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From the Editor

Every new year I have the same resolution – to be more choosy about what I download. And every year I break it before the Christmas decorations come down. The problem is that, faced with so many new programs, apps and tools, curiosity takes over, my resistance crumbles, and I embark on a download spree.

The inevitable result is that I end up with much that's substandard. I'm sure many of you do, too. So in our Cover Feature (p50) we've compiled a more discerning download list, preparing you for 2015. As well as essential new software and apps, you'll find free security tools to fight upcoming threats, must-read ebooks, exciting betas and brilliant games. It's your companion for the next 12 months.

One program I've already downloaded is the 2015 version of Kaspersky Internet Security, which has won our past four antivirus group tests. You'll find secret tips for this software on page 48, and an exclusive reader offer (half price!) on page 68.

Daniel Booth
editor@computeractive.co.uk

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COVER FEATURE P50

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Computeractive offer of the fortnight

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News

The top stories in the world of technology

New Skype tool translates languages as you speak

Skype has released the beta version of Translator, its groundbreaking tool that translates languages being spoken in real time.

It provides instant spoken and text translations as you chat with someone via a video link (see screenshot right), although for now it only translates Spanish into English, and vice versa. It works on Windows 8.1 and 10.

It's been trialled on school children in Mexico City and Tacoma in the US state of Washington, with one classroom speaking Spanish and the other English.

The program works by comparing your speech with millions of recorded audio samples. It recognises and removes speech "disfluencies", such as "um" and "er".

Announcing the launch on the Skype blog (www.snipca.com/14865), Gurdeep Pall wrote: "Skype Translator relies on machine learning, which means that the more the technology is used, the smarter it gets".

He added: "This is just the beginning of a journey that will transform the way we communicate with people around the world. Our long-term goal for speech translation is to translate as many languages as possible on as many platforms as possible".

Skype hopes to make Translator work with 40 languages, including Klingon, which will delight the most dedicated *Star Trek* fans.

To try the Skype Translator beta, you have to register on the site (www.snipca.com/14861). Skype will ask you which device you currently use it on, and which languages you're "interested in". Selecting these will help Skype decide which languages to add to the service next.

We will test Translator in an upcoming issue.

COMMENT

Skype Translator is a landmark moment in technology because, like time travel and teleportation, an instant-translation machine has always been seen as one of the key inventions that symbolise a more advanced future. Even before this launch we loved Skype enough to name it our favourite program ever (see Issue 434). Now, with the launch of a tool that has greater potential than anything we've seen in years, we'll be able to sing its praises to people in Spain, Argentina and Ecuador. *¡Fantástico!*

It's official: Windows 10 will be 'awesome'

The developers working on the next version of Windows 10 are so excited by what it contains they have codenamed it "FBL_AWESOME".

Writing on the Blogging Windows blog on 17 December (www.snipca.com/14858), Microsoft engineering manager Gabe Aul admitted that the name "is a bit corny", but that it acts as a "daily reminder to ourselves that we want this build to be great".

His comments came a couple of days after the latest version of Windows 10 was leaked online. It includes several new features, such as a fully integrated version of the voice-activated personal assistant Cortana (see screenshot).

Microsoft is expected to unveil the Consumer Preview of Windows 10 on 21 January.

The company says more than 1.5 million people are testing Windows 10, the most beta testers for any version of Windows to date. Around 450,000 of those are using Windows 10 every day.

You'll like this... Britain's oldest sci-fi film, made in 1913, is available to watch online (www.snipca.com/14860)

...but not this Complaints about gadget warranties doubled in the past year (www.snipca.com/14859)

Microsoft sues phone scammers who give bogus tech support

Microsoft is fighting back against one of the most common and irritating phone scams of recent years, by suing one of the companies allegedly behind it.

In the scam, targeted people receive a phone call from someone purporting to be a tech-support worker from Microsoft. The caller claims there is a problem with the user's PC, and asks to take remote control of it so they can fix it.

They then demand money to resolve this non-existent problem, and may also install malware and steal personal info, such as passwords and bank-account details.

Over the past few years hundreds of *Computeractive* readers have told us they've received such phone calls.

In December, Microsoft's Digital Crimes Unit filed a civil lawsuit in the Central District of California against OmniTech Support and other firms for "unfair and deceptive business practices and trademark infringement".

Outlining the lawsuit on its blog (www.snipca.com/14852), Microsoft said: "In some instances, OmniTech has actually created security issues for victims by gaining access to their PCs and installing malicious software, including a password grabber that could provide access to personal and financial information".

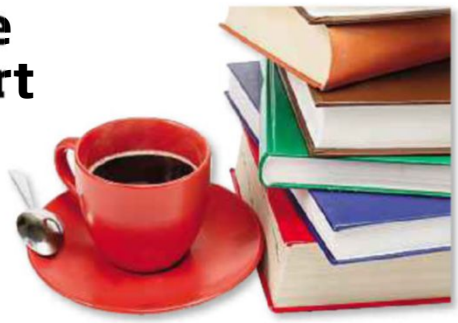
It warned that while these scammers "don't discriminate", elderly people are particularly vulnerable: "According to the FBI, senior citizens are often more trusting and con artists exploit these traits".

In the blog post Microsoft gave advice on how to avoid being scammed: "Never provide credit-card or financial information to someone claiming to be from Microsoft tech support".

Microsoft added that it had received more than 65,000 complaints about tech-support scams since May.

You can report scams to Microsoft using the company's online form: www.snipca.com/14853.

Make libraries more like coffee shops, says report



Public libraries must emulate coffee shops by offering free Wi-Fi, says a new report.

It's one of the main recommendations made in the Independent Library Report, commissioned by the Departments for Culture, Media and Sport, and for Communities and Local Government.

The report said that a "Wi-Fi connection should be delivered in a comfortable, retail-standard environment, with the usual amenities of coffee, sofas and toilets, and offer, in addition, such new services as would make the library a vibrant and attractive community hub".

As well as free Wi-Fi, libraries should offer more e-lending, so people can read books on tablets and e-readers, the report said.

It added: "By not providing Wi-Fi and high-quality computer facilities, libraries often present a negative image of being old-fashioned places that have little relevance in today's society".

William Sieghart, author of the report, told *The Independent* that he finds it "astonishing" that one-third of England's libraries (around 1,000) don't have Wi-Fi.

He said that while libraries remained a vital part of a community, with 35 per cent of people in England still using them, there needs to be a "re-invigoration" of the library network in order to ensure they survive in the digital age.

The report's key recommendation is the creation of a taskforce that will work with local authorities to "improve and revitalise" libraries. It will meet for the first time in February 2015.

Do you agree that libraries should be more like coffee shops? Let us know: letters@computeractive.co.uk

IN BRIEF

TWITTER 'SHOULD BAN RACIST WORDS'

A Labour MP said Twitter should block racist words after she received 2,500 anti-semitic messages on the site in an internet campaign against her by white supremacists. Talking to the *Daily Telegraph* Luciana Berger, shadow minister for public health, said that Twitter should ban "racist words which aren't allowed to be printed in newspapers or broadcast on TV and that could never be used in a positive way – such as kike".

NEW IPLAYER RADIO APP FOR TABLETS

The BBC has redesigned its iPlayer Radio app to make it easier to use on tablets. While the app was previously available for tablets, using it wasn't easy because it had been built specifically for phones. It also contains more information about programmes on the schedule pages. You'll find links to the new version for Android tablets, the iPad and Amazon Fire on the BBC's Internet Blog: www.snipca.com/14821.

Tomorrow's world

The next time you pop into your nearest DIY store, don't be surprised if you're served by a robot. A hardware store in San Jose, California, is now using an "autonomous navigational robot" called the OSHbot to help customers find what they want. If the android assistant proves popular in the US, it may soon appear on this side of the Atlantic. Watch it in action at www.snipca.com/14708.

IN BRIEF

JEANS THAT BLOCK PASSPORT HACKERS

Antivirus company Symantec is working with online clothing company Betabrand to make a pair of jeans and blazer that use a silver-based material to block wireless signals. The trousers are intended to prevent thieves from hacking into passports and contactless payment cards containing radio frequency identification RFID. They are due to go on sale in February.

NEW US APP SHOWS DRIVING LICENCE

Residents in the US state of Iowa could soon be able to display their driving licence on their phone using a free app, the first of its kind in the world. It will contain the same information as the current plastic card, and be considered a valid form of ID. The app will be trialled by Iowa state employees over the next six months. If successful, it will be made available to the public next June.

Skype and Facebook make older people 'feel less lonely'

Using websites like Skype, Facebook and Twitter helps elderly people feel less lonely, a new study claims.

Researchers who conducted the two-year study also said that regularly using a computer can boost brain power and learning capabilities.

The project, called Ages 2.0, was led by the University of Exeter, in partnership with Somerset Care Ltd and Torbay & Southern Devon Health and Care NHS Trust.

The aim was to test whether the internet offers a tool for "promoting active ageing".

Researchers split two groups of people aged between 60 and 95, all either receiving care in the community or living in a care home.

Participants in one group were trained how to use social networks and Skype on a touchscreen PC, while the other group received no training to act as a control.

Those who used the web said they felt more confident, engaged more in social activity and had a stronger sense of personal identity.

They also revealed that talking to friends and relatives on Skype about shared interests made them feel less isolated.

Researchers say these positive feelings led indirectly to overall better mental health and physical well-being.

Dr Thomas Morton, psychology lecturer at the University of Exeter, said: "People who are socially isolated or who experience loneliness are more vulnerable to disease and decline".

He added: "For these reasons finding ways to support people's social connections is a really important goal. This study shows how technology can be a useful tool for enabling social connections, and that supporting older people in our community to use technology effectively can have important benefits for their health and well-being".

Do you agree that using the web makes elderly people feel less lonely? Let us know: letters@computeractive.co.uk

New GCHQ app to encourage next generation of code-breakers

The UK's electronic monitoring agency GCHQ has released a free app in order to encourage teenagers to pursue a career in cyber-security.

Called Cryptoy, it teaches children "about the mysterious world of cryptography" by telling the story of four famous codes through history, including Enigma, which was cracked at Bletchley Park during World War Two.

GCHQ hopes to show how much fun children can have experimenting with cryptography, writing messages in code, then challenging others to decipher them.

A GCHQ spokeswoman said the app is intended as a "fun teaching aid" to help 14 to 16 year olds studying at the Key Stage 4 level.

The app is part of the agency's commitment to help "increase the uptake of STEM (Science, Technology, Engineering and Maths) subjects at schools".

Launching the app, Minister for the Cabinet Office Francis Maude MP said: "Famously, the Government recruited winners of a *Daily Telegraph* cryptic crossword competition

to work at Bletchley Park. Today, I'm pleased to announce a similarly creative solution in the hunt for expertise, but with a 21st-century spin".

Cryptoy is currently available only as an Android app (www.snipca.com/14738), though reports say GCHQ is working on an iOS version to launch next year.

What's new from Google

It's never a good sign when you hear an announcement at a train station beginning, 'We regret to inform you. . .' Google knows how common train delays are in the UK and has added updates about them to its Maps app for phones and tablets, pulling in real-time data from National Rail. If your train is cancelled, the app will suggest an alternative route using other trains and local buses.

Question of the Fortnight

What would BT buying EE mean for you?

There are fears that BT's planned purchase of mobile-phone network EE could lead to higher bills, though rural customers might benefit

BT's announcement in December of its intention to buy EE, the UK's biggest mobile-phone network, for £12.5bn sparked lots of business interest. The company's share price rose, and City investors spoke of "substantial cost synergies".

But what does the deal mean to customers of the two companies? First off, anyone on an EE contract will be automatically moved to BT.

The biggest concern is that BT will need to hike prices in order to finance the purchase. The company says significant cuts to a number of departments will help fund the deal, but some analysts value this saving at only £5 billion. Where will the rest of the money come from?

Another fear is that BT's customer service performance, already seen as poor, will sink even further. In Ofcom's latest report on customer satisfaction (www.snipca.com/14746), published in December, BT came bottom in the 'landline telephone' and 'fixed broadband' categories. EE didn't fare any better, coming last in the 'mobile' category.

BT has admitted that it struggled to cope with the rush of customers following the launch of TV channel BT Sport in 2013. Attempting to integrate EE's 24.5 million customers with its existing services could be just as problematic.

So who will win from the deal? One group who might benefit are people living in remote areas. In 2011, BT and EE worked together in Cornwall to deliver high-speed broadband via 4G to properties that were too remote to reach with underground cables. That collaboration ended in June 2012, but BT may now revive plans to reach customers in rural areas, thereby avoiding the expense of laying cable.

> "BT and EE customers are likely to be offered discounted deals to take broadband, mobile, landline and television"

However, analysts agree that BT's main motivation for wanting to buy EE is to fully compete with Virgin Media as a so-called 'quad-play' provider, offering broadband, mobile, landline and TV in one bundled package.

Existing BT and EE customers are likely to be offered discounted deals and freebies to buy bundled packages, but they offer value for money only if you take all four services. Switch to another company for one of those services and you'll probably end up paying more overall. This disincentive to switch is one of the main reasons companies prefer signing you up to bundled deals.

Experts warned customers not to be dazzled by BT's tempting offers. Dominic Baliszewski, telecoms expert at broadbandchoices.co.uk, said: "If you find yourself in this situation, don't feel rushed or pressured into signing up to a new contract. BT will likely offer some very attractive customer-retention deals, but it's always worth taking the time to compare and understand what you need versus what you want – especially in an increasingly complicated market".

That advice applies especially to EE broadband customers because it seems likely BT will try to lock them into 18-month contracts on its own fibre network. The move should be relatively painless, though, because EE already offers fibre broadband based on BT's network.

Whatever the final details of the deal, many EE customers will simply accept it and switch to BT with little fuss. But those put off by a potential deterioration in customer service or the restrictive nature of quad-play bundles should shop around. Rival companies like Sky and Virgin will be sure to offer competitive deals of their own to tempt you away.

THE FACTS

- BT is in talks with EE, Britain's biggest mobile-network group, to buy the company for £12.5bn.
- The two companies previously worked together in Cornwall to deliver high-speed broadband via 4G to remote areas.
- By purchasing EE, BT would be able to offer customers so-called 'quad-play' packages that bundle home phone, broadband, TV and mobile contracts into one deal.

Letters

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Replace Captchas Google, and all is forgiven

We read a lot about how Google invades our privacy, avoids paying tax and wants to be above British law. No doubt we'll soon discover that it is planning to enrich uranium in order to build its own nuclear arsenal.

But I'm prepared to forgive Google all its naughtiness if it manages to kill off the hated Captchas (News, Issue 439). Every time I see one my heart sinks. My eyesight is failing now, which makes the task of identifying the letters and numbers even harder. I find the letter B impossible to distinguish from the number 8. The same applies to the letter S and the number 5. I think ancient Greek would be easier to decipher. Please, Google, hurry up with your Captcha replacement.

Bill Michaels

Ban hands-free calls while driving too

I wholly endorse the points by Arthur Marshall in his Star Letter in Issue 438 ('Name and shame people who use phone while driving'). But I am wondering if many people would endorse my wish to see the law taken even further. I quote from an article which appeared in, I think, an AA magazine of yesteryear: "It is all very fine having your hands on the wheel, but it is of no use if your brain is not connected to your hands".

I defy anybody to fully concentrate on driving if, for example, they are discussing a difficult business matter. So I would like to see even hands-free calls being made illegal while a vehicle is moving. Built-in phones could be disabled when the engine is running apart from registering an incoming call, to which the driver could respond when safely at rest.

Roger Castle-Smith

Not convinced that I need Windows 10

Like many others I have installed Microsoft's Windows 10 Technical Preview. I cannot see any difference

between this version and Windows 8.1, which I would never buy. Even the backgrounds are the same. What is missing is any form of instruction literature from Microsoft outlining or selling the advances made since Windows 7.

I use my PC for serious work and am not interested in an app store full of games and gimmicks. Neither do I want gaudily coloured start screens or even a touchscreen. I have all of that on my smartphone. Microsoft should learn from Apple and have two separate operating systems - one for computers, one for mobile devices.

I am sure that Microsoft want to lure users of Windows 7 and indeed XP into buying the latest version. In that case, they should be busy buying advertising space in magazines such as yours, selling the differences that an investment in Windows 10 would bring. Right now they are not convincing many people

Tony Steele

Why couldn't Windows 8 have also been delayed?

How I chuckled when I read in Issue 439 that Microsoft has delayed the release of Windows 10. I wish they had also delayed the release of Windows 8, preferably by about 47 years. That way, I wouldn't have been tempted to upgrade from an operating system I loved (Windows 7) to one that I find as hard to operate as an octopus would buttoning a duffel coat.

David Lee

Let GCHQ read my emails - I've nothing to hide

Does Nathan Brazil have something to hide? Having read his Star Letter in Issue 439, it certainly seems that way. Otherwise, why would he be so concerned about GCHQ being able to monitor his emails?

I'm perfectly relaxed about the prospect of the James Bonds and Miss Moneypennys at GCHQ reading my emails because I've never planned to behead a British soldier, nor arranged to travel halfway across the world to wage jihad. If they intercepted my emails they would read me moaning about my football team to my brother; moaning about my job to my wife; moaning about my dodgy knee to my physiotherapist;

Let's hear more positive thoughts about tech

How refreshing it was to read Jane Hoskyn's positivity in Issue 439 (The Final Hurrah, 'Stop moaning about tech'). While I do enjoy Stuart Andrews's grumpiness, his anti-everything attitude can feel a little overwhelming. Not everything is as bad as he makes out. If he really hates tech that much, he could try living in a cave, rubbing sticks together for warmth.

Jane's words remind us that while tech sometimes fails, or drives us mad, overall we still benefit from its presence. In other words, despite crashing PCs, poor Wi-Fi signals and nasty ransomware, the net effect is still positive. How quickly we become complacent. We are using devices now that, just 10 years ago, would have felt like sci-fi. Fast forward 10 years, and I'm sure today's tech will seem prehistoric.

I would like to read more from Jane on the benefits of technology. Maybe she and Stuart Andrews could have a 'for and against' tug of war every issue? They could pick a subject, then tackle it from opposite ends of the spectrum.

Catherine Madeley

and moaning about Windows 8 to *Computeractive*. They would take one long at my emails and conclude that I am a moany old git. And they would be right. They would also conclude that I pose no threat to anyone.

Mr Brazil says that he'll happily show GCHQ his emails if they show him theirs. I have another proposition for GCHQ. I'll show them my emails if they promise to keep me, and brave members of our armed forces, safe from terrorist attacks.

James Barclay

Scammed by my wife!

Here is an idea that your lady readers may find interesting. It was invented by my wife. I have named it 'Free Bay' and 'Free Pal'. It works like this: my wife finds something she wants on eBay then says to me, "I want that, but I'm not an eBay member, so I'm not sure about this bidding procedure and I don't have a PayPal account. Could you do it for me?" It's obvious what happens next: I bid, I win, I pay and she gets the goods. What a great scam!

Peter Brice

Stop nagging me to buy things I don't want

Stuart Andrews's rant against recommendations being showered on you, before you have even had the chance to read or view your latest purchase, really rang my bell (The Final Straw, Issue 438). I am constantly nagged for reviews of purchases I have bought (and even reviews of packaging!). Then I am pestered to declare myself a student so as to obtain discounts because I previously bought certain volumes normally only used for study, such as *The Communist Manifesto* and books by John Maynard Keynes and Jeremy Bentham. My tastes are varied and I should like to be left in peace to indulge them when I can afford to, not harried and hassled into whatever channels the online merchants have chosen for me.

Susan Platter

STAR LETTER

Help! I need new Facebook friends

I was rather surprised to see that the Scottish Referendum was the most discussed UK topic on Facebook (News, Issue 439) because my friends on the site seemed more obsessed with mindless pap like *Come Dine With Me*, what they had for breakfast (mostly Shreddies) and earth-shattering observations about the weather ("I can't believe it's raining outside"). How I wish my friends possessed the political awareness to say something articulate and pertinent about Alex Salmond's mutinous plans.

When my friends aren't talking rubbish, they're posting daft photos of themselves. Some of these are just boring holiday photos. Having to look at all these is the modern equivalent of being forced to endure a neighbour's slideshow of their recent trip ("and here is the restaurant we went to every night"– so what, I don't care!).

To give my friends some credit, not many of these photos capture them drunk. However, I'm clearly in a minority. Facebook obviously thinks there are too many photos of tipsy twits because it is planning a 'drunk photo filter' to stop people posting them. According to the BBC's story (www.snipca.com/14719), Facebook will deter people posting drunk photos by asking: "Are you sure you want your boss and your mother to see this?" I wish Facebook would also introduce a 'tedious holiday photo' filter, that would ask the question: "Do you really want to bore your friends to sleep with another snap of yourself on the beach?"

It's clear that two options face me. One, to find a new set of Facebook friends, preferably some that don't require a dictionary when using words of more than one syllable; and two, to abandon Facebook and look in the 'real' world for like-minded souls. Which should I choose?

Douglas Graham

The Star Letter writer wins a *Computeractive* mug!

Royal Mail staff 'need to work much harder'

Instead of complaining about the competition, why doesn't Royal Mail compete better (Question of the Fortnight, Issue 438)? With vans, mostly half empty, calling at addresses everywhere in the UK, they have a huge advantage over other companies.

But what a lot of courier companies have realised is that they can offer doorstep collection quite cheaply, just as they offer the delivery of reasonably sized packages, based on weight rather than complex size calculations. It is totally unfair to say that Yodel and similar companies cream off urban work – I live in a rural area and I have not yet found a courier company that refuses to deliver or collect from me at the same price as if I lived in a city.

The Royal Mail's biggest problem is that the staff need to work much harder than they do now. They need to operate seven days a week and make their services easier to use. Nowadays even sending a letter involves weighing each item and then measuring all the dimensions, even the thickness of a letter, to find out what has to be paid. Parcels, letters, packets and registered mail should all be handled by one delivery driver and not two or even three as they are currently. The same postman, already calling at homes, could just as easily collect parcels at the same time. The problem is that they would no doubt expect to be paid more for doing it. Royal Mail could, and should, be the cheapest, fastest and most reliable service, so the question is, why isn't it?

Clive Richards

Consumeractive

Was Curry's salesman trying to con me?

Q I decided to buy an HP Stream laptop from my local Currys store for £229. The salesman said I'd also have to buy a £35 32G USB memory stick to be used in case the computer crashes. He refused to sell me the laptop without this. Surely this is a con?

Nick Dobie

A We're not sure whether this is a con, but it's certainly very strange. While it's wise to have some form of backup storage, it's hardly mandatory and we can't think why this salesman thought so. If Nick had bought the memory stick under those conditions, he could have argued that he'd been mis-sold the laptop. He would have had a case under the Consumer Protection from Unfair Trading Regulations and the Sale of Goods Act for an item not as described.

We spoke to our customer-service contact at Currys, who was equally bemused. He said that he couldn't comment without further information because it may have been a misunderstanding. Nick told us he will go back to the shop and get the salesman's name. If he does, we'll pass this on to Currys so it can investigate. We'll let you know what happens.

What are my rights after buying a broken phone from Phones 4u?

Q I bought a Nokia Lumia 635 phone on a 24-month, EE contract from Phones 4u in August 2014, but it won't connect to the internet. Because Phones 4u went bust in September, EE sent it away for repair, but this was unsuccessful. EE has now washed its hands of the matter and won't cancel the contract. I'm paying £19 a month for a phone I can't use. What are my rights?

Stephen Forster

A Sadly, Stephen's rights are very limited, as are those of all Phones 4u customers. EE doesn't have to fix the phone because Stephen's contract was with Phones 4u. EE also doesn't have to cancel the airtime because although it formed part of the deal, it's actually a separate contract to the handset; and it works fine. But rather than giving up – leaving Stephen with a useless phone – we pursued other options.

When Phones 4u went bust, EE agreed to repair phones for free if the handset wasn't covered by insurance and was still under warranty. EE may have stopped trying to repair Stephen's phone because it believes the fault isn't covered by the warranty. Confusing the matter is that it's unclear which warranty EE has agreed to fulfil – Nokia's or Phones 4u's. We've asked EE to clarify.

We've also suggested to Stephen that he makes a claim as an unsecured creditor with Phones 4u's administrators PricewaterhouseCoopers. Admittedly, this is a long shot because unsecured creditors rarely get any money back, but it's worth trying. If you're in a similar situation to Stephen, you can make a claim on the PwC website by clicking on creditors and suppliers and downloading a claim form (www.snipca.com/14651).

Stephen didn't take out Phones 4u's care plan, but anyone who did still has this protection. The phone number for this service is 0333 222 6730. Technical Support is also still available on 0844 871 2233.

Do I have to accept a repair for my faulty TomTom?

Q I bought a TomTom sat-nav from Amazon on Black Friday for my husband's Christmas present. We've had problems charging it. You've said in the past that you can only get a full refund for a faulty product within the first 30 days, after which the company can insist on repairing or replacing it instead. Is that still the case?

Sally Shaunessy

A Yes, it is. However, some companies do occasionally offer refunds for longer. Amazon sometimes offers a full refund for up to six months after purchase, especially if it can no longer replace the item. Sally needs to contact Amazon (through the 'Contact Us' option at www.snipca.com/14652) to find out what it's prepared to offer her.

If Sally had bought the sat-nav from a trader on Amazon Marketplace, she would probably have to put up with a repair or a replacement. She wouldn't need to prove the fault is inherent because the burden of proof is on the seller to prove otherwise. Amazon provides information on how to return an item bought through Marketplace at www.snipca.com/14656.

We stand up for your legal rights

Contact us so we can investigate your case

Email: 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.

Do I have to put up with a repair if the retailer takes too long accepting goods back?

Q Earlier this year *The Sun* was offering a Hudl Tablet for £80, including a year's free online access to the paper. I got the tablet on 29 August, but *The Sun*'s app didn't work properly. Then the whole tablet froze. I reported this to *The Sun* within 30 days of receiving the tablet, but was refused a replacement or refund. Can you help?

Ian Mitchell

A We can. Assuming the tablet is inherently faulty, Ian is entitled to a replacement or refund – and can refuse a repair – because he'd met the legal requirements of reporting a fault within 30 days. He can't be held responsible for the newspaper taking so long to respond.

A day after we contacted *The Sun* on Ian's behalf to explain this, he told us that the newspaper had now promised to collect the tablet. However, it gave a vague pick up time of "within two weeks", and we're not sure whether it plans to repair or replace the broken Hudl.

We have reassured Ian about his rights, and also explained that *The Sun* is entitled to inspect the tablet to check that the fault is inherent. We've also asked *The Sun* to confirm with Ian a pick-up date for the tablet.

CASE ONGOING

LEGAL UPDATES

New retail watchdog to help customers

A new ombudsman service gives consumers another weapon in the fight for their rights. Launched on 2 January, The Retail Ombudsman (TRO) has been set up in order to provide a free dispute-resolution service that doesn't entail legal action. If you make a complaint to TRO, a case worker will be assigned to your case within 10 days. They will gather evidence from both you and the retailer to try to reach an informal resolution. If this isn't possible, the complaint goes before the Chief Ombudsman for a decision. The resolutions aren't legally binding on you or the retailer, but if you accept a decision you can't then decide to take the matter further legally.

The Retail Ombudsman has the authority to investigate complaints about products and services at high-street and independent shops, as well as petrol stations, garden centres and shopping websites. It's important to remember that TRO is a voluntary scheme funded by retailers who agree to act by its Code of Practice. Case workers don't have any statutory powers.

You can contact TRO by email (enquiries@retail-ombudsman.co.uk) or by phone (0203 137 8268). To write to TRO, click 'Contact us' at: www.retail-ombudsman.co.uk.

THIS WILL COME IN USEFUL

Insurance companies

Aviva
Contact details: www.aviva.co.uk/contact-us
Twitter: @AvivaUKSupport

AXA
0844 874 0211
Twitter: @axainsurance

Bupa
New customers:
08081 634 545
Existing customers:
08456 090 111
Twitter: @BupaUK

Churchill
Contact details: www.churchill.com/contact-us
Twitter: @thechurchilldog

Direct Line
Car insurance:
0845 246 3761
Home insurance:
0845 246 3564
Twitter: @DirectLine_UK

Legal and General
Phone contacts:
www.snipca.com/14529
Email contacts:
www.snipca.com/14528
Twitter @landg_uk

Prudential
Phone contacts:
www.snipca.com/14540

Saga
Car insurance:
0800 056 9173
Home insurance:
0800 056 9102
Twitter: @SagaUK

Standard Life
0800 634 7474
Online help:
www.snipca.com/14672

Saga
Standard Life

Protect Your Tech

Scams and threats to avoid, plus new security tools

WATCH OUT FOR...

Premium-rate scams on phones

What happened?

Mobile-phone users were warned to look out for malicious apps that rack up huge bills without the victim knowing.

The warning came from regulator PhonepayPlus (www.phonepayplus.org.uk), a partner of Ofcom, which fined three UK companies £330,000 in December. Working with antivirus company Kaspersky, it found that the Android apps made by Circle Marketing, Cloudspace and Syncronized to promote and provide premium-rate services contained malware.

Victims inadvertently installed the apps, which had names including Fun Sexy Girls and Glam Pleasures, from porn websites.

After installing the app, victims unwittingly began a subscription to a premium-rate service simply by tapping anywhere on the phone's screen.

This subscription charged users between £1.50 and £4.50 a week. Most people didn't know they were being charged because the apps stopped the notification confirming payment from appearing.

Some people reported bills of hundreds of pounds. Others complained to PhonepayPlus that they received sexually explicit text messages.

PhonepayPlus said that the companies were unable to prove they had obtained customers' consent to be charged. As well as being fined, the companies were ordered to refund their victims.

What should you do?

Sadly, avoiding porn websites doesn't mean you'll be immune from premium-rate scams. Criminals are also using fake Android apps, sold on both the Google Play store and unofficial alternatives, to infect phones with malware that calls or texts expensive numbers. Make sure you're convinced by an app's authenticity before installing it.

It's crucial you spot scams early, so check for any unusual payment on your phone bill. If you think you've been scammed, contact PhonepayPlus on 0800 500 212. You can find out if a premium-rate number is legitimate using the regulator's Number Checker (see screenshot, www.snipca.com/14720).

New tools

Dashlane Password Changer
www.snipca.com/14692

Wouldn't it be great if the next time an internet-wide flaw like Heartbleed or Shellshock is discovered, you could change all your passwords in one click? This is what Dashlane's new Password Changer tool promises to do.

It works across about 70 websites, including Outlook.com, Facebook, Amazon, Skype, Apple, PayPal and Google. It was still in beta when we went to press, and you'll need to sign up to receive "early access". That might take a while - when we registered there were 10,000 people ahead of us. But if the tool works as well as Dashlane claims on its blog (www.snipca.com/14693), we don't mind waiting. The company also says it's working on a feature that lets you automatically change your passwords at a set interval – every 30 days, for example.

