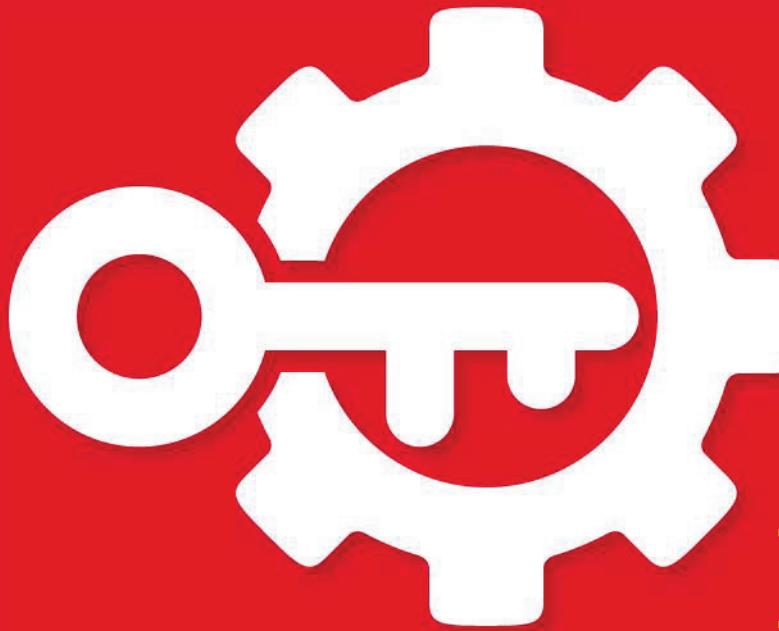
Best new software, apps and other goodies



- Plus** • 10 mistakes you should've stopped making in 2017
- Discover secret info about your neighbourhood online

Subscribe to Computeractive at [www.getcomputeractive.co.uk](http://www.getcomputeractive.co.uk)

# SECRET SETTINGS OF YOUR FAVOURITE PROGRAMS

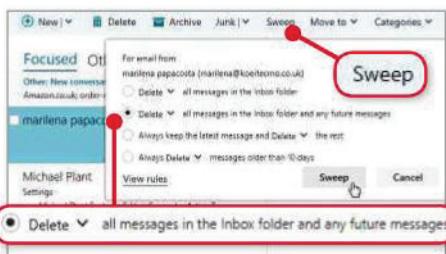


You may not be able to teach an old dog new tricks, but Mike Plant reveals useful, tucked-away features to bring a new lease of life to programs you use every day

## EMAIL

### Outlook.com

**Stop email spammers** Many of us will get a steady stream of junk emails from the same sender. But did you know you can delete them all in one go and block subsequent emails from that sender? You need to use Outlook.com's Sweep tool. Click any email from that sender, then click Sweep (see screenshot below). In the pop-up menu select the 'Delete all messages in the Inbox folder and any future messages' option, then click Sweep. If you'd prefer to store the emails, but remove them from your inbox, click the small arrow to the right of Delete, then Archive.



Quickly remove emails from spammers using Outlook.com's Sweep tool

### Gmail

**Mute irritating threads** If you've been copied into an email thread that never seems to stop receiving messages you can mute it so that it stops showing up in your inbox. Open the relevant email thread, click More (in the centre, above the message), then Mute. The thread will

be archived so you'll still be able to search for it, but you'll only see it in your inbox again if an email in the thread is specifically sent to you.

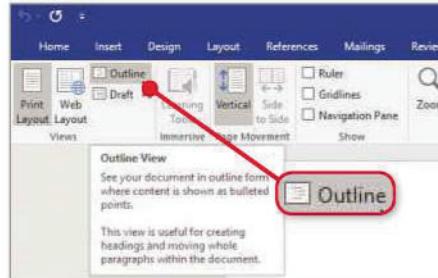
## OFFICE

### Word

**Browse long documents faster** When working on longer documents, it can be incredibly time-consuming to trawl through to the specific section you want to edit. Thankfully, Word has a setting that can speed up this process.

Click View, then Outline (see screenshot below) to open Outline View. Your document will now display bullet points next to passages of text (paragraphs, sections, etc). Tick the Show First Line Only box at the top of the screen to show only each passage's opening line. This will make it easier to navigate to the section you want.

You can also move an entire section by double-clicking the bullet point to its left, then cutting and pasting the text.



Navigate longer Word documents faster using Outline View

## Excel

**Create a chart template** If you need to create a series of charts in Excel that require the same layout and colours, you can save the first one you create as a template for the others. Right-click your chart, then click the 'Save as Template' option in the pop-up menu. Your template will appear as an option when you want to create a new chart.

## LibreOffice

**Make your documents crash-proof** LibreOffice has a handy feature that creates a backup of any open documents, but for some reason it is no longer enabled by default.

To enable it, click Tools, Options, Load/Save, General, tick 'Always create a backup copy', then click OK. From now on, LibreOffice will create a temporary backup of your open documents as you edit them, so it can recover all but your most recent edits should your PC crash.

## VIDEO & MUSIC

### VLC

**Fix out-of-sync audio** It can be incredibly annoying when you start watching a film on your PC, only to realise that the audio is out of sync with the picture. VLC has a tool that can fix this. Click Tools, then Track Synchronization. Adjust the 'Audio track synchronization' field to sync the audio track. Use a positive value if the audio is ahead of the pictures, or a negative one if the audio is lagging behind.

## YouTube

### Link your PC and TV

To control YouTube on your TV from your PC, go to [www.youtube.com](http://www.youtube.com) in your PC's browser, click the menu button (three lines at the top left), scroll down to Settings, then click Connected TVs. Open YouTube on your TV (via an app on your smart TV, a set-top box or games console), then navigate to Settings and select 'Link TV and Phone'. You'll see a 12-digit number. Type this into the 'Link with TV code' box on your PC, then click 'Add this TV'. You'll now be able to search for and play YouTube videos on your TV from your PC.

## MusicBee

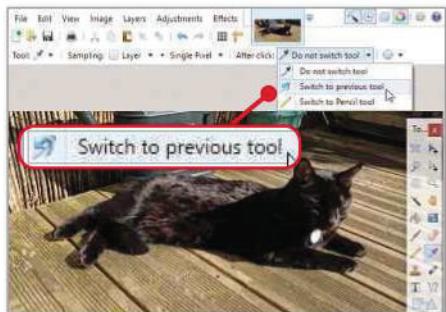
**Build a better MusicBee** MusicBee ([www.getmusicbee.com](http://www.getmusicbee.com)) is a good music player, but if its busy interface isn't to your liking you can change it. Click the small down arrow to the right of MusicBee in the top-left corner, View, then Arrange Panels. Untick any section to remove it from the panel using the boxes on the left. Alternatively, add new elements by dragging and dropping them from the 'available elements' section. Click Apply, then Save once you've finished.

## PHOTOS

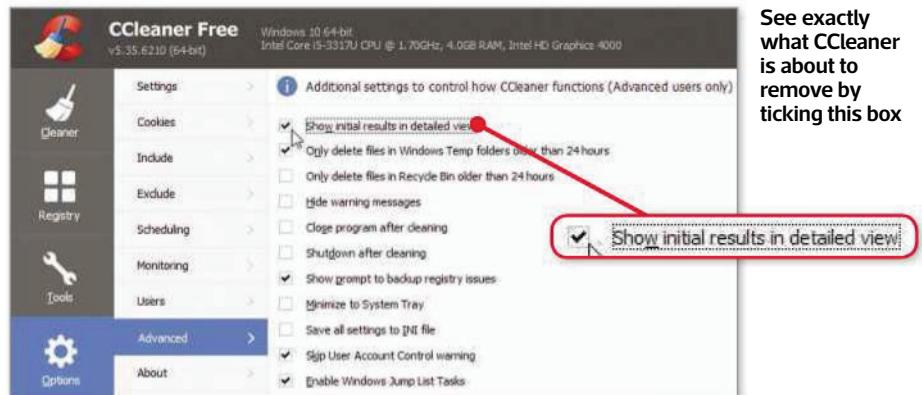
### Paint.net

**Select colours faster** We use Paint.net's Color Picker all the time when editing photos. But we do find it annoying that you have to click it to select it, then click the colour you want to add to the image, then click the Paintbrush tool again to paint with that colour.

