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Without  
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Computer  
**active**

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Your friendly guide to technology

# Clean Your PC DEEPER THAN EVER

Best free software to optimise  
your entire system p50



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The one thing you've  
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## From the Editor

I know this sounds odd, but using software to clean your PC can become addictive. Maybe I just need a hobby, but I find it peculiarly satisfying to run programs like Clean Master and CCleaner to find out how much junk I need to remove. I pore over the results (which I find fascinating) because they help me micro-manage my PC, as I try to squeeze extra speed out of my computer by removing programs that I don't need. But I'd like to stress that you don't need to be as obsessed as me to find this issue's Cover Feature useful!

As well as cleaning your PC, you should always make sure it runs the best antivirus



available - and in our past three tests that has been Kaspersky Internet Security. So I'm delighted to say that we're offering another exclusive discount for Kaspersky, this time for the brand new 2015 version. You can buy a one-device, one-year licence for just £17.99 (normally £39.99) on page 68.

**Daniel Booth**

editor@computeractive.co.uk



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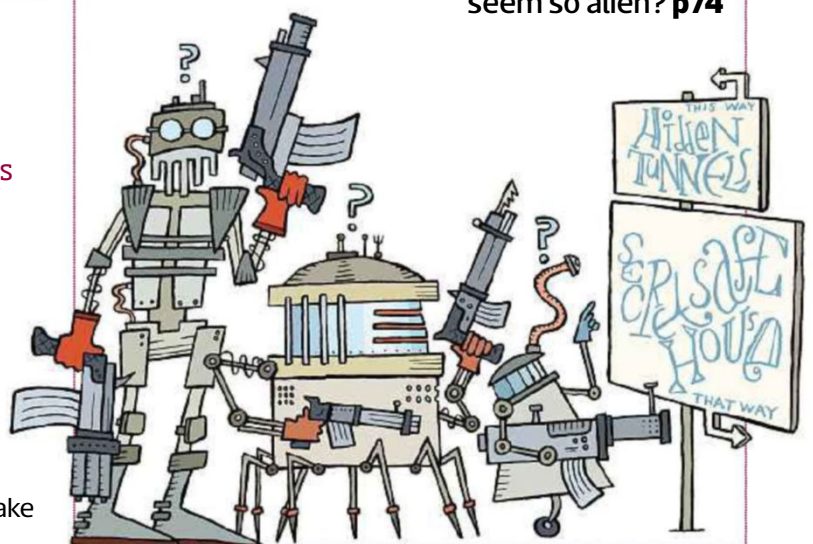
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**active**  
**BUY IT!**  
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**BUY IT!**  
★★★★★

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## Computeractive offer of the fortnight

**Kaspersky Internet Security 2015**

**page 68**



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Normally £89.99

## Phone scammers use fake caller IDs to steal your money

Fraudsters have made millions of pounds by using fake phone numbers that mimic those used by banks, phone companies and other legitimate organisations.

The practice, known as “number spoofing”, has been going on for years, but Financial Fraud Action UK (FFA UK) has reported a marked increase in the activity in recent weeks. The scam is hard to detect because the number you see on your screen when called by the fraudsters is that of an actual organisation – it may even be a number that’s already saved on your phone. According to Ofcom, criminals are using software to create these fake caller IDs.

Once they have convinced callers of their legitimacy,

fraudsters will set out to extract personal information that can be used to steal identities or money from bank accounts.

Craig Jones, a spokesman for FFA UK, points out one dead giveaway to look out for. “Remember that if a caller is trying to draw your attention to the number on your phone display, it’s very unlikely the call is genuine as there is no legitimate reason to point it out,” he said.

Other telltale signs that



you’re being targeted by criminals is being asked for your account passwords and PIN, or if you’re prompted to transfer money. They might even try to arrange for a ‘courier’ to pick up your credit card from you, after telling you over the phone that it has been compromised. Last year, criminals stole £4,000 from an 86-year-old woman using this trick.

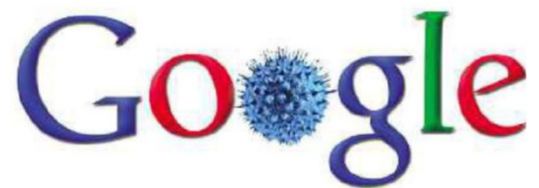
In October, the British Banking Association released a list of eight things your bank

### COMMENT

You’d think that criminals would be coming up with more creative ways to steal your money, instead of reverting to the same old tricks. Unfortunately, these tricks are still working for them, because a legitimate phone number carries a lot of weight when you’re pretending to be someone you’re not. Thankfully, they seem all too aware of this themselves and are likely to refer to their phone number as proof of legitimacy – and by doing so give themselves away.

will never ask you to do over the phone ([www.snipca.com/14251](http://www.snipca.com/14251)).

## Google’s secret labs fight cancer and heart disease



Google is working on a project aimed to help doctors diagnose cancer, strokes and heart disease much earlier than is currently possible.

It hopes to develop a pill that, once swallowed, releases disease-detecting nanoparticles which enter a patient’s bloodstream. They would then travel around the patient’s body, giving a

comprehensive insight into everything that’s going on internally, from the chemical content of the blood to tissue changes.

The pill would work in tandem with a wrist-worn sensor to identify changes in the person’s biochemistry and act as an early-warning system, long before physical symptoms appear.

The project is being developed by the company’s research unit (<http://research.google.com>), called Google X. Other health-related projects the company is working on include ‘smart’ contact lenses that analyse the wearer’s tears so diabetics can monitor their glucose levels.

Speaking to the BBC,

Professor Paul Workman, from the Institute of Cancer Research in London, said the research was great “in principle”. But he warned that it required “very careful and rigorous analysis” before becoming standard medical practice because inaccurate diagnoses can lead to needless treatment and stress.



**You’ll like this...** A new flying drone that contains a defibrillator to help treat heart attack victims ([www.snipca.com/14252](http://www.snipca.com/14252))



**... but not this** Security experts say Samsung’s Find My Mobile service can be hacked ([www.snipca.com/14249](http://www.snipca.com/14249))



# Hackers, keep out! Windows 10 will use two-factor authentication

Microsoft has revealed that Windows 10 will include several new security features, including optional two-factor authentication, which will make it much harder for hackers to break into your PC.

This means you'll not only require your password to log into your account, but also a randomly generated code usually texted to your phone or generated by a security fob, such as those widely used by people who bank online.

It's not yet known how two-factor authentication will work in Windows 10, but it's likely to involve you using your phone or tablet to sign in. Some security experts think passwords should only be sent via Bluetooth or **NFC** because hackers can easily send fake text messages to launch phishing attacks.



Another major security feature of Windows 10 will be an app "signing service", which blocks app installations if they don't meet the 'trust' level you set. For example, you can set it to block apps that don't come from a Microsoft-verified software vendor.

Microsoft hopes this will reduce the number of fake apps in the Windows Store. In August, Microsoft removed 1,500 fake apps from the Windows Store, following an investigation by technology

site How-To Geek ([www.snipca.com/14188](http://www.snipca.com/14188)).

These security features will also apply to tablet and phone versions of Windows 10. The Microsoft blog that introduced these features also mentioned "automatic encryption of corporate apps, data, email, web content and other sensitive information", but it's not known if these features will be restricted to business users.

By bolstering its security, Microsoft is playing catch-up with Google and Apple. Both companies announced in October they will encrypt all their devices by default. Google also revealed a USB security key that uses **U2F**, a type of two-factor authentication that lets people identify themselves by plugging a USB stick into their PC, rather than getting a code sent to their phones.

## Queen's first tweet launches communications tech exhibition

A new technology exhibition at the Science Museum charting the development of communication technology over the past 200 years was inaugurated by the Queen, who sent a tweet live from its launch event.

The Queen wrote: "It is a pleasure to open the Information Age exhibition today at the @ScienceMuseum and I hope people will enjoy visiting. Elizabeth R".

The permanent exhibition covers important events in the progress of modern technology and communication, from Ada Lovelace's conception of computer programming to the invention of the social networks and smartphones of today.

Exhibits include the NeXT computer on which Sir Tim

Berners-Lee hosted the first-ever website, Alan Turing's ACE – the first computer capable of complex calculations to aid scientists and researchers, and 2LO, the radio transmitter used by the BBC for its first broadcast in 1922.

The exhibition will also feature interactive elements. You can try your hand at building a 1980s mobile-phone network using a giant touchscreen display and make a phone call using an early-20th-century-style operator switchboard.

Tilly Blyth, the exhibition curator, hopes it will give some perspective on modern



technology. "We want visitors to see that our predecessors lived through similar periods of change. Ours isn't the only revolution – just the latest in a series of transformations since the electric telegraph in the 1830s," said Blyth.

Entry to both the Science Museum and the Information Age exhibition is free. For more information, go to [www.snipca.com/14154](http://www.snipca.com/14154).

## IN BRIEF

### APPLE FIXES BUGS IN iOS 8.1

Apple has released the third update to the bug-infested iOS 8 operating system since it was launched in September. The iOS 8.1 update fixes the Poodle vulnerability, which allows hackers to steal passwords from sites that use outdated encryption tools (see News, Issue 435), and also patches problems with messaging, Bluetooth connectivity and device crashes.

### GOOGLE SHOWS LEGAL ALTERNATIVES TO DODGY DOWNLOADS

Searching on Google for free film and music downloads now brings up a box at the top of your results that suggests alternative sites where you can get the content legally. Google hopes the service – which links to sites such as Netflix, iTunes and Google Play – will combat piracy by promoting legal downloads. Companies pay Google for the right to appear in the box.

## Tomorrow's world

A Taiwanese company has developed a new way of letting you unlock your phone. Using the device's gyroscope, it recognises an "air signature", which is a particular shape you 'draw' by waving the phone. The company, called AirSig, says it's safer and more convenient than using fingerprint sensors and facial recognition. You can watch it being demonstrated on BBC's technology show [Click at www.snipca.com/14059](http://www.snipca.com/14059).

## IN BRIEF

### FACEBOOK LAUNCHES CHAT-ROOM APP

Facebook has introduced a free app called Rooms, that lets you chat anonymously about shared interests – but only on an iPhone ([www.snipca.com/14167](http://www.snipca.com/14167)). The service was inspired, the company said, by the chatrooms, forums and message boards of the early web. It lets you create what are effectively topic-based chatrooms and invite others who are also interested in that topic to join. An Android version is planned soon.

### MET OFFICE BUILDS £97M SUPERCOMPUTER

The Met Office has received funding from the Government to build a £97m supercomputer to forecast weather more accurately than ever before. The 'Cray XC40' will be built in 2015, and have a processing power of 16 petaflops (16 quadrillion calculations a second) – 13 times faster than the Met Office's current computer.

## Porn websites forced to check users are aged over 18

The Government wants to force UK-based adult websites to verify users are aged 18 or over to prevent children from accessing sexually explicit content online.

Age-verification systems would block access to such websites unless a user could provide details to confirm their age. The plans would also apply to websites selling weapons.

New legislation is being drawn up by the Department for Culture, Media and Sport (DCMS) and is likely to employ technology already used by betting websites that confirm a user's age using their passport details, driving licence or bank statement.

According to *The Sunday Times*, the age-verification software will use bank-approved software and credit cards, plus payment services such as PayPal.

The original plans will only affect British businesses, but the government says it will "starve" any adult websites



that make money in the UK.

The plans come after a shocking study claimed one in 20 visitors to adult sites are under 18.

Research published earlier this year by online regulator the Authority for Television on Demand (ATVOD) found that 11 per cent of UK children aged under 18 had visited an adult website in December 2013.

One website, PornHub – which contains free pornographic videos – was

visited by 112,000 boys aged between 12 and 17.

ATVOD said at the time that the survey probably underestimated the scale of the problem because the figures didn't include porn sites visited on smartphones and tablets

The regulator called on the Government to prevent sites that failed to introduce age-verification measures from processing payments from British customers.

## What's new from Google

### NEW 'INBOX' TOOL FOR GMAIL

Google thinks it has a solution to what it calls the "daily chore" of dealing with emails. It has announced a new tool for Chrome, Android and iOS called Inbox, which groups Gmail emails into 'bundles', and highlights important information from messages, such as flight times (a bit like Google Now – see page 49). Google explains more in its blog ([www.snipca.com/14129](http://www.snipca.com/14129)), but you can get a glimpse of it, and request an invite to try it, at [www.google.com/inbox](http://www.google.com/inbox).

### SEE CHIMPANZEES IN STREET VIEW

Humans aren't the only creatures that pose for Google's Street View – chimpanzees like to look good on camera too. You'll see them climbing trees, crossing streams and eating termites in this fantastic new imagery captured in Tanzania's Gombe National Park ([www.snipca.com/14121](http://www.snipca.com/14121)), home to Dr Jane Goodall's pioneering work monitoring chimps' behaviour.



### BETTER 3D IMAGES IN GOOGLE EARTH APP

Zooming into the Google Earth app on Android ([www.snipca.com/14184](http://www.snipca.com/14184)) will be "faster, smoother, and crisper", following the introduction of new 3D-rendering technology. It will give you sharper views of whatever you choose to see, whether it's the Swiss Alps, New York skyscrapers or the Lake District. Read more on Google's Lat-Long blog: [www.snipca.com/14185](http://www.snipca.com/14185).

## The Definitive Guide to Google Hidden Tools

You'll find more of Google's brilliant features in our new 164-page book *The Definitive Guide to Google Hidden Tools*.



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# Commemorate your loved ones using Co-op's web memorials

The UK's largest funeral director has launched a service that lets you create online obituaries and memorial pages dedicated to the recently deceased.

The Co-operative Funeralcare – which arranges around 100,000 funerals a year – says online memorials “allow people to share more details about the lives of their loved ones” than obituaries published in a newspaper or magazine.

People can include photos, videos and tributes, as well as provide information about funeral arrangements. You can also set up a donation page to a charity of your choice, and share the memorial on Facebook and Twitter.

Online memorial services are available to anyone using Co-operative Funeralcare.



It costs £48 for a memorial to stay online for three months, but for £184 you can keep a memorial live for 10 years, with the option to extend it beyond this period.

At any point, you can order a physical keepsake memorial book, containing the photos, stories and testimonies from the online memorial.

No special skills are required to set up a memorial, and the website offers guides and tutorials on how you can customise its design and set it up how you want it.

Helen Chandler, lead developer for the service, said: “This new service also allows friends and family to share messages of condolence and memories of the deceased in a new way, no matter where you are in the world”.

To find out more about the service, go to [www.snipca.com/14229](http://www.snipca.com/14229).

Several other sites exist that let people create memorial pages. Much Loved ([www.muchloved.com](http://www.muchloved.com)) is a free site that lets people view memorial pages, make donations and see photos from the lives of those who have died.

Much Loved also lets you ‘light a candle’ for the deceased, which is a graphic of a candle accompanied by a comment sharing your thoughts on the person.

## IN BRIEF

### NEW VERSION OF OFFICE OUT NEXT YEAR

Microsoft has confirmed that the next version of Office for Windows – currently called Office 16 – is scheduled for release in the second half of 2015, three years after Office 2013 arrived. Windows blogger Mary Jo Foley says that Office 16 will be aimed at “traditional” desktop PC and laptops, meaning that the software will be built primarily to work best when you use a keyboard and mouse, not a touchscreen.

### NEW APP IDENTIFIES BIRDSONG

Birdwatchers may soon be able to use an app to record and identify birdsong. The makers of Warblr – due to launch next spring for £1.99 – say it recognises the songs of 88 bird species. However, in tests by the BBC the app failed to distinguish a Canada goose from a screaming child. The developers hope to improve the app through research paid for by money raised in a Kickstarter campaign ([www.snipca.com/14216](http://www.snipca.com/14216)).

### MICROSOFT REVEALS HEALTH WRISTBAND

Microsoft has revealed its first wearable device, the Microsoft Band ([www.snipca.com/14233](http://www.snipca.com/14233)), which can track your sleep patterns, calorie intake and even exposure to sunlight. The wrist-worn Band will connect to Microsoft's Health app, which will be available for Android, iOS and Windows Phone. With its 10 tracking sensors, experts say the device is more health-focused than similar devices from Google and Samsung. The Band will cost \$200 (£125), but a UK release date is yet to be announced.

## Free Wi-Fi at over 1,000 buildings, including libraries and museums

More than 1,000 public buildings – including over 200 libraries – are to start offering free Wi-Fi as part of the Government's SuperConnected Cities Programme.

The £150m project aims to ensure that UK cities can deal with the increasing demand for using the internet in public.

Some of the Wi-Fi hotspots have already gone live, with the remainder due to be up and running by March 2015.

The cities to benefit are Aberdeen, Belfast, Brighton and Hove, Birmingham, Cambridge, Cardiff, Derby, Derry, Edinburgh, Leeds and Bradford, London, Manchester, Oxford, Perth, Portsmouth and Salford.



As well as libraries, dozens of community centres, transport hubs, museums and sporting locations will offer Wi-Fi. Locations include London's National Gallery,

Natural History Museum (pictured) and Imperial War Museum, Manchester's Moss Side Leisure Centre and Central Library, and the Royal Botanic Gardens in Edinburgh.

Belfast Castle and Cardiff Castle will also get free Wi-Fi. You can see the entire list at [www.snipca.com/14234](http://www.snipca.com/14234).

Digital Economy Minister

Ed Vaizey said: “For business, visitors and the UK public, accessing Wi-Fi in our cities is absolutely vital.

These free hotspots will be instrumental in making UK cities even more attractive as places to not only do business, but to visit as well.”

## IN BRIEF

### FREE UNLIMITED CLOUD STORAGE FOR OFFICE 365 USERS

Subscribers to Office 365, Microsoft's cloud-based office suite, now get free unlimited cloud storage on OneDrive. The upgrade started rolling out in October to Home and Personal customers, and will continue over the next few months. Office 365 Personal costs £59.99 a year, making it cheaper than Google Drive, which costs \$120 (£74) a year for 1TB of storage.

### AMAZON STARTS SELLING CONTRACTS WITH PHONES

Amazon is now selling phones on pay-monthly contracts ([www.snipca.com/14205](http://www.snipca.com/14205)). The site previously only sold SIM-free phones, but has teamed up with O2 to offer contracts on over 90 models. All contracts are for 24 months, with the cheapest tariffs starting at £13 a month. Amazon also offers extras such as MMS and international calls.

## Government to hit nuisance callers with bigger fines

The Government wants to make it easier to fine companies the maximum £500,000 for pestering people with marketing phone calls and text messages.

Current law puts the onus on the Information Commissioner's Office (ICO) to prove that a company has caused 'substantial damage or substantial distress' by its actions to be liable for the full penalty.

But a Government consultation has proposed lowering this threshold so that the maximum fine can be imposed on companies causing 'annoyance, inconvenience or anxiety'.

Culture Secretary Sajid Javid said: "Companies have bombarded people with unwanted marketing calls and texts, but have escaped punishment because they did not cause enough harm. I want to make it easier for



companies to face the consequences of ignoring the law and subjecting us to calls or texts we have said we don't want".

Javid didn't refer to any specific cases, but a high-profile example of the current regulations' flaws occurred in 2012, when a £300,000 fine imposed on Christopher Niebel for running an

unlawful spam-texting service was overturned on appeal because the messages were not deemed to cause 'substantial distress'.

The ICO said the case demonstrated how powerless it was to deter companies from sending vast quantities of spam.

If you are being harassed by nuisance callers, you can sign up to the free Telephone Preference Service (TPS, [www.snipca.com/14160](http://www.snipca.com/14160)), which will block

marketing calls from a particular company unless you have consented to them.

You can block calls to your mobile-phone and landline numbers, and this should come into effect within 28 days of your request.

Almost four-fifths of UK households are currently registered to the TPS – around 20 million phone numbers.

## Protests force Hungary to back down on internet tax

The Hungarian government has shelved plans to impose a controversial tax on internet usage, following days of large-scale protests in Budapest.

Protesters hurled old computer components at the headquarters of Hungary's ruling Fidesz party, which is led by Prime Minister Viktor Orban, and held their mobile phones aloft outside the economy ministry, chanting "Censorship, Censorship!"

Two days later, around 100,000 protesters marched through the streets of Budapest to demonstrate their opposition to the



'undemocratic law'.

The proposed law would have charged individuals and organisations 150 forints (around 40p) per gigabyte of data traffic they used. Hungary's Economy



Minister Mihaly Varga said the tax was needed to plug holes in the country's 2015 budget.

But organisers of the protest, which grew from a Facebook group, insist the law

"followed a wave of alarming anti-democratic measures by Orban that is pushing Hungary even further adrift from Europe. The measure would impede equal access to the internet, deepening the digital divide between Hungary's lower economic groups, and limiting internet access to cash-poor schools and universities".

Mr Orban said that "if the people not only dislike something but also consider it unreasonable, then it should not be done. This tax must be withdrawn, and we do not have to deal with this now".



## Question of the Fortnight

# Are passwords becoming too much hassle?

Companies are boosting the safety of our passwords, but this extra security comes at the expense of our convenience

In October, Google, Apple, Microsoft and Twitter separately announced that they will offer added security to user accounts (see page 7). Security updates are nothing new, but what was significant about their announcements was that they all introduced different types of **two-factor authentication** (2FA) as an extra security measure on top of our passwords. The message from the tech companies is clear: the best way to make your password secure is to add another password to it.

At a time when we're going through a digital revolution, is this really the best thing they can come up with to keep our online accounts safe?

From a security perspective, the answer is 'yes'. Experts say that for now 2FA is the most effective way to stop hackers stealing our passwords, and that users should accept the

direction where you'll need a USB stick to log into Google, a fob to log into your bank account, and your phone to log into your Microsoft accounts. If other companies join this trend, then soon we'll

stolen from sites like eBay, Gmail and Dropbox.

The recent adoption of 2FA feels like a response to the online security disasters of the past year. But why should we be forced to go through more complicated password procedures just because companies can't take care of their security? Experts say that "two or more layers" of security are better than one, but by that logic we'll soon have to use 3FA, 4FA, and so on. If our passwords weren't constantly finding their way from popular websites onto hackers' databases, then a single password would be enough unless a hacker specifically targeted you (which is unlikely to happen unless you're a celebrity).

In fairness, forward-thinking companies are trying to come up with more convenient

alternatives to 2FA. Many smartphones now have eye scanners, and the iPhone 6 can be unlocked using your fingerprint. Devices running Android 5.0 and all future Chromebooks will have a 'personal unlocking' feature, which lets you set locations where your device will be automatically unlocked.

These are still relatively new ideas, but give us hope that soon there will be better security solutions than simply piling on more passwords.

In the meantime, however, you should read about the new 2FA security options offered by Google, Microsoft and other companies you have accounts with, and decide for yourself if the added protection is worth the hassle. 2FA is not the quick-and-easy log-in method we'd hope for in this digital age, but for now it remains the best way to keep your online accounts safe.



“The message is clear: the best way to make your password secure is to add another password to it”

extra effort it requires. Malwarebytes researcher Chris Boyd says: “Anything you use on a daily basis is likely important enough to you that you'd spend the extra 10 seconds grabbing a new authentication code”.

So 2FA may be secure and not too much hassle if you use it on only one account, but we seem to be heading in a

need to start carrying special pouches to hold our collection of 2FA-related gizmos.

All this is, of course, optional. You can keep using your single password, but then you're back to worrying that hackers will get their hands on it the next time a password-leaking bug like Heartbleed is discovered, or millions of passwords are

## THE FACTS

- Google, Apple, Microsoft and Twitter have started offering two-factor authentication (2FA) to help keep users' online accounts safe
- Experts say 2FA is the best way to keep your online accounts secure
- Millions of passwords were stolen from popular sites such as eBay, Gmail and Dropbox in the past year, prompting companies to improve their security

# Letters

Tell us what's on your mind




Email: [letters@computeractive.co.uk](mailto:letters@computeractive.co.uk)  
Facebook: [www.facebook.com/computeractive](http://www.facebook.com/computeractive)



Twitter: [@ComputerActive](https://twitter.com/ComputerActive)  
[www.twitter.com/computeractive](http://www.twitter.com/computeractive)

## Using Windows shouldn't be a "challenge"


 Larry Dickinson (Star letter, Issue 434) clearly enjoys the "challenge" of getting to grips with new versions of Windows. Many of us, I would suggest, do not share his enthusiasm – we just want our computers to perform those tasks for which we bought them in the first place.

When support for XP was withdrawn and we were all urged to switch to 7 or – heaven forbid – 8, I invested in a reconditioned Dell laptop, running Windows 7 Pro. This left me with a slow, ageing, but still serviceable desktop computer containing lots of files, photos and music which could be accessed without connection to the internet and all its attendant dangers of attack by hackers. As there was plenty of unused space on the hard drive I **partitioned** it and installed Ubuntu (12.04) alongside Windows XP. This is set up to dual boot – with Ubuntu as the default setting – and I have disabled the XP connection to the web.


Despite warnings that Ubuntu is difficult to get to grips with I have encountered no problems. Indeed, I find it far more user-friendly than Windows and it has breathed new life into my aged desktop computer. Ubuntu boots in a matter of seconds so that I now find myself using it for accessing my emails, online banking and general web browsing. Ubuntu probably cannot do everything that Windows 7 can, but for run-of-the-mill jobs I find it excellent.

As you may have guessed, I shall certainly not be "upgrading" to Windows 8, 10 or whatever subsequent wonderful operating systems Microsoft comes up with.


Tony Parsons

 I had to laugh at the Star Letter in Issue 434. Larry Dickinson welcomed the changes introduced by Microsoft between successive versions of Windows, relishing the challenges. Most of us use a computer as a tool, not as a substitute for *The Times* crossword. Why can't Microsoft realise that most users are not geeks but just want a familiar, albeit constantly improving, operating system.

William Cole


 It might surprise Mr Dickinson that many people who use computers, whether for business or pleasure, actually do so to accomplish something, not as an end in itself. I am interested in the development of computers just as I am interested in cars, but I do not study the software developments of cars, I just drive them.

Stephen D Wilkes

 Larry Dickinson sums up exactly what a new operating system *shouldn't* be. Rather than making the user learn new skills, an OS should feel like a seamless transition. Discovering how it works should be pleasurablely intuitive, not something that requires mental effort. When I buy a new car, I don't want to spend 30 minutes figuring out which pedals to push or where to insert the key. Ditto for a new PC.

Paul Charlton


## Chromebook takes 7 seconds to boot - XP PC takes 7 years

 I'd like to echo Nathan Wright's praise of Chromebooks (Letters, Issue 435). I'm 70 years older than him, but I'd like to think my enthusiasm for these fantastic laptops is just as ardent.

Nathan nails the appeal when he says his Chromebook switches on in seven seconds. Mine does too. It's almost as quick as turning on my TV. By contrast, my Windows XP PC takes about seven years to boot. In fact, if I still want to be using it in my nineties, I better turn it on now.

John Ashmore


## Queuing for iPhone is 'narcissistic and pathetic'

 Sometimes I think Stuart Andrews can read my mind. I'd been shaking my head at those deluded fools queuing for days to collect the latest iPhone, and then Stuart brilliantly articulated my thoughts in Issue 434 (The Final Straw).

It's not the act of queuing that I find so bizarre. I've queued in the past to get



## Sceptical about Internet Addiction Disorder

 I share some of your scepticism over Internet Addiction Disorder (IAD), which you expressed in Question of the Fortnight, Issue 435.

There's no doubt many people spend a lot of time online, and that people's dependency on the web shouldn't be trivialised, but I'm not convinced that it does enough damage to be classified as a "disorder". The key point is that you can do almost anything online, and it's these specific activities that people become unhealthily obsessed with, not the internet per se.

For example, a teenager could become addicted to social networks, a single man in his 20s could become hooked on web porn, and a Forty-something divorcee could spend 15



hours a day on dating websites. In each case, I would argue that the person is addicted to a distinct activity that should be treated separately. Take away the activity, and you'll probably cure the addiction.

Eric Love



tickets to watch my football team, once waiting over five hours in the rain. But that was because if I hadn't queued patiently, I wouldn't have been able to get a ticket. That doesn't apply to the iPhone. Instead of queuing, these people could have strolled into the shop the day it was released, having had a cosy night's sleep at home.

So what's going on with these people? Simple – it's narcissism. They start queuing because they want to be interviewed by TV and newspapers, who marvel at their dedication (while the rest of us think they're just sad). In their own strange way they think they've become celebrities. Queuing is their talent, not singing or dancing. It doesn't make me angry, but it is a bit pathetic.

Harold Payne

### Windows Update is better than 'doing nothing at all'

✉ I found George Ayton's 'advice' unbelievable ('Stop using Windows Update', Letters, Issue 434). He says that one friend running XP had their installation corrupted to the point where a complete re-installation was required. Well I could relay numerous accounts involving friends, relatives and colleagues who have asked me to help because their systems weren't working properly. Invariably the cause was outdated virus programs or no updates at all, resulting in malware playing havoc with their kit. The worst case had well over 300 separate warnings and it took more than 2 days of booting, rebooting and wading through junk that reinstalled itself until the system was clear.

I agree that Windows Update isn't perfect, but it's surely better than doing nothing at all and trusting to luck. Alternatively, turn off all updates and don't use the internet. As one old IT technician advised me, the only 100-per-cent safe machine is an isolated one

Simon Collins

### I'd rather fly with phone 'numbskulls' than moaners

✉ In Issue 435, Terry Patterson asks how he can avoid listening to 'phone-addicted numbskulls' on planes. Well, I'd rather sit next to one of these than to Mr Patterson, who sounds like the grumpiest man on the planet. The best way he can avoid these people, and indeed the rest of the human race, is to stay at home ranting at every news story

## STAR LETTER

### I'm happy using Windows 7, thank you very much!

✉ I enjoyed reading your Star Letter from Larry Dickinson. He is, he tells us, a big Microsoft fan. Well, I always suspected there was one out there somewhere, but it was really nice to hear from him.

Seriously though, he made a couple of points with which I fundamentally disagreed. I recently changed to Windows 7 from XP, due entirely to the withdrawal of security support by Microsoft. Why didn't I upgrade to Vista? For the same reason I won't go to Windows 8 – because every article I read about these operating systems said they were rubbish!

Larry says that we are "surviving and stagnating" with 7. Surviving? Wrong I'm afraid, Larry. I'm living very happily with 7. It does everything I need it to do – and does it very well. Stagnating? Wrong again. I'm aware that Microsoft will at some future date withdraw security support for 7, just as they did with XP. So, being forewarned, I have built myself another PC and installed the Ubuntu Linux **distro**. When support is withdrawn from 7, I shall simply disconnect my Windows machine from the internet and use it as



a standalone PC while continuing online with the Linux machine. By then I should be familiar with the Linux OS (which, by the way, will never be more than six months old, due to the Ubuntu upgrade cycle).

There are two basic rules that I have always felt applied particularly to computing: 1) If it isn't broken, don't fix it; and 2) "Fan" is a shortened form of "fanatic" – and a fanatic about anything is always wrong!

John Todd

**CA says** Larry's Star Letter provoked one of our biggest responses of 2014, with every reader disagreeing with his assertion that a new operating system should "force you to learn new things". You can read more letters on the subject on the opposite page.

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

he reads. Meanwhile, the rest of us, who use our phones sparingly, and don't treat other people with contempt, can board flights happy in the knowledge that we won't have to sit next to him.

Joyce Purnell

### Police time 'will be wasted' on new online-abuse law

✉ Normally, I'd agree with any legislation that increases the sentences criminals receive. One of the reasons why the British public feel so out of touch with the establishment is because of the pathetic prison terms handed down to rapists, child molesters, violent thugs and so on. But I'm uneasy about the Government's plans to hand out stiffer sentences to internet trolls

(News, Issue 435).

My fear is that anyone who feels slightly threatened by an offensive (but not abusive) message online will call the police. For example, I could tell someone on Twitter that their religion is a complete waste of time, and that no heaven awaits them when they die. That wouldn't be a very nice thing to do, and people would take offence, but I would argue that it wasn't abusive – just confrontational and antagonistic. And yet I bet police time would be wasted investigating it.

The line between abuse and offence is never clear. The Government should think very hard about introducing laws that blur the lines even more.

Warren Matthews



# Consumeractive

## Is Yodel or PayPal liable for refunding stolen goods?

**Q** I spent more than £100 through PayPal buying a Wolverine digital converter from an American eBay seller. It was delivered by the courier Yodel while I was on holiday, so the delivery person left it behind my dustbin. It was subsequently stolen! Yodel says I need to claim from PayPal, but PayPal says it's Yodel's responsibility. Can you help?

John Edgerley

**A** Sadly, we won't be able to help John. Morally, you can argue Yodel is culpable because leaving a parcel behind a dustbin isn't a "safe place" as laid out by its guidelines ([www.snipca.com/14073](http://www.snipca.com/14073)). But John hasn't got a contract with Yodel, the eBay seller has, so he can't sue this company. PayPal's off the hook because the item was delivered to his address, albeit not safely into his hands.

But the crucial factor is that the seller is based outside the EU, which means he's not covered by the Consumer Contracts Regulations 2013 (which replaced the Distance Selling Regulations in June). All sellers inside the EU are responsible for the safe delivery of an item, unless they can prove the customer is lying about it being stolen or not delivered. If a parcel has been signed for, the buyer has to prove they didn't get it.

**CASE CLOSED**

**YODEL PayPal**

## Can I claim compensation for wrongly charged customs duties?

**Q** In August I ordered an electronic translator from Ectaco's UK website for £134.95 ([www.snipca.com/14030](http://www.snipca.com/14030)). It was made clear that the device was being shipped from America, but Ectaco promised I wouldn't be charged any duty by HMRC. But I then got a bill for £19.61 from FedEx for import duty. I called Ectaco, which says it's sorting this out, but could I claim compensation as well?

Martin Wells



**A** Martin could try, but we think it would prove very difficult. First, he would need to decide who he wanted to sue. Ectaco is blaming FedEx, saying the charges are incorrect, but Martin doesn't have a contract with FedEx, so it could turn around and blame Ectaco.