ScamWatch
READERS WARN READERS

Not fooled by £150 email reward

In the spam folder of my Gmail account I recently received an email with the subject line, "Last reminder about your £150 – Action Required". It was from someone called Marja Hakkarainen (which I thought was a Finnish name - a search on Google confirmed this). I deleted it instantly because I had never heard the name before. If anyone else gets this message, my advice would be to do the same. If you are tempted to open the email, I would suggest doing so on a virtual machine, in case it contains a virus.

Jack Stephenson

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

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Best Free Software

Brilliant new programs that won't cost you anything

PC CLEANER

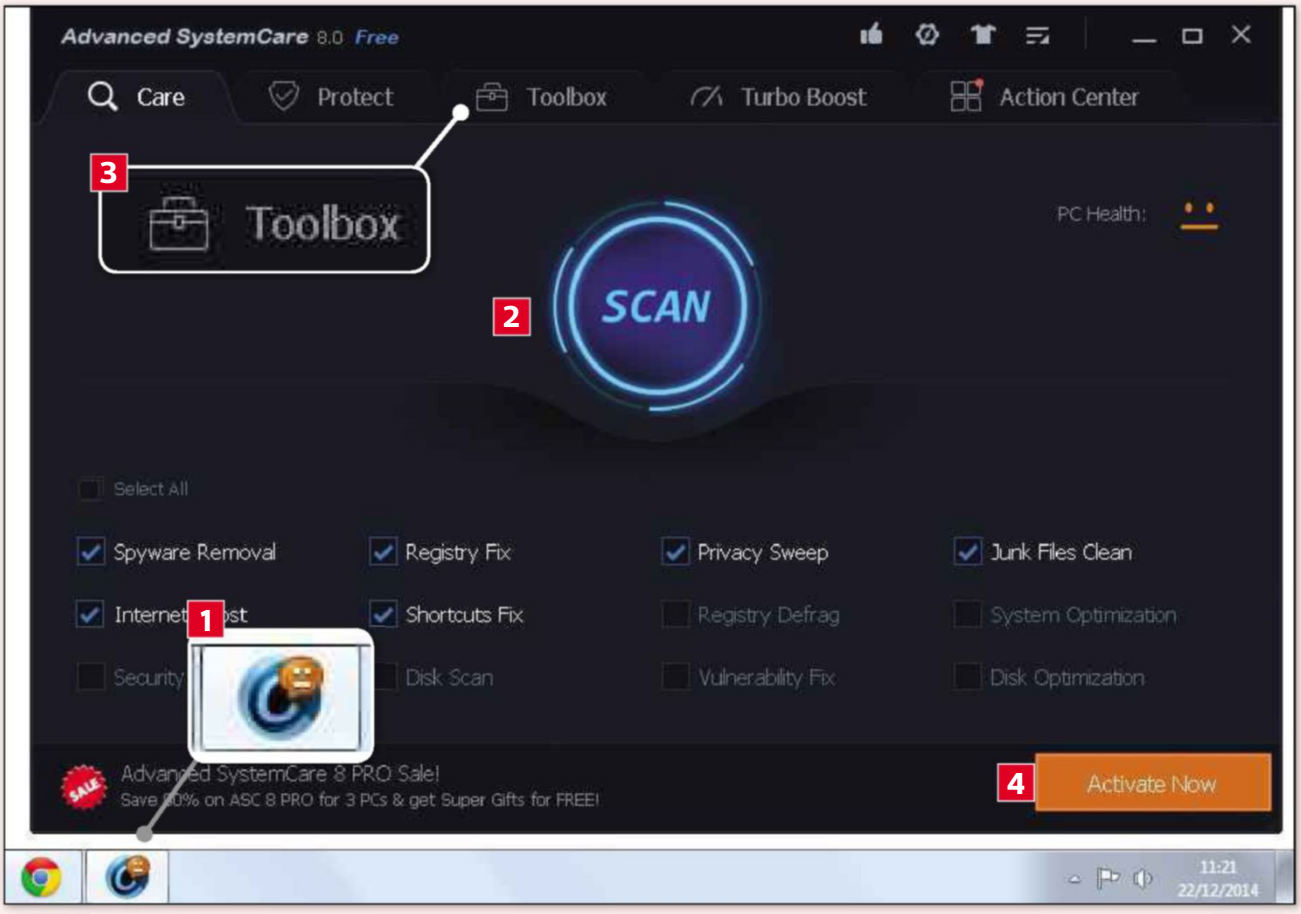
Advanced SystemCare Free 8

www.snipca.com/14848
What you need: Windows XP, Vista, 7 or 8+

The new version of IObit's system-cleaning program now includes the excellent IObit Uninstaller, and it lets you fix Registry errors, boost your PC's boot time and remove hidden junk, all from one simple dashboard.

When you run Advanced SystemCare, its taskbar icon has a little face on it. It's not just being friendly; the face is there to show you how healthy your PC is. Our little taskbar face looked rather glum, so we clicked Scan to track down the cause of our PC's unhappiness.

As great as all this sounds, we recommend Advanced SystemCare with reservations. The eagle-eyed among you will remember that we criticised the program in our Issue 436 cover feature, because its installer included loads of unwanted extras, including the dreaded Yahoo toolbar. Thankfully, these PUPs have now disappeared, but you still have to download the program from a third-party site (clicking Free Download takes you to www.snipca.com/14849 – a CNet page), and it tries to install Driver Booster 2 (another IObit tool) without being asked. Be vigilant, and don't click the orange Activate Now button in the program window – that's another advert.

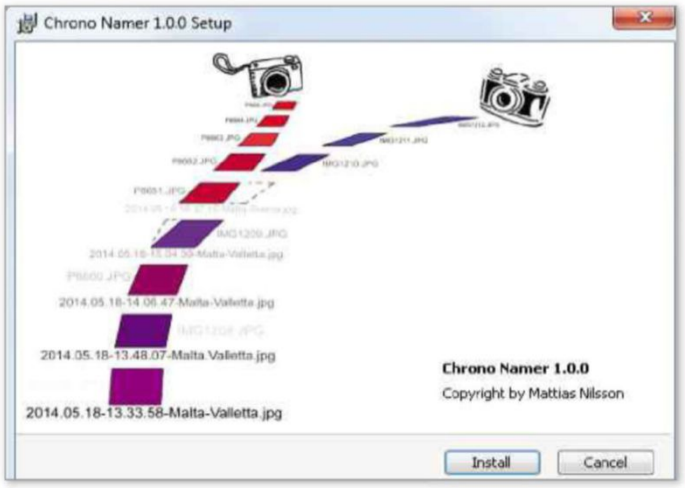


1 The face on Advanced SystemCare's taskbar icon is a quick indicator of your PC's health. Our cluttered PC clearly needs a boost.

2 Click Scan to start scanning for things that are slowing your PC, including Registry errors, spyware and junk files.

3 On the Toolbox tab you'll find other recently added IObit tools, including IObit Uninstaller and Driver Booster.

4 Don't click Activate Now unless you want to buy the pro version. Tools marked 'pro' on the Toolbox tab are only available if you upgrade.



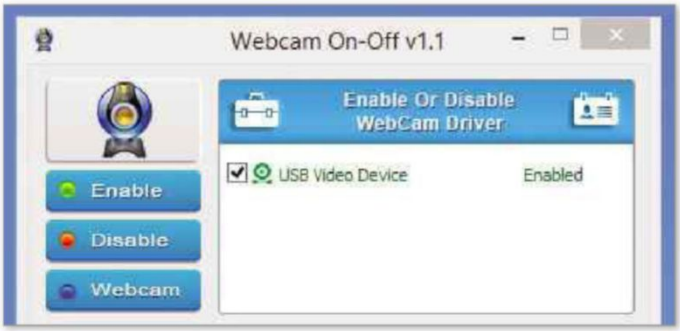
FILE RENAMER

Chrono Namer

www.snipca.com/14819

What you need: Windows 7 or 8

Not all software installers set our teeth on edge. In fact, Chrono Namer's made us smile, thanks to its simple and lovely illustration, which also appears in the program's opening window. Chrono Namer is, as its title suggests, a tool for renaming batches of files – specifically 'media' files (photos, videos or music). The files are renamed according to rules chosen by you, using EXIF information such as where and when the files were created. The program also features a slideshow function so you can view photos in an animated sequence. We hit a small hitch when downloading the installer file, because our browser flagged it as 'dangerous' (it isn't).



WEBCAM SECURITY

WebCam On-Off 1.1

www.snipca.com/14816

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

In our Workshop 'Stop Russian hackers using your webcam' (Issue 439) we showed you how to use this portable new tool to disable your PC's webcam completely so it can't be accessed by hackers. No sooner had we published the Workshop than its creator Sordum updated it. You can now switch multiple webcams on and off (useful if you have an external webcam as well as a built-in one), and clicking the Webcam button now opens a preview window, where you can take a screenshot and zoom in or out. It's fast becoming the only webcam tool you need.

ANTI-SPYWARE

Detekt

www.snipca.com/14851

What you need: Windows XP, Vista or 7

It's not just "researchers, human-rights workers and journalists" who are at risk of spyware, despite what you'll read on the website where we found this new open-source security tool (https://resistsurveillance.org). Everyone with a computer is equally at risk, so Detekt is for all of us. To download the tool, created by a group of organisations including Amnesty International and Privacy International, visit the link above and click Download Detekt, then click 'detekt.exe'.

WHAT SHOULD I DOWNLOAD?

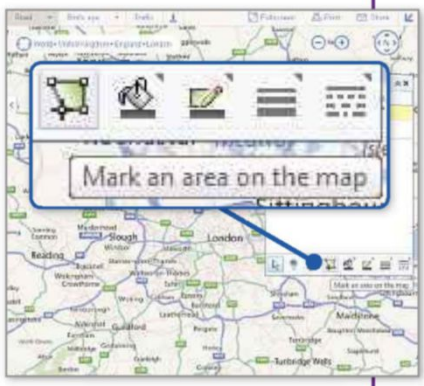
We tell you what software to use

What can I use instead of MapPoint?

Q I have searched repeatedly for a map program like the old Microsoft MapPoint, where I could draw a radius on a UK map and mark locations within it. Google Maps doesn't seem able to do this. Can you recommend anything?

Alan Wilton

A Users of Microsoft MapPoint (www.snipca.com/14866) are now being directed to Bing Maps (www.bing.com/maps), which is free and online-only. Click 'Sign in' to create an account, then click 'My places' to start drawing areas and marking locations. The site is very easy to use, with self-explanatory tool icons such as a dotted line for the 'Draw a path or trail' tool, and a filled dotted line for 'Draw an area'.



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

Reviews

New products tested by our experts

PC | **£229** from www.fuze.co.uk/products

Fuze Technologies Fuze-T2-R

Learn to program a robot arm with this Raspberry Pi-based educational PC

We're big fans of the Raspberry Pi, the tiny computer aimed at those who want to learn, develop and use their programming skills (see our review of the model B+, Issue 434). However, the basic Pi doesn't really give you much to work with beyond pointing you at an appropriate operating system and some online tutorials. Where the Pi leaves off, the Fuze-T2-R picks up.

The Fuze is specifically designed as a computer for education, with schools and children interested in technology as its main target audience. If you fondly remember programming in BASIC on a BBC Micro and working with home electronics projects in the 1980s and want your children or grandchildren to have the opportunity to learn in the same fun way, the Fuze-T2-R could be just the ticket.

> "The Fuze is a great way to encourage a budding programmer"

Its sturdy metal case contains a Raspberry Pi B+ hooked up to a built-in keyboard and a board with input/output connectors that's designed to control the supplied breadboard, which you can use as the foundation for your own electronics projects. At the back of the Fuze are four USB 2.0 ports, an HDMI connector for plugging in a monitor, an Ethernet socket and an audio port. There's also a microSD slot that contains an 8GB storage card with the Raspbian Linux operating system installed on it. If you remove the Fuze's four rear screws, you can pull off the back panel to reveal an internal tray holding the Pi itself.

The Fuze-T2-R also comes with a mouse, a USB robot arm for you to control and a little kit of electronic components, including a number of LEDs, resistors, switches, plenty of jumper wires, a light sensor and a single-character LED screen. All you need is an HDMI cable and a monitor or TV to connect to your little computer.

The look and feel of the Fuze is reminiscent of early home computers such as the ZX Spectrum and BBC Micro. Its laptop-style keyboard is positioned at a surprisingly steep angle, but we found it reasonably comfortable to use for short bursts of typing such as when coding. It's less suitable if you need to type lengthy text documents. The unusually small, offset space bar proved to be a slight problem, but we got used to it after a couple of days.

BASIC training

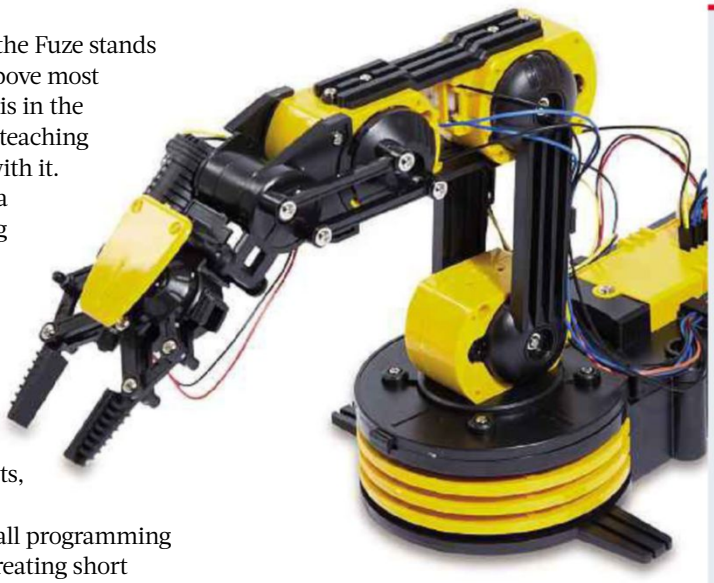
What really sets the Fuze apart is the FUZE BASIC programming language it comes with. Although FUZE BASIC is available for free and will work on any Raspberry Pi running Raspbian, it's been built to work specifically with the Fuze's supplied input/output board and robot arm. Like earlier versions of BASIC, the programming language is designed to be easy to learn.

FUZE BASIC has been refined to make what you learn from it translate more easily to other programming languages. For example, there are no visible line numbers and you're encouraged to avoid archaic commands in favour of more modern ones. All this makes for an easier transition from BASIC to modern programming languages if and when you want to move on to something more advanced. Another advantage FUZE BASIC has over older versions of BASIC is that it runs much faster.

You can, of course, use the Fuze to code in other programming languages, such as Python which also comes installed on it, so the computer's usefulness won't end once you've progressed past what BASIC can do. The version of Raspbian installed on it is also a fully functional Desktop operating system, allowing the Pi to be used for basic PC tasks such as web browsing and playing media files.

Guided tuition

Another place where the Fuze stands head and shoulders above most Raspberry Pi bundles is in the quality of the printed teaching materials that come with it. The Fuze comes with a series of programming projects, written in a light, clear manner that's easily comprehensible to children and people with no experience of programming. By completing the projects, users will learn about concepts common to all programming languages, all while creating short and simple programs that produce tangible results.



The last couple of projects use the FUZE to control an external electronic circuit and the robot arm. The arm can only perform simple tasks such as picking up objects from one pile and moving them to another, but successfully programming it gives a great sense of achievement. Unlike the computer, the robot arm arrives in kit form so you have to build it yourself.

As well as being entertaining to program and control, the arm is fun and satisfying to build: you start with a collection of motors, loose gears, and bits of plastic casing, and end up with a working robot. It takes a bit of patience and a few hours to assemble, but both the process and the result are educational and entertaining. There are lots of little pieces involved, so a steady hand and a sharp eye are essential.

The printed project cards that come with the Fuze are great, but we'd have liked more electronics projects. Plus, not all of the components that the Fuze comes with have a role in the supplied lesson plans. For example, the Fuze comes loaded with BASIC code snippets to use the supplied light sensor, but there's no accompanying tutorial so you have to work things out for yourself. However, the official website (www.snipca.com/14635) contains a number of additional resources, with the promise of more to come. These resources include lesson plans and a tutorial series to create a simple space-shooter game. If you're going to take on a teaching role when using the Fuze, it's a good idea to work through all the projects yourself before guiding someone else through them. If you're already reasonably familiar with BASIC, devising new projects for a beginner to work with is fairly simple. The example code in FUZE BASIC's default directory provides some useful jumping-off points.

The Fuze-T2-R is a great way to encourage a budding programmer. If the £230 Fuze-T2-R with its robot arm is a bit pricey for you, a version without the arm, but with everything else, costs £180. If you already have a Raspberry Pi, you can buy the stand-alone Fuze case and input/output board for just £70.

SPECIFICATIONS

700 MHz ARM1176JZ-F processor • 512MB memory • 8GB micro SD card • Raspbian Linux • MicroSD slot • dual-core VideoCore IV integrated graphics chip • 4x USB2 ports • 1x HDMI port • 1x 10/100Mbps Ethernet port • 70x33x23mm (HxWxD) • 1.8kg

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). 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.

VERDICT: A fun robot arm, a simple programming language and clear tutorials make this the best realisation we've seen of the Raspberry Pi's educational potential

★★★★★

ALTERNATIVE:
Raspberry Pi B+ £25
If you're more interested in your own electronics projects than programming, then a stand-alone Pi will do the trick

TABLET | **£330** from www.snipca.com/14701

Sony Xperia Z3 Tablet Compact

The waterproof Android mini tablet with superb battery life

Computer active BUY IT! ★★★★★

The Sony Xperia Z2 Tablet was one of our favourite Android tablets of 2013 (see our review, Issue 424). This makes it all the more puzzling that Sony has decided against updating that 10in model and has instead released a smaller 8in version. The Xperia Z3 Tablet Compact (not to be confused with the Xperia Z3 smartphone), squeezes the best features of its larger stablemate into a more compact device that easily rivals Google's Nexus 9.

Like other Xperia Z-series tablets and smartphones, the Z3 Tablet Compact is waterproof. In our test, it survived intact a 30-minute submersion in a bathtub. Sony says it can withstand depths of up to 1.5 metres, so we'd recommend you don't test it in a swimming pool.

While the Z3 is pleasingly slender, it also manages to be very sturdy. Its plastic case may not be as robust as the iPad Mini's metal construction, but it's much sturdier than the creaky Nexus 9 (see our review, Issue 438). It has a microSD slot too, but you'll need to remember to snap its cover securely shut, when using it in the bath.

> "This is easily the best Android mini tablet available"

Annoyingly, the Z3's screen has very narrow borders on its two longer edges, so it can be difficult to get a firm grip on the tablet without inadvertently touching the screen and triggering an action. The 8in screen itself has good colour accuracy and contrast, while text looks sharp, thanks to the 1920x1200-pixel resolution. As with previous Xperia tablets though, brightness is a letdown. While the Z3 Tablet Compact's screen is brighter than previous Xperias, it's still significantly darker than other mini tablets.

We have no complaints about battery life though. When playing video continuously, the battery survived just under 20 hours, which is easily the best time we've ever seen for a tablet. It performed well too, with the 2.5GHz Snapdragon quad-core processor and 3GB of memory speeding through our demanding benchmark tests. Responsiveness wasn't quite on this level, with the touchscreen occasionally lagging behind our finger strokes and prods, but nothing we couldn't live with.

Sony makes some superb standalone cameras, but the eight-megapixel camera built into this tablet isn't up to scratch. The focus tended to be on the soft side and photos had lots of noise, even when taken in brightly lit conditions. It's definitely a camera of last resort.

Android 4.4 KitKat is preinstalled on the Z3 Tablet Compact, with a free upgrade to Android 5.0 Lollipop promised for "the beginning of 2015". Sony's modifications to the Android interface aren't overly intrusive and can be easily be ignored if you don't like them. But some of their refinements are actually quite useful, such as the 'small apps' which float above regular apps in a small resizable window, giving you some of the benefits of PC-style multitasking. The range of small apps is limited, but include a browser, calendar, calculator and Gmail – all of which are handy to have.

Less useful is the ability to connect wirelessly to your Sony Android phone and control it remotely, with the contents of the phone's screen displayed in a resizable window on your tablet's screen. Both devices have to be on the same Wi-Fi network. Even if we could think of a practical benefit of this feature, the incredibly frustrating lag in response times – even on a fast 802.11n network – made this feature unusable.

Although the Sony Xperia Z3 Tablet Compact isn't perfect, it's still easily the best Android mini-tablet available. While its design means it's difficult to grip, and the responsiveness and brightness of its touchscreen have room for improvment, its incredible battery life, waterproof design and pacy performance mean it's still great value.

SPECIFICATIONS

8in 1920x1200-pixel touchscreen • 2.5GHz Qualcomm Snapdragon 801 quad-core processor • 3GB memory • 16GB storage • MicroSD slot • Android 4.4 Kit Kat • 270g • 213x124x6mm (HxWxD) • One-year warranty www.snipca.com/14702

VERDICT: Although it has some niggling flaws, it's still better overall than Google's vaunted Nexus 9

★★★★★

ALTERNATIVE: Apple iPad Mini 2 £239 Not waterproof and its battery life isn't as lengthy, but cheaper and with a brighter screen and unrivalled selection of apps

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* Chillblast won more awards in the leading IT press publications PC Pro, PC Advisor and Computer Shopper combined than any other retailer 2010-2013
** World's fastest PC as tested by PC Pro Magazine - http://www.pcpro.co.uk/reviews/desktops/371152/chillblast-fusion-photo-oc-iv

PRINTER | **£52** from www.snipca.com/14645

Ricoh Aficio SG 2100N

A gel-based alternative to an inkjet or laser printer

The Ricoh Aficio SG 2100N is an unusual colour printer. Instead of using ink or toner cartridges like an inkjet or laser, it uses blocks of soy-based gel. Ricoh claims this technology allows the printer to match a cheap mono laser for speed and running costs, but with the high-quality colour printing of an inkjet. One clear advantage is that prints made with its gel-based inks dry quickly without smudges.

The sturdily made SG 2100N has an Ethernet port, so you can connect it to a router and share it among your computers.

Unusually, everything on this printer is accessed from the front, which means you could squeeze it into some tight spaces such as shelves, or even stack other devices on top. Ricoh says that it's designed to print up to 10,000 pages a month so it can easily handle the printing needs of most small offices.

While Ricoh claims an impressive 29 pages per minute (ppm) in black or colour, in our test this printer was far slower. A text document printed at 11.4ppm, rising to 19.5ppm using the draft-quality setting. We were impressed with the print quality only when we used the slightly slower High Quality setting. This produced crisper text and sharper colour graphics, particularly on coated inkjet paper.

The SG 2100N has pretty low running costs of 3.6p per black page and 10.6p for colour, but many inkjets are now even cheaper to run and have better print quality. Unless the SG 2100N's space-saving design is a priority, you should spend a little more for an inkjet instead.

SPECIFICATIONS

3600x1200dpi maximum print resolution • 29ppm • A4 paper sizes • 213x399x360mm (HxWxD) • 9.5kg • One-year warranty www.snipca.com/14646

VERDICT: The SG 2100N is cheap to buy and is reasonably quick, but both print quality and running costs could be better

★★★☆☆

ALTERNATIVE: Epson WorkForce WF-3540DTWF £110 A little more expensive, but this inkjet has better print quality and lower running costs

SSD | **£140** from www.snipca.com/14655

Samsung 850 Pro 256GB

Exceptionally fast, but also very expensive

The Samsung 850 Pro is the first SSD to use a new storage technology called 3D V-NAND. Samsung claims this lets them make even more spacious SSDs.

Samsung also claims that 3D V-NAND increases performance. We were initially sceptical as the 256GB 850 Pro was actually slower than other SSDs at copying small files, managing 90MB/s, although this is still a respectable score. It blazed ahead when copying large files, though, with a jaw-dropping score of 613MB/s – it's easily the fastest SSD we've seen in this test.

The Samsung 850 Pro is a cracking SSD, but the 256GB model costs £140, or 55p per gigabyte. The 512GB Crucial MX100 (see our review, Issue 427) costs less (£150 or 29p per gigabyte) for twice as much storage. Although it's not as fast at copying large files, it's still outstrips the 850 Pro in copying small files.

VERDICT: Incredible performance, but you pay a high price for it

★★★☆☆

SSD | **£207** from www.snipca.com/14647

SanDisk Extreme Pro 480GB

A very fast SSD, but a little pricey

Computer active GREAT PICK ★★★★☆

SanDisk is best known for its range of SD cards and USB sticks, but the company also makes SSDs. The Extreme Pro, its latest model, is available in 240, 480 and 960GB capacities.

The Extreme Pro was faster than older SanDisk SSDs in our large files test, with an average speed of 559MB/s. This makes the Extreme Pro the second fastest SSD we've ever seen in our large-files test, second only to the Samsung 850 Pro (see left). It was less impressive in our small-files test with an average speed of 86MB/s. Although slower than other SSDs, it's still far faster than any hard drive.

The Extreme Pro is backed by a lengthy 10-year warranty, but unless this is a priority there are better-value SSDs available. The 512GB Extreme Pro costs a relatively high 43p per gigabyte. The 512GB Crucial MX100 (see our review, Issue 427) isn't quite as fast, but costs just £150, or 29p per gigabyte.

VERDICT: Very fast and with a long warranty, but it's not cheap

★★★★☆

PRINTER | **£182** from www.snipca.com/14678

Brother MFC-J5620DW

This compact inkjet pretty much prints everything, including A3 paper

Brother's MFC-J5620DW is a versatile inkjet multifunction printer (MFP). It prints, scans, photocopies and faxes. It also supports duplex printing, has a 35-page ADF to take the strain out of copying and faxing multiple pages, and has a reader for memory cards and USB sticks. It also supports both wired and wireless networks, so it's easy to use in conjunction with a number of PCs, smartphones and tablets. And to top things off, everything is controlled via an easily adjustable colour touchscreen

That's an impressive list, but the MFC-J5620DW has one more trick up its sleeve. Despite its compact dimensions, you can print to (though not scan from) A3 paper. There are two paper trays that can handle A3, plus a single-sheet bypass slot that's A3-capable. Flexible paper-input options like these are rare indeed.

It has four separate ink cartridges (cyan, magenta, yellow and black), instead of a single combined cartridge, which reduces waste and keeps running costs down. Each cartridge that comes with it are rated for a generous 550 pages. After these run out, you can replace them with high-capacity versions rated for 2,400 black and 1,200 colour pages (at just 4.2p for an A4 page of text and colour graphics).

That's the good news. However, the MFC-J5620DW's compact size comes at a cost. Paper handling is clunky. The main input tray needs to to be manually extended or collapsed to suit the paper size being loaded. This would be fine, but some sizes load with a landscape orientation, while others load with a portrait orientation. It can get confusing. With A4, you need to set the output tray carefully to avoid it becoming untidy.

More significantly, print quality was disappointing, with colour graphics in particular looking washed out and lifeless. Scan quality was more impressive, but the images we scanned lost a little detail in the darkest shades.

As inkjet printers go this is pretty fast, delivering 20 pages of text in just 54 seconds, equivalent to 22 pages per minute or 35 ppm, and 5 pages of colour graphics in 25 seconds (8.6ppm). It even prints A3 quickly, with five pages of text taking 34 seconds (9ppm) and 5 pages of colour graphics just 58 seconds (5ppm).

Overall this is a decent MFP with fast performance, reasonably low running costs and A3 capability in a space-saving design. However, the trade-off is lacklustre print and scan quality, making it only average value and not suitable for everyone.

VERDICT: We love its fast performance and low running costs, but not its underwhelming print quality

★★★☆☆

ALTERNATIVE: HP Officejet Pro 8610 £140 An MFP with similar features but better print and scan quality, and even lower running costs, but no A3 capability

SPECIFICATIONS

6000x1200dpi maximum print resolution • 20ppm colour/22ipm mono quoted speeds • 2400x2400dpi maximum scan resolution • USB2 • 802.11b/g/n Wi-Fi • One-year warranty www.snipca.com/14679

The best... iPad Mini cases

Apple iPad Mini Smart Case

£55 from www.snipca.com/14733

A minimalist leather case with a protective screen flap that also folds back to double as a stand. It's available in black, blue, red, cream and brown.

Covert Berkeley

£30 from www.snipca.com/14734

This stylish pouch is made out of tweed while the opening is covered using a fold-over flap that snaps securely shut using a series of buttons.

Griffin Survivor All-Terrain

£25 from www.snipca.com/14735

A rubber and plastic case that completely encases your Mini, protecting it from shocks, water and dust. Despite its extensive protection, the fingerprint sensor still works, and flaps give easy access to all the ports.

Covert Cavalry

£30 from www.snipca.com/14736

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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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- Windows 8.1
- 3 Year Premium Warranty

£639 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 Gaming PC

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

£1039 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 Gaming Laptop

- Intel® Core™ i5 4210M processor
- 8GB Corsair DDR3 1600MHz memory
- 2GB NVIDIA GeForce GTX 860M
- 15.6in 1,920 x 1,080 screen
- 1TB SATA 6Gb/sec hard drive
- Windows 8.1

£829 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 LG1720 Gaming Laptop

- Intel® Core™ i7 4710HQ processor
- 8GB Corsair DDR3 1600MHz memory
- 3GB NVIDIA GeForce GTX 970M
- 17.3in 1,920 x 1,080 screen
- 1TB SATA 6Gb/sec hard drive
- Windows 8.1

£1154 Inc VAT

The LG1720 is a 17.3" high-end gaming laptop that includes a choice of powerful NVIDIA GeForce GTX 970M or 980M graphics card, ensuring silky smooth frame rates in all games. The LG1720 is ready for next-day delivery and has a 2 Year Warranty.

Scan Computers recommends Windows.

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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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Prices correct at time of print and are subject to change.

Reviews

SMARTPHONE | **£296** (without contract) from www.snipca.com/14633

Nokia Lumia 830

A sleek and powerful Windows Phone

Windows Phone 8.1 is a slick and well-designed mobile operating system, but until now almost all of the new phones which come with it pre-installed have been pretty mediocre. That's all changed with the Nokia Lumia 830. Although it looks very similar to the Lumia 930 (see our review, Issue 431), it actually has lower specifications. However, several refinements in the 830's design help make it the best Windows Phone yet.

While the 830 looks very similar to the 930 with its colourful plastic rear panel and a metal band running around its edges, it's far slimmer than the 930, making it much more comfortable to hold and use. Plus, unlike the 930, the metal band didn't dig into our flesh as we were using it. The 830 also has two small but useful features that its more expensive counterpart lacks – an easily replaceable battery and a slot for adding more storage using microSD cards.

