

**USE FREE  
ANTI-VIRUS?**Install the firewall that adds  
the tools you're missing **p54**

## *The Advanced Guide to*

# EMAIL

**Unlock all the powerful tools you need  
to become an expert **p40****

- ☒ Create fake accounts
- ☒ Block adverts in your inbox
- ☒ Make 2FA easier & faster
- ☒ Download emails as PDFs
- ☒ Stop others reading your emails
- ☒ Unsend messages
- ☒ Back up your webmail
- ☒ Stay 100% anonymous

**+ Has your  
PASSWORD  
BEEN  
HACKED?**

£2.20 9 771473 709165 34>

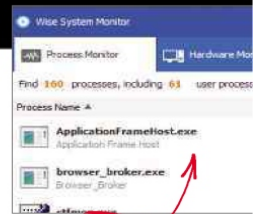
**PLUS**

**SWITCH TO 'LITE' APPS  
TO REGAIN LOST STORAGE**

Another clever way to use your VPN! **p50**

**BEST FREE SOFTWARE  
TO BOOST YOUR PC**

Dump Windows Task Manager for this tool **p48**



# UNLOCK YOUR GAME

gmaster.iiyama.com



## JOIN THE PRO SQUAD

1ms

144Hz

Free Sync



RED EAGLE™

GB2488HSU | GB2788HS | GB2760QSU



## GET IN THE GAME

1ms



Free Sync



BLACK HAWK™

GE2288HS | G2530HSU | G2730HSU



## IMMERSE YOURSELF IN THE GAME



Free Sync



GOLD PHOENIX™

GB2888UHSU | G3266HS



## ENTER A NEW DIMENSION

2560  
x  
1440

1ms

Free Sync



SILVER CROW™

GB2783QSU



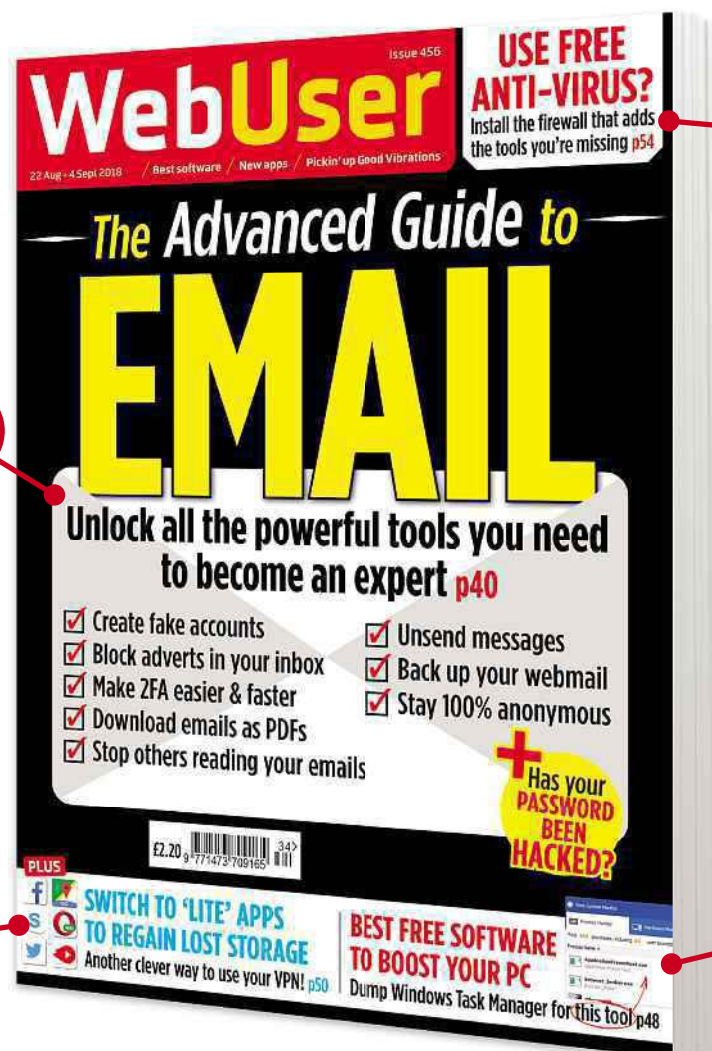
## Be an email expert, not a chump!

It's nearly 10 years since the *Wall Street Journal* reported that email's reign as "king of communications" was over, usurped by young upstarts such as Facebook, Twitter and, er, Google Wave ([bit.ly/ws456](http://bit.ly/ws456)). "Email, stuck in the era of attachments, seems boring compared to services like Google Wave", sniffed the *WSJ*, the chumps! Here in 2018, we're all still using email and although it may not be as trendy as, say, Slack (which is essentially Google Wave in a new hat), we'd be lost without it.

In this issue's cover feature, we celebrate email's 47th birthday by revealing how you

can get more from your messages and make your inbox as secure as possible. Our expert tips and tricks will help you protect your emails from prying eyes, add clever new features that your webmail lacks and customise how your messages look. With security breaches now increasingly common, it's vital to ensure that your email isn't your weak spot.

**Robert Irvine, Editor**  
[robert\\_irvine@dennis.co.uk](mailto:robert_irvine@dennis.co.uk)  
[#webuser](https://twitter.com/webuser)



### 5 Things you'll learn this issue

- 1 How to view a more rounded and realistic rendition of Earth in Google Maps **page 7**
- 2 How to lock your mouse movements at a specific speed **page 29**
- 3 How to block PUPs automatically using Malwarebytes' new browser add-on **page 32**
- 4 How to create an emergency login when Windows 10 has locked you out **page 71**
- 5 How to watch YouTube videos in incognito mode on your Android phone **page 69**



### Subscribe to Web User!

Never miss another issue – subscribe at [subscribe.webuser.co.uk](http://subscribe.webuser.co.uk)

**abc** Average sales, Jan-Dec 2017, 27,156 copies per issue



ISSUE 456

22 AUG - 4 SEPT 2018

COVER  
FEATURE

## The Advanced Guide to

# EMAIL

Secure your inbox, enhance your messages and unlock secret tools

p40



Should you be worried about  
facial recognition? p38



We test 13 super-fast  
routers p20

### IN DEPTH Articles on the latest tech topics

- 38 FAQ**  
Facial recognition
- 40 COVER FEATURE**  
**THE ADVANCED GUIDE TO EMAIL**  
Tips to enhance your privacy, security and more
- 47 Which version are you using?**  
Do you know exactly which OS you're running?
- 48 Best free system-monitoring tools**  
Keep an eye on everything your PC does
- 50 Switch to lightweight versions of apps**  
Save space, power and data on your phone

### REVIEWS Apps, sites and products on test

- 14 Best New Websites**  
Take a bite out of Wimpy's mouth-watering site
- 20 Group Test**  
Get more from your broadband connection with one of the 13 super-fast routers on test
- 28 Best Free Software**  
Play vintage games for free on your PC
- 32 Best New Browser Tools**  
Auto-save text you type into any website
- 34 Best Free Apps**  
Carry a powerful free office suite in your pocket





## FAVOURITES Must-read regulars

- 6 What's New Online**  
Listen to NASA's Apollo 11 archive
- 8 Need to Know**  
This fortnight's top tech news stories
- 12 Stay Safe Online**  
Security advice for PC and mobile
- 18 What to Watch Online**  
Films and TV shows you can't miss
- 23 Build a Better Site**  
Expert tips, tools and practical help
- 27 Best Buys**  
Our pick of the best new products
- 37 Take a Screen Break**  
Guess our emoji capital cities



- 60 Broadband Deals**  
Find the best-value package for you
- 72 Inbox**  
Tell us your views and opinions
- 74 Page 404**  
Laptops break too easily, says Barry



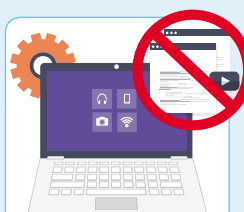
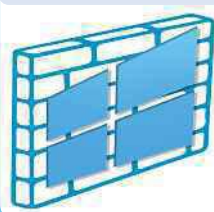
## Practical WebUser

Workshops, tips, projects and problem solving

16 pages

- 52 Workshop 1**  
Skype 8
- 54 Workshop 2**  
Add tools to Windows Firewall
- 56 Workshop 3**  
Block annoying website notifications
- 57 Workshop 4**  
Create custom phone vibrations
- 58 Weekend Project**  
How to run Windows programs on Android devices – and vice versa
- 64 Web User Masterclass**  
Automate key mobile settings
- 66 Ask the Expert**  
All your technical questions answered
- 68 Readers' Tips**  
The best tips from our readers
- 71 Readers' Helpdesk**  
Answers from our reader forums

### Boost Windows Firewall p54



### Block notifications from sites p56

### Run Windows programs on your Android devices p58



#### EDITORIAL

Group Editor Daniel Booth  
Editor Robert Irvine  
Technical & Reviews Editor Andy Shaw  
Features Writer Steve Clark  
Art Editor Laurence Hallam  
Production Editor Miki Berenyi  
Editorial Tel: 0203 890 3890  
Visit [forum.webuser.co.uk](http://forum.webuser.co.uk)  
for technical and buying advice

#### ADVERTISING

Tel: 0203 890 3846  
Advertising Director Charlotte Milligan  
Advertising Manager Alexa Dracos

#### ADVERTISING PRODUCTION

Group Production Manager  
Stephen Catherall, 0203 890 4050  
Production Assistant Helina Ozyurt, 0203 890 3827

#### MARKETING

Marketing Manager Rachel Hare  
Marketing Production Manager Gemma Hills

#### MANAGEMENT

Tel: 0203 890 3890  
Managing Director John Garewal  
MD of Advertising Julian Lloyd-Evans  
Commercial and Retail Director David Barker  
CFO/COO Brett Reynolds  
Chief Executive James Tye  
Company Founder Felix Dennis

#### SYNDICATION AND USE OF LOGOS

Syndication Senior Manager Anj Dosaj-Halai  
Tel: +44 (0)203 890 3816  
Email: [anj\\_dosaj-halai@dennis.co.uk](mailto:anj_dosaj-halai@dennis.co.uk)

#### INTERNATIONAL LICENSING

Web User is available for licensing overseas.  
Licensing & Syndication Assistant Nicole Adams  
Tel: +44 (0)203 890 3998  
Email: [nicole\\_adams@dennis.co.uk](mailto:nicole_adams@dennis.co.uk)

#### SUBSCRIPTIONS

Tel: 0330 333 9493  
Email: [subscriptions@dennis.co.uk](mailto:subscriptions@dennis.co.uk)  
You can manage your existing subscription through [www.ManageMyMags.co.uk](http://www.ManageMyMags.co.uk). This should be your first port of call if you have any queries about your subscription. A subscription to Web User for one year costs £47.99 for UK subscribers, £95 for Europe and £151 for the rest of the world. Call 0330 333 9493 to get the next issue, delivered free to your door.

#### PRINTING

Printed by Wyndeham Bicester, Oxon  
Distributors Seymour 020 7396 4000

#### PERMISSIONS

Material may not be reproduced in any form without the written consent of the publisher. Please address such requests to: John Garewal, Dennis Publishing, 31-32 Alfred Place, WC1E 7DP

#### LIABILITY

While every care was taken preparing this magazine, the publishers cannot be held responsible for the accuracy of the information or any consequence arising from it. All judgments are based on equipment available to Web User at the time of review. 'Value for money' comments are based on UK prices at time of review. Web User takes no responsibility for the content of external websites whose addresses are published in the magazine.

© Copyright Dennis Publishing Limited. Web User is a trademark of Felix Dennis.



#### A DENNIS PUBLICATION

Web User is published fortnightly by Dennis Publishing Ltd, 31-32 Alfred Place, WC1E 7DP. Company registered in England. Material may not be reproduced in whole or part without the consent of the publishers. ISSN 1473-7094

WEB USER  
PRINTED IN THE UK



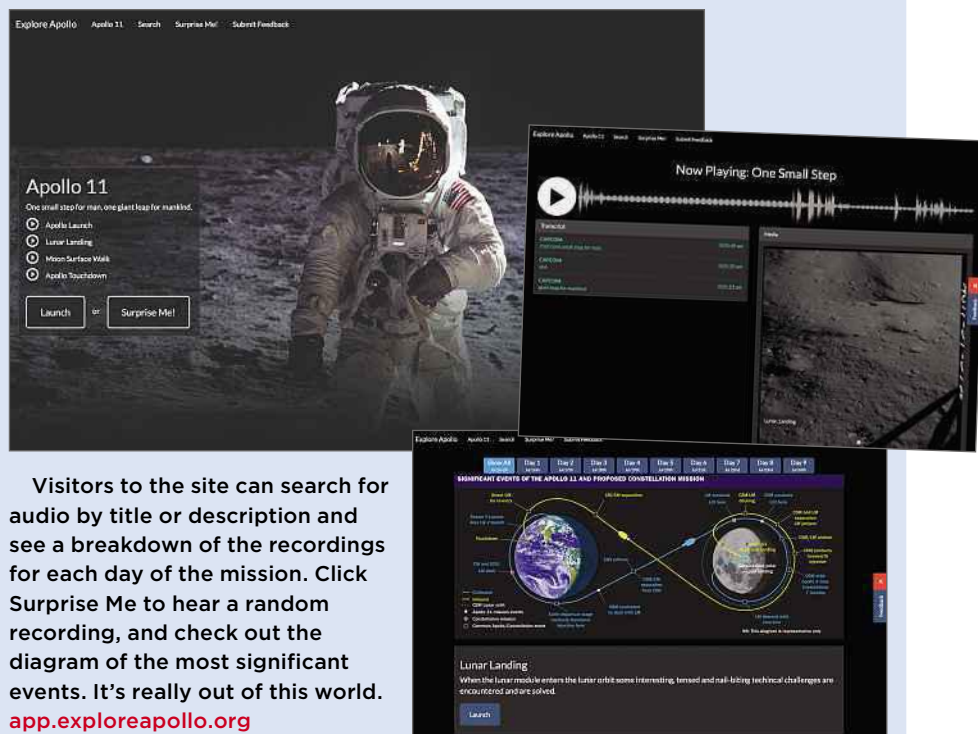
# What's New Online

## Listen to the Apollo 11 recordings

**N**ASA has unearthed 19,000 hours' worth of audio from the historic Apollo 11 mission, which saw humans set foot on the Moon for the very first time on 20 July 1969 – and you can listen to the lot online.

As well as earwigging on the conversations of astronauts Neil Armstrong, Buzz Aldrin and Michael Collins, you can hear engineers, supervisors and analysts at Mission Control. The recordings include some well-known audio gems such as “one small step for [a] man, one giant leap for mankind” along with discussions about the technical systems, and even a joke request from Buzz to turn the Earth around so the crew could enjoy a better view.

As you can imagine, digitising the tapes has been a mammoth effort. Teams at NASA and the University of Texas at Dallas spent five years on the project and the accompanying transcriptions.



Visitors to the site can search for audio by title or description and see a breakdown of the recordings for each day of the mission. Click **Surprise Me** to hear a random recording, and check out the diagram of the most significant events. It's really out of this world.  
[app.exploreapollo.org](http://app.exploreapollo.org)

## Help create an AI world

[worlddraw.withgoogle.com](http://worlddraw.withgoogle.com)

Google has combined the AI recognition technology used in AutoDraw ([autodraw.withgoogle.com](http://autodraw.withgoogle.com)) and QuickDraw ([quickdraw.withgoogle.com](http://quickdraw.withgoogle.com)), and is now looking to take on the world – albeit in the virtual sense. Its new World Draw tool lets you sketch 2D objects, which it then recognises and turns into 3D models using WebGL. Use sliders to adjust the object's size and hue, and World Draw will place it in an ever-expanding world made up of other people's creations.

So far, around 175,000 people from 175 countries have produced more than 265,000 creations, which should give you an indication of the scale of the project. There's a lot of fun to be had, especially in exploring the world in glorious cartoon-like 3D, where you can pan around to see vehicles driving over the roads, follow boats along winding rivers and experience buildings springing up out of the ground.



## Customise travel itineraries on Bing

[www.bing.com/maps](http://www.bing.com/maps)

Want to find the quickest and easiest route to an action-packed holiday? Then check out the latest update to Bing Maps. Microsoft's mapping service introduced ready-made itineraries for popular destinations such as New York earlier this year, and now you can customise these plans to suit your particular tastes and travel needs. You can quickly add attractions by clicking the Find Attractions button on an itinerary or click the three-dot menu to move Bing's suggestions to a different day. You can also add or remove days from the schedule, delete attractions and edit the title of the itinerary and its description. Once you've finished planning your trip, you can save the itinerary to My Places or share it with friends and family using a link. By pasting the resulting URL into your phone's browser, you can ensure you've always got your itinerary with you while you travel.



We pick the 10 best things you must do on the web this fortnight

## View a round Earth in Google Maps

[maps.google.co.uk](https://maps.google.co.uk)

Flat Earthers are likely to weep, but if you zoom out of Google Maps you'll notice that our planet is now rendered as a globe. This makes its depiction of the Earth more realistic, because its land masses are now in the correct proportion to one another. "Greenland's projection is no longer the size of Africa," the service said on Twitter.



## Sell your designs on Amazon



[merch.amazon.com](https://merch.amazon.com)

If you're a talented designer, you can now get Amazon to slap your artwork on T-shirts, hoodies, sweatshirts and more in the hope of making some cash. The company has extended its Merch by Amazon scheme to the UK, so participants can earn a royalty on every item sold. It's a print-on-demand service, so there are no inventories or upfront fees, and a Royalty Calculator lets you work out how much you could earn. Best of all, your designs remain your intellectual property. The only downside is that you have to request an invitation to join.

## Track sharks in the Atlantic

[bit.ly/sharks456](https://bit.ly/sharks456)

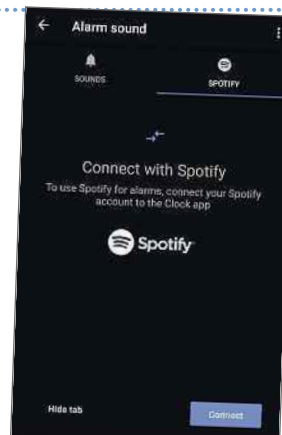
Over the past few years, conservation group Oceana has tagged 45 sharks off the East Coast of America to track their movements in relation to commercial fishing activity. Now it has added a new Shark Tracking layer to its interactive Global Fishing Watch tool, so you can follow the sharks' journeys and discover more about each of these magnificent fish. See if you can find Buzz, the shark who travelled 3,000 miles south, or Oscar, who has swum more than 22,000 miles in two years. Turn the layer on in Activity Layers in the top-right corner.



## Wake up to your favourite song

[bit.ly/clock456](https://bit.ly/clock456)

If you use the updated Google Clock on Android, you can connect your Spotify account and set the app to wake you up with the music of your choice every morning. It works with free and premium Spotify accounts but the paid-for version lets you choose your preferred track, album or playlist. You can set Spotify to continue playing once you've woken up, too.



## NEW VOICE COMMANDS

### Choose a voice by picking a colour

Google is rolling out an update that lets you switch between Google Assistant's voice options by picking a colour rather than a number.

### Get a crazy response

Siri's forthcoming Shortcuts feature will match your routine with apps to make time-saving suggestions. In the meantime, say, "Siri, I see a little silhouette of a man" for an amusing response.

### Talk to Alexa in the car

Seat has been building Alexa into new Ateca and Leon models, so you can talk to your car à la *Knight Rider*. Press a button on the steering wheel to ask for services, restaurants and music as you drive.

## + Browse the web in VR

[bit.ly/daydream456](https://bit.ly/daydream456)

Google has added a Chrome browser to its Daydream virtual-reality software, so you can access the internet using a compatible VR headset and enjoy an optimised 'cinema mode' when browsing the web or watching videos.

## Send voice messages in LinkedIn

[linkedin.com](https://linkedin.com)

LinkedIn has launched a new voice-messaging feature for users who are too busy to type. To record up to a minute of audio, tap and hold the microphone icon on the app's keyboard.

## Listen to old records

[bit.ly/phono456](https://bit.ly/phono456)

To mark Louis Armstrong's 117th birthday, Google Arts & Culture has teamed up with record label Deutsche Grammophon to digitise phonograph recordings from its archive.



## CCleaner update causes privacy-fears backlash

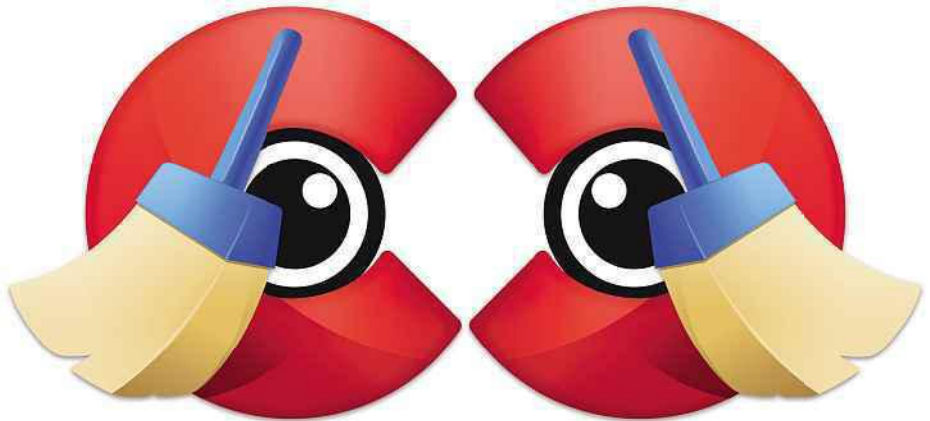
### What happened?

The popular PC cleanup tool CCleaner has been forced to step back from changes that meddled with user privacy. An update to version 5.45 of the software introduced controversial new data-monitoring features that were designed to help the developers improve the product.

CCleaner is developed by Piriform, which was recently bought by security company Avast. Piriform didn't offer much detail on the change in the release notes, only saying it had "added more detailed reporting". Users noticed that if they turned off the data collection, it re-enabled itself next time the software started. Also, it's difficult to completely turn off CCleaner: clicking the 'X' in the top-right corner doesn't fully close the program – it only minimises and continues to run in the background.

Following complaints from CCleaner forum users, Piriform withdrew the update and explained in a post ([bit.ly/piriform456](http://bit.ly/piriform456)) that the information is collected under a system it calls Heartbeat. This is anonymous and designed to spot bugs, identify poor interface design and help the developer decide which features to focus its efforts on. It also admitted that it had added the new data-collection system to the existing Active Monitoring feature, which watches for 'junk data' that accumulates on your PC to help keep it clean. But combining the two features made it impossible to use one and not the other.

Now, CCleaner will separate Active Monitoring (the junk file hunter) and Heartbeat (the data collection for



product improvement) into two separate systems, so users can enable either option or both, and disable one if they don't want to use it. These choices are remembered when the software is closed. Piriform also said it would rename Advanced Monitoring, noting that the "scary name" may be alarming people and preventing them from using a key feature.

The privacy uproar comes a year after the PC-cleaning software was hijacked and used by hackers to infect computers, potentially getting access to sensitive data. That was embarrassing for Avast, the security company that had bought CCleaner's maker Piriform only a few months before.

### How will it affect you?

If you use CCleaner, check which version you're running and disable any features – snooping or otherwise – that you aren't happy with. If you're on a version before 5.45, it may be worth avoiding updating to the newer edition that's fraught with these privacy issues.

If you're on 5.45 already, Piriform has promised a new version in the next few weeks, though it hasn't specifically said when it will be released. If you're nervous about your data being collected in the meantime, it may be worth temporarily uninstalling the software or not running it until the new version arrives. But remember that clicking the 'X' in the corner isn't enough to shut down the software completely – to do

so, open the Task Manager in your version of Windows, select CCleaner and click End Task. If you restart your PC, open Task Manager again to check if CCleaner has also restarted.

It's worth thinking about whether you even need CCleaner. If you're only using it to clear away old temporary files, that's easy enough to achieve without installing a piece of software, while clearing out what runs on startup and uninstalling unwanted programs can be done directly through Windows.

We recommended the best free alternatives to CCleaner in our cover feature in Issue 450 ([bit.ly/webuser450](http://bit.ly/webuser450)).

### What do we think?

Trust is important to PC users and many of us are sensitive to privacy matters right now. Any software developer that thinks it has a right to track and monitor you to improve its product isn't thinking straight. Imagine if you bought a toaster and it tracked how often you loaded it with slices of bread. It sounds silly, but when developers assume they can monitor use, it's just as ridiculous. Users don't owe developers their data.

There's a simple solution for CCleaner and other software creators – just ask permission first. Many users will happily give it to get better software. That helps build trust, which is something CCleaner and Piriform could do with right now, since the pair of recent security and privacy debacles are casting a shadow.



**An update to CCleaner 5.45 introduced scary-sounding privacy features**

What we think of this fortnight's top tech news stories and rumours, and how they affect you

## Fortnite for Android poses security risk

### What happened?

The hit online game Fortnite is finally headed to Android, but not in the way Google would prefer it. The battle game is already available on iOS, computers and consoles, but although an Android app has been released, it's not available via the Google Play store. Instead, fans have to head to the official Fortnite site ([fortnite.com](http://fortnite.com)) to sign up for an invite to download the game and then install the app by sideloading it.

Security experts have long advised Android users to only install apps from official stores, but Fortnite's publisher, Epic Games, has chosen to offer direct downloads instead – presumably to avoid paying Google the 30% cut of all revenue it takes for sales via its Play store.

### How will it affect you?

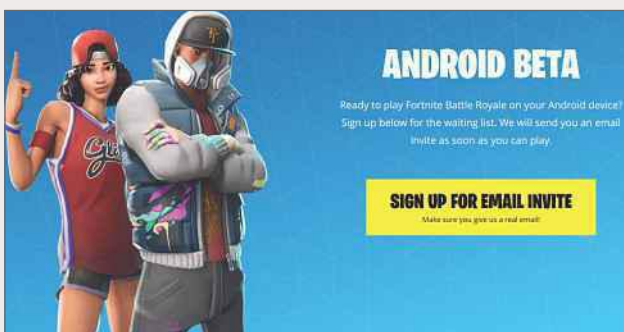
When you install the Fortnite app on your compatible Android phone or tablet, your device will display a warning, saying that it isn't allowed to install "unknown apps". You'll have to click through to change your security

settings to enable the option. This is designed to block malicious apps from downloading to your device, so you should change it back into locked-down mode after the game has installed.

### What do we think?

If we'd made a game as popular as Fortnite, we probably wouldn't want to hand Google a 30% cut, either – estimates suggest that Epic avoiding the Play store will cost Google \$50m this year alone. On the other hand, the move may encourage poor security practices, especially if other game developers follow suit.

However, Google deserves some credit for its response. While it could be bitter about losing out on Epic's cash cow, it's instead warning users searching for Fortnite in the Play store that the game isn't available there. That should stop malicious apps taking advantage of people searching for the game by tricking them into downloading an imitation. It's a classy move that will protect at least some Android users.



## Researchers uncover WhatsApp flaws



### What happened?

The mobile messaging tool WhatsApp has flaws that could let hackers alter your text and change your messages, researchers have said. Security experts at Check Point showed how it was possible to meddle with messages, editing quoted text to confuse senders, or intercepting a message to a group in order to change what it says.

The hacks require some security skill, as attackers would need to intercept the messages or be part of the group they're sent in, and decrypt the messages being sent. But if used, they could effectively put words into someone's mouth or plant misinformation.

### How will it affect you?

This type of hack isn't likely to directly affect most of us, but WhatsApp has been implicated in misinformation that sparked deadly mob violence in India, so any technique to send fake messages could be potentially serious. Figures released earlier this year showed WhatsApp has

over 1.5 billion users, with more than one billion chat groups and 65 billion messages sent daily, which means the scope for misinformation is massive.

If you want to check the veracity of a quoted message in WhatsApp, pressing it will take you back to where it was originally posted in the chat thread, making it clear whether it's been faked or not.