If that's not confusing enough, he faces other problems. It's true that he shouldn't be out of pocket, but unless Ectaco or FedEx agrees to pay him as a goodwill gesture, Martin would have to take his case to the small claims court. There he'd have to prove what his expenses for this mix up were, such as phone calls and letters. It's relatively easy to provide evidence of this, but much harder to prove distress, or that the matter has eaten into your time, on

which point Martin's compensation claim could flounder.

The £19.61 that Martin was charged by FedEx comprised £8.86 VAT plus a £10.75 advancement fee. He has no choice but to pay the VAT bill because overseas companies aren't liable to pay this, leaving you to pick up the tab. FedEx charged the hefty advancement fee because it pays any duties and taxes owed to HMRC in advance.

At the moment it's unclear whether the charges FedEx are charging are correct, but if they are, then Martin was misled by Ectaco's initial reassurance that he wouldn't have to pay import duties. If this happens to you – and the company is based in the UK – you can take legal action under the Consumer Protection from Unfair Trading Regulations (read more at the Citizens Advice website: [www.snipca.com/14033](http://www.snipca.com/14033)).

**CASE CLOSED**

## Why isn't Mesh responsible for repairing my PC?

**Q** I bought a £350 computer from Mesh Computers, but it was faulty, so I sent it back for a repair. Despite numerous calls and excuses from Mesh I never received it back. I've since learned that Mesh ceased trading in May 2011 and another company took it over. Can you help me get my money back?

G Mitchell

**A** The only way Mr Mitchell can get his money back is if he paid for the computer by credit card. This would mean he's protected by Section 75 of the Consumer Credit Act, which covers purchases from £100 to £30,000.

When companies go bust, the company buying the assets sometimes take on its liabilities, including debts and warranties. However, PC Peripherals –

who bought Mesh's assets in May 2011 – didn't do so, which means it doesn't owe any refunds to Mesh customers. But at the time PC Peripherals said it would honour any outstanding repairs, so for a period of time Mr Mitchell would have been able to get his PC fixed. This offer has probably ended, but we've asked PC Peripherals just in case.

**CASE ONGOING**





We stand up for your legal rights

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

**Email:** [consumeractive@computeractive.co.uk](mailto:consumeractive@computeractive.co.uk)

**Write:** Consumeractive, Computeractive, 30 Cleveland Street, London W1T 4JD

Please include both your phone number and address.

Unfortunately, we can't reply to all your letters.

## Can I sue the BBC, Tesco or Sony because of an iPlayer upgrade?

**Q** I bought an internet-connected Sony Blu-ray BDP- S185 player from Tesco about a year ago, mainly to watch the BBC iPlayer. But the BBC's recent upgrade of the app means it doesn't work on this device now, and Sony says it doesn't have a fix. I feel I should've been warned about something like this. Do I have any rights against the BBC, Sony or Tesco?

Derek Millar

**A** We're sorry to say that Derek's got no legal case against any of the companies.

The Blu-ray player isn't inherently

faulty, so Tesco can't be sued under the Sale of Goods Act. Also, there's nothing in law that says a third party (in this case the BBC) has to ensure that updating an app doesn't leave it incompatible with a device. Similarly, manufacturers don't have to upgrade a device to make it work with an updated app. Nor are they legally required to explain that future upgrades may render a device obsolete.

However, in August the BBC said that it's updating the app to make it



compatible with the latest TVs, Blu-ray players and set-top boxes (see the full range of devices at [www.snipca.com/14039](http://www.snipca.com/14039)).

This includes Sony Blu-ray players made in the past three years, so we've told Derek to double-check whether the app doesn't work.



## CASE UPDATES



### Sky TV finally pays up

In Issue 433 we reported Richard Glenister's complaint against Sky TV, which had charged him for an extra month even though he had cancelled his account. We contacted Sky on

Richard's behalf and while we were waiting for a reply, he told us that the case appeared to have been resolved. Thanks to Richard's persistence in writing letters and phoning the company, Sky said it would refund him £47.

However, two months on he still hadn't received this money. We contacted Sky again and he also wrote a letter to Jeremy Darroch, Sky's chief executive. This led to a phone call from a Sky customer-service representative who apologised and said that his Sky account had been credited with the money. This wasn't much help, though, because Richard had closed his account.

He told Sky this, who finally got it right by placing the money in his bank account.

If you're having problems getting a company to respond, a polite but firm letter to the CEO can work wonders. But it's quicker and cheaper to send an email. You'll find emails for the CEOs of many major companies at [www.ceoemail.com](http://www.ceoemail.com) (for example, [jeremy.darroch@bskyb.com](mailto:jeremy.darroch@bskyb.com)).



## THIS WILL COME IN USEFUL

### Mobile phone networks

#### EE

**07953 966 250**

**From EE mobiles: 150**

Online help: <http://ee.co.uk/help/contact-us>

Twitter: @EE

#### Orange

See EE

#### O2

**0344 809 0202**

**From O2 mobiles: 202**

Live chat:

[www.o2.co.uk/contactus](http://www.o2.co.uk/contactus)

Twitter: @O2

#### T-Mobile

See EE

#### Tesco

**0345 301 4455**

**From Tesco mobiles: 4422**

Email:

[www.snipca.com/13959](http://www.snipca.com/13959)

Twitter: @tescomobilecare

#### Three

**0333 300 3333**

**From Three mobiles: 333**

Email:

[www.snipca.com/13958](http://www.snipca.com/13958)

Twitter: @ThreeUKSupport

#### Virgin

**0345 6000 789**

**From Virgin mobiles: 789**

Live chat:

[www.virginmedia.com/contactus](http://www.virginmedia.com/contactus)

Twitter: @virginmedia

#### Vodafone

**08700 776655**

**From Vodafone mobiles: 191**

Live chat: [www.vodafone.co.uk/contact-us](http://www.vodafone.co.uk/contact-us)

Twitter: @VodafoneUKhelp



# Protect Your Tech

Scams and threats to avoid, plus new security tools

## WATCH OUT FOR...

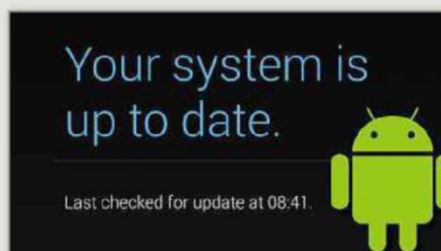
### Android malware disguised as images

#### What happened?

Google have released an updated version of Android to fix a security flaw that could have allowed hackers to infect phones and tablets with malicious software.

The flaw was discovered by researchers Axelle Apvrille and Ange Albertini, who demonstrated how it could be exploited to disguise malware as image files (formats such as PNG and JPEG), tricking security apps into thinking it's safe. It also fools Google's Bouncer, which scans the Play Store for malicious apps.

In their research paper Apvrille and Alberti showed how an app that could steal photos, emails and other data was made to look like an image of the *Star Wars* villain Darth Vader. They said such attacks can easily bypass security tools



because they don't look suspicious.

Fortunately, they didn't publicise the flaw until Google had fixed it in a new Android update, so hackers can't now take advantage of it on devices running the old version.

#### What should you do?

Make sure you're using the latest version of Android (4.4.4), which isn't vulnerable to the flaw. How you check this depends on the device, but the

process doesn't vary too much.

Generally, you need to open Settings (often represented by a cog icon), then scroll down and tap 'About phone' or 'About tablet'. Tap 'System updates' or 'Software update' (or something similar) and Android will search for an update or display the message "Your system is up to date" (see screenshot).

If Android needs to search for an update, agree to the installation when prompted. This will reboot your device, so make sure you're not in the middle of something important.

Unfortunately, many device manufacturers won't immediately offer this update, which means hackers do have a window of opportunity. Until you can update Android to the 4.4.4 version, make sure you only open images you know are safe.

## New tools

Malwarebytes Anti-Malware 2.0.3  
[www.snipca.com/14096](http://www.snipca.com/14096)

The release of Version 2.0.3 was announced in a post on the Malwarebytes forum ([www.snipca.com/14097](http://www.snipca.com/14097)) that listed so many repaired faults, it makes you wonder how the software ever worked properly in the first place. That said, it shouldn't stop you updating what is one of the best free security tools available.

What pleases us most is that Malwarebytes has fixed a bug that caused the program to keep crashing in Chrome. Another fix stops it crashing when you use the 'Copy to Clipboard' function. A word of warning, though – some early users of 2.0.3 reported that the Malicious



Website Protection tool was showing as "disabled", and couldn't be activated. You'll find their complaints on the Forum post mentioned above, along with solutions from Malwarebytes. It's great to see the software developers responding so quickly.



**ScamWatch**  
READERS WARN READERS

#### Financial Ombudsman scam

Over the past few years I've received several phone calls from scammers telling me there's a virus on my PC, but last week I was targeted by a new scam. The scammers claimed to be from the Financial Ombudsman Service (FOS), and said I was entitled to compensation. They sounded quite professional, but I smelled a scam when they asked for £150 to process the compensation. It seemed implausible to me that the FOS would phone people and ask for money. Read more on the Action Fraud website about this scam at [www.snipca.com/14011](http://www.snipca.com/14011).

Edmund Hardy



Warn your fellow readers about scams at  
[letters@computeractive.co.uk](mailto:letters@computeractive.co.uk)





# You trust Dell to deliver exceptional IT management solutions.

## Dell trusts APC to protect them.

Introducing the new Dell Smart-UPS, engineered by APC for unbeatable power protection.

On site, off site, virtualized, or in the cloud — your IT network is critical to your business success. That's why you rely on Dell for integrated IT solutions with the performance, scalability, and open architecture you need to get things done. But even the best networks need reliable power protection, and now, they have it — thanks to the new Dell Smart-UPS™, engineered by APC™ by Schneider Electric™.

With a 25+ year track record of unsurpassed reliability, Smart-UPS deliver seamless protection of mission-critical network connections, both for off-site applications and cloud-based services as well as on-site storage devices and applications. And with features like precision temperature-compensated charging, a unique power-meter function, and a patent-pending "green mode," you'll save energy and reduce utility costs — without jeopardizing system availability or business uptime. Now, whether you're working with a virtualized or cloud-based environment, deploying VoIP or PoE technologies, or enabling a BYOD approach, Smart-UPS can help you manage your IT network with confidence.

### Intelligent. Manageable. Efficient.

#### Intuitive alpha-numeric display

Get detailed UPS and power quality information at a glance — including status, about, and diagnostic log menus in your choice of up to five languages (depending on model).



#### Configurable interface

Set up and control key UPS parameters and functions using the intuitive navigation keys. On rack/tower convertible models, the display rotates 90 degrees for easy viewing.



#### Energy savings

A patent-pending "green" mode achieves online efficiencies approaching 99 percent, reducing heat loss and utility costs.



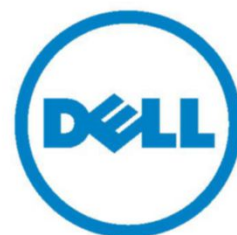
Engineered by



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# Best Free Software

Brilliant new programs that won't cost you anything



## ANTIVIRUS SUITE

### Avast 2015

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

**What you need:** Windows XP, Vista, 7 or 8

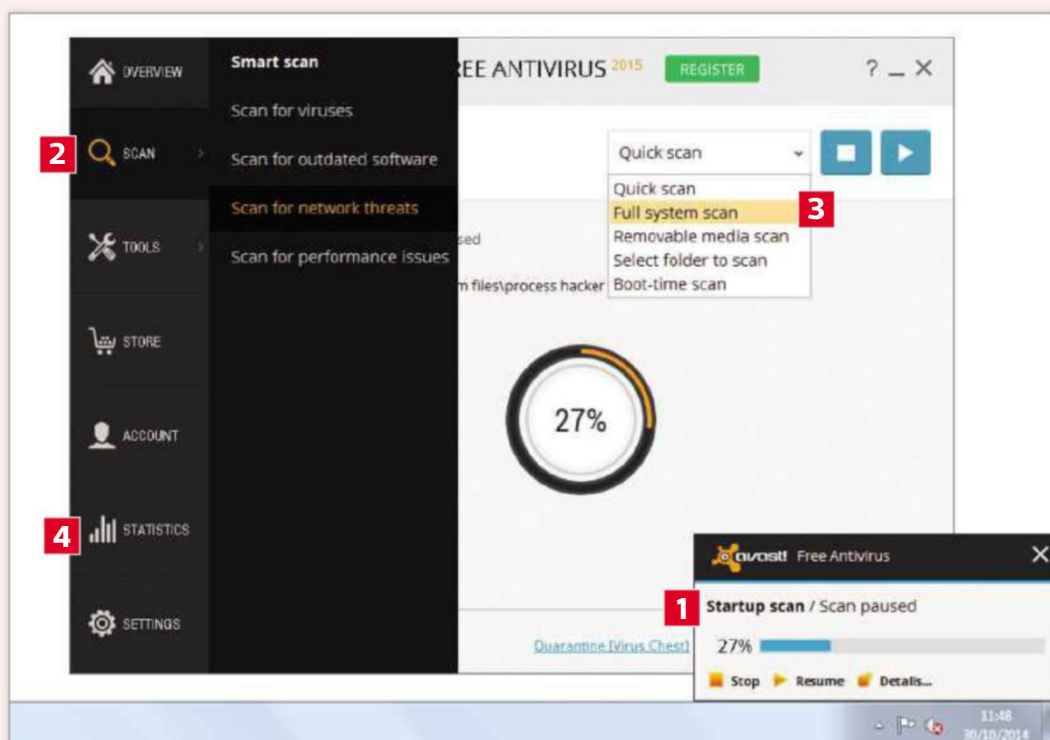
The latest version of our favourite free antivirus has arrived. The security suite formerly known as Avast Free Antivirus is now just 'Avast' with next year tagged on the end. Besides the rebrand, the main change is a new Home Network Security tool that detects flaws and intruders on your home Wi-Fi.

Other tools include a Software Updater for identifying, updating and removing your out-of-date software, and a Rescue Disk tool that lets you create a bootable USB for scanning and fixing any PC. There's no firewall or safe-banking tool unless you upgrade to Avast Internet Security (£39.99 per year, [www.snipca.com/14232](http://www.snipca.com/14232)), but if you're simply looking for reliable protection against the latest threats, Avast Free Antivirus does the job nicely.

Our only criticism is that you have to download Avast via a

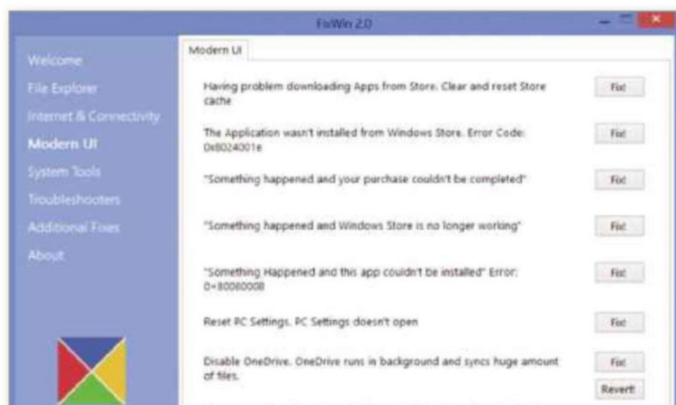
[mirror site](#) and untick an offer during setup. Click Go To Download, then Free Download and click the green Download Now button, then run the installer, which is a surprisingly small 4.8MB. The offer (Dropbox) is innocuous and it gives you 2GB storage space for free, but untick it and click 'Custom install' to get more control over the installation process and minimise unwanted clutter on your PC. Make sure you don't install it until you've removed your existing antivirus suite, or they will conflict and effectively cancel each other out.

In our next issue, we'll reveal how Avast (albeit the previous version) compares with the biggest paid-for antivirus programs on the market, including Kaspersky and Norton. Here's a sneak preview: it fares very well indeed.



- 1** Avast quickly scans your PC as soon as you finish installing. Control the scan by clicking Pause, Resume or Stop in the pop-up at the bottom right of your screen.
- 2** Click Scan to open a menu of tools including 'Scan for outdated software', which opens the Software Updater tool, and 'Scan for network threats' to check your Wi-Fi.
- 3** Open the 'Quick scan' dropdown menu and select 'Full system scan' to thoroughly check your entire PC for malware. You can also scan selected drives and folders.
- 4** Click Statistics, then 'Component status' to see information including how many scans you've run and how many outdated programs you've got installed.





## WINDOWS 8 TOOL

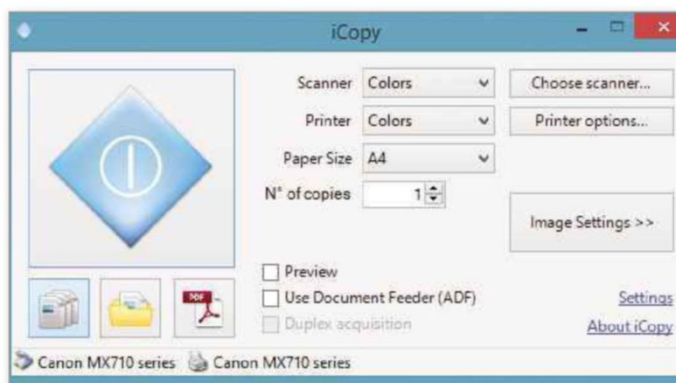
### FixWin 2

[www.snipca.com/14236](http://www.snipca.com/14236)

**What you need:** Windows 8

This new portable tool from the makers of Ultimate Windows Tweaker ([www.snipca.com/14238](http://www.snipca.com/14238)) turns Windows 8/8.1 into a much less problematic place to be. It's like having a personal Windows tour guide who can instantly fix things.

FixWin 2 lists all the main areas you might need help with (such as File Explorer and Modern UI) and, for each area, lists things that might go wrong, such as 'Having problems downloading Apps'. To solve any of the 50 problems, click Fix. Many fixes also have a Revert button to undo any changes.



## SCANNING & PRINTING

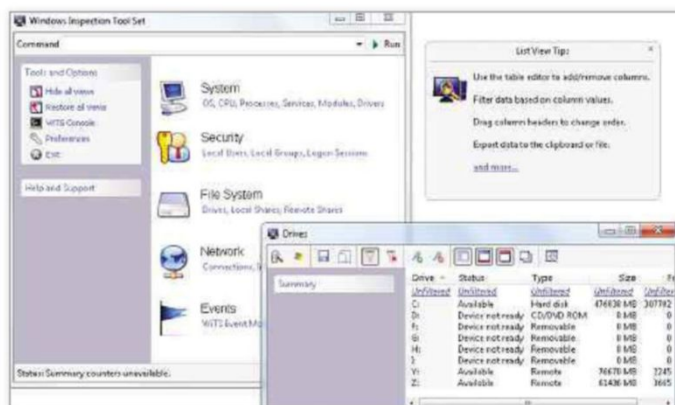
### iCopy

[www.snipca.com/14243](http://www.snipca.com/14243)

**What you need:** Windows XP, Vista, 7 or 8

Ever wished you could use your scanner as a simple photocopier, without the faff of importing scanned images into one program and exporting them from another? This tiny free tool turns your scanner and printer (or all-in-one printer) into a photocopier by letting you scan and print with one click, using a big blue photocopier-style button. If you don't have a printer, you can photocopy to PDF or JPG instead.

Click the 'Download version' button and choose the installed version (first download link) or portable version (second link). After you connect your scanner and run the program, you can tweak the settings, then save them for one-click copying in future.



## SYSTEM SCANNER

### Windows Inspection Tool Set

[www.snipca.com/14246](http://www.snipca.com/14246)

**What you need:** Windows XP, Vista, 7

See inside your PC – in the digital sense, anyway – with this powerful **open-source** tool that lets you check the status and specifications of your operating system, drivers, network and much more. Click Download and follow the link to open-source **download mirror** SourceForge (direct link: [www.snipca.com/14247](http://www.snipca.com/14247)), then run the installer, which is very quick and doesn't include any extras.

## WHAT SHOULD I DOWNLOAD?

We tell you what software to use


### How do I turn family photos into cartoon films?

**Q** I want to turn digital photos of the family into little cartoon film clips. Will any programs let me do this? Many thanks.

Bob Morgan

**A** Your best bet is to do it in stages – first edit your photos with

cartoon-style effects, then turn the edited photos into slideshows or films. BeFunky ([www.befunky.com/create](http://www.befunky.com/create)) is a free online photo-editing tool with some great arty effects such as cartoon and sepia. Free program FotoSketcher ([www.fotosketcher.com](http://www.fotosketcher.com)) has more advanced cartoon effects, and the free online tool PhotoSnack ([www.photosnack.com](http://www.photosnack.com)) is great for creating simple slideshows. If all those tools are too basic for you, try Animoto (<https://animoto.com>), a superb online tool for creating sophisticated films from your photos. It's free to make clips up to 30 seconds; £5 a month for longer films.

 Do you need our advice on what software to use? Just email us at [letters@computeractive.co.uk](mailto:letters@computeractive.co.uk)

# Reviews

New products tested by our experts

## Head to Head

THE BIG NEW IPHONE vs THE SLIMMEST GALAXY YET

### Apple iPhone 6

Computer  
**active**  
**BUY IT!**  
★★★★★



**£539 (without contract, 16GB)**  
from [www.snipca.com/13906](http://www.snipca.com/13906)

#### SPECIFICATIONS

4.7in 1334x750-pixel touchscreen • 1.4GHz Apple A8 dual-core processor • 1GB memory • 16GB storage • 4G • Nano SIM • iOS 8 • 129g • 138x67x7mm (HxWxD) • One-year warranty  
[www.snipca.com/13819](http://www.snipca.com/13819)

### Samsung Galaxy Alpha



**£494 (without contract, 32GB)**  
from [www.snipca.com/13907](http://www.snipca.com/13907)

#### SPECIFICATIONS

4.7in 1280x720-pixel touchscreen • 1.8GHz + 1.3GHz Samsung Exynos Octa 5430 eight-core processor • 2GB memory • 32GB storage • 4G • Nano SIM • Android 4.4 KitKat • 115g • 132x66x7mm (HxWxD) • One-year warranty  
[www.snipca.com/13909](http://www.snipca.com/13909)

**A**pple and Samsung are bitter smartphone rivals and their customers tend to be just as committed, with the most die-hard fans fiercely devoted to their iPhones or Galaxy Android phones. By pitting the iPhone 6 against Samsung's new Galaxy Alpha, we therefore fully expect to receive bags of hate mail. We expected this head to head to be closely fought, but in the end the victor was clear cut.

#### Build quality and screen

The iPhone 6 is the smaller 4.7in version of the 5.5in iPhone 6 Plus **phablet** (see our review, Issue 434). Although this difference in size doesn't sound much, it makes the iPhone 6 much easier to use with one hand. It's not as comfortable as other, smaller phones, but its rounded edges do help a little. The smooth aluminium rear is a touch too slippery and is marred by ungainly plastic stripes required for the antennas to work, but the phone does feel robust.

From the front, the Galaxy Alpha looks

different to any other Samsung phone we've come across, with a chiselled, angular metal band around its edge. It's unmistakably a Galaxy phone from the back though – like the Galaxy S5 (see our review, Issue 423) it has a soft-touch back that's available in blue, black, gold, white and grey. This makes it less slippery than the iPhone, but the Alpha's metal band dug into our flesh, making it less comfortable to hold than the iPhone 6.

Both phones have 4.7in screens, but the iPhone 6 has the higher **resolution** – 1334x750 pixels compared to 1280x720. This ensures older iOS apps not designed for this resolution still display correctly. There was little between them in terms of sharpness of text – both look good. Both screens were also very bright, albeit with minor colour flaws. The iPhone 6's screen had a slight yellowish tint, while the Alpha's screen had a mild blueish tint.

Unlike the Galaxy S5, the Alpha isn't waterproof and lacks a **microSD** slot, but the battery is easy to remove, which is handy if you're away from a power

socket for long periods of time. This is just as well as the Alpha's battery life was disappointing as our next section reveals.

**WINNER: Tie.** Both screens are equally good while neither phone has an overwhelmingly superior casing.

#### Battery life, performance and call quality

We were expecting the phones to be evenly matched in terms of battery life, so we were surprised when the iPhone 6 trounced the Alpha. In our test, both phones were connected to O2's 3G network in central London and used for calls, web-browsing, GPS and taking photos. The iPhone 6 lasted an impressive 31 hours, while the Alpha lagged far behind at 20 hours. This is surprising because the Alpha fared better when playing videos on a loop, lasting 11 hours 46 minutes compared to the iPhone 6's 10 hours 34 minutes.

We were also surprised by the iPhone 6's superior call quality. While both phones were equally adept at filtering out



background noise, callers reported that our voice sounded clear on the iPhone 6 but fuzzy on the Alpha.

Both phones are more than fast enough at running the latest apps and have very responsive touchscreens, but Apple's 1.4GHz A8 **dual-core processor** and 1GB of memory easily outpaced the Alpha's eight-core processor, which should be more powerful, and its 2GB of memory. It was twice as fast in both the 3DMark 3D graphics test and the Basemark OS II overall system test. We strongly suspect that most apps currently aren't coded to take advantage of Samsung's eight-core processor. Until they are, the iPhone 6 will have the edge at keeping up with the very latest, most demanding apps.

**WINNER: iPhone 6.** Future versions of the Galaxy Alpha may one day have better battery life and call quality, but at the moment the iPhone 6 is streets ahead.

### Camera

On paper the Alpha's 12-megapixel camera should wipe the floor with the iPhone 6's eight-megapixel version. However, packing that many pixels into such a small **sensor** has negatively affected photo quality. Photos we took in low light were blighted with **noise**. While the iPhone 6's camera also suffered from noise in dim conditions, it was far less severe so more details were visible and colours were more accurate.

Both cameras coped well when shooting landscapes and buildings in daylight, although the Alpha sometimes produced oversaturated colours. Oddly, the Alpha's camera often applied an overly aggressive noise-reduction effect to portrait shots, which smeared skin tones and facial features. This looked very unrealistic and unflattering.

The phones were more evenly matched in video recording. The iPhone 6 has a small lead here though, because its slightly faster focusing made sharper recordings of excitable pets and kids.

**WINNER: iPhone 6.** Apple's camera is simply far better.

### Extras

Both phones have fingerprint scanners so you can use your fingerprint instead of a passcode to unlock your phone, which is very convenient. However, while the iPhone 6 consistently recognised our swipes first time round, the Alpha often needed a second or third swipe.

Some third-party apps for both iOS

and Android use fingerprint verification to provide extra security, but surprisingly there are fewer available for the Alpha even though fingerprint readers have been available on other Samsung Galaxy devices for several months now.

Both phones can also be used as basic fitness trackers and have built-in apps for tracking health and fitness data such as your weight and how far you've jogged or cycled. The Alpha was more easily fooled than the iPhone 6 though – putting up some shelves was enough to convince the Alpha that we'd run 400 extra steps.

**WINNER: iPhone 6.** Apple's extra features are better designed.

### Operating system

Apple has added extra flexibility to iOS 8, the latest version of the iPhone's operating system. You can now add third-party keyboards, widgets and extensions (see our review of the iPhone 6 Plus for details, Issue 434) – features Android has had for a while.

Android remains more flexible overall because you can modify almost any part of Google's operating system. This is just as well because Samsung has added a lot of clutter to Android 4.4 KitKat on the Alpha, although much of it can be removed with a little effort. Some features are genuinely useful, such as the ability to use two apps side by side, even though this can feel cramped and there are few compatible apps available.

iOS has the advantage of instant operating system updates, whereas Android updates for the Alpha are dependent on the whims of Samsung and your mobile network. The iOS App Store still has a better selection of quality apps than Android's Google Play, although the gap is far narrower than it used to be.

**WINNER: Tie.** Both operating systems are great. Android is more flexible, but iOS has its own advantages too.

### OVERALL WINNER

#### iPhone 6

The undoubted winner of this head-to-head is the iPhone 6, thanks to its longer battery life, superior camera, efficient fingerprint reader and faster performance. The Galaxy Alpha, while undoubtedly stylish, isn't anywhere near as good as previous Samsung phones. If you want an Android phone with the latest features then you should wait for Sony's upcoming Xperia Z3

### HOW WE TEST

*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*, *Web User*, *Micro Mart* and *MacUser*, and the website Expert Reviews ([www.expertreviews.co.uk](http://www.expertreviews.co.uk)). This means we can test thousands of products before choosing the most relevant for *Computeractive*.

### FAIR AND IMPARTIAL

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

### OUR AWARDS



We award every product that gets five stars our Buy It! stamp of approval. It means we were extremely impressed by the product, and we think you will be too.



Every product that gets a four-star review is given the 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.

phones as we've been hugely impressed by its previous Z2 series. For everyone else though, the iPhone 6 is a great choice.

**iPhone 6**  
**Galaxy Alpha**



**ALTERNATIVE:** Motorola Moto G 4G **£147** (without contract)  
If you're on a tight budget, this no-frills 4G Android phone is a great-value alternative



# Reviews

GRAPHICS SOFTWARE | £67 from [www.snipca.com/13865](http://www.snipca.com/13865)

## CorelDRAW Home & Student Suite X7

A comprehensive graphic-design suite at a bargain price



While many high-end graphics suites only offer reduced prices to those who can prove they're currently in education, CorelDRAW Home & Student Suite X7 is available to everyone. It costs under £100 and is identical to the £480 professional edition, except it's missing Corel Website Creator and a few features only very advanced users will miss.

This makes it a great option for hobbyists, whether you're already a wizard with a graphics tablet or simply keen to try your hand at new skills. Plus, you can install it on up to three computers in your household.

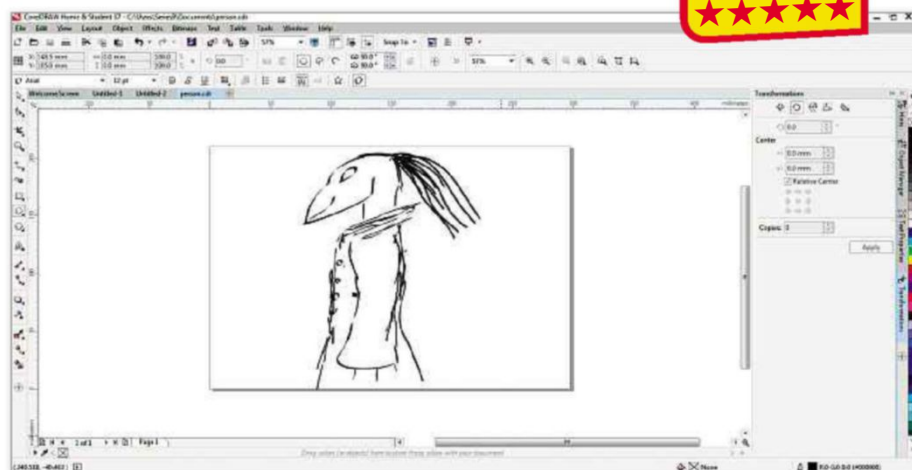
The X7 suite includes two major programs and a number of extras. The core elements are CorelDRAW itself, a **vector illustration** and **DTP** page-layout program, and Corel Photo-Paint, a **bitmap image**-editing program that you can use to touch up photos and resize images for use on the web.

“X7 suite has two major programs and a number of extras”

CorelDRAW's revamped interface is immediately accessible, with easily customisable toolbars and an optional Lite interface that hides some of the more advanced features. We were also pleased to find a number of different **CMYK** colour palettes, which is important for accuracy if you want to send work to be professionally printed. A range of helpful new tutorials are included and this version is the first to support super-high-**resolution** screens.

CorelDRAW's vector-drawing capabilities are excellent, whether you're producing original artwork or just sketching a quick building plan.

We were delighted to find Corel's widest-ever array of pen and brush effects, which neatly smooth a shaky hand. You get calligraphy pens, brushes and preset vector curves, many of which are new to this version, as well as a spray can that puts down patterns such as stars



and musical instruments – great for children's party invitations.

CorelDRAW also includes powerful tools to create page layouts. A number of templates are provided for document types such as business cards, letterheads, newsletters and more. These provide appropriate page sizes and margins, as well as suggested layouts. You can also create and save your own templates, an essential feature for monthly newsletters that always follow the same basic design.

To add graphics to your layout, a number of options are available. You can create or import vector graphics, import bitmap images such as photos, or use Corel PowerTRACE to convert a bitmap image into a vector. PowerTRACE works best with simple images that you want to turn into line art, but you can also use it to convert photos into clip art.

You can also download more than a thousand photos, fonts and clip art images using the new built-in Corel Connect Content Exchange feature. The Standard membership that comes with this version of the suite doesn't give you as much as the Premium membership that comes with professional edition, but it's still useful. Connect also lets you search a number of stock photo services, where you can buy more images.

When it comes to editing and optimising your bitmap images, Photo-Paint is both powerful and easy to use. While Adobe Photoshop Elements has far more sophisticated photo-editing tools, Photo-Paint is nonetheless a good alternative. It supports numerous **RAW** formats and gives you fine control over lighting and colour settings. It's easy to cut out the subject of a photo from its background and we particularly like the program's colour mask and selection tools, which lets you remove background elements by hue. A wider than ever range of pen settings and effects provide artists with plenty of options.

CorelDRAW Home & Student X7 is a fantastic buy, whether you're new to the program or upgrading from the previous 2014 version. In one software bundle, you get everything you need to lay out documents, create original vector and bitmap artwork, and manipulate existing images. There are better individual programs for each of these tasks, but it's unbeatable as a low-cost, one-stop shop.

**VERDICT:** A great all-in-one suite for DTP, vector graphics and bitmap image-editing

★★★★★

**ALTERNATIVE:** Serif DrawPlus X6 £82 A powerful dedicated drawing program



### REQUIREMENTS

Windows 7 or later • 2GB of memory • 1GB of free hard drive space • Intel Core 2 Duo, AMD Athlon 64 processor or faster [www.snipca.com/13866](http://www.snipca.com/13866)



**PRINTER** | £77 from [www.snipca.com/14126](http://www.snipca.com/14126)

## Canon PIXMA MG5650

Canon's latest home MFP looks smart and performs well

The Canon Pixma MG5650 is a **multifunction printer** (MFP), which means it prints, scans and copies. It offers plenty of features including **duplex printing**, wireless connectivity and the ability to scan and print without the need for a computer. It's a stylish device made of high-quality plastic. While it has a colour display, it isn't touch sensitive and the controls can be a little confusing due to the somewhat convoluted on-screen menus.