The 930's battery life was disappointing, so we feared a similarly poor performance from the thinner 830. It actually lasted four hours longer than the 930, however, managing 29 hours on 3G. We suspect that this is due, at least in part, to two compromises that replace higher-specification components with parts that have lower specifications but are more power efficient. One is the 830's Snapdragon 400 quad-core processor. Although not as fast as the 930's Snapdragon 800, it's still more than fast enough for running most Windows Phone apps.

The other is the 830's 5in screen which has a 720p resolution instead of 1080p like the 930, but the difference in sharpness will be imperceptible to most people. The screen is very bright with good contrast. Colour accuracy is a little off, but it's not too bad. There's no compromise when it comes to responsiveness, though – as expected it had no trouble tracking our finger swipes and prods.

We weren't surprised by the shoddy quality of the camera as it's been a weak area for recent Lumia phones. The focus wasn't sharp enough, while colours tended to look either washed out or oversaturated. Shots in dim conditions were too dark to be usable - even a wintery overcast day was often dark enough to have us reaching for another camera.

However, the biggest problem with the 830 is the threadbare selection of Windows Phone apps. While most of the big names are available, the number and quality of apps still lags behind iOS and Android, especially for niche interests. Whether you want an Arabic phrasebook or a bird-watching guide, it's more likely you'll find what you need in Apple and Google's app stores than in Microsoft's.

The Lumia 830 isn't perfect then, but it is reasonably priced at £300 without a contract. It's a good-value alternative to an iOS or Android phone, but bear in mind its limitations before buying.

SPECIFICATIONS

5in 1280x720 pixel touchscreen • 1.2GHz Qualcomm Snapdragon 400 quad core processor • 1GB memory • 16GB storage • 4G • micro SD slot • nano SIM • Windows Phone 8.1 • 150g • 139x71x8.5mm (HxWxD) • One-year warranty www.snipca.com/14634

VERDICT: Let down by a mediocre camera, but this latest Windows Phone otherwise has a lot going for it

★★★★☆

ALTERNATIVE: Apple iPhone 5c £319 (without contract) More comfortable to hold due to its smaller size and with a better selection of apps and a superior camera too, but only 8GB of non-expandable storage

WHAT SHOULD I BUY? We solve your buying dilemmas

Which tablet should I buy for my niece?

Q I'd like to buy a tablet for my niece as her birthday is coming up soon, but I'm not sure which one to buy. She likes to play the latest games so I would need to buy a powerful one, but I don't want to spend £400 on an iPad Air 2. What would you suggest?

Catherine Peterson

A Our first pick would be the iPad Mini 2. Although it doesn't use the latest triple-core A8 processor like the iPad Air 2, its A7 dual-core processor is still very fast, making it one of the fastest tablets available. It can easily handle the latest games, plus iOS often gets the latest titles before Android. Best of all, it costs just £239 for the 16GB WiFi-only model (from www.snipca.com/14467). If you can, it's worth paying just £40 more for the 32GB model.

If £239 is still too much, then consider the Tesco Hudl 2 (£129 from www.snipca.com/14705). Its Intel processor was around 30-50 per cent slower than the iPad Mini's processor when grappling with our most demanding 3D graphics benchmark tests, its touchscreen isn't as good as the Mini's and your niece will sometimes have to wait patiently for the very latest titles to arrive on Android, but it's still a good budget gaming tablet.

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

SMARTPHONE | **£420** from www.snipca.com/14629

Motorola Moto X (second generation)

The leather-backed phone you can control hands-free

With most smartphones there's little you can do to customise their appearance, aside from adding a case of your choice. The new Moto X breaks the mould in this respect. When bought directly online from Motorola, each phone is made to order so you can customise the colours (front and back). For £20 extra you can even go for a leather or wooden rear (see image). This sounds tacky but actually looks very classy in the flesh, though you can't choose to have a photo on the rear casing, which is a disappointing omission.

> "The wooden casing option actually looks very classy"

The Moto X's build is so slender that it can't accommodate a microSD slot, but it is exceptionally robust. Even after we accidentally dropped it a couple of times (including a drop on to concrete from a height of around four feet), there was no damage to either the metal band around the edge of the phone or the plastic rear.

There's more to the Moto X than just its customisable appearance. You can control a number of its functions without even touching it, simply by saying 'Hello Moto X' (or a phrase of your choice) followed by a command. While this is a boon for people with dexterity problems, it's not a unique feature. Most of the commands are actually handled by Google Now, the voice-activated personal assistant present on all new Android phones. But on the Moto X you can issue commands from anywhere on your phone, not just the home screen as is the case with most other Android phones.

There are also a couple of basic motion controls. For example, you can wave your hand to silence an alarm, although we found this feature very fussy. We had to move our arm in a specific arc at just the right speed. In the end, we found it easier to just tap the screen. Some of the other features Motorola has added to Android 4.4 KitKat are genuinely useful however, such as a Do Not Disturb mode for silencing notifications. If you're not interested in these features then you can easily avoid them because they don't clutter up the Android interface.

Software aside, the Moto X is generally a good phone. Compared with the cheaper Moto G (see our review, Issue 436), the Android interface felt smoother and was consistently responsive. Although it's not the fastest smartphone to go through our benchmark tests, its 2.5GHz quad-core processor and 2GB of memory were more than fast enough for running demanding apps. Its 5in 1080p screen is sharp and bright, with great image quality.

Call quality on O2's network in central London was excellent. Voices sounded loud and clear, while the noise of trucks and jackhammers from a nearby building site was almost completely kept at bay. Battery life was in line with what we'd expect. When connected to O2's 3G network, it lasted 24 hours when calling, taking photos, using GPS and browsing the web.

The Moto X's biggest letdown, in line with previous Motorola smartphones, is its camera. While it coped reasonably well in daylight, capturing the finer details within landscapes and people's faces, it was useless in dim lighting, producing dark, blurry shots.

The Moto X is a good phone with a lot going for it, but unless you like Motorola's customisation options it doesn't do quite enough to justify its high price. If you have this kind of budget and want an Android phone, then choose the Samsung Galaxy S5. While it has a lot of surplus software, its waterproof casing, better camera and longer battery life make it a better buy.

SPECIFICATIONS

5.2in 1920x1080-pixel touchscreen • 2.5GHz Qualcomm Snapdragon 801 quad-core processor • 578MHz Adreno 330 graphics chip • 2GB memory • 16GB storage • 4G • Nano SIM • Android 4.4 KitKat • 144g • 141x73x10mm (HxWxD) • One-year warranty
www.snipca.com/14630

VERDICT: A good Android phone but with some annoying flaws

★★★☆☆

ALTERNATIVE: Samsung Galaxy S5 £405 (without contract) A more fussy interface, but a waterproof design, better battery life and a superior camera make this a generally better-value Android phone

Seven things we want for 2015

Reviews Editor **Alan Lu** thinks 2015 will be another year of sliding prices and technological refinement rather than dramatic breakthroughs, but he's hopeful of a few major advances too

Better smartphone battery life

Smartphones are great, but their big weakness is short battery life. While manufacturers have mitigated this with more energy-efficient processors and a host of power-saving software tricks, these techniques can only do so much. What's needed are new types of batteries that last for days, not hours.

Budding new technologies that promise to triple battery life are in the works at universities and labs around the world, while other projects set out to create batteries that recharge in minutes rather than hours. Major advances like these can take years to arrive in the marketplace though, so if they don't materialise this year then I hope that at least substantial progress is made – especially as smartphone giants like Samsung and Apple spend billions every year in research and development.

Faster Android updates

Android is the most widely used mobile operating system in the world, and its latest version, 5.0 (also called Lollipop), featured some big changes. But because most Android devices have to wait weeks or even months to get the latest OS version (if they get them at all), it's likely many users will never get the chance to enjoy it.

Google has tried to fix this with initiatives such as the Android One series of phones and by distributing major software changes in updates to the Google Play Services background app, but more still needs to be done. Most devices will be lucky to get more than one significant update. Even Google's Nexus devices, which get Android updates as soon as they're available, can face inexplicable delays and are only guaranteed to get updates for 18 months after the model's release date.

Better two-in-ones or none at all

Microsoft has been promoting laptop-tablet hybrids ever since the launch of Windows 8, but I haven't been convinced by any of them. They're often good only at being a laptop or only at being a tablet, or they're mediocre at being both. Windows 10's Continuum features and Intel's power-efficient, fanless Broadwell processors (both promised for 2015) may finally produce hybrids that tick both boxes, but I suspect it's time to give up on creating the perfect jack-of-all-trades device.

Fewer security holes and patches

Security updates are a necessary evil, but the torrent of security patches for every program from Adobe Flash to Windows can be overwhelming. Software code is very complex and protecting it against hackers is far from easy, but software needs to be designed more with security in mind – not only so we waste less time installing updates, but also to better protect our data and all the services, infrastructure and institutions that rely on software too.

Upgradeable laptops

Laptops are now better than ever. Thanks to Intel's incredibly power-efficient Haswell processors, many laptops that came out in the past two years can finally last for more than a handful of hours on battery power – and they're getting cheaper too. In the process though, manufacturers have started sealing their laptops, making them incredibly difficult to upgrade. While most people will never upgrade their laptop, they should. It not only prolongs the life of your laptop, it also prevents perfectly usable technology from a premature and ecologically unsound burial in landfills. More upgradeable laptops please!

Subscriptions and eternal licences

Adobe angered many by offering its latest Creative Suite programs as subscription only. Very few companies followed Adobe's lead – even Microsoft has had the sense to continue offering Office both as a one-off purchase and on subscription. Software on subscription will suit many, but not all, which is why one-off purchases should always remain an option.

Better software interfaces

Almost all major operating systems have adopted a minimalist 'flat' appearance for their user interfaces. The uncluttered layouts and stylish, legible typography are great, but in the process many controls have become hard to find, hidden from sight unless you know where to look or which gesture to use. So please can we have better balanced software interfaces that don't throw out the baby with the bath water.

SECURITY CAMERA | **£188** (two-camera pack) from www.snipca.com/14461

Philips In.Sight Wireless HD Home Monitor

A home-security camera that's not as good value as it first appears

Although Philips insists on calling the In.Sight a "Wireless HD Home Monitor", it's not a monitor at all but a home-security camera. Like many recent security cameras, you'll need an Android or iOS device to set it up and it needs an internet connection because it stores your security footage online. A pack of two costs just £188, while a single camera costs £97 from www.snipca.com/14462 – both prices are very competitive.

Setup is easy using the wizard in the free app (iOS: www.snipca.com/14459, Android: www.snipca.com/14460). Once your camera is up and running, it detects lighting conditions and automatically switches between normal and night-vision mode as needed. The video quality adapts according to your Wi-Fi connection speed. At higher speeds, video quality is very good with only a small amount of noise visible in night-vision mode.

Recording is triggered whenever the camera detects sound and/or motion. You set a 'Detection Area' within which the camera picks up movement. Setting this area is easily done within the app – just drag a resizable box around your screen. You can also adjust the camera's sensitivity to minimise false alarms. It's not as tweakable as the Y-cam HomeMonitor HD (see our review, Issue 420), which lets you set two detection areas using different levels of sensitivity, and schedule the motion detection to only run at specific times of day through the week. The fewer options do make the In.Sight very simple to use though.

When the cameras detect motion or sound, you receive a notification on your phone or tablet within a couple of seconds telling you what time the detection was made and showing you a small snapshot of what the camera picked up. However, unless you're prepared to pay a subscription fee, you can't actually watch the footage itself.

To watch, save and share recordings from the past seven days you need to pay £7.99 a month (or £79 a year) for the Silver package. To extend this to the past 30 days, you need to pay £27.90 a month or £279 a year for the Gold package. This is poor value compared with the Y-cam HomeMonitor, which lets you access seven days of recordings for free, and only costs £30 a year for 30 days of recordings.

In itself, the Philips In.Sight is a good security camera that's very easy to use. However, the camera is of little use unless you pay the high subscription costs, making it hard to recommend when Y-cam's cameras are of equal quality, but subscription-free.

VERDICT: A good home-security camera let down by expensive subscription fees

★★★☆☆

ALTERNATIVE: Y-cam Home Monitor HD £139 A high-quality security camera with more features and, best of all, no need for a subscription

SPECIFICATIONS

720p resolution • 102-degree viewing angle • Infra-red night mode • 2.4GHz 802.11b/g/n • Requires mobile device running iOS 6 or later, or Android 2.3 or later • 114x65x65mm (HxWxD) • One-year warranty • Part code M120G/10 www.snipca.com/14463

COMING SOON

JANUARY 2015

Google's Project Ara is an ambitious initiative to create an upgradeable smartphone based around components that are easily interchangeable blocks. The first Ara phones and blocks will likely be beta versions, much like the current version of Google Glass.

JANUARY 2015

Seagate's new 8TB internal desktop hard drive is due in the New Year. It will cost $260 (£166) in the US, with UK pricing to be confirmed.

MARCH 2015

HTC's Android Wear smartwatch (see artist's impression, right) is due to be announced in January at the CES show in Las Vegas, with the actual release in March. Wackier rumours say we'll see a smart necklace or hat instead of a watch.

EVleaks

SPRING 2015

Echo is Amazon's voice-activated personal assistant, similar to Siri and Cortana, but is built into a standalone mains-powered device for your home rather than into a tablet or phone. UK pricing and availability haven't been confirmed, but it costs $200 in the US (approx £126).

Softpedia

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LAPTOP

Apple MacBook Air 13in 128GB
£849 from 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

DESKTOP PC

Palicomp AMD Kaveri Evolution
£500 from 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 cheap, complete PC system that's powerful enough for basic tasks. £350 from www.snipca.com/12606

TABLET

Apple iPad Mini 2
£239 from www.snipca.com/14467
Tested: Issue 416

Apple's mini tablet from last year is now available at an even lower price. The only thing it lacks compared with this year's Mini 3 is a fingerprint sensor and the option of lots of built-in storage. Otherwise, it's an absolute bargain.

ALTERNATIVE: Apple iPad Air 2 A thin and lightweight 10in tablet with a fingerprint reader, an excellent screen and peerless selection of apps £399 from www.snipca.com/14309

PHONE

Motorola Moto G 4G
£150 without contract from 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

DIGITAL CAMERA

Panasonic Lumix DMC-GF6
£300 from 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

E-READER

Kobo Aura H2O
£140 from 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 Voyage The best Kindle yet, with a sharp, extremely responsive touchscreen and easy-grip design. £169 from www.snipca.com/14451

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SECURITY SOFTWARE

Kaspersky Internet Security 2015

£17.99 from www.snipca.com/14212
Tested: Issue 437

Kaspersky Internet Security 2015 has won our past four antivirus tests, making it the year's standout performer. The 2015 edition is available at an exclusive reader discount on our Software Store. Click the link above for a one-device licence, or buy a three-device licence for just £39.99 at www.snipca.com/14221.

ALTERNATIVE: Norton Internet Security 2014 Great antivirus software, but sometimes blocks legitimate software. £29 from www.snipca.com/14479

SMART TV

Samsung UE32H6200

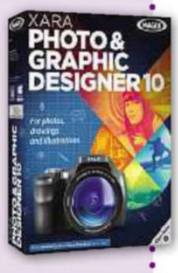
£350 from www.snipca.com/13101
Tested: Issue 427

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. £450 from www.snipca.com/12931

COMPETITION

Win 1 of 5 XARA Photo & Graphic Designer 10



XARA Photo & Graphic Designer 10 offers an amazing range of options for optimising and creatively editing your photos. It's one of our favourite new graphic-design programs, which is why we awarded it five stars and a Buy It! stamp of approval in Issue 438. This latest version is a huge improvement on previous releases. The colour-correction tools are far superior, giving you more advanced methods with which to improve your photos. To enter, email your address to cacomp@dennis.co.uk by midnight 20 January.

XARA Photo & Graphic Designer 10 is available now priced £69.99. For more information visit www.snipca.com/14659 and follow MAGIX on Twitter @MAGIX_UK.

SECURITY CAMERA

Y-cam HomeMonitor HD

£147 from 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. £101 from www.snipca.com/12741

ROUTER

Trendnet TEW-812DRU

£104 from www.snipca.com/14612
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. £195 from www.snipca.com/14350

MULTIFUNCTION PRINTER

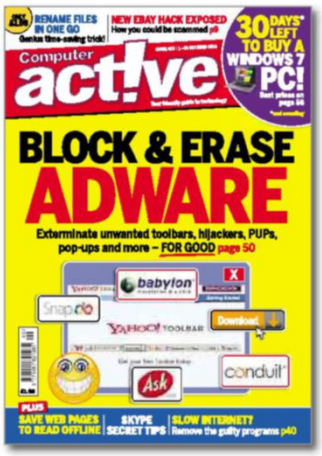
Canon Pixma MG4250

£50 from 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

Missed an issue?



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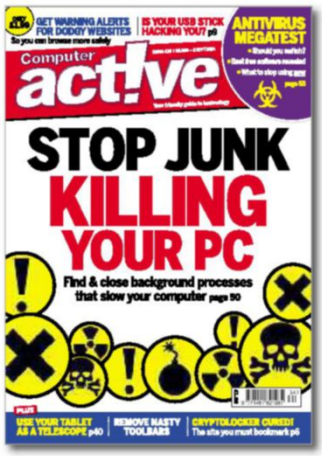

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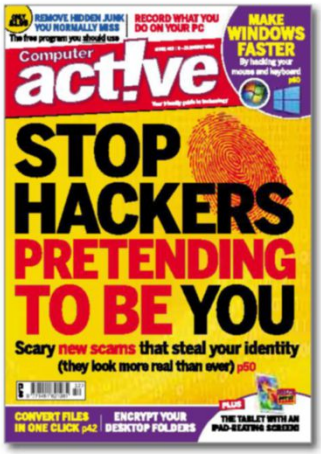

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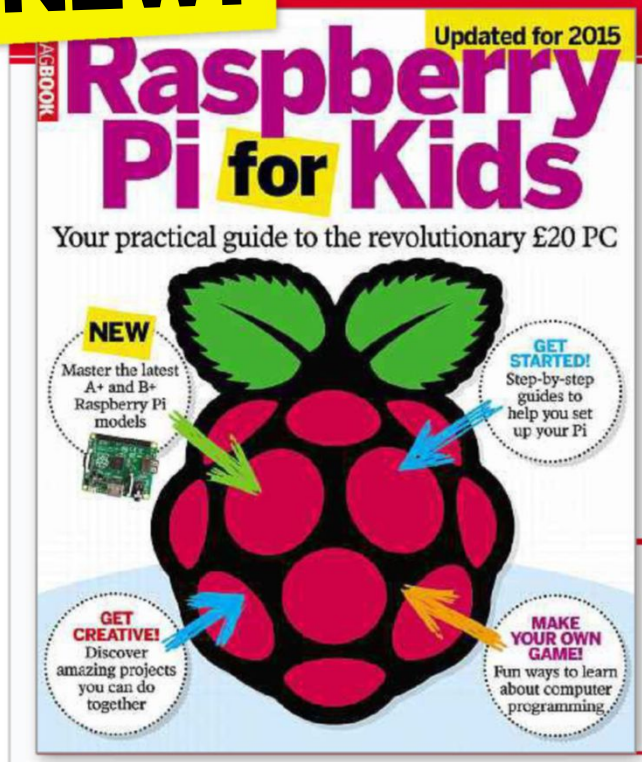

RASPBERRY PI FOR KIDS

The Raspberry Pi is the incredible £20 British computer that's taking the world by storm. It's ideal for children of all ages to experiment, play games and learn valuable skills. We've updated this 148-page book for 2015 to include instructions on mastering the new Pi models (A+ and B+), helping children learn the coding skills needed to excel at the new school curriculum. We take you step by step through the basics of setting up and configuring the Pi and introduce many fun projects for families.

BUY IT NOW FROM AMAZON
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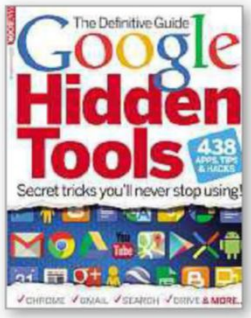
THE DEFINITIVE GUIDE TO GOOGLE HIDDEN TOOLS



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.

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Workshops & Tips

PULL OUT & KEEP Issue 440

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

35 Turn your life story into an audiobook
38 Add printing tools Windows lacks
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42 Update Windows without rebooting

PLUS

43 Readers' Tips
44 Phone & Tablet Tips
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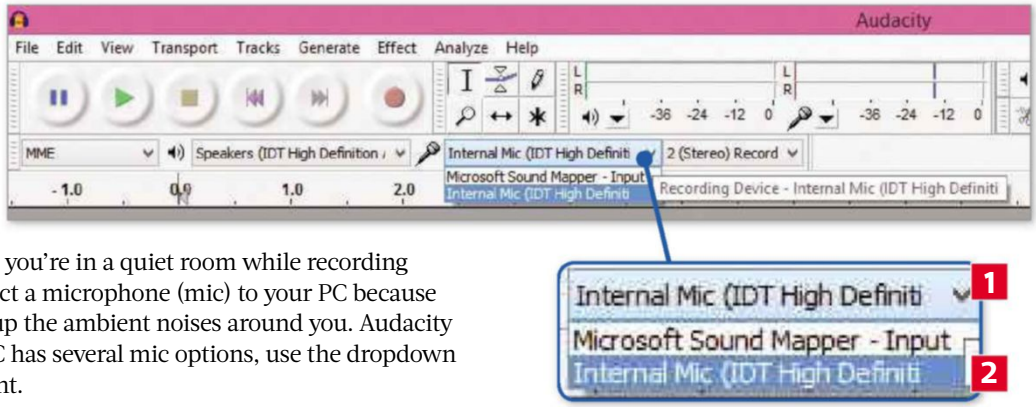
48 Secret Tips For... Kaspersky Security 2015

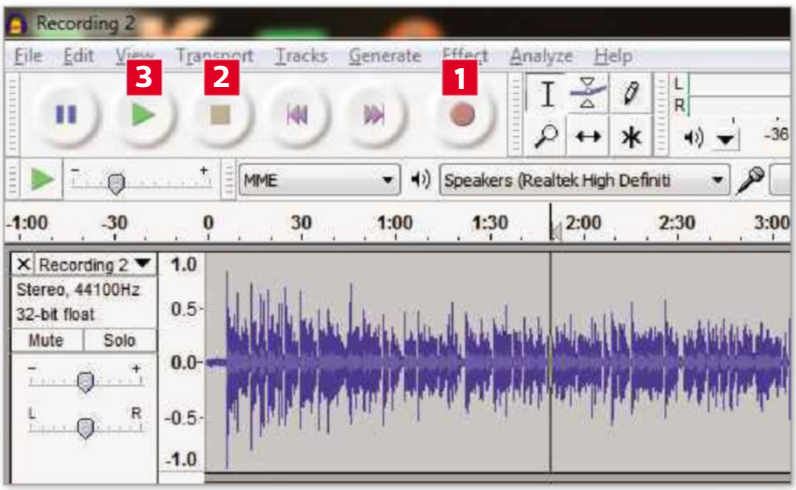
Turn your life story into an audiobook

What you need: Audacity; Windows XP, Vista, 7, 8 or 8.1
Time required: 50 minutes

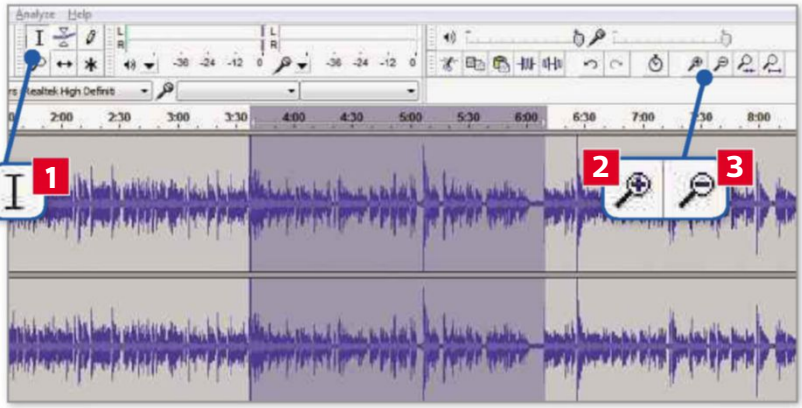
Audacity is a free audio-editing program that lets you record a voiceover and embellish it with music and sound effects. Despite its overwhelming appearance, it's actually very simple to use. We'll show you how to record your life story, edit it, add an intro and background music, then save the file as an audiobook that your children and grandchildren will treasure. You can either use this Workshop to create one chapter of your life or to narrate your entire life story in one go.

STEP 1 Go to www.snipca.com/14663 and click the 'Audacity 2.0.6 installer' link at the top. Click the setup file that downloads to your PC and follow the steps to install the program. Close the Help screen that pops up after it launches. Ensure you're in a quiet room while recording your voiceover. If you can, connect a microphone (mic) to your PC because your PC's built-in mic will pick up the ambient noises around you. Audacity will detect your mic 1. If your PC has several mic options, use the dropdown menu 2 to select the one you want.

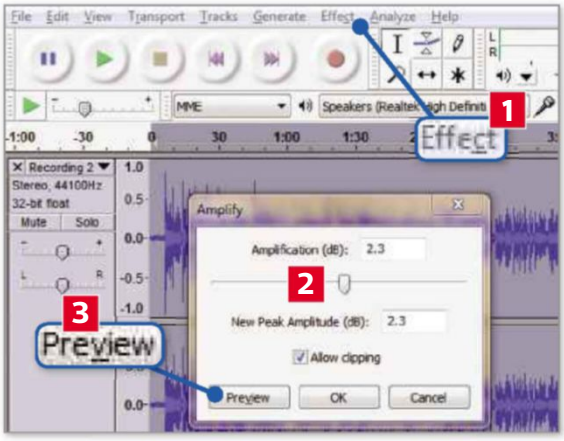




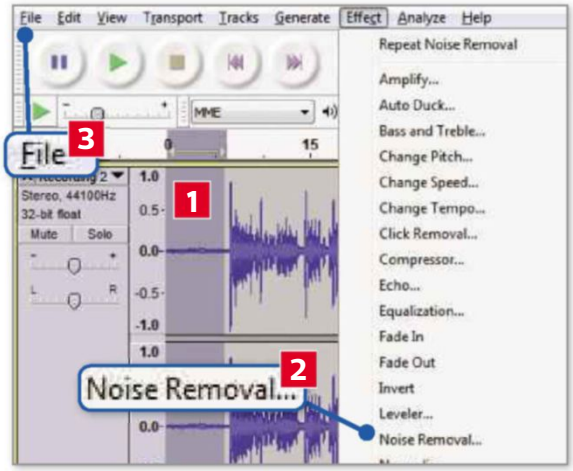
STEP 2 Create a test recording for about a minute to check that everything is okay. To begin recording, click the Record button (or press R on your keyboard) 1, wait for five seconds and then start speaking (we'll explain why you need to wait in Step 5). You'll see waveforms (lines) appear as you speak, which represent your recording. To stop recording, click the Stop button 2 (or press the spacebar on your keyboard). To play back your recording, click the beginning of the waveform lines, then press Play 3 (or the spacebar). Hearing your recording back will give you an idea of whether you need to change your mic or move to a quieter room. Click anywhere on your recorded waveform then press Delete to delete this test recording.



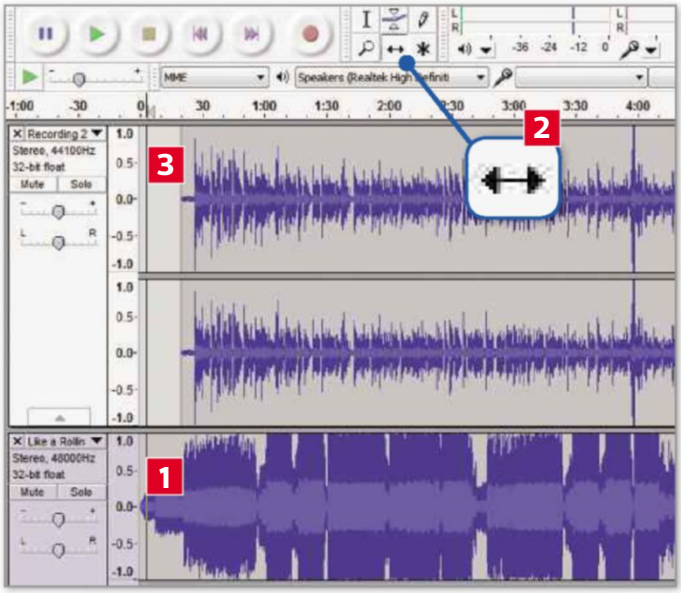
STEP 3 When you're ready to make your first recording, repeat Step 2. Record as much as you can in one go. Don't worry about any mistakes, repetitions or long pauses as we'll show you how to remove these in the next step. After you've finished recording, click the Selection Tool 1, which is used to select any section of your file. To only play a section of a recording, highlight it and press the spacebar. Use the Zoom In 2 and Zoom Out 3 options at the top to zoom into a specific area of your recording and see it more clearly. You can also use the keyboard shortcut Ctrl+1 to zoom in and Ctrl+3 to zoom out.



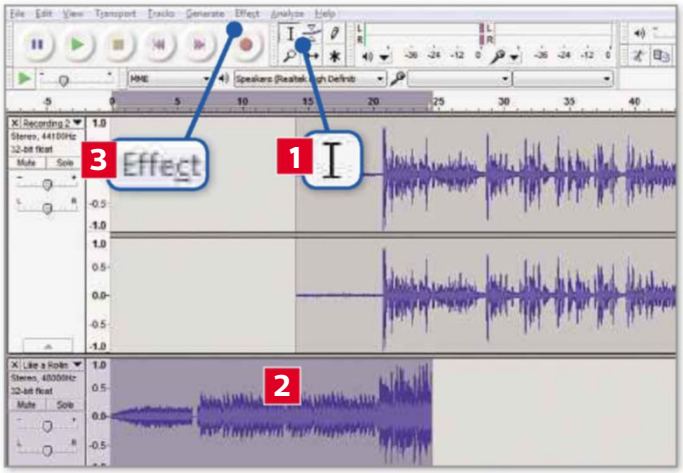
STEP 4 Editing mistakes in Audacity is as easy as editing text in Word. Ensure that the Selection Tool is clicked, then highlight the section you want to delete (mistakes, long pauses, repetitions) and then press Delete on your keyboard. To undo a deletion, press Ctrl+Z. Audacity has tons of effects to make your audio sound better. For example, if you notice that your recording is too soft, press Ctrl+A to select your recording. Next, click Effect 1, then Amplify. Now move the slider a fraction to the right 2 (moving it to the left makes it softer) and click Preview 3 to hear how a portion of your track will sound with the applied effect. If you like it, tick 'Allow clipping' then click OK to amplify the recording.