Thankfully there's a way to streamline this process. Click Settings (the cog icon, top right), Tools, scroll down to the Color Picker section, then select 'Switch to previous tool' in the 'After click' dropdown menu (see screenshot below). Now you'll automatically return to the last tool you were using – for example, the Paintbrush – when you click a colour.

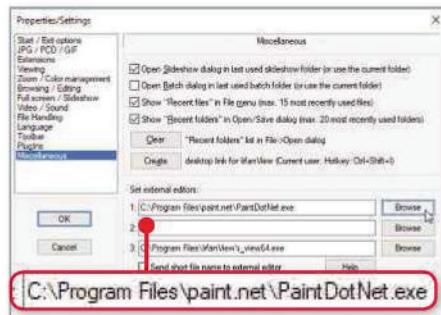


Make the Color Picker less cumbersome to use by selecting this setting



## IrfanView

**Edit an open image** IrfanView is a great image viewer, but its editing options aren't as extensive as programs like Paint.net. To open an image you're viewing in IrfanView in the image editor of your choice, click Options, Properties/Settings, Miscellaneous, then click Browse in the 'Set external editors' section (in the top field). Navigate to and select the .exe file of your image editor (for example, at C:\Program Files\paint.net\PaintDotNet.exe, see screenshot below), then click OK. From now on you can open the image you're viewing in your editor by pressing Shift+1.



Link your picture editor to IrfanView so you can quickly edit any open images

### Stretch images across multiple monitors.

View your images on a larger scale by stretching them across multiple PC monitors. Click Options, Properties/Settings, Full screen/Slideshow, tick 'Multiple monitor mode', then click OK. To stretch an image, open it, then double-click the image.

## SYSTEM TOOLS

### CCleaner

**Get more info about the files you're cleaning** PC-optimisation program CCleaner doesn't provide much information about the files its about to delete from your PC. To get more information, click Options, Advanced, then tick the 'Show initial results in

detailed view' box (see screenshot above). Now, when you click Analyze, you'll see a detailed list of every file up for removal.

For a little peace of mind you can stop CCleaner removing recently deleted files that you may still need. In the Advanced settings menu (see above), tick the 'Only delete files in Recycle Bin older than 24 hours' box. CCleaner will no longer remove any files you moved to the Recycle Bin in the past day.

### Wise Uninstaller

**See a list of uninstalled programs** If you suddenly realise you've accidentally deleted a program you still need but can't remember exactly what it was called – you can find out by checking Wise Uninstaller's history. Click the Menu button (top right, see screenshot below), then Uninstall History.



Remind yourself of the programs you've uninstalled using Wise Uninstaller's history

### PicPick

**Capture the cursor** In PicPick (<http://ngwin.com/picpick>) you can take screenshots that include your cursor. To enable this, right-click the PicPick logo in the notification area of the taskbar, click Program Options, Capture, tick the 'Include cursor image' box, then click OK. 

# Will Firefox Quantum kill your favourite add-ons?

Firefox is changing and some of your favourite add-ons may stop working. Mike Plant explains how to make the leap to Quantum with minimum hassle



The release of Firefox version 57 – called Firefox Quantum – could prove more of a curse than a blessing for long-time users of the browser. As we explained in Issue 513 (see What's All the Fuss About? page 49), this latest version stops many of Firefox's [add-ons](#) (or [extensions](#)) from working.

Here, we'll tell you which Firefox add-ons no longer work in Quantum and what the best alternatives are. We'll also explain how you can continue using your favourite add-ons in other browsers.

## Do I have Firefox Quantum?

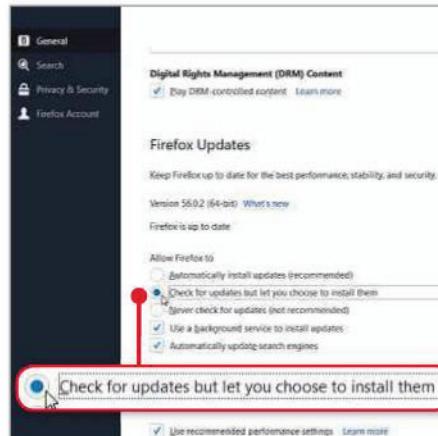
The easiest way to check is to open Firefox, click the Menu button (three horizontal lines at the top right), the question mark at the bottom of the menu, then About Firefox. If you have the latest version you'll see Firefox Quantum at the top and the version



If the About Firefox pop-up window looks like this, you have Quantum

number will be 57 (see screenshot above).

If Firefox hasn't updated yet you can delay the update to make a few helpful preparations first. Click the Menu button, Options, scroll down to the Firefox Options section, then select 'Check for updates but let you choose to install them' (see screenshot below). Click the Menu button, Add-ons, then Extensions to see your installed add-ons, then make a note of them.



Select this option to put off the update and give yourself time to prepare for it

## WHY IS FIREFOX REMOVING ADD-ONS?

In a bid to make Firefox load faster Mozilla has changed how browser extensions work. From now on only so-called WebExtensions will work and that means many of the most popular add-ons are no longer compatible (see box opposite). Many add-ons are created and maintained by small teams or individuals who don't have the resources to turn their add-ons into WebExtensions.

## Which extensions will no longer work?

If you haven't yet updated to Quantum, click the Menu button, Add-ons, Extensions, then look for any that are labelled 'Legacy' (highlighted in yellow – see screenshot below). These will no longer be supported and will therefore be removed as soon as you do update to Quantum.

If you already have Firefox Quantum, click Menu, Add-ons, extensions, then click 'Show legacy extensions' (or Legacy Extensions on the left). This lists all the add-ons you had installed that no longer work. This information doesn't always tell the whole story, however.

For example, in our screenshot below LastPass is listed as a legacy extension, but there is a [beta](#) version on LastPass's site ([www.snipca.com/26114](http://www.snipca.com/26114)) that works. Scroll down and click the red 'Download the beta' button to add it.

So even if your favourite add-on is listed as a legacy extension, it's still worth



Check which of your add-ons are set to disappear



If you have Firefox Quantum, click this to see which add-ons you're missing

doing online research to make sure it's definitely no longer available for Quantum.

## Find alternatives to your favourite add-ons

If your favourite add-on has been abandoned by Firefox Quantum, you'll need a suitable replacement.

Go to Firefox's Extensions site at [www.snipca.com/26122](http://www.snipca.com/26122) to see a list of extensions that still work with Quantum. Enter keywords into the search box to find similar add-ons. For example, we like the Easy Screenshot add-on but it's yet to be updated for Quantum. We searched using the term **screenshot** and found a suitable replacement called Awesome Screenshot Plus (see screenshot below).



Search Firefox's Extensions site for add-ons that work with Quantum

## Continue using your old add-ons

We explained above how you can put the update to Quantum on hold, but we don't recommend doing that for long because out-of-date browsers can soon become a security risk.

Instead, if you really can't live without all your favourite add-ons, you should install the Waterfox browser ([www.waterfoxproject.org](http://www.waterfoxproject.org)). Waterfox is based on the same code as Firefox, and so all the add-ons that work in Firefox will work on Waterfox, including those that are no longer supported in Quantum. Waterfox will continue to be updated too, so there's no risk of it becoming unsafe.

The first time you open Waterfox you'll see the Waterfox Wizard, which lets you import your bookmarks and other data from Firefox, Edge, Internet Explorer or Chrome. You can also select 'Don't import anything' if you'd prefer to start over with a blank slate. To add an add-on, click the Menu button (three lines at the top right), Add-ons, then search using the search bar. We were able to install the Easy Screenshot add-on that no longer works in Firefox Quantum (see screenshot right).

# WILL YOUR FAVOURITE ADD-ON SURVIVE?



### ADBLOCK PLUS

With nearly 14 million users, advert-blocker Adblock Plus is the most popular Firefox add-on by a country mile. You'd expect it to have been updated for Firefox Quantum – and you'd be right – but its developer certainly took its time doing so. To add it to Quantum go to [www.snipca.com/26161](http://www.snipca.com/26161).