### What do we think?

WhatsApp told the *New York Times* that the flaw was "the equivalent of altering an email" and not a sign of any glitch in its encryption. But it's a reminder that even an app that appears to be a simple texting tool may have serious repercussions if abused by malicious parties.

That's particularly true for British politicians, who famously use WhatsApp to chat with and gossip about each other – with juicier comments leaking their way to the tabloids. If such messages can be faked, the use of such an app for serious communication may prove limited.

Credit: Alex Ruhl / Shutterstock.com

# BBC subpoenas Microsoft over *Doctor Who* leak

## What happened?

Back in June, footage of the new *Doctor Who*, Jodie Whittaker, leaked online. The 53-second clip, set aboard a darkened train, gave fans a glimpse of the new series' tone and Whittaker's take on the Time Lord.

At the time, the BBC refused to comment, but it has since ramped up its efforts to discover who leaked the video. Last month, the Beeb asked US courts to force the California-based message board, Tapatalk – where the clip was posted – to pass on the identity of the perpetrator. It's not known whether this action proved useful, but the BBC is continuing its digital detective work.

The corporation has now subpoenaed Microsoft in an effort to force the software giant to give up information that potentially identifies the leaker. According to the BBC, the offending video was originally stored and shared via the company's cloud-storage service OneDrive, innocently titled IMG\_1563.TRIM.MOV.

Auntie Beeb is asking for “any name, account name, address, telephone number, email address, birth date, profile photo, device information, browser information, location information, information from others (eg Facebook or Google+) and time posted”. At the time of going to press, Microsoft had yet to respond, though it is



technically obliged to supply ‘non-content’ data such as names, emails and addresses, if requested.

## How will it affect you?

This isn't just about cracking down on copyright theft – it's also a matter of privacy, because Microsoft must decide between respecting a company's protected property or the privacy of its users. That's a delicate line to tread. Although we're sure *Web User* readers wouldn't dream of infringing copyright in this manner, you also need to consider whether you'd want any organisation who *suspected* you of wrongdoing to gain access to your private, personal information.

## What do we think?

We appreciate that copyright law must be respected, but Microsoft's users have a legally backed expectation of privacy, and the company has the right to challenge the court's subpoena ([bit.ly/datalaw456](https://bit.ly/datalaw456)). Given that we only have to wait until Autumn to see the 13th Doctor in action, we question whether this is a good way to spend the licence fee. After all, lawyers don't come cheap. That said, the leaking of the *Doctor Who* content is theft, even if it is only a 53-second clip and not a full episode, so we're not surprised that the BBC isn't happy – we're sure Sky and Netflix wouldn't be either – and nor are fans who want to avoid spoilers for the new series.



## FIRST LOOK

### Android Pie

[bit.ly/pie456](https://bit.ly/pie456)

Android Pie (or Android 9, if you prefer numeric nomenclature) is now available for selected users to try. Google's updated operating system is currently available on its Pixel phones and the Essential Phone, with Android One phones getting a slice of the Pie later this year. It delivers some jazzy interface upgrades but right now, we think it's missing the filling.

The new pill-shaped Home button offers productivity-boosting gesture support. You still summon Google Assistant with a long-press, but you can now, for example, flick the button to open your last-used app, or swipe it to horizontally cycle open apps – a design tweak that's nabbed straight from Windows Mobile. Memorising all



available gestures is tricky, but once mastered makes your phone's performance far more fluid.

Also making its debut is the optional-orientation icon, which pops up when the phone senses it's been rotated. It lets you confirm that you want the orientation to change, rather than accidentally – and frustratingly – auto-rotating the screen. Google has also added a text magnifier, and made it even easier to share screenshots.

Pie's most-hyped features aren't yet

here – disappointing news for those eagerly anticipating AI-driven features such as Adaptive Battery and Adaptive Brightness. You won't find App Actions, either – a clever tool that preemptively offers a shortcut to the app you want: so, if you slot your headphones in, it may assume you're playing music and up pops Spotify.

Most notable by its absence is the Digital Wellbeing Dashboard. Unveiled at this year's Google I/O conference, this helps you better balance phone usage by displaying how often (and how long) you use apps. You can then limit functions and set reminders to take a screenbreak. Researchers recently revealed that we check our mobiles every 12 minutes on average, so it's a welcome addition. If you own a compatible phone, you can sign up for the beta at [bit.ly/well456](https://bit.ly/well456).





## WHAT'S THE RUMOUR

# Is Microsoft going to charge for Windows 10?

Rumours abound that Microsoft is planning to introduce a subscription fee for Windows 10.

The operating system is already preinstalled with money-grabbers such as the game Candy Crush Saga and subscription services including Netflix and Microsoft's own Office 365 and Xbox Live. That's the price we pay for an OS which, upon its 2015 release, was advertised as "free, forever. No subscriptions. No additional costs".

That promise hasn't prevented industry insiders from speculating that the recently revealed Microsoft Managed Desktop transforms Windows 10 into a subscription-based service. Allegedly, the service – which leaked last month via a job listing – is the next 'product-as-service' in the sweeping Office 365 suite; a 'desktop-as-service', if you will, that entails users renting Windows 10 devices and paying Microsoft a monthly fee to regularly maintain and patch the machines outside of the bi-annual updates.

If you believe everything you read, that means we could soon all be paying for the privilege of using Windows 10. Waded through the sensationalist headlines, however, and not everything is as it seems.

It's true that Microsoft Managed Desktop is in the pipeline. However, as with existing Surface-leasing services offered by authorised sellers, this isn't



a consumer program; it's an optional 'auto-pilot' service for businesses, which ensures the smooth running of their workplace without employees needing to hassle the IT department every five minutes.

### LIKELIHOOD RATING



**We wouldn't put it past any business to introduce a subscription service – not in an age where films, games and even sat-navs require them. But Microsoft has already foisted its "last ever" operating system on millions of machines, whether users wanted Windows 10 or not. It would be foolhardy to then force them to pay a recurring sub for the upkeep of the operating system. But if it's true, expect Linux downloads to skyrocket.**

## WEBOMETER

### WE LIKE...

#### Turn off Conversation view in Gmail

The Gmail app for Android and iOS now offers the option to turn off 'Conversation view', which combines multiple emails in one thread. Google admitted that some users prefer to see their emails listed individually.



#### Spotify to let free users skip ads

Spotify is preparing to run a test in Australia that will allow users of the free version to skip audio and video adverts at any time during playback. Listeners will be able to skip ads as many times as they like, as often as they like.



### WE DON'T LIKE...

#### Butlins hack hits 34,000 customers

Up to 34,000 Butlins customers may be affected by a data breach, security specialists have warned. Personal details such as postal addresses and holiday arrival dates are thought to have been among the data stolen.



#### Fax machines vulnerable to hacks

Researchers have discovered critical vulnerabilities in the fax functions of all-in-one printers that could allow an attacker to seize complete control of a machine. More than 300 million fax numbers are still in use.



## What's new on Kickstarter

Our favourite new project on the crowdfunding site

### PiShell

[bit.ly/pishell456](http://bit.ly/pishell456) | From £4

Protect the exposed motherboard of your Raspberry Pi with the PiShell, a hardy plastic case that effortlessly snaps around the computer to offer greater security. Compatible with most Raspberry Pi models, the cover is crafted to allow easy access to all ports and pins, with a designated slot to shield your Pi camera. Since the PiShell consists of three layers – the base, body and camera cover – you can mix and match between five colours to customise it. Pledge £4 and above to receive an engraved case, or £75 for the PiShell, Raspberry Pi 3B+ and a Pi Camera kit.



# Stay Safe Online

News about the latest threats and advice from security experts

## SECURITY ALERT! | What's been bothering us this fortnight

### Reddit suffers massive security breach

Reddit announced that it had suffered a "serious attack" in June after a hacker intercepted its employees' SMS-based two-factor authentication (2FA) setup. The attack compromised a handful of Reddit employees' accounts between 14 and 18 June and gained access to some recent user data, such as email addresses, and all data from between 2005 and 2007, including account credentials.

Following an investigation, Reddit identified 2FA as the most likely point of intrusion, and said it now realises that text message-based 2FA is "not nearly as secure as we would hope". It has recommended that everyone moves to token-based 2FA instead.



"Although this was a serious attack, the attacker did not gain write access to Reddit systems; they gained read-only access to some systems that contained backup data, source code and other logs," Reddit said. The company has reported the incident to the relevant authorities and is forcing password-resets for users who may have been affected.

[bit.ly/reddit456](https://bit.ly/reddit456)

### Dixons Carphone breach affects 10 million

Dixons Carphone has admitted that 10 million people were affected by its data breach last year – far more than the 1.2 million initially reported. The retailer also revealed that customers' personal records, including names, addresses and email addresses, may now be in the hands of hackers.



The company ruled out the possibility that any card or bank details were included in the leaked records but said it was contacting affected customers to reduce the risk of fraud, because hackers would now be able to use their personal details in phishing attacks.

"We're disappointed in having fallen short here, and very sorry for any distress we've caused our customers," said chief executive Alex Baldock. "I want to assure them that we remain fully committed to making their personal data safe with us."

The UK's data watchdog, the Information Commissioner's Office (ICO), is already investigating the

Dixons Carphone breach, which could see the company facing a massive fine.

[bit.ly/dixons456](https://bit.ly/dixons456)

## Security Helpdesk | Your questions answered by security specialists

**THIS ISSUE'S EXPERT:**  
**David Emm, Principal Security Researcher at Kaspersky Lab**  
([www.kaspersky.co.uk](http://www.kaspersky.co.uk))



**Q** Could having Alexa in your car (see page 8) compromise your privacy?

Thomas Christ, Twitter

**A** Installing a digital assistant such as Amazon's Alexa in cars offers a host of new opportunities, but there has to be a compromise

between convenience and security. This new technology adds to the proliferation of devices that hold, send and receive personal data, so it's essential that car manufacturers ensure their systems are secure.

The Amazon Echo is powered by artificial intelligence that stores command history to help make the device 'smarter'. This way, it can respond more appropriately to future commands. While the reasons for storing this data are sound, imagine what could go wrong if someone else were to gain access to it? Even if Amazon doesn't do anything questionable

with your interactions while you're in your vehicle, it stores them in the cloud, which isn't completely hack-proof. Manufacturers must do everything they can to ensure their networks can't be compromised.

**Q** Are traditional login methods no longer safe?  
Jake Ball, Facebook

**A** Many people have a single email address that they use to log into all the services they use online. This puts them at risk of being hacked, especially if they use the same password across multiple sites. If someone's username and

password are stolen from a website during a security breach, an attacker can try the same username and password on other websites in the hope that the victim has recycled them.

There's a growing move towards the use of biometrics – fingerprints, iris scans and so on – as a replacement for passwords, but in my opinion these should be used to confirm our identity in conjunction with a password. If I choose a poor password and it's compromised, I can change it; if my fingerprint is compromised, there's nothing I can do about it.



# Ultra Wide-Color

with 4K in an immersive design

Colours like you've never seen before. This brilliant 4K UHD resolution display with Ultra Wide-Color offers the richest and most vivid colours wrapped in an immersive curved design for a your best creations yet.

innovation ✨ you



UltraWideColor



CurvedDisplay



4K Ultra HD UltraClear 4K Ultra HD

40" 4K curved display  
(BDM4037U)

**MISCO**  
A Systemax Business

**ebuyer.com**

**amazon.co.uk**

**BT** Business Direct

**PHILIPS**



# ★ Best New Websites

## Site of the Fortnight

FOOD

### Wimpy

wimpy.uk.com

RELAUNCH

Despite its US origins, there's something peculiarly British about Wimpy, with its fast-food-and-cutlery combo. The heritage theme is strong on its revamped website – it was the first restaurant to serve hamburger meals in the UK, after all. Reminding visitors of Wimpy's place in Britain's heart, stomach and high street, you'll find a snappy timeline populated with fun facts that's a pleasure to scroll, while its most famous dishes feature their own historical overview. Restaurant-site staples such as menus, promotions and store locators are easy to find and use, and the smart design is as delicious as a Bender in a Bun.

Our rating



### FIND YOUR FOOD

Wimpy has scrapped its old PDF menus and its new 'dish stories' reveal the history of classics such as its chips (not fries!)



### FUN FOR ALL

Keep kids occupied with fun games and puzzles. The only downside is you have to print to play them



**Own a Piece of History!**

Welcome to The Open Auction

Your exclusive source for Official Memorabilia of The Open Championship.

Play Your Part

When you purchase Official Memorabilia from The Open you are supporting the development of golf around the world - positive change remains golf's truly global sport for today and future generations.

Thank you for your support.

**NEW**

**SPORT**

### The Open Auction

theopen.com/auction

The Open Auction is what you get when you cross eBay with golf's most high-profile championship. The site is a repository of sporting memorabilia that golfers are guaranteed to love: vintage programmes, authentic scorecards and even bag tags – all at reasonable prices (so long as you're not out-bid). However, as a new site, products are currently thin on the ground. Navigation is best conducted using the tabs at the top of the page, where you'll find items listed by category, end and start time, and those available for instant purchase. Locating products via the search bar is more hit and miss, either displaying loosely related items or nothing at all.

Our rating



NEW

CULTURE

### The Toy Box

the-toy-box.com

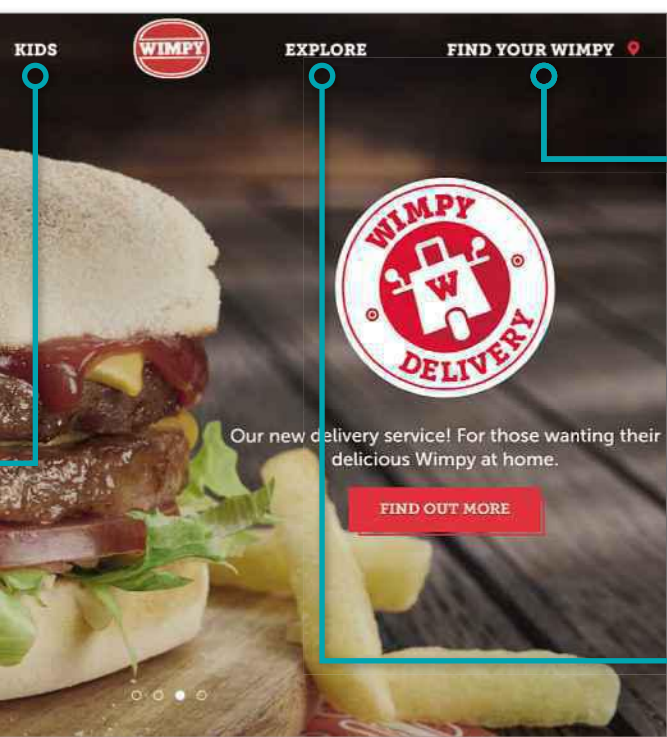
Like a real toybox in a kids' room, this site is stuffed full of old-school action figures and accessories, vintage video games, comics and annuals, and even the odd pin badge lodged at the bottom.

The company has been on eBay for a while, and also owns a sister site that delivers loot crate-style mystery toy boxes, but this marks its first proper ecommerce website, which accepts card and PayPal payments. To rummage through collections, just press the three-line menu, choose your category and select a nostalgic range such as Ghostbusters, Marvel or Star Wars.

Our rating



We review this fortnight's best new and relaunched websites and rate them for content, design and features



**KIDS** **WIMPY** **EXPLORE** **FIND YOUR WIMPY**

**WIMPY DELIVERY**

Our new delivery service! For those wanting their delicious Wimpy at home.

**FIND OUT MORE**

**SEATING AND EATING**  
A major step-up from its last incarnation, the restaurant locator is intuitive and user-friendly – ideal when you're peckish

**FIND YOUR WIMPY**

**ADDLESTONE**  
123 Station Road  
**MENU** **SEE YOUR WIMPY**

**ANDERSHOT**  
9-10 Lower Walk  
**SEE YOUR WIMPY**

**WIMPSHAM**  
Sycamore Road  
**SEE YOUR WIMPY**

**HISTORY**  
Read all about the UK's first hamburger restaurant and how Wimpy has become an iconic part of the high street.

**OUR FOOD**

**TRAVEL BACK IN TIME**  
Over a history spanning 60 years in the UK, there's plenty to get your teeth into, from modern social-media 'moments' to classic 'heritage dishes'

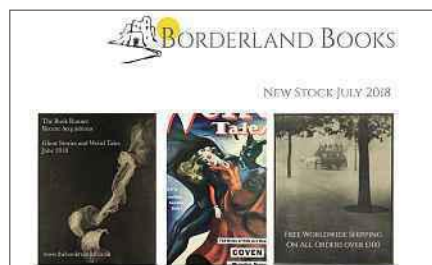


## PROPERTY

### Homes for Londoners

To address the continuing housing crisis, Homes for Londoners is designed to tackle concerns and alleviate the financial burden by showcasing new-builds for those looking to get on the city's property ladder. Functioning like a standard property website, it's easy to use but a bit dull; even livened up by an alluring pink and black palette, you still have to wade through mind-numbing tables and text. Irritatingly, a lot of screen space is wasted by three unnecessary bars that could have been rolled into one. Ironic, really, given that space in the capital is currently at a premium.

Our rating



## BOOKS

### Borderland Books

If you're a horror hoarder, gothic gatherer or collector of cult oddities, Borderland Books is for you. Offering the sort of rare and specialist manuscripts Amazon doesn't even know about, the site for this Lancashire-based bookshop is peppered with vintage images lingering between daydream and nightmare. As you'd expect from passionate bookworms who buy and sell everything from supernatural fiction to detective stories, each item listing is impressively detailed, often with numerous images, and you can buy online, although there's no search facility yet.

Our rating



## SHOPPING

### Star Bargains

Lots of empty space and a basic layout make this discount-shopping site look as bland as a supermarket own-brand product. But who wants pretty when you can buy cheap food, drink and household products from brand names? Navigating the online aisles is simple, with prices (and savings) clearly listed next to the add-to-cart button. There are links to items for those with special dietary requirements, and a pound shop where, unlike on the high-street, everything actually costs a quid. We like the way essentials are collected under a Basket Fillers tab, making shopping even easier.

Our rating







CHARITY

## Down's Syndrome Research Foundation UK

[dsrf-uk.org](http://dsrf-uk.org)

The Down's Syndrome Research Foundation's relaunched website looks professional and contemporary, and has a more efficient, impactful and user-friendly layout. Taking centre-stage on the homepage is the About Us button that sends visitors to a concisely written, comprehensive look at Down's Syndrome – an ideal primer for relatives and friends of those with the genetic disorder. Also worth checking out is the People With DS page, which is friendly and helpful, but never patronising.

Our rating



GARDENING

## Incredible Edible

[incredibleedible.org.uk](http://incredibleedible.org.uk)

Incredible Edible's relaunched site is a homely, welcoming hub for those looking to get involved in the gardening game. The organisation is dedicated to inspiring kids (and adults) to grow their own vegetables – for healthy living and the good of communities that Incredible Edible seeks to unite. Unmissable search bars and uncluttered drop-down menus make searching the site hassle-free, whether you're looking for local groups or the latest news. It's a very green site – literally – but what it lacks in colour diversity it makes up for with lively social-media feeds and a blog that showcases some fantastic projects.

Our rating



MENTAL HEALTH

## NCISH

[bit.ly/ncish456](http://bit.ly/ncish456)

With mental health high on the political and social agenda, Manchester University's National Confidential Inquiry into Suicide and Safety in Mental Health (NCISH) has never felt so relevant. Established in 1996, the project collects data and publishes studies on mental health, so practitioners in the field can better understand and help those in need of care. The site details practical info, ongoing projects and a selection of useful telephone numbers for organisations that offer treatment and advice. If you've always thought mental health would benefit from a cultural slant, check out the poems by Char March.

Our rating



CRIME

## Crimestoppers

[crimestoppers-uk.org](http://crimestoppers-uk.org)

The charity Crimestoppers has been part of British life since 1988, providing a secure and anonymous outlet for anti-crime tipsters who don't fancy going directly to the police. Placing the most important links and info at the top of every page, the rest of this revamped website is bold, bright and easy to read, with fonts that wouldn't look out of place in a large-print book. Volunteering and fundraising opportunities are splashed across the site, while tucked inside the Keeping Safe section are categorised tips to prevent visitors from becoming victims of crime. There's also a searchable, grimly fascinating database of the UK's Most Wanted criminals.

Our rating



SHOPPING

## Ginikins

[ginikins.com](http://ginikins.com)

Perhaps understanding that the rising popularity of 'ethical shopping' is a major consumer shift, Ginikins offers mums and dads hand-crafted, ethical children's clothing – all designed and made in-house. From romper suits to shorts and leggings, the unique designs are eye-catching, with cute photos of kids modelling the clobber. Customisation is readily available – just choose your print and decide on the fabric. Elsewhere, visitors can pick up pictures covered with supposedly inspirational quotes. It may all be a bit too twee for cynics, but the site certainly has its heart in the right place.

Our rating





# Portable, functional and elegant solution

I1601FWUX



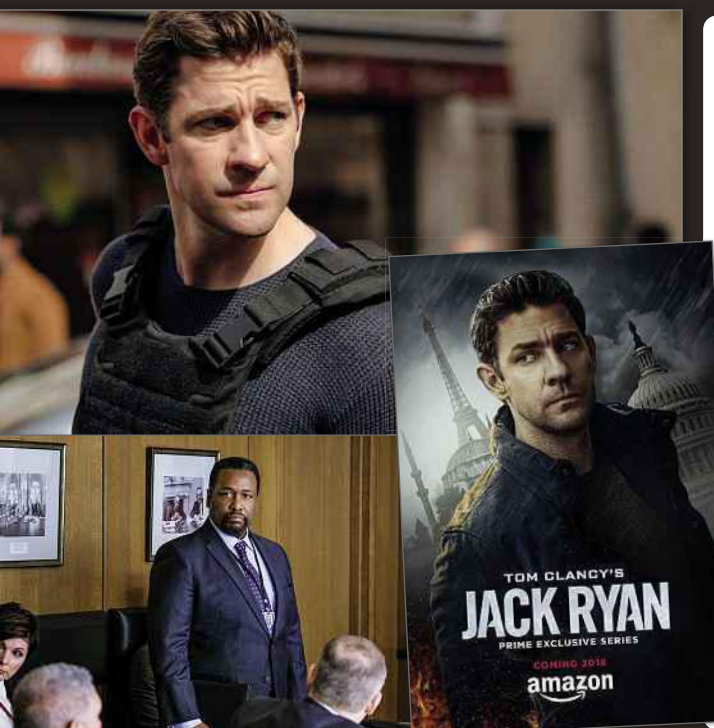
The latest USB-C powered portable display from AOC, I1601FWUX boasts a vivid 15.6" IPS display with wide viewing angles (160/160°) and 5 ms GtG. Includes smart cover and auto-pivot mode.





# What To Watch Online

## Pick of the fortnight



### Save the world with *Tom Clancy's Jack Ryan*

From 31 August

Does the world (-wide web) really need another spy-turned-action-hero thriller? You can now watch every James Bond film on Netflix and every *Mission Impossible* film (pre-*Fallout*) on YouTube Movies On Demand. And there are Jack Ryan films aplenty on Amazon Prime Video, where he's played by Harrison Ford and lesser actors.

Amazon reckons there's room for more, though, and the pilot of its new *Tom Clancy's Jack Ryan* series went down a storm at Comic Con in July. John Krasinski (Jim in the US version of *The Office*) plays Ryan, while Wendell Pierce (Bunk from *The Wire*) is his CIA boss. The storyline screams cliché - Ryan is flung from desk job to deadly field assignment in a bid to save the world (meaning the US) from Islamist extremists - but Comic Con audiences didn't seem to mind, hailing the show for its edge-of-the-seat action scenes and charismatic cast.

Judge for yourself when Season 1's 10 episodes debut on 31 August. Meanwhile watch the trailer at [bit.ly/ryan456](http://bit.ly/ryan456), and a teaser - created for the US Super Bowl - at [bit.ly/ryanbowl456](http://bit.ly/ryanbowl456).

### **N** Watch Professor Guy Pearce in *The Innocents*

From 24 August

The first thing we noticed in the trailer for this supernatural thriller series was Guy Pearce in clever-person glasses and salt-and-pepper beard, and frankly that's us sold. Pearce (*Memento*, *LA Confidential* and, of course, *Neighbours*) plays a mysterious professor who offers to help teenage runaways June and Harry, after June (Sorcha Groundsell, from ITV's *In Plain Sight*) discovers she's an unwitting shape-shifter. Can she be cured? Can the professor be trusted? Watch the tantalising trailer at [bit.ly/innocents456](http://bit.ly/innocents456), plus an extra teaser on the show's Netflix page ([bit.ly/innflix456](http://bit.ly/innflix456)).



### **now TV** Tune into Alan Cumming's *Instinct*

From 23 August

Alan Cumming (*X-Men 2*, *GoldenEye* and great *Spy Kids* villain Fegan Floop) plays Dr Dylan Reinhart, author and former CIA man, who's sucked back

into crime-solving after his novel inspires a serial killer. *Instinct* is a cracker of a story based on a James Patterson best-seller, and the cast is excellent, too, with Whoopi Goldberg and Naveen Andrews (*Lost*) coming along for the ride.

The first episode airs on Sky Witness (the new name for Sky Living) on 23 August, and you can watch online with a Now TV Entertainment Pass, which costs

£7.99 per month after a free 14-day trial ([bit.ly/nowtv456](http://bit.ly/nowtv456)). Watch the trailer on YouTube at [bit.ly/instinct456](http://bit.ly/instinct456).

### **amazon** See Andy Murray's return in the US Open tennis

27 August - 9 September

Amazon has all but forced tennis fans to pay for its Prime Video service. It's now the only place you can watch the US Open tennis tournament, following a deal in April said to be worth \$40m (£31m). All matches and highlights will be available to stream live and on-demand at no extra cost for Prime subscribers.

You can watch dozens of clips from years gone by on the US Open's official





## We reveal what's new on Netflix, BBC iPlayer, Amazon Prime Video and other streaming services

YouTube channel ([bit.ly/tennis456](http://bit.ly/tennis456)). Later this year, the ATP World Tour finals will also screen exclusively on Amazon Prime Video.

### **N** Watch a new season of *Ozark* From 31 August

Season 2 of this Netflix Original will fray the nerves Season 1 failed to reach,

judging by the trailer ([bit.ly/ozark456](http://bit.ly/ozark456)). Crime-entangled financial planner Marty Bryde (Jason Bateman from *Arrested Development*) and his family have upped sticks to the idyllic Ozarks region of Missouri, but they're now

tracked down by the crime syndicate, led by ruthless attorney Helen Pierce (wonderful British actress Janet McTeer). Family problems and local crooks add to the mounting sense that this will end very badly indeed. Catch up with Season 1, plus the latest trailers and teasers, at [bit.ly/ozarkflix456](http://bit.ly/ozarkflix456).

### **N** Get your Scandi-noir fix from *Deadwind*

From 23 August

If you've had a big, dark Nordic hole in your life ever since *The Bridge* ended

## Half of UK adults watch streaming services

Nearly half of UK adults have paid to watch an online streaming service such as Netflix, Now TV or Amazon Prime Video in the past three months – a huge rise since 2016, the last time a similar survey was carried out.

According to the latest Internet Access report from the Office for National Statistics (ONS), internet usage itself has barely changed, with 90% of households reporting some kind of internet access. But the number who watched a subscription streaming service has surged to 46% compared with 29% in 2016.

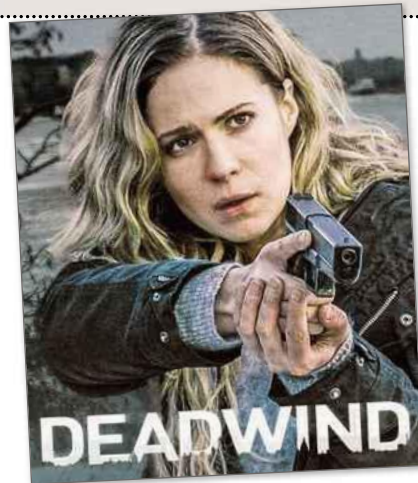
YouTube and other free and on-demand streaming services are on the rise, too, with 62% of adults using them in the past three months, compared with 47% in 2016.