This printer has a single paper-input tray that lacks a dust cover. There's no separate manual feed, so you'll need to empty this tray temporarily if you have one-off print jobs to carry out, such as envelopes. As you'd expect in a colour inkjet at this price, there are five separate colour ink tanks rather than a single combined colour cartridge, so you only have to replace individual colours when they run out rather than an entire cartridge.

When connected over USB, this printer delivered five pages of text in 30 seconds and five pages of colour graphics in one minute 11 seconds – both impressive results. Photo-printing speeds weren't too bad either, with an A4 print taking under six minutes, and a postcard-sized print just over two minutes at the highest-quality setting possible. We've experienced slow performance from some Canon printers when connected via a Wi-Fi network, but we had no such problems with this one.

The MG5650 is quick with basic scans too, capturing an A4 page at 150 **dots per inch** (dpi) in eight seconds. Scanning a 6x4in photo at a more detailed setting of 1200dpi was relatively slow, however, taking one minute 39 seconds. As we'd

### SPECIFICATIONS

4800x1200dpi maximum print resolution •  
8.7ipm colour/12.2ipm mono quoted speeds •  
1200x2400dpi maximum scan resolution • USB •  
Wi-Fi • One-year warranty [www.snipca.com/14127](http://www.snipca.com/14127)



expect, scan quality was excellent – scans of photos and children's paintings all looked superb. Print quality was also extremely good, with photos particularly sharp and detailed.

If you store photos online at Dropbox, Flickr or Picasa, you can browse them on the MG5650's screen and print them – all without using your computer. You can also scan files directly to online storage and configure Google's Cloud Print, enabling you to print to the MG5650 from your laptop, tablet or smartphone no matter where you are (as long as you have internet access).

On top of everything else, Canon has also ensured the printer's ink costs are competitive – 7.3p for a page of mixed text and graphics. With impressive features, great print and scan quality, and respectable performance, the MG5650 is a strong all-rounder at a fair price, so it's highly recommended.

**VERDICT:** This MFP's strengths far outweigh its minor niggles. It's an excellent choice

★★★★★

**ALTERNATIVE:** Canon PIXMA MX535  
£70 If you need an MFP for a small home office, this is a better choice because it has a built-in ADF and fax



## The best... iPhone 6 cases

### Xqisit iPlate Odet

£15 from [www.snipca.com/14172](http://www.snipca.com/14172)

A slender case made of stiff transparent plastic that will protect your iPhone 6 from scuffs and knocks without adding much bulk.



### Tech21 Classic Shell

£25 from [www.snipca.com/14173](http://www.snipca.com/14173)

Similar to the iPlate Odet, but with a thicker bumper around the edges that adds a lot of extra width. At least this thick, rigid orange material does provide greater protection from drops and shocks.



### Xqisit Tijuana Folio Case

£19 from [www.snipca.com/14174](http://www.snipca.com/14174)

A wallet-style case with a magnetic flap that protects the screen when the phone isn't in use. On the inside of the flap are slots for payment cards and business cards, while the attached lanyard can be looped around your wrist for an even more secure grip.



### Griffin Identity Ultra-Slim Case

£22 from [www.snipca.com/14175](http://www.snipca.com/14175)

A three-part case that consists of a rigid bumper, a screen protector and a plastic back plate with a textured grip, making it less likely that you'll drop your phone. You can remove the back plate for a slimmer profile if you wish.



# Reviews

**PC GAME** | £20 from [www.snipca.com/13686](http://www.snipca.com/13686)

## Train Fever

A game that lets you build your own rail empire from scratch



Financed via [crowd-funding](#) investment website Gambitious.com, Train Fever is a simulation game aimed squarely at railway enthusiasts where you are tasked with running your very own transportation company. You start off in the year 1850 with a limited budget and an open map, and from there you spend the next 150 or so virtual years developing your rail, bus and tram networks, managing your passenger and cargo routes, and adapting your infrastructure as cities grow and technologies evolve over time.

To preserve your sanity, you'll almost certainly want to open the game's settings and disable the cheesy, repetitive background music. Unfortunately, this

alone won't disguise the fact that Train Fever can feel decidedly rough around the edges. The game's interface has some frustratingly counter-intuitive controls and there's next to nothing in the way of a tutorial.

Even more disappointing is Train Fever's lack of any campaign mode where you have to meet certain criteria to win. This makes gameplay somewhat simplistic compared to other similar titles. And that's probably Train Fever's biggest problem: it just doesn't square up particularly well to existing transport-management games – even those from several years ago, such as Cities in Motion and Sid Meier's Railroads.

Train Fever certainly isn't without merit. Zoom into the maps, for instance, and the graphics reveal themselves to be beautifully detailed. The environments are large and interesting too, and it's

refreshing to find you don't have to stick rigidly to grids when laying down tracks or putting up stations. There's also a growing gaming community at [www.train-fever.com/forums](http://www.train-fever.com/forums) where you can swap tips. That said, there's no shortage of better, cheaper alternatives.

**VERDICT:** Train Fever will appeal to die-hard rail fans, but it lacks variety and can be clunky to play

★★★★☆

**ALTERNATIVE:** Railroad Tycoon Collection £10

Three classic railway-management games in one bargain-priced, downloadable package



### REQUIREMENTS

Windows XP or later • Intel Core 2 Duo processor or faster • 2 GB RAM • Nvidia GeForce 8800 512 MB • ATI Radeon HD 3850 512 MB or better graphics card • Mouse with scroll wheel [www.train-fever.com](http://www.train-fever.com)

**PC** | £190 from [www.snipca.com/13900](http://www.snipca.com/13900)

## Asus Chromebox

A quiet and compact alternative to a Windows PC



You wait ages for a Chrome OS desktop PC to come long and two arrive at the same time. While the LG Chromebase (see our review, page 23) is an all-in-one PC with a built-in monitor, Asus' Chromebox is a mini PC small enough to fit inside a child's lunchbox.

The Chromebox doesn't come with any accessories other than a mount for attaching it to the back of a monitor (to save you even more space). You can connect two monitors at the same time via the [HDMI](#) and [DisplayPort](#) connectors and we had no trouble using USB or wireless keyboards and mice. Wireless

peripherals are a good idea as there are only four [USB 3.0](#) ports. We do wish the [SD card](#) slot was on the front (rather than on the left-hand side) for easier access, but this is a minor quibble.

We're big fans of Chrome OS. [Web apps](#) for it are plentiful, cheap and cover most everyday tasks. The system requires little maintenance and automatically backs up all your files to Google Drive. It's a shame, therefore, that Chrome OS' desktop-management features are so basic. Its version of Windows Snap, for example, is awkward to use, while its [virtual desktops](#) feature is very rudimentary.

Although Chromebox's cooling fan is a bit noisy when handling heavy-duty tasks, it's otherwise whisper-quiet. Its 1.4GHz Intel Celeron [dual-core processor](#) isn't overly fast by Windows standards, but paired with 4GB of memory it's quick

enough for running Chrome OS.

The Chromebox is a good PC, but it's overpriced. It costs almost the same as most Chromebook laptops, even though it doesn't come with a keyboard, mouse or screen. Unless connecting two monitors of your choice is a priority, a Chromebook or LG's Chromebase are better value.

**VERDICT:** A good Chrome OS mini PC, but it costs almost the same as a Chromebook without any peripherals

★★★★☆

**ALTERNATIVE:** Dell Chromebook 11 £200 A Chrome OS laptop with identical performance that's better value



### SPECIFICATIONS

1.4GHz Intel Celeron 2955U dual-core processor • 4GB memory • 16GB SSD • Intel integrated graphics • 802.11a/b/g/n • Gigabit Ethernet • Chrome OS • 600g • 42x130x130mm (HxWxD) • One-year warranty [www.snipca.com/13901](http://www.snipca.com/13901)



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# Reviews

**LAPTOP** | £558 from [www.snipca.com/14143](http://www.snipca.com/14143)

## Toshiba Satellite Pro R50B-B-12U

A quality Windows 7 laptop at a low price



The vast majority of new Windows laptops run Windows 8.1. If you really can't get on with Microsoft's current operating system, but need a new Windows laptop (and can't wait for Windows 10) then your choices are limited to a handful of Windows 7 laptops aimed at businesses, like the Toshiba Satellite Pro R50-B-12U.

The R50 has a plain, black plastic build that's reasonably sturdy, with only a dash of style in the ribbed lid and wrist rest. Unusually in a new laptop, it has a built-in DVD writer. So, while most software is now sold online, this drive is handy for installing older programs, as well as making backups. As a result, the R50 is a tad heavy, weighing 2.3kg (2.7kg with charger).

The R50 is therefore hardly ideal for use while travelling, but at least the battery is up to the job. It lasted just under nine hours, which is good for a 15in laptop at this price. Part of the reason for this lengthy battery life is the energy-efficient

Intel Core i5 4210U **processor**. Paired with 4GB of memory, it's fast enough to justify using the R50 as your main computer. It wasn't too noisy during our test and its underside never became uncomfortably warm.

You can boost the memory to a maximum of 16GB and replace the 500GB hard drive with a larger model or an **SSD**. This requires unscrewing 20 screws in the base – it's a time-consuming exercise, but not too difficult.

The screen has a **resolution** of 1366x768 pixels. We'd have preferred a higher resolution to see more detail in photos and to work on multiple documents side by side, but it's good enough for most tasks. While it's very bright, colour accuracy is disappointing. Colours can shift in appearance dramatically depending on your viewing angle, and the backlight is so uneven that the colour accuracy in the bottom half of the screen is noticeably worse than the top.

Toshiba has squeezed in a number pad alongside the keyboard. The number pad's keys are a little narrower than usual as a result, but the keyboard is large. Although the keys have plenty of

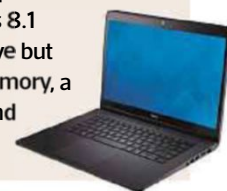
**feedback**, they don't have quite enough **travel**. While this means the keyboard isn't as comfortable as others we've tried, we got used to it fairly quickly and were typing quickly and accurately in no time.

The Toshiba Satellite Pro R50-B-12U isn't flawless, but it's still a good-value laptop – especially if you want Windows 7. If you're already getting to grips with Windows 8.1 though, Dell's similar Inspiron 15 5547 is better value thanks to its more comfortable keyboard, larger hard drive and longer battery life – all for £60 less.

**VERDICT:** Slightly overpriced, but still a great choice if you want Windows 7



**ALTERNATIVE:** Dell Inspiron 15 5547 £499 A Windows 8.1 laptop with no DVD drive but cheaper, with more memory, a larger 1TB hard drive and longer battery life



### SPECIFICATIONS

1.7GHz Intel Core i5 4210U dual-core processor • 4GB memory • 500GB hard drive • DVD writer • Intel HD 4400 integrated graphics chip • 15.6in 1366x768-pixel screen • 802.11ac/a/b/g/n • Windows 8.1 • 2.3kg (2.7kg with charger) • 24x379x258mm (HxWxD) • One-year warranty [www.snipca.com/14144](http://www.snipca.com/14144)

## WHAT SHOULD I BUY?

### Which earphones are best for blocking external noise?

**Q** I often travel to see my relatives in Scotland and Spain, which means I spend a lot of time on trains and planes. I like to listen to music and watch movies on my tablet to pass the time, but I find the background noise onboard to be very distracting. Is there any way I can block it out?


Malena Marquez

**A** Noise-cancelling earphones will block out



background noise and typically come in two varieties – passive and active. Passive noise cancellation relies on physically blocking out unwanted noise, either with earplugs that slide into your ear canal or with an ear muff-style design that fits over your head. Active noise cancellation uses microphones and complex circuitry to create a soundwave that cancels out the soundwave of the unwanted noise. Creative's EP-3NC

earphones combine both techniques, making it one of the most effective noise-cancellation earphones we've tried, successfully blocking out the rumble of a jumbo jet on a transatlantic flight we took. The circuitry is powered by a single AAA battery and is small enough to clip onto your clothing easily. Best of all, it's affordable at just £50 from [www.snipca.com/14177](http://www.snipca.com/14177).

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





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## **PUNISHER 500 GAMING PC**

: AMD A10-6800K 4.40GHz Quad Core  
: AMD RADEON HD 8670D  
: 4GB DDR3 1333MHz  
: 1TB SATA III HARD DRIVE  
: WINDOWS 8.1 (64Bit)

**FROM £425.00**



## **PUNISHER 600 GAMING PC**

: AMD FX4350 4.20GHz Quad Core  
: GTX 660 2048MB GDDR5  
: 8GB DDR3 1600MHz  
: 1TB SATA III HARD DRIVE  
: WINDOWS 8.1 (64Bit)

**FROM £600.00**



## **PREDATOR 1000 GAMING PC**

: AMD FX6350 O.C. 4.00GHz Six Core  
: NVIDIA GTX760 2048MB GDDR5  
: 8GB DDR3 1600MHz  
: 1TB HARD DRIVE + 120GB SSD  
: WINDOWS 8.1 (64Bit)

**FROM £875.00**



## **HELLION 1300 GAMING PC**

: INTEL i7-4790K O.C. 4.40GHz Quad Core  
: NVIDIA GTX780 3072MB GDDR5  
: 8GB DDR3 1866MHz  
: 2TB HARD DRIVE + 250GB SSD  
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## **WELCOME TO THE ARENA**

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# Reviews

**SMARTPHONE** | £138 (without contract) from [www.snipca.com/14155](http://www.snipca.com/14155)

## Motorola Moto G (second generation)

Use two SIM cards at once in this brilliant and cheap Android phone

Motorola only recently released the 4G version of the Moto G (see our review, Issue 432), which is our favourite budget Android phone – but the company isn't resting on its laurels. The clumsily named Moto G (second generation) is the second new budget smartphone from Motorola in as many months. Bizarrely though, this new model is 3G-only, so if you crave 4G you'll have to buy the previous version.

We suspect the new Moto G is 3G-only due to its new dual-SIM features, because 4G dual-SIM phones tend to be expensive. Unlike its predecessors, you can use two SIM cards simultaneously. Dual-SIM-capable phones remain something of a rarity in the UK.

Dual-SIM is handy if you want separate numbers for your work and personal life, or if you're abroad and want to use a local SIM for cheap calls and internet access, while remaining reachable on your UK number. The Moto G's dual-SIM features are surprisingly well thought through. In the settings, you can turn each SIM on and off, enable or disable internet access for each SIM and choose which SIM is used by default for calls and texts.

The second-generation Moto G is longer and wider than previous models for two principal reasons. The first is the larger

“It has dual-SIM, a bigger screen and stereo speakers”

screen – now 5in instead of 4.5in. This doesn't sound like much of an increase, but it does make the new Moto G more awkward to hold and use with one hand. The **resolution** remains the same at 1280x720 pixels, so text isn't any sharper, but the display is brighter, colour accuracy is much improved and viewing angles are wider. It's a great screen, especially for such a cheap phone.

The second reason for the increased dimensions is the stereo speakers positioned just above and below the screen when held in portrait orientation.

These are much louder than most smartphone speakers. While the HTC One M8's speakers remain the best smartphone speakers we've heard, with more volume and clarity (see our review, Issue 421), the Moto G's speakers are still more than good enough for listening to radio, podcasts and YouTube videos.

The second-generation Moto G is otherwise very similar to its predecessors. Its appearance is quite plain, though you can exchange the back cover for a range of coloured alternatives to give it a dash of style. It's remarkably sturdy and well made, and although the battery is fixed in place, you can add more storage using **microSD** cards. The camera is average at best. Shots taken in bright daylight lacked sharpness and were blighted by **noise**, while night-time shots were too dark to be usable.

Like previous Moto Gs, this model has 1GB of memory and a 1.2GHz **quad-core** Snapdragon 400 **processor**. While it didn't perform particularly impressively in our benchmark tests, it's still more than fast enough for running most apps, other than those with detailed 3D graphics. Its responsiveness could be better, however. While the touchscreen generally had no trouble keeping up with our finger movements, it struggled when there were lots of apps or web pages open simultaneously. That said, it's not nearly as bad as other cheap Android phones.

Battery life was slightly disappointing at 22 hours 15 minutes when used for web browsing, phone calls, photography and GPS. We'd expect most smartphones to last at least 24 hours. Call quality was excellent though. When making calls next to a busy London road on O2's network, calls were clear and loud with traffic noise completely blocked out.

### SPECIFICATIONS

5in 1280x720-pixel touchscreen • 1.2GHz Qualcomm Snapdragon 400 quad-core processor • 450MHz Adreno 305 graphics chip • 1GB memory • 8GB storage • 3G • Dual micro SIM • Android 4.4 Kit Kat • 149g • 142x71x11mm (HxWxD) • One-year warranty [www.snipca.com/14157](http://www.snipca.com/14157)



Computer  
**active**  
**BUY IT!**  
★★★★★

It's a shame that the new Moto G's dual-SIM feature and its bigger, better-quality screen come at the cost of battery life, but if you want these features then it's a great buy. If you don't, or you want 4G, then the 4G version of the first Moto G is the better budget Android phone.

**VERDICT:** The shorter battery life and bigger screen won't suit everyone, but the latest Moto G is nonetheless great value

★★★★★

### ALTERNATIVE:

Asus Zenfone 6 £200 If you want a budget phone with an even bigger screen, this 6in phablet will fit the bill if not your pocket





**PLANT MONITOR** | £45 from [www.snipca.com/14135](http://www.snipca.com/14135)

# Parrot Flower Power

Make your plants tell you what they need

Parrot's Flower Power device measures the water, light, temperature and fertiliser levels of the soil into which its two prongs are inserted. Twinned with a free app on your Android or iOS device (Windows Phone users are out of luck), it aims to alert you when your precious plant needs some horticultural tender loving care. The Flower Power uses Bluetooth 4.0 to communicate with your mobile device. Also known as Bluetooth LE, it's been built into iOS devices since the iPhone 4s and iPad 3, but has only just started to become widespread on Android phones and tablets.

Once you've inserted the battery into the Flower Power and placed its prongs into the earth near to your plant of choice (indoor or outdoor), you can launch the app and tell it what kind of plant you are monitoring. The app's database has data for around 7,000 plants. The plant database would be more useful for novices if it included aspect and soil-type

This is a real shame as the app has some intriguing extra features. It works with the If That Then This website (<https://ifttt.com>) for automatically controlling multiple apps and devices to carry out tasks. For example, you can – in theory – set up the Flower Power to work with Philips' Hue Wi-Fi-connected light bulb so that the bulb automatically switches on if the Flower Power detects your plant isn't receiving enough light. This didn't work for us though, due to the app-update problems mentioned above.

The Flower Power's reliability problems and relatively high price mean it's only worth using if you have a plant that costs hundreds of pounds and needs sporadic care over a long period of time. Newly planted trees need attention for up to three years, for example. But with its current flaws, the Flower Power isn't good value overall, which is a shame because it could have been a boon for greenfingered novices.

“We found our fuchsia in a state of extreme droopiness”

requirements for each plant as this would help novice gardeners when selecting what to buy. We chose a fuchsia and planted it in a pot on a sun-trap patio.

Unfortunately, we found that the iOS app (on an iPhone 4s) often failed to update info automatically. We often had to open the app and manually force an update, which isn't convenient for busy or absent-minded gardeners. In our case, our fuchsia went without much-needed water for 48 hours due to the app's failure to notify us and we found it in a state of extreme droopiness.

## SPECIFICATIONS

Requires iOS or Android device with Bluetooth LE • 1 x AAA battery • 170g • 150x200x20mm (WxHxD) [www.snipca.com/14134](http://www.snipca.com/14134)

**VERDICT:** This monitor is overkill for anything but very pricey plant purchases and needs refinement

★★★★☆

## ALTERNATIVE:

Garden Mentor £3 An Android and iOS app packed full of gardening information



## COMING SOON



### NOVEMBER/DECEMBER 2014

HP's Stream laptops have similar specifications to Chromebooks, but run Windows 8.1 instead. The 11in version will arrive in November and cost £179 while the 13in version will hit the shelves in December priced £199.



### DECEMBER 2014

HP has announced the Stream 7 – a 7in Windows 8.1 tablet that will cost just \$99 (£62) in the US. UK pricing and availability haven't been confirmed, but we'd expect a release date in time for Christmas.



### JANUARY 2015

Google's Project Ara is an initiative aiming to develop an upgradeable smartphone based on a design of easily interchangeable blocks. The first Ara phones and blocks are likely to be beta versions, much like the current version of Google Glass.



### JANUARY 2015

Amazon has just announced the Fire TV Stick, a smaller USB stick-sized version of its Fire TV video-streaming set-top box. It costs just \$39 in the US, but lacks the voice controls of its bigger cousin. UK pricing hasn't been confirmed.



## NEXT ISSUE

ON SALE  
26 Nov



Amazon Kindle Fire HD6 Amazon's 6in £79 tablet



HP Slatebook 14 HP's 14in Android laptop

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### Scan V1 Value System

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The V1 is a very capable entry-level system perfect from basic home/office tasks. It's based around the dual-core Intel® Pentium® G3240 processor, 4GB of RAM plus a 500GB hard disk.



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The V15 ups the ante by including a quad-core Intel® Core™ i5 4460 processor, so it makes light work of office and multimedia applications.



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Thanks to its dual-core Intel® Pentium® G3240 processor and NVIDIA GTX 750 Ti SSC graphics card the G20i is our most affordable gaming PC. It even includes surround sound!



### Scan G30i Value System

- Intel® Core™ i5 4460 processor
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- 1TB SATA 6Gb/sec hard drive
- Microsoft Windows 8.1

**£679** Inc VAT



The combination of quad-core Intel® Core™ i5 4460 processor and NVIDIA GeForce GTX 760 graphics card ensures that the G30i can play any game you throw at it.



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- 1TB SATA 6Gb/sec hard drive
- Microsoft Windows 8.1
- 3 Year Premium Warranty

**£599** inc VAT



The 3XS Performance GT is an affordably-priced gaming rig that includes a dual-core Intel Pentium G3258, which we overclock up to 4.4GHz for improved performance. Also included is a 2GB NVIDIA GeForce GTX 760 graphics card, 8GB of 2133MHz Corsair DDR3, a Z97 motherboard and 1TB hard disk.



### Scan 3XS Gamer 20i

- Intel® Core™ i7 4790 processor
- 8GB Corsair DDR3 2133MHz memory
- 4GB NVIDIA GeForce GTX 970 SC ACX
- 1TB Seagate HDD
- Microsoft Windows 8.1
- 3 Year Premium Warranty

**£1019** inc VAT



The 3XS Gamer 20i is a super-fast gaming PC thanks to its combination of quad-core Intel Core i7 4790 CPU running at 3.6GHz with added Hyper-Threading plus a 4GB NVIDIA GeForce GTX 970 graphics card. These components are installed in an Asus Z97-K motherboard along with a 1TB hard disk.



### 3XS Graphite LG156

- Intel® Core™ i7 4710MQ processor
- 8GB Corsair DDR3 1600MHz memory
- 2GB NVIDIA GeForce GTX 860M
- 15.6in 1,920 x 1,080 screen
- 500GB WD 7200rpm hard drive
- Microsoft Windows 8.1

**£869** inc VAT



The LG156 is 15.6" mid-range gaming laptop that includes a NVIDIA GeForce GTX 860M graphics card. The LG156 has won multiple awards in the press for its performance and value for money. The LG156 is ready for next-day delivery and has a 2 Year Warranty.



### 3XS Graphite LG1711

- Intel® Core™ i7 4710MQ processor
- 8GB Corsair DDR3 1600MHz memory
- 6GB NVIDIA GeForce GTX 870M
- 17.3in 1,920 x 1,080 screen
- 500GB WD 7200rpm hard drive
- Microsoft Windows 8.1

**£1065** inc VAT



The LG1711 is a 17.3" high-end gaming laptop that includes a choice of powerful NVIDIA GeForce GTX 870M or 880M graphics card, ensuring silky smooth frame rates in all your games. The LG1711 is ready for next-day delivery and has a 2 Year Warranty.

### 3XS Custom Series

Our 3XS Custom Series is a range of computers designed to offer the best performance for a variety of applications, with a particular focus on games. We build Custom Series PCs to order, so we can configure and tailor make an individual PC just the way you want it. We can also overclock the processor, so you get a faster PC without a substantial increase in price. All 3XS Custom Series PCs are covered by a three year warranty as standard with the first year on-site.



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Warranty

**3XS SYSTEMS**

# Buy It

Our pick of products that have won the Buy It award

## LAPTOP

**Apple MacBook Air 13in 128GB**  
**£849** from [www.snipca.com/10020](http://www.snipca.com/10020)  
**Tested:** Issue 402



Apple's latest MacBook Air isn't cheap, but it's the best lightweight laptop available. It has excellent battery life, a comfortable keyboard, a sensibly sized screen, a sturdy and classy build and great bundled software.

### ALTERNATIVE: Asus Chromebook C200

A cheap Chrome OS ultra-portable laptop with a bright screen, lengthy battery life and great keyboard. £200 from [www.snipca.com/13460](http://www.snipca.com/13460)

## DESKTOP PC

**Palicomp AMD Kaveri Evolution**  
**£500** from [www.snipca.com/11804](http://www.snipca.com/11804)  
**Tested:** Issue 422



A budget PC with a fast overclocked processor. It also has good upgrade potential and comes with a surprisingly good 24in monitor, as well as a quality USB keyboard and mouse.

### ALTERNATIVE: Braebo Hemera A

A cheap, complete PC system that's powerful enough for basic tasks. £350 from [www.snipca.com/12606](http://www.snipca.com/12606)

## TABLET

**Asus Nexus 7**  
**£150** from [www.snipca.com/14161](http://www.snipca.com/14161)  
**Tested:** Issue 407



An excellent budget 7in Android tablet with a high-resolution screen and good battery life. It's not quite as cheap as the original Nexus 7 and Android still needs more high-quality tablet apps, but it's still a fantastic bargain.

### ALTERNATIVE: Apple iPad Air A

A lightweight, 10in tablet with an excellent screen and peerless selection of apps. £319 from [www.snipca.com/10545](http://www.snipca.com/10545)

## PHONE

**Motorola Moto G 4G**  
**£160** without contract from [www.snipca.com/14162](http://www.snipca.com/14162)  
**Tested:** Issue 432



Motorola's budget Android smartphone is an absolute steal. It's very responsive, well made, fast and has a good screen. Plus, it's now been updated with 4G and a microSD card slot.

**ALTERNATIVE: Apple iPhone 5s** An excellent smartphone with a great camera and performance. £459 without a contract from [www.snipca.com/10171](http://www.snipca.com/10171)

## DIGITAL CAMERA

**Panasonic Lumix DMC-GF6**  
**£300** from [www.snipca.com/12607](http://www.snipca.com/12607)  
**Tested:** Issue 405



This compact interchangeable lens camera is small and reasonably priced, yet it has well-designed controls, a wide range of available lenses and shoots excellent quality photos. The GF6 really is unbeatable value.

**ALTERNATIVE: Fujifilm XF1** If you don't need the flexibility of removable lenses, this slim compact is a great choice. £130 from [www.snipca.com/13701](http://www.snipca.com/13701)

## E-READER

**Kobo Aura H20**  
**£140** from [www.snipca.com/13859](http://www.snipca.com/13859)  
**Tested:** Issue 435



A waterproof e-reader with an easy-to-read, high-resolution touchscreen that's easy on the eyes and great for reading in the bath. There's no 3G version, but, unlike the Amazon Kindle, you can buy ebooks from independent retailers that use the ePub format.

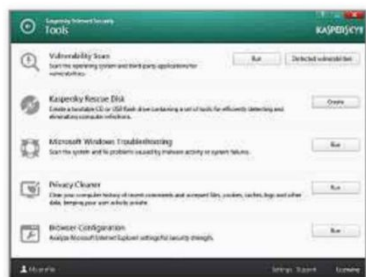
### ALTERNATIVE: Amazon Kindle

**Paperwhite (2013)** An e-reader with a brilliant screen, a slick interface and some useful features. £109 from [www.snipca.com/13543](http://www.snipca.com/13543)



## SECURITY SOFTWARE

**Kaspersky**  
Internet Security 2014  
£25 from [www.snipca.com/12054](http://www.snipca.com/12054)  
Tested: Issue 430



Kaspersky Internet Security 2014 has won our past three antivirus tests, making it the year's standout performer. Click the link above for a three-device licence for just £17.99 from our Software Store at [www.snipca.com/14194](http://www.snipca.com/14194).

**ALTERNATIVE: Norton Internet Security 2014** Great antivirus software, but sometimes blocks legitimate software. £37 from [www.snipca.com/11279](http://www.snipca.com/11279)

## SMART TV

**Samsung UE32H6200**  
£360 from [www.snipca.com/13101](http://www.snipca.com/13101)  
Tested: Issue 427



A stylish 32in smart TV with great picture quality and apps for all the terrestrial TV catch-up services. It has plenty of extras, too, such as recording-to-USB storage, 3D, playing media files stored on a NAS or USB stick, and plenty of HDMI ports.

**ALTERNATIVE: Sony KDL-42W705B** Excellent image quality, stylish looks and a 42in screen. £479 from [www.snipca.com/12931](http://www.snipca.com/12931)

## COMPETITION

Win a **Pure Jongo T6** wireless speaker

The Pure Jongo T6 is a superb wireless speaker, with Wi-Fi and Bluetooth. It performed exceptionally well in our recent test, demonstrating great overall sound quality, with clear vocals and impressive bass, and fully deserved our four-star Great Pick award (see Issue 433). You can connect it wirelessly to other Jongo speakers to create a multi-room sound system, letting you listen to the same music as you move around your home. To enter, email your address to [cacomp@dennis.co.uk](mailto:cacomp@dennis.co.uk) by midnight 25 November.



The Pure Jongo T6 is available now priced £249.99. For more information visit [www.pure.com](http://www.pure.com) and follow Pure on Twitter @PURE\_Insider.

## SECURITY CAMERA

**Y-cam HomeMonitor HD**  
£147 from [www.snipca.com/11646](http://www.snipca.com/11646)  
Tested: Issue 420



A home-security camera that's well priced and easy to set up. Plus, it has great picture quality, useful apps and there's no need to subscribe to any extra services. It's a worthy successor to the original HomeMonitor, our previous favourite security camera.

**ALTERNATIVE: D-Link Wireless-N Day & Night Camera** A good-value security camera with excellent night vision. £90 from [www.snipca.com/12741](http://www.snipca.com/12741)

## ROUTER

**Trendnet TEW-812DRU**  
£100 from [www.snipca.com/14166](http://www.snipca.com/14166)  
Tested: Issue 427



An incredibly fast 802.11ac router that's also one of the cheapest we've seen. It's superb and it's the router to buy if you're ready to make the jump to 802.11ac.

**ALTERNATIVE: Linksys WRT1900AC** More expensive, but even faster and with loads of features too. £200 from [www.snipca.com/12928](http://www.snipca.com/12928)

## MULTIFUNCTION PRINTER

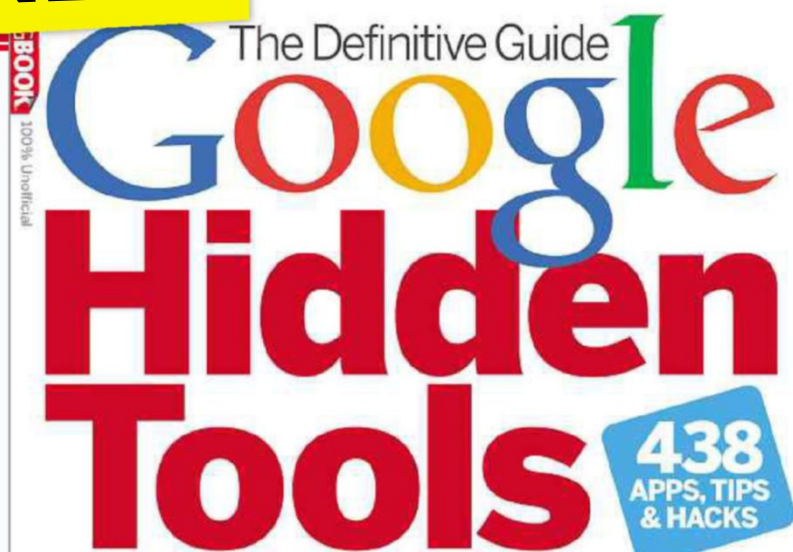
**Canon Pixma MG4250**  
£60 from [www.snipca.com/12457](http://www.snipca.com/12457)  
Tested: Issue 382



This budget multifunction printer (MFP) isn't the fastest available, but it's cheap to buy and inexpensive to run. Just as importantly, both prints and scans look great. Unless you need faster print speeds or separate ink tanks for each colour, this MFP is the one to buy.

**ALTERNATIVE: Canon Pixma MX535** An MFP aimed at small offices with duplex, ADF and fax, but also good photo print quality. £70 from [www.snipca.com/12909](http://www.snipca.com/12909)

# Computeractive Bookstore

**NEW!****THE DEFINITIVE  
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Secret tricks you'll never stop using!

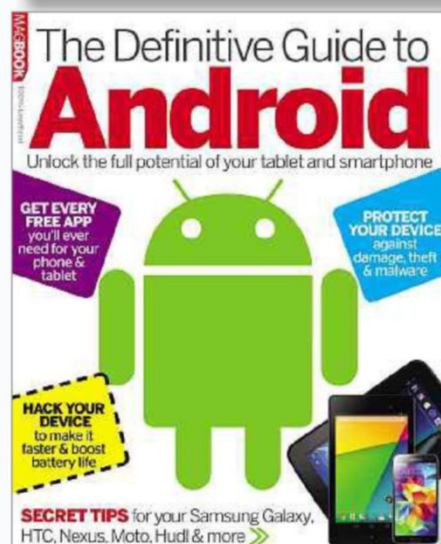


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Inside the 164-page *The Definitive Guide to Google Hidden Tools*, we lift the lid on Google's most popular tools to reveal more than 430 ways to make them even more efficient, useful and tailored to your needs. These include clever new add-ons for Chrome, amazing free apps for Android and stunning sights in Google Maps, as well as secret tips for Gmail, Drive, YouTube and many more. The great thing about Google is that there are always new tricks to learn and, once you've learned them, you'll use them every day.