### UBLOCK

Firefox's second most popular advert blocker – and the second most popular add-on overall – among Firefox users has been fully updated for Quantum. Go to [www.snipca.com/26213](http://www.snipca.com/26213) to install it.



### NOSCRIPT SECURITY SUITE

This security add-on blocks **active content** such as Java, JavaScript and Flash from running on websites without your say so. Its developer is hoping to make it available for Quantum very soon. Go to [www.snipca.com/26131](http://www.snipca.com/26131) to see if it's been released, or check [www.noscript.net](http://www.noscript.net) for more information.



### GHOSTERY

We use this to stop advertisers tracking our browsing habits. We were happy to see that it has already been updated for use on Firefox Quantum ([www.snipca.com/26135](http://www.snipca.com/26135)).



### TAB MIX PLUS

This popular add-on lets you customise the way Firefox's tabs work. As it stands its future is unclear. Its developer is working on an update, but there's no word on a release date (see [www.snipca.com/26136](http://www.snipca.com/26136) for the latest bulletins). The bad news is that there's no alternative available, with all similar add-ons also struggling to make the leap to Firefox Quantum.



### HTTPS EVERYWHERE

Visiting the more secure [https](https://) version of websites is a must when browsing the internet, which is why we recommend you install HTTPS Everywhere. We're happy to say it's already available for Quantum ([www.snipca.com/26137](http://www.snipca.com/26137), see screenshot below).



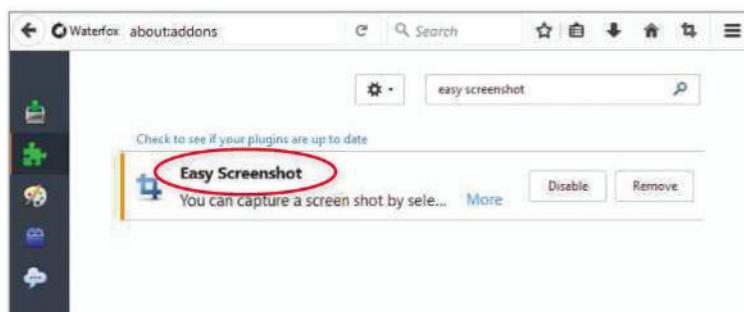
### CLASSIC THEME RESTORER

This add-on lets you roll back the look of Firefox so it resembled the browser circa 2014 (before the menu was moved and other changes implemented). It seems Firefox doesn't want you to turn back time anymore because the new computer code used in Quantum stops Classic Theme Restorer working (and its developer has all but admitted defeat – see [www.snipca.com/26138](http://www.snipca.com/26138)). If you want to carry on using it, we suggest you install Waterfox.



### GOOGLE EARTH

For the first time Google Earth will soon be available for browsers other than Chrome – and that includes Firefox Quantum. That's because Google has been working on something called WebAssembly, which is a fancy name for a bit of tech that makes computer code work across all browsers. It's not available yet, but you can read more from Google at [www.snipca.com/26139](http://www.snipca.com/26139).



Add-ons like Easy Screenshot that no longer work in Firefox Quantum will continue to work in Waterfox

# Best new Christmas gadgets

Stuck for Christmas present ideas, or don't know what to ask for yourself? Then feast your eyes on these innovative gift ideas...



## Gamebuino META

<http://gamebuino.com/>

€ 79.00 (£70.00)

Retro gaming is all the rage – with even Nintendo reproducing its classic consoles in affordable new formats. The Gamebuino META is based on the incredibly popular Arduino board, the starting point for many a DIY computing project, and lets you play games programmed by other enthusiasts, as well as creating your own. Back the Kickstarter fundraising project before 23 December to be one of the first to own this fantastic new handheld unit.

## CHERRY DW 5100 Keyboard

[www.scan.co.uk](http://www.scan.co.uk)

£27.00

Why put up with a bog-standard keyboard and mouse when you can get quality and style for a bargain price? This wireless keyboard has a comfortable typing action and laser-etched labels that won't wear off, plus 10 multimedia keys that you can reprogram with Cherry's free KeyM@n software. Its ergonomically shaped mouse has a soft surface, rubber grip panels and five programmable buttons. Both mouse and keyboard connect to one tiny radio receiver that plugs into a USB port.



## Chillblast Fusion Toro PC

[www.chillblast.com/toro](http://www.chillblast.com/toro)

£1149.00

Chillblast is renowned for producing high-spec gaming PCs and its new ultra-powerful Fusion Toro comes equipped with the latest top-notch components, including an Intel quad-core processor and GeForce GTX 1060 graphics card. The bundled ASUS 24in 144Hz monitor will make your games dazzle, while Chillblast's five-year warranty and award-winning customer service provide reliable backup and assistance. Get £150 off at [www.chillblast.com/toro](http://www.chillblast.com/toro), or use the checkout code GIFTGUIDE17.



## DJI SPARK

[www.dji.com](http://www.dji.com)

£519 from DJI

Get yourself a DJI Spark drone and you'll never again need to press a button to take a photo. Once it's in the air, simply form a rectangle shape with your fingers and it'll recognise the gesture as its cue to take a snap, giving you a bird's-eye selfie. It can take 12-megapixel photos and record Full HD video, providing editing templates via its accompanying app.





## CHERRY Strait 3.0 Black Keyboard

[www.cpc.farnell.com](http://www.cpc.farnell.com)

£30.00

Cherry's reputation for precision engineering and high-quality workmanship is showcased in this eye-catching keyboard. The laser-etched black keys and blue inlaid background sit within an elegant ultra-flat chassis, and include five programmable hotkeys to control media-player functions. The comfortable typing action and whisper-quiet keystrokes make it ideal for everyday use.

## GT Omega Pro Racing Office Chair

[www.gtomegaracing.com](http://www.gtomegaracing.com)

£180.00

It's time to bring some flair to the humble office chair. The GT Omega Pro Racing's sports-car styling reflects the attention to ergonomics you'd expect from a classic motor marque. The body-hugging design provides solid back support, while the headrest and lumbar-support cushions, height-control mechanism and adjustable armrests allow you to set up your perfect working (and gaming) position. It even reclines so you can enjoy a quick power nap!



## iPhone 6s

<https://softoption.buytech.store>

£364.00 from SoftOption



The innovations of the iPhone 6s include 3D Touch, which lets you access extra features with a firmer press of the screen, and Live Photos, which capture a moving picture from just before to just after you hit the shutter. Its 12-megapixel rear camera takes brilliant 4K video, and the rounded metal-backed case feels great in your hand. SoftOption is now selling this fantastic phone, compatible with Apple's latest iOS 11 operating system, in four colours, with a huge 64GB of storage, unlocked for use on any mobile network, at 44% less than its original price.



## Creative Sound BlasterX Katana

[uk.creative.com](http://uk.creative.com)

£279.00

Soundbars designed to sit under your TV also make sense under your monitor, especially when they're as compact and powerful as the Katana. Music, movies and games all sound awesome thanks to the 24-bit DAC (digital to analogue converter) and five speakers driven individually by amplifiers using DSP (digital sound processing). The unique Aurora Reactive lighting system lets you create stunning colour effects with 49 programmable LEDs controlled from your PC.

# Best new Christmas gadgets



## ROCCAT Kone AIMO and Khan Pro

[www.currys.co.uk](http://www.currys.co.uk)

£159.98

Looking for that perfect Christmas gift for your favourite gamer? ROCCAT has you covered. The Kone AIMO offers a new immersive lighting system to brighten your gaming experience. The highly precise Owl-Eye Optical sensor, ergonomically placed buttons, and benchmarking shape make the Kone AIMO the perfect mouse for any gamer. And because it's Christmas why not add the unique Hi-Res Audio gaming headset, the Khan Pro. Both products are available in black, grey and white.