The figures show it's not just young viewers who are driving the change. "These services are getting traction among older groups as well," analyst Tom Harrington told BBC News ([bit.ly/bbcstream456](http://bit.ly/bbcstream456)). "You can see that reflected in the types of programming being made available, with Netflix and others commissioning original shows pitched at more mature audiences." Read the ONS report at [bit.ly/ons456](http://bit.ly/ons456).



(and then vanished from BBC iPlayer), this intense psychological thriller may help to fill it. This time we're in Finland, where murder detective and single mum Sofia Karppi (Pihla Viitala) returns to work after the accidental death of her husband – only to find herself grieving all over again when she begins to identify closely with a woman murdered on a Helsinki construction site. Watch the trailer at [bit.ly/deadwind456](http://bit.ly/deadwind456).

Scandi-noir classic *The Killing* is also available on Netflix ([bit.ly/killing456](http://bit.ly/killing456)) and well worth seeing.



In case you missed it...

*Peep Show* and *The Thick of It* writer Jesse Armstrong is back – only this time he's on HBO, via Sky Atlantic. Armstrong's new show *Succession* casts Brian Cox



(the *Deadwood* actor, not the floppy-haired physicist) as an 80-year-old billionaire who decides to stay on as CEO of his media conglomerate, to the

horror of his ambitious kids.

All 10 episodes are available to stream on Now TV, but only until 4 October. Treat yourself to a £7.99 Entertainment Pass ([bit.ly/nowtv456](http://bit.ly/nowtv456)) – or spend your free 14-day trial watching the whole thing. Sky subscribers can use the new Sky Go desktop app ([bit.ly/skygo456](http://bit.ly/skygo456)).

Over on Amazon, football fans (except perhaps fans of Manchester United) should check out behind-the-scenes documentary *All Or Nothing: Manchester City*. The film, which has been available since 17 August, follows the team from dressing room to pitch throughout its record-breaking 2017-2018 season. Watch with a Prime subscription at [bit.ly/mancity456](http://bit.ly/mancity456).



# Group Test

We test and compare the latest products

## Super-fast routers

Does your Wi-Fi fall short of expectations? We've reviewed 13 routers to find out if it's worth replacing your existing model with something newer and faster

**T**here are lots of ways to improve the Wi-Fi in your home, but one of the easier options is simply to upgrade your router to a new model. If your existing router is more than a few years old, a new one will almost certainly offer better technology for sending a stronger Wi-Fi signal further into your house. You'll gain a number of fringe benefits, too: better software, more options and a better-looking device.

Depending on how you currently get broadband, some of these devices may need a separate modem, although most will provide excellent performance if you simply connect them to your current router using an Ethernet cable and switch off the Wi-Fi on your old device.

### HOW WE TESTED

We put each device through its paces in a typical domestic setting, with the router set up in the living room and connected to a fast NAS drive via Gigabit Ethernet. We fitted an 802.11ac adapter to a laptop and tested how long it took to transfer files wirelessly from the NAS to the laptop in a variety of different locations around the house: short range in the living room; medium range in the bedroom; and long range in the bathroom.

**Linksys EA9500 Max-Stream** | **£224.99** | Buy from Amazon: [bit.ly/lksy456](https://bit.ly/lksy456)

FEATURES ★★★★★ PERFORMANCE ★★★★★ EASE OF USE ★★★★★☆ VALUE FOR MONEY ★★★★★

If this monster of a router had failed to deliver on performance, we would have been very disappointed. The EA9500 is an imposing slab festooned with eight non-removable antennae.

It creates two 5GHz networks on separate frequencies. By default these appear as a single 802.11ac network, while a band-steering tool works behind the scenes to distribute your connected devices efficiently between them.

We witnessed an impressively fast connection in our tests, with solid download speeds of 13MB/s even at the far end of its range. It wasn't quite the fastest router in every test, but it was always in the top three and never more than a whisker behind the winner.

At the back of the device, you'll find eight Gigabit Ethernet ports (more than any other router we've reviewed in this test) and an Ethernet WAN socket for connecting a separate modem or your existing router. It also has a pair of USB ports. There's no print server, so it can't run a printer in its own right, but it has a DLNA and FTP server, so you can use it to stream media from a connected hard drive, or connect to it from the internet.



Most other tools you could wish for are here, including a guest network, timed access for individual devices, dynamic DNS and simple integration with Amazon Alexa (if you ask, the voice assistant will tell you your Wi-Fi credentials and switch the guest network on or off).

The worst thing about the router is its Smart Wi-Fi web interface, which is nicely laid out but frustratingly slow. The graphical network map, for example, is over-designed and would be much more useful presented as a simple table.

At least you can use the Linksys smartphone app instead, which has a cleaner interface and lets you check your network's status and even tweak its settings remotely.

### VERDICT ★★★★★

The Linksys EA9500 Max-Stream is a superb all-rounder. It's almost as feature-packed as Netgear's mighty Nighthawk X10 but is far more sensibly priced. It consistently delivered terrific wireless speeds across all our tests. The interface could be faster and better designed but you can work around it by downloading the excellent smartphone app.

## Synology RT2600ac | **£217.36** | Buy from Amazon: [bit.ly/syno456](http://bit.ly/syno456)

FEATURES ★★★★★ PERFORMANCE ★★★★★  
EASE OF USE ★★★★★ VALUE FOR MONEY ★★★★★

WebUser  
SILVER  
AWARD

Synology is a name more often associated with network-attached storage (NAS) devices, but the company's superb DiskStation Manager software has been brilliantly adapted for routers, putting the interfaces of rival devices in the shade. Icons, live graphs and illustrations help you find your way around, and there's no shortage of technical stats and network settings. You can even install specialised apps for controlling hard drives, servers, VPN and DNS.

The RT2600ac has four Gigabit Ethernet ports, a Wi-Fi switch, two USB ports and a handy memory-card slot for getting photos off a camera. With its smaller case and aerials, it was outperformed at short range by the fastest routers in our test but was remarkably consistent at longer range, and kept up with the best in our 'bedroom' and 'bathroom' tests.

### VERDICT

★★★★★

At £217 the Synology router isn't quite a bargain – you get better performance from the Gold Award-winning Linksys EA9500, which costs only a few pounds more. However, it's smaller and better looking and has great software tools.

## Netgear R9000 Nighthawk X10 | **£408.38** | Buy from Amazon: [bit.ly/ntgnh456](http://bit.ly/ntgnh456)

FEATURES ★★★★★ PERFORMANCE ★★★★★  
EASE OF USE ★★★★★ VALUE FOR MONEY ★★★★★

WebUser  
BRONZE  
AWARD

If money is no object, allow us to introduce Netgear's R9000 Nighthawk X10. Its advanced 60MHz 802.11ad network is superfast over short range, making it perfect for streaming to compatible devices in the same room. It performed well on 802.11ac, too, proving the fastest router at the longest range in our 'bathroom' test.

Although six Ethernet ports is less generous than Linksys's eight, it has a 10Gb Ethernet port, and you can aggregate two ports to create a double-size Ethernet stream if you have compatible devices to connect to them.

The star of the show, however, is the router's ability to run a full Plex ([www.plex.tv](http://www.plex.tv)) server, so you can access media on storage devices connected to it from anywhere in the world using the slick Plex interface.

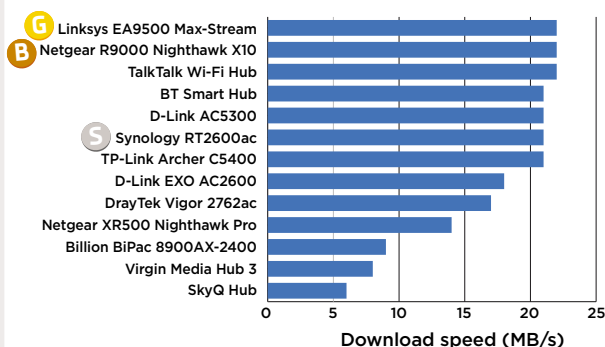
### VERDICT

★★★★★

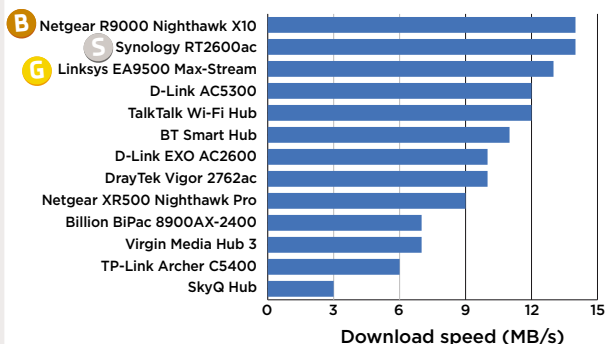
This extraordinary router has more tools and options than most people will know what to do with. It's extremely fast at both short and long range, but if you don't have any compatible devices, it's too expensive to justify.

## TEST-RESULTS CHARTS

### Bedroom download speed



### Bathroom download speed



## BEST OF THE REST

If you like the sound of the Netgear Nighthawk X10 but don't want to spend so much money, the **Netgear XR500 Nighthawk Pro** (£239.99 | [bit.ly/nhpro456](http://bit.ly/nhpro456) | ★★★★★) has similar software tools without the expensive hardware. It's aimed at gamers in particular, so it's great for configuring bandwidth to specify which devices should have priority on your network.






For a more affordable option, we liked the **D-Link EXO AC2600** (£69.99 | [bit.ly/dlink456](http://bit.ly/dlink456) | ★★★★★). Its performance was middling in our tests, but it's very good value and ideal if your current router is in dire need of an upgrade but you can't afford anything more expensive.

## ALSO TESTED

<b>BT Smart Hub</b> (£130)	★★★★★
<b>DrayTek Vigor 2762ac</b> (£145)	★★★★★
<b>D-Link AC5300</b> (£300)	★★★★★
<b>TalkTalk Wi-Fi Hub</b> (£30 for existing customers)	★★★★★
<b>TP-Link Archer C5400</b> (£256)	★★★★★
<b>Billion BiPac 8900AX-2400</b> (£250)	★★★★★
<b>Virgin Media Hub 3</b> (free for new Virgin customers)	★★★★★
<b>SkyQ Hub</b> (free for new Sky Q customers)	★★★★★



## Group Test Super-fast routers

	 Web User GOLD AWARD	 Web User SILVER AWARD	 Web User BRONZE AWARD		
	Linksys EA9500 Max-Stream	Synology RT2600ac	Netgear R9000 Nighthawk X10	Netgear XR500 Nighthawk Pro	D-Link EXO AC2600
WEBSITE	<a href="http://www.linksys.com">www.linksys.com</a>	<a href="http://www.synology.com">www.synology.com</a>	<a href="http://www.netgear.co.uk">www.netgear.co.uk</a>	<a href="http://www.netgear.co.uk">www.netgear.co.uk</a>	<a href="http://eu.dlink.com">eu.dlink.com</a>
PRICE	£224.99	£217.36	£408.38	£239.99	£69.99
BUY FROM AMAZON	<a href="http://bit.ly/lksy456">bit.ly/lksy456</a>	<a href="http://bit.ly/syno456">bit.ly/syno456</a>	<a href="http://bit.ly/ntgnh456">bit.ly/ntgnh456</a>	<a href="http://bit.ly/nhpro456">bit.ly/nhpro456</a>	<a href="http://bit.ly/dlnk456">bit.ly/dlnk456</a>
WI-FI STANDARDS	802.11a/b/g/n/ac	802.11a/b/g/n/ac	802.11b/g/n/ac/ad	802.11b/g/n/ac	802.11a/b/g/n/ac
GIGABIT ETHERNET PORTS	8	4	6	4	4
USB PORTS	2 x USB3	1 x USB2, 1 x USB3	2 x USB3	2 x USB3	1 x USB2, 1 x USB3
GUEST NETWORKS	✓	✓	✓	✓	✓
VPN SERVER	✗	✓	✓	✓	✓
MEDIA SERVER	DLNA	DLNA	DLNA, Plex	DLNA	DLNA
SMARTPHONE APP	✓	✓	✓	✓	✓
DIMENSIONS	318 x 265 x 67mm	280 x 169 x 77mm	224 x 168 x 74mm	322 x 244 x 55mm	259 x 184 x 46mm
WARRANTY	Two-years return-to-base	Two-years return-to-base	Two-years return-to-base	Three-years return-to-base	Two-years return-to-base

### OUR VERDICT

We gave our Gold Award to the Linksys EA9500 Max-Stream. This superb all-rounder has oodles of tools and hardware features that come close to rivalling the most expensive models we reviewed in this group, but it's very reasonably priced. It performed admirably in all our tests, and was the fastest of the lot in our medium-range 'bedroom' test.

The EA9500 Max-Stream's massive bulk won't be to everyone's taste, though. If you'd rather have a smaller, sleeker router, the Silver Award-winning Synology RT2600ac is almost as good and a little cheaper. It's also a pleasure to use, with a magnificent user interface that its rivals could learn a lesson or two from.

Our Bronze Award went to the Netgear R9000 Nighthawk X10. This may be one of the most expensive routers available, but it's packed with next-generation technology, which means you won't need

to replace it again any time soon. It's also incredibly fast, particularly at long range, covering areas that most cheaper routers fail to reach. ■



Web User  
GOLD  
AWARD



# </> Build a Better Site

Specialist tips, top tools and practical help

## Top Tips of the Fortnight

### Choose complementary fonts

Putting a little thought into the typefaces you use can transform an average-looking website into something special. Google offers lots of interesting fonts for free, but choosing a couple that complement each other is better than taking the scattergun approach of choosing any that take your fancy. A handy free tool



called FontPair ([fontpair.co](http://fontpair.co)) matches your favourite Google font with something compatible – just type its name into the search box at the top. Alternatively, browse through the predefined font pairings to find a partnership that suits your site.

### Differentiate between image and text searchers

Tools such as Google Analytics ([analytics.google.com](http://analytics.google.com)) let you see how many of your visitors come from search engines, but finding out exactly what they searched for is harder. Google will soon be providing us with a little more information by identifying image searches, so you can separate those from more traditional text searches. This will help filter out information about people who are looking for pictures when you're trying to find out more about those looking for information. Find out more from the Google blog at [bit.ly/imag456](http://bit.ly/imag456).

### Deal of the Fortnight

Namesco ([www.names.co.uk](http://www.names.co.uk)) is offering 'online' domains for just £4.20 per year, down from £35.99

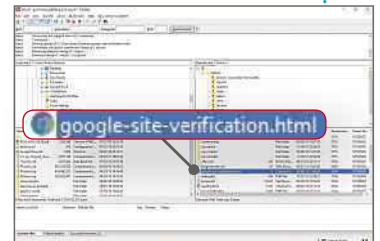
## Web-building Helpdesk

**Q** I'm having trouble verifying my website with Google so that I can join its Webmaster Tools program. To get Google to recognise a site, it appears that you need to create a subdomain, then add the supplied code. I've tried to do this but it failed. My web host won't let me send an email or put in a support ticket.

TheClash, Web User Forums

**A** I've always put the google-site-verification.html page in the root folder of my websites. The WordPress directory is already a subfolder off the root of your web hosting, and I've found that Google can find the file there without any problem.

Sneakybeaky, Web User Forums



## MINI WORKSHOP | Try WordPress's new Gutenberg editor

Gutenberg: [wordpress.org/gutenberg](http://wordpress.org/gutenberg) | 10 mins | Self-hosted WordPress website

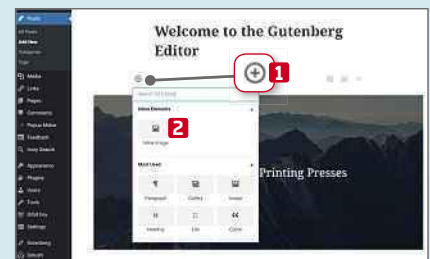
WordPress users may have seen an invitation to try Gutenberg, the service's new tool for creating posts and pages. It's worth trying this out now as a plugin before it becomes standard later in the year



**1** Gutenberg uses blocks to add content to your site, like other web-building tools such as Wix. Click the Preview button from your Dashboard to open a new post with lots of example content already filled in. **1** The usual tools on the right have been replaced by expandable boxes under the Document tab. **2**



**2** Click a block to edit it. If it's a text block, click in the text and start typing. A formatting section appears, **1** which lets you style the text. The menu button **2** provides access to further options. The column on the right switches to the Block tab, **3** which offers a range of tools depending on the type of block you're editing.



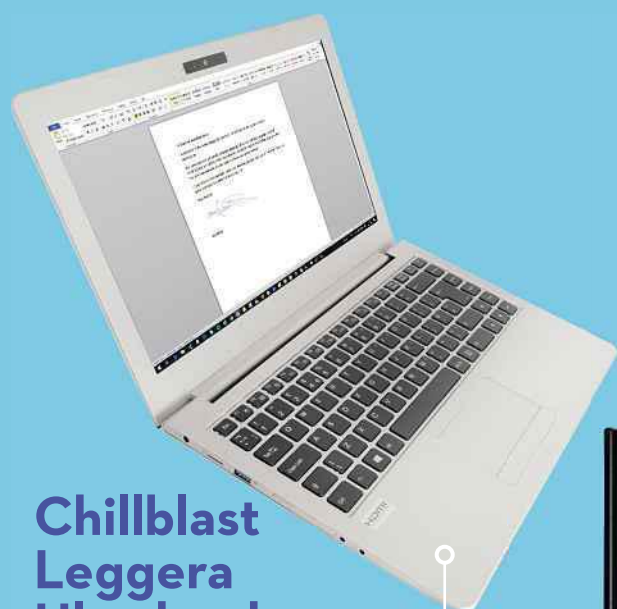
**3** To insert a new block, click the Add button at the top of an existing block. A holding block will appear. Click the '+' button **1** to choose the type of block to add. **2** This determines which editing tools appear in the Block tab on the right. Keep adding blocks until the page is finished.

# Back to School

## 2018

### MUST HAVES

Make sure you're prepared for the start of term with these essential devices - perfect for school or university



## Chillblast Leggera Ultrabook for students

[chillblast.com/leggera](http://chillblast.com/leggera)

£999

The Chillblast Leggera is a slimline aluminium Ultrabook that's small enough to carry everywhere you go comfortably. Its svelte 1.3kg design belies its incredibly powerful components: an Intel Core i7 CPU, 1TB M.2 SSD and 8GB of DDR4 RAM. Then, to top it all off, a battery that lasts all day. Students save 5% off the £999 price with code STUDPUB18.



## Apple iPad

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

FROM £319

The new 9.7-inch iPad and Apple Pencil (£89) give students the ability to be even more creative and productive, from sketching ideas and jotting down handwritten notes to marking up screenshots. For extra protection, consider buying a keyboard/case combo too.



## iiyama ProLite XB2474HS-B1

[amazon.co.uk](http://amazon.co.uk)

£129.99

The iiyama XB2474HS-B1 is an ideal solution for teachers and students, featuring a VA 24-inch panel that offers exceptional viewing angles, a height-adjustable stand and HDMI and DisplayPort connectivity for compatibility across all PC and laptop platforms. And don't forget about the three-year warranty, too.



## Kingston UV500 SATA SSD 480GB

[ebuyer.com](http://ebuyer.com)

£99.99

Kingston's UV500 SATA solid-state drives dramatically improve the responsiveness of your existing system with incredible boot, loading and transfer times compared to mechanical hard drives. This SSD is 10 times faster than a traditional hard drive. It also has end-to-end data protection, thanks to 256-bit AES hardware-based encryption and TCG Opal 2.0 security management solutions.





## Chillblast Triton game design desktop for students

[chillblast.com/triton](http://chillblast.com/triton)

£999

Need a PC that can power through game design, graphics and 3D animation workloads? Meet the Chillblast Triton. With a powerful 8th Gen six-core Intel Core i5 processor, GeForce GTX 1060 graphics and 16GB of RAM, it's got everything you need. Students save 5% off the price with code STUDPUB18.

## Canon Pixma TS6150 Printer

[amazon.co.uk](http://amazon.co.uk)

£113

This stylishly small all-in-one is ideal for fast document and photo printing. It's a flexible choice for students, too, whether you want quick copies of documents or to scan in photos for later reference. With wireless and wired options, it's well connected for the modern age, supporting smart devices, social networks and cloud storage services. And you can count on its quality, with five inks to help produce beautiful photos, as well as crisp text and graphics. Plus, enjoy smartphone-like touch control from different angles using a tilting 7.5cm LCD colour screen, and cut your running costs by choosing XL and XXL ink cartridges.



## Nuu Mobile G3

[nuumobile.com](http://nuumobile.com)

£199.99 + free case offer

Beauty meets design. The G3 offers exceptional value for money for students and parents alike. Enjoy a 5.7-inch 18:9 display, edge-to-edge curved glass, fingerprint ID, facial recognition, 13+5 dual rear camera, 13MP front camera, 4G Dual-SIM, 4GB RAM with 64GB of storage, a microSD slot and NFC Google Pay. Plus a free Tudia Lite case (valued at £15) when purchased in Aug/Sept 2018.

Checkout code: SUMMER18.



2 Year Warranty & UK Support Centre



## AOC 24P1

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

£166

The stylish and compact AOC 24P1 is perfect for dorms and bedrooms alike, with three borderless sides surrounding its 23.8-inch IPS display. With a Full HD 1,920 x 1,080 resolution, it includes a full range of display inputs (VGA, DVI, HDMI, DisplayPort), 4 x USB 3.0 hub, built-in speakers and an improved ergonomic stand with 150mm of height adjustment.





## Synology DiskStation DS418play with Seagate IronWolf 4TB

[ebuyer.com](http://ebuyer.com)

£519.99

Don't worry about losing crucial essays. Together, the Seagate IronWolf hard disk and Synology DS418play 4-bay NAS actively protect data thanks to the IronWolf Health Management app. For entertainment, the Synology DS418play supports 4K transcoding for up to two channels of H.265/H.264 video at the same time. And it should last as long as your studies: the IronWolf's RV sensors enable 24x7 RAID performance and multi-user workloads of 180TB per year.



## Microsoft Surface Book 2

[microsoft.com](http://microsoft.com)

From £1,149

Looking for a laptop with a difference? The Surface Book 2 is certainly that, with the ability to work happily as a laptop - and then become a tablet at the touch of a button. Simply detach the screen and start scrawling notes with the optional Surface Pen (£100). Back in laptop mode, you'll find the combination of a top-quality keyboard and 13.3-inch PixelSense display mean you work happily for hours. Add Nvidia GeForce GTX 1060 graphics for some after-hours entertainment, and a battery life of up to 17 hours, and this will make you the envy of your friends. Special pricing for eligible students, parents and teachers - see site for details.

## iStorage datAshur Personal<sup>2</sup>

[istorage-uk.com](http://istorage-uk.com)

8GB, £39; 64GB, £79

The datAshur Personal<sup>2</sup> USB 3.0 flash drive secures data you don't want others to see, so no need to worry about private files falling into the wrong hands! Incorporating a rechargeable battery, the user enters a 7- to 15-digit PIN via the on-board keypad before connecting the drive to a USB port. Data transferred to the drive is encrypted in real-time, which protects from unauthorised access even if the device is lost or stolen. It's compatible with all operating systems, with drag-and-drop encryption and plug-and-play simplicity. In plain and simple terms, without the PIN, there's no way in!



## Loupedeck+ photo-editing console

[WEX Photo Video](http://WEX Photo Video), [amazon.co.uk](http://amazon.co.uk) and specialist photography stores around the country

£199

Loupedeck+ is the *PC Pro* Recommended photo-editing console that lets you be more creative, makes your editing faster, and allows you to focus on what's important - your photos. Loupedeck+ is compatible with Adobe Lightroom Classic CC and Aurora HDR.





# Web User's Best Buys

Web User and its sister titles test over 2,500 products every year

## HARDWARE

### ROUTER

#### Linksys EA9500 Max-Stream

**NEW!**



£224.99 from [bit.ly/lksy456](https://bit.ly/lksy456)

Tested: Issue 456

The EA9500 Max-Stream is a superb router that's packed with features and sensibly priced. It delivers terrific wireless speeds, creates two 5GHz networks on separate frequencies and offers an excellent smartphone app.

#### KEY SPECS

802.11a/b/g/n/ac ■ 8 x Gigabit Ethernet ports ■ 2 x USB 3 ports ■ Guest-network mode ■ DLNA media server ■ 318 x 265 x 67mm ■ Two-years return-to-base warranty

### PHOTO PRINTER

#### Epson Expression Photo HD XP-15000



£251.96 from [bit.ly/epsonexp450](https://bit.ly/epsonexp450)

Tested: Issue 450

Epson's XP-15000 lacks some of the features of a true all-rounder but it prints photos beautifully, all the way up to size A3+.

#### KEY SPECS

5,760 x 1,440dpi maximum print resolution ■ 250-sheet input capacity ■ Double-sided printing ■ Colour touchscreen ■ USB, Ethernet, Wi-Fi connectivity ■ 479 x 370 x 159mm ■ 8.5kg ■ Three-years return-to-base warranty

### SMART THERMOSTAT

#### Honeywell Evohome



£199 from [bit.ly/honevo449](https://bit.ly/honevo449)

Tested: Issue 449

The Honeywell Evohome is a powerful multi-zone smart heating product that lets you control all the radiators in your central heating system. This will save on heating bills, but it may take a while before you recoup the cost of the initial outlay.

#### KEY SPECS

Remote thermostat ■ Battery-powered ■ Hot-water support ■ Individual radiator support ■ Alexa voice-assistant support ■ IFTTT support ■ 13.9 x 2.1 x 10.1cm ■ 898g

### LAPTOP

#### Asus ZenBook UX410



£539.95 from [bit.ly/asuszb447](https://bit.ly/asuszb447)

Tested: Issue 447

This laptop, with its compact aluminium body and impressive design, feels built to last. Performance was middling, though it's fine for everyday tasks, and the screen looks fabulous.

#### KEY SPECS

Dual-core Intel Core i3-7100U processor ■ 4GB memory ■ 128GB storage ■ 14in 1,920 x 1,080-pixels screen ■ USB-C, USB 3, 2 x USB 2 ports ■ 802.11ac Wi-Fi ■ Windows 10 Home ■ 323 x 223 x 19mm ■ 1.4kg ■ 1-year return-to-base warranty

### MONITOR

#### BenQ GL2580HM



£109.99 from [bit.ly/benq445](https://bit.ly/benq445)

Tested: Issue 445

This BenQ monitor's stylish slim bezel and attractive design are matched by its solid performance and good-quality colour display. However, it's not suited to serious gamers.

#### KEY SPECS

24.5in screen ■ 1,920 x 1,080-pixel resolution ■ 16:9 aspect ratio ■ 16.7 million colours ■ 50-76Hz refresh rate ■ 1,000:1 native contrast ■ 2ms response time ■ HDMI, DVI and VGA ports ■ Two 1W speakers ■ 42.6 x 55.7 x 17.5cm ■ 4.4kg

### PC

#### Palicomp AMD Gravity RYZ1



£799.99 from [www.palicomp.co.uk](https://www.palicomp.co.uk)

Tested: Issue 443

This is the best PC we could find for under £800. It's powerful, well built and well balanced, so long as you're happy to use an overclocked processor.