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# Workshops & Tips

PULL OUT  
& KEEP  
Issue 436

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

**35** Block zero-day malware for free  
**38** Delay start-up items to boot faster

**40** Send phone texts from your PC for free  
**42** Watch US TV blocked in the UK

## PLUS

**43** Readers' Tips  
**44** Phone & Tablet Tips  
**46** Make Windows Better

**47** Make Office Better  
**48** Secret Tips For... Google Now

## Block zero-day malware for free

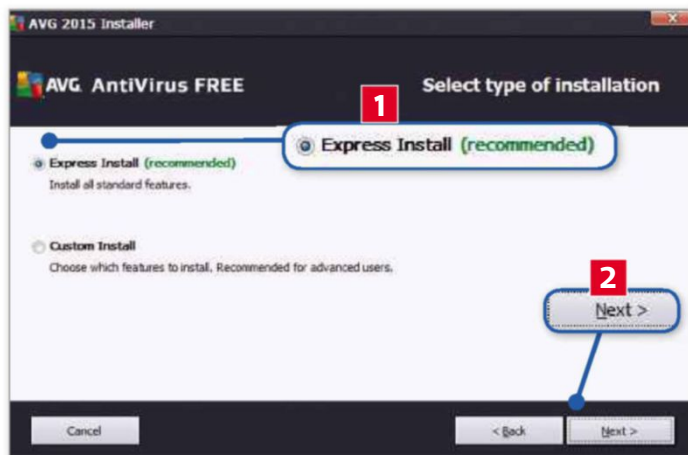
**What you need:** AVG Antivirus Free 2015; Windows XP, Vista, 7, 8 or 8.1  
**Time required:** 40 minutes

For the first time the free version of AVG Antivirus scans and blocks **zero-day malware**, which makes it an even more powerful tool to protect your PC. We'll show you how to tweak the program's default scan settings so it finds and removes

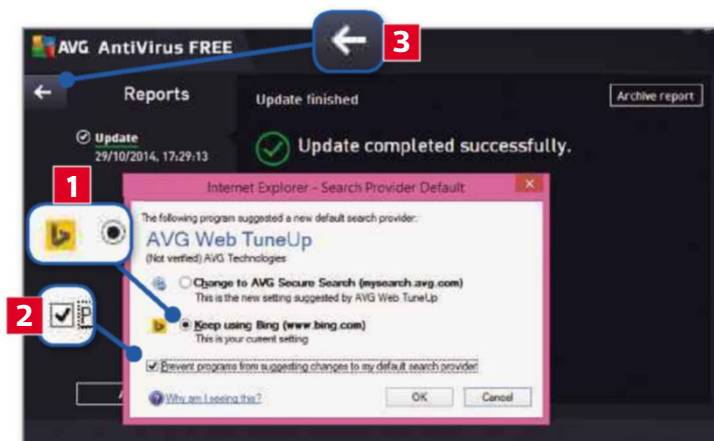
every harmful file on your system. You can set AVG's settings to minimise the impact on your PC's performance while you run a system scan. It also lets you schedule automatic scans and protect your emails and browser settings.



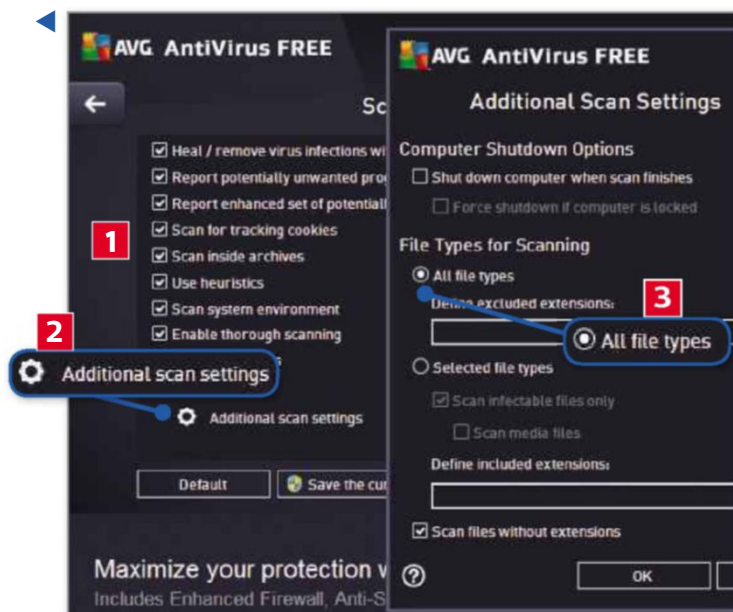
**STEP 1** To download AVG Antivirus Free 2015, go to [www.snipca.com/14230](http://www.snipca.com/14230) and click the green Download Now button. Click the setup file, Yes, Next and then Accept (to accept the T&Cs). Next, select 'Basic protection', then click Next. Click Next again on the following screen (to verify the automatically generated licence number), then select Express Install **1** and click Next **2**. On the final screen, tick the box at the top (optional) to send anonymous feedback to AVG, and type your email address in the field below (optional) to receive email updates. Click Finish to open AVG.



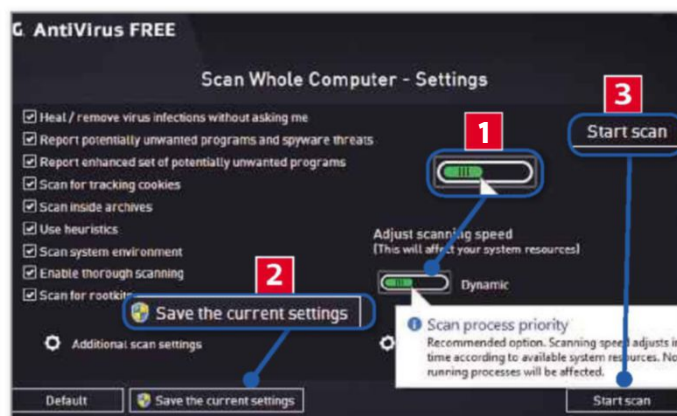
**STEP 2** As soon as it's installed, AVG automatically updates its **virus definitions**, which for the first time will update to identify zero-day malware. Click Updating to see your update status (including how long it'll take to finish). Click OK on the pop-up prompting you to install AVG Web TuneUp (which stops adware changing your default browser). AVG will try to change your default search engine, so make sure you keep your current search engine **1**, tick the box below **2** to stop other programs changing it, and click OK. Click Back **3** to return to the main screen when your update is complete.



# Workshops



**STEP 3** Before scanning your PC for the first time, it's a good idea to optimise AVG's default scan settings. Click the cog icon beside 'Scan now', then click the cog icon beside Scan Whole Computer. Next, tick all the boxes **1**, click 'Additional scan settings' **2**, select 'All file types' **3** and then click OK. If you want the scan to include any password-protected archives, documents or files, click 'Set additional scan reports', tick those boxes and then click OK.

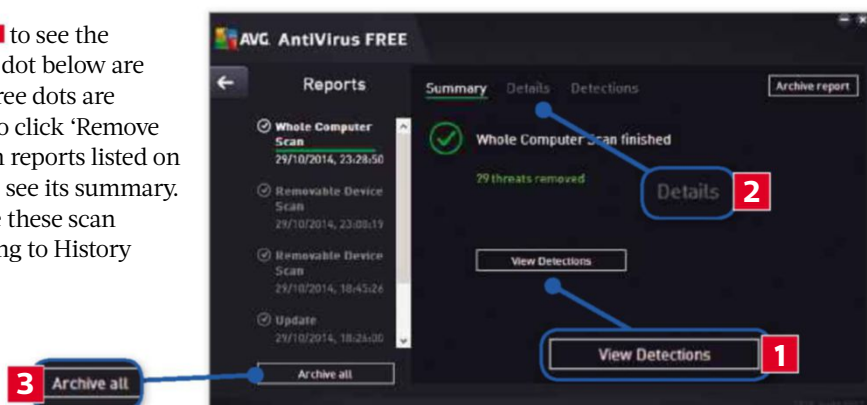


**STEP 4** By default, your scans run in Dynamic mode **1** (the speed of the scan varies depending on what you're doing on your PC). Move the slider to the right to carry out a Basic scan, which is slower but less demanding on your PC. Move the slider further right for Fast, which is the ideal setting when your PC is otherwise idle. Choose the mode you want and then click 'Save the current settings' **2**, followed by 'Start scan' **3**.

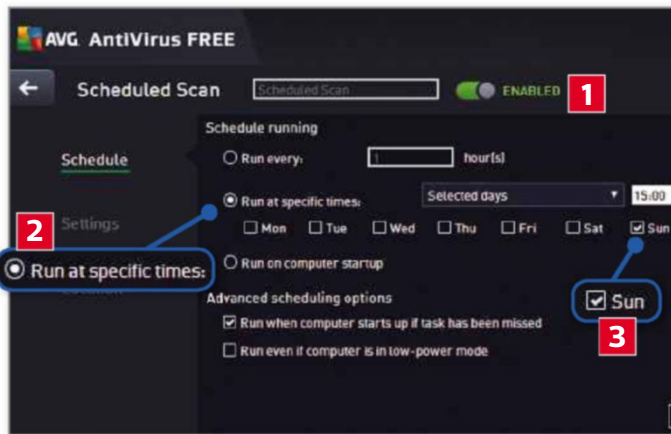


**STEP 5** You can pause or stop a scan at any time by clicking those options **1**. If you want to shut down your PC automatically after the scan, click 'Additional scan settings' **2** and tick the first box **3**. If you want to force your PC to shut down should it become locked (for example, if you've set your PC to auto-lock after a certain period of inactivity), tick the second box as well and then click OK.

**STEP 6** After the scan, click View Detections **1** to see the detected threats. Items listed with one dot below are the least harmful, while those with three dots are extremely harmful. To remove them all in one go click 'Remove all' at the bottom. You'll see your individual scan reports listed on the left. Click any scan, then the Details tab **2** to see its summary. Click 'Archive all' **3** if you want to clear and save these scan reports (they can be accessed at any time by going to History in the Options menu).







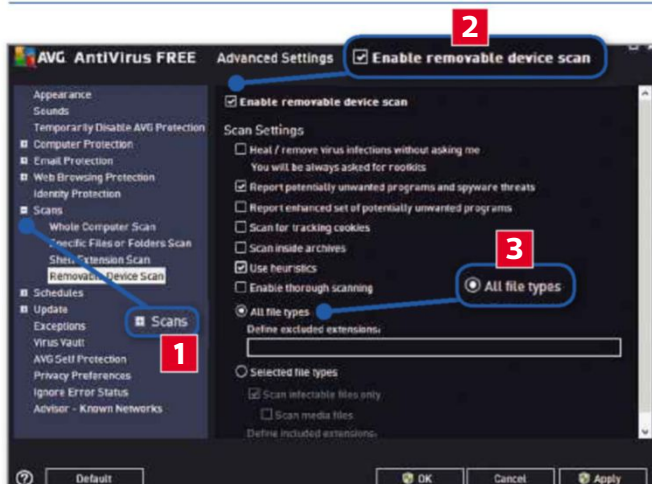
**STEP 7** To schedule a scan, return to the main screen, click the cog icon beside 'Scan now' and then click 'Manage scheduled scans'. Next, select Scheduled Scan at the top and click 'Edit scan schedule' at the bottom. Click the slider at the top **1** to enable a scheduled scan. We recommend scanning your PC once a week, so select 'Run at specific times' **2**, click the dropdown menu beside it and select 'Selected days'. Add a scan time by clicking the arrows in the time field, tick the day you want **3** and then click Save.



**STEP 8** AVG also lets you restrict your scan to specific files or folders. From the main screen, click the cog icon beside 'Scan now', then the cog icon beside 'Scan Specific Files or Folders'. Tick all the boxes and tweak your 'Additional scan settings', 'Set additional scan reports' options and the scanning speed slider (see Steps 3 and 4). Click 'Save the current settings', then Next. In the folder menus showing your PC's locations **1**, tick the drives and folders you want to scan **2**, and then click 'Start scan' **3**.



**STEP 9** AVG also includes an email scanner, which scans all your incoming and outgoing emails. To optimise its settings, return to the main screen, click the Email option (fourth tile) and then click the small cog icon at the bottom-right of Email Scanner. Now tick the following boxes: 'Check outgoing email' **1**, 'Report enhanced set of potential unwanted programs' **2** and 'Enable thorough scanning' **3**. This will ensure you get a 'Virus' notification on receipt of any potentially unsafe email.



**STEP 10** AVG doesn't automatically scan devices you insert into your PC (such as USB drives or external hard drives). To enable this, click Scans **1** and then click Removable Device Scan in the menu that opens. Tick 'Enable removable device scan' **2** and select 'All file types' **3**. Click Apply and then OK at the bottom to apply your changes (from the last two steps).

## Delay start-up items to boot faster

**What you need:** Startup Delayer; Windows XP, Vista, 7, 8 or 8.1

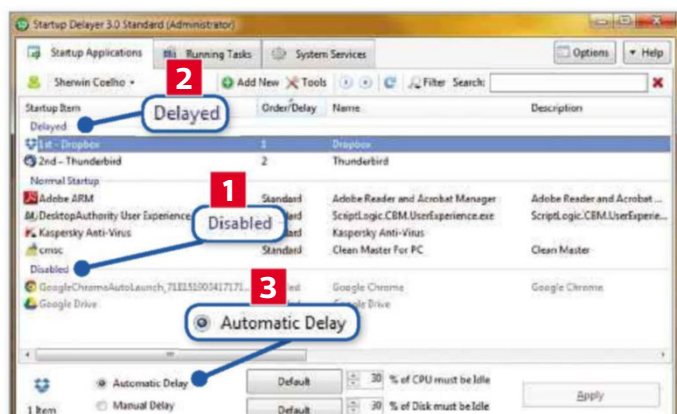
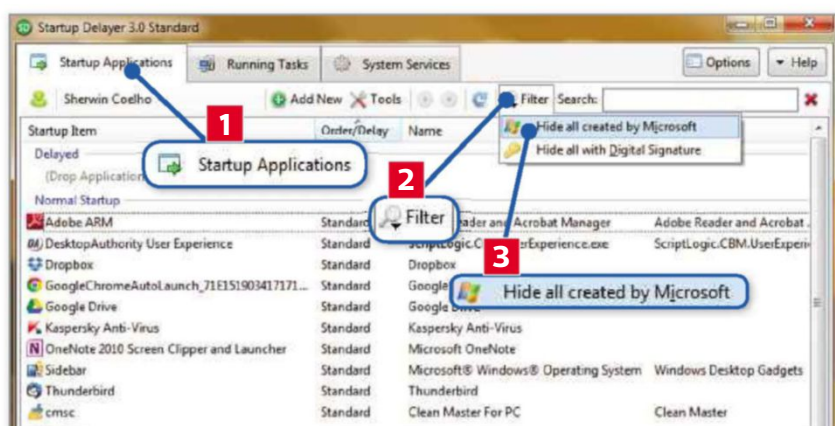
**Time required:** 20 minutes

Some programs set themselves up as start-up items when you install them, thus increasing the time it takes your PC to boot. Free software Startup Delayer shows you all these programs and gives you the option to disable them from

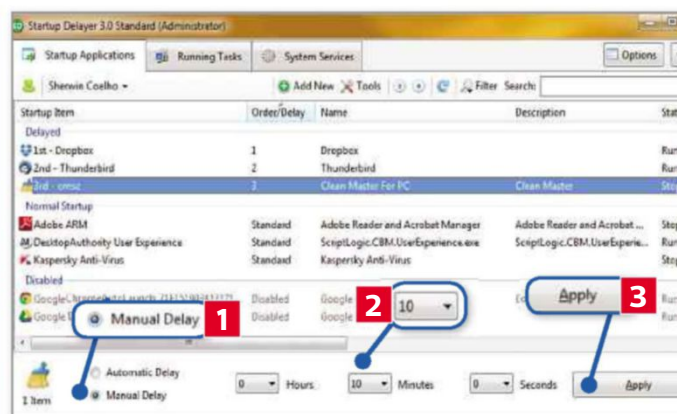
starting up with your PC or delay their startup until after your PC boots. It also lets you organise the delays according to which programs you'll need to use first and stop background tasks that are slowing your PC.



**STEP 1** Go to [www.snipca.com/14186](http://www.snipca.com/14186) and click the Download Standard button. Click the setup file and follow the steps to install it. Select English from the language options and click OK. Click the Startup Applications tab **1** to see all the programs that start up with your PC in the Normal Startup section. Startup Delayer lets you hide all Microsoft programs from the list because most of them are necessary for your system to boot properly. Click the Filter dropdown menu **2** and then click 'Hide all created by Microsoft' **3**.

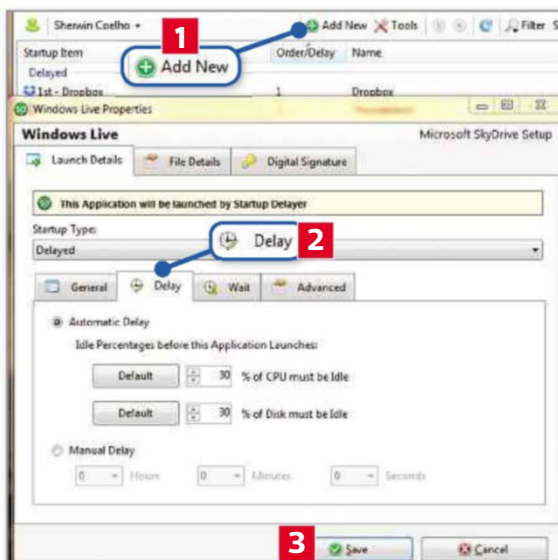


**STEP 2** To disable a program from startup, click it in the Normal Startup section and drag it to the Disabled section below **1**. If you want a program to start automatically, you should delay its start time until after your PC has booted. To do this, click a program and drag it to the Delayed section **2**. There are two ways to delay a startup program – Automatic and Manual. Click a program in the Delayed section and then select Automatic Delay **3** in the panel below. By default, delayed programs start up when your CPU and Disk are 30 per cent idle, which means only after your PC has completely booted.

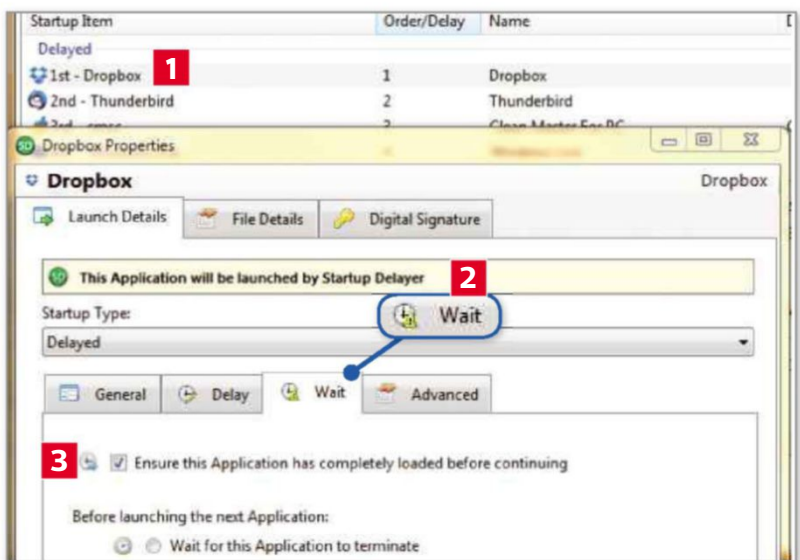


**STEP 3** Manual Delay lets you set a specific time delay, after which a program will start up in the background following your PC's boot. To set a manual delay, click the program and then select Manual Delay **1** in the panel below. Next, set the length of the delay by clicking the Hours, Minutes **2** and Seconds dropdown menus. If you don't need that program immediately, delay its startup by 10 or 15 minutes. Click Apply **3** when you're finished.



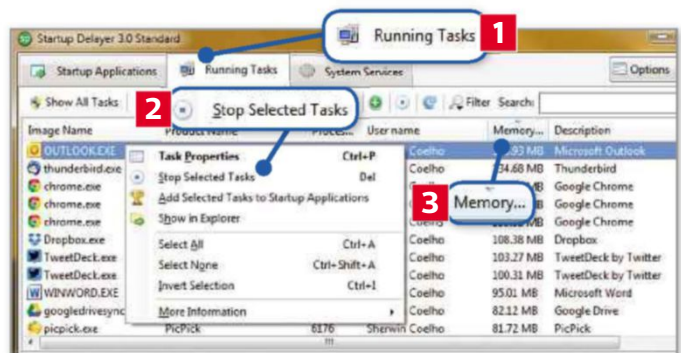


**STEP 4** Startup Delayer also lets you add a program that doesn't appear in its Normal Startup section. To do this, click the Add New button **1**, navigate to the Program Files folder (on your C: drive), click the program's folder, its setup file (ending in a '.exe' extension) and then click Open. To delay that program's startup, click the Delay tab **2**, set an automatic or manual delay (see Steps 2 and 3) and then click Save **3**.



**STEP 5** The programs in the Delayed section start up in order (top first). To re-order programs, simply drag them up or down the list. Some programs (for example, cloud-storage and email programs) will start syncing background items (cloud-based files and emails) as soon as they start up. This, in turn, will slow down the next program's startup. To ensure a program loads fully before the next one starts, double-click it **1**, click the Wait tab **2**, tick the first box **3** and then click Save.

**STEP 6** Like Windows Task Manager, Startup Delayer's Running Tasks tab **1** shows you all the programs running on your PC. As we mentioned earlier, it's best to hide Microsoft programs (see Step 1). If a non-Microsoft program is not working, you can force-close it from here by right-clicking the program, then clicking Stop Selected Tasks **2**. If your PC is running slowly, click the Memory column header **3** to see which programs are using the most memory. You can then stop these tasks or uninstall the programs via the Control Panel.



**STEP 7** You can set a time (in seconds) between when your PC boots and when your delayed programs start. Click the Options button **1**, the Launch Process tab and the dropdown menu **2**. You can set anything between 1 to 59 seconds, but 5 seconds should be fine. If you want to see a message (in your Notification Panel) when all your delayed programs have started, click the Startup Applications tab **3** and tick the 'Display a Message when all Applications have finished launching' box. Click Save to apply these changes. ●

## Send phone texts from your PC for free

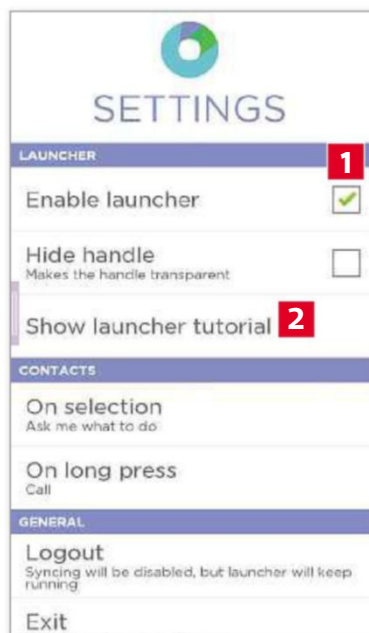
**What you need:** Spots - Magical Launcher; Android phone; Chrome  
**Time required:** 25 minutes

**S**pots is a new, free Android app launcher and Chrome browser extension that syncs your Google account on your phone and PC. The launcher lets you quickly access your favourite apps and contacts

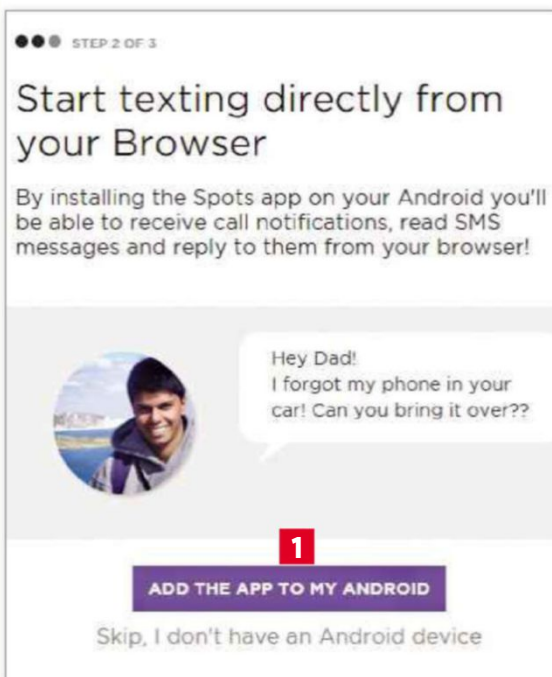
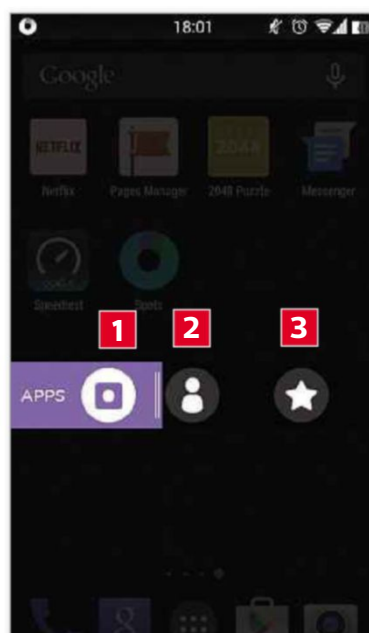
with a swipe, while the extension lets you access your phone messages and see missed calls on your Chrome homepage on your PC. You can then read all your messages and send texts for free.



**STEP 1** Install the Spots - Magical Launcher app ([www.snipca.com/14210](http://www.snipca.com/14210)) on your Android phone. Open the app and keep tapping Next to swipe through the introductory screens until you reach the 'Sign in' screen. Tap 'sign in with Google' and tap OK. This gives Google access to your basic info, which is necessary and perfectly safe. The app will automatically use the Gmail account you use to sign into Google Play. Tap Settings and ensure 'Enable launcher' is ticked **1**. Tap 'Show launcher tutorial' **2** to see what you can do using Spots.



**STEP 2** Spots has a small purple slider at the left edge of your screen. Drag and release it to access your apps **1**, contacts **2** and favourite apps **3** (those you use the most). Within each of these sections, you can tap the search bar at the top and type a specific search term. Drag the slider to the extreme right to make a general search of your entire phone.

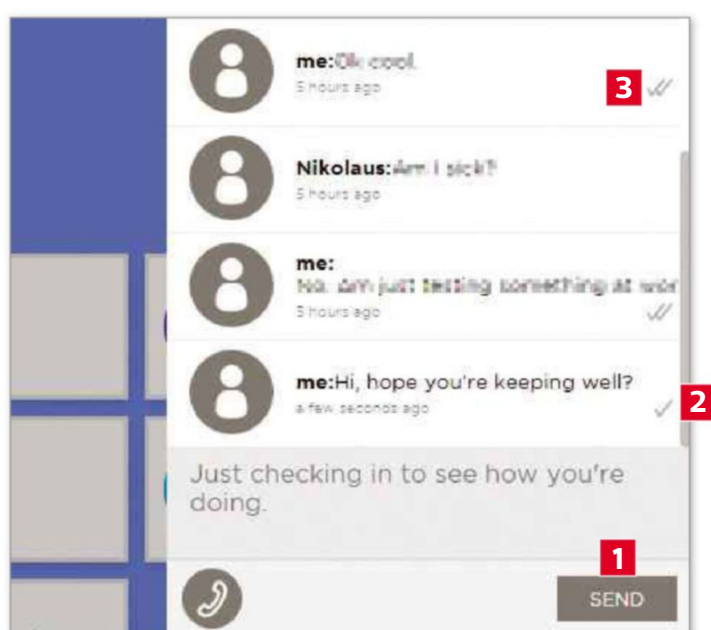


**STEP 3** We'll now add the Spots extension to our PC's Chrome browser. Go to [www.snipca.com/14211](http://www.snipca.com/14211) on your PC, click the blue Free button, then Add. Click Start, then click the red G (Google) icon and log in using the Gmail account you use for Google Play on your phone. Next, click Add The App To My Android **1** and then click I've Launched The App, followed by Start Spotting.



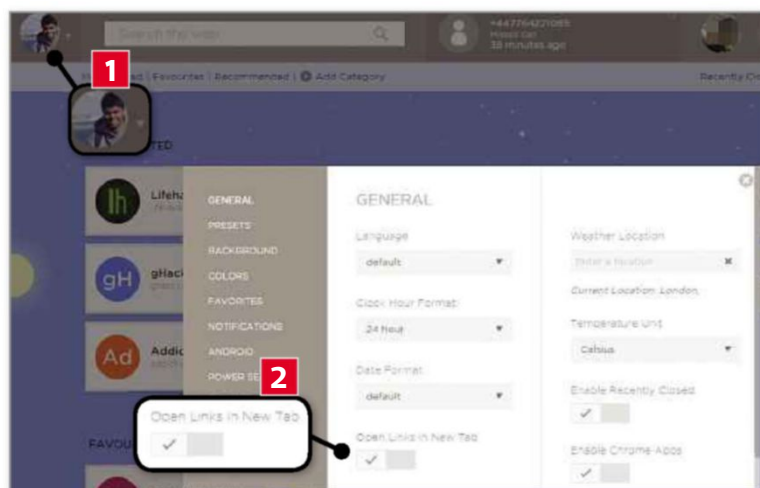
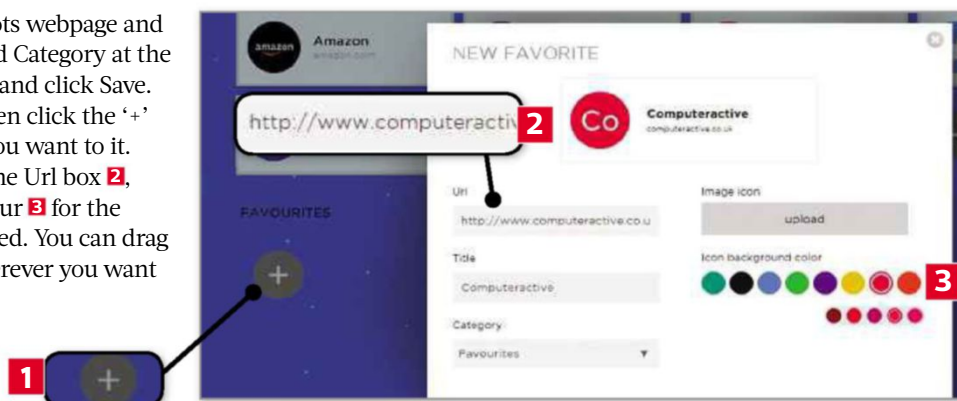


**STEP 4** You'll now see your Spots webpage with categories that include your Most Visited websites **1** and Recommended websites (based on the most used apps on your phone). Click a website's tile to open it. At the top right, you'll see thumbnails of the last three people you called **2**. Click the Messages icon **3** to see a list of all the texts you've sent and received. Scroll to the bottom and click Load More to see your older messages. Click any message to see it in a conversation view.



**STEP 5** To send a text for free, click the Messages icon, the contact you want to text, type your message at the bottom and then click Send **1**. A tick on the message **2** indicates it's been delivered and two ticks **3** indicate it's been read. We found messages took about 10-15 minutes to be delivered, but future updates to Spots should speed things up. You'll also see any missed calls you receive on your phone as a notification tile at the bottom of your Spots webpage.

**STEP 6** It's easy to customise your Spots webpage and add more categories. Click Add Category at the top left, type a category name and click Save. Scroll down to the new category and then click the '+' symbol **1** to start adding the websites you want to it. Copy and paste your website's URL in the Url box **2**, give it a title and add a background colour **3** for the site's tile. Click Save when you've finished. You can drag the category header to reposition it wherever you want on the page.



**STEP 7** By default, any website tile you click will open in your Spots webpage tab. If you'd rather open it in a different tab, click your account dropdown menu at the top left **1**, then click Settings. Next, click the Open Links In New Tab slider **2** to turn it on. To quickly access Spots from any website, move your cursor to the right edge of your screen and click the small grey slider that appears. This displays any missed-call notifications and a list of your favourite websites. To remove Spots and revert to your old homepage, open any website, right-click the Spots icon in your URL bar, click 'Remove from Chrome' and then Remove again. ●

## Watch US TV blocked in the UK

**What you need:** TunnelBear; Windows Vista, 7, 8 or 8.1; Android and iOS

**Time required:** 10 minutes

**T**unnelBear is the best free VPN to access online content that's available in other countries, but blocked in yours (for example, to watch US TV blocked in the UK). Because VPNs keep all your browsing data anonymous, hackers will never

be able to see what you do online. You can only use 500MB of data a month for free, but we'll show you how to get an additional 1GB every month. You can also use it to watch US TV on Android ([www.snipca.com/14197](http://www.snipca.com/14197)) and iOS ([www.snipca.com/14198](http://www.snipca.com/14198)).



**STEP 1** Go to [www.tunnelbear.com](http://www.tunnelbear.com) on your PC and click the 'Download a TunnelBear' button to download the setup file. Click it and then click Run, I Agree and Install. To create a TunnelBear account, select 'I don't have a TunnelBear account', click Next, fill in your personal details on the login screen **1** and then click Next **2** again. Now click Skip (to skip following TunnelBear on social media), followed by Next. Open the email address you provided and then click 'Verify my Account'. Close the web page which opens and then click Done in the TunnelBear window. If you get a message asking you to install any missing network adapters needed for TunnelBear to work, click OK and then Install.



**STEP 2** You'll see a small TunnelBear window on your Desktop with an On and Off knob and a dropdown menu that lets you connect virtually to 11 countries including the US, Canada, France, Germany and even United Kingdom (which is useful for watching British television when you're abroad). Click the dropdown menu, select United States **1** and then click the knob **2** to turn it on. After a few minutes, the status will say 'Connected' with a notification that you're now browsing in private from the United States **3**. This means you can watch shows from US TV services that aren't available in the UK.