STEP 5 There will probably be background noise in your recording. Audacity has a brilliant built-in tool to minimise this. First, highlight the five seconds of static audio at the start of your recording 1. Now click Effect, Noise Removal 2 and then click Noise Profile. This tells Audacity that it should detect that specific background noise throughout your audio and remove it. Next, select your entire recording by pressing Ctrl+A. Then click Effect, Noise Remove and OK to remove that background sound. We'll now save what we've done thus far as an Audacity file that we can edit later. Click File 3, Save Project As, name your file and then click Save.

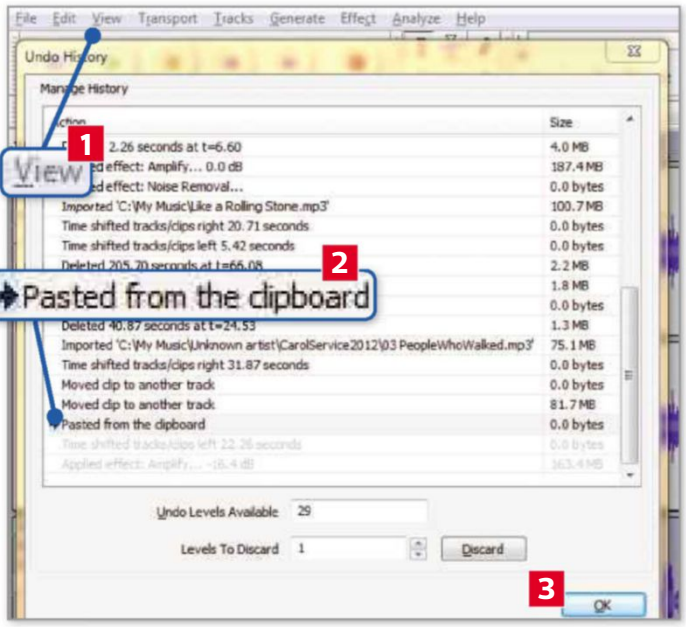


STEP 6 A great way to begin your audiobook is to fade in with a music track. Here, we're using the intro of Bob Dylan's *Like a Rolling Stone*. Open the folder containing that track on your PC and then drag and drop the track into Audacity. You'll see it loaded in a second waveform 1 at the bottom of your original recording. If you press Play at the start of your recording, both these tracks will play together. Because we only want the music to start, we'll use the Time Shift Tool 2, which lets us move one track independently of the other. Click it, click your recording at the top and then move it to the right to add a blank space at the start of your recording 3.

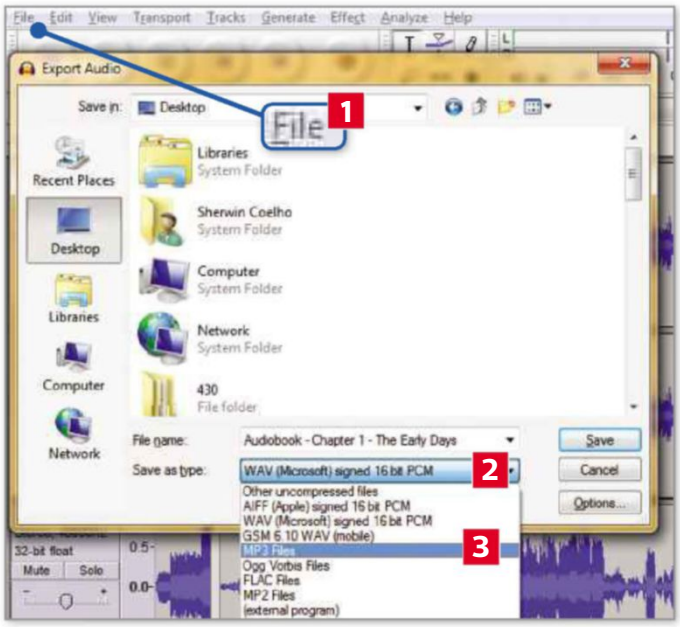


STEP 7 Now click the Selection Tool 1, zoom into the start of your timeline then play your recording from the start by pressing the spacebar. You should only hear the music. Pause the track (by pressing the spacebar) and use the Time Shift Tool again to align your recording exactly where you want it to begin after the music intro. To add a Fade In effect to this intro (before your recording begins), click the Selection Tool, highlight the intro music 2, click Effect 3, then Fade In. Delete the rest of the track (see Step 4) so that the music doesn't conflict with your recording.

STEP 8 To keep your listener interested, you could use an instrumental backing track that compliments your recording. Use any instrumental track from your PC (you can also find and download royalty-free tracks from www.snipca.com/14669). Drop the track into Audacity and click OK. It'll appear as a third waveform. Click the Time Shift Tool 1, then click the track and drag it from the third waveform to the second 2 (where your intro music is). If this backing track is not long enough, use the Selection Tool to highlight the entire track, press Ctrl+C (to copy it), then press Ctrl+V (to paste it). Join all these copies together using the Time Shift Tool.



STEP 9 Make sure you divide up your audiobook into sections, each with its own intro and background music. You can also add sound effects (www.freesound.org is a good resource for free effects). For example, if you're describing your favourite beach holiday destination (or your honeymoon), you could use one of Freesound's wave effects. Don't worry about making mistakes as Audacity automatically saves all your changes to a History file that can be accessed by clicking View 1 and then History. Here you can jump to any past changes you've made by clicking it 2 and then clicking OK 3.



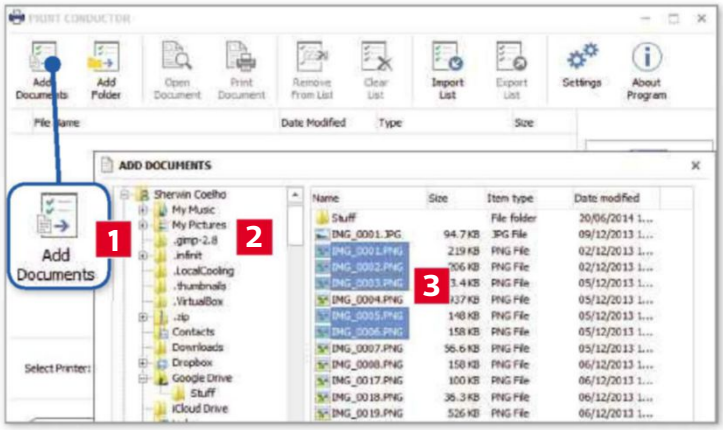
STEP 10 End your audiobook by adding some uplifting music. Add a fade-out effect by highlighting the last few seconds, then clicking Effect, Fade Out. To save your audiobook, click File 1 and then click Export Audio. By default, Audacity will save it as a WAV file 2, which is a larger file format than MP3, with better sound quality. To save it as an MP3 instead, click the 'Save as type' and select that option in the dropdown menu 3. Finally, name your track, navigate to where you want to save it, click Save and then OK on any confirmations that appear.

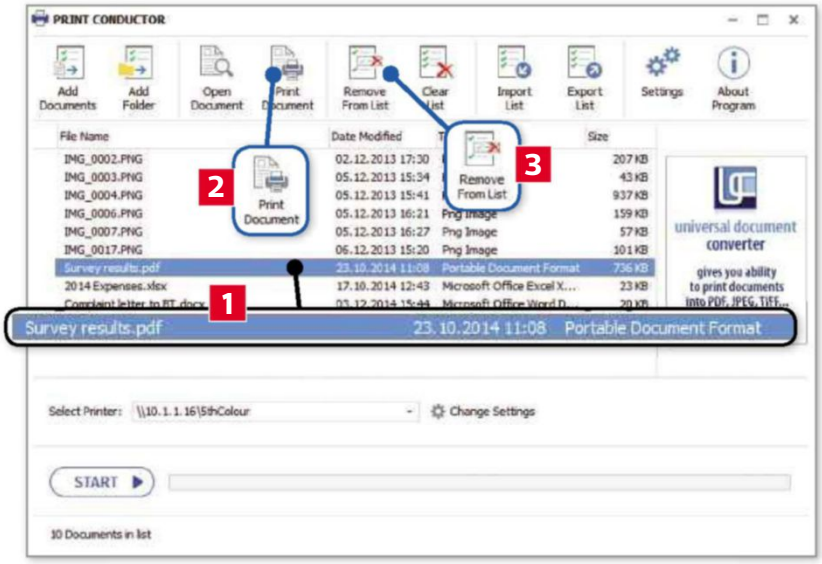
Add printing tools Windows lacks

What you need: Print Conductor; Windows XP, Vista, 7, 8, or 8.1
Time required: 20 minutes

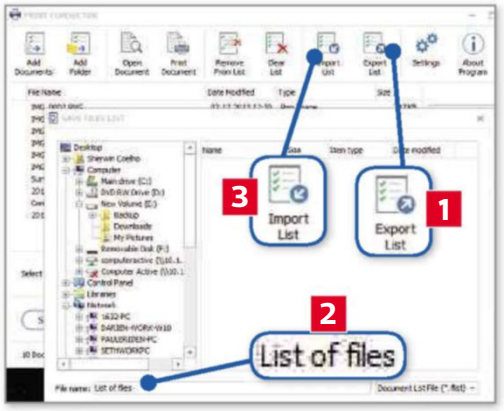
Windows doesn't let you print multiple files in one go, but with free program Print Conductor you can do exactly that simply by dragging and dropping files into the program, then clicking Start. You can even drag and drop entire folders to print all the files within. It also provides the option to create and save a list of files to print at a later date.

STEP 1 Go to www.snipca.com/14662 and click the blue Download button. Click the setup file that downloads to your PC and follow the installation steps. If your PC is connected to a printer, Print Conductor will automatically detect it. Otherwise, connect your printer then open Print Conductor. Next, drag and drop files directly into the program. Alternatively, you can use the options at the top right by clicking Add Documents 1, navigating to the relevant file via the dropdown menus on the left 2, then clicking OK. To add multiple files from one folder, navigate to that folder, press the Ctrl key on your keyboard, click the files you want 3, then click OK.

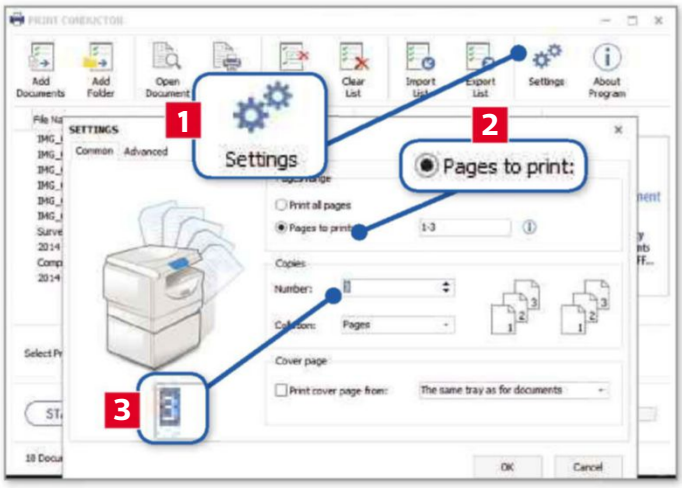




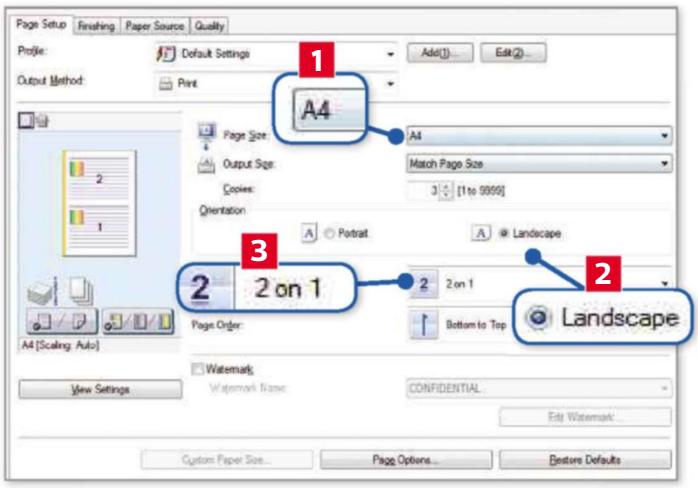
STEP 2 You can also add an entire folder of files to print in one go by clicking Add Folder, selecting the folder you want, then clicking OK. If you've added a number of files to Print Conductor but want to print only one, click it 1, then click Print Document 2. To remove a file that you've added to the list by mistake, click it, then click Remove From List 3. To remove multiple files, press Ctrl, click the files you don't want, then click Remove From List. To clear your list of files and restart the process, click Clear List, then Yes.



STEP 3 Print Conductor's Export List feature comes in handy if you intend to print the same files again in future. When you come to print these files again, you simply import the saved list. First, click Export List 1, then select where you want to save it by navigating through the menus on the left. Name this list file 2, then click OK. Open it the next time you want to print the files on the list. Alternatively, click Import List 3, navigate to the list file, then click OK to load it into Print Conductor. Click Start and then Continue Printing.

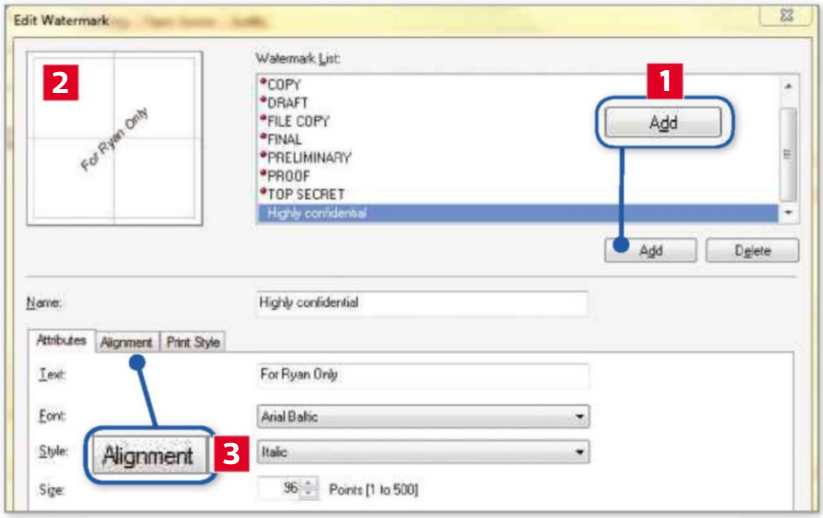


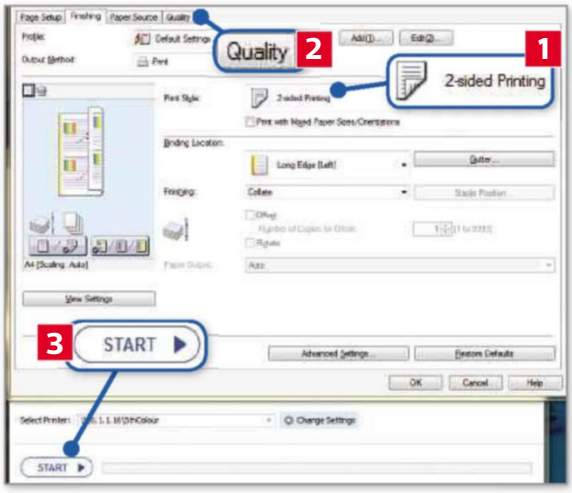
STEP 4 Print Conductor lets you specify which pages within a document you want to print and the number of copies. Bear in mind, these settings will apply to all files in the list. Click Settings 1, select 'Pages to print' 2 and enter the page range (for example, 1-3). Enter the number of copies you want in the Number field 3. Click OK.



STEP 5 To change your printer's default settings, click Change Settings at the bottom. Click the Page Size dropdown menu 1 and select the option you want. To print in landscape mode, select Landscape 2. To print two document pages on one side of a sheet, for example, click the Page Layout dropdown menu and select '2 on 1' 3, or the layout of your choice.

STEP 6 You can also add watermarks to whatever you print (either from a list of presets or one you've created). Tick Watermark, then choose from the preset options in the Watermark Name dropdown menu. To create your own, click Edit Watermark, then click Add 1. Name your watermark in the Name field. In the Attributes column below, enter the text for your watermark, select the font, font style and font colour from the dropdown menus, then adjust its size in the Size field. You'll see a preview of your watermark at the top 2. By default this runs diagonally across your page. To change this, click the Alignment tab 3 and choose one of the options. Click OK.





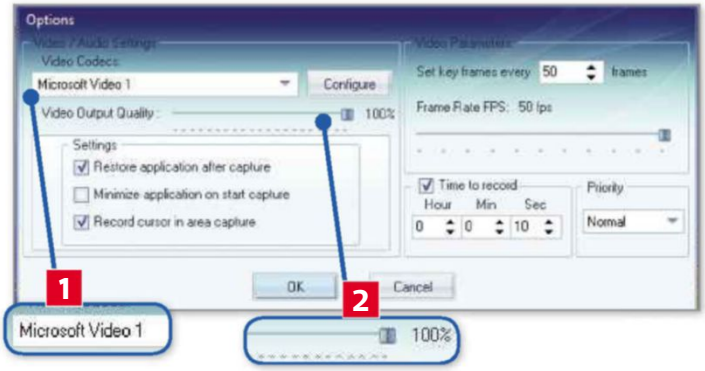
STEP 7 To print on both sides of a sheet, click the Finishing tab, the Print Style dropdown menu and select '2-sided Printing' 1 (it's set to '1-sided' by default). To print your files in black and white, click the Quality tab 2, the Color Mode dropdown menu and select 'Black and White' (it's set to Auto by default). Click OK, Start 3, then Continue Printing to print your files. Because you're using the free version of Print Conductor, it prints an extra page giving you a summary of what you printed and prompting you to buy the paid-for version (the only drawback in an otherwise great program).

Record Desktop problems as a video

What you need: Fast Desktop Recorder; Windows XP, Vista, 7, 8 or 8.1
Time required: 15 mins

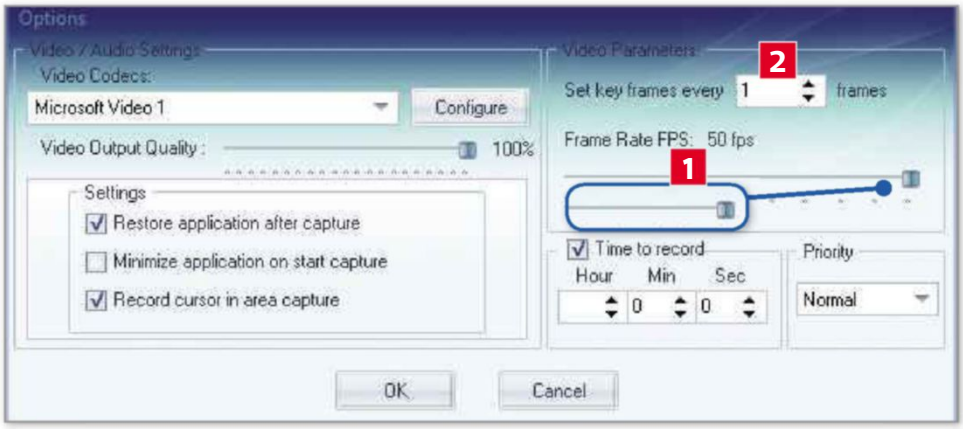
Whether you're speaking to a tech-support adviser over the phone about fixing a PC problem or trying to help another person carry out a task, it can often be hard to explain in words exactly what the fault or solution is. Fast Desktop Recorder overcomes this by letting you record yourself carrying out tasks on your PC. You can then save these recordings, and email them to your friends, family, and tech-support teams, or simply keep them for your own future reference.

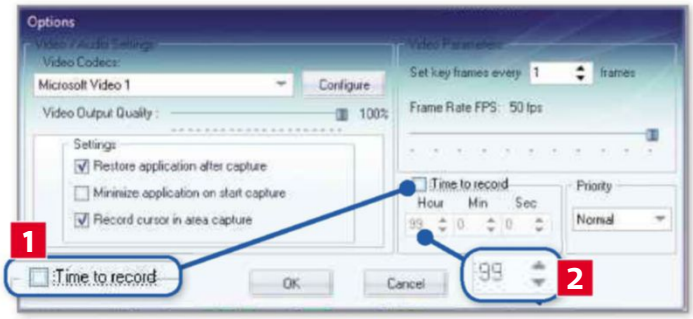
STEP 1 First, go to the Fast Desktop Recorder download page at www.snipca.com/14725. Make sure you click the green Download button next to Fast Desktop Recorder, rather than the one next to ScreenMaster. Once it has downloaded, open the installer, follow the instructions to install Fast Desktop Recorder, then open it. The homescreen is a small, simple window with several options. The first thing you should do is set a folder to save your recordings in. To do this, click the folder icon 1 (yellow folder with a magnifying glass), navigate to the folder where you want to save your recordings and click OK.



STEP 2 You'll need to familiarise yourself with the various recording options in Fast Desktop Recorder. On the homescreen, click Options, the Video Codecs dropdown menu at the top left, then Microsoft Video 1 1. This sets the program to record videos in the AVI format, which can be played back on most video software, including Windows Media Player and VLC. Next, move the Video Output Quality slider 2 to a quality that suits you. The lower the quality, the less hard-drive space a video takes up, but to keep the video legible we don't recommend going below 50 per cent. A 10-second, full-quality clip we recorded used up 44MB of space, while a clip at 50 per cent quality used up 10MB.

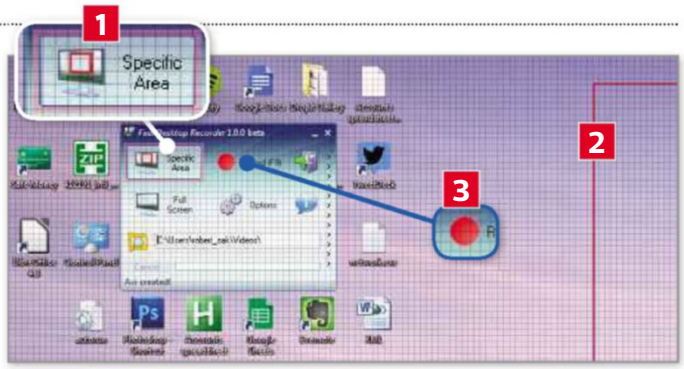
STEP 3 In the Video Parameters section on the right side of the Options screen, you can adjust the Frame Rate FPS (frames per second) slider 1. The higher you set the slider, the less jumpy your recorded videos will look, making it easier for viewers to follow. A higher frame-rate makes any movement and animation in the video appear smoother. Drag the slider all the way up to 50fps and lower the 'key frames' value above it to 1 2 to make the recorded video as smooth as possible.





STEP 4

In order to make your recordings as long as you like, you should untick the 'Time to record' 1 box. However, Free Desktop Recorder is still in beta and we found a minor bug which means that there's a chance that your video will fail to record unless you manually enter numbers into the 'Time to record' section. If you encounter this problem with the box unticked, tick the box, and type '99' 2 or another high value into the Hour box, and then click OK. This workaround will effectively give you unlimited recording time.



STEP 5

Back on the Fast Desktop Recorder homescreen, you have two ways in which you can make recordings. One of these is Full Screen, which simply captures everything on the screen. The other option is Specific Area. Click this if you want to record only a specific part of your screen. This is particularly useful if you're privacy conscious and don't want the recipient of your video seeing everything on your Desktop. Click Specific Area 1, then on the grid hold left-click and drag your mouse across the area you want to record 2, which will create a red box around it. If you highlighted the wrong area, just highlight another area and the old one will disappear. Once you've selected your recording area, press Enter, then on the Fast Desktop Recorder homescreen click Record 3.

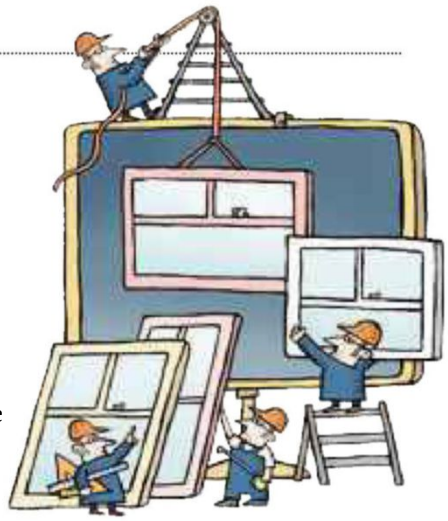
STEP 6

When you start recording, the Record button will change to a flashing blue Stop button 1. If you're recording a specific area, four red markers 2 will appear, indicating the corners of the area which is being recorded. Anything outside these markers will not appear in the recording, so make sure that whatever you want to record is within this area. When recording, move your mouse quite slowly, otherwise the recorder may not catch every movement, making the mouse appear as if it's jumping around the screen in the final video.

STEP 7

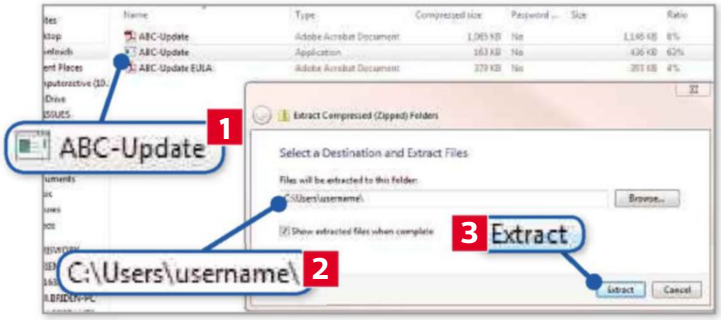
When you've recorded everything you needed to, Click the blue flashing Stop icon in Fast Desktop Recorder. A moving blue line 1 will appear at the bottom, under which you'll see the message 'Saving video in progress' 2. Once the video has been saved, this text will change to 'Avi created!' and you'll be able to find the video in the directory you chose to save it to 3 at the start of this Workshop. The video is now ready to be sent by email, popped on to a USB stick, or simply kept on your hard drive.

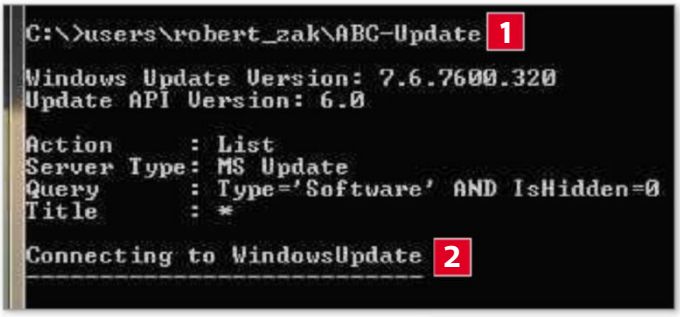
Update Windows without rebooting



What you need: ABC-Update; Windows Vista, 7, 8 or 8.1 **Time required:** 15 mins

Even if you run Windows updates in the background, they tend to slow down your PC, and then harass you with prompts to reboot your PC. Windows makes you reboot even after the tiniest update, but you can avoid this palaver with ABC-Update. This free tool installs Windows updates using the command prompt, and doesn't force you to reboot after every single update. If an update does require a reboot, then ABC will let you know without constant reminders, letting you do it in your own time.

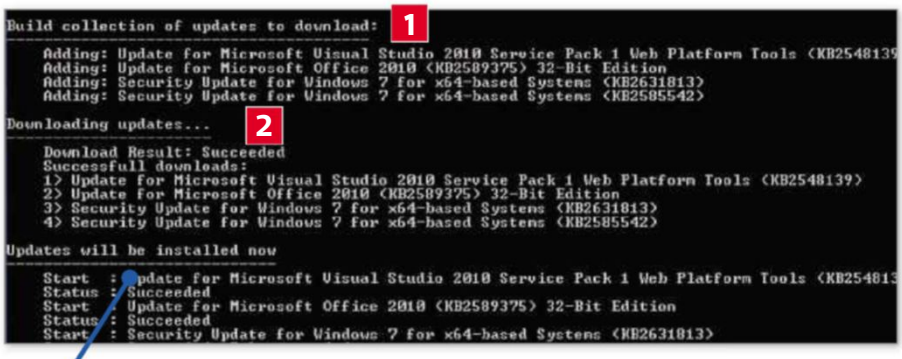




STEP 1 To download ABC-Update, go to www.snipca.com/14640 and click the 'Click to download .ZIP file' link under Downloads. Once the ZIP file has downloaded, open it, double-click the ABC-Update executable file 1, then click 'Extract all'. Choose a destination for the file (for our purposes, we'll use C:\Users\username\ 2), then click Extract 3. Because you open ABC-Update through command prompt, you should make sure the destination path is easy to type. Once you've extracted ABC-Update, click Start, type cmd, right-click it in the search results, then click 'Run as administrator'.

STEP 2 In Command Prompt, if the default directory is wrong (for example, C:\Windows\system32\), type cd .. then press Enter. Repeat this process until you're only left with the letter of your hard drive (usually C:), then type the location of ABC-Update (in our case, C:\Users\username\ABC-Update 1) and press Enter. You'll see the status message 'Connecting to WindowsUpdate' 2 as it scans for installed and missing updates on your PC. After a few minutes, you'll see a list showing all available Windows updates. Scroll up the list, and look for updates that start with the word 'Missing'. These are updates you need to download and install.

STEP 3 To automatically install all your missing Windows updates, type C:\Users\username\ABC-Update A:\install and press Enter. You'll see the 'Connecting to WindowsUpdate' message. Then under 'Build collection of updates to download' 1, you'll see a list of all the updates you need to install. Beneath that you'll see a list of your updates as they download 2 (this may take a while). Once they're downloaded, beneath 'Updates will be installed now' you'll see a list of each update 3 as it's added to your computer.



NEXT ISSUE

ON SALE 21 Jan

- Make it easier to create System Restore points
- Play Scrabble on your TV
- Block adverts in your software
- See the night sky the day you were born

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TIP OF THE FORTNIGHT

See what your street looked like years ago

Just when I started giving up hope that I'd experience the wonders of time travel in my lifetime, a friend told me that this is a readily available feature within Google Maps.

Google recently added the Time Travel feature to the browser version of Street View. This lets you use a slider to see how an area has changed in the years since Google started photographing it (using its Street View cars). Go to maps.google.com, then enter the postcode (or address) of the location you want to time-travel to in the bar at the top left and press Enter.

Now click and drag the Street View icon (the small orange pegman) from the bottom-right corner to the spot you want to see in Street View. Once you're in Street View, click the small circle icon with the downward arrow next to it at the top left (see screenshot right).

You'll see a timeline slider with white dots denoting the different years photos of that place were taken in Street View (how far back you can travel in time varies from place to place). Drag the big dot on the slider to any of the smaller dots to see a thumbnail of what that very spot looked like at that time. Click the magnifying glass at the bottom right of the thumbnail to make it full screen.