## iStorage diskAshur<sup>2</sup> USB 3.1

<https://istorage-uk.com>

£141.78

The diskAshur<sup>2</sup> is the ultimate encrypted hard drive for storing precious data, such as family photos and videos. Once you set your unique PIN code, everything it contains will be safe from prying eyes. The drive is available in four striking colours (Ocean Blue, Fiery Red, Phantom Black and Racing Green) and in capacity options from 128GB to 5TB. Use the code FGG15 to buy it at a 15% discount - £141.78 (including VAT).\*

\*Terms and conditions apply to the entire iStorage range. Promotion ends 31st January 2018.



## Google Daydream View

<https://store.google.com>

£69.00

Google's Daydream View lets you join the virtual-reality revolution without spending a fortune - just slide a compatible phone into the fabric-clad case and you'll be immersed in another world. By sensing your every move, it makes games feel brilliantly realistic. Daydream's standout feature is its wireless controller - just make sure you hold on tight to the handy wrist strap to stop it flying out of your hand in the excitement!

## CHERRY MX Board 3.0

[www.scan.co.uk](http://www.scan.co.uk)

£60.00

Cherry has been manufacturing some of the best keyboards in the world for over 40 years, and the exclusive Gold Crosspoint contacts in its MX key switches ensure perfect keystrokes every time. This professional wired USB model with laser-etched key caps is sturdier than ever, and comes with a choice of red or brown switches: both provide a fast, lightweight linear action with no annoying click sound, with brown providing an extra bump of tactile feedback.





## Apple iPad with Retina Display 64GB Wi-Fi + cellular

<https://softoption.buytech.store>

£303.06 from SoftOption

Seven years on from its arrival, the iPad continues to push at the boundaries of tablet innovation. This 'Good as New' edition includes 4G connectivity, an ultra-sharp Retina-display screen and an iSight camera that records videos in 1080p resolution. At £303, it costs around half of the original price and comes with 64GB storage – an option that's no longer available from Apple's store.



## Oakley Radar Pace

[www.wiggle.co.uk](http://www.wiggle.co.uk)

£320.00

Imagine having the benefit of a professional coach, urging you to train faster and for longer. Pair Oakley's Radar Pace glasses with your phone and they'll use sensors to analyse your running, giving you audio feedback to improve your technique and a well-balanced training program that gradually increases the intensity of your speed training.



## Beats SOLO3 Wireless On-Ear Headphones

<https://softoption.buytech.store>

£214.19



With a battery life of up to 40 hours, the Solo3 headphones ensure you'll never be marooned without your favourite tunes. Charge them up for just five minutes and the Fast Fuel feature guarantees three hours of playback. Hold them near your iPhone and they'll connect simultaneously to your Apple Watch, iPad and Mac. For the best audio experience, customise the ear cups for optimum comfort.

## Affinity Photo & Affinity Designer

<https://affinity.serif.com>

From £19.99

The Affinity Photo and Designer programs enable you to work faster than ever on image-based projects, whether you're carrying out a quick photo edit or putting together a complex document involving hundreds of layers or stacked images. Version 1.6 of the programs contains new tools that raise the bar for creative software, including an impressive 'Light' user interface, which provides a vibrant alternative to the 'Dark' mode. Available on Mac, Windows and iOS.

# Problems Solved

## PROBLEM OF THE FORTNIGHT

### How do I get WhatsApp on my iPad?

**Q** I've been using WhatsApp on my iPhone for ages. Recently, I thought I'd install it on my iPad. However, I can't find WhatsApp in the App Store. Oddly, if I start typing 'WhatsApp' into the App Store's search bar, then I see options like 'WhatsApp for iPad' and even 'WhatsApp for iPad Free' – but tapping on either of these still doesn't reveal the real app. Why is this? I did find something called 'Messenger for WhatsApp', which had variable reviews. Will this work, and can it be trusted?

Ray Hardy

**A** WhatsApp is not available for the iPad. There are doubtless a variety of technical and commercial reasons for this, but to find out what those are you'd have to ask WhatsApp (or Facebook, which has owned the service since 2014).

That's why you can't find the app in the App Store. But the reason you see suggestions like 'WhatsApp for iPad' when searching is because Apple's servers are predicting what you're looking for as you type. As many other people have previously typed 'WhatsApp for iPad', it duly appears in the list of suggestions – but this doesn't mean the app is actually available.

The Messenger for WhatsApp app that you found ([www.snipca.com/25851](http://www.snipca.com/25851)) does work, but it is not developed by WhatsApp/Facebook, so it is unofficial. This brings two key problems. The first is that the app or parts of it could be broken at any time by WhatsApp if the company changes how its own servers work – and this has happened previously. The second is that you have to trust your messages being handled by a third party (an outfit called Internet Rocks, at <https://irocksapps.com>).

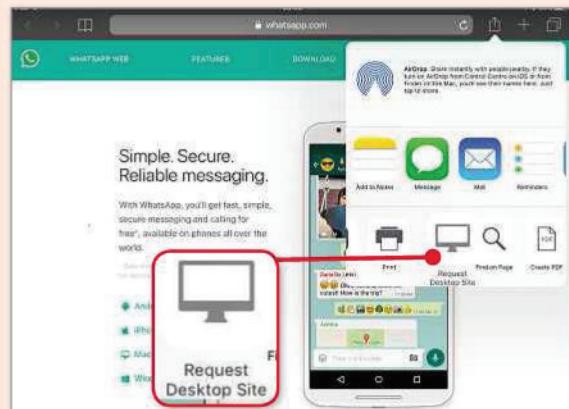
There's no specific suggestion that the people behind it are dodgy. However, its website is awash with broken links and the only contact method is an online form, so we wouldn't recommend using it.

However, there is a workaround that lets you use WhatsApp on your iPad, safely and through an official channel – and that's to use WhatsApp Web (<https://web.whatsapp.com>), which is a version of WhatsApp that works through a web browser.

If you visit WhatsApp Web in Safari on your iPad it'll look like you can't use it, because WhatsApp redirects the browser to its normal home page. However, if you tap the Share button at the top of Safari (the box icon with an up arrow) and then tap Request Desktop Site (see screenshot), you'll be presented with a QR code. Next, in WhatsApp on your iPhone, tap Settings followed by

'WhatsApp Web/Desktop' and then Scan QR Code. Point your iPhone's camera at the QR code displayed on your iPad and you'll now be able to use the web version of WhatsApp in Safari.

Note that if you refresh the tab – or leave it for a while – you'll need to repeat the Request Desktop Site part of these instructions, but you won't again need to scan the QR code.



In the absence of an official WhatsApp app for iPad, users can instead use its web version in Safari

### Is my old tablet fit for Windows 10?

**Q** Some time ago I bought an Acer E13 ES1-311-C4Q6 laptop. I updated it to Windows 10 but never really got on with it, so haven't used it much. I read an article that said some Windows 10 machines are no longer being supported. I followed the instructions to check my processor and found that my Windows 10 version is 1607 (Anniversary Update), and the processor is a 2.16GHz Intel Celeron N2840. It would seem that the Creators Update either wasn't offered or failed. Can I assume my Acer is one of those now-defunct machines, fit only for the scrapheap?

Len Jones

**A** Windows 10's minimum requirements are actually quite modest, and haven't changed for Creators Update (1703) or the more recent Fall Creators Update (1709). You can check Microsoft's recommendations at [www.snipca.com/26085](http://www.snipca.com/26085), but your machine's core components surpass them – so there's certainly no need to dump it.

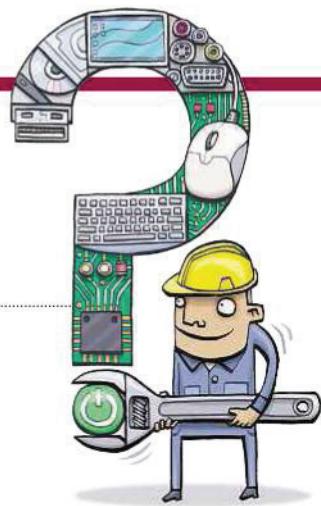
You didn't say if Windows Update displayed any error messages, but if so, then you could search online for more information. However, with the Fall Creators Update now out the quickest fix is to download Microsoft's Windows 10 Update Assistant, from [www.snipca.com/26086](http://www.snipca.com/26086). Just double-click the downloaded tool, then click Update Now to start the process (see screenshot).