**STEP 3** You only get 500MB of free data every month, unless you upgrade to one of TunnelBear's paid plans (which you can do by clicking Upgrade **1**). However, you can get an additional 1GB every month by sending a tweet from within TunnelBear. Log into your account, click the cog icon **2** and then click 'Tweet for 1GB' **3**. Next, click Tweet Now, enter your Twitter ID (if you didn't do so on the login screen), click 'Confirm and Tweet' and then click Tweet on your Twitter page. Within an hour, you should get an email confirming your additional data.

### NEXT ISSUE

- Close PC tasks running without your permission
- Use 40 antivirus programs for free
- Create multiple Desktops in Windows 10
- Stay anonymous on your iPad

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ON SALE  
26 Nov



## TIP OF THE FORTNIGHT

### Find out when your free cloud-storage deals expire

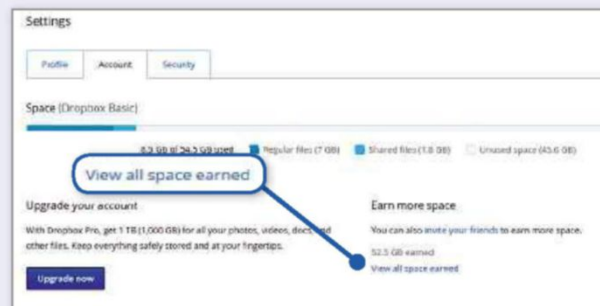
A little while back, I bought a new Samsung device which came with 48GB of Dropbox storage for free. I made use of this free storage to archive my photos and other important files.

However, last week I received an email telling me the free space was part of a promotional offer valid for a limited time period only and prompting me to upgrade to the Pro (paid-for) version. Not wanting to fork out unnecessarily, I deleted the files in my Dropbox account that I no longer wanted and moved the others to free cloud-storage alternatives like Google Drive and OneDrive.

Cloud-storage services run these 'promotional offers' in conjunction with products all the time, but people may not realise they are limited-period deals nor when they expire.

To find out when your Dropbox deals run out, go to [www.dropbox.com](http://www.dropbox.com) and log in. Click your account dropdown at the top right and then click Settings. Click the Account tab and then click the 'View all space earned' link (see screenshot, right) to see any bonus space you've received, along with when it expires.

In Google Drive, go to [www.drive.google.com](http://www.drive.google.com) and click Manage at the bottom left. Move your cursor over the pie chart to see any deals that have an expiry date. In OneDrive, go to [www.onedrive.live.com](http://www.onedrive.live.com), click the cog icon at



the top right (beside your account) and then click Options.

It's disappointing that Dropbox only offers 2GB of free storage, but with Google Drive and OneDrive both now offering 15GB for free, you should have more than enough space for your cloud needs.

David Hendricks



The winner of every Tip of the Fortnight wins this exclusive Computeractive mug!

## BROWSERS

### Uninstall the annoying Ask Toolbar from Chrome

I download a lot of programs to my PC and, annoyingly, one of these installed Ask Toolbar on my default browser (Chrome). I tried uninstalling the toolbar using the Control Panel, but received a message telling me it couldn't be uninstalled because Chrome was still running in the background (even when it was closed). After a little online research, I eventually discovered how to completely remove this irritating toolbar.

It turns out that, even after you close it, the Chrome browser still runs as a background process. To close the process, press Ctrl+Alt+Delete, then click Start Task Manager. Next, click the Processes

tab, then the 'chrome.exe' process that's using the most memory (indicated in the Memory column – see screenshot). Finally, click End Process at the bottom and 'End process' on the Windows Task Manager pop-up.

Now you can uninstall the Ask Toolbar via your Control Panel for good. I must admit I felt quite geeky after doing this.

Paul Carter

## SOCIAL MEDIA

### Make Facebook photos appear bigger

I use Facebook a lot, mainly to see what my large family (scattered around the world) are up to. I'm 77 and my eyesight isn't what it was, so following a tip from my son-in-law, I added a new extension to my browser that lets you zoom into images on Facebook by hovering over them with your cursor.

To do this in Chrome, go to [www.snipca.com/14131](http://www.snipca.com/14131), click the blue Free button and then click Add. If you use Firefox, go to [www.snipca.com/14132](http://www.snipca.com/14132), click the green '+ Add to Firefox' button and then click Install Now. I had to restart my browser before the extension worked properly.

Marge Everley

## LINUX

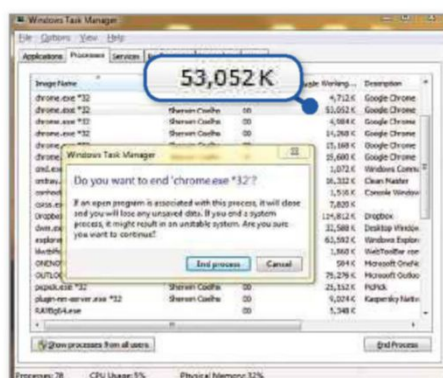
### Add a Windows-like taskbar to Ubuntu

I was very reluctant to replace my beloved Windows XP PC when Microsoft ended support for it in April. Thankfully, I followed your Workshop in Issue 420 about dual-booting to Linux (Ubuntu 12.04). This turned out to be a great option but I missed the Windows Taskbar, until I discovered a great Linux alternative – a free tool called Tint2.

To install it, press Ctrl+Alt+T to launch Terminal, type `sudo apt-get install tint2` and press Enter. Type your password and press Enter again. When prompted to continue, press y, followed by Enter. After the installation has finished, type `exit` and press Enter to exit your Terminal.

To add the taskbar, click the Search box (the Dash Home icon) at the top left, type `startup applications` and then click the option that appears. In the Add Startup Program box that appears, type a name in the Name field and `tint2` in the Command field (leave the Comment field empty). Next, click Add. You'll need to log out of Ubuntu and back in to see your new taskbar. Any programs you open will automatically appear there. To close a program, right-click it on the taskbar.

Mark Prior



# Phone and Tablet Tips

Brilliant things to do on your device

## ANDROID

### Back up everything on your device



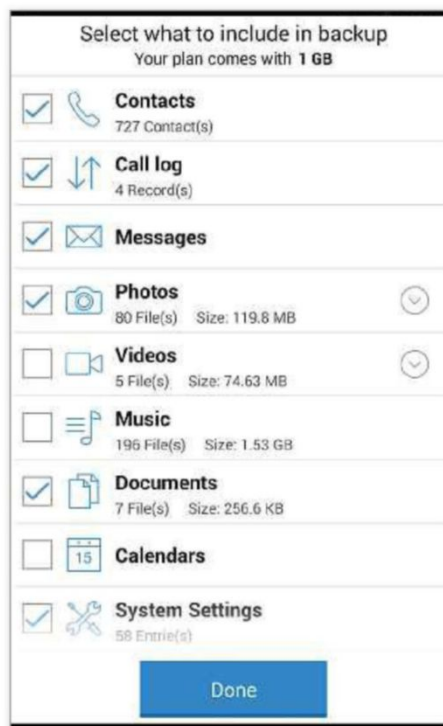
G Cloud Backup is one of the best free apps for backing up everything (including contact details, call logs, emails, settings, photos and music) on your device. The app automatically backs up your data (including any changes you make) every day and comes with 1GB of free storage. You can then export your backup to

another device or use it to restore your data should you need to carry out a factory reset on your device.

Install and open the app ([www.snipca.com/14102](http://www.snipca.com/14102)) and then tap Sign Up. Type your email address and a password, then tap Sign Up again, followed by Proceed (to verify your details). Select 'Add this device to My Account', then tap Next. You'll see everything (by sections) that you can back up. The more space-hungry sections (Photos, Music, etc) display the total amount of storage they require (see screenshot, below left).

Tick the boxes next to those you want to back up and then tap Done. On the next screen, select 'Don't use Find My Android' (other apps such as Theftie are better alternatives), then tap Done and OK.

To restore all this data on a new or factory-reset device, install and open the app, tap Login, enter your login details and then tap Login again. Next, select 'Restore from an older device backup' and then tap Next. Finally, tap your device name, select 'Restore everything' and tap Next.



eat into your device's storage space.

Usefully, you can now set an upper limit (in MBs) on the amount of offline data you save.

Open Pocket, tap the three dots at the top right and then Settings. Scroll down and tap 'Set offline storage limits'. By default, the slider is set to Unlimited. Drag the slider to the left to set your limit (50MB should be sufficient) and tap Save at the top. You'll still be able to read older items you've saved, but only when you're online.

## ANDROID & iOS

### Passcode-protect OneDrive



If you save important files to OneDrive, it's worth making use of

a new feature that lets you lock the app with a four-digit code. Open the Android app ([www.snipca.com/14104](http://www.snipca.com/14104)), tap the three dots at the bottom right, Settings, then tap 'Require code to use app'. On the iOS app ([www.snipca.com/14105](http://www.snipca.com/14105)), tap Settings at the bottom right, then Passcode. Tap the slider to turn it on, then enter and re-enter a code.

If you have an iOS device running iOS 8 and use Touch ID to unlock your phone, you can use this to lock your OneDrive app. Touch ID is Apple's security method where you lightly tap the home button and a fingerprint scan confirms your identity. Tap the Use Touch ID slider to enable it for OneDrive (see screenshot, above right).

## ANDROID

### Limit the storage space offline articles take up



If you tend to save web content to read offline with the free app Pocket ([www.snipca.com/14103](http://www.snipca.com/14103)), unless you regularly delete your saved content, you'll find it can quickly begin to

## Best New Apps

What you should install this fortnight

### Flickr

Free

Android: [www.snipca.com/14107](http://www.snipca.com/14107)

iOS: [www.snipca.com/14108](http://www.snipca.com/14108)

Flickr has finally released an app for iPads. Photos look much better on the larger screen, and there are lots of options for editing and organising photos. Set photos taken on your device to auto-upload to your Flickr account to take advantage of its huge 1TB (1,000 GB) free storage space.



### Photo Sphere Camera

Free

Android: [www.snipca.com/14109](http://www.snipca.com/14109)

iOS: [www.snipca.com/14110](http://www.snipca.com/14110)

The camera on Nexus devices has this feature built in, but Google has now released a standalone iOS app that lets you take amazing 360-degree panoramic images by moving your camera in any direction and using onscreen graphics to help you make a seamless image.

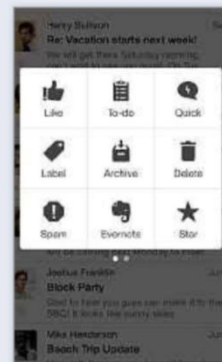


### Boxer Mail

£2.99

iOS: [www.snipca.com/14111](http://www.snipca.com/14111)

Apart from a new design, Boxer now lets you batch-select all emails from a particular sender and mark them (as read, junk, and so on). You can also set a specific archive action (such as delete, move to a folder, etc) and swipe across emails to read the next one.







HDR). You'll now see two options – 3s and 10s, which set three- and 10-second timer delays (see screenshot, below left). Tap the delay you want, then the shutter button. You'll see a countdown timer on your screen before your photo is taken.

To take a panoramic shot, swipe up from the yellow Photo category at the bottom right until you reach Pano. Next, tap the shutter button to begin capturing your photo. Move your iPad slowly to the right (following the arrow sign). Tap Stop (the shutter button) to save your panoramic image, and tap the small thumbnail at the bottom right to see it.

iOS

## Switch to Google Maps from Apple Maps

iOS doesn't let you set Google Maps ([www.snipca.com/14106](http://www.snipca.com/14106)) as your device's default maps app. But if you've updated to iOS 8, there's an easy way to switch from within Apple Maps. Open Maps (Apple Maps), tap Directions at the top left and enter your start and end points (or postcodes). You'll see your route in Apple Maps. To see this in Google Maps instead, tap Apps at the top and then tap Route beside Google Maps.

Some third-party apps display addresses as links that you can tap to open in Apple Maps. If you want to get directions to those places in Google Maps, tap Directions at the top right, followed by Google Maps.

iOS

## Use your iPad's camera timer and take panoramic photos

iOS 8 added many new features to the iPad's default camera app. You can now set a timer to make those dreaded selfies a little easier and a panorama mode for those wide-angle sweeping images.

To set the timer (which works with both the front and back cameras), tap the small Timer icon at the top right (above



## Games With Kids

What to play together on your phone and tablet

**AGES 0-5**

### Elmo's Monster Maker

£1.99 [www.snipca.com/14112](http://www.snipca.com/14112) (iOS)

This *Sesame Street*-based game will thoroughly entertain your toddler. Keep tapping the monster's face to change its eyes, nose and hat. Tap the camera icon to take a photo of your monster and the music icon to make it dance. You can also watch clips from the programme.



**AGES 6-10**

### Recall: The Memory Jogger

Free [www.snipca.com/14113](http://www.snipca.com/14113) (iOS)

Simply choose from different categories (for example, Science, History, Sport) to read a selection of trivia on that topic. Then answer as many questions as you can about the topic within a set time. Apart from developing memory skills, it's also a great way to improve general knowledge.



**AGES 11-16**

### Flick Shoot 2

Free [www.snipca.com/14114](http://www.snipca.com/14114) (Android)

This football shooting game will test whether you and your kids can bend it like Beckham. Swipe to make your player kick the ball at the right speed and angle to score from a free kick. You can customise the shirt, boots and ball and use Practice mode to hone your skills.



### WINDOWS 7, 8, 8.1

#### Launch any Taskbar program using keyboard shortcuts



There's a clever keyboard shortcut that launches any item on

your Taskbar. This applies to closed programs pinned to the Taskbar and open Desktop programs that are minimised to your Taskbar.

Just press the Windows key+the number key (at the top of your keyboard) that corresponds to that item's position on your Taskbar, reading left to right.

### WINDOWS 7, 8, 8.1

#### See all programs you installed between specific dates

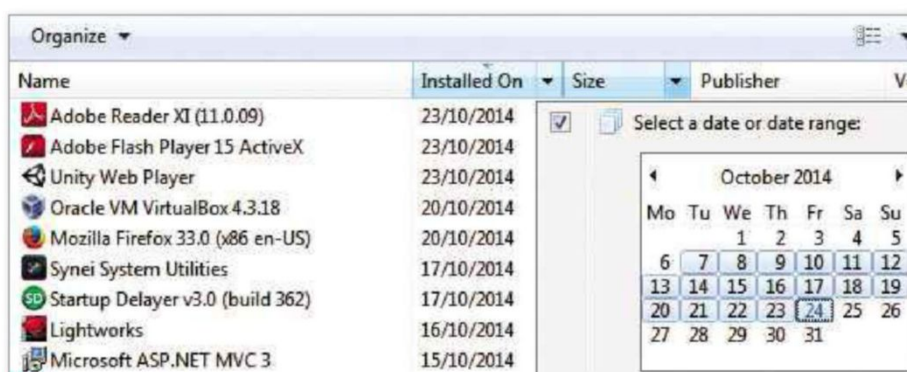


Windows lets you identify all programs installed (or updated)

between specific dates, so you can check if a newly installed program or update is responsible for your PC not working.

Click the Start button, Control Panel and then click 'Uninstall a program'. Now move your cursor to the Installed On column header and click the dropdown menu that appears beside it. Click the first date you want, press Shift on your keyboard and then click the last date (see screenshot below). You'll now see all the programs installed and updated between those dates. Untick the box beside 'Select a date or date range' to revert to seeing all your installed programs.

You can also sort your installed programs by size. In the Size column header, click the dropdown menu to see options for Small, Medium, Large, Huge and Gigantic programs. Tick Gigantic, for example, to see all programs over 128 MB. Uninstall any programs you don't want, to free up space on your PC, but avoid uninstalling anything you're unsure of (especially programs from Microsoft and Intel).



### WINDOWS 7

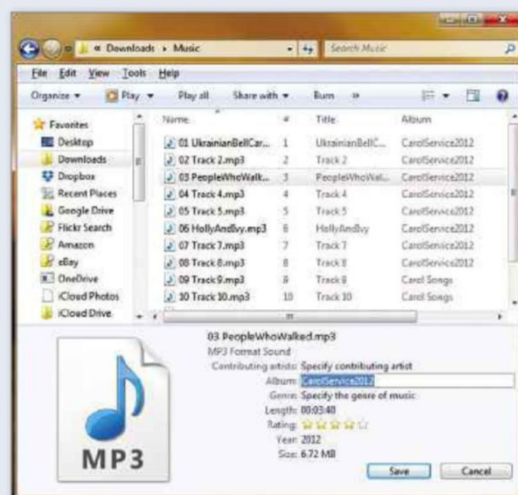
#### Add columns to better categorise your files



In Windows 7, whenever you open a folder containing documents or media files in the Details view, it will display columns with specific information (depending on the type of files). So, for example, if you open a folder containing music files, you'll see column headers for Title, 'Contributing artists', Album, Track Number and so on. You can easily edit these values for each individual file and even add more information columns.

We'll use a folder containing audio files for this example. First, switch to the Details view by clicking the View dropdown menu at the top right and then clicking Details. Next, click any of the column headers at the top to organise your files. You can also click and drag these headers (to the left or right) to re-order the columns.

Click an individual music track, then drag the edge of the pane at the bottom



of your screen upwards to see all the information about it. Click any of the boxes beside Album, Genre, Year and so on, and type any changes you want to make. Click the stars (beside Rating) to rate the track.

Many of the fields that appear in the pane below, such as Genre and Rating, don't appear as columns. To add them, right-click any column header and click those options.

### WINDOWS 8, 8.1

#### Customise the Sport app to follow your favourite sports



The Sport app on the Modern tile interface displays news about your favourite sports.

It's easy to customise the default lists of sports and add teams you want to keep track of.

Open the Sport app (represented by a trophy icon). Scroll to the extreme right to see which sports you currently receive

news for (see screenshot below). To remove a sport, right-click its tile and then click the Close icon (at its top-right corner). To add a sport, click the '+' symbol (in the My Sports section) and the '+' symbol beside any sport on the list.

To read news about your favourite sports teams, click the '+' symbol beneath My Teams, type your team's name and click the correct option from the suggestions, repeating the process to add as many teams as you want.





### OUTLOOK

## Change your default fonts for emails

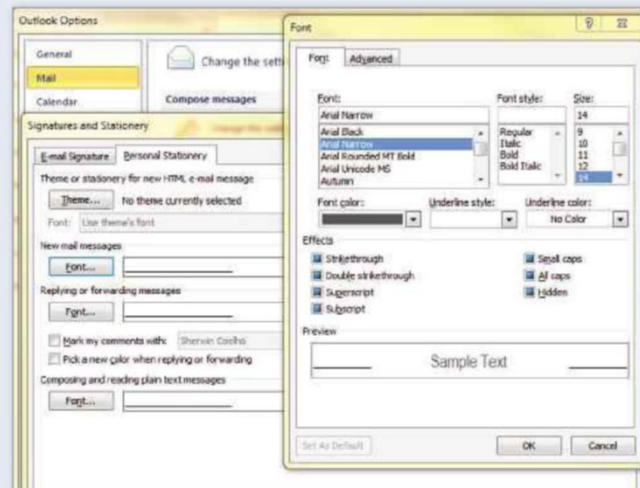


Every time you compose a new email you can of course change the formatting of the your text by making tweaks in the Basic Text section of the Message tab.

However, if you've found a font format that you're happy with and would like to apply to all your emails, there's a simple way to customise your default font, its size, style and colour, while also adding themes to every email you send, forward and reply to.

Click the File tab at the top left, then click Options. In the Outlook Options window, click Mail on the left, the 'Stationery and Fonts' button, then the Personal Stationery tab at the top.

Click the Theme button to see a list of themes you can add to your messages. Those options with '(Stationery)' beside them are plain themes, while others have sample text



clicking those dropdown menus (see screenshot). Click the 'Font color' dropdown menu if you want to change that. You'll see a preview of your new font in the Preview field below. When you're happy with it, click OK.

To add a customised font for emails you reply to and forward,

you can write over. Select a theme you want, then click OK.

Next, click the Font button below 'New mail messages' and choose from the list of fonts, font styles and sizes by

click the Font button below 'Replying or forwarding messages' and customise your font in the way you did above. Click OK, then OK again to apply these changes.

### ONENOTE

## Find all your tagged items



Among OneNote's most useful features is the ability to tag items according to their status. The most common type of tags are To Do (add a checkbox beside items), Important (add a star) and Question (add a question mark).

Another little-known OneNote feature lets you find all items you've tagged anywhere across OneNote in one go.

To do this in OneNote 2010 and 2013, click Find Tags (in the Tags section of the

Home tab). In OneNote 2007, click Insert, move your cursor to Tags and then click Show All Tagged Notes.

You'll see a pane on the right with all your tagged items in the notebook you're in, categorised according to the tags you've assigned to them. If you want to group your tags by section, click the 'Group tags by' dropdown menu and then click Section (see screenshot left). There are also options to group them by title, date and note text (which lists them alphabetically).

To see the tags from all your notebooks in this panel, click the Search dropdown menu at the bottom and then click 'All notebooks'.

colours and patterns.

Next, click the chart, the Design tab at the top and then click Save As Template (second option from the left). Name the chart and ensure the 'Save as type' dropdown menu is set to 'Chart Template Files (\*.crtx)'. If it's not, select that and click Save.

To use this template for other charts you create, highlight the data you want to include, click the Insert tab, then the Other Charts dropdown menu (in the Charts section) and click All Chart Types. Now click the Templates option at the top left, select your saved template and click OK.

### WORD

## Add bookmarks to access text



You might be working on a huge Word document and need to refer to specific passages repeatedly. Fortunately, Word lets you create bookmarks so you can quickly navigate to specific text or sections.

Highlight a word (or section), click the Insert tab and then click Bookmark (in the Links section). Name your bookmark and click Add.

To make use of a bookmark, click Bookmark, click one of the bookmarks you've added, then click the Go To button.

### EXCEL

## Create a chart template



Excel 2007 and 2010 lets you save any chart you've created as a template you can use again in the future. First, create a chart template you want to reuse. To do this, highlight data on the spreadsheet you've made, click the Insert tab, then click any of the chart dropdown menus (in the Charts section) and select a type of chart to represent your data. To customise your chart, right-click it and then click the dropdown menus at the top to change its default





# Google Now

See Google Now cards on your PC, control your device using your voice, and follow your favourite sports teams

### Access Google Now cards on your PC

Google Now is pre-installed on all Android devices. On iOS, install the app from [www.snipca.com/14089](http://www.snipca.com/14089). Once it's installed the app icon is a 'g' on a blue background. Open the app to see sections (called 'cards') that show you information you might find interesting based on places you've been to and things you've searched for on Google (both on your device and PC).

Google recently added the option to access Google Now cards from your PC. Open Chrome on your Desktop and go to [www.google.co.uk](http://www.google.co.uk). You'll need to be logged in using the same Gmail account you use on your phone or tablet. If you aren't, do that by clicking the blue 'Sign in' button at the top-right.

Now click the 'Chrome - Notifications' (bell icon) in your PC's notification area (the bottom right of your Taskbar). If you don't see the icon there, click the small triangle to access your hidden icons.

### See more information about topics you search for

Google Now uses your past searches to

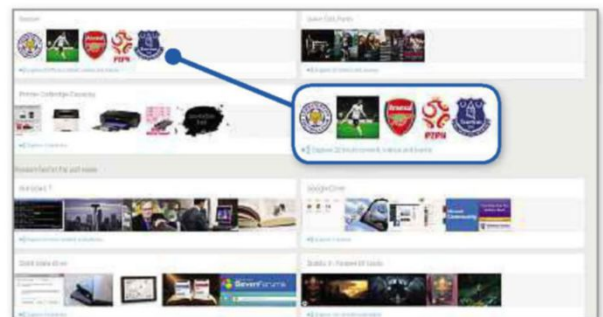
automatically create 'research topics', which you can then click to find out more about the ones you're interested in. For example, if you've been looking up information to replace your PC's hard drive, it will make 'Hard drive' a research topic and point to guides on how to do this.

To view these topics, open Chrome on your PC or on your devices and go to [www.google.com/now/topics](http://www.google.com/now/topics). Click any of your research topics to see more information.

### Add cards to display information you want

By default the Google Now app displays cards based on the weather and things you've previously searched for. But you can add more cards to keep track of the sports teams you follow or TV shows you watch. Open the Android app, scroll to the bottom and then tap the magic wand icon. On iOS, scroll to the bottom, tap the three dots at the bottom-right and then tap Settings.

Here, you can add your home address



Google automatically organises your past searches into research categories

and choose your preferred mode of transport to get cards which will display your approximate commute time with traffic information.

Tap 'TV & video' and type your TV provider (such as Sky or Freeview) and Video-on-Demand information (such as Netflix or Amazon Instant Video). Likewise, tap Sports and type the sports teams you follow. Google Now's cards will display data based on the information you provided.

### Search your device using Google Now

You can also use Google Now to search your Android device for your apps, contacts and Chrome bookmarks as well as books and music you've purchased on Google Play. Scroll to the bottom of Google Now, tap the three dots at the bottom right, Settings, then 'Phone search' (or on your tablet tap 'tablet'). Tick the areas of your device that you'd like Google Now to search.

Now type your search term in the Google Now search bar. As you start typing (before you tap Go/Enter), you'll see your device's search results with a Search Phone (or tablet) option at the bottom, which you can tap to see more results. Tapping Go/Enter will run a web search for that term.

You'll find more Google tips in our new 164-page book *The Definitive Guide to Google Hidden Tools* ([www.snipca.com/14100](http://www.snipca.com/14100)).

## Create more voice commands for Google Now

The Android Google Now app lets you find out more information about a topic by tapping the microphone icon (in the search field) and speaking a search term. To try it out, tap the icon and say: 'What's the weather like today?'

'Commandr for Google Now' ([www.snipca.com/13948](http://www.snipca.com/13948)) is a free app that expands the number of voice commands you

can use in Google Now. To activate the app, open it, tap Open Settings, 'Commandr for Google Now', the slider at the top and then OK. Now tap back (three times) and finally tap Done.

Tap Built-In Commands to see a list of all the voice commands you can use in Google Now. Tap the pencil icon beside any command to change it.



Use Commandr to expand Google Now's voice commands

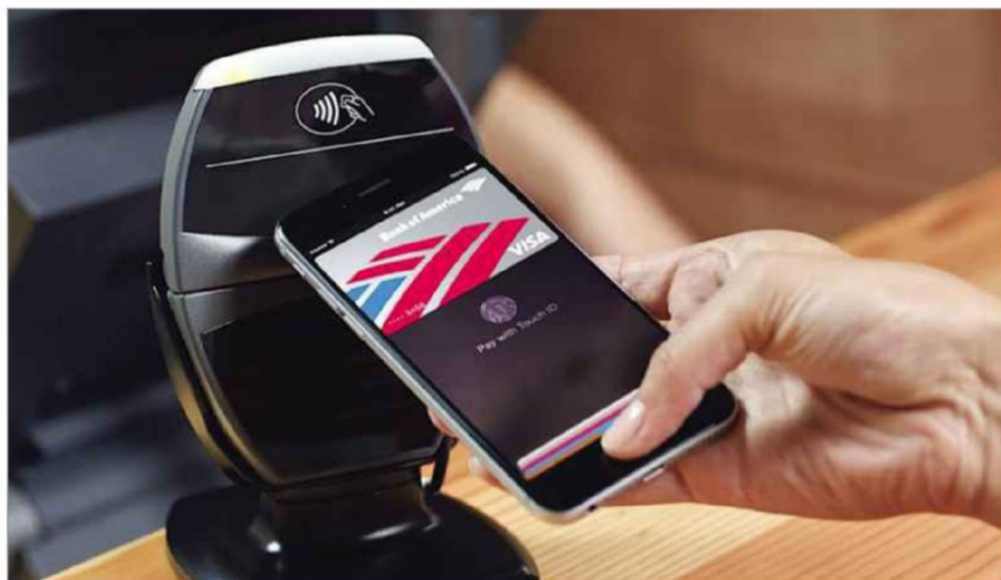


## Apple Pay

Apple has launched a new payment service that - it says - is "Your wallet. Without the wallet". What does that mean?

### What is it?

Apple's new payment service (<https://www.apple.com/apple-pay/>), which lets you buy items in shops by tapping your iPhone or iPad. It arrived on Apple devices on 20 October as part of the iOS 8.1 update, but is only available in the US at the moment, although Apple says it's "working hard" to bring it to the UK. Hopefully, that means it will arrive here in 2015, though you will need a new Apple device because it only works on the iPhone 6 (and 6 Plus), the iPad Air 2, iPad Mini 3 and the Apple Watch.



### How does it work?

It uses **Near Field Communication** (NFC) to make a payment from your credit or debit card, which you first need to add to the Passbook app through your device's settings. Once that's done, you just hold your device against a credit-card reader in a shop, then press your finger on Apple's Touch ID button, which scans your fingerprint to confirm your identity. This makes it very safe - a thief won't be able to use it. You can also use Apple Pay to buy apps, saving you the hassle of entering your details every time.

### So the main benefit is speed?

Yes - payments take a few seconds. Apple Pay is part of the 'contactless payment' revolution, which is killing off the PIN in the same way that credit and debit cards killed off the cheque. Many UK shops now accept contactless cards, while London buses no longer accept coins as payment.

### How safe is it really?

Extremely. Your bank details are encrypted in a chip called Secure Element and not in the device's software, which means no one can hack into your

phone or tablet to steal your bank details. Even if hackers dismantled your phone, the payment system would detect damage and shut itself down.

To process a payment, Apple Pay creates a random 16-digit Device Account Number, along with a code that's unique to that transaction. At no point is your card number seen by anyone, so it's far safer than, say, handing a card to a waiter at the end of a meal.

And just to be completely safe, if you lose your device you can lock Apple Pay remotely using the 'Find My iPhone' tool on another Apple device, or from your browser.

### Ah, but won't Apple know what I've bought?

No, it won't track your purchases. Nor are any

of the payment numbers saved on Apple's servers. But Apple will make lots of money - by taking a cut from each transaction - giving the company a slice of the huge amounts banks generate each year from credit-card transactions (over \$40 billion).



With EE's 'Cash on Tap' app you can also make contactless payments on Android phones

### Do Android devices also let you make contactless payments?

Yes, if they have NFC built in (and dozens do - here's a list: [www.nfcworld.com/nfc-phones-list](http://www.nfcworld.com/nfc-phones-list)), but you'll need to install EE's Cash on Tap ([www.snipca.com/14116](http://www.snipca.com/14116)) or Vodafone's SmartPass app ([www.snipca.com/14117](http://www.snipca.com/14117)) to use it in the UK. From next year you'll also be able to use the contactless app Zapp ([www.zapp.co.uk](http://www.zapp.co.uk)), which Sainsbury's and Asda have said they'll accept, letting you buy *Computeractive* with a tap of your phone!

# Clean Your PC DEEPER THAN EVER

Your hard drive is cluttered with files that make it slow, unstable and even unsafe. Jane Hoskyn reveals the best free tools for deep-cleaning every part of your PC

**P**ut that duster down – this is not a feature about cleaning crumbs off your keyboard (though that might not be a bad idea). The gunk that really affects your PC is invisible, and it's been growing since before you even bought your computer. Beneath that brand new exterior lay a landfill of manufacturer's software and pointless Windows processes that were

already slowing down your system and filling up your precious hard-drive space – and it's been getting worse ever since.

There's plenty of software around that promises to remove junk from your hard drive, and you may even have a couple of these PC-cleaning programs installed. The likes of CCleaner and Glary Utilities are well-established and widely trusted, for good reason – they're reliable tools that can find and remove hard-drive junk automatically at the click of a button.

But they haven't fixed the problem. There seems to be a never-ending procession of new PC-cleaning programs, such as the new Windows version of the popular Android app Clean Master, and we happily snap them up. This isn't because we have fun using them – it's because hard-drive clutter is a huge and ongoing problem for PC users, and we'll try anything to solve it.

## Are all cleaning programs the same?

PC-cleaners may look like a series of cynical imitations (Clean Master's blue-and-yellow broom logo is uncannily like CCleaner's blue-and-yellow broom logo, for example), but actually they're quite different programs with different strengths and weaknesses. The best cleaning tools are useful in different ways, so they complement each other rather than cancelling each other out.

The trick is knowing which program to use for which job – cleaning your Registry, one-click cleaning, weeding out duplicate files and so on. Over the next few pages we'll take a closer look at some familiar names and compare them with the latest newcomers to see which programs really are best at different PC-cleaning jobs, and show you how to get the best out of them.

### KEY POINTS

- Find out what's cluttering up and slowing down your PC
- Clear out Windows junk including logs, dumps and caches
- Remove junk software leaves behind
- Tidy up your Registry to make Windows faster and safer
- Delete duplicates and massive files



## QUICKLY CHECK AND CLEAN YOUR HARD DRIVE

### See at a glance what's cluttering your hard drive

Clean Master ([www.snipca.com/14145](http://www.snipca.com/14145)) is a welcome addition to the PC-cleaning fold. Far from being a CCleaner clone, it's a faster, simpler program that gives you a clear insight into the types of file that clutter your PC.

The program is easy to install and there's no adware to opt out of. Click Free Download, run the installer and untick 'Create a desktop shortcut' to avoid creating more clutter. When you run it, it automatically scans your PC for clutter and sorts this 'junk' into categories represented by icons, such as a Windows logo for Microsoft **cache**s and an Internet Explorer logo for IE junk.

Click an icon, then click Details to see a list of all the files in that category. You can't right-click files in the list for more information, and there are no toolbar menus like Tools or File. To find out more about a file, you'll have to hover over it and click view to open it in Windows Explorer.

The first time we ran Clean Master on our much-used (and abused) Windows 7 PC, the junk tally was a giddy 6.77GB, including 19,936 'junk files', 53 'junk registry files' and 1.5GB 'temp files'. Half an hour later, it had gone up to 6.8GB (and the Registry junk files down to 40), even though we'd done nothing other than go out for lunch. There's also an annoying pop-up that appears by default every time you switch on your PC, but you can easily disable this from the pop-up. The pop-up, by the way, said we had 5.9GB of junk, so Clean Master's scan is not an exact measure. But it's a quick and jargon-free insight into the state of your PC's digital innards.