#### KEY SPECS

AMD Ryzen 5 1600 processor ■ Asus Prime B350M-A motherboard ■ 8GB DDR4 memory ■ GeForce GTX 1060 graphics card ■ 240GB SSD ■ 1TB hard drive ■ 475 x 468 x 230mm tower case ■ Windows 10 Home 64-bit

# Best Free Software

## PASSWORD MANAGER

### Dashlane 6

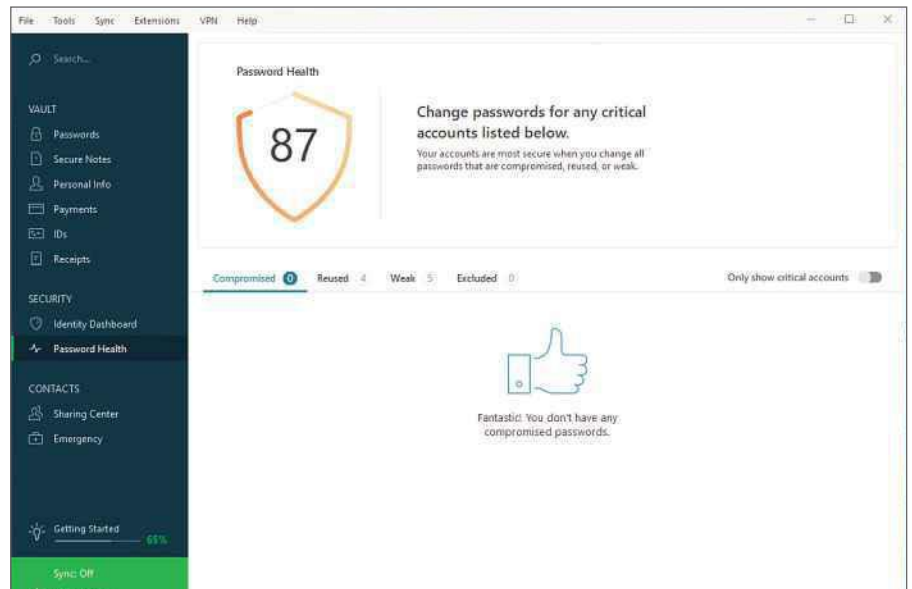
[www.dashlane.com](http://www.dashlane.com)

**Min requirements:** Windows 7/8.1/10

**File size:** 733KB (installer)

We have so many online accounts these days that it's no wonder many of us resort to reusing passwords across different sites, even though security experts regularly warn us against it. The problem is that it's tricky to come up with secure passwords and then remember them all. Saving your login details in your browser helps with the latter, but it's much safer to use a dedicated password manager such as Dashlane for the task.

This excellent free software generates and stores passwords for you, and offers a handy Sharing Centre that lets you securely share up to five

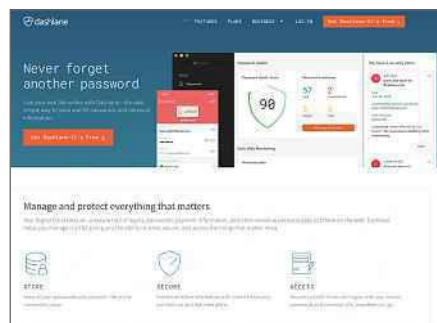


passwords with people you trust. There's also an emergency contacts feature that lets loved ones access your accounts in the event that something bad happens to you.

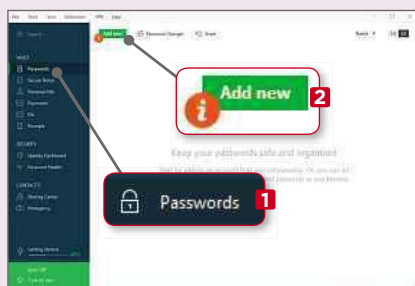
Dashlane's sidebar provides easy access to your stored passwords, secure notes, payments, IDs, your passwords' health ratings and more. The software also has a password changer that can automatically log you into a supported site, change your password to something more secure and then save it in Dashlane.

The latest update to the program introduces a new Identity Dashboard that makes it easier for you to review your password health – identifying and updating any weak or duplicated passwords. It also checks to see if any of your personal information is up for sale on the Dark Web.

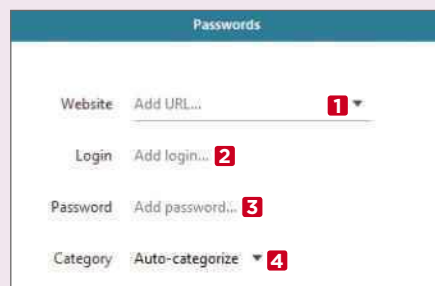
The free version of the software limits you to using Dashlane on a single device and stores up to 50 passwords. The full version costs \$39.99 (£30.90) a year and provides a number of additional features, including a new VPN tool.



## MINI WORKSHOP | Keep your passwords secure using Dashlane



**1** Create a Dashlane account by entering your email address and a secure master password, then verify your account using the code you receive by email. Install the Dashlane extension in your browser and you're ready to begin. Open the program and click Passwords, **1** followed by the green 'Add new' button. **2**



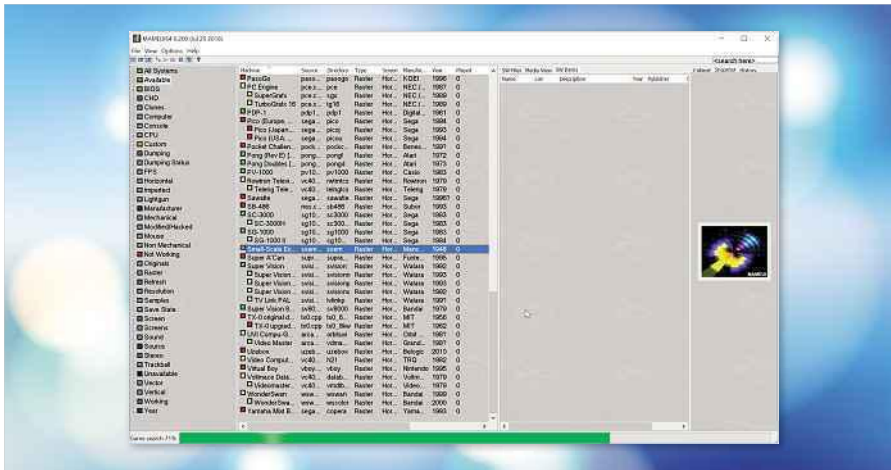
**2** Enter the URL of a website you use, or click the down arrow and choose one from a list of popular sites. **1** Next, enter your username **2** and password. **3** You can add the website to a category **4** for easy management. Each time you log into a new website, Dashlane will offer to save the details for you.



**3** The new Identity Dashboard **1** analyses your passwords, presents you with an overall security score **2** and shows you which passwords are safe, compromised or weak. **3** Dashlane can also check the Dark Web **4** to see if your personal information is listed there – which would suggest that it has been leaked or stolen.



This fortnight's top new software downloads to help you make the most of your PC, and they're all FREE



## EMULATOR MAMEUI 2

[www.mameui.info](http://www.mameui.info)

**Min requirements:** Windows 7/8.1/10 **File size:** 55.5MB

If you want to play vintage console or arcade games on your PC, you need an emulator such as MAME (Multiple Arcade Machine Emulator, [mamedev.org](http://mamedev.org)). MAMEUI provides a front end for MAME, making it easier to use. It runs on 64-bit Windows, and you'll need to use 7-Zip ([www.7-zip.org](http://www.7-zip.org)) to unzip the software. This update adds new working machines and clones. You'll also need some games to play in MAMEUI, which you can find by searching the web for 'MAME ROMS'.

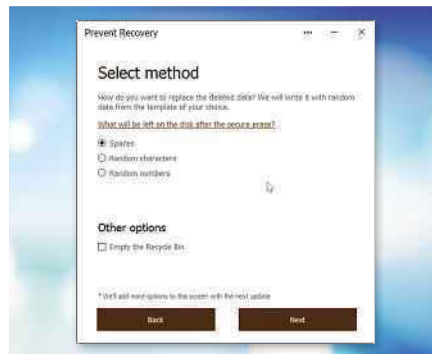


## SYSTEM TOOL KeepMouseSpeedOK

[bit.ly/kmsok456](http://bit.ly/kmsok456)

**Min requirements:** Windows XP/Vista/7/8.1/10 **File size:** 24KB

Some people suffer from fluctuating mouse speeds: one moment the cursor is moving too quickly and the next it's too slow. The tiny tool KeepMouseSpeedOK lets you set your preferred mouse speed and then locks it at that rate. You can minimise the program to the system tray for easy access and open the Mouse Settings and Windows Ease of Access options directly from the program.



## SYSTEM TOOL Prevent Recovery 4

[bit.ly/prerec456](http://bit.ly/prerec456)

**Min requirements:** Windows XP/Vista/7/8.1/10 **File size:** 1.8MB

Anyone with the right software can restore a file you've deleted in a matter of seconds. Prevent Recovery stops that happening. It overwrites deleted programs (and free space) and gives you a choice of 12 security algorithms to ensure your data is erased for good. This new release has been completely redesigned and is much easier to use, with a wizard interface that guides you through the process.

## New Windows Apps

### Kids Cartoons

[bit.ly/cartoons456](http://bit.ly/cartoons456)

**Min requirements:** Windows 10

**File size:** 20.14MB

This app lets you watch thousands of videos and programmes for kids, including content from Disney and Sesame Street. You can add popular choices to your favourites for easy access.



### Killswitch

[bit.ly/kills456](http://bit.ly/kills456)

**Min requirements:** Windows 10

**File size:** 8.5MB

Killswitch runs on your desktop PC, phone and tablet, and lets you shut down any connected device. It uses client and server components, and you can shut down multiple systems at the same time.



### Send 2Me

[bit.ly/send2me456](http://bit.ly/send2me456)

**Min requirements:** Windows 10

**File size:** 25.46MB

Send 2Me makes it easy to send anything from your PC to other devices. You use Windows 10's built-in Share function to access the tool, which creates QR codes for items you want to share.



## IMAGE EDITOR

### Fenophoto 5

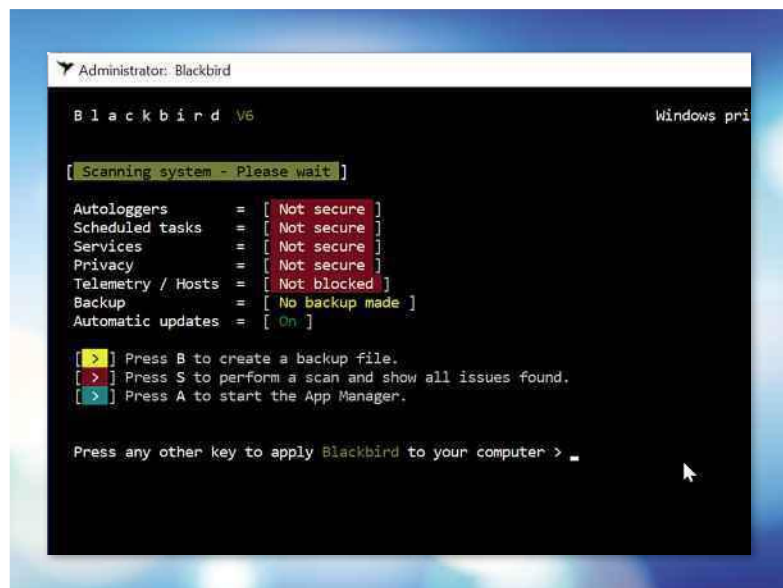
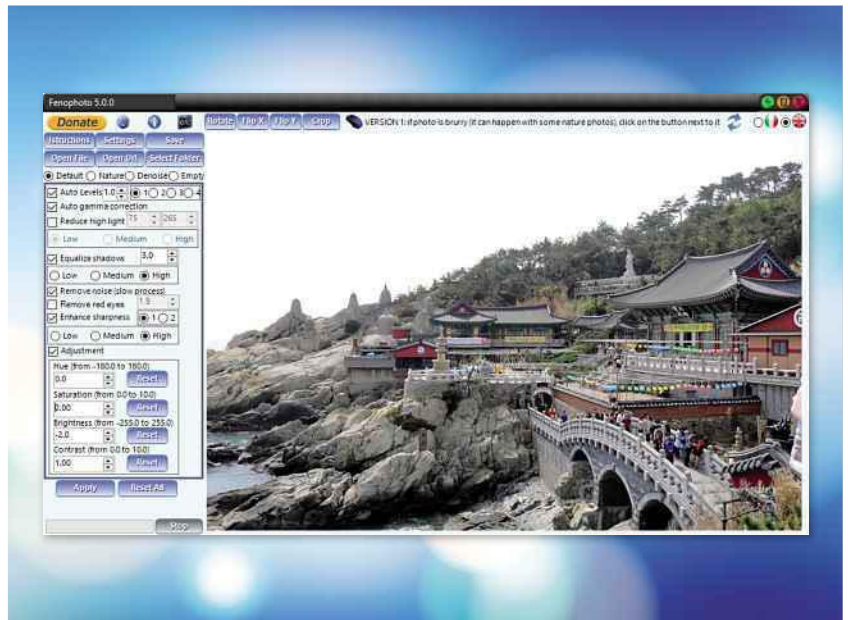
[bit.ly/feno456](http://bit.ly/feno456)

**Min requirements:** Windows 7/8.1/10

**File size:** 91.5MB

These days, most of us are reasonably happy with the photos our phones capture, but the results often require a little improvement. Fenophoto can quickly rotate, flip and crop your images, and offers a large number of photo-correction tools, including auto levels and auto gamma, the ability to equalise shadows, red-eye correction, denoise, sharpening, and batch and command-line processing. The program can handle all the major image formats, including uncompressed RAW files.

The latest version of Fenophoto fixes some problems and adds the ability to increase the default value of shadow equalisation.



## PRIVACY TOOL

### Blackbird

[getblackbird.net](http://getblackbird.net)

**Min requirements:** Windows XP/Vista/7/8.1/10

**File size:** 502KB

If you're worried that Windows 10 is compromising your privacy, you can use Blackbird to lock it down. This handy tool scans your system and reports on the main risks, such as autologgers, scheduled tasks, ad-tracking and other threats to your privacy. You can create a backup file, run a thorough scan or start the app manager, which lets you block or unblock apps. To speed things up, you can simply apply all the recommended changes, which include disabling Cortana, OneDrive, Bing integration, Wi-Fi Sense, Windows Error Reporting and more. It even blocks some YouTube, Skype and Facebook ads. We recommend checking what Blackbird disables before applying the changes.

## SYSTEM TOOL

### Windows Firewall Control

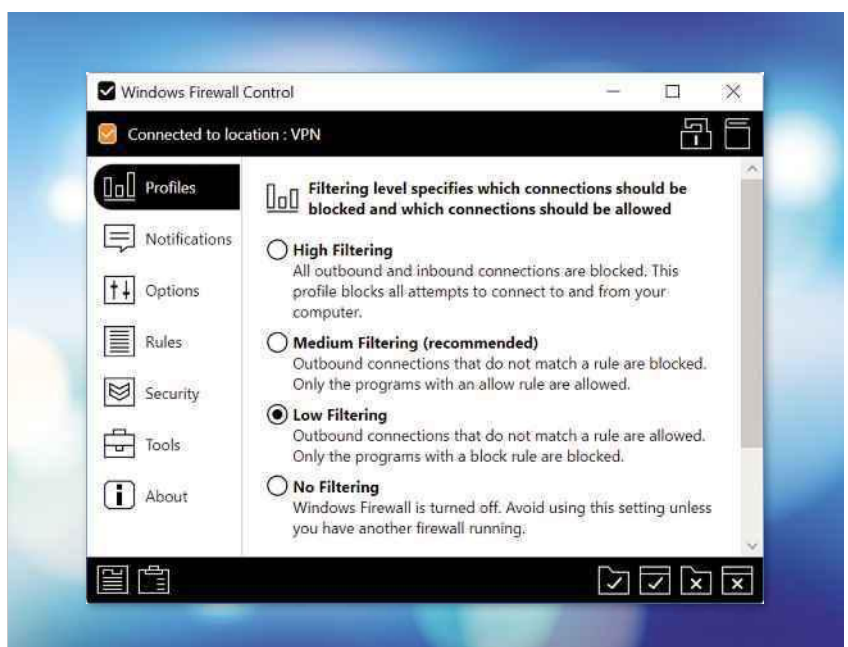
[bit.ly/wfc456](http://bit.ly/wfc456)

**Min requirements:** Windows XP/

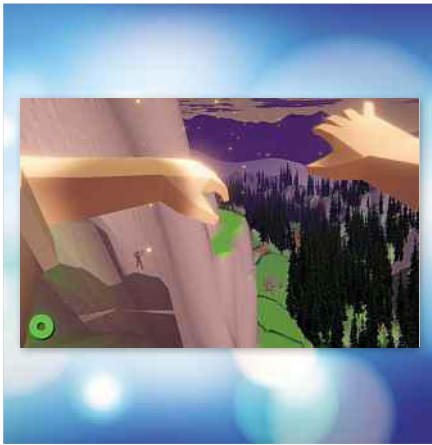
Vista/7/8.1/10 **File size:** 3.3MB

The Windows Firewall is surprisingly powerful, but if you're looking for more advanced features, consider installing Windows Firewall Control. This offers a choice of filtering modes – High (which blocks all outbound and inbound connections), Medium (which blocks outbound connections based on rules you set), Low (which allows outbound connections based on your rules) and No (which turns off the firewall). The free version used to have some limitations, but now it's entirely free, and features that you once had to pay for, such as outbound connection notifications, are available to everyone.

See our Workshop on page 54 to find out how to use Windows Firewall Control.







## GAME

### The Secret of Dank Mountain

[bit.ly/dank456](http://bit.ly/dank456)

**Min requirements:** Windows 7/8.1/10, MacOS or Linux

**File size:** 24.6MB

The aim of this first-person game is simply to scale a mountain, which you do by finding the best places to ascend and then tapping the Climb button. Your stamina is limited, so you have to climb in bursts. There are a number of peaks to ascend and it has a brilliant ending that makes it worth the effort.

## Don't install...

### Mailbird

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

**Min requirements:**

Windows XP/  
Vista/7/8.1/10

**File size:** 78.7MB

Mailbird Lite is a great-looking email client that also connects to popular apps and services, including WhatsApp, Slack and Facebook. Sadly, the free version limits you to a single email account and removes some of the full program's better tools, including attachment previews and email snoozing. Adding these will cost you £19.50.



## ...Install this instead

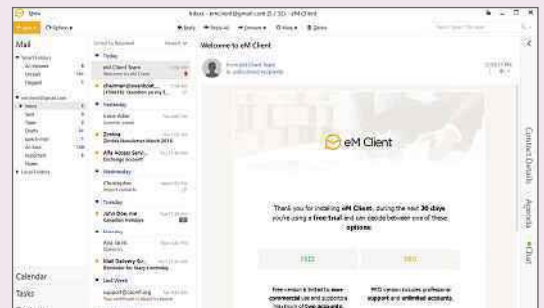
### eM Client

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

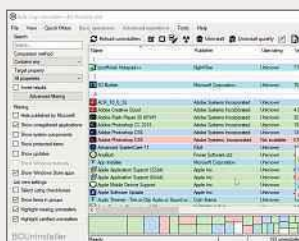
**Min requirements:** Windows XP/Vista/7/8.1/10

**File size:** 51.3MB

With a smart interface and plenty of advanced features, eM Client is easily the best free email software for Windows PCs. It integrates a calendar, contacts and tasks, and has built-in support for chat. Setting up accounts is simple – it recognises most popular email services and configures them automatically without you having to faff around with SMTP server settings and so on. If you're switching from another email program, eM Client offers to import its data, and if you use an Outlook.com or Gmail account, it syncs your calendar and contacts too.



## UPDATED | New tweaks and fixes for your favourite free programs



## UNINSTALLER

### BCUninstaller 4.6

[bit.ly/bcuninstaller456](http://bit.ly/bcuninstaller456)

**Min requirements:**

Windows 7/8.1/10

**File size:** 3.6MB

BCUninstaller can remove unwanted programs in batches and clear away any junk they and other programs leave behind. This release adds support for Oculus VR store apps and games, detects unremovable store apps and includes a range of new options for browsers.



## SYSTEM TOOL

### BootRacer 7.3

[www.greatis.com/bootracer](http://www.greatis.com/bootracer)

**Min requirements:**

Windows 7/8.1/10

**File size:** 13.8MB

BootRacer tells you exactly how long your computer takes to boot into Windows, and reveals which programs are slowing you down. The latest version of the software features improvements to the Ultimate Services Optimizer and helps you recover lost startup programs.



## DISK-PARTITIONING TOOL

### Macrorit Disk Partition Expert Free 5.1

[macrorit.com](http://macrorit.com)

**Min requirements:** Windows XP/Vista/7/8.1/10

**File size:** 14.3MB

Macrorit Disk Partition Expert Free is a hard-drive management tool that lets you create NTFS or FAT32 volumes on MBR or GPT drives. It can also resize, copy, move, format and delete partitions, and more. This update adds a Clone Disk function and fixes bugs.



## VPN SOFTWARE

### TunnelBear 3.5

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

**Min requirements:**

Windows XP/Vista/7/8.1/10 or MacOS

**File size:** 78.5MB

TunnelBear is a free VPN tool that's easy to use. This release displays notifications in the Action Center in Windows 10. If TunnelBear has trouble connecting to the internet, you can automatically send an error report as soon as you're back online. ■

GET FREE SOFTWARE FIRST subscribe to Web User at [subscribe.webuser.co.uk](http://subscribe.webuser.co.uk)





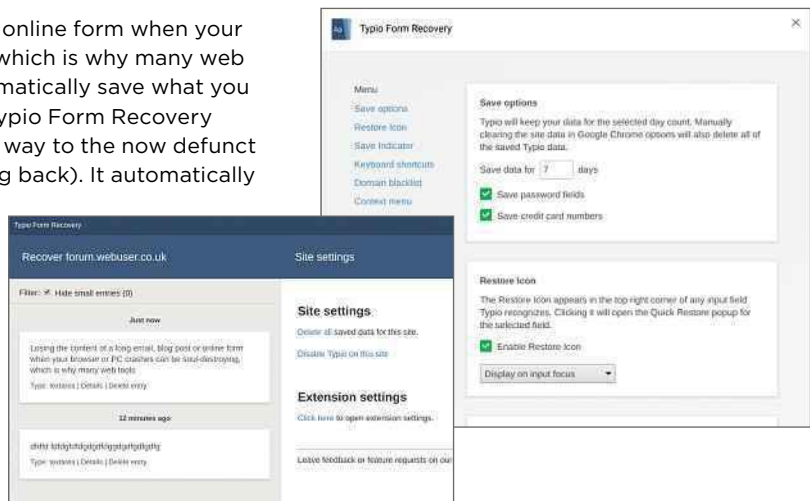
# Best New Browser Tools



CHROME

## Auto-save and recover what you write online

Losing the content of a long email, blog post or online form when your browser or PC crashes can be soul-destroying, which is why many web tools – including Google Docs and Gmail – automatically save what you type. For sites that don't, you can fall back on Typio Form Recovery ([bit.ly/typio456](http://bit.ly/typio456)). This add-on works in a similar way to the now defunct Lazarus (which, unlike its namesake, isn't coming back). It automatically saves any text you enter on a web page, and you can recover it either by clicking its toolbar button and choosing Open Recovery or right-clicking the page and selecting that option. There are even keyboard shortcuts. By default, Typio stores your data for seven days, although you can increase or decrease this as required, or delete entries manually. You can also disable the extension on specific domains, and allow it to save typed passwords and credit card details, too.



## Block PUP downloads using Malwarebytes

Malwarebytes has updated its excellent extension for Chrome ([bit.ly/malchrome456](http://bit.ly/malchrome456)) and Firefox ([bit.ly/malfirefox456](http://bit.ly/malfirefox456)), making it even more effective at protecting you from online threats. As well as blocking malicious code, phishing scams, third-party trackers and clickbait, the add-on now prevents the downloading of potentially unwanted programs (PUPs), including toolbars and pop-ups. Just make sure the Enable PUP Protection option is selected in the settings. You can now turn Malware/Scams and Ads/Clickbait on and off separately, too, which is useful if a site you're on isn't displaying properly but you don't want to disable

protection completely. Malwarebytes Browser Extension is still in beta, so you may encounter the occasional bug and false positive – where the tool mistakes a legitimate site or program for a threat.

## View random Airbnb rooms on new tabs

If you're tired of browsing hotel-booking sites to find holiday inspiration, a new Chrome extension called Random Bnb ([bit.ly/random456](http://bit.ly/random456)) could save you time and money. It displays a random listing from accommodation-booking site Airbnb every time you open a new tab, providing a photo, a small map and details of the nightly rate. The add-on was created by an American developer, which unfortunately means prices are in dollars, but clicking the title of the listing takes you to the relevant page on Airbnb UK, where you can view further details, including the nightly cost in sterling, and request a booking.



## Identify propaganda bots on Twitter

Twitter recently made the news when it deleted a reported 70 million fake accounts, but there are plenty more where those came from – often in the form of bots. These accounts look as if they're controlled by real people, but they do little more than automatically retweet or reply to tweets that contain certain keywords, often as a means of spreading political propaganda. You can spot and stop these pests using the Chrome extension Botcheck.me ([bit.ly/botcheck456](http://bit.ly/botcheck456)), which uses “advanced machine learning techniques” to detect propaganda bots on Twitter. Just click the ‘Botcheck.me’ button that appears in the top-right corner of a tweet to scan the account for “patterns conducive to propaganda bots”. If the add-on detects a bot, you can either block that account or click Disagree if you suspect that the account is genuine.



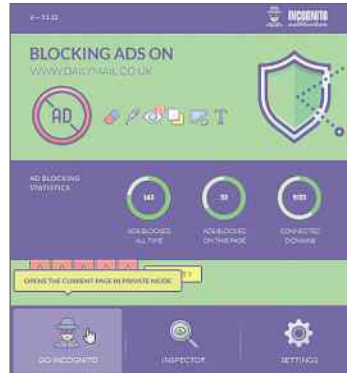
This fortnight's most useful tips and add-ons to help you get the most from Chrome, Firefox, Opera and more



## FIREFOX

### Block all adverts in private mode

You've probably noticed that when you switch to private browsing in Firefox (or incognito mode in Chrome), all your add-ons, including your ad blocker, are automatically disabled so that none of them can save data to your computer. This means you have to manually reactivate extensions you need, and until you do, your lack of an ad blocker will leave you at risk of exposure to annoying and intrusive adverts. This is where Incognito Adblocker ([bit.ly/incognito456](http://bit.ly/incognito456)) proves invaluable. This new tool overrides Firefox's settings so that it continues working when you open a new private window, blocking all ads on all pages, as well as unwanted external connections and trackers. Usefully, it also has a Go Incognito button that opens the current page in private mode, and uses the same all-encompassing filter lists as the popular ad blocker uBlock Origin.



### Add Clippy the paperclip to Firefox

Clippy was Microsoft's attempt to make Microsoft Office more user-friendly by including an animated character that offered help when it detected various actions, such as writing a letter in Word. He was included in versions of the office suite from Office 97 to Office 2003, until a deluge of negative feedback from users prompted Microsoft to send Clippy back to the virtual stationery cupboard. Until now, that is, because a nostalgic developer has decided to resurrect the chirpy paperclip as a



Firefox add-on ([bit.ly/clippy456](http://bit.ly/clippy456)). This means you can now have Clippy following you around the web from his

spot in the bottom-right corner of your browser (although you can move him anywhere on the page). This version of Clippy is a lot less annoying than the original Office Assistant, but he still tries to entertain you by twisting himself into different shapes, blinking and dancing, and making the occasional quip based on the site you're viewing. Welcome back, Clippy!



### Apply effects to YouTube videos

YouTube now offers a dark mode, but its other customisation options are pretty limited. You can enhance your viewing experience by installing the brilliant YouTube Video Effects ([bit.ly/effects456](http://bit.ly/effects456)), which lets you apply more than 50 filters to what you're watching. Effects include broken mirror, rainbow, crystal ball, underwater and 'love'. Beyond playing around with cosmetic changes, you can delve into the add-on's options to force videos to play at the highest quality and maximum window size, remove the black space from around videos and even block adverts. YouTube Video Effects offers its own dark mode, and the developer promises further features soon, including a floating player and customised subtitles. It's also available for Chrome, Vivaldi and Opera ([www.videoeffects.org](http://www.videoeffects.org)).