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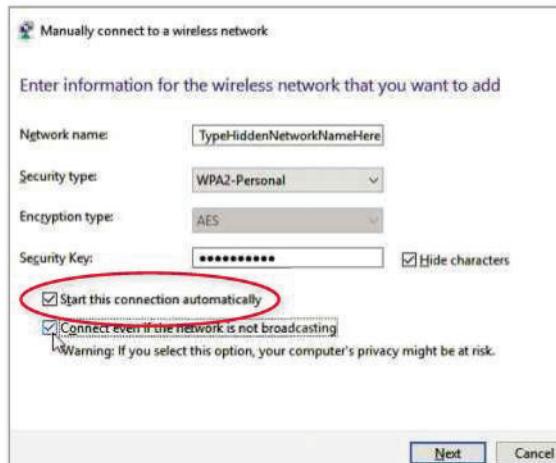
## Can I hide my router's name?

**Q** In Issue 512's Problems Solved you answered Megan Stewart's question about what she thought were strange names in the list of wireless devices displayed by Windows. You explained that these were the names of her neighbours' routers, but that this was entirely normal. That got me to wondering: can I hide the name of my own router, so that my neighbours can't see it? If I did that, how would my own devices see or connect to it? And is there any security benefit in doing this? My laptop runs Windows 10 and I also have an iPhone.

Christopher Harding

**A** You can usually do this, yes – though the exact steps depend on your router make and model. First, go to a web browser and log in to your router. This is usually achieved by typing 192.168.0.1 or 192.168.1.1 (or similar) into the address bar and pressing Enter, but you'll need to check the manual.

Your router's name is known



If you hide your router's identity from neighbours, you'll have to manually connect new devices to your network

technically as the Service Set Identifier, or SSID. So, you now need to look for an option with this label. It might be called 'Broadcast SSID', for example. Remove the tick or switch it off and your router will no longer broadcast its name.

Devices already connected (like your laptop) will continue to do so as normal. However, any new devices will need to be connected manually, because they won't be able to 'see' the router. In Windows 10, for example, first right-click the Wi-Fi icon in the Taskbar and choose 'Open

Network and Sharing Centre'. Next click 'Set up new connection or network' followed by 'Manually connect to a wireless network'. Type the network name, choose the security, type the password, and tick the box labelled 'Connect even if the network is not broadcasting' (see screenshot). On your iPhone, launch Settings, then tap

Wi-Fi followed by Other. Tap in the hidden network's name, then tap Security and choose the security type, then type the password and tap Join.

As for security benefits, they're minimal. It's easy for hackers to use special tools to 'sniff out' hidden networks, and anyone determined to get into your network would do exactly this. However, your neighbours are unlikely to be using such tools, so they won't see your router name – and you might consider that benefit enough.

## Where's my Envelope option in LibreOffice Writer?

**Q** I have been a reader of your magazine for many years, and I now find myself writing to you, to see if you can help me with a problem I have. I am using LibreOffice Writer for all my letters, and have been very pleased indeed with the program. But, after a recent update, I cannot find the Envelope option, which used to be on the Insert menu. I have looked and looked, all to no avail. Do you know if this option has been removed from the program?

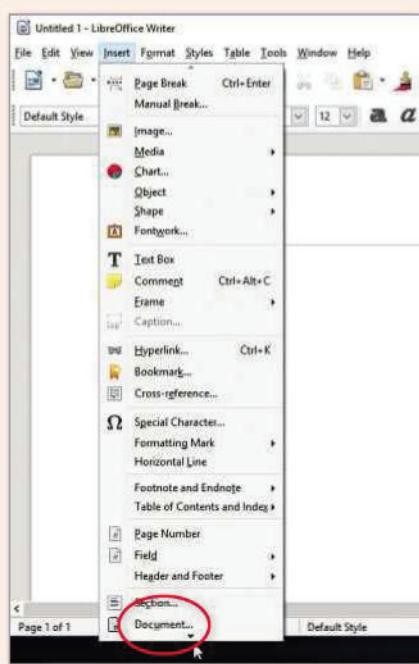
Leslie Simmons

**A** The Envelope remains in LibreOffice Writer and, in fact, is still on the Insert menu. However, for reasons best known to the

developers, the option has shifted position to virtually the bottom of the Insert menu, just below Document and above Form Control.

As the old phrase goes, it's possible that you just couldn't see for looking, and now that we've explained you'll probably spot it right away. However, it's also possible that you're using Writer on a small or low-resolution screen.

If this is indeed the case then the option might have actually disappeared, as the program truncates long menus to stop them 'falling' off the bottom of the screen. Look for a small down-pointing arrow at the foot of the menu (see screenshot): hover your cursor over this to have the hidden options scroll into view.



LibreOffice's Envelope option has been moved further down the Insert menu

# Problems Solved

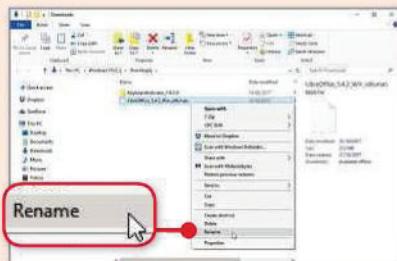
## Why does LibreOffice download incorrectly?

**Q** Following the advice in Issue 513, I downloaded LibreOffice with a view to replacing Microsoft Office. However, the downloaded file has a suffix of .man, rather than .exe. As a result, Windows 10 doesn't know what to do with it. Help!

R P Truscott

**A** This is actually the result of the way Internet Explorer (IE) downloads from certain types of server, including some of the ones used to host LibreOffice. The details are complicated but in particular circumstances IE misidentifies .msi ('Microsoft installer') downloads as .man files. These .man files are for the Unix operating system, and Windows cannot run these. Incidentally, an .msi file is much the same as an .exe file – and just needs to be double-clicked to be launched.

We can't do anything about the way IE interacts with LibreOffice's servers, but there is an easy fix. The downloaded file is correct, but has the wrong **file extension**. Renaming it solves the problem. Press Windows key+E to launch File Explorer and then navigate to your downloads folder. Next, right-click the downloaded file ('LibreOffice\_5.4.2\_Win\_x86.man') and choose Rename (see screenshot). Finally, delete the .man file extension, replace it with .msi and press Enter. Now just double-click 'LibreOffice\_5.4.2\_Win\_x86.msi' to launch the installation.



It is easy to rename a .man to a .msi file in your downloads folder

## How do I receive bank texts?

**Q** I live in a mobile blackspot, with no signal near my home. Increasingly, I find that banks and other financial institutions want to send verification text messages to my smartphone – but that's a smartphone I don't own because of the aforesaid lack of signal! I'm wondering if there'd be any way of receiving such texts through my BT Wi-Fi?

David Bishop

**A** Most of the UK mobile networks offer signal-booster boxes that connect to a home broadband connection via an Ethernet cable to your router, effectively providing your home with its own mobile antenna and thus a signal. As well as enabling mobile calls, this would allow any smartphone you might buy to receive or send texts – so this is the answer for you.

Your choice of network and smartphone is obviously up to you. Once you've made your selections, you could get: a Boostbox from O2; a Sure Signal from Vodafone; a Signal Box from EE; or a Home Signal from Three. Prices are typically around the £60–£70 mark, but a



If you live in a blackspot, you should consider buying a signal booster

network might give you one free of charge depending on your particular circumstances. We recommend calling each network to discuss it.

We should say that these boxes turn voice calls and texts into data sent over your broadband connection, so they will use some **bandwidth**. However, unless you're making or receiving loads of calls, the amount will be negligible – and shouldn't be a concern at all unless you're on a capped broadband package.