### Track down junk without installing software

To find and remove hard-drive junk without adding to it, use the free, new portable tool W8 Sidebar ([www.snipca.com/14153](http://www.snipca.com/14153)). Portable programs run without needing to be installed, so they don't create program clutter such as Start menu folders and settings files on your PC.

W8 Sidebar – which works on Windows 7 as well as 8/8.1 – adds a PC-monitoring sidebar to your Desktop so you can check your hard-drive capacity and memory at any moment. The sidebar updates continually with real-time information about how much space is left on your local drive (C:) and any **partitions** or virtual drives (Y: and Z: in our screenshot, right, from a Windows 7 PC). It also reveals how hard your **CPU** and RAM are working, and even how many minutes and seconds have passed since you booted your PC.

To download W8 Sidebar, click the red 'Download W8 Sidebar here' link, extract the contents of the ZIP and

**See instantly how much space is left on your hard drive and partitions with W8 Sidebar**

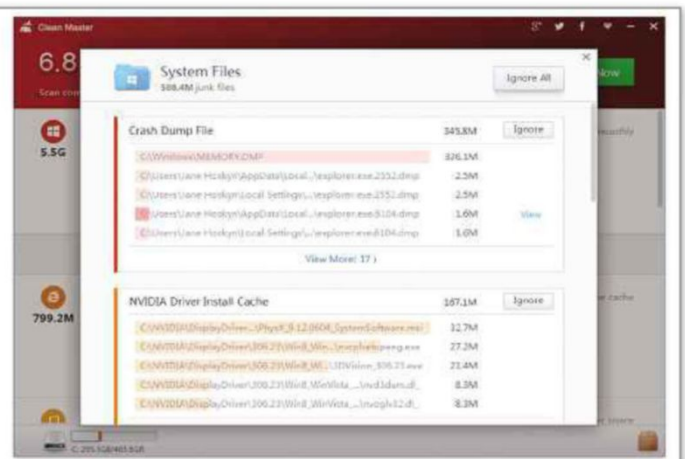
move the extracted EXE out of the containing folder (for example, to your Desktop), then double-click to run it. According to the website, the program 'will not run properly' if you don't move the extracted EXE file out of the folder.

Because it's portable, you can make as many copies of the EXE as you like – for example, copy it to a USB stick to run on any PC for a quick check on its hard drive.

When we ran W8 Sidebar from a USB on our new Windows 8.1 laptop (currently running the Windows 10 Technical Preview), it revealed the hard drive to be almost half-full, even though we'd barely added any files or software to the PC. The Technical Preview is big, but it's not *that* big. Just goes to show how much junk you get on a new PC.

### Clean a new PC with one click

Clean Master and W8 Sidebar both let you remove all your junk in one go (in Clean Master, click the green Clean Now button; in W8 Sidebar right-click the tiny yellow broom then select Run W8 Files Cleaner). CCleaner and Glary Utilities also have one-click cleaning ►

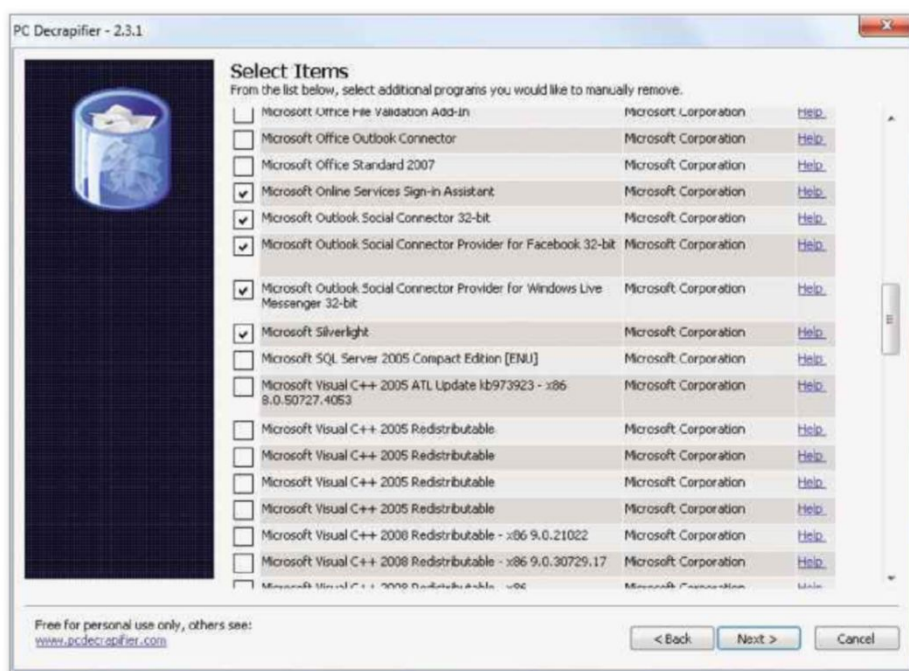


Click a category in Clean Master's main window (left), then click Details to see all the junk files and folders in that category (right)

options, but these programs are better used for more specific cleaning tasks, as we'll discuss over the next couple of pages.

In fact, whichever program you use, be very careful when using one-click cleaning buttons. They sound great (renew your filthy old hard drive with the press of a button!), but in practice they're risky. Automatic scanners and cleaners use **algorithms** to decide what counts as 'junk', and they don't all agree with each other. Sometimes they don't even agree with themselves, as shown by Clean Master's indecisiveness over our junk tally. If you blindly trust these tools, you may end up losing files that you – and your software – need.

However, one-click cleans are very useful indeed on new PCs, which tend to be full of pointless rubbish like animated Windows screensavers and games. New PCs also benefit from a software clean-out using the portable PC Decrapifier ([www.snipca.com/14158](http://www.snipca.com/14158)), which is designed to get rid of pre-installed programs and plug-ins that other uninstallers can't remove (see our Workshop in Issue 434).



The last stable release of PC Decrapifier cleans pre-installed programs and plug-ins from a new PC

The latest version of PC Decrapifier is a slightly unstable **beta**, so if you have trouble running it you should use the previous version instead. You can download it from a reliable mirror site

([www.snipca.com/14181](http://www.snipca.com/14181); click the blue Download Now button). There's a built-in **system restore point** tool so you can roll back your changes in case anything goes wrong.

## DEEP-CLEAN YOUR OPERATING SYSTEM

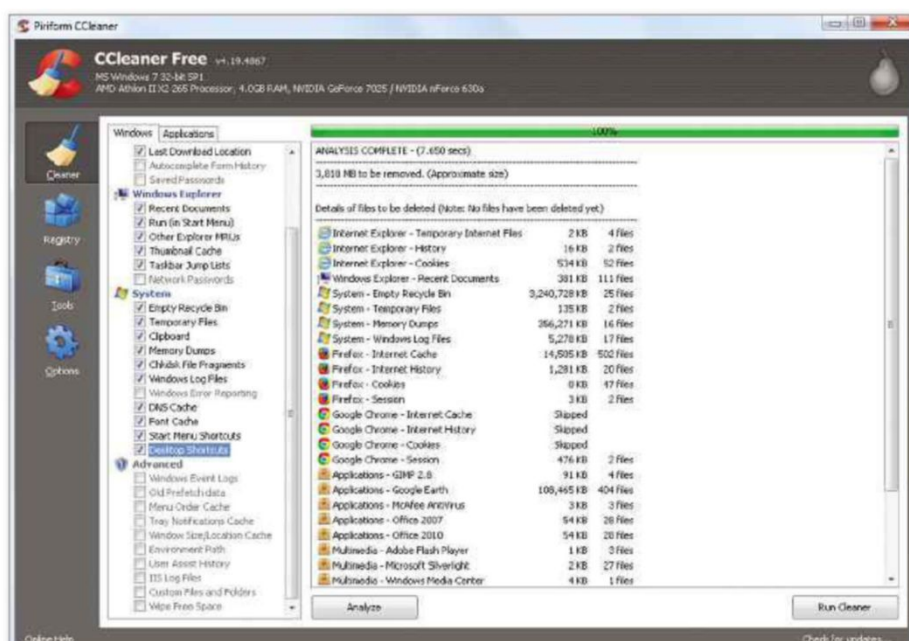
### Clear Windows logs, caches and other system junk

Most of the junk on your PC was put there by Windows. This is the stuff Clean Master refers to as 'System cache', and it includes Windows log files, error reports and temporary files.

You can remove Windows junk quickly but systematically using Clean Master. Click a 'System cache' icon – such as MS Product or System Patch – then click Details to check the contents. To remove all files in that category, click Clean Up. You can exclude certain files (or batches of files) from Clean Up by clicking Ignore.

If you already know what Windows junk you want to remove, use the free program CCleaner ([www.piriform.com/ccleaner](http://www.piriform.com/ccleaner)) instead. CCleaner can't match Clean Master for a quick clutter diagnosis, but its scan is more thorough and, unlike Clean Master, it's now available as a portable program (download it directly from [www.snipca.com/14148](http://www.snipca.com/14148)).

CCleaner doesn't scan automatically – you need to click Analyze and wait a few minutes while it scans your PC for junk. Don't be alarmed if it tells you to close your browser so that it can clean all



Tick and untick types of Windows junk in CCleaner to add or remove them from the clean

its files. It's not actually removing any files at this point, just collecting information. To save time, you can right-click any item under the Windows or Applications tab and click Analyze to scan it alone.

When the scan is done ('Analysis

Complete'), CCleaner ticks the items it thinks you should remove, such as Recycle Bin and Temporary Files. All ticked items are cleaned automatically when you click Run Cleaner. You don't have to stick with the defaults – you can tick any unticked items (such as Font



## THE CLEANERS THAT BRING THEIR OWN JUNK

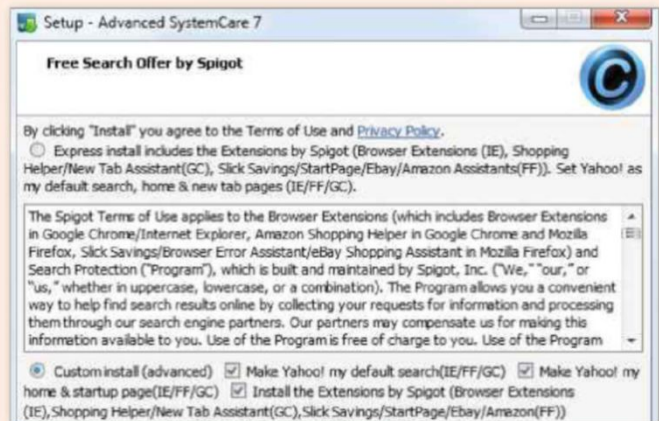
We often get our hopes up about a free program that claims to do exactly what we're looking for – but then it lets us down with an installer full of adware. This time, the offender is IObit Advanced SystemCare 7 Free ([www.snipca.com/14142](http://www.snipca.com/14142)), which includes a one-click cleaning tool and, ironically, an adware-remover.

Advanced SystemCare lost our trust early on. The Free Download button transferred us to the download mirror site Cnet, where we had to rely on our Adblock Plus extension (<https://adblockplus.org>) to remove the adverts that looked like Download buttons. Then, the setup wizard contained a host of **PUPs**, including Yahoo browser hijackers and several unwanted extensions with names like Slick Savings and

Shopping Helper. We had to click 'Custom install (advanced)' and untick every PUP in turn to avoid downloading them.

In the end, we decided to cancel setup. You don't have to put up with this nonsense – there are plenty of free alternatives, many of which don't even need installing. PUPs are impertinent in any setup wizard, but they're totally unacceptable in a program that claims to clean your system and improve your security.

We had similar setup problems with Auslogics Duplicate File Finder ([www.snipca.com/14179](http://www.snipca.com/14179)), but this time we pressed on with the installation, because there are fewer decent alternatives. Duplicate-finding seems to be one of those areas that attracts software cowboys like bees



You can opt out of all the junk in IObit's Advanced SystemCare installer – or cancel setup and find a safer alternative

to a dodgy honeypot. The web is full of "free" duplicate file finders that let you run a scan but won't let you delete any duplicates without paying a fee of up to £30. Auslogics Duplicate File Finder doesn't do this, so we've included it in

our recommended tools for finding and deleting duplicate files from your hard drive (see page 56). However, we advise caution and a steady hand when you run the installer. Click 'Custom install' and untick every extra product you're offered.

Cache, Windows Event Logs and Desktop Shortcuts) to include them in the clean, and untick any ticked defaults. You can also clean any item alone by right-clicking it and clicking Clean.

### Remove selected Windows junk with one click

CCleaner is a memory-hungry program and its cleaner is an intensive process, so you shouldn't (and wouldn't want to) run it on your PC every day. Use it every few weeks for a thorough clear-out of your Windows junk, then run the free portable program dMaintenance Home Edition ([www.snipca.com/14159](http://www.snipca.com/14159)) every few days to keep the junk under control.

To download it, scroll down the rather haphazard dMaintenance page and click the 'Download Portable: dMaintenanceHome.zip' link, just under

the big blue button (which is for the installed version). Extract the files from the ZIP and double-click the EXE to run the program.

dMaintenance is an automatic one-click cleaner, so don't let it do anything until you've told it what it can and can't remove. In the 'Run Maintenance?' box, click No, then OK to open the Config window and set your preferences. Clear Print Queue and 'Delete Temp files' are ticked by default, along with 'CleanMgr.exe' (Windows' built-in Disk Cleanup tool, which removes temporary files and empties the Recycle Bin). You can untick these to remove them from the clean, or tick other items – such as Delete Internet History – to add them. You can also tick Delete Cookies, but we think it's best to let your cookies survive your most

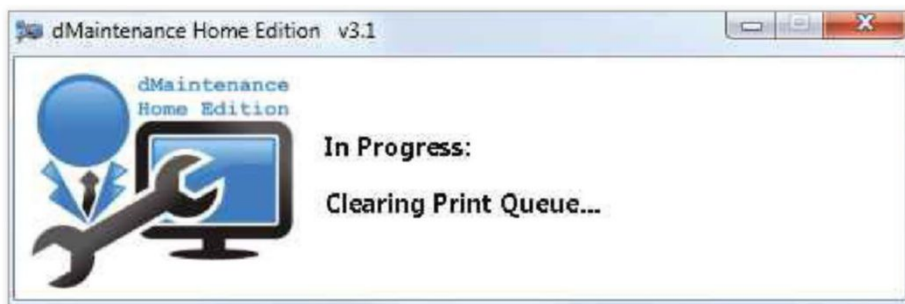
frequent cleans, so that you don't have to enter your usernames manually every time you go online. Finally, click 'Save & Close'. Next time you run dMaintenance, click Yes in the 'Run Maintenance?' box to automatically remove Windows junk according to your preferences.

### Clean Windows on an automatic schedule

The free version of dMaintenance doesn't let you schedule clean-ups, but Disk Cleanup does – after you've done some tweaking in the Command Prompt.

It's very easy and only takes a couple of minutes to set up. First, tell Disk Cleanup what you want it to clean. Type **cmd** into Start and press Enter, then type **cleanmgr.exe /sageset:1** (including the space) and press Enter. Wait a few seconds and the Disk Cleanup Settings window will open. Under 'Files to delete', tick the Windows junk you want to include in your scheduled clean (there's a lot to choose from – search online for anything you're not sure about), then click OK.

Next, set up the schedule using Windows' built-in Task Scheduler. Type **task scheduler** into Start and press Enter. In the window that opens, click Action, select Create Basic Task, then enter a name and description for your task (say, ►



Run dMaintenance to automatically clean Windows junk, including the print queue

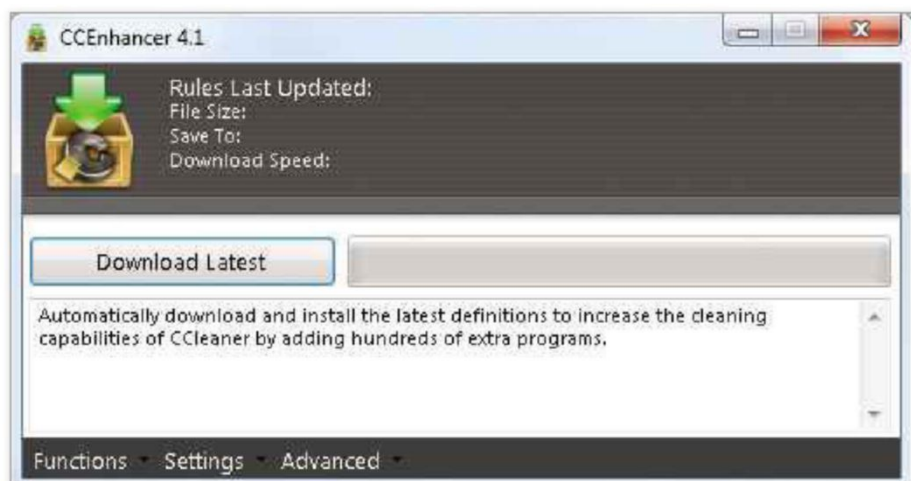


Choose Windows junk to remove on a schedule in the Disk Cleanup Settings window

'Cleaning Windows' and 'Run monthly for more hard-drive space'). Click Trigger to set your schedule (for example, monthly at a time you select), then click Action and select 'Start a program'. Under 'Program/script' type `C:\Windows\system32\cleanmgr.exe`, and in Add Arguments type `/sagrun:1`. Click Next, then Finish. Now Disk Cleanup will clean your chosen junk every month at your chosen time. This trick works on all versions of Windows from XP onwards.

## Make CCleaner see more program junk

Windows isn't the only software that leaves a trail of cache junk and temporary files on your hard drive – every program you install (and uninstall) does so, too.



Click Download Latest in CCEnhancer to update your CCleaner Applications list (see screenshot, right)

CCleaner is the best tool around for cleaning this program junk without actually uninstalling the programs.

Run CCleaner and click the Applications tab. The list includes your browsers (except Internet Explorer, which appears under Windows), your antivirus, plug-ins (such as Java and Adobe Reader) and a few Windows programs such as RegEdit (Registry Editor). Ticking a program or plug-in doesn't uninstall it; instead it removes its temp files, recent documents and other detritus. If cleaning a program may stop it working properly, CCleaner warns you in a pop-up.

That's all great – but where are all your other programs and Windows

tools? CCleaner can't see all your junk without a bit of help. To expand the list, download the free CCEnhancer extension ([www.snipca.com/14176](http://www.snipca.com/14176); works with the installed version of CCleaner only). Click the blue Download link after 'CCEnhancer (English only) 4.1', double-click the EXE file, then click Download Latest to let CCEnhancer expand CCleaner's list. Finally, click Yes to run CCleaner if you have it installed. Your Applications list is now a good five times longer, with loads of newly added tick boxes such as iTunes Previous Libraries, Shortcut Cache, Bookmark Backups and even CCleaner itself. Tick what you want to clean and click Run Cleaner, or right-click individual items and click Clean.

## Clean the Registry to make Windows faster

We've come across plenty of forum posts that claim Registry cleaning is a waste of time, because Registry files are so tiny. It's true that they're small, but they punch above their weight. The wrong Registry files in the wrong place, or too many old and obsolete files clogging your Registry, will make your software crash and could even make Windows unstable.

CCleaner has a Registry Cleaner, and it's easy enough to use – click Registry, click 'Scan for Issues', then remove any offenders. But the best free Registry cleaner is Glary Utilities ([www.glarysoft.com](http://www.glarysoft.com)), which lets you clean as fast or as thoroughly as you want.

For a really quick Registry clean, open Glary, click the '1-Click Maintenance' tab and untick all the boxes except Registry Cleaner. Click 'Scan for Issues' (yes, the same wording as CCleaner), wait a few seconds for the scan to complete, then click Repair Problems to wipe out all the automatically detected Registry junk.

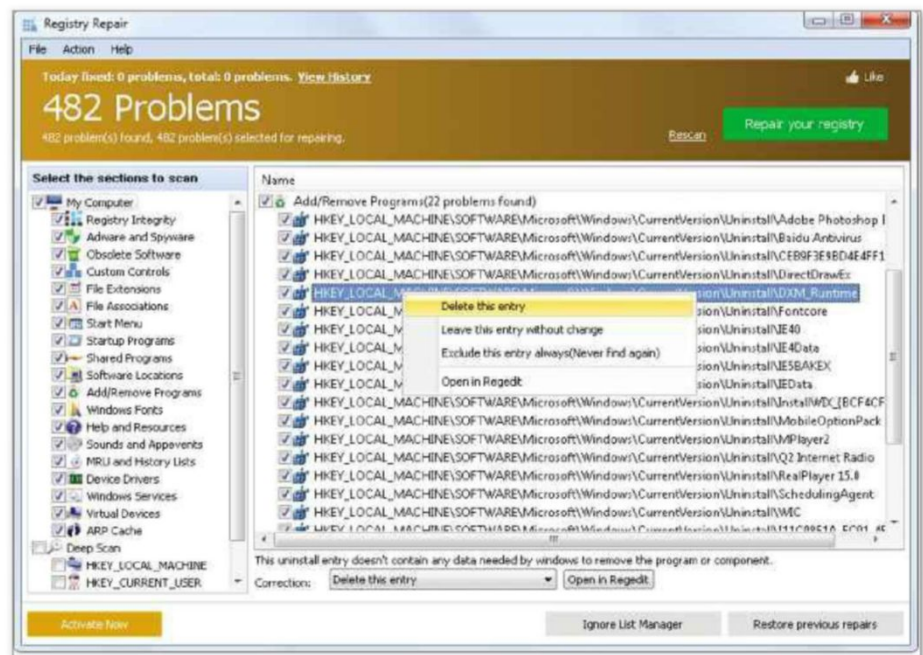




The problem here is that you're putting your faith (and your PC's life) into the hands of a one-click algorithm, as mentioned before. Glary is a very reliable program, but it's not a brain, and its one-click Registry clean may occasionally remove items that you would have chosen to keep.

For a more controlled clean, click Advanced Tools and click Repair under Windows Registry, at the top-left. This time the scan takes longer, but it's still very quick (a couple of minutes, even on our junk-stuffed beast of a computer). In the Registry Repair window that opens, you get an overall Registry junk tally and a detailed but easy-to-follow folder tree of items that need attention. Most are ticked by default, but you can tick and untick items that you want to add or remove from the clean. You can also delete or investigate individual items by right-clicking and choosing from options including 'Delete this entry', 'Exclude this entry always' and 'Open in Regedit'. To remove all ticked items, click 'Repair your registry'.

Glary's Windows Registry menu also includes a Defragment option (defragging your Registry essentially tidies it up, and is best done after cleaning); Backup (saves a copy of the



Use Glary Utilities to clean old and obsolete files from your Registry

entire Registry) and Restore (restores a backup).

To remove old Registry entries without installing more software, use the portable NirSoft program RegDllView ([www.snipca.com/14182](http://www.snipca.com/14182); scroll down and click Download RegDllview). This awkwardly named free tool looks for

Registry entries whose corresponding DLL files are no longer on your system. Another portable NirSoft tool, CleanAfterMe ([www.snipca.com/14183](http://www.snipca.com/14183)), automatically removes Registry entries that Windows no longer needs, and works on all versions of Windows from 2000 onwards. ►

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## DELETE SPACE-HOGGING FILES AND FOLDERS

### Remove duplicate files for free

Glary Utilities' free duplicates finder is the best tool of its kind in any of the big PC-cleaning programs. It's fast, thorough and accurate, even on our hard drive full of old photos. Go to Glary's Advanced Tools tab and click 'Remove duplicates' (under the Disk Space heading), then click Scan to scan your local hard drive (C:) for files that share the same name, size and creation time. You can tweak these search settings by clicking Options, and you can search specific folders (including external hard drives, USB sticks or even your tablet if it's connected to your PC) by clicking Folders and navigating to your destination.

The results are basically one long list, showing the number of multiples of each file Glary has found. Nothing is deleted or even ticked automatically. You can go through them all manually and tick the files you want to remove, or click Check Intelligent to let Glary instantly tick what it judges to be duplicates. It still doesn't delete anything until you click 'Delete checked files'.

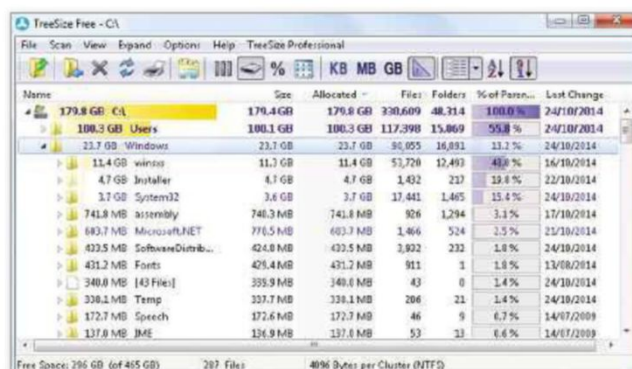
The new [open-source](http://www.snipca.com/14140) program Tiny Deduplicator ([www.snipca.com/14140](http://www.snipca.com/14140))

has a couple of features Glary doesn't. You can set it to automatically delete folders that are left empty by removing duplicates, and tell it to keep the first or last version of any set of duplicates. What's more, it's portable and it really is tiny – a mere 27KB.

To find duplicates automatically by content rather than name or file date, give the new version of Auslogics Duplicates Finder a go ([www.snipca.com/14179](http://www.snipca.com/14179)). Its installation process is maddening (see page 53), but the program is at least free, and its advanced search feature may help to dig out duplicates that are missed by the other programs we've mentioned.

### Scan any PC for huge files and folders

If you're anything like us, you try to keep your biggest photo and video files off your main PC and on external hard drives




Name	Size	Allocated	Files	Folders	% of Part...	Last Change
C:\	179.4 GB	179.4 GB	330,609	48,214	100.0 %	24/10/2014
Users	100.3 GB	100.3 GB	117,398	15,869	55.8 %	24/10/2014
Windows	23.7 GB	23.7 GB	56,055	16,831	13.2 %	24/10/2014
wininit	11.4 GB	11.4 GB	51,720	12,493	48.0 %	16/10/2014
Installer	4.7 GB	4.7 GB	1,492	237	19.8 %	22/10/2014
System32	3.7 GB	3.7 GB	17,441	1,465	15.4 %	24/10/2014
assembly	741.8 MB	741.8 MB	926	1,294	3.1 %	17/10/2014
Microsoft.NET	683.7 MB	683.7 MB	1,466	524	2.5 %	21/10/2014
SoftwareDistrib...	423.5 MB	423.5 MB	3,932	232	1.8 %	24/10/2014
Fonts	421.2 MB	421.2 MB	911	1	1.8 %	13/08/2014
[43 Files]	349.8 MB	349.8 MB	43	0	1.4 %	24/10/2014
Temp	338.1 MB	338.1 MB	286	21	1.4 %	24/10/2014
Speech	172.7 MB	172.7 MB	46	9	0.7 %	14/07/2009
IME	137.8 MB	137.8 MB	53	33	0.6 %	14/07/2009

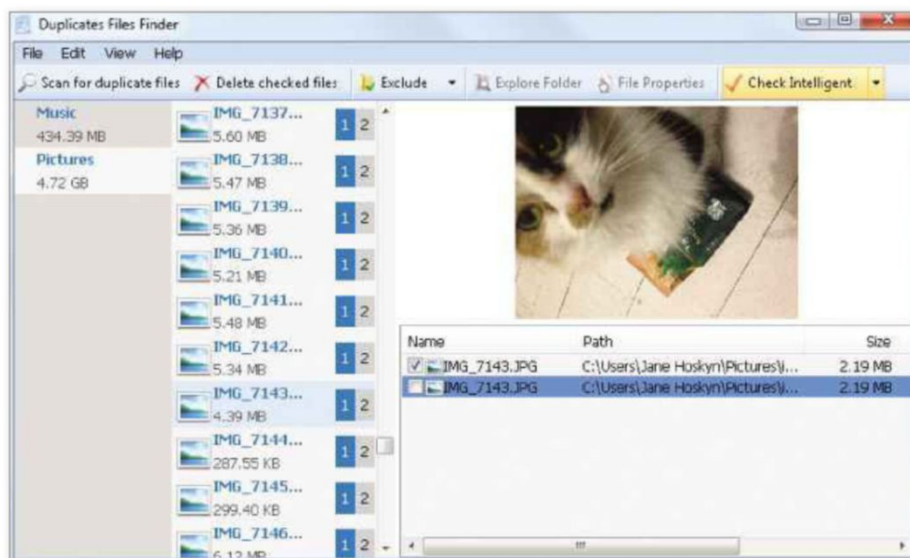
Run TreeSize to see instantly which files and folders take up most space on your PC

to save hard-drive space. Actually, these big files do less to slow down and destabilise your PC than Windows clutter, software leftovers and tiny Registry files. But it's still good practice to keep a lid on your massive-file count, partly to avoid trouble when installing software that needs lots of allocated hard-drive space.

TreeSize Free ([www.snipca.com/14147](http://www.snipca.com/14147)) is a small portable program that you can run on any PC (Windows 2000 and later) to instantly see every file and folder it contains – including the stuff that doesn't show up in Windows Explorer – arranged in order from biggest to smallest.

Right-click any file or folder for the usual Explorer right-click options including Delete and Properties. TreeSize also adds an option ('T R E E S I Z E') to the right-click menu for any file or folder in Explorer or on your Desktop, so you can check its size and see how many files it contains.

Click the blue Download button, then open the dropdown menu on the page that opens and select the second option ('TreeSizeFree zip'). Click 'Download for Europe', click Download, extract the EXE file from the ZIP and double-click to run it. In the program window, click Scan and select the drive you want to scan for junk. In most cases this will be 'Local Disk (C:)', but you can also scan external hard drives and partitions, if you have them. 



Click Check Intelligent to let Glary instantly – and accurately – select duplicates to be deleted

**NEXT ISSUE** On sale Wednesday 26 November

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# First 100 days of Windows 10



In the second instalment of her Windows 10 Technical Preview diaries, Jane Hoskyn wonders where the Start menu is and tries to unpin Search

## Day 16: Where's my Start menu?

Everyone knows Windows 10 has a Start menu. The tale of the Prodigal Start has been going around since long before Windows 10 was even called Windows 9. Poor blameless menu, cast into the wilderness for three years with only Clippy for company, until it was finally allowed back home.

Um, where? I'm looking at my brand new Windows 10 Desktop and the Start menu is nowhere to be seen. When I click the Windows icon, it takes me to the Start screen, just as in Windows 8.

In my search for a solution, I click the Windows icon, stab the Windows button and tap the icon repeatedly, sometimes with a finger-wiggle, just in case you have to open the menu using some new-fangled touchscreen trick. Doesn't work.

## Day 21: Win 8 Groundhog Day

Days pass. Every day, I switch on my laptop and the Start screen is still there, like some Windows 8 re-imagining of *Groundhog Day*.

I know I've got Windows 10, because it says 'Windows Technical Preview Evaluation copy' in tiny letters at the bottom right of my screen. I also have all the other Windows 10 features I've been hearing about, like the built-in virtual desktops and the new Search icon in the Taskbar.

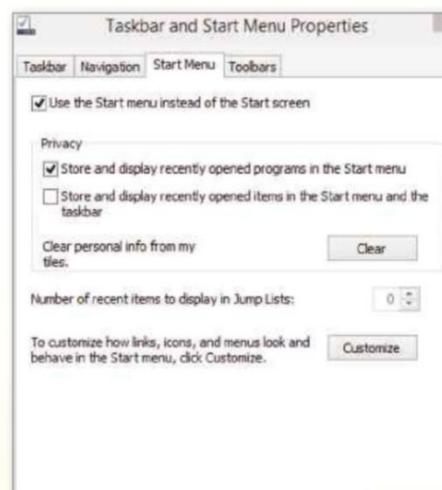
By the way, this search is Bing in disguise. When I click it, I get pictures of pop star Jennifer Lopez and a big Russian warship. And I can't unpin it. I'll be back with a Registry hack to fix this, mark my words.

## Day 25: When in doubt, blame the hardware

The mystery is solved when I read that the Windows 10 Start menu is hidden by default on all touchscreen PCs. First I assume this is a mistake, and a reminder that Windows 10 is not real yet

– it's an early prototype and we're its focus group. Or maybe it's Microsoft's way of saying "serves you right for getting a hybrid".

If you're having the same problem, here's how to get your Start menu back. Go to 'Taskbar and Start Menu Properties' (search for it on your Start screen) and tick 'Use the Start menu instead of the Start screen'. The change takes effect instantly.



**Tick or untick 'Use the Start menu...' to choose what happens when you click the Windows icon**

## Day 27: Keyboards 1 – tablets 0

Now that I've got a Start menu again, I see why Microsoft hid it. It's just too small for a touchscreen. Tap a menu item like 'PC settings', All Apps or even the power icon, and you're a millimetre away from opening the wrong thing, unless you have filed-down fingertips. So if you've got a Windows tablet like a Surface Pro – which doesn't come with a keyboard – you'll probably want to stick with the Start screen, which seems much the same in Windows 10 as it was in Windows 8. Sorry about that.

My Acer hybrid may be an infuriating machine and far less slick than a Surface, but it does at least have a keyboard that



**The Start menu is back – and it's tiny**

works properly for long enough to let me use the Start menu and its Windows 7-style Search box.

The first thing I do is get online and download Chrome to replace Windows 10's default browser, Internet Explorer 11. Apologies to its fans, but I can't bear IE and its barely visible address box, and would sooner give up the internet than use it again.

Once installed – and opened, and signed into, and set as my default browser – Chrome doesn't add itself to the Start menu, which is still stuffed with defaults. I put this down to Microsoft's impertinence rather than any laziness on Google's part. Either way, it's easy to fix – go to All Apps in the Start menu, right-click Google Chrome (or whatever you want to add) and select 'Pin to Start'. And relax.

## Windows 10 so far: 7/10

It's great to have Start and Desktop in one place again, but only if you're on a traditional, non-touchscreen PC. Tablets may not be poised to take over the world, after all.



# How to spot a **FAKE APP**

The next app you download could be a dangerous Trojan in disguise. **Jane Hoskyn** explains how to spot fake and malicious phone and tablet apps - before it's too late

**A**ndroid malware is on the rise. The latest Mobile Cyber Threats survey carried out by Kaspersky (winners of our last three quarterly antivirus lab tests - see page 68) in partnership with international crime agency Interpol, found there were six times as many malicious apps out there in July 2014 than in August 2013 ([www.snipca.com/14219](http://www.snipca.com/14219)).