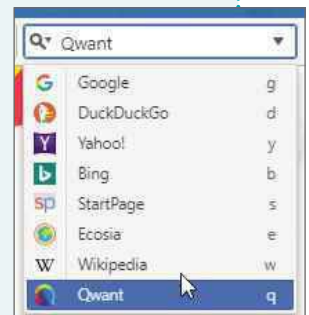
## OTHER BROWSERS



Search the web privately using Qwant

Back in Issue 448, we recommended the European search engine Qwant ([www.qwant.com](http://www.qwant.com)) as one of the best alternatives to Google, because it doesn't track you or store your search history. So we're

delighted that Vivaldi has now added Qwant to its list of search providers, giving you another way to search the



web anonymously (the browser already offered DuckDuckGo and StartPage as options). To search with Qwant, either click the arrow in Vivaldi's search box and choose that option from the drop-down menu, or just type q followed by your search term.



### Stay safe from malware and scams

Edge still lags behind Chrome and Firefox for security tools, but it's a step closer to its rivals now that Norton Safe Web ([bit.ly/norton456](http://bit.ly/norton456)) is available for the browser. This scans web pages for malware infection, online scams and "annoyance threats" and displays its

findings in a pop-up toolbar panel that turns

green for safe sites and red for dangerous ones. You can also view a full Safe Web report containing further security information and reviews of the current site by the Norton community.





# Best Free Apps



## App of the Fortnight

### PRODUCTIVITY

#### WPS Office

[bit.ly/wpsdroid456](http://bit.ly/wpsdroid456)

[bit.ly/wpsios456](http://bit.ly/wpsios456)

4.0

Whether you need to jot down a few notes now and then or access important documents, spreadsheets and other files while you're on the move, it's good to have an office suite in your pocket. Few mobile office suites offer as many features as WPS Office.

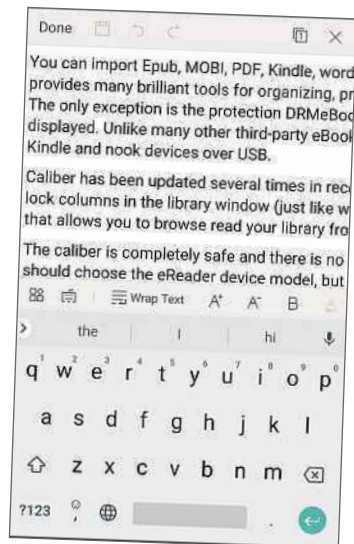
As is often the way with mobile apps, the Android and iOS versions of WPS Office have diverged slightly in their development but both have recently been updated with useful new features.

The Android version has gained some handy document-management functions, including the ability to perform bulk actions such as tagging several documents or deleting multiple files at once, rather than having to repeat the action for individual files. Another new tool lets you compose presentations quickly by scanning several images with your device's camera. Owners of Apple devices, meanwhile, can now insert photos from iCloud storage directly into their documents, and also gain improved tools for sharing on social media.

We've noticed a number of reviewers complaining about the presence of adverts in the free version of WPS Office. It's true that the app displays some full-screen ads, as well as a few smaller adverts in areas such as your file

list. The developer is pretty transparent about its business model, however. Unlike many other free office apps, which offer a very limited set of features compared with their premium versions, WPS Office Free gives you more or less the same features you'd get in the paid-for version (which, at £23 per year, is still considerably cheaper than Microsoft Office 365), with the exception of some advanced PDF functions – and it's only able to do so thanks to revenue from advertising.

UPDATED



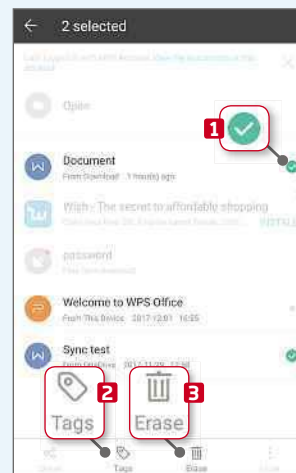
Our rating



### MINI WORKSHOP

#### Master the new features in WPS Office for Android

**1** The latest version of WPS Office for Android lets you add tags to multiple recent documents or delete them in batches. Press the Recent icon at the bottom of the screen. In the list of documents that appears, tap the grey circle to the right of a file to select it. Selected items have a green tick **1** next to them. When you've selected the files you want, tap the Tags **2** or Erase **3** icon, as needed.



**2** Another new feature in the Android version lets you quickly convert a collection of scanned images into a single presentation file. Press the Apps icon at the bottom of the screen, followed by Scanner. Tap the camera icon (and give camera permission if you haven't done so). Swipe under the main preview screen where it says Docs **1** so that PPT **2** mode is selected (in blue).



**3** Point your camera at what you want to scan and tap the round shutter button. On the next screen, use the bounding box **1** to crop any bits you don't want. Use the circular arrow icon **2** to rotate the picture if you need to. When you're ready, tap the tick icon. **3** To add further scans, tap Add Pictures and repeat the process. Tap 'Convert to PPT' when you've scanned everything you need.





# This fortnight's top free and paid-for apps for Android and iOS phones and tablets

## NEWS

### News With Friends

[bit.ly/newswith456](http://bit.ly/newswith456)

 9.3

Is your Facebook feed full of fake news? Then this could be the antidote. As the name suggests, News With Friends isn't only about reading the latest headlines, but also sharing them with your nearest and dearest so you can see which stories others are reading, and chat about the topics of the day. Stories are carefully selected from established news outlets. You can't currently tailor your feed to your interests as you can with other news aggregators – this app is about discovering and sharing.



Our rating



## GAME

### Simon's Cat – Pop Time

[bit.ly/simondroid456](http://bit.ly/simondroid456)  
[bit.ly/simonios456](http://bit.ly/simonios456)

 4.1  8

You watched Simon's Cat on YouTube, you bought the Simon's Cat book and you played the Simon's Cat mobile game. Now you can play a new, slightly different mobile game based on the popular cartoon cat and his adorable shenanigans. In this follow-up to Simon's Cat Crunch Time, your task is to pop your way through bubble-filled levels, collecting treats and freeing Simon's friends from their bubbly imprisonment. The gameplay is a little derivative, and the free version's ads are annoying, but the game is fun and the characters are cute.




Our rating



## ENTERTAINMENT

### Comedy Central Play

[bit.ly/comedydroid456](http://bit.ly/comedydroid456)  
[bit.ly/comedyios456](http://bit.ly/comedyios456)

 4.4  10

If you love comedy and you're a Virgin Media subscriber, you should definitely download this new app. Virgin customers currently get exclusive access to full episodes of Comedy Central shows such as *South Park*, *Russell Howard's Stand Up Central*, *The Daily Show* and more. Just sign in with your Virgin account when prompted. However, if you love comedy and you're not a Virgin Media subscriber, you can safely ignore this app, because it has precious little to offer beyond a few short clips.



Our rating



## KEYBOARDS

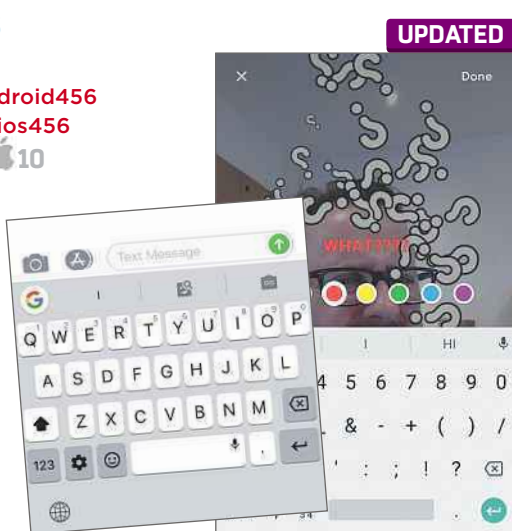
### Gboard

[bit.ly/gboarddroid456](http://bit.ly/gboarddroid456)

[bit.ly/gboardios456](http://bit.ly/gboardios456)

 (varies)  10

If a picture is worth a thousand words, a short, looping GIF must be worth at least two thousand. And a short, looping GIF with some words added to it is presumably worth two thousand words plus however many words you've added to the GIF. Which is probably why Google has updated its Gboard app to let you add text to your own custom GIFs. To do so in Android, tap GIFs, My GIFs, then Make A GIF (in iOS, tap the loop icon). Record your GIF, then tap the 'A' in the top-right corner (or the 'T' in iOS).



Our rating



## EREADER

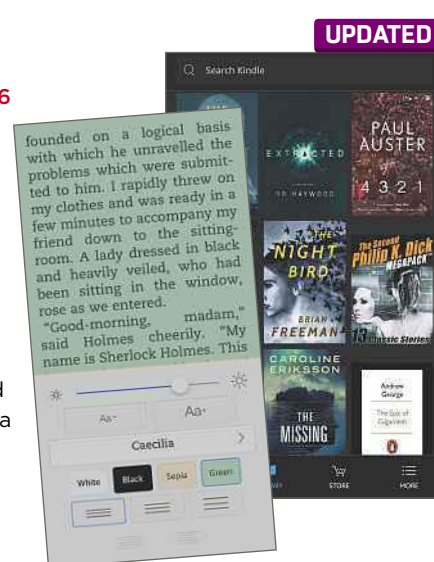
### Kindle

[bit.ly/kindledroid456](http://bit.ly/kindledroid456)

[bit.ly/kindleios456](http://bit.ly/kindleios456)

 (varies)  10

Even though Google and Apple have their own ebook stores, the Kindle app remains very popular, especially for tablet users – and for good reason. It's a great way to read your ebook library, and Amazon keeps finding new ways to improve the experience. The latest update brings support for split view to devices running Android 7.0 and up. Split view was added to the iOS version a couple of months ago, but Apple owners get new features in their latest update, too – namely a new green theme (tap Aa while in a book) and a redesigned X-ray that makes books easier to navigate.



Our rating



# 5 NEW APPS WORTH PAYING FOR

## GAME

### Alto's Odyssey

[bit.ly/altodroid456](http://bit.ly/altodroid456)

[bit.ly/altoios456](http://bit.ly/altoios456)

**Price:** £2.09 (Android),  
£4.99 (iOS)

4.1 10

Released for iOS earlier this year, this beautiful endless dune-surfing game has now come to Android. There's a free version, too, but pop-up ads spoil the fun somewhat, so we recommend paying for the app to remove them.



## EDUCATION

### Numbala

[bit.ly/numdroid456](http://bit.ly/numdroid456)

[bit.ly/numios456](http://bit.ly/numios456)

**Price:** £3.49 (Android),  
£4.99 (iOS)

4.1 9

Who says learning can't be fun? Designed in conjunction with neuroscientists, Numbala enhances your child's understanding of maths through this beautifully designed space shooter involving a young girl and her dog.



## GAME

### Pocket City

[bit.ly/citydroid456](http://bit.ly/citydroid456)

[bit.ly/cityios456](http://bit.ly/cityios456)

**Price:** £3.49 (Android),  
£4.99 (iOS)



4.1 9

This addictive city-building simulation looks great and takes the old-fashioned approach of allowing you to level up by playing the game, rather than making in-app purchases.

## TOOLS

### Clipboard Editor

[bit.ly/clipboard456](http://bit.ly/clipboard456)

**Price:** 59p

5

This lightweight app lets you access and edit your Android device's system clipboard. You can copy text to and from any app, and access the clipboard from your device's pull-down Quick Settings screen.



## AUGMENTED REALITY

### Hotel Transylvania CrazyCruise

[bit.ly/hoteldroid456](http://bit.ly/hoteldroid456)

[bit.ly/hotelios456](http://bit.ly/hotelios456)

**Price:** 69p (Android), 99p (iOS)

7 9

Released to coincide with the latest movie in the animated franchise, this augmented-reality app puts characters from the films in your local playground – a bit like Pokémon Go but with added swings.



Alto's Odyssey



Numbala



Pocket City



Clipboard Editor



Hotel Transylvania  
CrazyCruise



## Don't install...

### Custom Color Screen Filter

[bit.ly/dontinstall456](http://bit.ly/dontinstall456)

Screen filters can be beneficial for your eyes, particularly when you're using your device late at night. But not all are created equal, and Custom Color Screen Filter is a case in point. Despite claiming that it will "help your eyes from getting destroyed", many of the novelty filter colours don't actually filter blue light at all, and the incessant full-screen ads (along with all the smaller ones) just make it incredibly annoying to use.



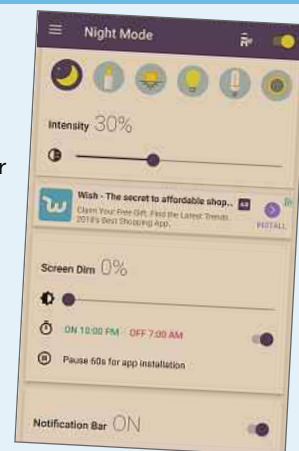
## ...Install this instead

### Blue Light Filter

[bit.ly/bluelight456](http://bit.ly/bluelight456)

(varies)

Blue Light Filter is one of the most popular screen filters on Google Play, and it's not hard to see why. As well as educating you as to precisely why blue light from device screens can be bad for your eyes, Blue Light Filter makes it easy to apply and customise your screen filter. A single button switches it on and takes you to a screen where you can choose from a selection of presets (candle, incandescent bulb and so on), or use sliders to adjust the intensity and screen brightness. You can set it to activate according to a timer, and although there are adverts, they're not intrusive. ■







# Take a Screen Break

Give your eyes a rest from your browser by taking our fiendish fortnightly challenges. Can you guess our capital-city emoji and our web year?

**WIN A  
WEB USER  
2017 BACK  
ISSUES DISC!**

Email your answers to  
[webuser@dennis.co.uk](mailto:webuser@dennis.co.uk)  
- one correct entry  
will win a disc



## CAN YOU GUESS THE CAPITAL CITIES FROM THE EMOJI?

1



2



3



4



5



6



## GUESS THE TECHNOLOGY YEAR

Can you work out which year the following tech news stories occurred in? No cheating!

**1** Apple launches its first smartwatch, the Apple Watch, which integrates fitness-tracking and health-tracking functions with iOS.



**2** Live-streaming apps are all the rage as the Twitter-owned Periscope and its rival Meerkat attract millions of users - for a while.



**3** Google causes confusion when it creates a parent company, Alphabet, and Google's CEO Larry Page (pictured) takes the helm.



**4** Windows 10 is released to a generally positive reception, although the UK's best-selling internet magazine objects to its privacy settings.



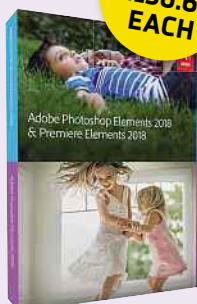
**5** Dating site Ashley Madison is hacked, and some users receive emails from blackmailers threatening to reveal their membership.



## COMPETITIONS

### WIN 1 OF 4 Adobe Premiere Elements and Photoshop Elements 2018 bundles

This pack contains everything you need to edit and organise your photos and videos. New tools include a revamped slideshow and the ability to open closed eyes in photos. To enter, email your address to [webusercomp@dennis.co.uk](mailto:webusercomp@dennis.co.uk) with 'adobe' in the subject line. For more information visit [www.adobe.com/uk](http://www.adobe.com/uk) and follow @AdobeUK on Twitter.



**WORTH  
£130.66  
EACH**

### WIN 1 OF 3 KitSound Slam 2 Bluetooth speakers

This water-resistant portable speaker delivers 20 watts of power and has a 10-hour battery life. Connect your phone or tablet wirelessly and listen to your favourite playlists on repeat. To enter, email your address to [webusercomp@dennis.co.uk](mailto:webusercomp@dennis.co.uk) with 'slam' in the subject line. For more information visit [www.kitsound.co.uk](http://www.kitsound.co.uk) and follow @KitSoundUK on Twitter.



**WORTH  
£59.99  
EACH**



# ? FAQ

Everything you need to know about the most interesting new technology trends and events

## Facial recognition

Technology that identifies people by scanning their faces is proving increasingly controversial. David Crookes finds out why



### What is it?

Facial recognition is a technology that maps people's faces mathematically and stores the data so that computers can use it to identify them. You've almost certainly come across it, perhaps to log into your phone or speed you through passport control. Perhaps because of its ubiquity, the technology is proving controversial, not least because it affects our right to privacy.

### How does it work?

In general, these systems detect and record your distinguishing facial features. Older methods make up to 80

depth and angles of your face down to a millimetre scale. Once this information is stored in a database, computers can use it to make matches either by scanning the person's face or using an image or video. Of the two methods, scanning the face is preferable to using a 2D photo because the captured face doesn't have to be staring directly at the camera.

### What benefits does facial recognition have?

Facial recognition can help the police solve crimes by comparing suspects caught on camera with images from a central database. Likewise, it could be used to identify terrorists or spot a

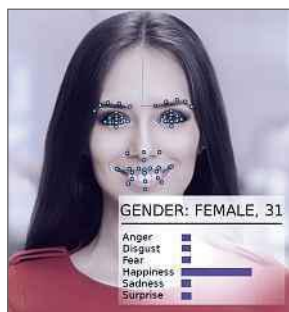
missing person. Less important uses include logging into services, verifying payments in shops and even organising your photos according to the people in them (as Facebook does – see [bit.ly/facebook456](https://bit.ly/facebook456)). There is a sinister side to the technology, however.

### Why is it controversial?

Brad Smith, the president of Microsoft, recently wrote a lengthy blog post ([bit.ly/msblog456](https://bit.ly/msblog456)) calling for facial-recognition technology to be regulated in the US. Smith expressed his concerns that facial recognition is getting better and faster thanks to improved cameras, sensors and machine-learning capabilities, and that it's becoming "deeply infused into our personal and professional lives". His worry is that databases are growing ever larger and that cloud computing offers the potential to connect multiple sets of data. This, he says, "raises issues that go to the heart of fundamental human rights protections like privacy and freedom of expression".

### Are these concerns about us being under surveillance?

To an extent, yes. Even though we're filmed many times each day – especially here in the UK, where there are more CCTV cameras per person than anywhere else in the world – Smith fears that we can now be personally identified and tracked as we move around. "Imagine a database of everyone who attended a political rally that constitutes the very essence of free speech," he wrote. "Imagine the stores of a shopping mall using facial recognition to share information with each other about each shelf you browse and product you buy, without asking you first".



Facial recognition measures your distinguishing features

measurements of attributes such as the distance between your eyes and the width of your nose. More advanced 3D-mapping techniques scan your face using light to measure its curves, then calculate the



Facebook says you shouldn't be afraid of facial recognition – but maybe you should!

### But surely the good outweighs the bad?

Perhaps, but there is a danger that a future over-reliance on facial-recognition software could lead to miscarriages of justice. Big Brother Watch launched a legal action against the Metropolitan Police in July ahead of a facial-recognition trial in Stratford. The campaign group called it a "slippery slope towards an Orwellian society" but,



**South Wales Police's facial-recognition van should be ashamed of its poor results**

just as importantly, it seems that the technology is by no means foolproof. In a previous experiment, the Met found that just two of the 104 alerts the system produced were positive matches.

## What have the police used the technology for?

Police forces have mainly deployed face-recognition software during large-scale events. The Met, for instance, scanned people attending the Notting Hill Carnival and a Six Nations Rugby match. Meanwhile, South Wales Police used the technology to identify potential troublemakers at the UEFA Champions League final in Cardiff last year. In all these cases, the systems compared images of the crowd with a database of people on a police watch list. Like the Met, however, South Wales Police found that the system was far from perfect: only 173 alerts proved to be correct matches – less than 10% of the overall figure ([bit.ly/swp456](http://bit.ly/swp456)).

## Surely if you've nothing to hide, you've nothing to worry about?

According to Big Brother Watch ([bigbrotherwatch.org.uk](http://bigbrotherwatch.org.uk)), facial recognition systems violate articles eight, 10 and 11 of the European Convention on Human Rights, which means they might affect everyone's rights to a private life, freedom of assembly, association and expression. The Information Commissioner, Elizabeth Denham, has raised concerns with the Home Office and National Police Chiefs' Council, and wants police forces to make a strong case for the use of facial recognition that



**Amazon's face-recognition identified politicians as criminals – surely not!**

proves alternative methods are less effective. "It's a real step change in the way law-abiding people are monitored as they go about their daily lives," she says.

## But what's the worst that can happen?

There's a chance you could be misidentified, questioned by police or worse, although forces such as South Wales Police say they are building checks and balances into their methodology. However, when Amazon's facial-recognition system, Rekognition, was tasked with matching photos of all 535 members of Congress against a database of 25,000 publicly available images of criminals, a surprising 28 Congress members were listed as matches. To make matters worse, a disproportionate number of those misidentified were people of colour, alarming the American Civil Liberties Union (ACLU) of Northern California, which carried out the study.

## What did Amazon say about the findings?

The company said Rekognition has benefited society and organisations by preventing human trafficking, inhibiting child exploitation and enhancing security, among other things. But it admitted that "the results could probably be improved by following best practices" and suggested that authorities should act only if they were 99% confident

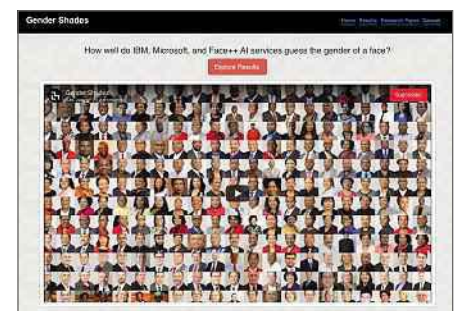
Rekognition had found a match. The system was designed to narrow the field, Amazon said, not to make autonomous decisions.

## But what about the misidentifications?

The errors point to biases in face-recognition systems, because accuracy has been shown to differ according to age, ethnicity and gender. MIT Media lab studied how well IBM, Microsoft and Face++ AI were able to identify faces ([gendershades.org](http://gendershades.org)). Using a sample of 1,270 images, it found that the services performed worst on darker female faces, best on lighter males, and better on men than women, with the difference in error rates as high as 21%. This could mean some people in society would be wrongly targeted more than others.

## So is facial-recognition technology doomed?

If the technology becomes accurate and proves useful against crime, then as long as ethical checks are in place and human judges are involved, a case could be made for its benefits. It may also be used for less serious purposes – perhaps to replace physical tickets at a stadium, to make secure payments or to reduce the potential for identity fraud. Either way, there are concerns over where and how all this data is stored, who can access it and how secure it is.



**Current facial-recognition tech appears to be biased towards Caucasian males**



**Big Brother Watch wants the police to stop using facial-recognition technology**

## "YOUR BABY LOOKS JUST LIKE YOU"

Sadly, some couples are unable to conceive without medical help, and a proportion may opt for egg donation. To ensure the baby will resemble the mother-to-be as closely as possible, the Spanish egg-donor bank Ovobank ([www.ovobank.com/en](http://www.ovobank.com/en)) is allowing medical professionals to use a facial-recognition matching algorithm. Once the mother has used an app to take a photo and her facial features have been mapped, the system compares the it with a database of donors in the



hope that it will find someone with similar observable characteristics.

# *The Advanced Guide to*

# EMAIL

**COVER  
FEATURE**

There's much more to email than just sending and receiving messages. **Robert Irvine** and **Wayne Williams** explain how to secure your inbox, enhance your mail and unlock secret tools

**E**ven with the rise of social networks and messaging apps, email is still the most popular means of online communication and remains essential for registering with websites, confirming your identity and receiving important information. Most email services are far from perfect, however, despite the introduction of GDPR and improvements to spam filtering and anti-phishing protection. Some of the most well-known services fail to protect your messages from hackers, invade your privacy by scanning their content and generally lack important features we all want and need.

In this advanced (but not complicated) guide, we show you how to become an email power user by unlocking the full potential of your webmail service. Whether you want to create a fake 'burner' address that forwards messages to your real one, block the annoying adverts around your inbox or organise attachments by file type, we have a host of secret tips and expert fixes that will make your email experience less restricted and completely secure.

We also review the best free providers of 100% anonymous email – turn to page 42 for our results.



## MAKE YOUR EMAIL HACK-PROOF

Barely a week goes by without news of another security breach in which users' email addresses are leaked. Here's how to make your inbox impregnable

### Create a fake 'burner' email address

When you use your real email address to register with a website, you're not only opening yourself to a deluge of marketing messages (despite the recent introduction of GDPR), you're also handing over an essential piece of personal information. If the site suffers a security breach, your email address could fall into the hands of cybercriminals, compromising the safety of your other online accounts. The best way to avoid being spammed, scammed and hacked is to create a temporary fake address using a disposable-email service. Use this fake address to sign up to a website, click the link in the confirmation message that arrives in your alternative inbox and you'll gain access to the site without sacrificing your privacy or security.

Our favourite new tool for this task is Burner Emails ([burneremail.io](http://burneremail.io)), as featured in Issue 453's Best New Browser Tools. It's available for Firefox and Chrome, and also works with Opera and Vivaldi. This browser extension automatically detects email fields on web pages and lets you click them to generate and enter fake addresses. Messages sent to these addresses are then forwarded to your real account, so you won't miss important verification and confirmation emails. You can then

delete or disable each 'burner' address so you won't receive any further communication from that site.

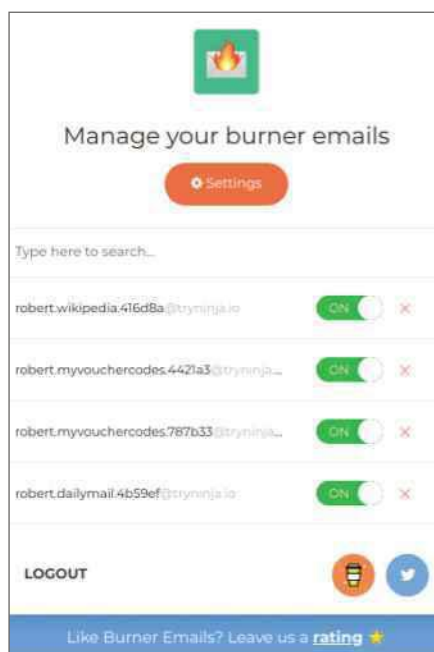
We also like the Firefox add-on Bloody Vikings ([bit.ly/vikings456](http://bit.ly/vikings456)), which lets you create fake addresses on the fly using 14 disposable email services, including Dropmail, Fake Mail Generator and Mailinator. Usefully, it opens your temporary inbox in a background tab, so you can confirm your registration without leaving the page. Another handy Chrome extension is Disposable Temporary Email Address ([bit.ly/disp456](http://bit.ly/disp456)), which generates accounts that expire after 10 minutes.

### Stop third-party tools reading your emails

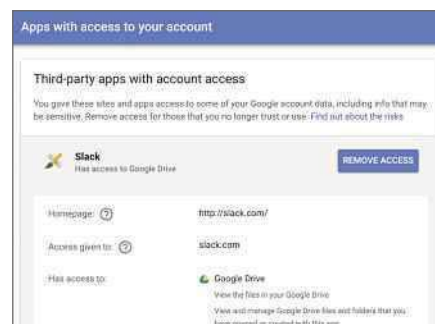
Google recently admitted that the contents of Gmail messages are not only processed by computer algorithms but can sometimes be read by human third parties, when certain apps are granted access to user accounts. With so many useful tools available for Gmail, this situation is difficult to avoid, but it still pays to know exactly which apps you've allowed to access your emails so you can block any that look suspicious.

To find out which of your apps can access your email, go to your Google Account ([myaccount.google.com](http://myaccount.google.com)) and click the 'Apps with account access' link in the 'Sign-in & security' section. Click Manage Apps to view further details about what personal data third-party apps can access, and click Remove Access to disconnect undesirable tools from your Gmail account.

Incidentally, some of the tips in this feature involve giving third-party apps access to your email account, but rest assured none of our recommendations share or exploit your data.