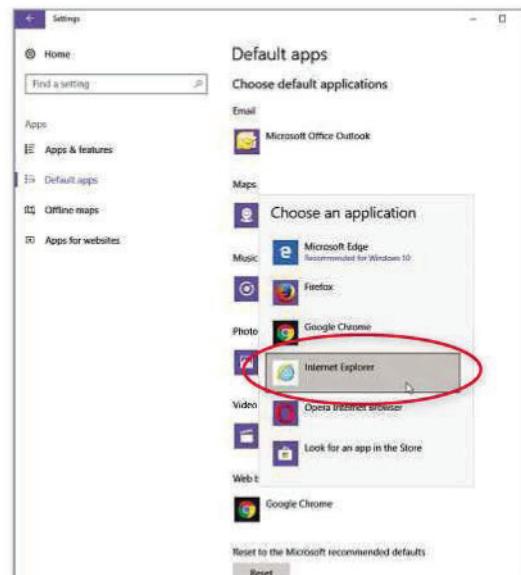
## How do I give Edge the elbow?

**Q** I have acquired a Windows 8 tablet that a friend set up for me. They put Microsoft Edge as the browser, but I prefer Internet Explorer (IE). I know IE will eventually lose Microsoft support, but until that happens I would prefer to stick with what I am used to. However, I have no idea what to do.

Frances Knight

**A** Edge is available only for Windows 10, not 8 or 8.1, so your device must be running Windows 10. In tablet mode it's quite similar in appearance to Windows 8, so it's an easy mistake to make. Windows 10 comes with both Edge and IE11, but Edge is the default – so your friend didn't do anything here.

It's easy to set IE11 as the default. First, tap the Settings cog, followed by System and then 'Default apps'. Swipe down to the 'Web browser' heading and then tap



In Windows 10's Settings you can easily switch from having Edge as your default browser

Microsoft Edge. Now tap Internet Explorer (see screenshot) followed by 'Switch anyway' to dismiss Microsoft's plea for you to stick with Edge.

## How do I stop this annoying 'bing'?

**Q** Every hour my laptop makes a bing noise and then displays a notification with a long string of random characters and something called 'fiber.js'. It seems harmless enough, and I can click OK to clear it – but it's very irritating, and has been going on for a while now. Do you know what's causing this? Is there any way I can get rid of it, or am I to be plagued by it forever?

Steve Russell

**A** Unfortunately, this message is the result of malware – most likely a browser hijacker or some other form of adware. You probably installed this unwittingly, along with another program you did actually want. It's impossible for us to say which one but many installation packages these days have hidden or craftily worded tickboxes that con you into accepting these interlopers.



AdwCleaner is a free tool for removing adware you have unintentionally downloaded

The good news is that your security software has already partly dealt with the threat, because the error message shows that the malware can't find what it's looking for. However, clearly some aspect of it is still active.

One of the best tools for removing adware is AdwCleaner from Malwarebytes, which is a free download

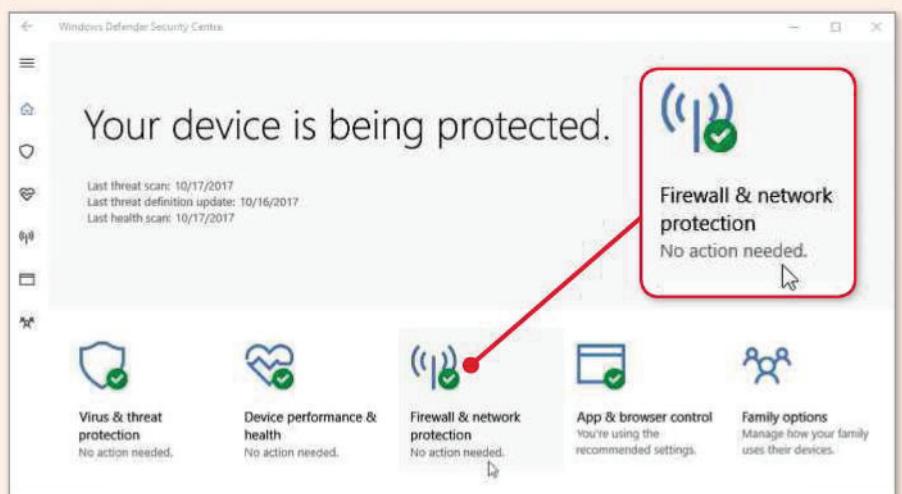
from [www.snipca.com/26087](http://www.snipca.com/26087). Just double-click the downloaded executable file, then click 'I agree' followed by Scan (see screenshot). When AdwCleaner has finished it'll display a list of infections. You can remove ticks from anything you know to be safe but, to get rid of them all, just click Clean followed by OK to confirm.

## Do I need a firewall in W10?

**Q** When I used Windows 7, I used Avast and ZoneAlarm to protect me. On Windows 8, I found that ZoneAlarm's intrusive pop-ups kept crashing my programs, so I uninstalled it. More recently, with your help, I have upgraded to Windows 10. So far, so good. I have Windows Defender turned on and still run Avast, and also regularly run CCleaner and Malwarebytes, but what about a **firewall**? I tried Komodo, but that clashed with Avast. I don't use the internet a lot since I retired, but do I really need a firewall? If so, what would you recommend?

Roy Brown

**A** A firewall is vital, as it monitors and controls all the digital information that is arriving at or leaving your PC. An effective firewall blocks illegitimate access attempts before they ever become a threat that might need to be dealt with by secondary



You can double-check that Windows 10's Firewall is working in 'Update & security'

security software, such as antivirus or clean-up tools.

Windows has actually included a firewall since XP. That early firewall was flawed in various ways, so using a better alternative was sensible. However, in Windows 10 the firewall is now part of Windows Defender and it provides good, reliable service – so third-party firewalls are mainly for those who want advanced control over such activities.

This firewall is enabled by default, but

if you want peace of mind it's easy to check. Click Start followed by the Settings cog, and then 'Update & security' followed by Windows Defender. Open Windows Defender Security Centre. Look under 'Firewall & network protection' (see screenshot). If it says 'No action needed', then that's that. If not, click here, then click 'Public (non-discoverable) network' and, under Windows Firewall, flip the switch to On.

# Problems Solved



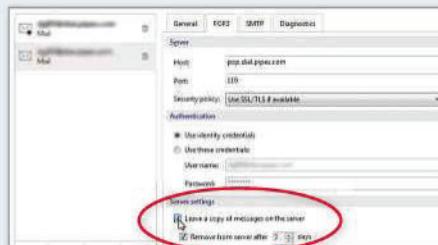
## What's the difference between... POP3 and IMAP?

**Q** I want to switch from Windows Live Mail to eM Client ([www.emclient.com](http://www.emclient.com)). I looked on my ISP's support pages for setup help and found details for both POP3 and IMAP servers. I don't really understand the difference or why I would choose one over the other. Could you advise?

Tom Haynes

**A** First, let's clear up a confusion: it's not POP3, but POP3. This stands for 'Post Office Protocol 3', indicating the third version of the standard that was invented in the 1980s by the Internet Engineering Task Force (IETF, [www.ietf.org](http://www.ietf.org)). IMAP is short for Internet Message Access Protocol, which is an alternative email-synchronisation system also introduced in the 1980s by the IETF.

There are many technical differences



**POP3 can't sync mailboxes across devices, but you can download messages to all devices**

between the two standards but the basics are straightforward. If you choose to sync by POP3, then the messages will typically be downloaded to your computer and then deleted from the remote email server. By contrast, with IMAP the messages are stored on the server, so when you sync what you're really doing is downloading a view of the current state of the remote inbox.

The key benefit of IMAP is that your mailbox will look the same on all devices – so if you delete a message on one

device, that email will disappear from another. POP3 offers no such cross-device synchronisation: ticking an email program's 'Leave a copy of messages on the server' option will give you the opportunity to download all messages to other devices but, unlike IMAP, changes to the inbox on one device won't ever be reflected on other devices. In eM Client click Menu followed by Tools and then Accounts. Choose the relevant account, then select the POP3 tab and tick the aforementioned box (see screenshot).

The key disadvantage of IMAP is that your mailbox might require more housekeeping, as storage space on the remote server will have a limit. POP3 alleviates this problem by deleting messages as they're downloaded, unless the aforementioned box is ticked.