From a hacker's point of view, you can see the attraction of targeting Android devices. Your tablet contains your personal details, your logins and passwords, your private notes, messages and photos - and it's probably linked to your bank account or credit card, too.

To get their hands on this valuable bounty, all a hacker has to do is create a Trojan and get you to download it by disguising it as something you really, really want. Facebook fakes, video apps and too-good-to-be-true antivirus tools are circulating in their thousands, right now, waiting to con you.

But hackers, like all conmen, give themselves away by making mistakes. Here are some dead giveaways to look out for.

## It's 'Facebook', but not as you know it

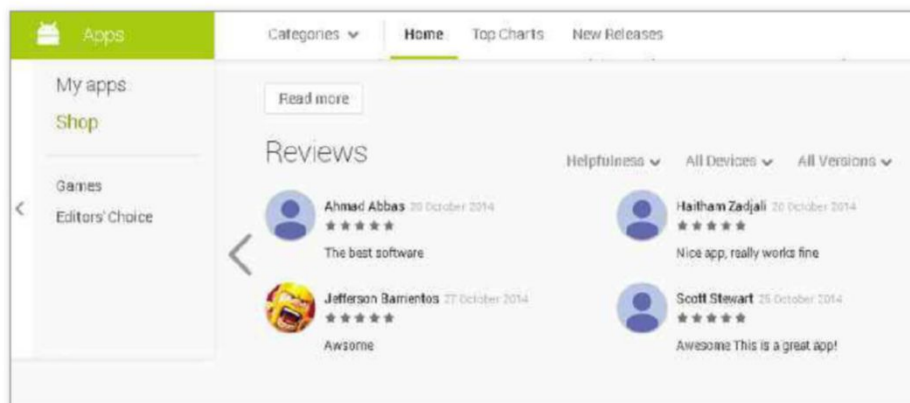
Mobile malware-makers love Facebook. According to Cheetah Mobile ([www.cmcm.com](http://www.cmcm.com)), makers of Clean Master (see page 51 of our cover feature), no fewer than 15,000 fake social-networking and messaging Android apps appeared between January and August 2014, and more than half were dodgy Facebook clones. Thousands more pretended to be WhatsApp, Twitter and Instagram.

Hackers use these apps to steal your

username and password, which they assume (often correctly) you're probably using on other accounts too.

Malicious clones are often riddled with poor spelling and badly reproduced branding, but you may not notice these errors until after you've downloaded the app and entered your login details. By which time, the app's work is done.

There are a few ways to check that a big-name app is the real thing before you download it. First, see how many people have downloaded it from the Google Play



Lots of generic, short, "awesome" reviews may be a sign of a fake app



Store (it's the number in brackets next to the star rating). At the time of writing, the real Facebook Android app ([www.snipca.com/14215](http://www.snipca.com/14215)) had been downloaded nearly 23 million times. If you're looking at a 'Facebook' app that's been downloaded 200 times and only has a few "user" reviews (say, a couple of five-star reviews by the hacker's mates), it's not Facebook.

Also be wary of believing everything you read in Play Store reviews. It's easy for app developers to buy fake reviews and ratings from feedback touts such as App Reviews Mart (<http://appreviewmart.com>; "Get 5 star ratings fast!") and BestReviewApp ([www.bestreviewapp.com](http://www.bestreviewapp.com); "Get app reviewed, watch sales & rank soaring!"). Click a couple of reviewers' names to read other reviews they've written. If they're worded exactly the same and sound suspiciously generic ("Great app, just what I needed!"), take them with a large pinch of salt. You can also report suspicious apps, reviews and comments to Google ([www.snipca.com/14222](http://www.snipca.com/14222)).

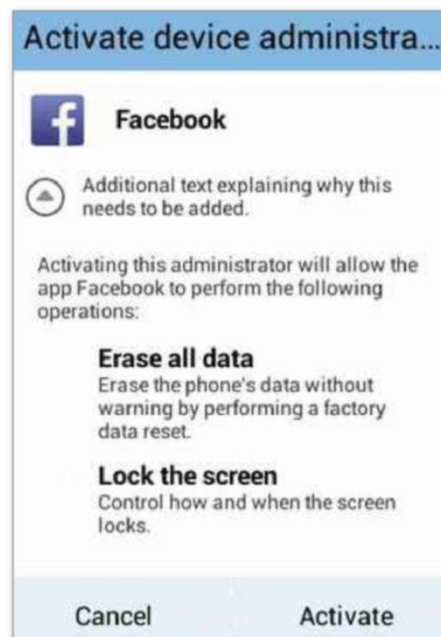
## It's not in the Google Play Store

If you're still not sure whether that brilliantly reviewed, badly spelled app is legitimate, bookmark its Play Store download page and come back to it a couple of days later. Fake apps don't survive in the Play Store for long. Those that aren't blocked instantly by Google's app-scanning tool, Bouncer (explained by security firm Trend Micro at [www.snipca.com/14223](http://www.snipca.com/14223)) are usually removed within a day or two, according to the latest Mobile Threat Report from security company F-Secure ([www.snipca.com/14202](http://www.snipca.com/14202)).

But Google can't police the entire internet, and bogus apps soon find other distribution channels. All the fake apps identified by Cheetah, for example, were



Never download apps via adverts or links in Facebook comments



Genuine social apps never ask for 'device administrator' permissions

downloaded from outside the Play Store. Sources included independent Android app websites such as AppBrain ([www.appbrain.com](http://www.appbrain.com)) and links in Facebook comments, emails and online adverts.

Independent Android sites are not inherently dangerous, but be bear in mind they don't scan apps as thoroughly as Google. Earlier this year security firm Opswat ([www.opswat.com](http://www.opswat.com)) found that a third of all Android apps from outside the Play Store were infected with malware ([www.snipca.com/14224](http://www.snipca.com/14224)).

Similarly, if you have an iPad you should only download apps from the App Store and iTunes – not that you have much choice. The tightly controlled nature of the iOS platform prohibits third-party app markets and helps to keep hackers at bay.

## It's too good to be true

Hackers know that we're slaves to our desires. If they promise to give us exactly what we want, we're less likely to trust our better instincts.

Last June, Android ransomware arrived in the shape of the Simplocker Trojan, which came packaged as a porn-video app. Soon after that, hackers exploited political fervour by spreading spyware among Hong Kong protesters, who thought they were downloading a pro-democracy app.

Also be on the lookout for apparent collaborations. In September, a new Android app called Angry Birds Transformers turned out to contain the devastating Elite Trojan. Security



The Angry Birds Transformers app contained a "vandal" Trojan that destroyed data

researchers at Dr Web ([www.drweb.com](http://www.drweb.com)) discovered the Trojan in October and categorised it as a "vandal program" because it destroys victims' data.

When you launch it, it asks for 'device administrator' permissions (usually only required by apps that let you lock or wipe your phone or tablet remotely) and immediately sets about formatting your **SD card**, then blocking all your messaging apps.

Incidentally, if an app says it can remove all your pre-installed manufacturer's apps without the need for **rooting**, or reveal who's looked at your Facebook profile, it is lying – and you should never trust a liar.

## You've never heard of it

New apps from unheard-of companies that promise the Earth are unlikely to be what they seem. According to Kaspersky, fake antivirus apps are a particular problem ([www.snipca.com/14225](http://www.snipca.com/14225)).

In April, an antivirus app called Virus Shield by a developer called Deviant Solutions managed to sneak through Google's app scanner and get itself downloaded by 30,000 Play Store customers, who each paid \$3.99 (£2.38) for the privilege. The app wasn't malicious but it was completely (and deliberately) useless – except to its developer, who became quite wealthy. When the scam was exposed, Google was forced to refund all the customers.

Don't be tempted by 'novel' antivirus apps. Most of the big antivirus companies make safe, reliable tools to protect your tablet from malware and fake apps, and they're regularly updated to keep you safe from the latest threats. Avast's Mobile Security & Antivirus ([www.snipca.com/14227](http://www.snipca.com/14227)) and AVG's Tablet AntiVirus Security Free ([www.snipca.com/14228](http://www.snipca.com/14228)), which was updated on the day we went to press, both let you scan installed apps for malicious files. **ca**

# Remove out-of-date drivers



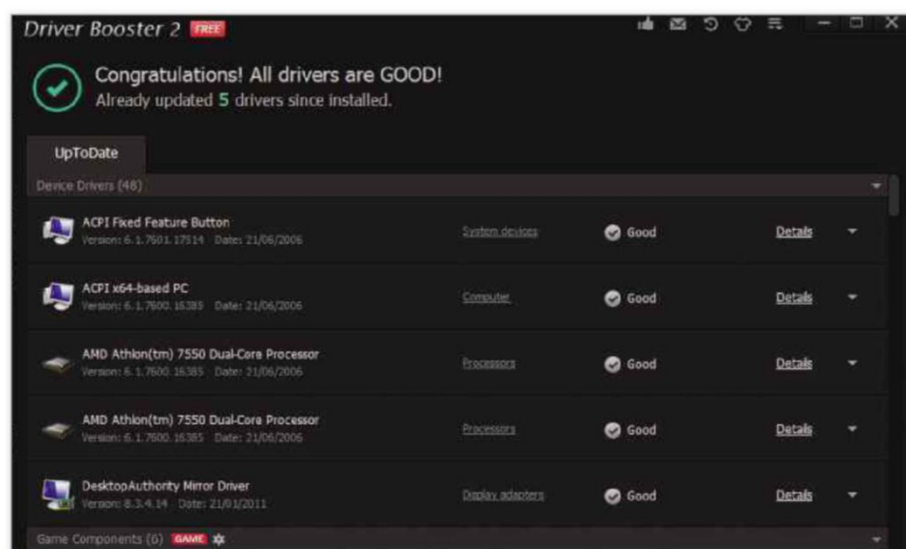
Old hardware drivers make your PC unstable and inefficient. Robert Zak reveals how to update these tiny but vital programs, starting with automatic driver updaters...

## Update your drivers automatically

The quickest and easiest way to update all your drivers is to let a dedicated program do it automatically. There are lots of free driver-updating tools, but most don't cut the mustard. An exception to this rule is IObit's Driver Booster 2 ([www.snipca.com/14120](http://www.snipca.com/14120)), which has recently been updated and is the most effective automatic driver-updater we've ever used.

It not only scans your PC for drivers and installed programs that need updating, but it also lists the most important drivers on your PC – including those that are up to date. It's worth knowing which drivers are on your PC (there are probably more than you expect!) and which hardware they correspond to, even if you don't want to update them.

Knowing what driver versions you have installed is particularly helpful if you experience problems with a driver, because you can then go to the



Update your drivers in one go with IObit's Driver Booster 2

manufacturer's website and find out whether installing an older version of a driver might fix the problem.

Driver Booster 2 lets you schedule driver scans. Click the three horizontal

lines at the top right of the home screen, Settings, then Scan. When drivers are being installed, you should also tick the 'Silent installation' box, which ensures that any updates take place in the

## WHY DO YOU NEED DRIVER UPDATES?

If your PC is full of old and outdated drivers, your hardware – including your motherboard, modem and display – won't work as well as it should.

Many driver updates add new features and performance enhancements, just like other types of software updates. For example, video-card driver updates may improve the performance of video-editing tools and games. Catalyst,

the AMD graphics card driver, recently added a feature that lets you tweak colour, contrast and hue on your display with much greater depth.

Printer-driver updates often increase the accuracy with which printers measure ink levels and offer new options to save ink when printing.

Other driver updates are designed to make your PC more reliable and stable.

Your motherboard, for example, uses chipset drivers, which are responsible for the stability of components such as USB ports and modems. To upgrade these, find out your **motherboard's** manufacturer and model number by using a tool like CPU-Z ([www.snipca.com/14136](http://www.snipca.com/14136)), then visit that manufacturer's website and download the latest chipset drivers.



background and won't clutter your screen with dialogue boxes.

There's another free driver updater that lets you schedule scans with even greater precision. Called SlimDrivers ([www.snipca.com/14119](http://www.snipca.com/14119)), it lets you set specific days and times to update your drivers. It even found a number of driver updates that Driver Booster 2 failed to detect. However, it identified a couple of Nvidia graphics card-related drivers as being out of date, when according to Nvidia they were the latest versions. SlimDrivers tried to update the apparently outdated drivers but failed, suggesting it had made a mistake in indentifying them.

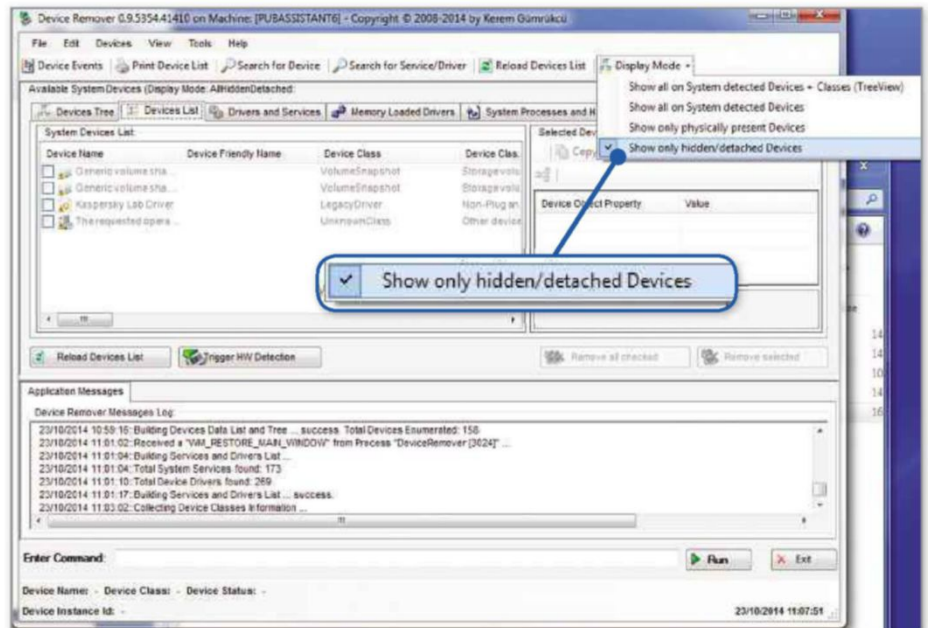
Interestingly, running the two programs one after the other seemed to yield the best results. After SlimDrivers installed a driver update that Driver Booster 2 had missed, we ran Driver Booster 2 again and it found an even more recent update for the same piece of hardware. Both programs are very easy to use, so you might want to give them both a try to see which one you like best.

## Update your drivers manually

Because programs like Driver Booster 2 and SlimDrivers aren't 100 per cent accurate, it's worth spending some time managing your installed drivers and updating them manually.

First, you need to find out what drivers you have installed. As mentioned earlier, Driver Booster 2 provides a quick, at-a-glance insight. For a more detailed look at your drivers, use NirSoft's free DriverView tool ([www.snipca.com/13111](http://www.snipca.com/13111)). It instantly reveals a list of drivers on your PC (see screenshot below), along with their manufacturer and corresponding hardware. To sort the list by manufacturer, click the Company column heading. DriverView is a portable tool, so you can run it from a USB stick without having to install it.

When you scroll down the list you'll see that the vast majority of your drivers are made by Microsoft. These are updated



Use Device Remover to track down drivers whose corresponding hardware has been removed


automatically in Windows updates, so you don't need to worry about them. Make a note of the company that makes your sound, display and network drivers, so you can visit the manufacturers' websites if you want to update your drivers, install older drivers or find advice on fixing malfunctioning drivers.

Windows' built-in DirectX Diagnostic Tool (DxDiag) will provide more specific details about your graphics and sound cards. To open it, click Start, type **dxdiag** and press Enter. Click the Display and Sound tabs to see who manufactures those drivers. If your computer uses an AMD or Nvidia graphics card, download AMD Catalyst ([www.snipca.com/14123](http://www.snipca.com/14123)) or Nvidia's GeForce Experience ([www.snipca.com/14124](http://www.snipca.com/14124)). These official tools let you access advanced settings on your graphics card, as well as checking automatically for the latest drivers. If you have a graphics or sound card by another manufacturer, such as Intel, go to its website and look for the latest drivers there.

## Remove drivers for devices you no longer use

Did you know that every PC device you remove or replace – whether it's your keyboard, mouse, printer or USB Wi-Fi adapter – leaves its drivers lying around on your hard drive? As well as cluttering up your PC, two or more may eventually conflict and prevent each other working.

By default, Windows Device Manager doesn't list drivers whose corresponding devices have been removed. To make it show these unemployed drivers, go to the Command Prompt (click Start button, type **cmd**) and type **set devmgr\_show\_nonpresent\_devices=1**, and press Enter. Then type **device** into Start, open Device Manager, click View, then click 'Show hidden devices'. Click each dropdown in the Device Manager list and look for devices whose icons are greyed out. These are drivers for devices that are no longer connected to your PC. Right-click the device and click Uninstall.

For an even deeper clear-out of your old drivers, use Device Remover ([www.snipca.com/13113](http://www.snipca.com/13113)). This free program provides a more detailed view of the drivers on your PC and flags up leftover drivers for disconnected hardware and uninstalled software. To remove these in one go, click Display Mode, then select 'Show only hidden/detached Devices' (see screenshot above). Click the Devices Tree tab, tick the devices you want to remove, then click 'Remove all checked'. Removing these obsolete drivers greatly reduces the chance of errors and driver conflicts – and saves hard-drive space. 

Company	Description	Version	Product Name
VIA Technologies, ...	VIA High Definition Audio Function D...	6.0.11.200	VIA High Definition Audio Dri...
ScriptLogic Corpor...	ScriptLogic ExpertAssist Mirror Minip...	8.3.4.14	ScriptLogic ExpertAssist
ScriptLogic Corpor...	ScriptLogic ExpertAssist Kernel Inform...	8.3.4.14	ScriptLogic ExpertAssist
ScriptLogic Corpor...	ScriptLogic ExpertAssist Token provider	8.3.4.14	ScriptLogic ExpertAssist
Realtek Semicond...	Realtek USB Mass Storage Driver for 2...	6.3.9600.30176	Realtek USB Mass Storage Driv...
Ralink Technology...	Ralink 802.11 Wireless Adapter Driver	3.0.9.0	Ralink 802.11 Wireless Adapters
NVIDIA Corporation	NVIDIA® nForce(TM) SATA Performan...	10.6.0.18	NVIDIA nForce(TM) SATA Driv...
NVIDIA Corporation	NVIDIA MCP Networking Function Dr...	7.3.1.7335	NVIDIA Networking Driver
NVIDIA Corporation	NVIDIA Windows Kernel Mode Driver...	9.18.13.4411	NVIDIA Windows Kernel Mod...
NVIDIA Corporation	NVIDIA Virtual Audio Driver	1.2.20.0	NVIDIA Virtual Audio Driver
NVIDIA Corporation	NVIDIA HDMI Audio Driver	1.3.32.1	NVIDIA HDMI Audio Driver
Microsoft Corpora...	NT Kernel & System	6.1.7601.18526	Microsoft® Windows® Oper...

Run NirSoft DriverView to find out who makes your installed drivers

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# Problems Solved

## PROBLEM OF THE FORTNIGHT

### Why won't my user profile load?

**Q** I have a Dell Inspiron 1545 computer that runs Windows Vista. Recently, I tried to log on and was met with this error message: "The User Profile Service failed the logon. User profile cannot be loaded". What happened to cause this? And can you help me get my computer up and running again?

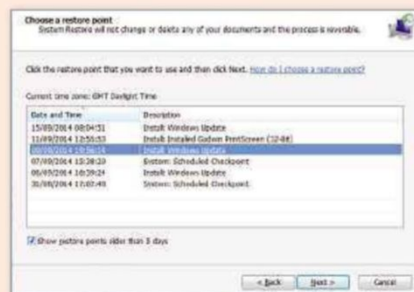
John Neill

**A** One or more files associated with your Windows user account have become corrupted, so Vista is unable to open them. This can happen for a variety of reasons but is often caused by switching off the computer (or experiencing a power cut) during startup or shutdown.

One simple solution is to make use of System Restore to roll back Windows to a point where everything worked properly. This doesn't always solve the problem, but it's worth a try. Click Start, type **system restore** into the search box and then click System Restore at the top of the Start menu. Click Next and then choose a suitable restore point. If none appears or the dates listed are more recent than when the problem first occurred, tick the 'Show restore points older than 5 days' box. Click Next and follow the prompts. Your computer will restart and it'll take several minutes for System Restore to work its magic – if it can. Sit tight and keep your fingers crossed.

If System Restore fails to resolve the problem, then you could create a new user account and start afresh but that's usually far from ideal, particularly if you've spent a few years personalising Windows to work exactly the way you want.

Instead, it's possible to rescue a corrupted user account. First, use Windows Safe Mode to create two new user accounts – named, say, 'John2' and



Roll back your computer to a point before a specific problem occurred using System Restore

'John3'. Tap F8 when you first power up, use the arrow keys to choose Safe Mode then press Enter. When Safe Mode launches click Start, Control Panel, then 'User Accounts and Family Safety'. Click 'Add or remove user accounts' followed by 'Create a new account'. Give it a name ('John2', for example), select the Administrator button then click Create Account. Repeat for the second account then restart your PC.

Now log in as John2. Next, click Start followed by Documents, open the Tools menu (press Alt if no menus appear), then click Folder Options. Click the View tab, select the 'Show hidden files and folders' button and untick 'Hide protected operating system files'. Click OK.

Now use Windows Explorer (Windows key+E) to navigate to C:\Users\John (assuming 'John' is the name of the account you want to rescue). Press Control+A to select all the files and then, holding down Control, deselect the Ntuser.dat, Ntuser.dat.log and Ntuser.ini files. Now press Control+C to copy everything to the Windows Clipboard.

Next, use Window Explorer to navigate to C:\Users\John3 and press Control+V to paste everything you've just copied. Now restart Windows and log in as John3. Restart your PC, log in as John3. Check that everything works as you expect and, when you're confident all is well, feel free to delete the John2 and John user accounts.

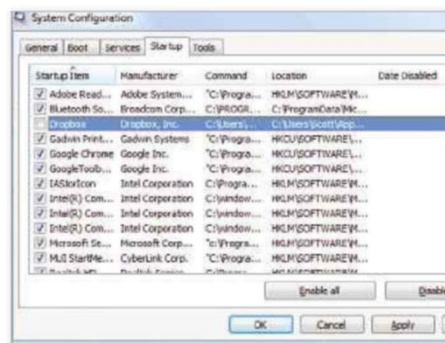
### Why is my PC so sluggish?

**Q** As a long-time subscriber to *Computeractive* I know how to speed up boot times by removing startup items and generally how to keep my PCs in good running order using Microsoft's System Configuration utility (msconfig) and other similar tools. Both my ageing self-built desktop PC and a newish laptop are a bit slow to boot because I have lots of programs that launch automatically, including Dropbox, OneDrive and my security software. I can live with the slow boot but my problem is that both computers are also very sluggish for a few minutes after boot. Once they've 'warmed up' they are very responsive. Why would this be and is there a solution?

John Lattimore

**A** We think the answer might be staring you in the face – Dropbox and OneDrive. After you boot your PC, both these tools will spend time indexing your files and then make use of your internet connection (and/or local network) to synchronise the changes. With both working at once, we're not surprised your PCs struggle for a while.

If you want to keep using both tools there's no obvious solution, but you can at least check by temporarily disabling one or both (you could do this with msconfig, since you're familiar with this tool). If your post-boot PC feels snappier with them out of the picture then you can make an informed decision about whether or not to keep using one, the other or both.



Temporarily disable programs that slow your PC using System Configuration



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## How do I stop my PC waking on its own?

**Q** I have a problem that I cannot solve. My Windows 7 computer starts up on its own. It'll start up at any time of the day or night, unless I turn off the power to the computer from the wall when I finish using it. I forgot to turn it off when I went on holiday for two weeks and it was on when I got home. Any idea what is wrong?

Dave Kay

**A** Do you put your PC into sleep or hibernation modes? Some components, including the mice, keyboards and network hardware, are able to wake computers from these modes. For example, visit the 'Hardware and Sound' section of Control Panel and click Mouse. Now choose the Hardware tab and click Properties. In the Properties dialogue box, select the General tab and click 'Change settings'. If there's a box labelled 'Allow this device to wake the computer', remove the tick. Repeat for your keyboard and hardware.



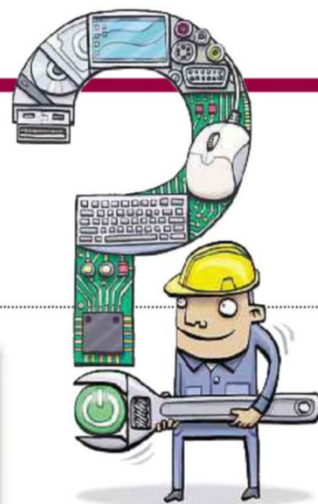
Prevent your hardware from waking your PC via the Device Manager

It could also be caused by your network hardware (possibly built into the motherboard or an expansion card). If a feature called 'Wake on LAN' (or WOL or similar) is enabled then your PC is able to react to outside signals and wake up.

It's not easy to figure out where such a signal might be originating from, or what might be sending it, but it should be reasonably straightforward to stop your PC responding to it. In Windows 7, click Start, right-click Computer and choose Properties, then click Device Manager. Expand the 'Network adapters' group and right-click your PC's network card and choose Properties. Select the

Power Management tab and then untick the 'Allow this device to wake the computer' box.

That should work, but if this option isn't displayed then you'll need to investigate your motherboard's BIOS. Restart your PC and press the Delete (Del) or F2 key and then use the cursor (arrow) keys to navigate the BIOS – you're looking for an option labelled 'Wake on LAN' or similar, which will most likely be in the Power Management page. Disable this option then exit the BIOS (usually by pressing Escape), saving your changes when prompted.



## Why are my Outlook Express windows so small?

**Q** Due to various files on my hard drive being corrupted I was forced to reinstall Windows XP Professional on my Toshiba Satellite Pro laptop. This went fine, but has created a new problem. Previously, when I used Outlook Express to create emails a window occupying about 70 per cent of the screen was opened. Now this window takes up only about 20 per cent. While this can be enlarged to full-screen size, it is annoying to have to do this every time I want to read or create an email. Please can you tell me how to set the window to open in its original size?

Jim Nicholson



Set your Outlook Express windows to open at the desired size by clicking and dragging the bottom-right corner and closing it

**A** Setting a default size for Outlook Express email windows is achieved in exactly the same way as setting any other window size – left-click at the

click the Create Email button, resize the resulting blank message window and then close it by clicking the red cross. Subsequent windows will open at this saved size.

bottom right of the window, then drag to the desired size before releasing the mouse button. Then, when you close the window (by clicking the red cross at the top right), Windows will remember the size.

However, if you resize the new message window and then write and send the email, Windows does not know to save it at this size. So, to apply this method to the Outlook Express new message window, you need

# Problems Solved

## How do I deal with this TomTom update error?

**Q** I've been informed by TomTom of a critical update for my satnav device but when I try to apply the download, Windows displays the following error messages: "2503 called runscript when not marked in progress" and "2502 called InstallFinalize when no install in progress". TomTom says that my PC is at fault and my local computer shop cannot help, so I have no idea what to do. Can you help?

George Mitchell

**A** We suspect that a previous installation has gone wrong, leaving behind digital detritus that's tripping up Windows when you try to apply the TomTom update. Microsoft offers a free troubleshooter tool that cleans up these electronic messes, so we suggest you try it. Visit [www.snipca.com/13769](http://www.snipca.com/13769) and click 'Run now'.

Double-click the downloaded file, click Accept (to accept the license), then 'Detect problems and let me select the fixes to apply'. Wait while the troubleshooter gathers info about your system, then click Installing. Choose the TomTom program from the displayed list, then click Next.

Follow the prompts to let the troubleshooter complete its work then try your installation afresh. If it still doesn't work, run the troubleshooter again and choose the 'Detect problems and apply fixes for me (Recommended)' option.



Use Microsoft's free troubleshooter tool to resolve installation problems

## Why does my laptop display this blue-screen error message?

**Q** I have a Lenovo G780 laptop that runs Windows 8 and Windows 7. Most of the time the laptop runs OK, but for no apparent reason it sometimes shuts down with a blue-screen message that says 'BAD\_POOL\_CALLER'. I've reinstalled Windows back to factory reset and have reinstalled all software bit by bit making **restore points** after each installation. I have done this a few times but still get the problem. Is there any way I can solve this problem?

Les Beckler

**A** This is symptomatic of a memory problem – it could be a loose memory module or a fault. You can check the former by removing the compartment cover on the rear of your laptop and making sure each module is fully inserted by applying firm thumb pressure. If you need help figuring out how to remove the rear, you'll find your laptop's full

service manual at [www.snipca.com/13768](http://www.snipca.com/13768).

If that doesn't fix the problem then the chances are you have a faulty module or modules, perhaps caused by heat (which would explain why the fault is intermittent). We suggest using the free version of MemTest86 ([www.memtest86.com](http://www.memtest86.com)) to put your **RAM** through its paces. If a fault is found then contact the retailer (if it's still under warranty) or manufacturer, or buy replacement modules and fit them yourself.



Resolve blue-screen error messages on your laptop by fully inserting its modules or using the MemTest86 tool

## How do I access my old password-protected documents?

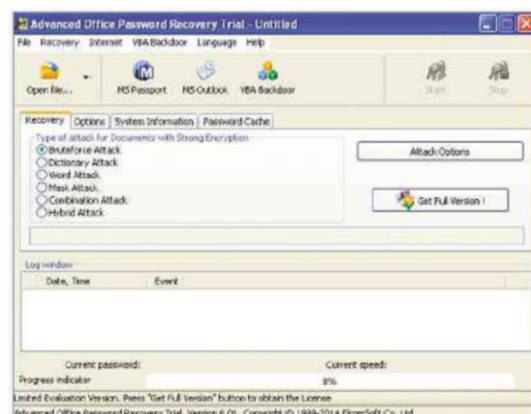
**Q** I have a couple of documents created in Word 97, possibly using Windows 98. At the time, I locked these with Word's password feature. I now want to open these documents but I cannot remember the password. Is there any way I can retrieve these?

R A Beaton

**A** You're probably in luck, because by modern standards Word 97's password-protection features are pretty easy to crack. One of the best tools for doing this is called Advanced Office Password Recovery ([www.snipca.com/13770](http://www.snipca.com/13770)). This is a paid-for product that costs \$49 (£30), but there's a trial version that will crack shorter passwords for free, and let you know if longer passwords are crackable – at which point you can decide

whether your documents are worth the asking price.

If you have some inkling of the original passwords (ie, that they're English words), use the Dictionary Attack option because that's the quickest. Otherwise, select the Bruteforce Attack button and Advanced Office Password Recovery will eventually crack your locks.



Use Advanced Office Password Recovery to try to retrieve document passwords you've forgotten



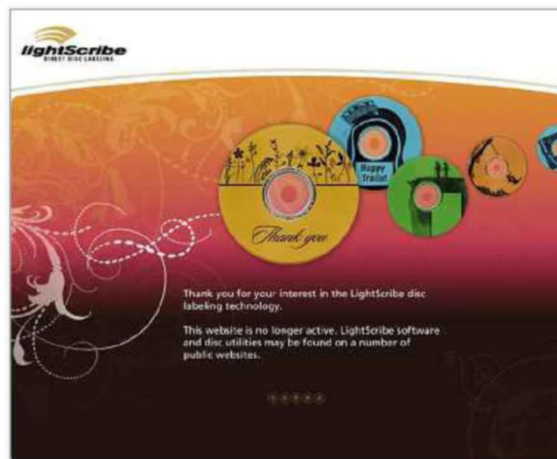
## How do I get LightScribe to work in Windows 8?

**Q** For many years I've used the LightScribe software on my PC to create disc labels. Unfortunately, my computer died and I had to upgrade to Windows 8. But now the LightScribe software won't work. When I try to install it a message comes up saying: "The operating system is not adequate for running LightScribe labeller". Can you help?

Don Moss

**A** Windows 8 won't let you install LightScribe because you are using an out-of-date version of the software, presumably supplied with your original computer or LightScribe drive.

HP, the company behind LightScribe, has effectively abandoned the technology, ceasing development and closing down



Although the LightScribe website is no longer active, you can find Windows 8 versions at [LightScribeSoftware.org](http://LightScribeSoftware.org)

the official website. Before this happened HP did update its various LightScribe tools to work with Windows 8, but the company has left in place an unhelpful holding page, which says merely that the LightScribe software "may be found on a number of public websites". The updated programs are in fact still available for download from the HP website, but the limited search tool makes it very hard to



find the latest versions.

Fortunately, a LightScribe enthusiast has come to the rescue by setting up [LightScribeSoftware.org](http://LightScribeSoftware.org) (<http://lightscribesoftware.org>). Click the Free Software link here to find direct links to the Windows 8-compatible versions of both the LightScribe System Software (the **drivers**, basically), and LightScribe Simple Labeler and LightScribe Template Labeler, which are the labelling tools we suspect you really want.

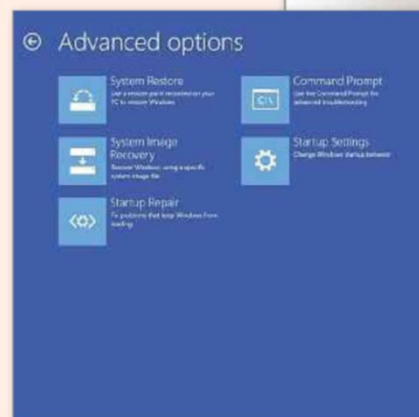
## Will a system image include Windows 8.1 updates?

**Q** I bought a new Windows 8 laptop and paid for the upgrade to 8.1, as my internet is too slow for the download. Since then I've applied all Microsoft's updates. Could you please clarify for me what happens if I now make a system image as a backup? Will it include the 8.1 upgrade and all the other updates or would it take me back to Windows 8 if I used it to recover my system? The computer's supplier cannot tell me one way or the other. How should I proceed?