**Burner Emails conceals your real email address when you register with sites**



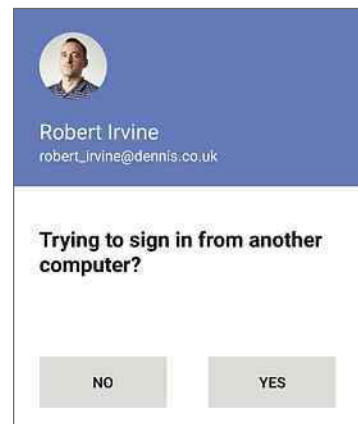
**Remove unwanted third-party apps that have access to your Gmail account**

### Make two-factor authentication easier to use

Two-factor authentication (2FA) – also known as two-step verification – adds a second layer of protection to your email account by asking you to enter a code when you sign in from a new device or if you've been logged in on your current one for 30 days. In January, Google software engineer Grzegorz Milka admitted that fewer than 10% of Gmail users have enabled this feature ([bit.ly/2fa456](http://bit.ly/2fa456)) but if you're security-conscious, it's definitely worth setting up. Go to [bit.ly/2step456](http://bit.ly/2step456), click Get Started, then sign into your Gmail account and click 'Start setup'. Enter your mobile number, choose how you want to receive the verification code and click Send Code. When you receive the six-digit code, enter it in the box and click Verify to add your phone number to your account.

If you prefer, you can use Google's Prompt feature, which saves you having to type a code each time. Instead, you tap Yes to confirm that you're trying to sign in from another device. This method is less secure, so Google recommends it's used only on phones and tablets that have screen lock activated. You can also print one-off backup codes to use at your convenience.

To set up 2FA for Outlook.com, go to the 'Security settings' page ([bit.ly/security456](http://bit.ly/security456)) and sign into your account. Under 'Two-step verification', choose 'Set up two-step verification' to turn the feature on, then follow the instructions. You can opt to receive your verification codes by text message or phone call, or have them sent to an alternative email address, but the easiest method is to use an authenticator app, such as Microsoft Authenticator ([bit.ly/auth456](http://bit.ly/auth456)) or Authy ([authy.com](http://authy.com)), which also works with Gmail.



**Use Google Prompt to avoid typing 2FA codes**

## STAY COMPLETELY ANONYMOUS ON EMAIL

If you want to keep the messages you send and receive completely private, there are much better options than Gmail. Here, we compare the best secure email services

**ProtonMail** | [protonmail.com](https://protonmail.com) | ★★★★★  
FEATURES ★★★★★ PERFORMANCE ★★★★★ EASE OF USE ★★★★★

Web User  
GOLD  
AWARD

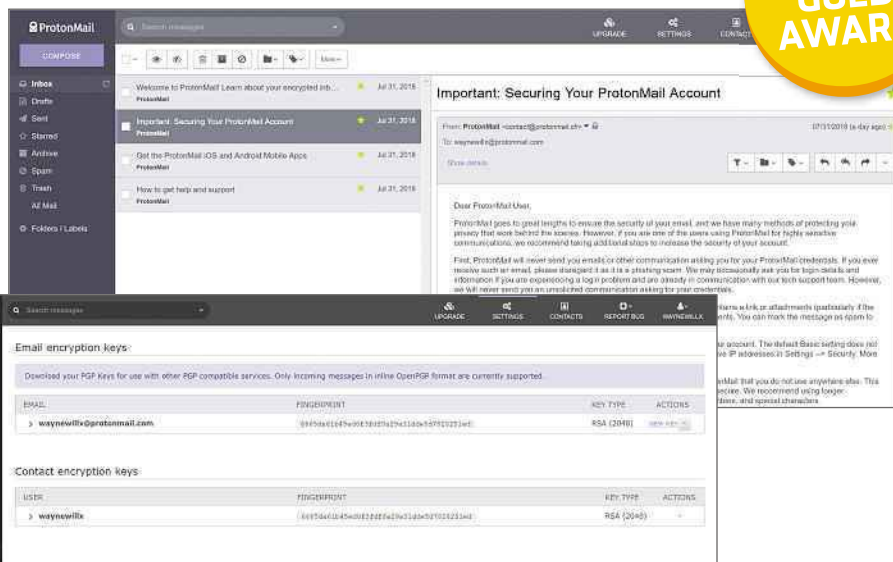
### What we liked:

ProtonMail doesn't look that different to Gmail, which means it's easy to master. It offers a choice of layouts, so you can choose to see just a list of message headers or enable the preview pane. You can move the messages you receive into folders or label them, and sort the contents of your inbox by size, date, read or unread.

The service lets you send and receive email from other providers and apply end-to-end encryption to all messages so that no one but your recipient can read them (not even ProtonMail). Unlike rival services, it doesn't log IP addresses, either.

The firm is based in Switzerland, which means your data is protected by some of the strongest privacy laws in the world. It's physically secure, too, because ProtonMail has its own data centre located in a heavily guarded nuclear bomb-proof bunker under 1,000 metres of granite rock!

There's no need to provide any personal information to set up an account with this open-source service. The free version limits you to 150 messages per day, but unless you're a



very heavy email user, this should be more than enough.

If you want to add VPN protection, you can sign up for ProtonVPN ([protonvpn.com](https://protonvpn.com)), which costs from €4 (£3.56) a month. ProtonMail also provides free apps for iOS and Android.

### How it can be improved:

The free version of ProtonMail limits you to 500MB of storage, which isn't much, and you can only have a maximum of three folders or labels, which is also

pretty stingy. Upgrading to the Plus plan for €48 (£42.70) a year gives you 5GB of storage, which still isn't a huge amount but is fine if you don't intend to use ProtonMail exclusively.

### OUR VERDICT

ProtonMail is very easy to use and offers all the security features you're likely to need, although some of them are only available to paid users. We like the fact that it provides its own mobile apps, too.

## HAS YOUR EMAIL ACCOUNT BEEN BREACHED?

Anyone who registers with a website these days risks their email address falling into the wrong hands. Security breaches have become increasingly and worryingly common – even at large companies that should be doing more to protect their users' data. You can find out if your email account has been compromised at Have I Been Pwned ([haveibeenpwned.com](https://haveibeenpwned.com)), which catalogues all the email addresses and other data taken in high-profile breaches. Search for your address and if the website finds it in the 'data dumps', it displays a red warning and reveals what was taken in the hack. It also recommends that you change your password(s) immediately. You can sign up for notifications of future breaches. At the time of writing, Have I Been Pwned featured 5,369,990,274 breached accounts, across 298 sites including LinkedIn, Adobe and Dropbox.

To ensure you're not logging into sites using unsafe passwords that are linked to breached email accounts, install PassProtect ([www.passprotect.io](https://www.passprotect.io)), which uses data from Have I Been Pwned to warn you about breached credentials. When you enter a password to sign up with or into a site, the extension checks the Pwned database to see if it has been involved in any breaches. If it has, it advises you to change it.



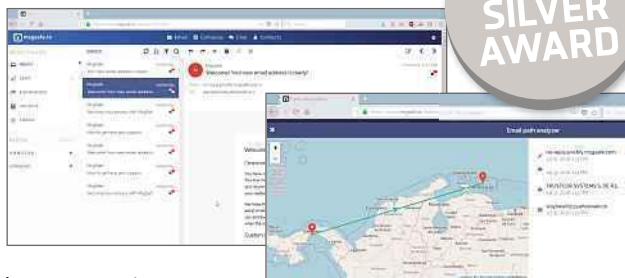
**MsgSafe.io** | [www.msgsafe.io](http://www.msgsafe.io) | ★★★★★  
FEATURES ★★★★★ PERFORMANCE ★★★★★ EASE OF USE ★★★★★

## What we liked:

When you set up your free MsgSafe.io account, you can choose an address from a large number of email domains that sound like other services, including 'outlookpro.net' and 'yahooweb.co'. You can create up to 10 virtual identities (fake email addresses) for free, associate contacts with them and disable addresses easily. MsgSafe.io creates each mailbox with 4,096-bit GPG and S/MIME encryption keys and certificates.

All tracking activity is removed from incoming messages, so the sender won't know if you've opened their emails or not, and Email Path Analytics lets you see where any messages you receive have been. You can also use the program to start encrypted chats with people in your contacts list.

Users of the free service get 1GB of storage and can send 25 emails and forward 100 messages a day.



**WebUser  
SILVER  
AWARD**

## How it can be improved:

Raising the number of outbound emails to 50 a day would be a big improvement. You can download a MsgSafe.io app for Android but it's described as 'in development' and may be unstable, while the iOS version is listed as 'coming soon'. However, you can access the service through its website on your mobile device.

## OUR VERDICT

**MsgSafe.io feels like a work in progress, but we like its simple interface and reliable encryption. The Email Path Analytics feature isn't found anywhere else, which makes it worth considering.**

**Tutanota** | [tutanota.com](http://tutanota.com) | ★★★★★  
FEATURES ★★★★★ PERFORMANCE ★★★★★ EASE OF USE ★★★★★

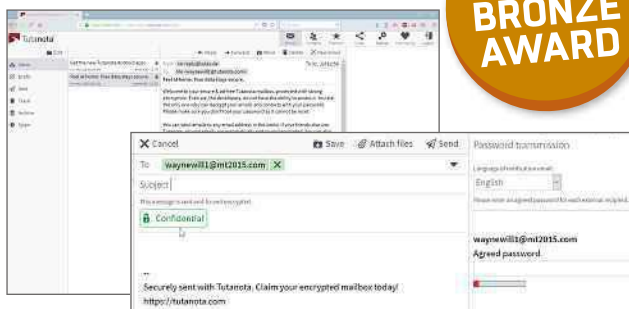
## What we liked:

Tutanota is open-source and free forever, although there are some optional costs that you should be aware of. You get 1GB of email storage for free, and mobile apps are available for iOS and Android. All data is encrypted from end to end, making it impossible for snoopers to view your messages, including the subject header, attachments and contact details.

The service is very easy to use, with a basic interface that places all the options within easy reach. You can create folders for messages and switch quickly between confidential and non-confidential emails. Recipients can view your messages on the web, and Tutanota's encryption ensures that their replies are encrypted, too.

## How it can be improved:

While the basic version of Tutanota is free, and upgrading to Premium costs



**WebUser  
BRONZE  
AWARD**

just costs €12 (£10.69) a year, there are plenty of additional costs to bear in mind. You can upgrade your storage, but it's expensive at €24 (£21.37) for 10GB, €120 (£107) for 100GB and an eye-watering €600 (£534.33) for 1TB a year. If you want to use email aliases, you have to pay for those too.

## OUR VERDICT

**Tutanota is one of the easiest services for sending and receiving encrypted messages, and it has a lot of potential. Mobile apps are available, and users are given a reasonable 1GB of storage, but it's a shame you have to pay so much for extras.**

## BEST OF THE REST

### Hushmail

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

Hushmail is one of the best-known secure email services. It's not free, but you can sign up for a 14-day trial without a credit card. The service costs \$49.98 (£38.34) per year, which includes 10GB of mail storage, and uses OpenPGP to encrypt your messages. You can create unlimited aliases to protect your real address, and the service works in any email client. There's an iPhone app, too, but not an Android one. You need to provide a mobile number when setting up your account.



### StartMail

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

StartMail is a powerful private and encrypted email service. A Personal account costs \$59.95 (£46) a year, for which you get a 10GB personal vault, 10 custom aliases, unlimited disposable aliases and PGP email encryption. A free seven-day trial is available, which doesn't require a credit card. This lets you reserve an email address, but you'll have to use a trial address that's based on it (for example, webuser.trial007@startmail.com) while testing the service. There are no mobile apps.



### Mailfence

[mailfence.com](http://mailfence.com)

Mailfence uses OpenPGP end-to-end encryption to secure your messages, and digital signatures to prove to recipients that an email has come from you. As well as keeping your messages private and secure, it provides a folder for documents, a calendar and a contacts database. The free version gives you 500MB of storage for messages, 500MB for documents, 1,000 calendar events and support for two-factor authentication.





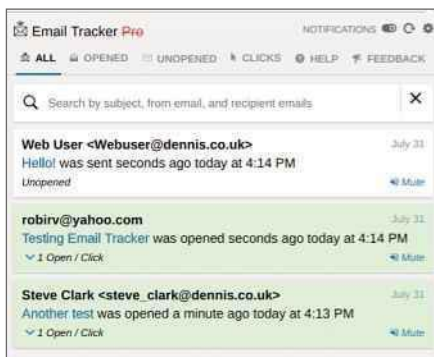
## BEAT EMAIL RESTRICTIONS

Want your webmail provider to give you more control over how you send, receive and manage your messages? Here, we reveal how to fix common frustrations

### Find out when your emails are opened

It's useful to know that someone has read your emails, so you can tell if they're deliberately not replying or your message has ended up in their Spam folder. Most webmail providers allow you to request 'read receipts', but the feature is usually limited to their paid-for plans, and recipients can decline to send receipts. You can beat both restrictions by installing the Chrome extension Email Tracker ([bit.ly/tracker456](http://bit.ly/tracker456)), which lets you see at a glance when your messages have been opened. Compose and send an email as usual, and when the recipient has read it, a tick appears beside the message in your Sent folder. You can also click the add-on's toolbar button to monitor your opened and unopened missives.

Email Tracker works with Gmail, Outlook.com and Yahoo Mail, and unlike

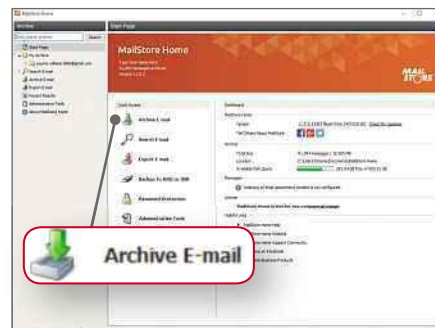


Email Tracker tells you if and when your messages are read by other people

similar tools that are used for marketing purposes, it doesn't limit how many messages you can track or make you sign up for an account. Additional features are available in the paid-for version, which costs \$4 (£3.05) per month, including details of where recipients are located and which links they click in your emails.

### Back up all your webmail messages

Because webmail services store everything in the cloud, your emails are safe from hardware-related woes such as drive corruption, infection and theft. Even so, it's a good idea to back up your emails from time to time in case you lose access to your account or accidentally delete important messages. One way to do this is to export your messages as an archive file, but a smarter and easier solution is to use MailStore Home ([bit.ly/mailstore456](http://bit.ly/mailstore456)).



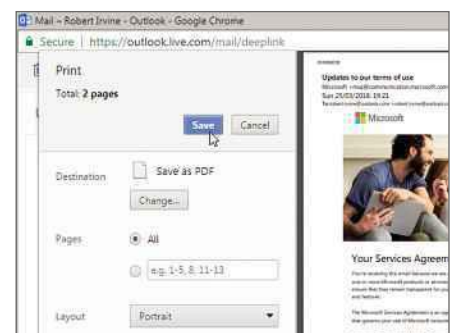
MailStore Home lets you back up your webmail accounts to your desktop

This free Windows program is easy to use and works with all major webmail services, including Gmail and Outlook.com. It saves your messages to a central location on your hard drive, and you can search, read and restore them directly in the software. MailStore Home also lets you password-protect your archives and fully encrypts databases so it's impossible for anyone else to read your emails.

To back up your messages in MailStore Home, click the Archive E-mail link under Quick Access, enter your email address and grant the program permission to access your account. The program creates a profile, and you can then click Run to import your messages from the web. Repeat these steps for any other accounts you want to back up.

### Download individual emails as PDFs

Saving an email to your desktop as a PDF file gives you an offline backup that you can share or print as required. This is very easy to do, and you don't even need a separate conversion or download tool, although the option is fairly well hidden. In any webmail service, open the message you want to save and either click the down arrow in the top-right corner and choose Print (in Gmail and Outlook.com) or click the Print button (Yahoo Mail). When the Print window opens, click Change next to the name of your printer and select 'Save as PDF' (this may be 'Export as PDF' or 'Print as PDF' in some browsers). Click Save, enter a file name, choose a download destination and make sure 'Save as type' is set to 'Adobe Acrobat Document'. Click Save again and the email will be converted and downloaded.



You can download a message from any webmail service as a PDF file

### Sign out of your email account remotely

It's creepy to think that someone might be reading your emails without your permission, even if you have nothing to hide, but it's easy to forget to sign out of your account once you've checked your messages. Fortunately, Gmail lets you log out remotely, or at least find out if someone has accessed your account on another device. In Gmail, scroll to the foot of the page and click the tiny Details link below 'Last account activity' in the bottom-right corner. This tells you if your account is open in another location, and displays a list of recent activity, including the access type (such as browser or mobile) and IP address. Click 'Sign out of all other sessions' to log out everywhere but your current location.

Yahoo Mail also lets you review your recent account activity and log out on other devices. Click your profile image in the top-right corner, choose 'Account info' and select 'Recent activity'. Click 'Sign out' next to any devices you don't recognise.



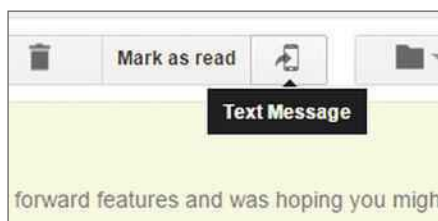
Check your recent email account activity and log out remotely on other devices

A quicker alternative is to use the Chrome extension Save Emails to PDF ([bit.ly/save456](http://bit.ly/save456)) to download both the email and its attachments in one click. It only works with Gmail, however, and you can only convert 50 messages for free each month.

## Forward important emails by text message

Research has found that 90% of text messages are read within three minutes of being received ([bit.ly/three456](http://bit.ly/three456)), whereas emails can sit unopened for hours. If you've ever sent someone an urgent email and then had to text them to check their inbox, you should consider installing Send Your Email to SMS ([bit.ly/sms456](http://bit.ly/sms456)). This handy Chrome extension lets you forward emails to people as text messages. Install the extension, select an email and click the phone button at the top of your box. Click Create Account, give CloudHQ (the developer) access to your Gmail account (don't worry, it can't read your messages) and it will create a code for the email. Enter the person's phone number and an optional message, then click 'Send as Text Message' to forward them the email in SMS format.

CloudHQ also offers a Chrome extension called Gmail SMS Alerts ([bit.ly/alerts456](http://bit.ly/alerts456)), which notifies you by text when important emails from specific people and companies arrive in your inbox. This means you no longer have any excuse to delay your reply either!



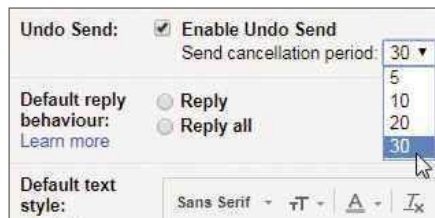
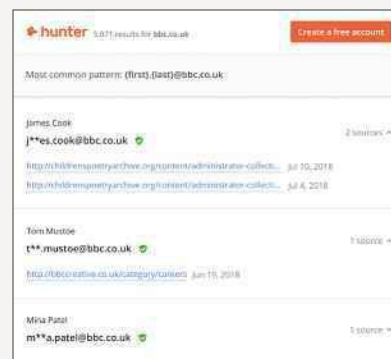
Ensure people don't miss urgent emails by forwarding them as text messages

## Give yourself 30 seconds to cancel emails you send

There are few things more mortifying than clicking Send on an email only to realise that it contains an embarrassing mistake, lacks the attachment it promises or – worst of all – is addressed to the wrong person, especially if the message is rude about them. To help prevent such mishaps, Gmail offers an invaluable Undo Send option that lets you cancel a sent email. It's a good idea to switch this option on and set it to give you the maximum length of time to change your mind. Click the cog icon in

## EXTRACT EMAIL ADDRESSES FROM WEB PAGES

Keeping your email address private is a sensible precaution, but when other people conceal their email address it can prove frustrating – especially if you need to contact them urgently. A browser add-on called Hunter ([hunter.io](http://hunter.io)) solves this problem by letting you see the contact details for a website at the click of a button. You can then add the email address to a list for future reference, and view the person's official job title and profiles on social media. Any email address it finds is accompanied by an accuracy estimate, and you can also search for a person's name on a company website to find their contact info. You need to register with Hunter to use the service, but this is free and allows you to submit 100 requests per month (more are available for a subscription fee).



Activate Undo Send to avoid embarrassing yourself with an impulsive email

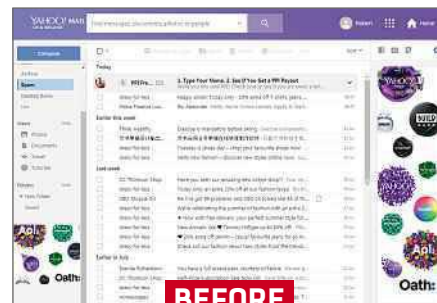
the top-right corner, choose Settings and, on the General tab, tick the box next to Undo Send. Select '30 seconds' in the 'Send cancellation period' menu and click Save Changes. You'll now see an Undo option at the top of the page whenever you send an email.

Outlook.com has a similar feature – although annoyingly it's not included in the new beta version of the service. To turn it on in the old version of Outlook.com, click the cog in the top-right corner, choose Options and, in the Mail section, select 'Undo sending'. Choose the option 'Let me cancel messages I've sent for' and select '30 seconds' from the drop-down menu.

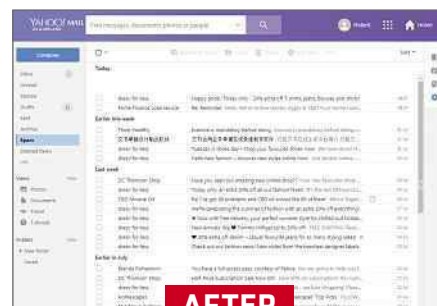
Yahoo Mail introduced an Undo Send option earlier this year, but only in its mobile apps. This gives you three seconds to cancel a message after it's sent.

## Block adverts in webmail services

Using an ad blocker for every website you visit has its downsides – it uses lots of memory, deprives smaller sites of essential revenue and stops some types of content being displayed – but ads and sponsored links that appear around your inbox are particularly annoying.



BEFORE



AFTER

Webmail Ad Blocker removes all annoying adverts from webmail services

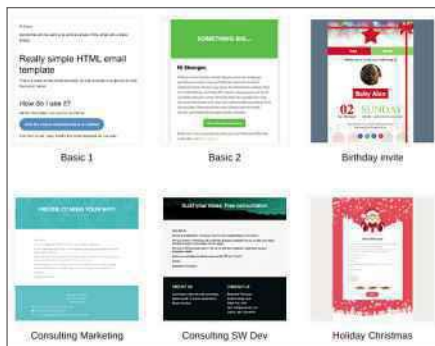
Fortunately, you can clean them up without resorting to blanket ad-blocking by using Webmail Ad Blocker, which is available for both Chrome ([bit.ly/adchrome456](http://bit.ly/adchrome456)) and Firefox ([bit.ly/adfirefox456](http://bit.ly/adfirefox456)). This extension removes banner ads from the sides of the page and sponsored links from the top when you're using Gmail, Yahoo Mail and Outlook.com. What's more, rather than leaving big empty boxes where the ads used to be, the add-on fills the gap by maximising your available inbox space. It also hides the People panel in Gmail. It certainly makes for a less irritating webmail experience.

## CUSTOMISE AND IMPROVE YOUR EMAIL

Webmail services usually keep things simple, but that doesn't mean you can't enhance them with your own personal touches. Here are three of our favourite tricks

### Personalise Gmail messages using templates

Gmail's simple interface is one of its biggest strengths, but it also makes your messages look rather plain – especially when you're wishing someone a happy birthday or inviting them to a wedding. You can make things more interesting by installing Gmail Email Templates ([bit.ly/templates456](http://bit.ly/templates456)), which lets you transform your messages using colourful, attractive templates tailored for specific types of recipient and occasion. There are templates for party invitations, legal letters, job applications and newsletters, for example, and you can customise the designs to suit your needs. Just click the Insert Template button in the bottom-left corner of a new-message window. You need to sign up with CloudHQ (see earlier tip on page 42) to use the add-on, but this is free and easy to do.

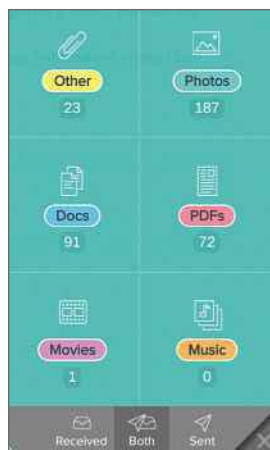


*Make your emails look more appealing by customising them with templates*

### Find attachments in your Gmail inbox instantly

For all Google's superior search capabilities, it doesn't make finding

*Dittach improves Gmail's attachment management to make finding files a doddle*



email attachments particularly easy. You can open the search options and choose to show only messages with attachments, but you can't specify the type of file you're looking for. A Chrome extension called Dittach ([www.dittach.com](http://www.dittach.com)) solves this problem by grouping all your attachments automatically, so you can instantly find files you've received, sent or both. Dittach keeps track of attachments as a chronological feed that you can filter to show only photos, PDFs, documents or other types of file. You can search within attachments from Gmail's main search box; sort them by size, making it easier to find and remove large files; and download, forward and print them without having to open the original message. The latest version introduces a handy feature called Mass Attachment Cleanup, which lets you delete all attachments that are older than a certain number of days.

To use Dittach, you must give the add-on access to your Gmail account,

but the developers promise to respect your privacy and not to make any changes to your emails.

### See exactly where messages come from

It's obviously important to know who has sent you an email, but it's also useful to see at a glance which company or website the message came from. Perhaps you can't remember the name of the customer-support person who contacted you, for example, or you suspect that a security warning may actually be a phishing scam. A Chrome extension called Gmail Sender Icons ([bit.ly/gsi456](http://bit.ly/gsi456)) makes life easier by adding sender information and an accompanying favicon (usually the company or website's logo) to every email you receive. Not only does this make your inbox and Gmail search results look more colourful, but it means you no longer have to open a message to find out which domain it was sent from, and can tell straight away if it's from a trusted source. ■



*Gmail Sender Icons shows which domains the emails in your inbox have come from*

**NEXT ISSUE**

**on sale Wednesday 5 September 2018**

**GET BETTER TV STREAMING FOR FREE**

Secret new tricks to improve your binge-watching on Netflix, Amazon Prime Video, Now TV, iPlayer and more



**PLUS...**

- **BENCHMARK EVERYTHING**  
Compare your PC's specs and speed with others
- **STOP YOUR HOME SPYING**  
What your smart devices really do with your data
- **HACK YOUR PC DESKTOP**  
Customise your screen using widgets and themes

**SUBSCRIBE TO WEB USER AT  
[SUBSCRIBE.WEBUSER.CO.UK](http://SUBSCRIBE.WEBUSER.CO.UK)**



# Which version are you running?

Do your programs need updating? What about your operating system? **Jane Hoskyn** reveals how to check all your software versions

## Check your Windows version and build

You probably know which edition of Windows you're using – 10, 7, XP or something in between. Go to [whatsmyos.com](http://whatsmyos.com) for instant confirmation and to find out if your PC's system is 32-bit or 64-bit.

To dig deeper into Windows 10, click Start and type about to open 'Device specifications' (for details of your RAM, processor and so on) and 'Windows

specifications' (for your version and build number).

The version number is based on the month of release (1709 is September 2017).

To translate this into its plain English name, visit [bit.ly/versions456](http://bit.ly/versions456) – 1709 is the Fall Creators Update, for example. The build number tells you about the latest update

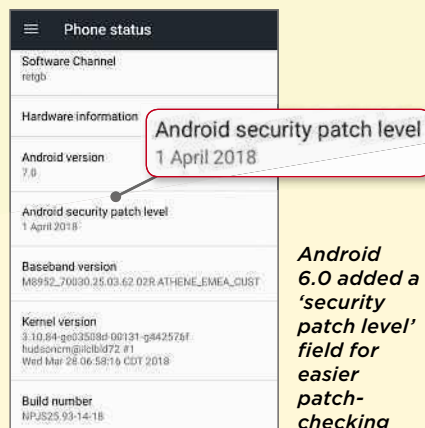
to your Windows version. Go to [bit.ly/builds456](http://bit.ly/builds456), press Ctrl+F and type your build number

to see when it was installed.