Ray Frasier

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

ONLINE SHOPPING

Track when Amazon items drop to your desired price

The internet is a much better place to find a bargain than the high street, but it can get overwhelming trying to keep track of which sites sell the things you want for the lowest prices. Thankfully, I found a site that makes it easy to track the price history of an item on Amazon, and set alerts for when the price drops to what I'm prepared to pay.

The site is called CamelCamelCamel (uk.camelcamelcamel.com). Go to the website, type the item you want to track in the bar at the top and press Enter. Now select your item from the search results list to see a handy chart showing its price history since it was first made available on Amazon. This is a great guide for comparing prices with other sites.

To receive email alerts when the price drops to what you're prepared to pay, type your desired price and email address in the boxes provided (see screenshot below left) and click Start Tracking. You'll be taken to a page where you can buy, update and delete your tracked items.

Alan Favre

CLOUD STORAGE

Make your default Documents folder sync with the cloud

For many years, the default Documents folder in Windows was the most important folder on my PC. But with my steady migration to Windows 8 and the cloud in recent years, this has slowly been surpassed by the Dropbox folder, which has the added benefit of syncing my stuff to the cloud, so I can access it from any device and even remotely via the website.

However, my warm feelings towards the default Documents folder – and the fact that Windows sends various documents downloads and data there by default – urged me to find a way to change the location of my Documents library folder to Dropbox in Windows 8. And I've succeeded!

In Windows Explorer, right-click Documents, which is under Libraries in the left-hand pane. Click Properties, the Location tab, then type the location of your Dropbox folder (by default, this should be C:\Users\[your name]\Dropbox\Documents) and press Enter. Anything saved to Documents will now automatically be saved to Dropbox as well. If you had things in Documents that weren't in Dropbox, you'll find them at C:\Users\[your name]\Documents.

Rahul Shah

EMAIL

Automatically delete emails you don't want

I love setting automated tasks on my PC, so you can imagine how much I enjoyed reading your Secret Tips on Task Scheduler in the last issue. While Task Scheduler can't manage browser-based services such as emails, I was pleased to find that my email service of choice – Outlook.com – lets me set it to automatically 'sweep' (delete) emails in my inbox from specific senders. This is a great way to avoid a backlog of newsletters and other promotional emails I only occasionally read.

Log into your Outlook account and tick the boxes next to all the emails you want to set Sweeping rules for (you don't have to do them all in one go). When you're done, click Sweep in the blue bar at the top. You'll now see a pop-up with options to 'Delete all from Inbox', 'Always delete emails older than 10 days old', and so on. Select the option you want and then click Sweep.

David Green

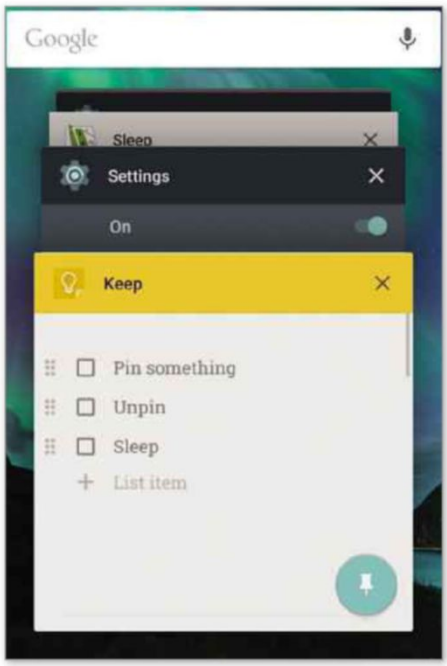
Phone and Tablet Tips Brilliant things to do on your device

ANDROID

Lock an app to your screen

If a number of people are handling your phone or tablet (you might be showing them a photo or app), you don't want them straying into other areas of your device, such as other photo albums or emails. To make sure they see only what you want them to see, Android 5.0 Lollipop lets you 'pin' an app (which effectively keeps it open on screen until you close it).

Go to Settings, Security, Screen Pinning, then tap the switch to turn it 'On'. Next time you want to pass your phone around a group of people, open the app you want to pin, then press the 'Recent apps' button on your device (to the right of your Home button). You'll now see the app in a window with a green pin icon at the bottom right (see screenshot below left). Tap the icon, set an unlock code (if you want to be ultra-cautious) by ticking the box, then tapping Start. The app is now 'pinned' and can only be closed by pressing the Back and Recent Apps/Overview buttons on your device.



ANDROID

Disable notifications from specific apps

Many apps use push notifications, which appear in the bar at the top of your Android homescreen. If you use eBay, for example, you may receive notifications telling you an auction is about to end, or an email apps might alert you to a new email.

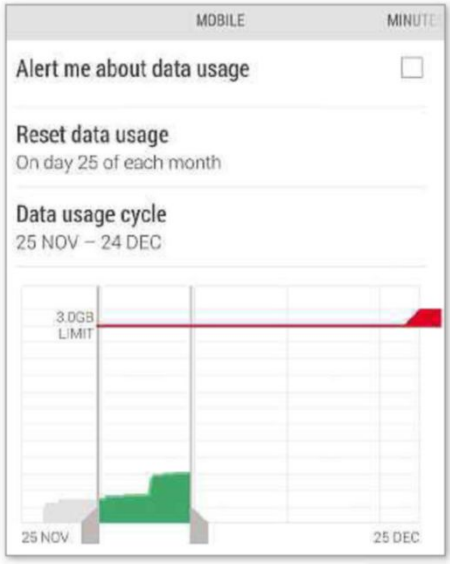
However, there might be apps from which you don't want notifications. There are a couple of ways you can stop these notifications appearing. Whenever you receive a notification you don't want, tap and hold it until App Info appears, then tap that. Untick the 'Show notifications' box, then tap OK. The other way to do it is by going to Settings, Apps, tapping the app in the list you want to stop receiving notifications from, and then unticking the 'Show notifications' box.

ANDROID

Set a limit for your data usage

These days we're all using more and more mobile internet data on our phones and tablets each month, so it's more important than ever that we can quickly check our monthly data usage so we don't get any shocks when the bills come in. But logging into your online account with your mobile network to check your data usage can be a hassle. It's much easier to use Android's built-in data-monitoring tool.

Tap Settings, Data Usage (or More, then Data Usage), then tick the box saying something similar to 'Limit mobile data usage' (this varies according to device). In the chart displaying your data usage,



Best New Apps What you should install this fortnight

Next Glass

Free

iOS: www.snipca.com/14680

Android: www.snipca.com/14681

If you're a beer, wine or whiskey enthusiast, and like to try out new beverages, this app is a great guide to what you may or may not like. You enter details about your favourite tipple, then when you come across a drink you haven't tried before, scan its barcode using your phone and Next Glass will tell you how likely you are to enjoy it based on your tastes.

Z Launcher Beta

Free

Android: www.snipca.com/14683

This Nokia-developed app is nothing if not ambitious. It tries to give you access to everything you need on your phone on a single homescreen, and does a great job of it. The app shortcuts it displays change depending on what time of day you typically use certain apps. You can use your finger to scribble a letter anywhere on the screen to display all your apps that start with that letter.

VLC for Android

Free

Android: www.snipca.com/14684

After two years of being in beta, the full version of the world's most popular PC video player arrives on Android. It plays most video and audio formats, supports subtitles, and lets you browse folders containing your audio and video files, just as you would on your PC.

you should be able to set a limit by holding your finger on a horizontal bar in the chart, then sliding it up and down to adjust the limit (see screenshot below left). To synchronise your monthly data usage with your phone bill, tap 'Reset data usage', then enter the day of the month you receive your phone bill. This way, the data-usage cycle will reset at the same time as you receive your bill.

iOS 8

Scan card details instead of typing them

In Safari, you can already autofill online forms with card details stored on your device. But if you prefer not to store sensitive data on your device, in iOS 8 you can use your iPhone or iPad camera to scan your card details instead.

When you're prompted for your credit-card details by a reputable shopping site such as Amazon or eBay, tap one of the information fields (where you'd normally type your card's details), then the Scan Credit Card option above the number pad. Your phone screen will turn into a camera, with a rectangular outline marking where you need to place your payment card. Position your card within this frame, and your device will enter the name and card number into the text fields. For security reasons, you still need to manually enter the expiry date and three-digit security code on the back of your card.

iOS

Use password managers directly through Safari

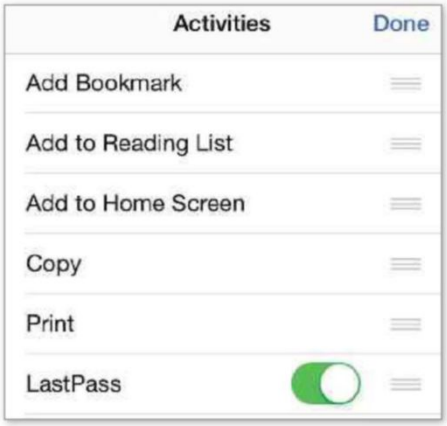
The Premium version of LastPass recently added a feature that integrates its password manager into the Safari browser, cutting out the fiddly business of having to paste passwords from the LastPass app to the browser. This will speed up your web browsing, while also giving you greater protection from hackers.

To use the extension, you will need the paid-for Premium version of LastPass, which costs £7.99 a year. While we normally try to recommend free apps, LastPass has for a long time been our favourite password manager, and the extra paid-for features, which include a portable version of LastPass you can run from a USB stick, as well as apps for Android devices, are worth the money.

In the App Store on your device, type lastpass in the search box, tap 'LastPass for Premium Customers' in the results, then tap Get, Install, and type your iTunes password if prompted. Once you've installed LastPass, launch the app, follow the steps to log in or create an account, then choose whether you want to use Touch ID (fingerprint scanning) to log in.

Next, you need to switch off your default Safari auto-fill options. Go to Settings, tap Safari in the left-hand pane, Passwords & Autofill, then tap 'Names and Passwords' to switch it off. Open Safari, tap the Share icon (blue box with arrow) to the left of the URL bar at the top, scroll right along the bottom row, then tap More. Tap the switch next to LastPass to turn it on (see screenshot above right), and it will now appear as an option when you tap the Share icon.

Next time you're on a site requiring login details, tap the Share icon, LastPass, then log in. The site will appear in a list, assuming you've already added it to LastPass. If you haven't, tap Add New Login then follow the instructions to add it to your LastPass list.



Games With Kids

What to play together on your phone and tablet

AGES 0-5

Color Shapes

99p www.snipca.com/14685 (iOS)

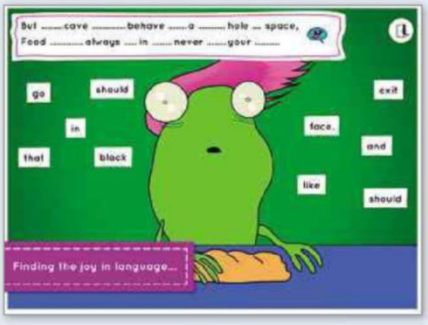
Set your kids the timeless challenge of fitting shapes in the right hole. Color Shapes encourages improvement, as the levels gradually increase in difficulty. The app is vibrant, colourful, and filled with silly noises, so it's sure to keep a child entertained and learning for hours.

AGES 6-10

Monsters behave!

£1.49 www.snipca.com/14686 (iOS)

Learning about English language and grammar becomes much more appealing to children if they can have a laugh while doing it. This fun app features word puzzles, rhymes, and games that involve popping bubbles, throwing pudding everywhere, and other mischievous activities.



AGES 11-16

Spaceteam

Free www.snipca.com/14687 (Android)
Free www.snipca.com/14688 (iOS)

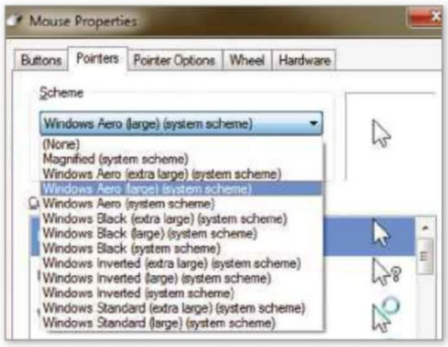
A chaotic game for chaotic kids, which up to four people can play (each requires their own Android or iOS device). Players must manage the control panel of an out-of-control spaceship. As nonsense commands appear on the screen, you have to shout them to other players, who have to twiddle switches and sliders on their own panels to stop the spaceship from crashing. It's out of this world!

WINDOWS XP, VISTA, 7, 8, 8.1

Make your cursor easier to see

If you find your cursor is too small and tend to lose track of it on your screen, there are a couple of tweaks you can make so that it's easier to see. Right-click any blank space on your Desktop and click Personalize. Next, click 'Change mouse pointers' in the left-hand pane, then the Pointers tab, and then click the Scheme dropdown menu. In the menu (see screenshot below), you'll see several cursor options, each offering 'large' and 'extra large' variations. Try out a selection of the larger sizes by selecting them and clicking Apply.

When you're happy with your choice of cursor, click the Pointer Options tab, then tick the 'Display pointer trails' box. This makes the cursor leave a trail in its wake as you move it, making it easier to keep track of. You can adjust the length of this trail by moving the slider. Click Apply and then OK to save your changes.



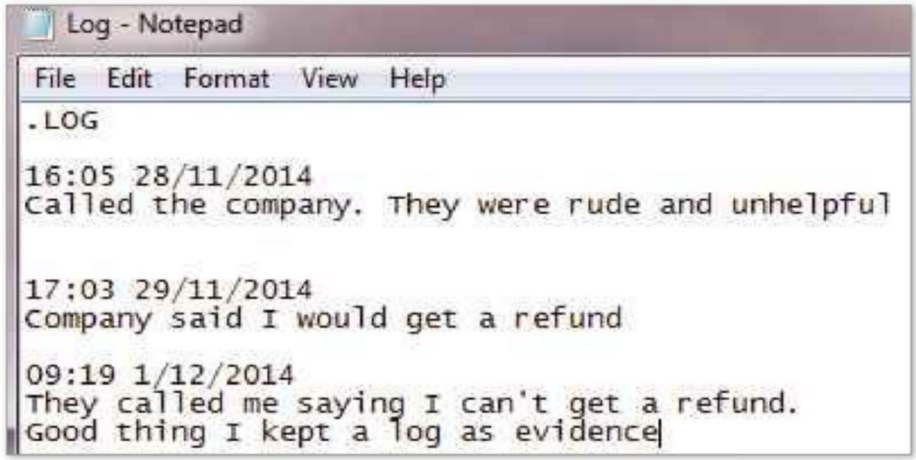
WINDOWS XP, VISTA, 7, 8, 8.1

Create a log diary in Notepad

Notepad is much more than just a poor man's Microsoft Word. In Issue 438, for example, we explained in a Workshop how you can use Notepad to create keyboard shortcuts.

Another great feature of Notepad is the option to create a log file, which can help you keep records of ongoing situations by automatically adding a date and time every time you open the file. This can be very useful, for example, if you're keeping track of how often your PC is crashing or if you want to log your communications with a company that you're having a dispute with (see screenshot below left).

To do this, open Notepad and type .LOG. Click File (at the top left), Save As, then name the file and click Save. Now whenever you open this file, it will automatically add the date and time – ready for you to add your log entry.



WINDOWS VISTA, 7

Customise your Start Menu links

There are many ways to customise the items that appear in your Start Menu. For example, you can change the Documents, Music and Pictures links to menus that display all the items in those folders when you move your cursor over them (similar to the All Programs menu).

To do this, right-click an empty space on your Taskbar, click Properties, then the Start Menu tab. Click Customize, then scroll through the list, choosing how you want each Start Menu item to be displayed, by selecting either 'Display as a link' or 'Display as a menu'.

At the very bottom of the list, you'll also see that you can add a link or menu to your Videos folder, which isn't displayed in the Start Menu by default.

When you've finished tweaking your Start Menu items, click OK, Apply and OK again.

Next, click the Start button. All the items you've turned into menus will now have arrows beside them. Move your cursor to them to see all the options, folders and files they contain (see screenshot).

WINDOWS 7, 8, 8.1

Display all the drives on your PC

Extra drives on your PC – SD card slots, for example – aren't displayed when you click Computer, unless you insert storage media into them. This makes it difficult to know whether those drives are working, especially if you don't use them regularly.

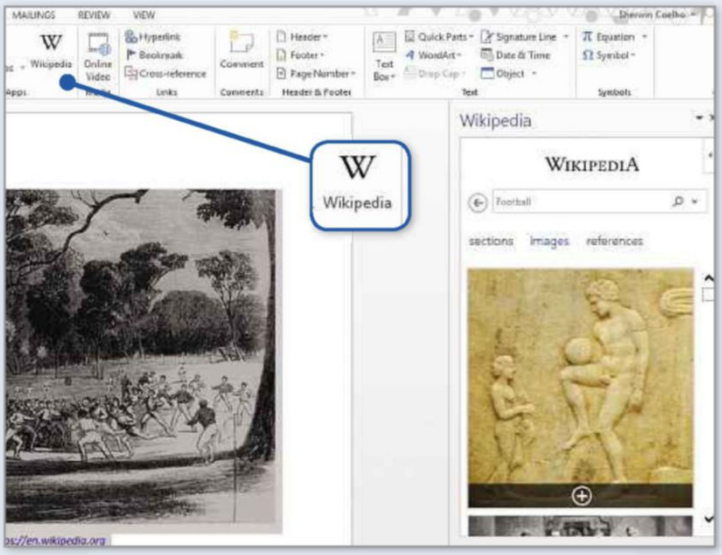
To display all drives on your PC by default, click Start, Computer, Tools, then 'Folder options'. Click the View tab, untick the 'Hide empty drives in the Computer folder' box, then click Apply and OK.

WORD

Use the Wikipedia 'app' in Word

Did you know you can add 'apps' to Office 2013? These can bolster your Office programs with all kinds of extra features. One of our favourites is the Wikipedia app, which lets you insert text and images directly from the website to your Word documents.

Click the Insert tab, then in the Apps section click Store. If you can see Wikipedia listed in the Apps section, it means your version of Office came came with it pre-installed. If not, in the 'Apps for Office' window, type wikipedia in the search bar, click Add next to the Wikipedia search result (with the 'W' icon), then click Trust It.



The Wikipedia icon will now appear in the Apps section of Word (see screenshot). Click it to see a pane on the right of your document displaying Wikipedia content. This pane works similarly to the website, assuming you have an internet connection. Type your search term in the search bar, press Enter and browse the results.

You can filter results by 'sections', 'images' or 'references'. If you want to add an image from Wikipedia to your document, click 'images', move your cursor over an image, then click the '+' symbol.

To add text, click 'section', highlight the text you want to add, then click the '+' symbol that appears when you highlight it.

EXCEL

Make changes to two tables at the same time

In Issue 416, Make Office Better, we showed you how to use Excel's 'transpose' function (see 'Convert rows to columns in one click'). Transposing a table basically means creating a new table of your original data with rows presented as columns and columns presented as rows. By default, the original and transposed tables are independent of each other (changes made to one are not applied to the other). We'll show you how to create a transposed table that automatically updates whenever you make changes to the original.

First, you need to make a note of the number of rows and columns in your original table. For example, if the table starts at A1 and ends at C7, note down 'A1:C7' (it has seven rows and three columns). Next, highlight a blank area in the spreadsheet with the reverse values of the original table. Using our example, this is three rows and seven columns. In the long formula bar at the top of the spreadsheet (where it says A1:C7), type =(TRANSPOSE(A1:C7)).

Now, instead of pressing Enter (which will transpose your data), press Ctrl+Shift+Enter. Your data will appear in the transposed table, and any changes you make in the original table will from now on automatically be applied to it.

ONENOTE

Create a page for your tagged notes

The Tags Summary pane in OneNote lets you manage all your tagged notes. To access this pane, click the Home tab, then Find Tags (in the Tags section). You can then filter and organise your tags using the 'Group tags by' dropdown menu at the top of the pane.

To give yourself greater control of your tags, you can create a 'Summary Page' (see screenshot right) for them. Doing this creates a OneNote page for your tags that you can edit like any other. In the Tags Summary pane, click the Search dropdown menu at the bottom and select the notebooks or sections whose tags you want displayed on your summary page, then click Create Summary Page.

OUTLOOK

Send 'CC' emails to a separate folder

Whenever you receive an email in which you are marked as a 'CC' recipient (copied in), you know you are just one of multiple recipients, and that its contents are probably of lesser importance to you personally. To help you identify these and stop them appearing in your inbox, you can set Outlook to send all these 'CC' emails to a different folder.

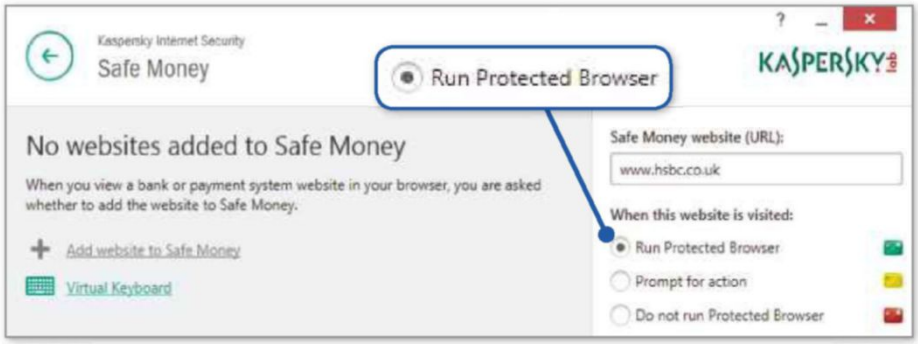
Click the Home tab, then Rules (in the Move section). Click Create Rule, Advanced Options at the bottom right, then in the Rules Wizard tick the box next to 'where my name is not in the To box'. Click Next and tick the first option ('move it to the specified folder'). Next, click the 'specified' link in the section below, select the folder you want to move it to and click OK. Finally, click Next twice and then click Finish.

Kaspersky Internet Security 2015

Protect your banking details, secure your webcam, and control your internet usage

Avoid scanning your PC if it's being overused

Kaspersky Internet Security 2015 is our favourite antivirus program, comprehensively winning our past four antivirus megatests. Because Kaspersky's scans are so thorough, they can put a strain on your PC, especially if it's low on memory or you have several other programs running in the background. Thankfully, Kaspersky has several features enabled by default that will minimise its impact on your PC. One feature not enabled by default, but which you can activate, is the option to postpone scheduled antivirus scans if your PC is under strain. In Kaspersky, click Settings at the bottom, Performance in the left-hand pane, then tick the 'Concede resources to other applications' box under the 'Computer resources' category.



Use Safe Money to give extra protection to sites you type sensitive information into

Protect websites that contain your bank details

By default, Kaspersky flags up suspicious links, websites and attempts to attack your PC while you're browsing the web. But you can put extra security focus on banking and other websites where you enter particularly sensitive information. In Kaspersky, click Safe Money, then Enable. Now click 'Add website to Safe Money'. In the 'Safe Money website' panel, type the URL of your bank (for example, www.hsbc.co.uk), select Run Protected Browser (see screenshot above), then click Add. Click the link to the site in the left-hand pane each time you want to access it. This will open a secure browser with a green border around it. Add the Kaspersky browser extension, if you're prompted to. This protects the website's safety and scans your PC for relevant malware. You can add as many websites as you want using this method.

Limit your internet data usage in Windows 8

Many Internet Service Providers limit the amount of data you can use at certain times of day. It's worth checking the Fair Usage policies of your ISP to see what these limits are. Kaspersky Internet Security 2015 can help you stay within these limits in Windows 8. First, you need to set your connection as a 'metered connection'. This limits Windows updates to the most important ones and prevents Windows apps updating automatically.

Open the Charms menu in Windows 8 by moving your cursor to the bottom-right corner of the Modern tile interface, then click Settings, 'Change PC settings', Network, Connections and click the 'Set as a metered connection' slider to turn it 'on'. In Kaspersky, click Settings, Additional, Network, and tick the 'Limit traffic on metered connections' box.

Stop hackers spying on your webcam

One of the newest features in Kaspersky Internet Security 2015 is added webcam protection, which blocks unauthorised programs (such as spyware) from accessing your webcam. You can find a list of officially supported webcams at www.snipca.com/14636. Even if your webcam is not on this list, you may still be able to protect it if you have the right drivers.

Make sure the Application Control switch is green to protect your webcam

To check this, click the Start button, type device manager and press Enter. Next, go to 'Imaging devices', double-click your webcam, click the Driver tab, then Driver Details. In the list, if you see the file '%windir%\System32\drivers\usbvideo.sys', then your webcam is compatible with Kaspersky's webcam protection. If this is the case, make sure Application Control is switched on in Kaspersky by clicking Settings, Protection Center, then checking that Application Control is turned on (its slider should be green – see screenshot above).

READER OFFER
Buy Kaspersky Internet Security 2015 for £17.99* (usual price £39.99).
See page 68
*While stocks last

Next issue Secret Tips For... Process Hacker

Creator CI20

Move over Raspberry Pi – there's a new pocket-sized computer that wants to steal your thunder

What is it?

A new microcomputer (main picture), priced just £50. It's made by Imagination Technologies, a Hertfordshire-based company better known for building processors that handle graphics in iPads and other mobile devices. The company hopes it will rival the credit-card-sized PC Raspberry Pi, which has been a huge hit with computing enthusiasts and amateur programmers since launching in 2012. You can pre-order the Creator CI20 at http://store.imgtec.com/uk, with units due to be posted at the end of January.

How is it different to the Raspberry Pi?

It's a lot more powerful, and has been dubbed 'the Raspberry Pi on steroids'. The most significant difference is the Creator CI20's CPU, which has double the clock speed. This means it can perform tasks more quickly.

It also has 1GB RAM, almost double the Pi's 512MB. Furthermore, unlike the Pi, it has flash storage (4GB), which you can add to using an SD card. Its connectivity is better, too: it has Wi-Fi and Bluetooth 4.0 built in, neither of which the Raspberry Pi can boast.

For graphics, it uses a version of the Imagination chip that is also found inside Apple's iPad. It handles 1080p video at 60 frames per second, letting you play high-definition videos.

The Creator CI20 will rival the Raspberry Pi, which is used in projects such as the BrewPi

Can I run Linux on it?

Yes, like the Pi. But unlike its fruity rival it also comes with Android 4.4 built in, providing a cheap way to learn how to develop phone and tablet apps. This may make it more attractive than the Pi to children keen to turn a passion for gaming into a career.

Is the Raspberry Pi better in any way?

Yes. The Model B+ Pi (www.snipca.com/14677) has four USB slots, two more than its new rival. And it's still much cheaper than the Creator CI20, at less than half the price – the new Model A+ costs just $20 (around £15). This will continue to make it more popular with teachers eager to introduce pupils to programming at a price that falls within their school's budget.

Another advantage the Pi has is that it has already proven to be a great success, spawning many websites, forums and books (including our own *Raspberry Pi For Kids*: www.snipca.com/14658) that give instructions, offer advice and suggest projects. It has a thriving online community, as you can see on the official site (www.raspberrypi.org/community), and there are also lots of Pi accessories, such as the Fuze robot arm (see our five-star review on page 18).

Owning a Pi is like joining a club where the members never run out of amazing ideas. It remains to be seen if the Creator CI20 captures the imagination as deeply. Will it, for example, inspire devices as innovative as the BrewPi (www.brewpi.com), which uses the Raspberry Pi to monitor the fermentation temperature of wine and beer (see photo below left)?

But is the Creator CI20 easier to use?

Yes. It has a lot more functionality built in, which means less fiddling around to make it work. But for many people it is this very fiddling that makes the Pi such a rewarding piece of kit. Some critics have said that the Creator CI20 feels like a do-it-yourself computer that doesn't require you to do much yourself.

But the Creator CI20 will appeal to people who find the Pi too basic. You should consider buying one if you feel you've outgrown the Pi, and want a new programming challenge. It has a duller name, but it can do a lot more.

What You Must DOWNLOAD in 2015

This year's real must-have software is here, long before Windows 10. **Jane Hoskyn** reveals the free tools and treats your PC and tablet can't live without in 2015

What do you want to download in 2015? Windows 10, of course. When do you want it? Now. Ideally for free, and without a traumatic installation process that leaves you weeping with regret that you ditched Windows 7.

You can't have it yet, at least not in all its full, stable, non-Preview glory. The most-anticipated download of 2015 is now due in the autumn, says Microsoft, having been pushed back from April.

We're actually grateful for the unexpected breathing space. All the fuss about Windows 10 is already making Windows 7, 8 and even 8.1 look old hat, and they're certainly not. We've seen the Windows 10 Technical Preview close up (we're still seeing it, over on page 57) and it's great, but it's certainly not the most exciting thing we've downloaded in the last couple of months.

KEY POINTS

- Get this year's must-have free software
- Fight 2015's threats with essential security tools
- Jump the queue for the latest betas
- Download free ebooks, games and video to keep
- Transform your tablet with the best new apps

Why you don't need Windows 10 (yet)

There has never been a richer choice of programs for the operating system (OS) and PC you've already got. This is especially true if you're on Windows 8.1, a fast and powerful OS whose support for Windows apps makes it incredibly versatile. But if you're on Windows 7 or even Vista, there's more than enough brilliant free software to ensure that your PC is bang up to date in 2015, and just as relevant as a computer running the Technical Preview (and certainly more stable).

Over the next few pages we'll reveal the downloads that'll help you get the best out of your PC in 2015. We will show you the programs that embrace current technology trends such as portable software, instant file-sharing and virtual PCs – which you'll definitely need if you're tempted by that Windows 10 preview.

We'll also reveal the apps that any self-respecting tablet needs in 2015, and highlight beta tools that are so good we don't mind if they're not quite finished. We'll also reveal which security tools can combat today's (and tomorrow's) threats, including the latest ransomware and rootkits.

After all that, some light relief. We'll show you where to find loads of content to download, legally, for keeps. We've got games, films and even an advert for your old Atari.

Every tool and download that we recommend here – from a big-name office app to an offensively difficult game of chess – is free and available to download right now.

THE FREE SOFTWARE YOUR PC NEEDS THIS YEAR

BROWSER

Firefox Beta

www.snipca.com/14776

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

If you think Windows has gone through lots of versions lately, just wait until you see what Firefox has been up to. Firefox 32 was launched in September (see Best Free Software, Issue 432); Firefox 33 in October (see Best Free Software, Issue 437), and Firefox 34 (www.snipca.com/14779) arrived in December – possibly a ruse to get into Best Free Software yet again. (It didn't. We have our limits.)

A couple of days after that, Firefox developer Mozilla released a new version of the browser for Android (www.snipca.com/14778), and immediately after that came the all-new Firefox Beta.