Ian Sneddon

**A** You didn't say which system-imaging software you're using, but a system image is an exact replica of your computer's setup. As such, making one after having installed Windows 8.1 and its various updates means that your image will include these.

Microsoft now downplays its own system-imaging tool, and it's now much harder to find in Windows 8.1. To create



Create a system image in Windows 8 via Control Panel then restore your PC from a system image via Troubleshoot's advanced options

an image, launch Control Panel (type **Control** from the Start screen then click Control Panel), then click 'System and Security' followed by File History. Next, click System Image Backup at the bottom left and follow the prompts.

Restoring an image requires rather more steps. First, open the Charms bar (press Windows key+C) and click Settings followed by 'Change PC settings'. Now click 'Update & recovery',



Recovery and then 'Restart now' under the 'Advanced startup' heading.

When your PC restarts, click Troubleshoot followed by 'Advanced options' and then System Image Recovery. Choose your user account, type your password and click Continue. Now choose the 'Select a system image' button, click Next, select the relevant image file and then follow the prompts to complete the restoration process.

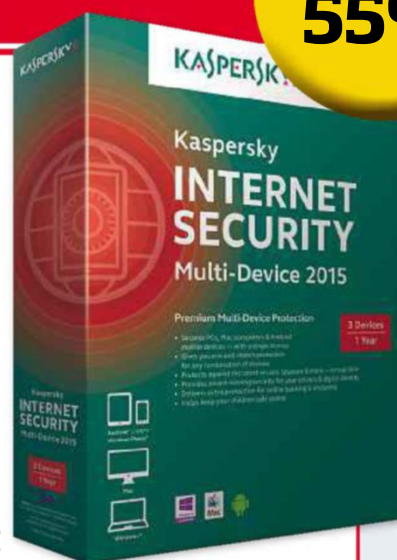
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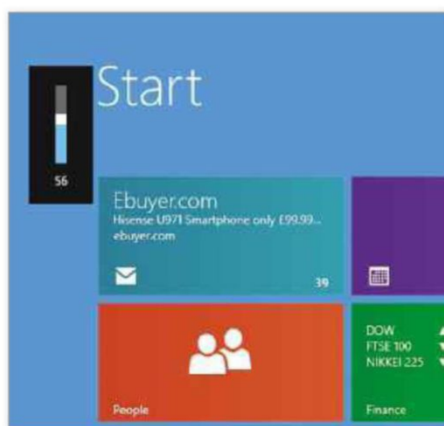
## What is this odd slider in Windows 8?

**Q** I have recently been experiencing a problem with Windows 8 and wonder if it is a Windows issue or if my computer has contracted a virus (though my virus-checker has found nothing wrong).

I noticed a small window appear at the top left of my screen. It's tall and slim and looks very much like a volume-control slider, complete with a number value. I tried clicking it to remove it – to no avail. More worrying is that whenever this window is present, I lose the Charms bar. It seems the only way I can shut down is to switch off at the mains. It's not always present, and I can use my PC for a few days before the problem comes back again. I'm on the verge of re-installing Windows. Any ideas?

John Osborne

**A** We're surprised that you've encountered this only recently because it is a feature that's built



**This icon appears in Windows 8 when you are controlling the volume of an input device**

into Windows – and it is indeed a volume-control slider. However, this particular slider appears only when using volume controls on input devices, such as keyboards or Skype headsets, so we wonder if you've bought something like this recently?

Even so, this wouldn't explain why the control apparently becomes stuck on your Start screen – but we'll explore that in a moment. First, check Windows 8's settings to see how long it's configured to display. Press Windows+C to open the Charms bar then click Settings, 'Change PC settings', 'Ease of Access' then 'Other options'. Check the setting under the 'Show notifications for' heading: it might be set to '5 minutes', for example, which would explain why the slider appears to be 'stuck'. In which case, choose a shorter duration.

Alternatively, check there's nothing inadvertently pressing down on one of the aforementioned peripherals' volume buttons. For example, if you have a headset lying around on your desk, perhaps a book is resting on its volume control. You could also try updating the drivers for these devices, which you'll be able to download from the manufacturers' websites.

## How do I delete typing mistakes from my browser history?

**Q** Occasionally, when entering my password into my Hotmail account, my finger slips and I end up typing a partial password into the email address box. This in itself is not a problem as it can be corrected. However, the next time I sign in I'm shown several choices for my email address and, of course, these choices contain all or part of my password. If someone else uses my laptop to check their Hotmail account, they can see what are clearly my passwords. Double-clicking on the addresses doesn't give me

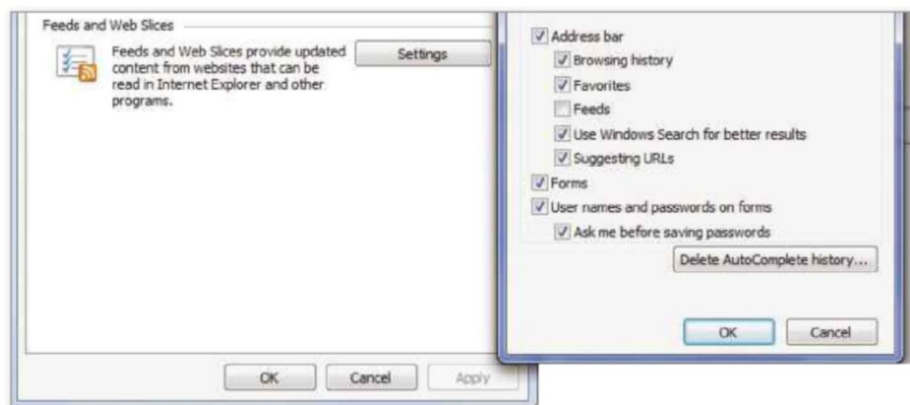
the option to delete. Is there some way to get rid of them?

Kath Thompson

**A** You didn't tell us which browser you're using but these mistyped entries are recorded by a feature known as AutoComplete, and they're usually pretty easy to delete. In Internet Explorer, for example, click in the relevant field then tap the down arrow key once to open a dropdown menu containing the AutoComplete entries. Now tap the down arrow again

to highlight the unwanted entry and press the Delete (Del) key on your keyboard.

If there are a lot, it's quicker to delete them in one fell swoop. To do this, click the cog icon at the top right and choose 'Internet options'. Now select the Content tab and click the Settings button in the AutoComplete section. Finally, click the 'Delete AutoComplete history' button. While you're here, you can – if you want – stop Internet Explorer from recording these entries, by removing ticks from the various boxes – 'User names and passwords on forms' in this case. Now click OK (twice) to return to Internet Explorer.



**You can delete your AutoComplete history in the Internet Options section of Internet Explorer**

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26 Nov

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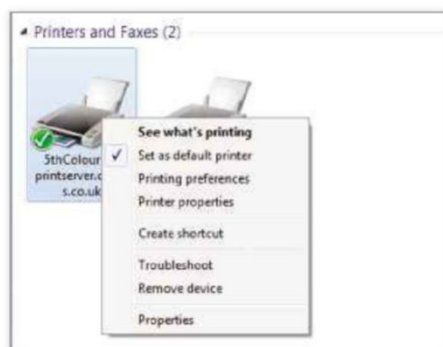
# Printers

## Prevent paper jams, fix dried cartridges and get rid of print-queue problems

### Windows sends jobs to the wrong printer

If you keep seeing the wrong printer in the Name field when you try to print a document, it's because you've got the wrong default printer set up in Windows. This can happen, for example, if you switch to a new printer and forget to change the default, or if you install PDF or virtual-printing software.

To make your current printer the default again, go to Control Panel, click 'Devices and Printers' (or 'View devices and printers' in the Category view), right-click your printer and then click 'Set as default printer'. To remove an old or unused printer from the 'Devices and Printers' list, right-click it, then click 'Remove device'.

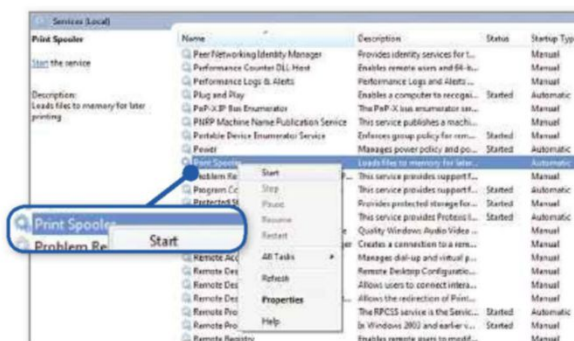


Change your default printer and remove old devices in the Control Panel

### Print jobs don't appear in the print queue

If you're trying to print documents but they don't appear in the print queue, it may be because Print Spooler is switched off in Windows. This service temporarily stores your documents when they're sent to be printed, letting you get on with other activities on your PC. It's easy to switch Print Spooler off inadvertently and some have found it switches off when they upgrade to Windows 8.1. To switch it back on, type **Run** into the Start menu and press Enter. Type **services.msc**, press Enter, then find Print Spooler in the list of services. Next, right-click it and click Start.

The problem may also be caused by a backlog of print jobs that are being held



Switch on Print Spooler in the Services window if your documents don't appear in the print queue

in a queue and can't be cancelled. To clear the queue, right-click Print Spooler and click Restart.

### Documents in print queue don't print

If you're sending documents to the print queue, but they're not printing, and restarting the Spooler doesn't solve the problem, then you might need to disable Bi-Directional Printing. This is a useful Windows service for people who have more than one PC on the same home network – it shows real-time information about what's being printed, who else is using the printer and so on. But if you're not on a network, it may stop your print jobs.

If this is the case, on your PC or printer display you'll see the error message 'User Intervention is Required'. To fix it, go to the Control Panel, click 'Devices and Printers', right-click your printer, then

click Properties. In the Ports tab, untick 'Enable bidirectional support'.

### Paper keeps getting jammed

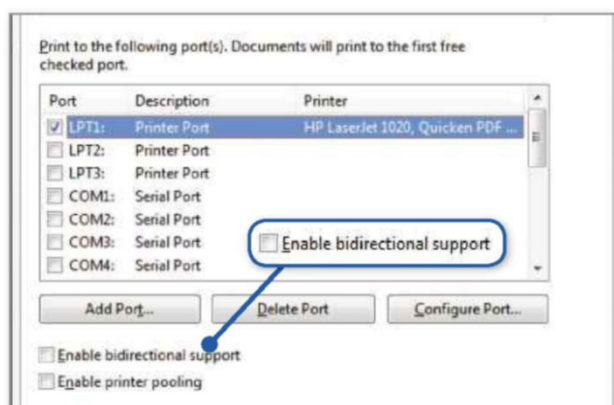
Regular paper jams are among the biggest bane of any printer owner's life. If your printer is prone to clogging up, there are a few things that could be causing it. First, make sure your paper tray is never full to capacity and that the paper fits

snugly against the plastic slider in the tray. If the slider isn't tight against the paper, the paper may feed into the printer at an angle, causing a jam. Also double-check that every sheet in the printer is the same size. If you need to print pages of different sizes, print them as separate jobs, replacing the paper each time. Finally, make sure your printer software is set to print the correct page size.

### Print quality is poor

If your printed pages are blighted by streaks, faded content and generally poor-quality reproduction, it's usually because the nozzles on your print cartridges have become clogged with dry ink. This is inevitable with most cartridges, for the simple reason that ink is a liquid and dries over time – particularly if you don't use your printer too often. Luckily, this is easy to fix. Remove the affected cartridges from your

printer and place them in shallow hot water (just enough to cover the nozzle) for around 20 minutes. Swish the cartridge around in the water a little, and the water should turn slightly inky as the nozzles unblock. You can dab the cartridge with a paper towel to help dry it, but leave it to dry completely before you put it back in the printer.



Untick 'Enable bidirectional support' if your printer is not on a network





## Lowering the Cost of Printing

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No.336 Black 5ml	£12.99
No.337 Black 11ml	£18.99
No.338 Black 11ml	£18.99
No.339 Black 21ml	£25.99
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- Total Digital Photography Magazine

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- Computer Upgrade Magazine

## Digital

PHOTOGRAPHY

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## Ink Test Winner!

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T008 Colour	<del>£23.99</del> <b>46ml</b>	<del>£4.99</del> <b>50ml, 3 for £13.99</b>	Photo 790, 870, 890, 895, 915
T009 Colour	<del>£29.99</del> <b>60ml</b>	<del>£4.99</del> <b>70ml, 3 for £13.99</b>	Photo 900, 1270, 1280
T026 Black	<del>£39.99</del> <b>16ml</b>	<del>£3.99</del> <b>20ml, 3 for £10.99</b>	Photo 810, 830, 830u, 825, 835
T027 Colour	<del>£29.99</del> <b>46ml</b>	<del>£4.99</del> <b>50ml, 3 for £13.99</b>	
T040 Black	<del>£44.99</del> <b>17ml</b>	<del>£3.99</del> <b>20ml, 3 for £10.99</b>	C62, CX3200
T041 Colour	<del>£39.99</del> <b>37ml</b>	<del>£4.99</del> <b>46ml, 3 for £13.99</b>	
T050 Black	<del>£32.99</del> <b>16ml</b>	<del>£2.99</del> <b>16ml, 3 for £7.99</b>	440, 640, 660 Photo 700, 1200
T051 Black	<del>£36.99</del> <b>24ml</b>	<del>£2.99</del> <b>26ml, 3 for £7.99</b>	740, 760, 800, 850, 860, 1160
T052 Colour	<del>£36.99</del> <b>30ml</b>	<del>£3.99</del> <b>39ml, 3 for £10.99</b>	440, 640, 660, 740, 760, 1160
T053 Colour	<del>£26.99</del> <b>43ml</b>	<del>£3.99</del> <b>48ml, 3 for £10.99</b>	Photo 700, 750
T0441-4 Set of 4	<del>£44.99</del> <b>14.99</b>	<b>3, 3 sets for £42.99</b>	C64, C68, C84, C86,
T0441-4 Set of 4	<del>£19.99</del> <b>13ml</b>	<del>£4.99</del> <b>13ml, 3 for £13.99</b>	CX3600/3650, CX4600, 6600
T0452-4 each	<del>£9.99</del> <b>8ml</b>	<del>£3.99</del> <b>13ml, 3 for £10.99</b>	
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T0481-6 each	<del>£15.99</del> <b>13ml</b>	<del>£3.99</del> <b>13ml, 3 for £10.99</b>	RX500, RX600, RX620, RX640
T0540-9 Set of 8	<del>£109.99</del> <b>35.99</b>	<b>3, 3 sets for £99.99</b>	Photo R800, R1800
T0540-9 each	<del>£8.99</del> <b>13ml</b>	<del>£3.99</del> <b>21ml, 3 for £13.99</b>	
T0541-9 each	<del>£14.99</del> <b>13ml</b>	<del>£4.99</del> <b>21ml, 3 for £13.99</b>	
T0551-4 Set of 4	<del>£34.99</del> <b>14.99</b>	<b>3, 3 sets for £42.99</b>	Photo R240, R245
T0551-4 each	<del>£8.99</del> <b>6ml</b>	<del>£4.99</del> <b>6ml, 3 for £10.99</b>	RX420, RX425, RX520, RX525
T0552-4 each	<del>£8.99</del> <b>6ml</b>	<del>£3.99</del> <b>6ml, 3 for £10.99</b>	
T0591-9 Set of 8	<del>£99.99</del> <b>12.99</b>	<b>13ml Check Website.</b>	Photo R2400
T0591-9 each	<del>£12.99</del> <b>13ml</b>	<b>Check Website.</b>	
T0611-4 Set of 4	<del>£34.99</del> <b>14.99</b>	<b>3, 3 sets for £42.99</b>	D68, D88
T0611-4 each	<del>£8.99</del> <b>6ml</b>	<del>£4.99</del> <b>6ml, 3 for £13.99</b>	DX3800/3850, DX4200/4250
T0612-4 each	<del>£8.99</del> <b>6ml</b>	<del>£3.99</del> <b>6ml, 3 for £10.99</b>	DX4800/4850
T0711-4 Set of 4	<del>£34.99</del> <b>14.99</b>	<b>3, 3 sets for £42.99</b>	SK1001/0511/152002/05215
T0711-4 each	<del>£8.99</del> <b>7.4ml</b>	<del>£4.99</del> <b>7.4ml, 3 for £13.99</b>	SK4004/0415/515, D798/2120
T0711-4 each	<del>£8.99</del> <b>7.4ml</b>	<del>£3.99</del> <b>7.4ml, 3 for £10.99</b>	DX4004/4050/6000/7400/8400
T0791-6 Set of 6	<del>£74.99</del> <b>12.99</b>	<b>13ml Check Website.</b>	Photo 1400
T0791-6 each	<del>£12.99</del> <b>13ml</b>	<b>Check Website.</b>	
T0801-6 Set of 6	<del>£51.99</del> <b>19.99</b>	<b>3, 3 sets for £57.99</b>	P50, R265/285/360, RX560/585
T0801-6 each	<del>£8.99</del> <b>7.4ml</b>	<del>£3.99</del> <b>7.4ml, 3 for £10.99</b>	R65/650, PX700/710/800/810
T0870-9 Set of 8	<del>£74.99</del> <b>7.99</b>	<b>11.4ml Check Website.</b>	Photo R1900
T0870-9 each	<del>£7.99</del> <b>11.4ml</b>	<b>Check Website.</b>	
T0871-9 each	<del>£7.99</del> <b>11.4ml</b>	<b>Check Website.</b>	
T0961-9 Set of 8	<del>£74.99</del> <b>7.99</b>	<b>11.4ml Check Website.</b>	Photo R2880
T0961-9 each	<del>£9.99</del> <b>11.4ml</b>	<b>Check Website.</b>	
T1281-4 Set of 4	<del>£29.99</del> <b>14.99</b>	<b>14.99</b>	S22, SX125, SX130, SX235W,
T1281-4 each	<del>£7.99</del> <b>9.5ml</b>	<del>£4.99</del> <b>9.5ml</b>	SX4200W/4250W/435W/445W,
T1282-4 each	<del>£7.99</del> <b>3.5ml</b>	<del>£3.99</del> <b>3.5ml</b>	BX305F
T1291-4 Set of 4	<del>£42.99</del> <b>16.99</b>	<b>16.99</b>	SX235W/4200W/4250W/435W/445W,
T1291-4 each	<del>£10.99</del> <b>11ml</b>	<del>£5.49</del> <b>11ml</b>	SX525W/60535W/6035F, B42M20
T1282-4 each	<del>£10.99</del> <b>7ml</b>	<del>£4.99</del> <b>7ml</b>	BX305F/320F/4525W/4525F/45PD
T1291-9 each	<del>£20.99</del> <b>26ml</b>	<b>26ml</b>	R3000
T1591-9 each	<del>£14.99</del> <b>17ml</b>	<b>17ml Check Website.</b>	R2000
T5801-9 each	<del>£41.99</del> <b>90ml</b>	<b>90ml Check Website.</b>	Pro 3800, 3880
No.16 Set of 4	<del>£24.99</del> <b>14.99</b>	<b>14.99</b>	Workforce WF-2010W, 2510WF,
No.16 Black	<del>£6.99</del> <b>5.4ml</b>	<del>£4.99</del> <b>5.4ml</b>	2520NF, 2530WF, 2540WF
No.16 CMY, each	<del>£5.99</del> <b>3.1ml</b>	<del>£3.99</del> <b>3.1ml</b>	Expression Home XP300,
No.18 Set of 4	<del>£22.99</del> <b>14.99</b>	<b>14.99</b>	XP102, 202, 205
No.18 Black	<del>£6.99</del> <b>5.2ml</b>	<del>£4.99</del> <b>5.2ml</b>	XP302, 305, 402, 405
No.18 CMY, each	<del>£5.99</del> <b>3.3ml</b>	<del>£3.99</del> <b>3.3ml</b>	
No.24 Set of 5	<del>£44.99</del> <b>20.4XL</b>	<b>Set of 6 £69.99</b>	Expression Photo
No.24 B.L.C.M., each	<del>£7.99</del> <b>5.1ml</b>	<del>£11.99</del> <b>8.9ml</b>	XP750, 850
No.24 CMY, each	<del>£7.99</del> <b>4.6ml</b>	<del>£11.99</del> <b>8.9ml</b>	
No.26 Set of 4	<del>£30.99</del> <b>20.26XL</b>	<b>Set of 4 £54.99</b>	Expression
No.26 Black	<del>£8.99</del> <b>8.2ml</b>	<del>£14.99</del> <b>9.2ml</b>	Premium
No.26 Photo Black	<del>£7.99</del> <b>4.7ml</b>	<del>£13.99</del> <b>8.7ml</b>	XP600, 605,
No.26 CMY, each	<del>£7.99</del> <b>4.5ml</b>	<del>£13.99</del> <b>8.7ml</b>	XP700, 800



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2		Plusnet: Broadband & Calls	<b>£9.99</b> (£2.50 for 12 months)	12 months	17Mbps max speed	∞ unlimited	<b>£30.00</b>
3		TalkTalk: Broadband	<b>£3.50</b> (HALF PRICE for 6 months)	12 months	16Mbps max speed	∞ unlimited	<b>£31.50</b>
4		Fuel: Broadband	<b>£4.00</b> (HALF PRICE for 6 months)	12 months	16Mbps max speed	∞ unlimited **	<b>£36.00</b>
5		Sky: Broadband & Calls	<b>£7.50</b> (HALF PRICE for 12 months)	18 months	17Mbps max speed	∞ unlimited	<b>£45.00</b>
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# Jargon Buster

**ADF** Automatic Document Feeder. A device that feeds sheets of paper into a photocopier or scanner, one by one.

**App launcher** An app that changes how the Android home screen looks and works, especially for managing and opening apps.

**Beta** A version of software that's being tested. Beta versions are often released so problems can be ironed out.

**BIOS** Basic Input-Output System. Essential software built into every PC that connects the vital components. It's visible for a few seconds when the PC starts.

**Bitmap** A type of image file made up from a grid of pixels. Bitmaps have a fixed size and cannot be resized without losing quality.

**Botnet** A group of infected computers connected together via the internet, and used to infect other PCs, send junk email and perform other criminal tasks.

**Brute-force attack** A method of breaking encryption by simply guessing all possible passwords until the right one is found.

**CMYK** Refers to the four coloured inks found in many printers: Cyan, Magenta, Yellow, and Black.

**CPU** Central Processing Unit. Another term for a PC processor.

**Crowd-funding** Obtaining money from a large group of people, usually online, rather than from more traditional sources.

**DisplayPort** A new socket for connecting monitors that's still relatively rare.

**Distro (Distribution)** A version of the Linux operating system and the programs that go with it, ready to install.

**Download mirror** A website that contains the same downloadable software as others, bundled in a branded installer.

**Driver** A file that tells Windows how to work with a peripheral device.

**DTP** Desktop Publishing. Creating documents, books, leaflets or other printed matter on a computer.

**Dual core** When two processors are combined into a single chip.

**Duplex printing** Printing on both sides of a sheet of paper.

**Expansion card** A card that can be fitted inside a desktop PC to add extra functions or sockets.

**Feedback** The tactile response that the keys on a keyboard give when they've been pressed.

**HDMI** High-definition media interface. A type of connection that transmits high-definition video and audio signals. It is found on many new TVs, media PCs and high-definition products such as Blu-ray disc players and the PlayStation 3 and Xbox 360 games consoles.

**Megapixel** A measure of the amount of detail that can be recorded by a digital image. A one-megapixel image is made up of a million dots (pixels).

**MicroSD card** A small type of memory card. Can be converted to SD size using an adapter.

**Mirror site** See Download mirror.

**Motherboard** The main circuit board inside every PC into which all other parts connect.

**MP4** A type of digital movie file often used for portable players.

**Multifunction Printer (MFP)** A combined printer and scanner.

**Near-field communication (NFC)** A technology that allows two devices to communicate by being touched together or placed near to each other. Can be used to pay for items in some shops using compatible mobile phones.

**Noise** Visible dust-like speckles that appear in some camera and TV images. In photos, they are caused by the camera's own sensor. In TV images, they can be caused by the TV's processor or by a flaw in the broadcast signal itself.

**Open source** Software that can be modified by anyone, rather than just by the employees of the company that created it.

**Overclocking** Making a CPU work faster to improve performance at the cost of it getting hotter and requiring more power.

**Partition** A large hard drive can be split into two or more partitions or 'virtual' drives. Once partitioned, each section is treated by Windows as though it were a completely separate, smaller hard drive.

**Phablet** A smartphone with a screen size that is midway between that of a typical smartphone and a tablet.

**Processor** The processor – or central processing unit – is the brain of a computer. Processors now are tiny and are capable of carrying out millions of calculations every second.

**Quad core** A computer that has four processors on a single chip, which allows it to operate faster than standard (single-core) computers.

**RAM** Random-access memory. The computer's working area, used for data storage while the PC is switched on. Its capacity is measured in megabytes (MB): the more memory your PC has, the more things it can process simultaneously and the faster it will seem. Any information in RAM will be lost when the power is switched off.

**Ransomware** Malware run by hackers who take over your PC and demand a payment to release it.

**Raw** A format for digital photos that stores the image exactly as the camera captured it, without compression or optimisation, but which is not compatible with all image editors.

**Resolution** The amount of detail shown in an image, whether on screen or printed.

**Rooting** Performing tasks on Android devices that aren't permitted by the manufacturer.

**Sandbox** A digital barrier that protects an operating system.

**SD card** Secure Digital card. A popular type of memory card.

**Sensor** The part of the camera that captures each image. Analogous to a piece of film on a film camera.

**SIM** Subscriber Identity Module. The smart card used by all digital mobile phones. The SIM card carries the user's identity and phone number for accessing the network.

**SSD** Solid-state drive. Storage that, unlike a hard drive, uses no moving parts. Faster but more expensive than conventional hard drives.

**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.

**Travel** The distance the keys of a keyboard have to be pressed before the keystroke is recognised.

**Two-factor authentication** A system that uses two different means to identify the user. For example, a PIN in addition to a password.

**USB 3.0** A faster version of the USB standard used to connect devices to a computer.

**Vector** Vector graphics are described (eg 'a line from x to y') rather than comprising a finite number of dots. Because they are rendered as smooth lines, they can be enlarged to any scale without a loss of quality, unlike bitmapped images which will become jagged when blown up.

**Virtual desktop** A desktop environment which you can expand beyond the physical confines of your PC's screen.

**VPN** Virtual Private Network. A technology for keeping all internet communication safe and private even on insecure networks.

**Web apps** Programs that aren't stored on your computer, but on a web server instead and run through your web browser.

# The Final Straw

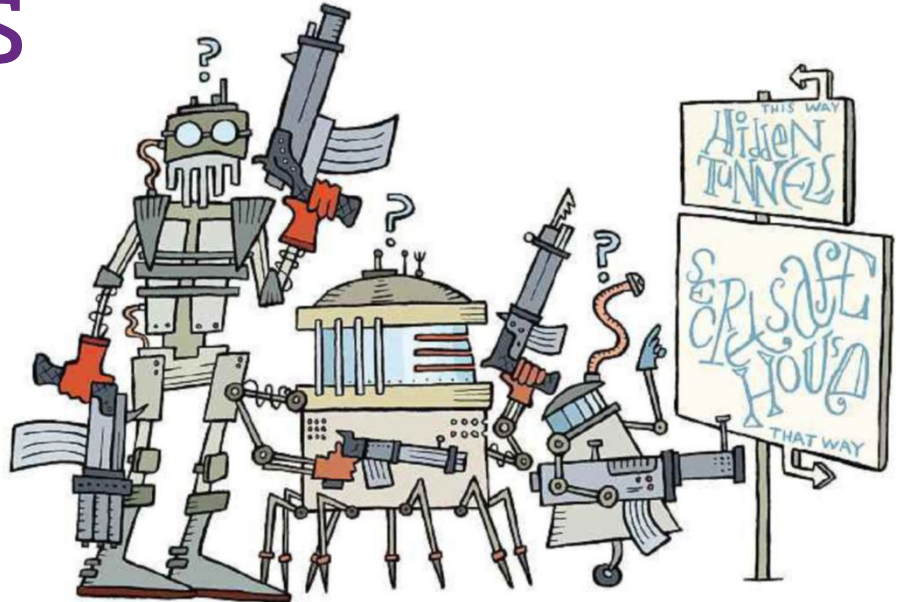


STUART ANDREWS is  
Computeractive's Mr Angry  
@SATAndrews

In this issue Stuart Andrews' eyes boggle trying to read. . .

## Captchas

I try to think of Captchas as a necessary evil. It doesn't help that I see them most when I'm failing to remember which stupidly over-convoluted password I've created for some website or other. After three or four misses the dreaded Captcha kicks in, giving me a couple of distorted, partly obscured words to work out. I know Captchas are fighting the good fight for truth and justice, stopping fiendish **brute-force attacks** on my account. But the problem is that they don't just stop the **botnets** – they're pretty effective at stopping me as well.



“  
The distortions are  
getting stronger, the  
words stranger and  
the combinations make  
no sense  
”

In theory, Captchas work by giving us a task that humans are good at, but baffles computers – one which involves separating merged letters, seeing them in context and looking past peculiarities in their form. Your average botnet might do a brilliant job of working out complex equations, but it's rubbish when it comes to deciphering these spidery squiggles. This, it strikes me, is a weakness science-fiction films should build into their plots. If we littered our cities with safehouses and underground tunnels then turned every sign into a Captcha, it would give the next army of killer droids a hard time.

Sadly, most of us wouldn't be able to read them either. I'm not sure whether

I'm no good at Captchas or they're just getting worse, but I'm finding those sequences of letters increasingly difficult to make out. Sometimes it takes me two goes, sometimes three or four, but every time I see a Captcha my heart sinks.

If it's bad for me, then it's worse for other people. Captchas are a nightmare for the blind and visually impaired. Not only can they not see the distorted shapes properly, but the very things that make Captchas so good at thwarting botnets also foxes the screen-reader software they rely on. True, some sites offer a spoken readout, but that hits those with both hearing and visual impairments. Some Captchas don't even provide it.

This may be because the spoken readout makes Captchas more vulnerable. Botnets might not be great at deciphering Captchas, but they can run speech-recognition software, and it's not a hard day's work for a hacker to code something that triggers the readout then runs software to decode it. Captchas are also under attack from hackers and Artificial Intelligence (AI) specialists, who see them as something of a challenge. In 2013, the AI company Vicarious claimed it had developed software that could recognise up to 90 per cent of Captchas. While designed to recognise objects in

photos, videos and visual data, it was also a dab hand at recognising warped and warty-looking words.

Maybe that's why Captcha systems are now playing hardball. The distortions are getting stronger and the words stranger. The combinations make no sense, and with no context I just don't have a clue. Google's popular reCAPTCHA system might also be to blame. It cleverly uses our not-so-awesome human powers to digitise books, getting us to recognise words that have Google's text-recognition software stumped. Bad news – they have me baffled too. If forgotten passwords make me stressed, then Captcha pretty much doubles the exasperation. I'm sorry, Captcha, but your protection is just getting in the way.

Still, for once Microsoft might be offering a better solution. Forget words, its researchers are saying, we could use another thing humans are good at but computers can't hack – telling photos of cats and dogs apart. A world where we could get through security with cheerful pics of pups and kittens might be one where I'm a bit less angry, and where Captcha might not be the final straw.

✉ Do you agree with Stuart?  
Let us know at [letters@computeractive.co.uk](mailto:letters@computeractive.co.uk)





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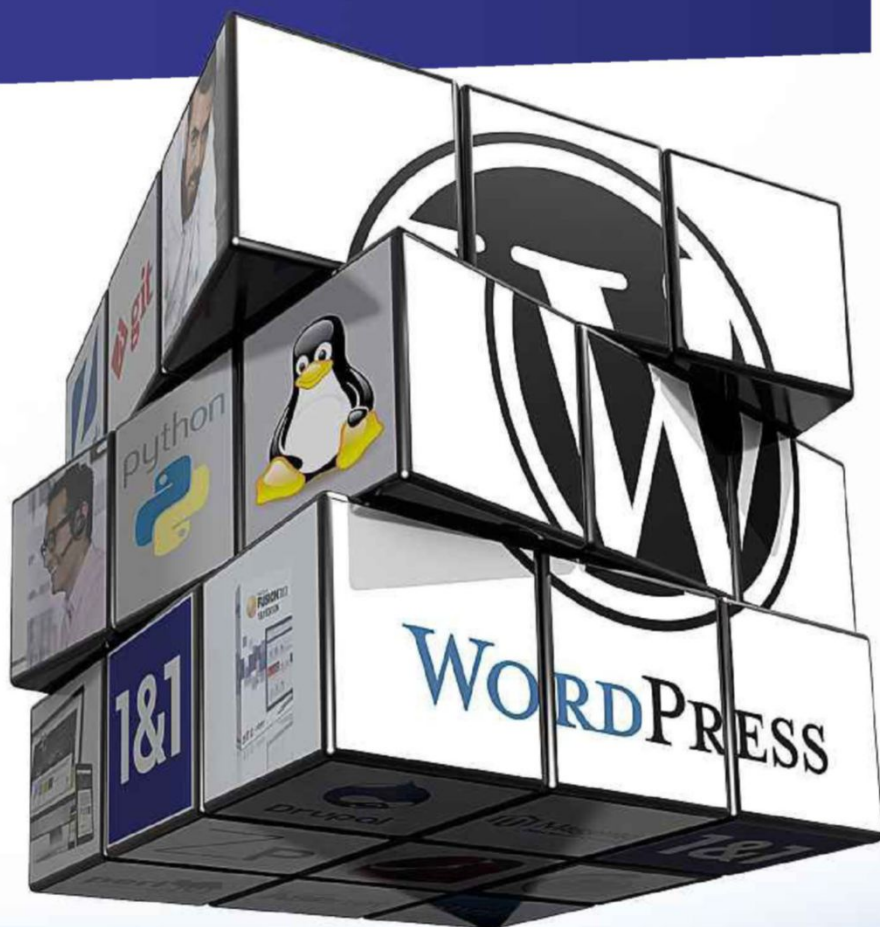
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