To see similar stats in Windows 7 and 8.1, go to Computer, Properties. In Windows Vista and XP, you can check the version and build number by pressing Win+R and typing winver.

## Find your Android and iOS version

Tap 'About phone' or 'About tablet' in Android Settings to find out your version and build numbers. You



Android 6.0 added a 'security patch level' field for easier patch-checking

can then match this to a name at [www.android.com/history](http://www.android.com/history) – 7.0 is Nougat, for example. The date of your latest patch is under 'Kernel version' and, in Android 6.0+, 'Android patch security level'. Tap 'Hardware information' to see your device's specification, including details of its RAM, ROM (storage) and camera.

Apple's iOS provides information that's easier to understand but doesn't dig as deep. Head for Settings, General, About to see details of your OS version, storage and installed apps. Then check for available updates under General, Software Update. Only certain devices support iOS 11 and the new iOS 12. Go to [www.apple.com/ios/ios-11](http://www.apple.com/ios/ios-11) and scroll down the page for the list.

## Discover your browser build

Go to [www.whatismybrowser.com](http://www.whatismybrowser.com) to check your browser's version and see if it needs updating (our copy of Chrome doesn't, but Firefox does – see below). This site also reveals the status of settings such as Flash, Java, cookies, ad-blocking and Do Not Track, as well as your IP address and location (although this may be inaccurate, if you've enabled certain privacy settings).

To find out more about Chrome, go to [chrome://chrome](http://chrome://chrome). Your build will either be Official (the standard version), Beta, Dev or Canary (the experimental version) and your Chrome system type will be 64-bit (which offers tighter security and more memory) or 32-bit. If the three menu dots are green, orange or red, you need an update – see [bit.ly/updatechrome456](http://bit.ly/updatechrome456). In Firefox, click the menu then Help, About Firefox to check and update your version. ■

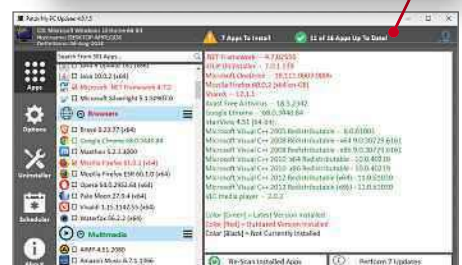


WhatIsMyBrowser.com shows our copy of Firefox isn't up to date

## UPDATE ALL YOUR SOFTWARE IN ONE GO

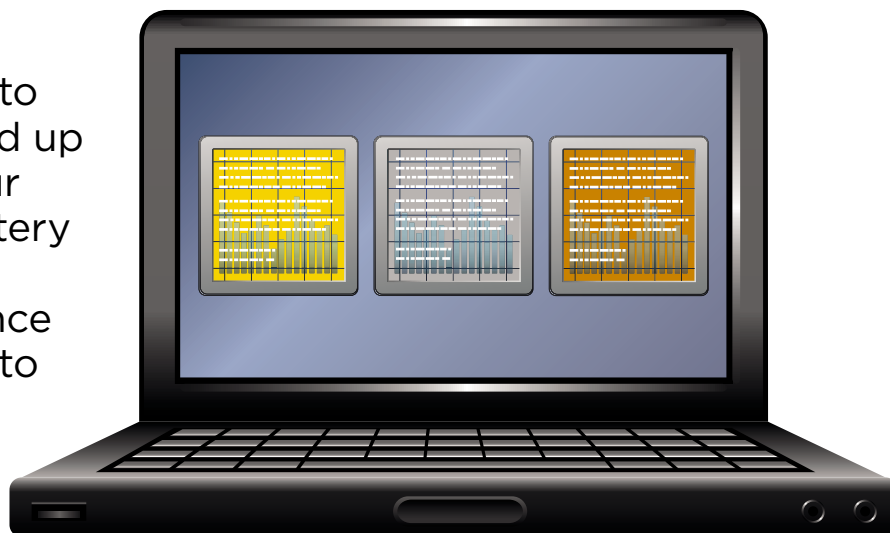
If your PC is packed with programs, you can save time and hassle by using the free, portable tool Patch My PC Home Updater ([patchmypc.net/download](http://patchmypc.net/download)) to check and update them all at once. Items in red are programs that need updating on your PC; the green ones are up to date. The rest are programs you don't have but can add to the same junk-free installer if you want (a total of 301).

11 of 16 Apps Up To Date!



# Best free alternatives to Task Manager

Task Manager is the Windows tool you turn to when you want to speed up a slow PC, optimise your boot speed or save battery power. **Steve Clark** monitors the performance of the best alternatives to Windows' built-in tool



**Wise System Monitor** | [bit.ly/wise456](https://bit.ly/wise456) | ★★★★★  
FEATURES ★★★★★ PERFORMANCE ★★★★★ EASE OF USE ★★★★★

WebUser  
GOLD  
AWARD

## What we liked:

Wise System Monitor looks and feels like a task manager fit for modern PCs, which is something even Windows' own Task Manager

struggles to do. Its smart design brings together all the tools you need to make performance monitoring comprehensive and accessible.

Each process has a large icon dedicated to it, while the information – which ranges from processor usage to send and received data counts – is given plenty of room, so you don't have to squint and scroll to see what's going on.

Two tick boxes at the bottom of the window let you filter out system or internet processes. To see every running process, untick both boxes. Tabs across the top of the screen let you inspect the workings of your hardware and operating system in detail. It's an elegant touch that marries hardware and software into a single task manager.

To kill any process stone dead, simply locate the small down arrow situated to the far-right of the process, then choose End Process. Here you can also Block Network Access or view Detailed Info for a process. Windows Task Manager lets you view properties with a right-

click, but we prefer Wise's streamlined approach.

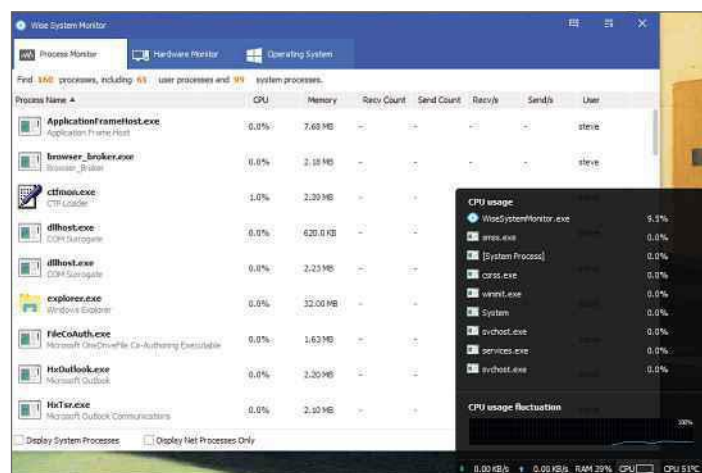
Close the main window and the tool continues to monitor processes in the background. A floating window sits unobtrusively above the notification area, listing

your ever-changing upload and download speeds, memory and processor usage, and hardware temperature. You can control processes from here, too, quickly shutting them down if necessary.

It's here that Wise excels, because it lets you drill down on details in greater depth with just a flick of the cursor.

## How it can be improved:

Wise System Monitor is easy to navigate, but we've always liked the way the Windows Task Manager categorises Apps and 'Background processes'. The main window is all but



redundant for anything more than a casual glance and for ending tasks, so you'll want to make use of that excellent floating window to control your PC's performance.

## OUR VERDICT

Wise System Monitor is a lightweight tool that performs seriously well. It lacks at-a-glance detail, but the information is there if you dig around, and this slight negative is outweighed by its clear-cut design and ease of use.

System Explorer | [systemexplorer.net](http://systemexplorer.net) | ★★★★★☆

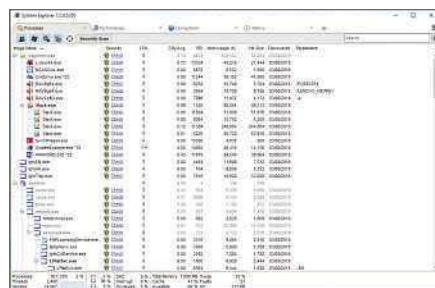
FEATURES ★★★★★ PERFORMANCE ★★★★★ EASE OF USE ★★★★★

WebUser  
SILVER  
AWARD**What we liked:**

Task Manager veterans will feel right at home with System Explorer, thanks to its old-school layout and long, ever-shifting list of processes. As with Windows' own tool, you navigate using tabs spread across the top, although these can be customised, letting you add or remove 14 additional categories from Security Info to Drivers.

Hovering over the icon in the notification area reveals everything you might want to know. You'll also find some of this information at the bottom of the main window, but simply moving your mouse over the tray icon is useful when you don't want to keep opening or tabbing across to the full tool.

Our favourite feature is 'Click and drag to select window'. Click the Crosshair located beneath the Processes tab, aim it at any open window on your desktop and System Explorer highlights the process on-screen. You can then kill, suspend, restart or prioritise it without having to scroll and search for it in the list.

**How it can be improved:**

The column of shields under the Security heading is the first thing you notice when opening the program. You're supposed to be able to view potentially threatening processes here, but when we tried this on multiple PCs while running the built-in Security Scan, we received only HTTP 500 errors.

**OUR VERDICT**

System Explorer narrowly missed our Gold Award. It's a powerful beast packed with helpful features, particularly the built-in Virus Total file checker. But we can't ignore the broken Security tool.

Process Explorer | [bit.ly/proexp456](http://bit.ly/proexp456) | ★★★★★☆

FEATURES ★★★★★ PERFORMANCE ★★★★★ EASE OF USE ★★★★★

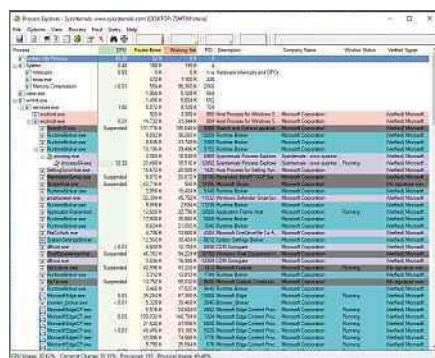
WebUser  
BRONZE  
AWARD**What we liked:**

Windows Task Manager's greatest strength is also its biggest weakness: it's light on information and is best used for closing resource-hungry apps than studying your system in depth.

Process Explorer takes an alternative path. By dispensing with most navigation tabs, it does its best to squeeze all pertinent data into the main window. It's a decent stab at increasing efficiency, but you might need a magnifying glass to make out the detail.

Despite the sheer volume of data on display, Process Explorer never feels entirely impenetrable. Each column is colour-coded, and you can add new ones like Command Line and Windows Status, and even alter fonts and colours.

One unique function is the ability to check the digital signatures of any executable file you're running (you'll need to manually switch on the Verify Image Signatures option). We also liked having the ability to kill an entire process tree at once.

**How it can be improved:**

Process Explorer's main screen is very busy, with little direction on how to explore everything on offer. To get the most out of it, investigate the community forums at [bit.ly/peforum456](http://bit.ly/peforum456).

**OUR VERDICT**

Process Explorer isn't dissimilar to System Explorer. Both have extras such as a Crosshair tool and Virus Total integration, but System Explorer's sharper interface and comprehensive process list win out.

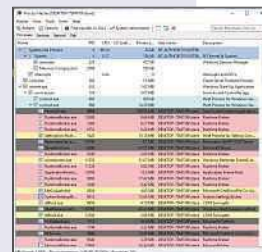
## BEST OF THE REST

**Process Hacker**[bit.ly/prohack456](http://bit.ly/prohack456)

Process Hacker is like Process Explorer's hip younger brother:

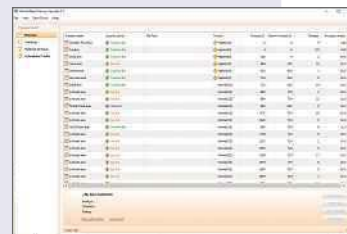
it's more refined, better looking and offers similar performance and features – but it lacks the smarts and experience of its elder sibling.

One of the handiest features is 'Scroll to new processes', which makes system monitoring a breeze. However, Process Explorer is the superior tool.

**WinUtilities Process Security**[pcclean.io](http://pcclean.io)

WinUtilities is more than just a task manager: it rolls all basic Windows utilities – such as disk cleanup, Registry backup and an uninstall manager – into a single program.

WinUtilities also offers an insanely useful function, displaying the security level of



every process running. The feature works, too, unlike System Explorer's failed attempt. As a dedicated task manager, WinUtilities is outshone by its rivals, but if you need an all-in-one system tool, it's well worth downloading.

**Daphne**[bit.ly/daphne456](http://bit.ly/daphne456)

The real appeal of open-source tool Daphne is its ability to kill processes politely. That doesn't mean it ends tasks with a please and thank you – rather, it tells the program to quit once it's finished

completing any tasks. You can also bulk-kill by typing the names of the offending processes, or drag that familiar Crosshair over a window to decide whether to Kill, Hide Application, Change Size and more.





# Switch to Lite versions

## Facebook Lite [bit.ly/fb456](https://bit.ly/fb456)

Size: 1.55MB Standard size: 185MB

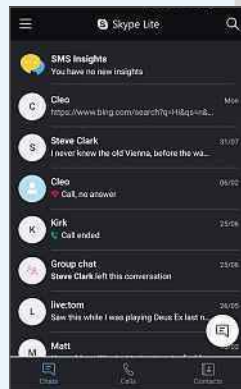
Facebook Lite's interface ditches the circles and curves of the full app for blocky squares and rectangles. Profile pictures, icons and text are smaller, too, which makes the app sleeker than its bloated big brother, even if it's not always as fast. One data-saving change is the way Facebook Lite handles photos and videos. It doesn't refresh notifications or play videos automatically, while images are low-resolution until you click them. Impressively, most other functions from the full app have been replicated in Facebook Lite.



## Skype Lite [bit.ly/sl456](https://bit.ly/sl456)

Size: 55MB Standard size: 76MB

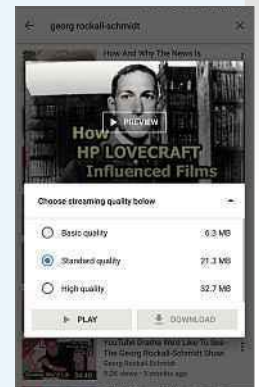
There's not much to choose between Skype and Skype Lite, which is no bad thing. As with similar Lite apps, media quality suffers, but that's all part of the data-saving initiative, which here includes showing your data usage – a feature every Lite app should have. The main difference is in its messaging options. Full-fat Skype lets you send anything, from money and GIFs to extensions from Bing, YouTube and TripAdvisor. Lite limits you to basic features such as emoji, photos, files and location. Video calling has fewer options and lower quality, but it works at a pinch.



## YouTube Go [bit.ly/ytube456](https://bit.ly/ytube456)

Size: 28MB Standard size: 87MB

Unlike Google Maps Go (opposite), YouTube Go is quite unrelated to its clunky, browser-based counterpart, and requires a VPN to install (see box, opposite). You can choose Basic, Standard and High Quality video streams and see how much data each consumes. There's also a button to share downloaded videos with friends. Beyond that, the app is limited – which is no surprise, considering how data-hungry videos are. You can't subscribe to channels, cast to devices or even 'like' videos. However, as with all the Go apps, it's a solid alternative.



## Messenger Lite [bit.ly/mess456](https://bit.ly/mess456)

Size: 18MB Standard size: 288MB

Messenger is a hefty, cluttered app for Facebook users who want to chat. Messenger Lite shrugs off the dead weight, with a single swipe bar loaded with messages, contacts and your profile. Like Facebook Lite, it doesn't load photos or videos until you tap them. However, this streamlined approach means Messenger Lite lacks popular features such as games, mobile payments and encrypted private conversations. One feature we didn't miss was 'Sponsored' messages: either we were lucky or Facebook has yet to foist them on Lite.



## Opera Mini [bit.ly/op456](https://bit.ly/op456)

Size: 25MB Standard size: 74MB

Superficially, Opera Mini and its full counterpart, Opera Mobile, look the same and offer similar tools, such as a built-in ad blocker. However, while Opera Mobile focuses on providing a full, secure browsing experience, Opera Mini prioritises speed. When you navigate to a website in Mini, Opera's servers download and compress the site before delivering it to your phone, so sites load faster with less data consumption. Using third-party servers this way makes the browser less secure, but it's no different to Opera Mobile's data-saving option.



## LinkedIn Lite [bit.ly/li456](https://bit.ly/li456)

Size: 3MB Standard size: 104MB

LinkedIn's mobile app is a drag on your battery and data, but LinkedIn Lite refines it without losing features. Both apps offer the core options – Home, Contacts, Notifications, Messages and Jobs – but LinkedIn Lite places Notifications and Messages next to the search bar, giving the app room to breathe. Profiles are stripped of unnecessary backgrounds to save data, while images are compressed and videos don't auto-play. As with Messenger Lite, there were no 'Sponsored' messages in our inbox.



# of apps

Lightweight versions of popular apps are smaller, faster and save you both data and storage space. **Steve Clark** picks the best cut-down apps

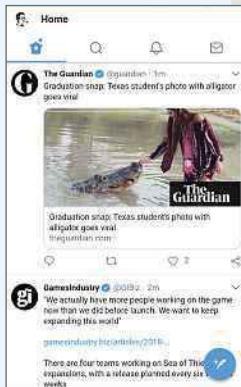


## Twitter Lite

[bit.ly/twli456](http://bit.ly/twli456)

Size: 3MB Standard size: 77MB

Twitter Lite is essentially a mobile version of the website, so you'll get exactly the same experience you would if you logged into [twitter.com](http://twitter.com). While the full app places key tabs along the bottom (ideal for one-handed tweeting), the Lite version (which requires a VPN to install) shifts these to the top of the screen. Aesthetically, that's the only real change. You can still see trending topics, retweet quips and use the floating New Tweet button to let the world know what flavour crisps you've just eaten. The real changes are under the hood – the app is designed to run well on low-spec smartphones, using cached data and compressed images.

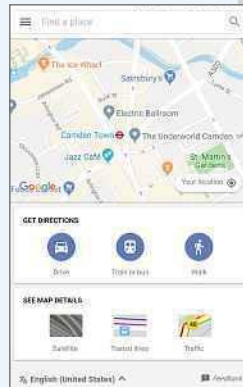


## Google Maps Go

[bit.ly/gmap456](http://bit.ly/gmap456)

Size: 287KB Standard size: 120MB

Google Maps Go is part of Google's special 'Go' range of lightweight apps that are preinstalled on basic Android Go devices. Like Twitter Lite, Google Maps Go is a Progressive Web App – a cut-down version of the website squeezed into an app. As such, you have to accept a few compromises if you use Google Maps Go. You won't find many of the useful extras Google Maps provides, such as offline maps, sat-nav and location sharing, or the data-sapping 'For you' and recently redesigned Explore modes (see our workshop in Issue 454, [bit.ly/webuser454](http://bit.ly/webuser454)). But if you need to get from A to B, it does the job without fuss (or excessive data usage).

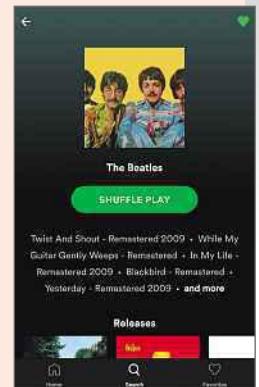


## Spotify Lite

[bit.ly/spot456](http://bit.ly/spot456)

Size: 15MB  
Standard size: 105MB

Spotify Lite is, ironically, too lightweight to be effective, having been stripped back to the point of near-uselessness – especially for Premium subscribers. Clicking an album in the full Spotify app brings up a track list with options to save, add to playlist, share and so on. In Spotify Lite, there's just one option: Shuffle Play. And you can forget about viewing songs on the album, beyond a few that are squashed beneath the artwork. Bizarrely, you can't even download tunes to listen to offline, which surely defeats the purpose of a lightweight app designed to stop you chomping through data on the go.



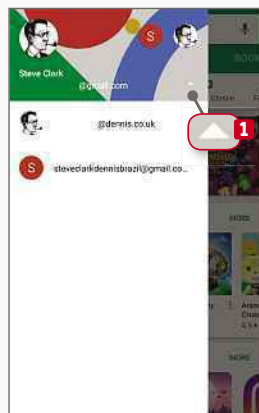
## MINI WORKSHOP | How to download Lite apps using a VPN

Many Lite apps are developed for use in Asia and South America, so people in the UK need to use a VPN to download them from the Google Play store. Most VPN apps offer a free trial, which is perfect for this task

**1** First, set up a dummy Gmail account so that Google Play doesn't know you're based in the UK. Once you've done that, go into your phone's Settings. Select 'Users & accounts', 'Add account'. **1** Tap the Google icon **2** and sign in with your new Gmail address.



**2** Open your Android VPN app and use it to connect to a location where the app you want is available (Brazil is a good option). In the Google Play Store, switch accounts by pressing the three-line menu and tapping the arrow **1** next to your default account address.



**3** Google checks your IP address to determine the default country, so you should now be able to find and download your app from the Play Store. Once you've completed the process, disconnect the VPN and remove your dummy account.





# Practical WebUser

16 pages of workshops, tips, projects and problem solving

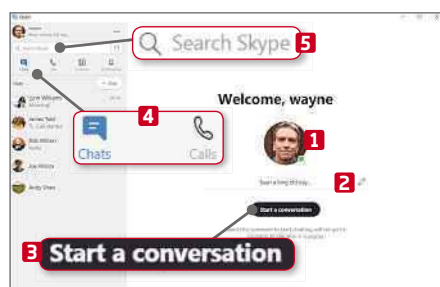
## Get to know the new Skype 8

Microsoft has updated its hugely popular chat tool with a new look and new features. Here's what you need to know to get started

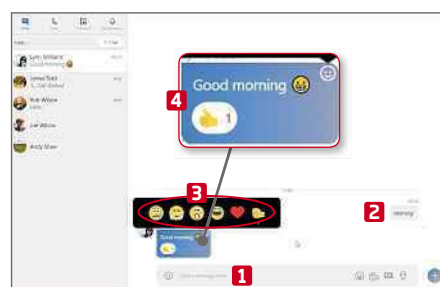
Skype: [bit.ly/skype456](https://bit.ly/skype456) | ⌚ 10 mins | 🖥️ Windows 10

**S**kype has been available in two versions for the past year, as Microsoft tries to persuade users to move from Skype 7 (also known as Skype Classic) to Skype 8. Although the company said it would close Skype 7 on 1 September, it changed its mind following a backlash from users, and will now continue to support the software

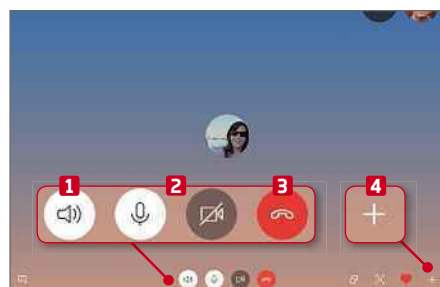
“for some time”. However, it has added some tempting new tools to Skype 8 to entice us to switch, including HD video calls with up to 24 people and the ability to share large files. It plans to add further tools, too. Although they weren't available at the time of writing, read receipts, private conversations and call recording are all expected soon.



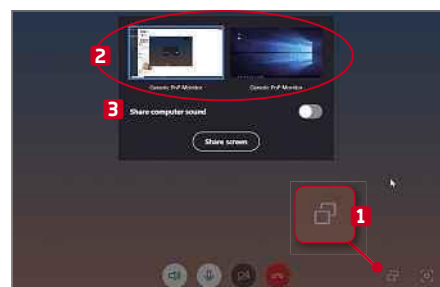
**1** The new version of Skype is easy to use. From the opening screen, you can change your photo, **1** edit your mood message **2** or start a new conversation. **3** You can also view past chats and calls, **4** and search Skype for other people you know. **5** Search results update as you type.



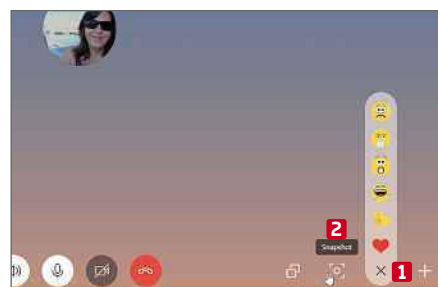
**2** To chat with someone, simply click their name and type a message. **1** The conversation unfolds above. **2** You can quickly respond with one or more emoji by clicking the smiley face icon and selecting one of the available options. **3** Both of you will be able to see the emoji you have sent. **4**



**3** You can switch to an audio or video call at any time by clicking the phone icon at the top of the screen. During a call, you can adjust the volume, **1** enable or disable audio and video, **2** and hang up. **3** You can also quickly add additional people to your call. **4**



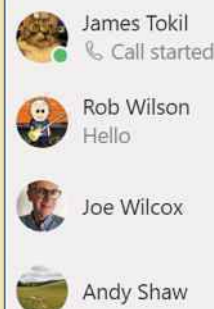
**4** The Share Screen button lets you show the contents of your screen to the other caller **1** so they can see what you're doing. If you have more than one monitor, you can choose which one to share. **2** You can also opt to share sounds as well as pictures. **3**



**5** Click the 'Show reactions' button during a call to send an emoji to someone. **1** You can also take a snapshot of your screen. **2** This appears in the call window, and you can close it, swipe it away or view it full screen – either by yourself or with other callers.

### CONTACTS

Explore the list of people you know, or invite more people to Skype







## SETTINGS

Click the three-dot menu to access the Application Settings, and the Audio and Video Settings screens. You can also sign out of your account

Here's that photo from the other day!

Lynn, 08:54

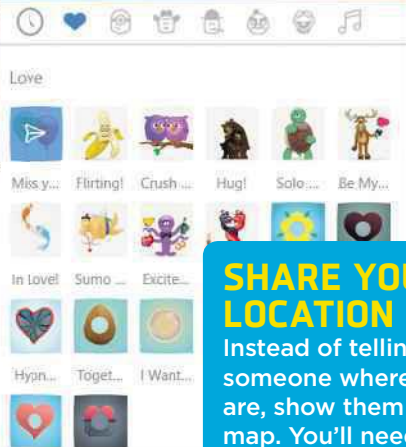


Lynn, 08:55



Type a message here

Search

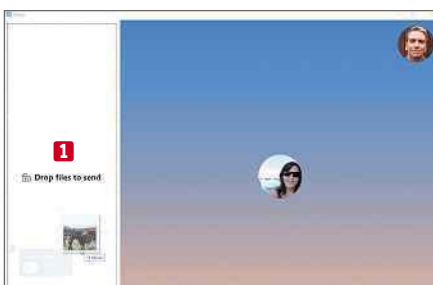


## SHARE YOUR LOCATION

Instead of telling someone where you are, show them on a map. You'll need to give Skype permission to access your location details

## MOJI PICKER

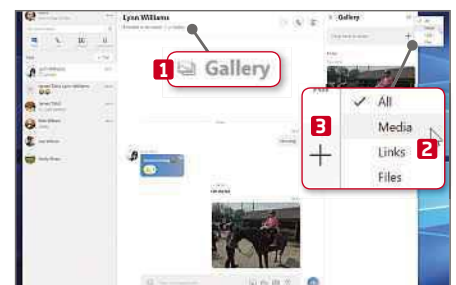
Click here to choose and send 'Mojis' during a chat. Explore the options using the bar at the top of the picker



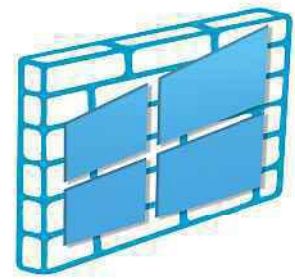
**6** You can easily share photos, videos and other files – up to 300MB at a time – by dragging and dropping them into the chat window. **1** If you receive a file, click it to open it. If it's a photo, you have the option to download it, open, copy or remove it.