Want to know the difference between technical terms? Email [noproblem@computeractive.co.uk](mailto:noproblem@computeractive.co.uk)

## How do I stop Windows 10 switching printers?

**Q** I've just got a new Windows 10 laptop to complement my old Windows 7 desktop PC – which is still running like a dream, incidentally. I have two printers on my network: a laser printer that I use mainly for letters, and an inkjet that is mostly for photos. Sometimes, though, I use the inkjet to add a spot of colour to a letter, because the laser can't manage this. When I do this Windows then seems to set the inkjet as the default. This is annoying because

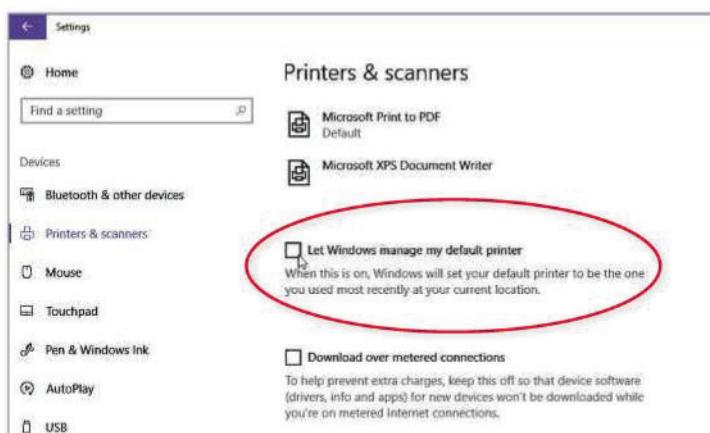
You can stop Windows from selecting your default printer by unticking this box in Settings

when I next print a letter I usually miss that the inkjet is pre-selected and thus print and needlessly waste ink.

I'd like to keep my laser as the default, and just choose the times when I print to inkjet. Do you know if or how I can do this?

Sam Fitzgerald

**A** By default, Windows 10 will manage your printers so that it presents the one it thinks you



want to use. There's some merit to this approach, especially for people who chop and change a lot, but in your case it sounds more like a hindrance.

To disable the feature, click Start followed by the Settings cog, and then Devices followed by 'Printers & scanners'. Now scroll down and untick the box labelled 'Let Windows manage my default printer' (see screenshot).

Finally, scroll back up to the list of printers and check that your laser is marked as Default. If not, click to select it, then click Manage followed by 'Set as default'.

## NEXT ISSUE

ON SALE  
Weds  
20 Dec

- How do I switch off my broken iPhone?
- How do I re-enable my webcam?
- How do I clear File Explorer searches?  
...And many more

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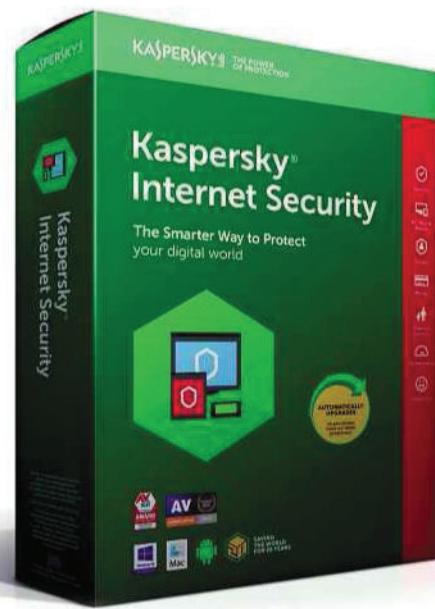
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## What's wrong with my fonts?

**Q** Following your recommendation (Issue 513, page 53) I removed OpenOffice and installed Libre Office. Doing so caused my old documents to become corrupted and I couldn't open any new files. I uninstalled the program and reset Windows using [system restore](#). However, the fonts displayed on websites, emails and documents are now much less clear than previously. How do I restore them and where did I go wrong with LibreOffice?

Steve Ashcroft

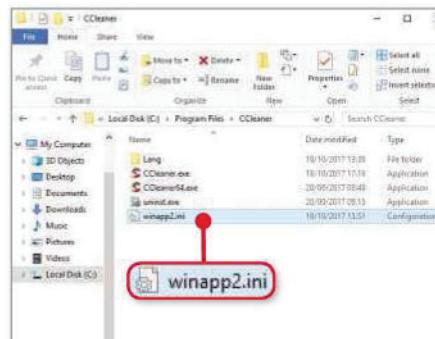
**A** OpenOffice and LibreOffice are closely related programs (they are both offshoots of a discontinued office suite called StarOffice), so they both open the same document types. Therefore, we can only assume that your LibreOffice installation has somehow become corrupted. If you download and install it again it will probably work perfectly.

Your fonts problem is likely to be unrelated because installing LibreOffice wouldn't affect text within your emails and websites you visit. We can only assume that Windows' display settings have been changed by your system restore. Right-click the desktop, click 'Display settings', then scroll down to the 'Scale and layout' section. Use the 'Change the size of text, apps and other items' dropdown menu to increase your font size, or use the Resolution dropdown menu to change your PC's resolution. For best results, select the resolution in the list that says '(Recommended)' next to it.

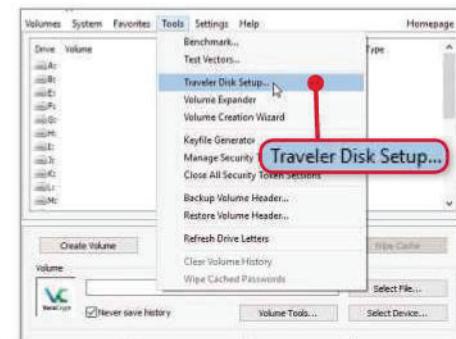
## How do I remove CCEnhancer?

**Q** You recently recommended installing the CCEnhancer add-on for CCleaner (Issue 514, page 61), which I did – but soon regretted it! When I next started CCleaner it took an age to open the Applications tab. I decided to uninstall it, but I can't find a way to do that. How do I remove it?

Barry Scrivner



Delete this file to remove CCEnhancer's extra features from CCleaner



Create a portable version of VeraCrypt so you can use your encrypted USB sticks on any PC

**A** We've covered CCEnhancer many times over the years and haven't come across this problem before. We can only think that your PC is either getting on a bit, or has a particularly large number of installed programs, hence the long loading times. To remove it, close CCleaner, open File Explorer, navigate to the CCleaner folder (typically at **C:\Program Files\CCleaner**), then delete the 'winapp.ini' file. Its filename may also contain a number (for example, 'winapp2.ini' – see screenshot above). Open CCleaner again and you'll find the CCEnhancer extras have gone.

## Can I use an encrypted USB stick on another PC?

**Q** I want to use VeraCrypt to encrypt a USB stick as explained in your Workshop (Issue 509, page 35), but I have a question. If I follow your instructions, will I be able to access the stick's contents on another PC?

Marek Mularczyk

**A** To open a VeraCrypt-encrypted USB stick on another PC, the second computer must have VeraCrypt installed. If that's not possible for any reason, you can create a so-called Traveler Disk that lets you take VeraCrypt with you.

Open VeraCrypt, click Tools, then Traveler Disk Setup (see screenshot above right). When the pop-up menu opens, insert a

blank USB stick, click Browse, navigate to and select the USB stick, click OK, then Create.

After a few seconds you'll see a message confirming the process was successful. To open VeraCrypt on any PC, insert the USB stick, open File Explorer, double-click the VeraCrypt Traveler Disk, open the VeraCrypt folder, then double-click 'VeraCrypt.exe'. You'll be able to open the encrypted USB stick you made by following our Workshop in this Traveler Disk version. Don't worry if your PC only has one USB port – once you open the Traveler Disk version you can unplug the USB stick.

## Is there a better alternative to iTunes for syncing my iPad?

**Q** Earlier this year you had a feature on an app that was better than iTunes for syncing an iPad to a PC. I have hunted through my old copies of the magazine but can't find it. Can you help?