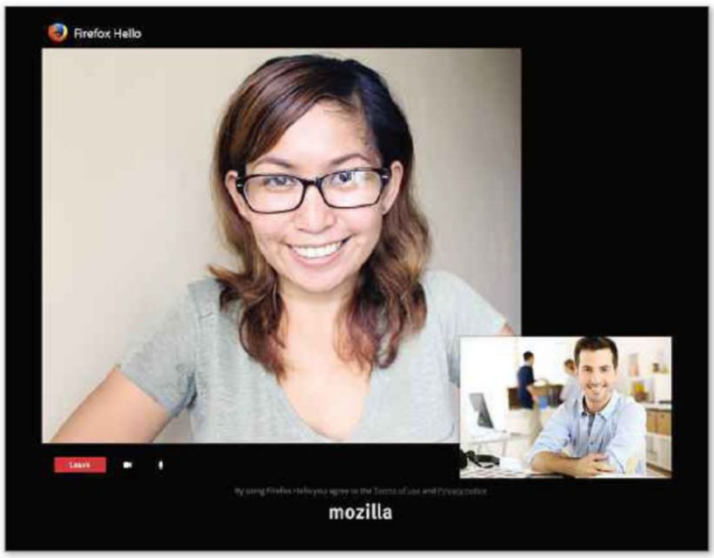
Firefox Beta, like Google's Chrome Beta, is an experimental parallel version of the browser where you get to play with tools that aren't in the full version yet. The latest significant addition to Firefox Beta is Firefox Hello, Mozilla's hassle-free new video-chat tool. It makes Skype look difficult to use (and we *love* Skype). Simply click a speech-bubble icon on the browser bar (see screenshot below) and type the email address of the person you want to call. You don't need to download any extra software, plug-ins or extensions, or even sign up for an account.

If you think Firefox Hello or any Firefox Beta features could be improved, you can tweak them using the built-in Developer tool, then send your suggestions to Mozilla. Your ideas may even turn up in the next full version.

We'd hoped to use Firefox Beta in tandem with Firefox 34, so we could compare them side by side, but the beta's installer automatically overwrites other versions of Firefox on the same PC.

If you really get a taste for testing, try the even more experimental Firefox Developer Edition (www.snipca.com/14782) instead. This pre-beta testing ground is rough, unstable and stuffed with jargon – but it's worth a look if you really want to play a part in the web of tomorrow.

Simplicity is key with Firefox Hello – just click on the speech bubble to start a conversation



Free new video chat tool Firefox Hello is currently only available in Firefox Beta

PORTABLE PROGRAMS

Portable Apps Platform

www.snipca.com/14794

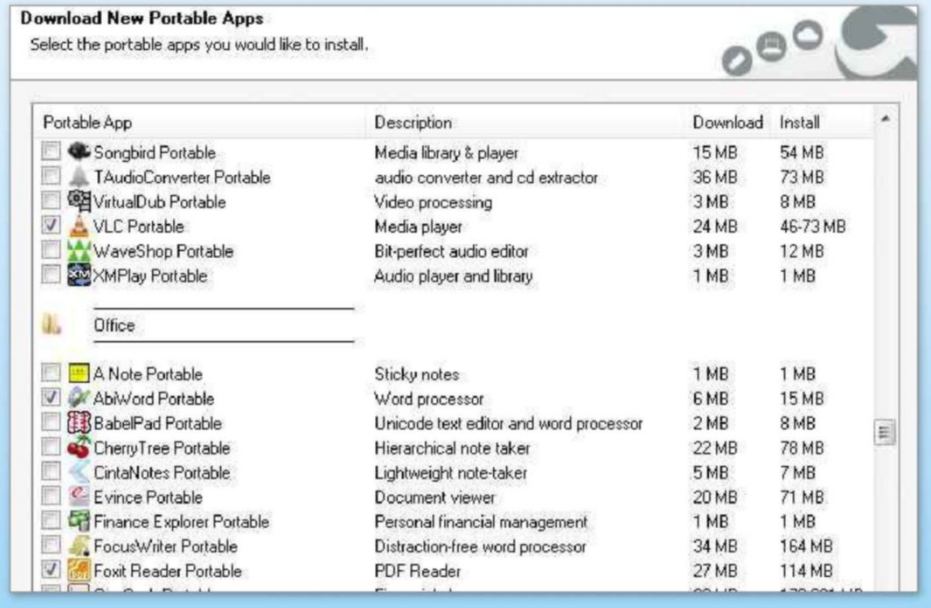
What you need: *Windows XP, Vista, 7 or 8+*

Portable Apps Platform (PAP) is like Ninite for portable programs. It's built around an open-source Portable App Directory database that's constantly updated with new programs and new versions. You can download any one of these programs – or loads at once, if you want – with a tick and a click (see screenshot below).

The database contains more than 300 programs, from AbiWord Portable (also available to download from PortableApps.com: www.snipca.com/14790) to ZSoft Uninstaller Portable (www.snipca.com/14791). It offers portable versions of many well known installable programs, such as VLC, Chrome and LibreOffice.

Portable tools are becoming the smart choice for savvy software users. These programs don't need installing – you just download the EXE file to your computer, copy and move it to wherever you want (USB stick, external drive, cloud storage), and click the EXE to run the program. Consequently, they bypass the growing menace of adware in software installers, they don't litter your PC with caches and Registry junk, and you can run them from a USB stick on any PC. They're software minus the hassle.

Portable Apps Platform itself works better if you install it on your PC, so it can update automatically every time you run it. Click the green 'Download Now – Free' ▶



Tick a batch of portable programs, then click Next to download them all in one go using Portable Apps Platform

button at www.snipca.com/14794, then follow the steps in the installer (which also includes an option to download a portable version). Once installed, PAP is very quick and easy to use. Browse the programs (see http://portableapps.com/support for detailed info about each one), tick your selection, then click Next to download them all in one go. One of the programs you can download is a portable version of Firefox Developer Edition. You can run this on your PC without having to replace the full (or beta) Firefox version.

VIRTUAL PC

VirtualBox

www.snipca.com/14806

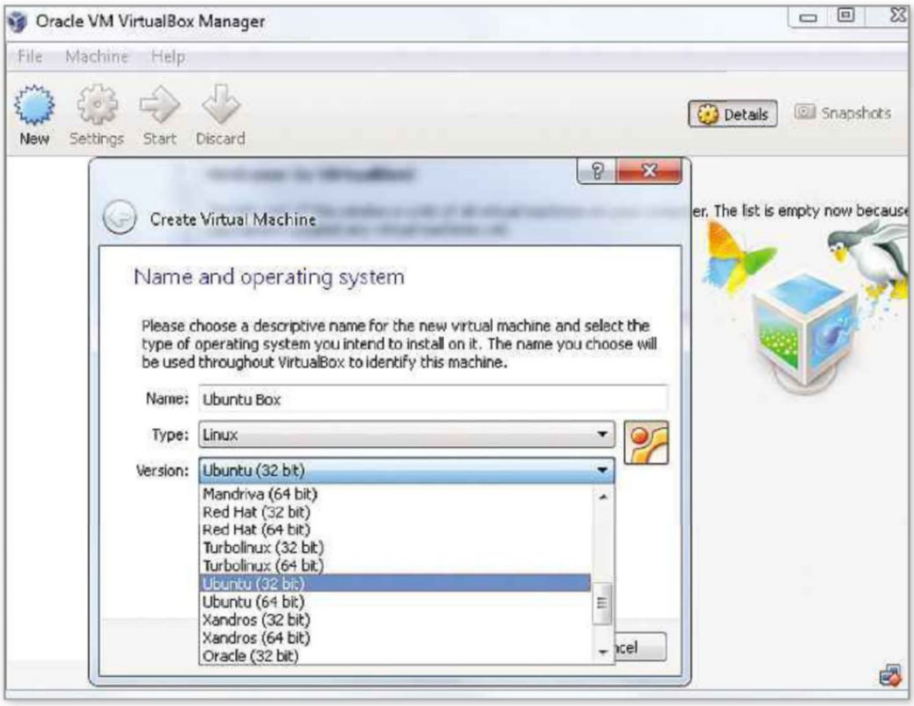
What you need: *Windows XP, Vista, 7 or 8+*

We're being inundated with operating systems in 2015. Just some of the launches we'll see in 2015 are The Machine, a 'revolutionary' OS from printing giant HP (www.snipca.com/14786); a PC version of SteamOS (www.snipca.com/14788), designed for running power-hungry games; and the fabulously named Ubuntu Vivid Vervet (www.snipca.com/14807), due in April. And a new Microsoft OS you might have heard about.

But how are you supposed to choose one? It's not as though you can try them all out, unless you've got 20 PCs at home. You can either stick with the OS you've got, blindly choose a new one and hope for the best, or make those 20 computers a (virtual) reality by installing VirtualBox.

This free program lets you create secure 'virtual machines' within your PC (see screenshot above), then use them to run systems and software in total isolation from each other. To install a new OS or any version of Windows (new, old or very old) you'll need its installation CD handy, or a legitimate installation file (usually an ISO file) and your licence number.

To download VirtualBox, go to www.snipca.com/14806 and click the small blue 'x86/amd64' link to the right of 'VirtualBox 4.3.20 for Windows hosts'.



Run multiple operating systems on your Windows PC using VirtualBox

You can safely ignore the dropdown menus in the installer and keep clicking Next until installation is complete. If you do have any problems, turn to the excellent online user manual for advice (www.snipca.com/14661).

There's an even cleverer alternative for the Linux-curious. Free tool LinuxLive USB Creator (www.snipca.com/14789) lets you create a portable version of any Linux OS (Ubuntu, Fedora, Debian and so on) with its own built-in virtual

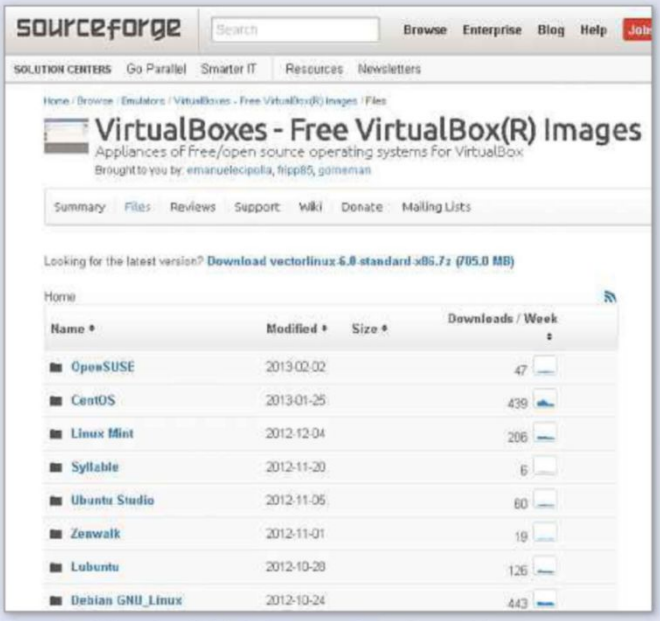
WHAT CAN YOU PUT IN YOUR VIRTUALBOX?

If you install VirtualBox, you're immediately faced with a problem: where can you find operating systems to install in your virtual machines?

It's no big hassle finding free disk image files of Windows 8, XP and the like on file-sharing websites, but they won't come with legitimate licensing, so you won't be able to run them.

Instead, head for the VirtualBoxes list on SourceForge (www.snipca.com/14822), where you'll find 46 open-source operating systems that are free and legal to download and run. The list includes Ubuntu (by far the most popular, according to the 'Downloads/Week' graphs next to the list); Android (second-most popular); and FreeDOS, an open-source version of MS-DOS that lets you run your old 1980s software and games.

To download an OS, click it, then click a version folder, then click the relevant file to download it. The files are either disk images (usually OVA format, supported by VirtualBox) or archive files (usually 7Z, an open-source version of ZIP). If you don't recognise a file extension, type it into Google. Sourceforge is designed by and for enthusiasts and doesn't offer much help to complete beginners, but the VirtualBox FAQ and Community (www.snipca.com/14823) will help if you get stuck.



Download free, legal OS disk images from SourceForge

environment. Save it on a USB stick, plug this into a PC and run the OS inside its virtual bubble – instantly and safely.

PRIVATE FILE SHARING

Pushbullet

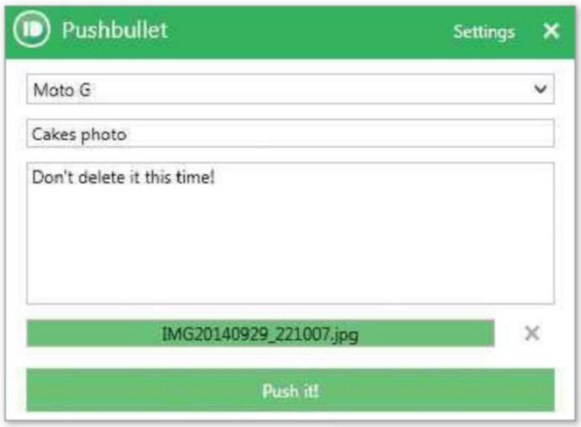
www.snipca.com/14809

What you need: *Windows 7 or 8+ (plus mobile and browser)*

If you've got a PC and other devices – laptop, tablet, phone – you need Pushbullet. Its aim is simple: instantly send files, web links or notes between your devices and contacts. It's incredibly efficient, and we wouldn't be without it.

Everything you send and receive is stored securely in your Pushbullet account on your PC, tablet, browser and wherever else you use it, so you can access your files and links whenever you want.

Go to Pushbullet's download page (www.snipca.com/14809) or to www.pushbullet.com and click Apps for links to the Windows beta, the superb Android app, and the fair-to-middling iPad and iPhone apps, which would be better if the keypad didn't obscure the Message box (fix it, please, Pushbullet). You can also add Pushbullet to your browser (Chrome, Firefox or Opera), and send and receive 'pushes' securely via the website.



Send files, web links and notes instantly to a friend (or yourself) using Pushbullet

ESSENTIAL FREE SECURITY TOOLS FOR 2015

WI-FI SECURITY

Avast Antivirus 2015

www.avast.com

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

Your router is the weakest link in your home security, according to a new survey by Avast. The antivirus firm surveyed 2,000 UK households and found that half of us haven't changed our routers' passwords from the default. Few of us have ever thought to switch to the safest available DNS server (DNS Jumper is the best free tool for that: www.snipca.com/14815). As a result, our routers are an open door to hackers, nosey neighbours and anyone who fancies standing outside our house using our Wi-Fi.

Avast targets this problem head on with the 2015 version of its free antivirus suite. The suite, which outclassed many of its fee-charging rivals in the last antivirus test run by our security team at Dennis Technology Labs (see Issue 437), includes a new Home Network Security tool that scans your router for security flaws and helps you fix them. It can even detect intruders on your home Wi-Fi network. It won't change your password for you, though – that's your job (here's how: www.snipca.com/14813). See Avast's blog for more router security tips, including updating firmware and disabling remote management (www.snipca.com/14814).

Avast's antivirus suite is the only program in this feature that has an unwanted extra in its installer. You'll need to select 'Custom install' in the setup wizard and untick the freebie. We don't begrudge Avast its income (the program is free, after all), but adding PUPs is not the way it should go about it.

PASSWORD CREATOR

PWGen

www.snipca.com/14799

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

If you can remember any of your passwords, they're not strong enough. It's the modern Catch 22. Soon passwords will be replaced by more futuristic login methods, but until then your best bet is to create pattern-based passwords using this ingenious open-source tool, which began life as a PhD thesis.

PWGen conjures up cryptic passwords based on patterns that you choose (see screenshot below), and unlike other password-generators it doesn't store them on its servers or on your PC. You can, however, export your passwords in an encrypted text file that only you can open.

Download an installable version of PWGen from SourceForge (www.snipca.com/14797) or portable version from PortableApps.com (www.snipca.com/14798) or via the Portable Apps Platform. Do make sure you visit the developer's website too (www.snipca.com/14799), and download the free PDF user manual (www.snipca.com/14800).

PWGen generates cryptic passwords based on patterns you choose

ADWARE REMOVER

Bitdefender Adware Removal Tool

www.snipca.com/14757

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

Bitdefender's new tool has been in beta for a while (see Protect Your Tech, Issue 437) and was previously available for Mac only, but it's finally had its full release for Windows, including for XP.

It's portable, so there's no setup wizard to worry about. Just accept the terms and conditions, click Get Started and wait a few minutes as it scans your PC for browser-hijacking toolbars and other PUPs. It's slower than our favourite adware-killing tool, AdwCleaner (www.snipca.com/14760; click the blue Download Now button), but we found it easier to use, and it certainly deserves to join your PC's security arsenal in 2015.

We'd also recommend downloading Unchecky (http://unchecky.com), which automatically opts you out of adware when you're installing programs.

No adware blocker or remover can ever stand in for a full antivirus suite, such as Avast Antivirus 2015. These are complementary tools that run alongside your antivirus. You should never have two antivirus suites installed and enabled on the same PC, because they will conflict and effectively cancel each other out. ▶

BEST FREE APPS AND GAMES TO DOWNLOAD IN 2015

OFFICE

Microsoft Office

www.snipca.com/14754

What you need: *iPad, iPhone, Android phone or Windows Phone*

Microsoft's Office app is finally free – properly free. The app, which incorporates mobile versions of Word, Excel and PowerPoint, was launched in March 2014 and has always been free to download, but its uses were pretty limited unless you subscribed to Office 365 (www.snipca.com/14824; £7.99 a month, Windows 7 or later). Now Microsoft has removed the cheeky hidden cost, so anyone can make spreadsheets, edit documents and create PowerPoint presentations on their tablet or even their phone.

Create documents and spreadsheets using Office for iPad, which is now free

There's still a catch, but it won't last long. At the time of writing the app isn't officially available for Android tablets, only phones. However, you can download a preview version by joining a special Google+ group (www.snipca.com/14752; click 'Ask to join'). Microsoft says the full version for tablets will be "generally available in early 2015" (www.snipca.com/14753).

INTERNATIONAL CALLS

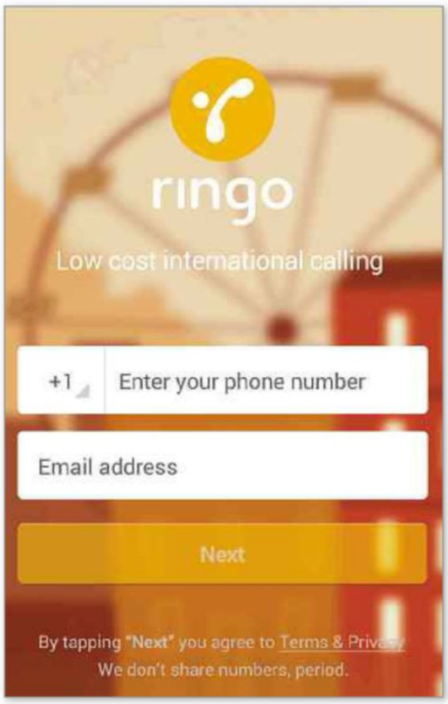
Ringo

www.ringo.co

What you need: *iPhone, Android phone or Windows Phone*

At last, an app that lets you ring your overseas relatives and friends without having to pay through the nose or mess around with video chat (we don't all enjoy being looked at while we talk, you know). And unlike Skype or Firefox Hello, Ringo doesn't even require an internet connection for making calls on your mobile.

Ringo is free to download, but you do have to pay for international calls – just as you do with Skype, which Ringo claims to undercut by 25 per cent. Ringo connects you to a local phone network in the country you're calling, and assigns you a



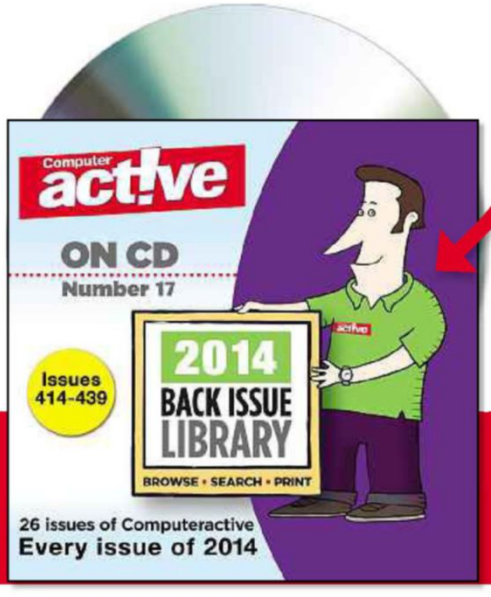
Make overseas phone calls at local rates using free new app Ringo

Computer active

Coming soon

Back Issue CD 2014

- Contains all 26 issues from 2014!
- Searchable index to make features easy to find
- Print and keep your favourite features



Read our next issue (out Wednesday 21 January) for more information

local number. It uses undersea cables to send data, bypassing the need for internet, mobile-data or roaming charges.

Find out more about Ringo's technology and charges on its website, where you can check how much a call will cost before you make it. You can also buy credits on the website. Your first call, to anywhere in the world, is free.

SPACE SIMULATOR

Rodina

www.snipca.com/14749

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

Explore deep space in stunning detail with this new RPG (role-playing game) that's free from its own website (see link above), but would cost £10.99 from games website Steam (www.snipca.com/14748). You're invited to make a donation to the developer if you enjoy the game, and we think the site's helpful honesty is worth at least a couple of quid.

When you install Rodina it downloads the DirectX plug-in if it's not already on your PC, as do many graphics-heavy games. DirectX is safe but your PC may flag it up as 'unknown', and installation takes a while. For updates and extras, keep an eye on the game's wiki site (www.snipca.com/14750).

Fly through the solar system and explore planets up close with free game Rodina

SimCity 2000 is free for a limited time for Windows XP and Vista only

SIM GAME

SimCity 2000 Special Edition

www.snipca.com/14825

What you need: *Windows XP or Vista*

When SimCity 2000 came out, it was the future. Five years in the future, to be precise. That makes the classic simulator 20 years old, and to mark the occasion its creator EA (Electronic Arts) has made the game free to download to your PC, and added more than a dozen new disasters to wreck your beautiful city.

Now, the downside. SimCity isn't supported by Windows 7 or 8, only XP or Vista. If you don't have an XP or Vista computer hanging around, use VirtualBox to install either OS on your current PC. You need to sign up for an account with EA's distribution site Origin (go to the link above and click the orange Get It Now button), then download the game via your Origin account. Finally, we should add that the free offer is "limited", and EA won't say when it'll go back to its normal price of £4.99. Grab it while you can. ▶

EVERY FREE PUZZLE YOU NEED

There are so many word games, brain teasers and strategy games available to download for free, you wouldn't get through them all in a lifetime, let alone a year.

First, look at the Games category in Portable Apps Platform or on the Portable Apps website (www.snipca.com/14840). A chess game confident enough to call itself Brutal Chess (www.snipca.com/14841) has to be worth a look, if only out of a sense of masochism. You may need a round of Quick Solitaire (www.snipca.com/14842) to calm you down afterwards. We also like Quick Bridge Portable (www.snipca.com/14844) and the inevitable Sudoku (www.snipca.com/14843).

If you're on Windows 8 or 8.1, there are loads of board game apps and word-puzzle apps just a click or tap away in the Windows Store. Taptiles is a beautifully rendered free variation on the classic board game Mahjong (www.snipca.com/14845; Windows 8.1 only). The brilliant word game Adlib (www.snipca.com/14846) stands out for not being yet another rehash of Scrabble (we're looking at you, Words With Friends). This Windows 8.1 app tests your vocabulary and attention to detail, challenging you to move pieces around the screen to create words (see screenshot).

Move letters around your Windows 8.1 screen to create words in Adlib

Free Android app Crosswords (www.snipca.com/14847) is our favourite of many crossword and wordsearch apps, and it'll definitely keep you busy – it contains 180 free puzzles at various levels of difficulty, and you can buy more within the app.

DOWNLOAD FREE FILMS, TV SHOWS AND EBOOKS

CLASSIC FILMS

The Internet Archive

www.snipca.com/14856

What you need: *Windows Media Player, VLC or other video player*

You'll never bother with Netflix again once you've seen the Feature Films section of The Internet Archive (https://archive.org). Here you'll find classics and curiosities to stream or download for free, including the stunning, silent 1925 version of *The Phantom of the Opera* starring Lon Chaney (www.snipca.com/14828 – click MPEG2 on the left), and John Travolta's early appearance in TV movie *The Boy in the Plastic Bubble* (www.snipca.com/14829 – click DiVX), which your writer dimly remembers seeing one afternoon in 1976.

The Internet Archive has modern content, too. One of our more recent favourites is the beautiful animated short film *Elephants Dream* (www.snipca.com/14830).

Downloading films rather than streaming means you can keep them forever and watch them without buffering, but they do devour hard-drive space. The best-quality version of the 1940 Cary Grant newspaper comedy *His Girl Friday*, for example, is a hefty 3.1GB. You really don't need file sizes that big for older films – it's not as though they're full of fine-tuned CGI – so go for smaller download sizes if offered. To get a 386MB file of *His Girl Friday*, click '512Kb MPEG4' in the column on the left on the left of its download page (www.snipca.com/14857) and save the file to your PC or external hard drive (preferably the latter, to avoid clogging up your PC).

Everything on Archive.org is free to download or view online, but you'll see an appeal for donations at the top, just as on Wikipedia. If you can spare a couple of pounds to keep this incredible resource alive, you'll be helping to make the internet a better place.

Download classics like *His Girl Friday* from The Internet Archive

TV SHOWS

BBC iPlayer Downloads

www.bbc.co.uk/iplayer

What you need: *Windows XP, Vista, 7 and 8+*

The BBC's iPlayer Downloads tool replaces the old iPlayer Desktop, a trailblazing but flawed program that never quite worked as well as hoped. Now, if you click the Download link on a programme page on the iPlayer site, you'll see a message asking if you've installed BBC iPlayer Downloads. Click 'No, install it now', then click For Windows. Once you've installed the tool, your chosen programme will start downloading.

The catch is that you can only keep the downloaded programme for 30 days; after that it will automatically disappear from your PC. If you haven't got round to watching it after 30 days, were you ever really going to watch it? Probably not.

If you want to download shows to keep forever, they'll need to be of an older vintage. The Internet Archive has plenty of TV downloads (www.snipca.com/14833). Our favourite category is 'Computer Commercials: Video Ads for Computer Products' (www.snipca.com/14837), a fabulous collection of adverts from the 1970s and 1980s, many of them digitised from old VHS tapes. The Atari Video Computer System ad from 1978 is a real treat (www.snipca.com/14838).

EBOOKS

Calibre Open Books

www.snipca.com/14831

What you need: *Any e-reader software*

"Every ebook fits every device" boasts Calibre of its 3,800-strong library of copyright-free (and often cost-free) digital books, many of which aren't available anywhere else online. Click Browse to search genres or use the search box to find books by title or author.

Most Calibre books are in formats like EPUB, which is supported by most e-readers and e-reading software, so you don't have to download the Calibre program (www.snipca.com/14834) to read them. We'd recommend it, though. Calibre is a fantastic tool for managing ebooks on your PC, and it's constantly being tweaked to handle the latest formats.

The Internet Archive also has some fascinating free reading material. Its 'eBooks and Texts' section (www.snipca.com/14835) has some incredible scanned vintage magazines that you can download in full, for free, in all sorts of formats. We were taken by *The Gardener's Monthly and Horticultural Advertiser* (www.snipca.com/14836), a beautifully preserved 1859 periodical contributed by Smithsonian Libraries. You can flip through pages online (click 'fullscreen' for an even better view), but it's best enjoyed offline, with no distractions. ca

NEXT ISSUE On sale Wednesday 21 January

ON SALE 21 Jan

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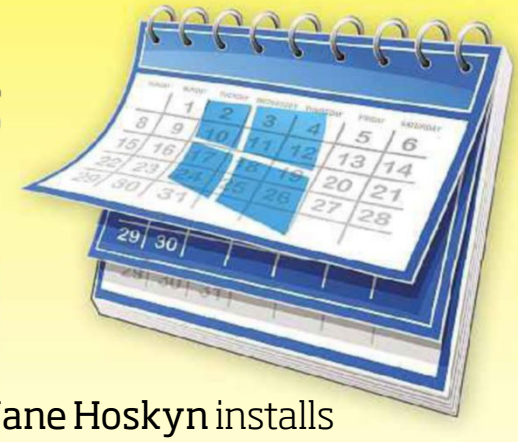
PART 6

First 100 days of Windows 10



In the final instalment of her Technical Preview diaries, **Jane Hoskyn** installs yet another build and sees a leaked Consumer Preview (or whatever it's called)

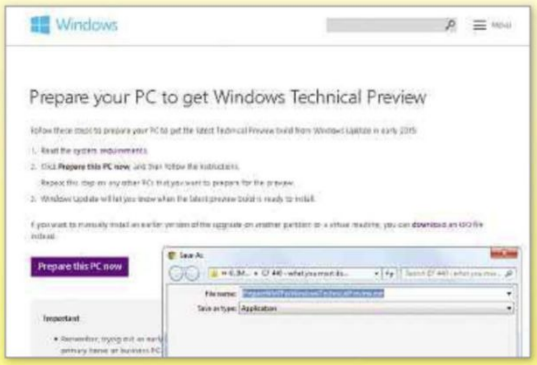
Day 80 Another day, another build

Farewell then, Technical Preview. You've left me with a heavy New Year cold and a laptop that no longer works, but at least we had fun (mainly on the lovely Surface Pro that I switched to after my laptop breathed its last). Now it's time to pack you off to the great big virtual PC in the sky, and replace you with... oh wait, yet another Technical Preview.

After a hefty download and several restarts (all in all, a process roughly as tedious as waiting for Windows 7 to start every time I switch on my work computer) I now have Windows 10 build 9879. It fixes a few bugs, adds support for high-definition MKV video files and extends trackpad gestures to more computers. But to casual observers it won't make an awful lot of difference, and to me it feels like another tease on the long road towards a proper release for Windows 10.

Day 86 Prep your PC

The strangest file name I've seen all week is 'PrepareWin7 For Windows Technical Preview.exe'. It's a free new program that downloads to your PC to "prepare" it for Windows 10. If you install it on your Windows 7 or 8/8.1 computer, it lets you bypass the Insider Program and install the latest available version of Windows 10 via Windows Update, preferably in a partition or virtual PC using a program like VirtualBox (see page 52).



You can now install the Technical Preview without joining the Insider Program – but you must 'prepare' your PC first

I should confess at this point that I haven't actually road-tested this, because I'm scared of destroying my employer's Windows 7 computer. I've already killed my Windows 8 PC by installing the first Windows 10 Technical Preview on it. But please, give it a go on my behalf and let me know how you get on.

Go to the curiously named 'Prepare your PC to get Windows Technical Preview' page (www.snipca.com/14867) and click 'Prepare this PC now', then run the EXE file according to Microsoft's instructions and system requirements (www.snipca.com/14869). I really hope you don't break your brand new computer in the process.

Day 95 Leaky Cortana

By the time you read this, Microsoft should be on the verge of releasing Windows 10 Consumer Preview, which is basically a public beta (a bit like Firefox Beta, see page 51). At the time of writing, this still feels a long way off. Fortunately, a version of the Consumer Preview, mooted for launch in a late-January Microsoft publicity shebang, has been leaked to a website, and that website has promptly uploaded a video (www.snipca.com/14868).

According to Windows news website WinBeta, the Consumer Preview (build 9901) may end up being called the January Technical Preview, which as far as I can see is just different words for "another Technical Preview". What's certain is that you won't have to join any Insider Programs to get it, and it'll include a new Xbox app and Microsoft's voice-controlled 'virtual assistant' Cortana, hitherto available only on tablets and phones.

Windows 10 build 9901 has been leaked online

Day 100 Awesome? *Really?*

In an apparent bid to distract us all from this leaked Consumer Preview, Microsoft has insisted that it won't be called Consumer Preview or January Technical Preview after all. It will be called Windows 10 Awesome (see News, page 6). Sorry, I need a moment.... "Awesome?" Apart from being the most obnoxious word in modern English usage, isn't that a bit dangerous? It's so presumptuous that it's asking for trouble. No early release of anything, ever, has been "awesome".

For me, it's the final straw (with apologies to Stuart Andrews). As a Christmas present to myself I had my Acer laptop wiped and restored to its former Windows 8.1 glory, and I have to confess I'm far happier with it. The trackpad is still useless, so I've plugged in a USB mouse and, so far, it seems to work fine. All I need to do now is set up Windows 8.1 so it's even better than Windows 10. In the next issue, I'll show you how to do just that. ca

Windows 10 Technical Preview – final verdict: 8/10

If I could go back and start again, I wouldn't. I'd wait for the full release (or the Consumer Preview, at the very least) and spend my time making the most of Windows 8.1 instead.

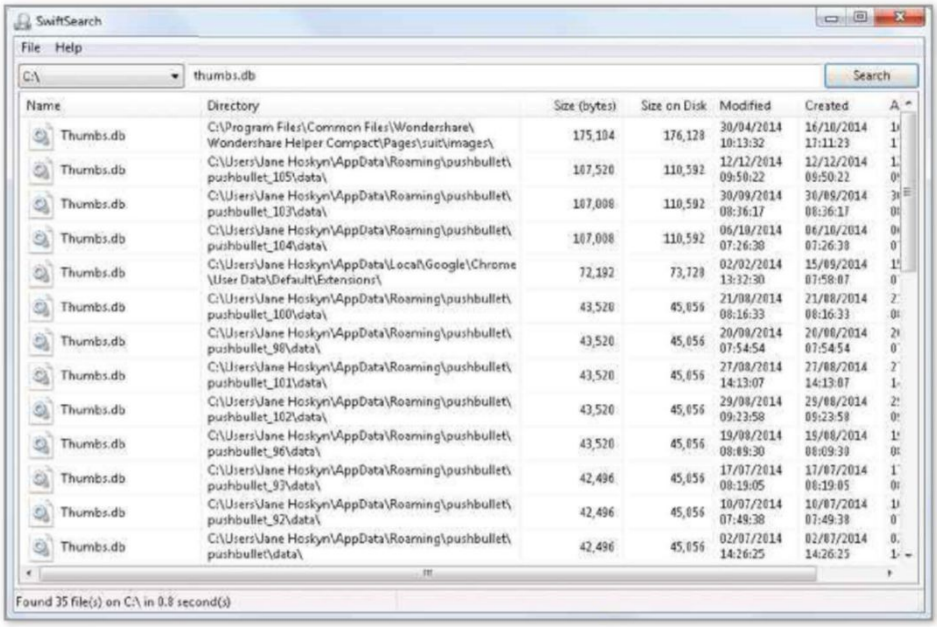
Remove pointless Windows files

Your PC is littered with files and folders you never asked for and don't need. **Jane Hoskyn** explains what this junk is and reveals how to delete it for good

Open your Documents folder, and what do you see? More folders, with obscure names like CrashDump and NativeFus_Log, and files with weird extensions, such as Thumbs.db and desktop.ini. Oh, and maybe a few documents.

With the exception of at least some of the documents, you didn't create these items, and you may have no idea what they are or who put them there. You're probably not keen to touch them either, given that they look like viruses. If you do delete them, they usually regenerate, which doesn't exactly make them endearing.

Over the next few pages we'll take a closer look at the mysterious files and folders that turn up in Documents or on your Desktop. We'll reveal what they are, why they're there and how to get rid of them for good – or even hack them into something useful.



Use SwiftSearch to see how many Thumbs.db files are clogging up your PC

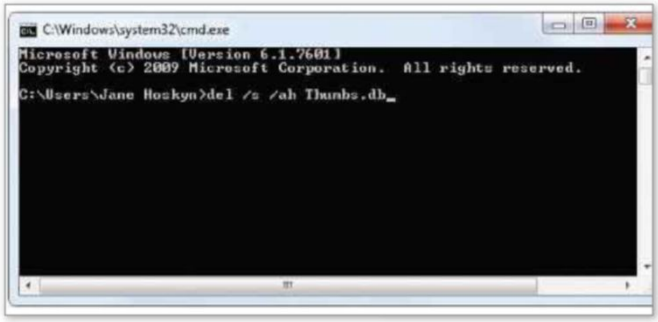
Thumbs.db

What is it?

Thumbs.db is a database file containing a cache of photo thumbnails, and it's created automatically when you open a folder of photos or videos. Thumbs.db supposedly makes thumbnails load more quickly, but you won't see much difference unless your PC is particularly old or slow.

Thumbs.db files may be hidden by default on your PC, so you may not realise how many you've got and how much hard-drive space they're taking up. To un-hide them, follow the steps in the box on page 59.

Find a Thumbs.db file on your PC and hover over it to see how much hard-drive space it's clogging up. We're not talking gigabytes, but these files can easily run to hundreds of megabytes, and you may have lots of them. Besides taking up space on your PC, they'll also eat into any cloud storage space you've paid for - and they serve no purpose whatsoever in the cloud.



You can delete all Thumbs.db files in one go using the Command Prompt

Can you delete it?

Yes. First, track down all your Thumbs.db files using the free, portable tool SwiftSearch, which you can download from the open-source site Sourceforge (www.snipca.com/14709). Run the program, select 'C:\' (your main hard drive) from the dropdown menu at the top left, type thumbs.db, then press Enter. The results appear instantly. Our PC contained 35 Thumbs.db files, including four bigger than 100MB (see screenshot, above).

SEE THE FILES WINDOWS HIDES FROM YOU

Your PC may be set to hide system files such as Thumbs.db and desktop.ini by default. This makes Explorer and your Desktop look tidier, but the intended benefit is more patronising than that: Windows hides them because it doesn't trust you with them. It assumes you'll edit or delete them and mess up your operating system.

As you'll discover in this feature, deleting files such as Thumbs.db certainly doesn't break your PC, and can free up a lot of wasted hard-drive space. Being able to see these files and folders also gives you more control over your PC and how it's organised, and lets you see how much space these often pointless items are taking up. So go ahead and un-hide them.

Go to Folder Options in the Control Panel (get there quickly by typing folder options into Start) and click the View tab. Click 'Show hidden files, folders, or drives', untick 'Hide protected operating system files (Recommended)', click OK, then click Yes in the Warning box. Microsoft's use of the word 'Recommended' is its last-ditch attempt to keep your hands off them. Once that's done, use SwiftSearch to find out how many of the files we mention here have been living and multiplying secretly in your PC.

Untick 'Hide protected operating system files' to see what Windows hides from you

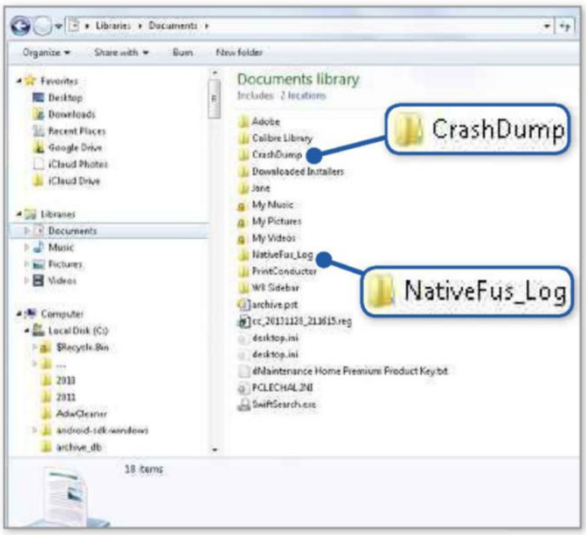
Un-hiding your system files and folders doesn't magically make them safe to move and delete, of course. Once you can see these unfamiliar items, they make Explorer a much messier place. You may need to be careful not to click or delete the wrong thing.

Always check Google for advice before you edit or delete a system file or folder that you don't recognise, and create a system restore point before you make any changes. We'd also recommend looking up mystery system files on the excellent free site FileInfo.com (www.snipca.com/14722).

Remove it for good

Deleting all your Thumbs.db files using SwiftSearch and/or Windows Explorer (File Explorer in Windows 8/8.1) would take a while, so use the Command Prompt. Type cmd into Start and press Enter to open it, then type del /s /ah Thumbs.db (see screenshot, page 58) and press Enter.

If you have lots of photos on your PC, it won't take long for Thumbs.db files to creep back into your system and start chewing up space again, but you can prevent this with a quick Windows hack. You'll need to be logged in as administrator. Press Win+R to open the Run window, then type gpedit.msc and click OK. In the window that opens, navigate through these folders on the left: User Configuration, Administrative Templates, Windows Components, then Windows Explorer (Windows 7) or File Explorer (Windows 8/8.1). In the right-hand pane, double-click 'Turn off the caching of thumbnails in hidden thumbs.db files' and click Enabled, then OK. You'll never be bothered by Thumbs.db again.



CrashDumps and NativeFus_Log contain crash log files, which waste lots of space

CrashDump and NativeFus_Log

What are they?

These two are the Tweedledum and Tweedledee of folders, usually turning up together in your Documents folder and always getting in the way. Double-click to open either, and you'll find more junk (crash log files, which can be huge) or nothing at all. They were created by programs, such as Nero DVD software or Kies Android file-management software (www.snipca.com/14724), and they store information about CPU usage and crashes. This info's usefulness is limited, especially if you've removed the original software.

We've seen lots of questions about these folders on malware forums. Be assured, they're not malware, but they do act like it – they have odd names, they appear out of nowhere and they regenerate when deleted.

Can you delete them?

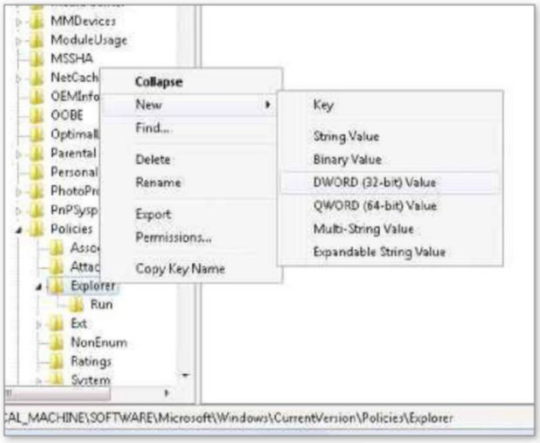
Yes. If the folders are empty, they're an annoyance rather than a problem, but if they contain huge crash log files they're better off removed.

Using SwiftSearch, look for files with the extensions LOG or MDMP ('minidump') and delete them if they're hogging space. To weed out pointlessly large folders, use the free program WinDirStat (https://windirstat.info; best download link is Sourceforge: www.snipca.com/14726). WinDirStat is great for managing your hard-drive space, because (unlike Explorer) it reveals folders' exact sizes and which software created them. However, it takes a while to gather its detailed 'tree' of folders and their sizes, so you might prefer the free new tool SpaceSniffer (www.snipca.com/14727). Its findings aren't as detailed as WinDirStat, but it's much faster, revealing massive folders at a glance. It's also rather beautiful.

Remove them for good

Windows' built-in tool Disk Cleanup can automatically clear out crash logs and other space hogs. It's easy to use, but it can be a bit gung-ho – it doesn't give you much control, and we've seen it removing useful program files. Instead, use CCleaner (www.piriform.com/ccleaner). Its default Windows Cleaner tool can find and remove Memory Dumps and ▶

Windows Log Files, and if you click Applications you can add Crash Reports and many more file types to the clean. To add even more options to CCleaner's Applications list, install the new tool CCEnhancer (www.snipca.com/14728; see Best Free Software, Issue 439).



You can remove all desktop.ini files from your PC by creating a new Registry value

Desktop.ini

What is it?

Every folder on your PC has a desktop.ini file that contains the folder's display settings, including its icon and the 'info tip' text that pops up when you hover your mouse over it. Like Thumbs.db files, desktop.ini files are created automatically (and repeatedly) by Windows. They're always hidden by default, so you'll need to un-hide them before you can discover how much space they're taking up.

After you un-hide your system files you'll see two desktop.ini files on your Desktop. This is because your PC has two Desktop folders – one for the administrator (normally stored at C:\Users\YourName\Desktop) and one in Users\Public.

We found no fewer than 401 desktop.ini files on our PC – nearly 12 times as many as Thumbs.db files. On the upside, they're not as big. Our biggest desktop.ini file was 3MB, and most were a few kilobytes.

The Mac equivalent of desktop.ini is DS_Store. You may see these files popping up in Explorer if you've ever connected an iPad or iPhone to your PC.

Can you delete it?

Yes, but Windows will replace it automatically with a new desktop.ini file, and the folder's settings will return to default. Remember every folder has a desktop.ini file, so if these files are taking up too much space on your PC, the answer is to reduce your folder tally.

In fact, desktop.ini files can be very useful. You can customise a folder by creating a desktop.ini file using just Notepad and the Command Prompt. For example, to customise a folder's info tip to say 'This folder is for cat photos', create a Unicode text file in Notepad and include the line 'InfoTip=This folder is for cat photos'. Save the file as 'desktop.ini' inside the relevant folder, then use the command line to apply the customisations. Microsoft has full instructions on the Developer section of its website (www.snipca.com/14714).

Remove it for good

If you really want to remove all instances of desktop.ini, try this Registry hack. Type regedit into Start, click 'regedit.exe', then click Yes to open the Registry Editor, and go to the HKEY_LOCAL_MACHINE root key. Now follow the folder path: **Software\Microsoft\Windows\CurrentVersion\Policies\Explorer**. Right-click the Explorer folder, click New and click DWORD to create a new value. Call it UseDesktopIniCache and set its value to '0'.

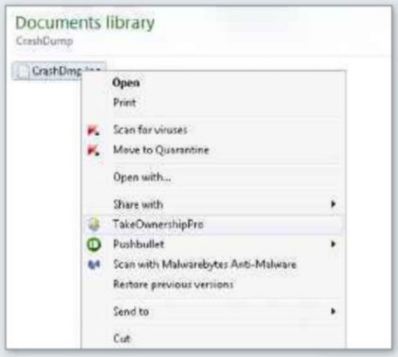
Find out what any system file is and does by typing it into FileInfo.com

WHEN FILES AND FOLDERS REFUSE TO DELETE

You own your PC, but it often acts like it owns you. When it's not busy hiding files and folders it doesn't want you to touch, it's trying very hard to prevent you deleting them.

If you want to delete one of the files or folders we've mentioned here and you're denied access, don't put your foot through your monitor – there are ways to beat the (operating) system.

Free new program TakeOwnershipPro (www.snipca.com/14729) adds an option to the right-click menu for any folder or file, including system and program files. Right-click and click TakeOwnershipPro to regain full control of the item, which you should now be able to delete. If it still won't go, open the Command Prompt and type cacls C:\Windows\System32\en-US\filename.extension /G YourName:F, substituting the filename and your username as indicated. Note there's a space before 'c' and 'a'. If this doesn't work, reboot in Safe Mode and try again.

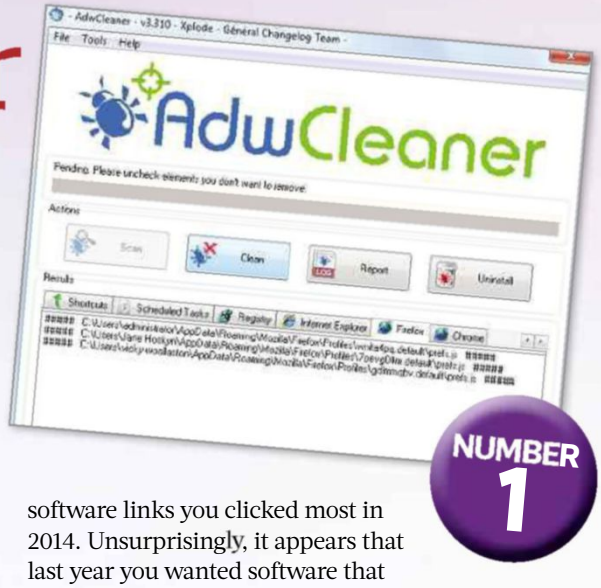


Make stubborn files easier to delete with TakeOwnershipPro – but only if you're sure they need deleting

To be honest, unless the file is particularly large and troublesome, we'd give up at 'denied access'. If you do go further than that, you must create a system restore point first.

System files you can't identify are best left alone. Gigabytes are cheap these days, and you shouldn't have any space problems if you stick to a sensible housekeeping plan: keep your Temp Files folders and Recycle Bin clean, run regular scans with CCleaner and malware-scanner AdwCleaner (www.snipca.com/14730), and do a monthly boot defrag. Your PC will thank you for it. ca

Your most popular programs of 2014



Our URL-shortening service Snipca shows us how many clicks each link gets. Here are your 10 most popular programs from the past 12 months

In every issue of *Computeractive* we use our Snipca URL-shortening service to provide simple, five-digit web addresses that are easy for you to type. Because each URL has a unique code, we can see how many times a link has been clicked. This tells us which apps, software, products and websites you're interested in, helping us make sure we give you more of what you want in future issues. It also means we can compile a list of the software links you clicked most in 2014. Unsurprisingly, it appears that last year you wanted software that would remove junk, make your PC faster and speed up your internet. Here's the top 10.

1 AdwCleaner
www.snipca.com/14262
First appeared in: Issue 418, p64
What it does: No piece of adware or spyware is safe from AdwCleaner. It can track down and remove the most elusive browser-hijacker or unwanted toolbar – and judging by the program's popularity in 2014, you're all familiar with these pests.

2 Process Hacker
www.snipca.com/14619
First appeared in: Issue 426, p51
What it does: When Windows Task Manager doesn't give you enough information about what's running on your PC, try Process Hacker instead. It reveals what your running processes are doing and how much memory they're using.

3 Clean Master
www.snipca.com/14534
First appeared in: Issue 434, p18
What it does: After being downloaded more than 200 million times since launching in 2012 as an Android app, Clean Master finally arrived on Windows last year. It scans your PC for junk, categorising it in jargon-free language, and lets you remove it in one go.

4 Wise Care 365
www.snipca.com/13098
First appeared in: Issue 424, p16
What it does: This powerful all-rounder includes a range of tools that remove hidden junk, disable programs that slow your PC, and turn off annoying Windows processes. It's worth trying as an excellent alternative to CCleaner.

5 Driver Booster
www.snipca.com/14120
First appeared in: Issue 414, p19
What it does: As we explained in Issue 438's Cover Feature, it's important you don't endanger your PC's health by using old hardware. Driver Booster helps by scanning your PC for out-of-date drivers, and providing links to update them.

6 CPU-Z
www.snipca.com/14136
First appeared in: Issue 419, p17
What it does: If you're curious about what actually goes on inside your PC, run CPU-Z. It reveals the specifications of your major components, including processor, motherboard, memory and graphics cards.

7 CCEnhancer
www.snipca.com/14176
First appeared in: Issue 419, p40
What it does: CCEnhancer turns CCleaner from a brilliant program into an exceptional one. It adds over a thousand programs and program components to those CCleaner can fix by default. It's not officially approved by CCleaner, but we've never had any problems with it.

8 DNS Benchmark
www.snipca.com/12727
First appeared in: Issue 428, p51
What it does: This clever program helps to speed up your internet by checking for the fastest available DNS (domain name server). It shows you which one your ISP has chosen, but also reveals which would be faster.

9 MyUninstaller
www.snipca.com/14743
First appeared in: Issue 427, p51
What it does: Nobody should attempt to deep-clean their PC without first running MyUninstaller. It identifies every program running on your PC, including unwanted plug-ins and nasty adware.

10 Glary Utilities
www.snipca.com/12528
First appeared in: Issue 421, p60
What it does: Few PC-optimisation programs are as easy to use as Glary Utilities. It has a host of one-click tools to stop your PC freezing, boost your PC's start-up time and reveal the programs that need updating. ca

HOW TO USE SNIPCA LINKS

Some people email us to say they have trouble using our Snipca links. The golden rule is to always type the Snipca URL into your browser bar, without the 'https://'. Don't type it into Google or a search toolbar. Our Snipca URLs aren't websites themselves, which is why Google doesn't find them. Instead, they merely redirect you to the longer URL. For example, typing www.snipca.com/14727 (see page 59) takes you straight to www.uderzo.it/main_products/space_sniffer/download_alt.html.

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Problems Solved

PROBLEM OF THE FORTNIGHT

Why is Excel multiplying my entries?

Q **I am having a problem with Excel 2010. I'm attending a learning course using this program and was doing well until I opened it at home. When I type a number into a cell, it gets multiplied by 100 as soon as I press Enter. For example, if I type '16', then it appears in the cell as '1600'. I think my version of Excel might be faulty and I'm very confused. Can you help?**

Shirley Suddens

A We scratched our heads over this one for a while, but we've had an idea that you can explore. Basically, we think that your version of Excel is applying percentage formatting to every cell. This is not normal behaviour but it would explain why every number you type appears to be multiplied a hundred-fold.

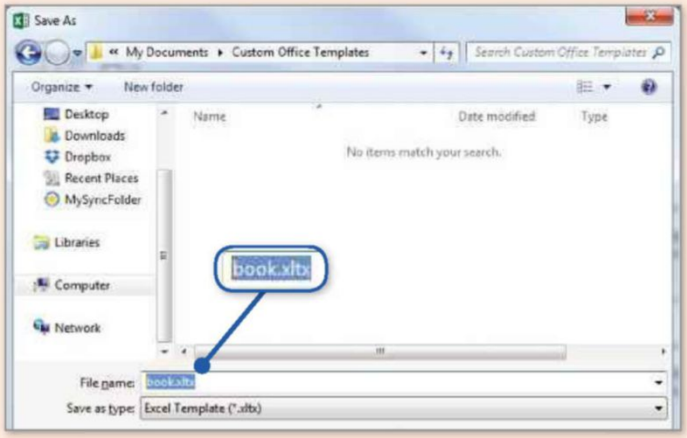
To test this theory, first enter a number into any cell then right-click the cell and choose Format Cells. Now click the Format tab, and in the Category list, if the selected format is anything other than General (or Number) then we're on the way to an answer. Our guess is that the selected category will be Percentage or Custom. Change this to General or Number and the number in the cell will display as expected.

However, as we said, this is not normal. So, is it possible that a previous user or PC owner has, for some reason, set up Excel to launch with a custom template that applies this formatting by default? Admittedly, this seems an odd thing to have done, but it would explain what you're experiencing.

To fix it, you'll need to create and save a new template that applies the formatting you want. Begin by creating a new worksheet in the normal way and then press Control (Ctrl)+A to select all cells. Now, as above, right-click, choose Format Cells, followed by the Format tab, select General in the Category list and then click OK.

Assuming you don't want to make any further customisations, you now need to save this file with a particular name ('book.xltx') and in a particular folder ('XLSTART') – but the exact location of this folder depends on how your PC is set up. The easiest way to find it is to click Start, type XLSTART and then click XLSTART at the top. A Windows Explorer window will open, showing the contents of the XLSTART folder. Click the bar at the top to reveal its full path.

Now, back in Excel, choose File followed by Save As, select 'Excel Templates (*.xltx)' as the 'Save as type', type book as the file name (see screenshot below) and then click Save. Restart Excel and if our shot in the dark is correct, you'll now be able to use Excel as normal.



Try creating and saving a new Excel template if your current worksheets have formatting problems

How can I accurately straighten images in GIMP?

Q **Like some of your other readers I've been trying out the GIMP image-editing program, which I'm finding powerful but quite hard to master. I've worked out how to use the rotate tool to twist and turn my images, and I'd like to use this to straighten some of my misaligned photos. However, with advancing years my hand-eye coordination isn't what it used to be, so I struggle to get things where I want them. Is there a way to make this easier?**

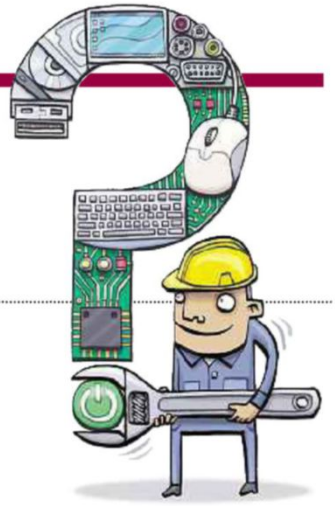
Miriam Ford

A We have a couple of tips that should help you. First, try using a guideline as an aid when rotating your images. This works particularly well if the image has a clear horizon (like a shot of the sea) or features another element that should run horizontally or vertically when the alignment is correct.

To do this, open your image and then open the View menu to ensure that Show Rulers is ticked (if not, click this menu item). Now move the cursor to the top or left-hand ruler (depending on whether you want to align horizontally or vertically) then click and drag down or to the right. Release the mouse button to drop a guideline in the appropriate spot. Now select the Rotate tool, then click and drag to rotate the image.

Secondly, for more accuracy in your movements, tap the up and down cursor (arrow) keys to rotate by a tenth of a degree each time.

In GIMP, use guidelines and arrow keys to help correctly straighten misaligned images



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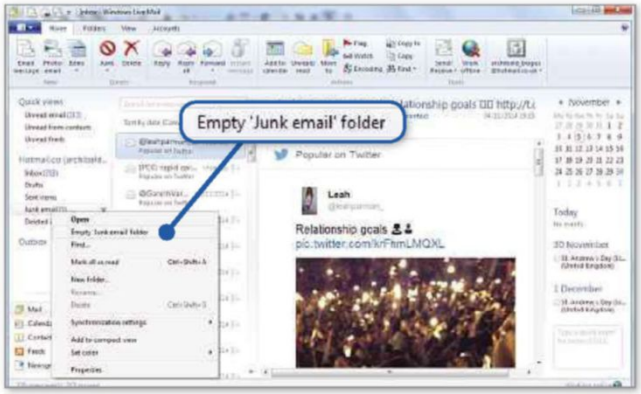
How do I stop Windows Live marking emails as read?

Q I fell for the propaganda of Windows XP losing Microsoft support and therefore retired my 'old' system and splashed out on a laptop loaded with Windows 8.1. Oh dear! With lots of help I managed to set up Windows Live Mail 2012 to work with my existing internet service provider, but I still have some problems. First, as new messages arrive the system automatically shows them as having been read. This means I'm no longer sure which emails I've actually opened and read. Is there a way to fix this? Also, I'm unable to send unwanted messages to the Junk folder. Every time I try, I see an error message. I clear the message to try again, but the same thing happens – so I get stuck in a loop. Can you help?

Roy Payne



If you're having problems moving emails to your 'Junk email' folder try emptying it by right-clicking it

A To fix your first problem, first open the File menu (click the blue down arrow at the top left) then point to Options and select Mail. In the Options dialogue box, click the Read tab and then untick the box labelled 'Mark messages read after displaying for X seconds'.

The second problem is a little more curious, not least because you didn't tell us what the error message says. Regardless, there are a few things that might cause Windows Live Mail (WLM) to refuse junk requests. It's possible, for instance, that your security software is being over-officious and preventing your system from doing responding to anything it's identified as potentially harmful.

We don't know what security software you're using but look for a 'real-time' email-scanning option. If you find one, disable it, then try using WLM's Junk button again.

If the problem persists, then it's possible that the Junk folder has become corrupt in some way. Right-click the 'Junk email' folder in the left-hand pane and choose 'Empty 'Junk email' folder'

As a last resort, try repairing WLM. From the Start screen, type control panel then press Enter. Next, click Programs, 'Programs and Features', find Windows Essentials 2012 in the list, then click to select it. Click Uninstall/Change then click 'Repair all Windows Essentials programs' and follow the prompts.

How do I update my iPad with only limited spare memory?

Q I have a third-generation 16GB iPad that I'd like update to the latest version of iOS. However, this requires at least 4GB of free space, so I'd have to clear off loads of my apps and data. I only bought this iPad two years ago and I feel a bit cheated, and I worry that eventually I won't be able to install new stuff because of this problem. Do you have any ideas how I can keep it up to date or is it a lost cause?

Robert Cronin

Use iTunes on your PC to update an iPad with little free space

A As with the original iPad, released in 2010, there will come a time when Apple will no longer issue updates for your model. Then, your iPad will enter a limbo stage, where more and more app updates will not work, as they will have been created to work with versions of iOS that you cannot install. However, for the third-generation iPad that point is likely to be at least a couple of years away, and many existing apps will continue to work even without updates.

If you have a PC or Mac, then one way around your lack of space is to connect your iPad to the Desktop version of iTunes and use this to update. This works because the iOS download can be stored on your computer's hard drive. Download iTunes (free from www.snipca.com/14402) and connect your iPad to your computer via your USB cable. Now, in iTunes, select your device and then, in the Summary tab, click 'Check for Update' (or just Update, if the Update has already been detected). Now click Download then Update.

Problems Solved

How do I get Windows to save more restore points?

Q I recently upgraded my PC from Windows XP to Windows 7 Home Premium. All is working well with the exception of System Restore. I discovered that, although I can save restore points, Windows deletes them after a short time, leaving me with no restore points at all. I have resorted to creating a new restore point once a week, but I'd like a more permanent solution. What should I do?

Bob Hartley

A This is standard behaviour that's dictated by the amount of hard-drive space reserved for System Restore. Adjusting this figure upwards will see Windows store more restore points, and for longer. Of course, how far you adjust the reserved storage depends on your free hard-drive space – but that's up to you.

To do it, click Start followed by Control Panel, and then 'System and Security' followed by System. Next, click 'System protection' on the left-hand side and, under Disk Space Usage, move the Max Usage slider to the right. You'll need to experiment to find the right amount for you, but use the Current Usage figure above as a guide: if, for example, it currently says 5GB then try doubling it.

Increase the space reserved for System Restore points via Control Panel

Why can't I view satellite images in Firefox?