John Killingback

**A** We think you're referring to MediaMonkey ([www.mediamonkey.com](http://www.mediamonkey.com) – Issue 480, page 48). Connect your iPad to your PC and MediaMonkey should detect it and add it to its media menu (the panel on the left). Click your iPad, Tools, Options then Portable Device Sync to change what your device syncs. For more guidance on MediaMonkey go to [www.snipca.com/26243](http://www.snipca.com/26243).

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### • SOFTWARE THAT CLOSED IN 2017

And what to use instead

### • DON'T LOG INTO DODGY WI-FI

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# Jargon Buster

Bust more jargon in our A-Z book: [www.snipca.com/21616](http://www.snipca.com/21616)



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

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

**5G** The next (fifth) generation of mobile networks, to eventually supersede 4G.

**Active content** Content on a website that's interactive (such as a poll) or dynamic (such as animations and streaming videos).

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

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

**Benchmarking** Comparing software and products with an accepted standard.

**Beta** A version of software that's being tested. Beta versions are often released so problems can be ironed out.

**Biometric** Using measurable personal characteristics, such as fingerprints, for identification.

**Blue light** Light given off by PC and phone screens. Can disrupt sleep patterns.

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

**Cast** To send content from your PC to TV.

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

**Core** Units on a processor that carry out program instructions.

**CPU** Central Processing Unit. Another term for a computer processor.

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

**E2EE** End-to-end encryption. Ensures messages can be seen only by the sender and recipient.

**Emoji** A small graphic that can be inserted into a message or email.

**EPUB** A file format used by many popular ebook readers.

**Extension** See Add-ons.

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

**File extension** The letters after the full stop in a file name. These denote what kind of file it is.

**Firewall** Software or hardware that prevents unauthorised access to a computer over a network, such as the internet.

**Firmware** Basic software stored on a device, such as a music player, to control its operation.

**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.

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

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

**HDR** High-dynamic range. A camera that takes more than one photo with different levels of colour and contrast.

**HTTPS** Hyper Text Transfer Protocol Secure. The secure version of HTTP, the technology that sends data between your browser and the web.

**IPS** A screen technology. Monitors that use it have wider viewing angles and better, more accurate-looking colours than monitors that don't.

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

**Launcher app** An app that changes how a phone's home screen looks and works, especially for managing and opening apps.

**LCD** Liquid-crystal display. The technology used to create almost all flatscreen monitors.

**M.2** A standard specification for internal PC expansion cards and connectors.

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

**NFC** Near-field communication. A technology that allows two devices to communicate by being touched together or placed near to each other.

**Overclocking** Making a processor work faster to improve performance at the cost of it getting hotter and requiring more power.

**PCI-E** Peripheral Component Interconnect Express. A faster version of PCI - a slot on the motherboard for expansion cards.

**Phishing** A form of internet fraud that tries to trick you into revealing personal details.

**Product key** A unique serial number. Issued by software companies such as Microsoft, the product key must be typed by the user before a program will launch for the first time.

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

**RAM** Random-access memory. The computer's working area, used for data storage while the PC is switched on.

**Ransomware** Malware run by hackers who lock files on your PC and demand a payment to release them.

**Read speed** How long it takes a hard drive to 'read' data, and respond to it.

**Search operator** Characters you can add to a search query to narrow the results.

**Spyware** Software installed (usually surreptitiously) to monitor and report back on a computer's use.

**sRGB** A standard RGB colour space for use on monitors, printers and the internet.

**SSD** Solid-state drive. Storage that, unlike a hard drive, uses no moving parts. Faster but more expensive than conventional hard drives.

**SteamVR** The operating system that runs on some virtual-reality gaming headsets.

**System image** A backup of your 'system image', which includes your operating system drivers, as well as your PC's settings, programs and files.

**System Restore** A Windows feature that reverts your computer's system files to an earlier point in time.

**System restore point** The collection of system files stored by System Restore on a given date and time to which Windows can revert if a problem occurs.

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

**TLC** Samsung's flash memory. Can store three bits of information per cell.

**Trojan** A malicious computer program that's disguised as a different, harmless program.

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

**Unibody** Term used to describe a smartphone or tablet cases made from a single piece of metal.

**USB 2.0/3.0/3.1** Faster successors to USB that are used by devices such as external hard drives.

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

**Write speed** How long it takes a hard drive to save data.

**ZIP file** A file that can contain a number of compressed documents or files.

# <sup>Final</sup> The Final Straw



**KEN RIGSBY** is  
*Computeractive's Mr Angry*

This issue Ken bids a tearful farewell to us, you and...

## Closed-down tech

**S**ome things have been around for so long that they just seem to become a fixture of everyday life. Take me, for instance: I'm sure that Mrs Rigsby wishes someone would. But for better or for worse, for richer or for poorer, she's stuck with me. Even so, I'm sure that after many years together she'd be just a little bit sad if I suddenly disappeared.

I was thinking about this recently, when it was announced that AOL Instant Messenger would be closing. The servers that run AIM, as it became known, will be switched off on 15 December, a little over 20 years since they were first fired up.

It would be easy to describe AIM as a technology dinosaur. But to continue the evolutionary analogy it was closer to a fish whose fins turned into something vaguely resembling feet. The program represented the industry's first stumbling steps at forming a social network – a chat tool that allowed you to hook up with

people from all over the world, and engage them in real-time text chats.

AIM was a trailblazer, and hugely popular, approaching 100 million users at its peak. But under AOL's myopic stewardship it didn't adapt to the fast-changing world it inhabited, meaning the platform was eventually outpaced by the social networks and chat tools that we all know and love (or loathe) today – like Facebook, Twitter and WhatsApp.

Perhaps surprisingly, the service still boasts a few million users globally, many of whom will doubtless feel angry or upset that this fixture of their lives is about to be removed. I'm one of them, as it happens. I'm not angry or upset but I will certainly miss AIM, because it enables me to keep in touch with a handful of contacts who, like me, still use it.

But AIM is hardly the first once-giant tech brand to be shut, annoying its remaining satisfied users. Just a couple of years ago, for instance, Google signed the death warrant for Picasa – its desktop photo suite that was a firm favourite with Computeractive's readers and writers alike. From the perspective of us mere users there was little wrong with Picasa.

However, to Google it was a relic that didn't fit with the firm's futuristic ambitions – so off with its head (almost literally), because few modern photo tools are able to match Picasa's excellent face-recognition technology.

On a grander scale, Microsoft is in the process of abandoning Windows 7. This is without doubt the most popular version of any operating

“One day something is there, the next it's gone: AltaVista, GeoCities, Netscape, Ask Jeeves, Friends Reunited, Hotmail

system to date, with over 600 million copies sold. And yet 'mainstream' support has already ended – and Microsoft plans to switch off what it calls extended support in a little over two years from now. By contrast, support for the much-detested Windows 8 continues until 2023. Truly, there's no justice in the world of closed-down tech!

But here's the rub about things that feel like fixtures: everything is actually transient. One day something is there, and feels like it will always be. The next day, you wake up and that same thing has gone: AltaVista, GeoCities, Netscape, Ask Jeeves, Friends Reunited and Hotmail, just to pick a few that popped into my head.

Oh, and Ken Rigsby. Yes, dear reader, this particular fixture of *Computeractive* is about to disappear. I've ranted now for years, and I want to go before I turn into even more of a grump. So this is it: my swansong and sayonara to you. Don't be angry or upset, though by all means miss me. But I'll be back for the odd guest appearance, unless I get closed down first!

Which closed tech do you miss?  
Let us know at [letters@computeractive.co.uk](mailto:letters@computeractive.co.uk)



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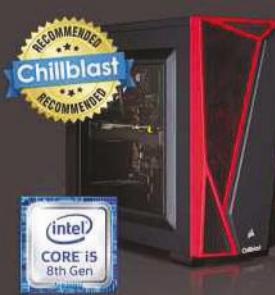


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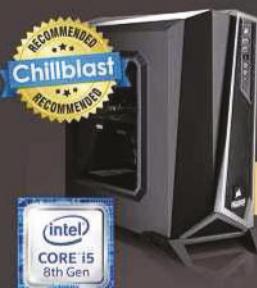
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