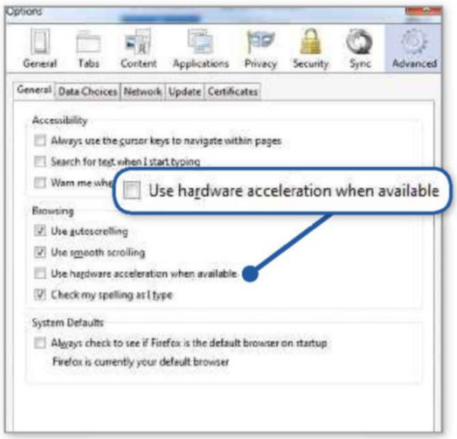
Q Chrome seems to be getting slower and slower for me so I have been trying Firefox. I like it but one element could prove a deal-breaker. I use the Google Maps website a lot, but I cannot get satellite view to work in Firefox. When I try it, the roads remain but everything else goes black. I thought it might be down to a lack of satellite images in this one area I was exploring, but when I tried the same area in Chrome, the overhead photography appeared as expected. I'm using the latest version of Firefox and everything else seems to work. Am I doing something wrong?

Alan Hepworth

A This is almost certainly down to Firefox's hardware-acceleration feature, which in recent versions is enabled by default. This feature makes use of your computer's graphics card to speed up certain webpage elements.

It's possible that your graphics-card drivers need updating, so check the manufacturer's website. However, Windows Update is pretty good at keeping such things up to date, so we think that there's some compatibility issue between Firefox and your graphics card. This is likely to be fixed with later updates to the browser, but in the meantime, disable the hardware-acceleration mode.

First, click the menu button at the top right (three horizontal lines), then choose Options. Next, on the General tab, untick the 'Use hardware acceleration when available' box and click OK to finish.



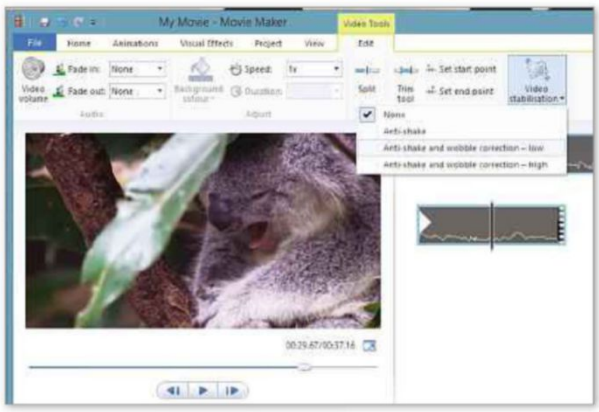
Disable hardware acceleration in Firefox to view all webpage content properly

Where is Windows Movie Maker's stablisation option?

Q I fancied trying Windows Movie Maker's 'hidden' video-stabilisation feature, which you revealed on page 57 of Issue 432. However, no matter how hard I tried I couldn't find this tool – it's certainly not on the Edit tab, as you indicated. I'm running a Windows 7 PC with 16GB of memory and a 2GB Nvidia graphics card. Am I doing something wrong or is my system not up to it?

John Lough

A Your computer's hardware is certainly up to the job but, unfortunately, Windows Movie Maker's video-stabilisation feature works only in Windows 8/8.1 – a fact that we should've pointed out. So, unless you're prepared to update to Windows 8.1, this feature will remain unavailable to you. If you do update then you won't need to do anything: the 'Video stabilization' button will appear on the Edit tab, as we described.



Windows Movie Maker's video-stabilisation feature is only available in Windows 8/8.1 on the Edit tab

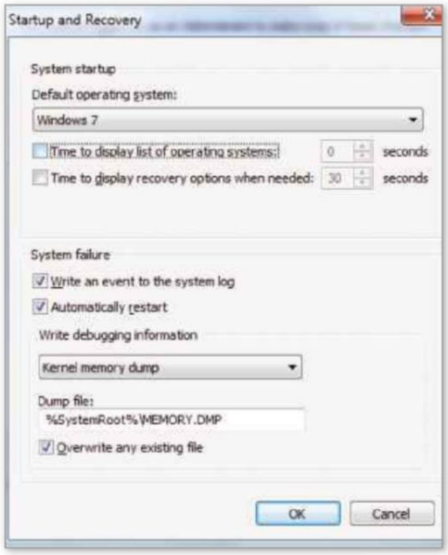
How do I boot to my working version of Windows 7?

Q I recently upgraded to Windows 7 from XP. I chose the 32bit version because some of my XP programs will not work in the 64bit edition. After some initial unreliability (traced to a faulty memory module), I had to install a new copy of Windows 7. Now when my computer boots, I'm offered the option to boot to my old Windows 7 installation as well as the new one. How do I get rid of this pre-boot menu so that my PC starts straight into the new, working Windows 7 installation?

Bill Power

A Click Start and then right-click Computer and choose Properties. Next, click 'Advanced system settings' in the left-hand pane and then, in the System Properties dialogue box that appears, select the Advanced tab. Click the Settings in the 'Startup and Recovery' section. Then, in the 'Startup and Recovery' dialogue box, choose the healthy Windows 7 installation from the 'Default operating system' dropdown menu.

In a moment, you'll need to untick the 'Time to display list of operating systems' box, but hold off for now, because it's a good idea to test the selection you've made – otherwise you could be stuck with a computer that boots to the wrong operating system. So, click OK twice to close both dialogue boxes, then restart your PC in the normal way. Assuming it boots to the correct operating-system option, as expected, repeat the above instructions to clear the aforementioned tick box.



Set which operating system your PC boots to if you have multiple installations

How do I transfer my files from Windows to Mac?

Q My Windows 7 laptop is showing signs of age and, because I am not happy with Microsoft's policies, I'm seriously considering replacing it with an Apple MacBook Air. I understand it's possible to transfer my files to the iOS operating system, but how easy is this and how do you recommend I go about it?

Richard Gibbs

Install the free program OpenOffice to open Microsoft Office files on your Mac

A First, let's clear up your confusion about Apple's operating systems. The MacBook Air that you're interested in runs OS X, not iOS – the latter being the operating system that runs on Apple's mobile devices, such as the iPhone and iPad. While there are plenty of visual and technical similarities between the two, they are distinct platforms. Mac OS X is rather more like Windows, conceptually at least.

As for transferring files from a Windows PC to a MacBook Air running OS X the process is easy, but the effectiveness depends on what you want achieve. For example, it's easy to use Windows Explorer to copy Microsoft Office documents from your PC to a USB stick or external hard drive. You can then connect this storage device to the MacBook Air and use Finder, the Apple equivalent of Windows Explorer, to copy your files to the MacBook.

However, what happens next depends largely on the files and what you want to do with them. If you have transferred Microsoft Office files, for example, then in order to open them you'll need to have installed on your MacBook the OS X version of this program (or a compatible free alternative, such as OpenOffice – www.openoffice.org). Digital photos and videos will also transfer without problems, and OS X has built-in tools called iPhoto and iMovie that lets you view these and carry out some basic editing.

If you're hoping to transfer and use your Windows programs, then that's not possible without additional software. A paid-for program called Parallels (£64.99, www.parallels.com) will let you set up a 'virtual PC' into which you could install Windows, which would then let you install and run all your Windows applications.

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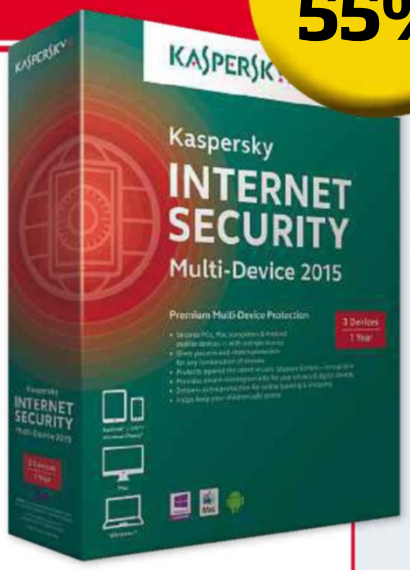

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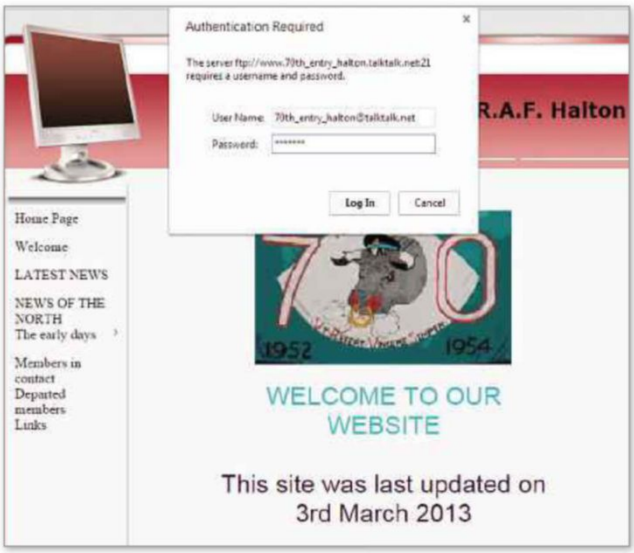
Issue 415 22 January; Issue 425 11 June; Issue 430 20 August; Issue 437 26 November

How do I access a departed friend's website?

Q I joined the RAF in 1952, along with 230 others. To keep in touch we have a website at www.70thentryhalton.talktalk.net that, until recently, was designed and kept up to date by our webmaster. Unfortunately, he has now passed away. I have volunteered to take the job on, but we have no information as to how he logged on to the site. We have been in touch with the chap's wife and she has given us a folder of information, but there was nothing in the paperwork to help us. Are you able to guide me in the right direction?

David Porter



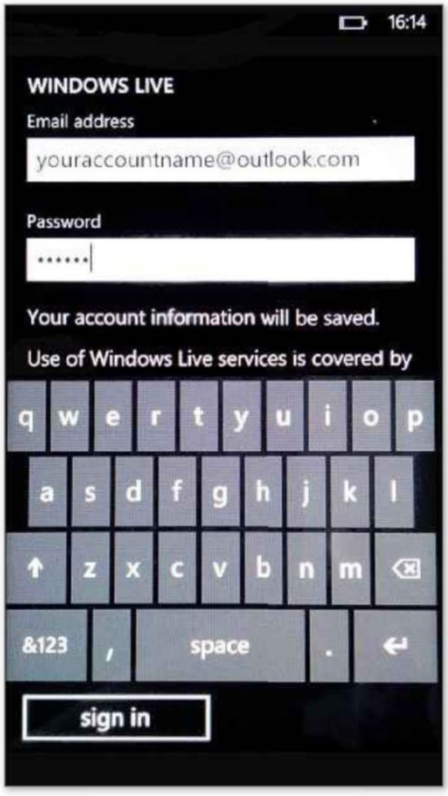
To maintain the website of someone who has passed away, retrieve login details from the site's host and go to the FTP server

A First, we discovered that your website is actually at www.70th_entry_halton.talktalk.net (with underscores in the web address). We don't think this is part of your problem, per se, but the underscores will be important later.

To access and update this website's contents you'll need to visit what's known as the FTP server, which you'll find by going to ftp://www.70th_entry_halton.talktalk.net. At this point, you'll be asked for a username and password. The username will be 70th_entry_halton@talktalk.net but we cannot tell you the password. Assuming your friend's wife doesn't know it, or can't guess it, then you (or more likely the widow) will need to contact TalkTalk's bereavement team at www.snipca.com/14386.

Once you've obtained the password you'll be able to log in to the FTP server to manage the website's words and images in whatever way you choose. From the website's source code (right-click and choose 'View source' or 'View page source') we can see that your friend designed this website using a program called WebSite X5. You can download a free version of this from www.snipca.com/14388. This program includes built-in FTP tools, so you'll be able to download all existing assets from TalkTalk's FTP server, letting you continue the job of maintaining the site.

How do I sync my Outlook calendar to my Nokia phone?



Sync Outlook 2010 with your mobile phone by signing up with a Microsoft account

Q **I use the calendar in Microsoft Outlook 2010 on my Windows 7 PC to arrange all my appointments and meetings. When I'm out and about, I also use my Nokia Lumia 625 phone, on to which I download my emails as required. I'm wondering if it's possible to synchronise my Outlook calendar with my phone? I'm quite happy to do this by connecting my phone to the PC via a USB cable, but I don't know how. Can you tell me if this is possible and what software I'll need?**

Richard M Price

A You can do this without connecting your Lumia to your PC and without installing additional software, though you will need a Microsoft account. You might already have one of these if you use Hotmail or Outlook.com, for example. But if not, sign up for free at https://signup.live.com. You don't have to use your Microsoft email address to send and receive email, though of course you are free to do so.

Next, in Outlook 2010, find out if you are using Microsoft Exchange to sync emails with your mail provider's server. Open Outlook 2010 on your computer, select the File tab, then click Info. Click Account Settings in the Account Information section followed by Account Settings, then look for the account type in the Type column.

Next, switch to your Lumia phone and tap Settings, followed by 'email+accounts' and then 'add an account'. If you're using Exchange, tap Outlook; otherwise tap 'Microsoft account'. Type your username and password. Your calendars will now sync whenever your Lumia has an internet connection.

NEXT ISSUE ON SALE 21 Jan

- Do I have to use BT Mail?
- How can I test my computer's security?
- Why has Chrome stopped web pages?

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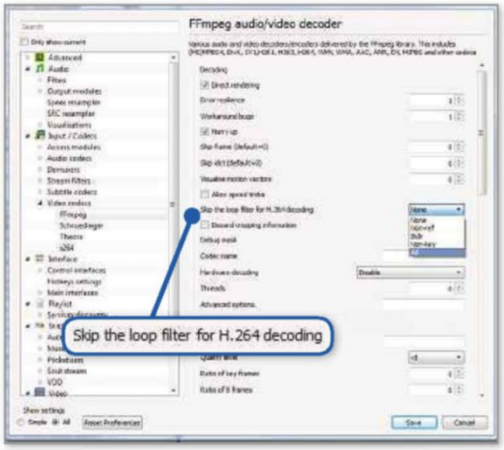
VLC

Stream online video without buffering, fix sound problems and make HD videos play smoothly

HD videos don't play smoothly

High-definition (HD) video is increasingly common on our TVs and on the internet, and many video downloads now come in the HD MKV format. You can play MKV video files in VLC, but the format uses a lot of memory, and you may find that your video lags and stutters as it plays.

You can fix this by tweaking VLC's settings. Go to Tools, Preferences, then select All at the bottom left of the Simple Preferences window. This changes the name of the window to Advanced Preferences and provides a list of options in a pane on the left. Click the arrow next to 'Input / Codecs', click the arrow next to 'Video codecs' and then click 'FFmpeg'.



Click All in the 'Skip the loop filter' dropdown menu to fix jittery HD videos

In the right-hand pane, click the dropdown menu next to 'Skip the loop filter for H.264 decoding', then click All (see screenshot above).

YouTube videos won't play in VLC

To play a YouTube video in VLC, press Ctrl+N, then paste the URL of the YouTube video into the text box. This should let you play it without being harassed by YouTube's adverts and other annoyances.

However, pasting the URL doesn't always work. If so, you may need to download a YouTube 'playlist' file (LUA) to replace your default one. Go to www.snipca.com/14594, click Download and save the LUA file (ending in 'youtube.lua') to your VLC installation directory, which you'll find at **C:\Program Files\VideoLAN\VLC\lua\playlist**. Click Yes if you're prompted to replace the file that's already there.

In newer versions of VLC, the 'playlist' folder may contain LUAC files instead of LUA files. If that's the case, delete the 'youtube.luac' file from the folder once you've download the 'youtube.lua' file.

Video streams keep buffering

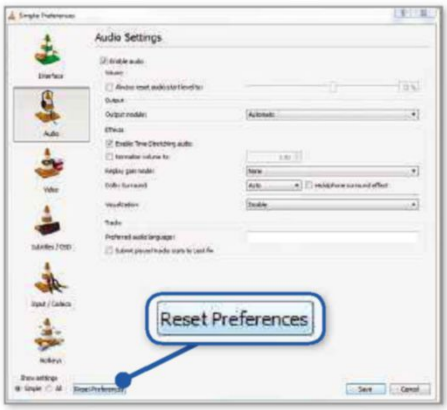
If you're trying to watch a YouTube video (or any other online video) in VLC and it buffers for a long time, you should be able to fix it by changing the Streaming Buffer settings to suit your internet connection.

Click Tools, Preferences, then select All at the bottom-left corner of the Simple Preferences window. Click 'Stream output' in the left-hand pane, change the number in the 'Stream output mixer caching' box to anything between 2,000 and 3,000, then click Save. This setting uses your PC's RAM to help speed up videos. Try entering different values into this stream output field and monitor the impact on your buffering times to work out the ideal setting for your internet connection.

You can't hear your videos

If the audio suddenly goes silent, first test the sound on your PC by clicking the speaker icon at the bottom-right of your Desktop and clicking several points in the slider. If you hear a 'ding' sound, then you need to fix your VLC audio settings.

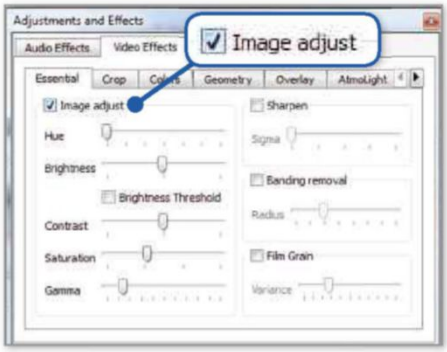
In VLC, click Tools, Preferences, then Audio in the left-hand pane. Make sure 'Enable audio' is ticked and the 'Output module' dropdown is set to Automatic. If these are in order and the problem persists, your advanced sound settings may have been changed in a software update or when you connected a new sound device. In the Simple Preferences window, click Reset Preferences, then click Save to bring your sound settings back to their default working order.



Click Reset Preferences to restore default audio settings and get your sound back

Video picture is too dark

VLC's default picture settings are designed to suit most videos, but they won't be ideal for every video you play. You can adjust the picture settings while a video is playing. Click Tools, 'Effects and Filters', then go to the Video Effects tab. Tick 'Image adjust' and move the brightness slider up. Once you've increased the brightness, you'll probably need to turn up the contrast as well, to prevent the video looking washed out and grainy. Remember to untick 'Image adjust' after watching the video, or the settings will be too bright for normal-quality videos.



Tick 'Image adjust' to tweak brightness and contrast while you're watching a video

Next issue Fast Fixes for... File Explorer

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T0711 Black	£8.99 7.4ml	£4.99 7.4ml, 3 for £13.99	SX400/405/415/515, D78/92/120
T0711-4 each	£8.99 5.5ml	£3.99 7.4ml, 3 for £10.99	DX4000/4400/5000/6000/7400/8400
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T0791-6 each	£12.99 10ml	Check Website.	
T0801-6 Set of 6	£51.99	£19.99, 3 sets for £57.99	P50, R265/285/360, RX560/585
T0801-6 each	£8.99 7.4ml	£3.99 7.4ml, 3 for £10.99	/685/650, PX700/710/800/810
T0870-9 Set of 8	£74.99	Check Website.	Photo R1900
T0870 Gloss	£7.99 11.4ml	Check Website.	
T0871-9 each	£9.99 11.4ml	Check Website.	
T0961-9 Set of 8	£74.99	Check Website.	Photo R2880
T0961-9 each	£9.99 11.4ml	Check Website.	
T1281-4 Set of 4	£29.99	£14.99	S22, SX125, SX130, SX235W,
T1281 Black	£7.99 5.9ml	£4.99 5.9ml	SX420W/425W/435W/445W,
T1282-4 each	£7.99 3.5ml	£3.99 3.5ml	BX305F
T1291-4 Set of 4	£42.99	£16.99	SX235W/420W/425W/435W/445W,
T1291 Black	£10.99 11ml	£5.49 11ml	SX525WD/535WD/620FW, B42WD,
T1292-4 each	£10.99 7ml	£4.49 7ml	BX305F/320FW/525WD/625FWD
T1571-9 each	£20.99 25ml	Check Website.	R3000
T1591-9 each	£14.99 17ml	Check Website.	R2000
T5801-9 each	£41.99 80ml	Check Website.	Pro 3800, 3880
No.16 Set of 4	£24.99	£14.99	Workforce WF-2010W, 2510WF,
No.16 Black	£6.99 5.4ml	£4.99 5.4ml	2520NF, 2530WF, 2540WF
No.16 C/M/Y, each	£5.99 3.1ml	£3.99 3.1ml	
No.18 Set of 4	£22.99	£14.99	Expression Home XP30,
No.18 Black	£6.99 5.2ml	£4.99 5.2ml	XP102, 202, 205
No.18 C/M/Y, each	£5.99 3.3ml	£3.99 3.3ml	XP302, 305, 402, 405
No.24 Set of 6	£44.99	No.24XL Set of 6 £69.99	Expression Photo XP750, 850
No.24 B/L/C/LM, ea	£7.99 5.1ml	No.24XL B/L/C/LM, ea £11.99 9.8ml	
No.24 C/M/Y, each	£7.99 4.6ml	No.24XL C/M/Y, each £11.99 8.7ml	
No.26 Set of 4	£30.99	No.26XL Set of 4 £54.99	Expression Premium XP600, 605, XP700, 800
No.26 Black	£8.99 8.2ml	No.26XL Black £14.99 12.1ml	
No.26 Photo Black	£7.99 4.7ml	No.26XL Photo Black £13.99 8.7ml	
No.26 C/M/Y, each	£7.99 4.5ml	No.26XL C/M/Y, each £13.99 9.7ml	

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2	EE	EE: Broadband & Calls	£9.95 (£2.50 for 12 months)	12 months	17Mbps max speed	∞ unlimited **	£30.00
3	TalkTalk	TalkTalk: Broadband	£3.50 (HALF PRICE for 6 months)	18 months	17Mbps max speed	∞ unlimited	£31.50
4	plusnet	Plusnet: Fibre Broadband & Calls	£14.99 (FREE for 6 months)	18 months	38Mbps max speed	∞ unlimited	£89.94
5	sky	Sky: Broadband & Calls	£7.50 per month	12 months	17Mbps max speed	∞ unlimited	£90.00
6	TalkTalk	TalkTalk Fibre Broadband	£13.50 (HALF PRICE for 6 months)	18 months	38Mbps max speed	∞ unlimited	£121.50
7	Virgin media	Virgin: Broadband & Calls	£17.50 (£12 for 12 months)	18 months	50Mbps max speed	∞ unlimited **	£144.00
8	EE	EE: Fibre Broadband & Calls	£19.95 (£5 for 3 months)	18 months	38Mbps max speed	∞ unlimited	£194.55
9	sky	Sky: Fibre Broadband & Calls ldkjklffjlkjfkjfkj a;kfjaslkfjlask ASJD fasjfhlajsf akjflasjflkjsf ajflkasjflkjsf	£20.00 per month	18 months	38Mbps max speed	∞ unlimited	£240.00
10	Virgin media	Virgin: Broadband & Calls	£30.00 (£24.50 for 12 months)	18 months	152Mbps max speed	∞ unlimited **	FASTEST £294.00

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Jargon Buster

1080p Of the common types of high-definition video, this is the best quality: 1920x1080 pixels.

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

64bit A technology that processes information in larger chunks. Most modern computers are 64bit.

720p A common resolution of high-definition video: 1280x720 pixels.

802.11n A standard for wireless networks that allows for high transfer speeds.

ADF Automatic Document Feeder. A device that feeds sheets of paper into a photocopier or scanner, one at a time.

Adware Unwanted adverts that come with software.

App launcher An app that changes how the Android home screen looks and works, especially for managing and opening apps.

BASIC A simple programming language.

Beta A version of software that's being tested. Beta versions are often released so problems can be ironed out.

Boot defrag Reorganises the data stored on a hard drive so files are stored in one piece and can be accessed quickly as your PC boots.

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.

Cache A temporary space for storing information. Can be memory used on a computer processor, or space on a hard drive used by a web browser.

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

CPU Central Processing Unit. Another term for a computer processor.

Directory An old name for a computer folder.

Disc image A file that contains all the information from a CD or DVD. Sometimes known as an ISO.

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

Dual core When two processors are combined into a single chip.

Duplex printing Printing on both sides of a sheet of paper.

EXE A program file designed to run in Windows. Named after the file extension .exe.

EXIF Exchangable Image File Format. A method for storing extra information, such as the date, time and camera model, inside digital photo files.

Firmware Basic software stored on a device, such as a music player, to control its operation. Can sometimes be upgraded in a process often called flashing.

Flash storage A data storage device that includes flash memory with an integrated USB interface.

FTP File Transfer Protocol. A system for transferring files between computers. Often used when uploading websites.

Graphics card A component in a computer that produces the image shown on the monitor.

HDMI High-definition media interface. A type of connection that transmits high-definition video and audio signals. 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.

Hotkey A key set up to perform a complex action.

ISO A type of image file that contains all the data from a CD or DVD disc.

JPEG Joint Photograph Experts Group. A common type of image file created by digital cameras.

LED Light-Emitting Diode. An electronic device that emits light. Used on almost all electronic devices, and to provide the backlight for some LCDs.

LTE A short term for 3GPP Long Term Evolution, one standard for very fast transfer of data on mobile networks, produced by the 3rd Generation Partner Project.

MB/s Megabytes per second.

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).

Memory See RAM.

MicroSD A small type of memory card. Can be converted to SD size using an adapter.

Micro SIM A smaller version of SIM cards used in mobile phones. Commonly found in smartphones.

Motherboard The main circuit board inside every PC into which all other parts connect.

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.

Plug-in A small program that adds extra features to your web browser or to other applications, and is loaded only when it's needed.

Processor The processor – or central processing unit – is the brain of a computer.

PUPs Potentially unwanted programs, usually downloaded with other software.

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.

Ransomware Malware run by hackers who take over your PC and demand a payment to release it.

RFID Radio Frequency Identification. A tiny chip that can be implanted into goods, animals and even people, which transmits information about the item it is attached to. The Pet Passport scheme uses RFID chips to identify animals.

Rootkit Software that gives a malicious user administration rights and access to a computer.

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.

Server A computer on a network, such as the internet, that distributes information to other PCs.

Source code Set of instructions written by programmers that tell a program how to function.

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.

Triple-core When three processors are combined into a single chip.

USB 2.0 Faster successor to USB that's used by devices such as external hard drives.

Unicode An encoding system for the representation of characters in software technology.

The Final Straw

STUART ANDREWS is *Computeractive*'s Mr Angry

This issue Stuart Andrews is plagued by...

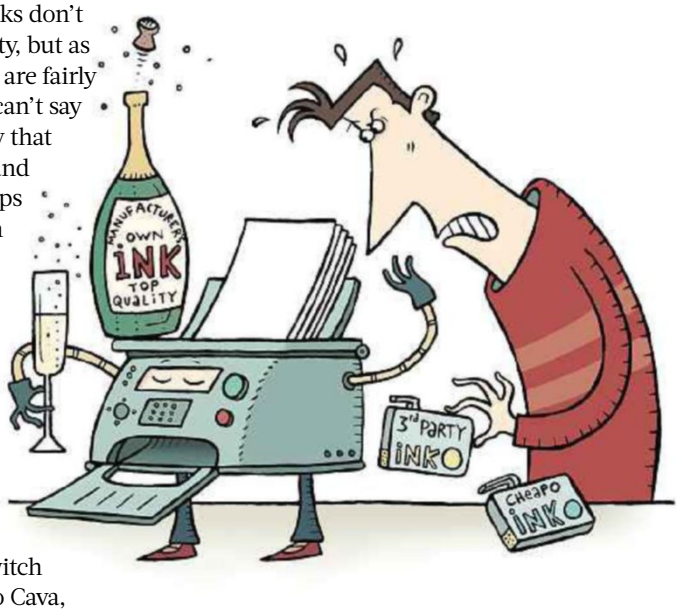
Printer problems

Printers and I have a long and painful history. From hellishly noisy dot matrix printers with paper feeds that would chew up my work, to personal lasers that would go wild and print a line of gibberish across 40 pages, I've hated almost every single one. Yet my latest printer has taken things to a whole new level. It's not just incompetent or belligerent, it's actually holding me to ransom.

I won't name and shame the make or model, but it's a wireless office-friendly inkjet from a well-known brand. By the standards of my other printers it's quiet and reasonably efficient. But over the past year I've noticed a disparity between the ink it uses up and the paucity of its actual output. It always appears to be running low, and seems to take great pleasure in warning me of this, even when I know it has plenty of ink left. I can't help but notice that the manufacturer's ink is, shall we say, exorbitantly priced. What is this stuff made of? Caviar and crushed scarab beetles?

> "I threaten the printer with a pretty vicious kicking if it doesn't mend its ways. It tells me that it's run out of black ink"

Now, I'm fully aware of all the arguments in favour of only using manufacturers' inks. Printer companies say that third-party inks don't deliver the same quality, but as most of my print-outs are fairly prosaic documents, I can't say I'm bothered. They say that their inks last longer and ensure my printer keeps running smoothly. I'm not convinced. They also claim to invest millions of dollars in ink research, but this is something I'm happy to file under 'not my problem'. In the end, I told my printer it could forget the good stuff. It was time to switch from Dom Perignon to Cava, from Belgian Trappist Beer to a pint of cheap lager. In an age of austerity, we all need to make do with second best.



Well, the manufacturers were right about one thing: switching to third-party inks has led to problems. The first set of inks threw up odd warnings and grumpy messages, and now my printer seems hell-bent on downing tools for good. I don't actually sit next to my printer. It lives in a spare room upstairs, while I work downstairs at the kitchen table. Because of this I tend to print something, then pop up later to see what has emerged. With third-party cartridges installed, the answer is usually a big fat zilch.

Now, I expect the printer to moan about my use of third-party ink cartridges, so I just ignore those messages. What I don't expect is to print a document, go upstairs and find the printer hasn't budged an inch. Instead, in a fit of pique, it shows a brand new third-party ink error message on its internal screen.

I press the OK button to force it to print. It goes ahead, then one miserable blank page churns out. I swear loudly, run down to my desk, press print, click through the warning, then run back upstairs. The printer repeats its error message. I press OK. It prints half a page as a tease, then spits out the rest blank, while it continues its little strop. I repeat the cycle and threaten the printer with a pretty vicious kicking if it doesn't mend its ways. It tells me that it's run out of black ink. It hasn't. The cartridge is over half full and was printing perfectly well yesterday. Even when my document finally prints and I think I've won, I know it's going to sulk again tomorrow.

All this trouble is so artificial. Manufacturers apply technology that should be helping us (by telling us how much ink we have left) to persuade us to buy their own brand ink and thereby look after their own bottom line.

At best it's restrictive; at worst, a total scam. Well, I'm going to fix my little problem. If I can't use whatever ink I like in my printer, I'll find a new printer that's less fussy. And the current model? Enjoy the recycling plant, you [expletive deleted, expletive deleted, expletive deleted]!

Do you agree with Stuart?
Let us know at letters@computeractive.co.uk

Next issue Stuart gets angry about the selfie stick

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