**7** Another new feature lets you grab someone's attention in a group chat by typing the @ symbol followed by their name. **1** Select the person in the window. **2** They will receive a notification in Skype and also in Windows if they're using it. Their mention will also appear under Notifications. **3**



**8** The new gallery makes it easier to find links, documents and photos that have been shared in a conversation. Select a contact and click the Gallery link **1** at the top. You can filter the list by file type, **2** and add items to share by dragging them into the gallery or clicking the plus sign. **3**



# Boost Windows Firewall with advanced tools for free

Windows Firewall Control: [bit.ly/wfc456](http://bit.ly/wfc456) | 20 mins | Windows 7, 8, 10

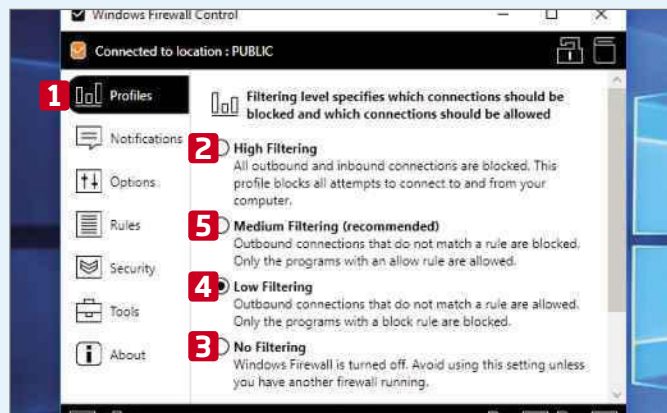
Some people like to buy an all-in-one security suite, while others prefer to use free software to build their own protection. If you're in the latter camp, you've probably got a preferred anti-virus tool, but what do you do about the firewall? Windows' built-in firewall is adequate as a first line of defence but doesn't offer all the fine-tuning options you'd expect to find in a paid-for program.

Fortunately, you can bolster the Windows Firewall with Windows Firewall Control, a handy tool that integrates with it perfectly and provides much greater control over its settings. Until recently, you had to pay \$10 (£7.75) to access all the software's features, but since June, when Malwarebytes bought the software, it's been completely free. Here, we show you how to set up the program and get the most out of it.

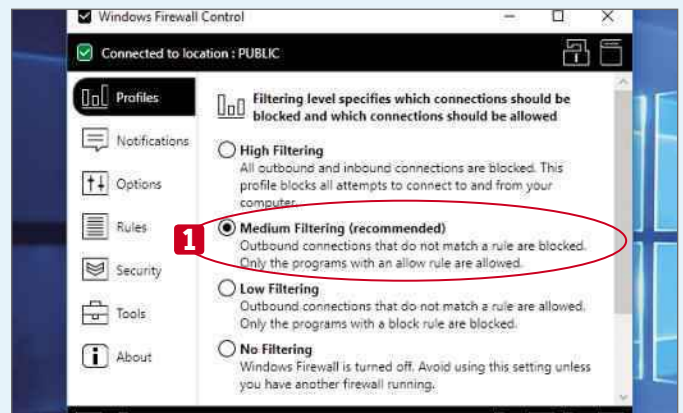
## EXPERT TIP

### Andy Shaw says

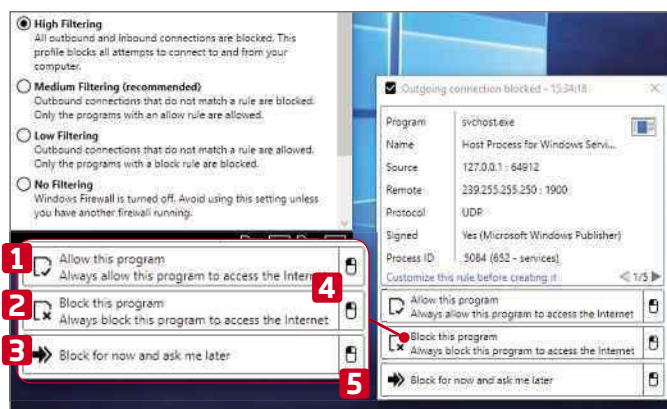
One of the differences between the previous free version of Windows Firewall Control and the new version is that you can now switch on notifications. This means you'll see more of the firewall's inner workings, which can help you understand what it's doing. To see them, select the Notifications tab and choose 'Display notifications'.



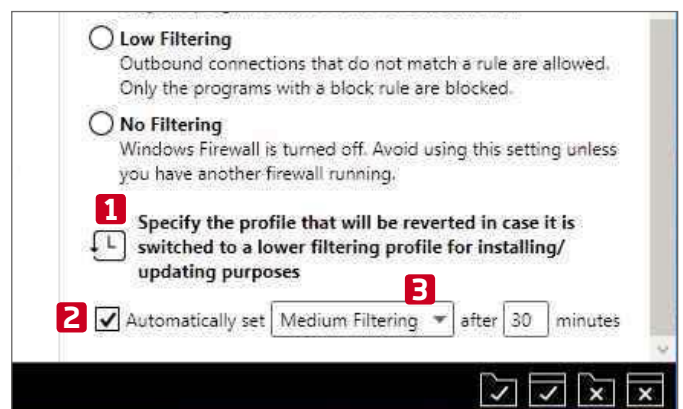
1 There are four basic settings to choose from on the Profiles tab. 1 High Filtering 2 blocks all connections in and out of your PC, while No Filtering 3 lets everything through. Low Filtering 4 allows outbound connections that don't have rules (see Step 5), while Medium Filtering 5 blocks them.



2 We'd recommend setting the firewall to the Medium Filtering level. 1 This has been sensibly configured to allow trusted software that's been digitally signed (indicating that it hasn't been tampered with since the author finished with it) to do what it wants, and should mean that the firewall won't bother you unless it has to.



3 If an unknown program tries to make a connection, a pop-up appears. Provided you know what you're doing, you can control its network access by clicking Allow, 1 Block 2 or 'Block for now'. 3 The mouse icons next to the top two options 4 let you temporarily Allow or Block, while the bottom mouse icon 5 excludes the program from notifications.

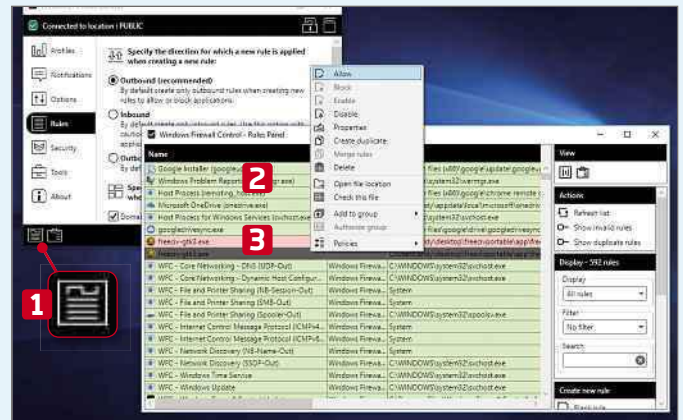


4 When installing new software, you may find you want to reduce the security level if the firewall is blocking something you know is safe. Scroll down to 'Specify the profile...', 1 tick the box next to 'Automatically set' 2 and choose the profile you want to return to and when - giving yourself enough time to install the software. 3

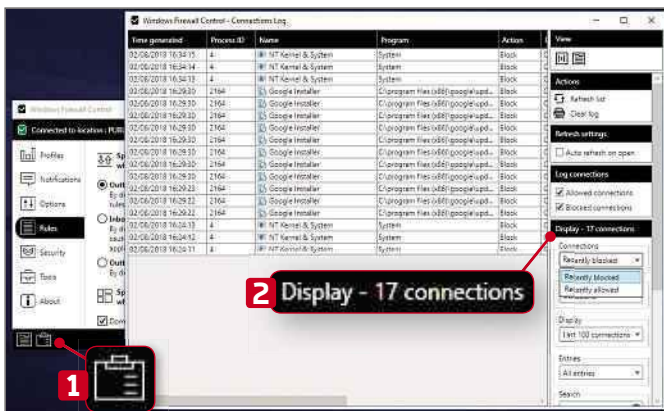




**5** The Rules tab **1** lets you specify how you'd like the firewall to treat new connections. The recommended option is Outbound, **2** which means that if you add a trusted program, it's only trusted to send information out. If you want data to flow back to your PC, you need to set up an Inbound rule, too.



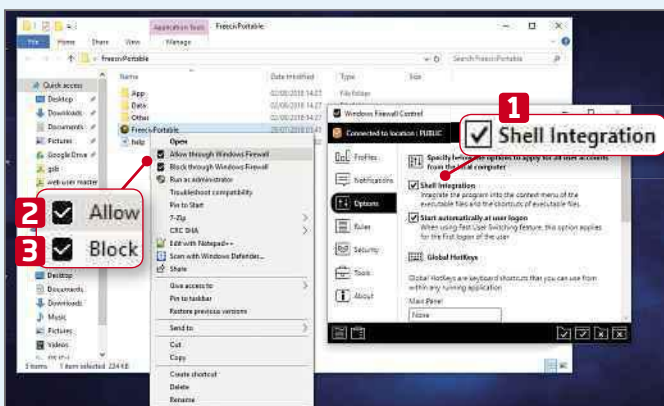
**6** To change an existing rule, click the Rules Panel button. **1** This displays every rule, with permitted connections in green **2** and blocked ones in red. **3** Some of these rules will have been created by Windows Firewall before you started using this software. If you want to make changes, right-click and choose an option from the menu.



**7** If you'd like to see what the firewall has been up to, click the Connections Log button. **1** Press F5 to refresh the page, which downloads a log of the last 100 firewall activities. Use the Display section **2** to choose which types of activity you want to see, such as 'Recently blocked' or 'Recently allowed'.



**8** Right-click the notification-area icon in the taskbar to access shortcuts to the Main Panel, **1** the Rules Panel **2** and the Connections Log. **3** You can also change the Profile **4** from here without having to open the software at all.



**9** You can integrate the Firewall's tools into Windows' right-click menu, which lets you apply rules to executable files straight from Explorer. Tick the Shell Integration box **1** in the Options tab. When you next add a new program, you can set the firewall's rules by right-clicking its EXE file and choosing Allow **2** or Block. **3**



**10** If you ever need to reset or reinstall Windows, you won't have to go through the rigmarole of setting up your firewall rules all over again. Open the Rules tab, scroll down and click 'Export Windows Firewall rules to a file'. **1** Once you've reinstalled everything, you can import your rules again. **2**



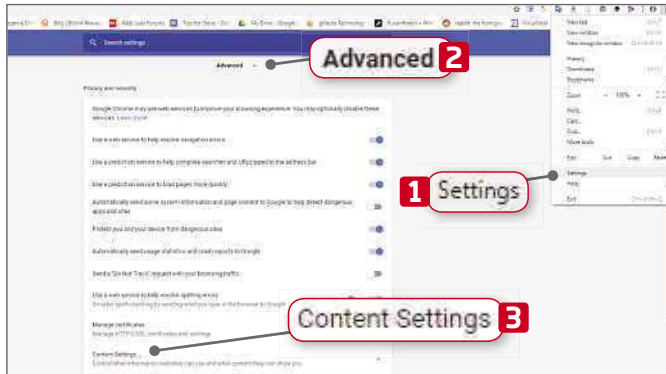
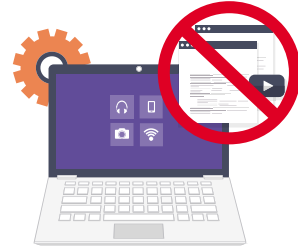


# Block annoying website notifications

It's not just emails and messages that distract you with annoying alerts – now websites demand your undivided attention by sending push notifications, whether you're currently on that site or not. If you've had enough of these

unwarranted site notifications breaking your online flow, here's how to block sites requesting desktop access and quieten any PC browser once and for all.

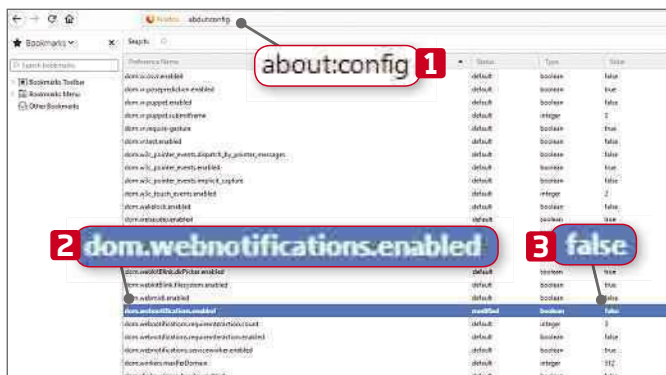
**Browser settings** | **10 mins** | **Chrome**, **Firefox**, **Opera**, **Edge**



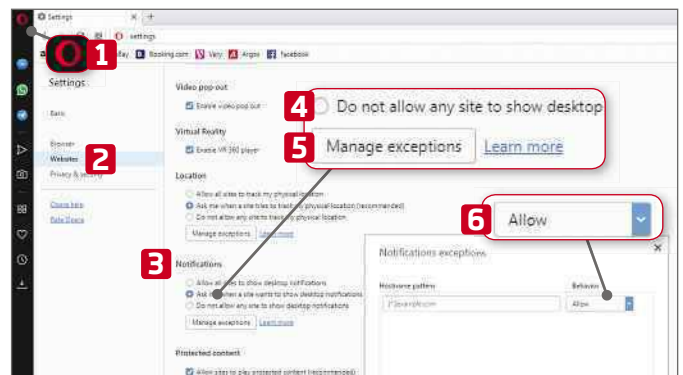
In Chrome, open the three-dot menu button and choose Settings. **1** Scroll down the page and click Advanced **2** to reveal additional options. Under 'Privacy and security', click into Content Settings **3** to show settings for managing pop-ups, cookies and more.



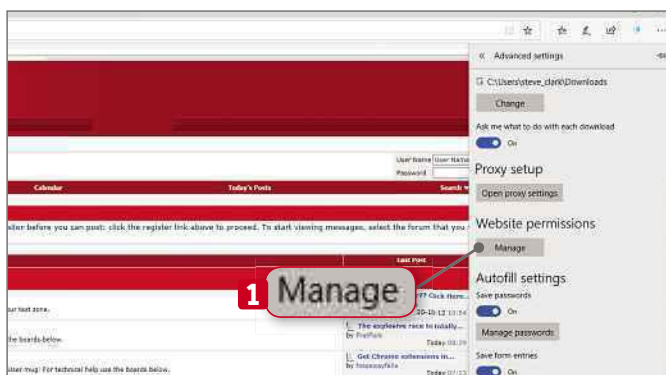
Open Notifications and set the switch for 'Ask before sending' to Blocked. **1** Whitelist or blacklist individual sites by clicking the three vertical dots beside existing sites and choosing Allow or Block. **2** Or press the main Add button, **3** then manually type the address. Click Add **4** to save.



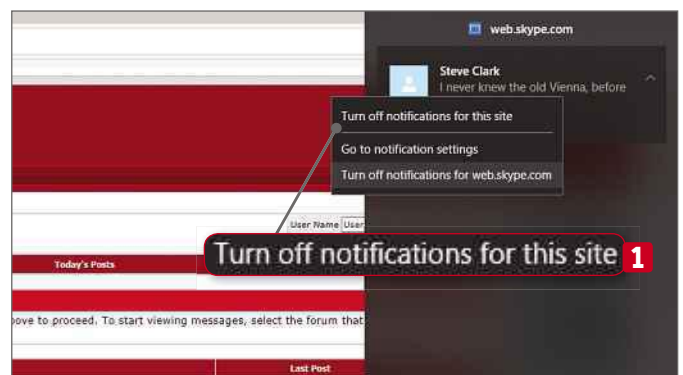
In Firefox, type `about:config` in the address bar **1** and click 'I accept the risk!' to proceed. Scroll down to find `dom.webnotifications.enabled` **2** and `dom.push.enabled`. You need to double-click both these settings – the Value changes from 'true' (on) to 'false' (off). **3**



Click the 'O' logo for Opera's Settings. **1** Click Websites **2** and scroll to Notifications. **3** To block all notifications, tick 'Do not allow any site to show desktop notifications'. **4** For specific websites, click 'Manage exceptions' **5** and add websites. Use the drop-down menu to Allow or Block. **6**



You can't block all Edge notifications – when 'Let [site] show notifications?' pops up, select No. If you've let a site send notifications, you can switch it off: click Edge's three-dot menu, select Settings, 'Advanced settings', then Manage. **1** Click each listed site to toggle permissions on or off.



Another way to block Edge notifications on a site-by-site basis is to wait until you receive a notification from a site on your approved list. Open the Action Centre, right-click the notification and choose 'Turn off notifications for this site' **1** to stop site-specific notifications in their tracks.

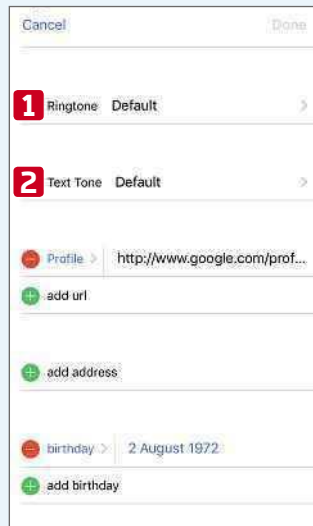


# Feel who's calling and messaging you

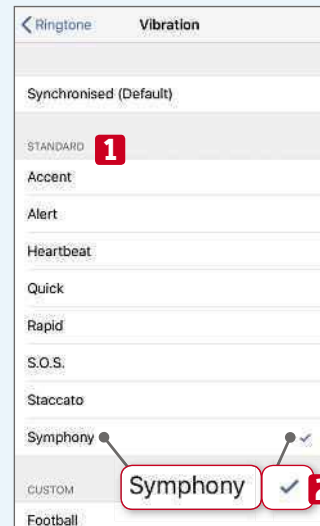
Many of us keep our phones silent and in our pockets so they don't disturb others, but this means that when your phone starts vibrating, you can't tell who's calling until you check your device. However, you can set

**Good Vibrations:** [bit.ly/goov456](http://bit.ly/goov456) | 10 mins | iOS Android

your phone to use custom vibration patterns when a specific contact calls, thanks to a feature built into iOS and available through an Android app.



**1** The ability to set custom vibrations for contacts is built into the iPhone. Open Contacts and find the person you want to assign a vibrating pattern to. Tap Edit and scroll down to Ringtone **1** and Text Tone. **2** Tap Ringtone, then tap Vibration, which will probably be set to Default.



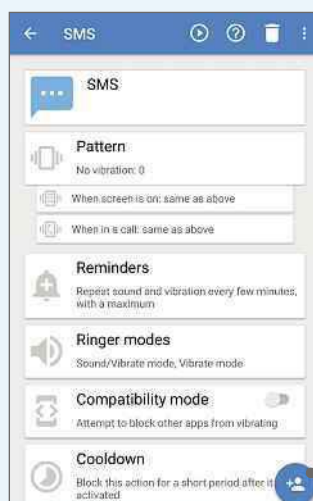
**2** There's a selection of predefined Standard vibration patterns to choose from. **1** Tap one to try it out. If you like it, leave it selected **2** and your phone will use it the next time that contact calls. Now go back two screens and make the same changes in the Text Tone options, so you get the same vibration pattern when you receive a message from that contact.



**3** If you don't like any of the Standard options, you can create a custom vibration. In the Vibration menu, scroll down to Create New Vibration and tap it. Tap your pattern in the grey box. **1** You can do a quick tap for a short vibration, or hold your finger down to create a longer one. Tap Stop **2** if you finish your pattern before the record time has run out. **3**



**4** Tap Play to replay your pattern or Record to erase it and start again. Tap Save **1** if you're happy with it. You'll need to give the pattern a name and tap Save again. **2** You can then select the recorded pattern in both the Ringtone and Text Tone option screens.



**5** In Good Vibrations on Android, tap the '+' symbol in the bottom-right corner, and select an action for either a call, text, picture message or app. Grant the app any permissions, if necessary. On the Action screen, tap the Add Contact symbol. **1** This opens your Contacts list.

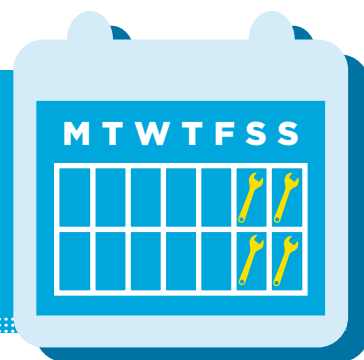


**6** Scroll through your contacts and tap a name to assign a pattern. The app asks you to choose a preset vibration or create a new pattern. Tap New Pattern, followed by the '+' symbol. **1** You can manually enter the length of vibrations and pauses, or tap out your own unique pattern.



# Weekend Project

Get to grips with some serious tech tinkering to boost your computer and other devices



How to...

## Run Windows software on an Android device

Wayne Williams demonstrates how to run some of your favourite Windows programs on Android – and vice versa

**W**indows and Android are very different operating systems: one is designed for desktop and laptop computers (and some tablets), while the other is mostly for mobile devices. Programs made for Windows don't run on Android, and apps designed for Android won't work on Windows. At least, that's how it's supposed to be – but some enterprising developers have proved that where there's a will, there's a way. In this issue's Weekend Project we show you how to run some (but by no means all) of your favourite Windows programs on Android, and also how to run Android apps on Microsoft's operating system. For good measure, we even look at how to run Windows software on a Chromebook.



### Run Windows software on Android

Most people don't realise that Android is based on Linux, just as Ubuntu and Red Hat are. That's probably because Google's mobile operating system is a world away from Linux desktop operating systems. All they really share in common is the kernel – the central component that operating systems are built around. Android lacks the

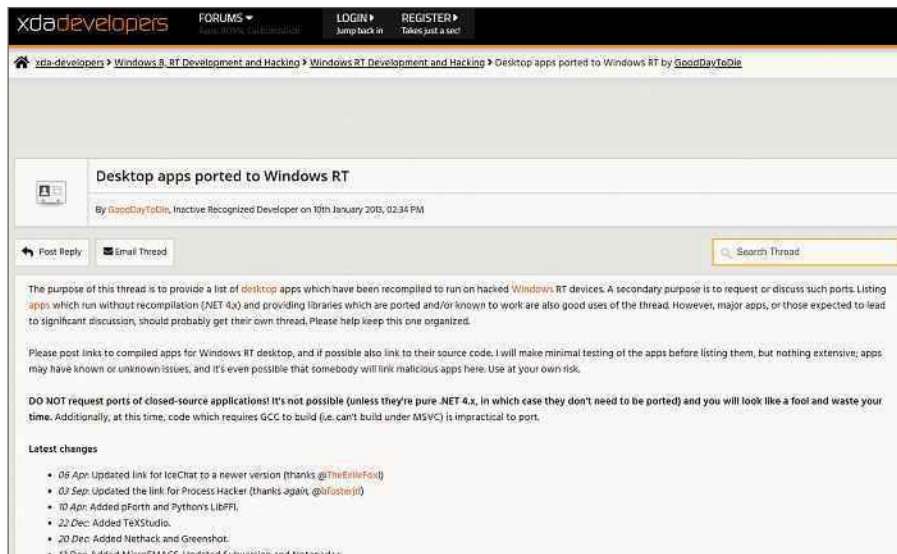
libraries and software you find in most versions of Linux, which is why it can't run Linux software.

Windows has even less in common with Linux because it runs on the Windows kernel, but it's still possible to use Windows software on Linux, thanks to a program called WINE ([www.winehq.org](http://www.winehq.org)). WINE (a recursive acronym that stands for 'Wine Is Not an Emulator') is an open-source 'compatibility layer' that

runs most Windows programs flawlessly as if they were running on Microsoft's OS. What's more, you can use WINE as the default installer for your Windows programs, saving you the hassle of configuring them yourself.

The latest version, WINE 3, includes an Android graphics driver, which means you can run some Windows software on Google's mobile OS. It's not guaranteed to work with all versions of Android





### Look for programs you can run on the XDA Developers Forum

(Oreo devices only seem to display a grey screen), but the chances are your handset has an ARM processor, which means it should be able to handle the software. A further limitation is that it can only run Windows software that has been ported to Windows RT. This means the list of compatible programs is far from exhaustive, but it includes some good ones, such as Paint.net ([www.getpaint.net](http://www.getpaint.net)), Audacity ([www.audacityteam.org](http://www.audacityteam.org)), KeePass Portable ([keepass.info](http://keepass.info)) and games including Doom ([bit.ly/doom456](http://bit.ly/doom456)), Quake 2 ([bit.ly/quak456](http://bit.ly/quak456)) and OpenTTD ([www.openttd.org](http://www.openttd.org)). You can browse the full selection in a thread on the XDA Developers Forum ([bit.ly/xdaf456](http://bit.ly/xdaf456)) and download programs from there too, which are more likely to work than versions downloaded directly from a developer's official site.

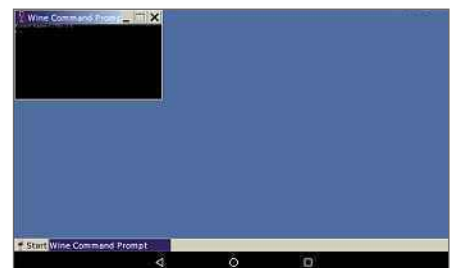
You can't simply install WINE on your Android device from Google Play, either, which means there are a few steps (and hoops) you'll need to go through to get started. We show you how to get WINE on your device in our Mini Workshop, below, and how to install software in our Mini Workshop on page 61.

You may need to use an external keyboard to type in WINE because the virtual keyboard doesn't appear in the app. An external mouse could come in handy, too, because WINE's buttons are likely to be very small, depending on the size of the screen you're running it on.

If you have these things lying around, it's worth giving this project a go, but we wouldn't recommend buying extra peripherals until you've tried it out. It's a brilliant experiment, but programs such as Paint.net aren't designed to run on a



Older games, such as Doom, work well in the Android version of WINE



You can launch programs using the Command Prompt or the Start button

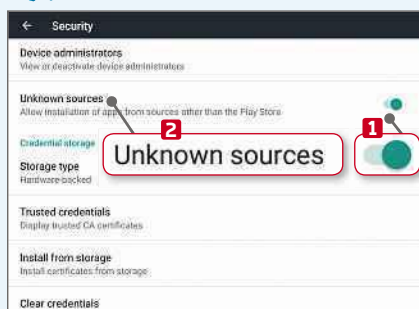
screen the size of a phone, and we had some stability issues. Running Windows programs in Android might impress your mates, but you won't be throwing away your PC and running everything from your phone any time soon.

### An alternative path

Another way to install a Windows program in WINE is to download it to your device and enter the path to the software in WINE's Command Prompt. For example, type `cd sdcard/Download/[program.exe]` if you're installing a program from the SD card. You'll need a Bluetooth keyboard for this.



## MINI WORKSHOP | Install WINE on your Android device



**1** Before you can install WINE on your phone or tablet, you must allow your device to use apps from unknown sources. Open Settings and go to the Security options (the exact name depends on which version of Android you're running). Activate the switch **1** next to Unknown Sources, **2** and accept the risks in the warning.







**2** Now you're ready to install WINE. Go to [bit.ly/wine456](http://bit.ly/wine456) on your Android device and tap the first entry in the list. **1** The APK version of the app will begin to download. When it's finished, pull down the notifications menu and tap the download in the list to install it.



**3** You need to give WINE the permissions it asks for, **1** which include recording audio and reading and modifying the contents of your SD card. If you're happy to continue, press Install. **2** When installation is complete, return to the Home screen and press the WINE icon to launch the software.

# Broadband Deals

Call FREE on 0800 083 2357 to switch your broadband

	Provider	Package name	Monthly price	Contract length	Broadband speed	Allowance	First-year cost*
1		TalkTalk: Broadband	<b>£17.00</b> (£27 after 12 months)	12 months	<b>11Mbps</b> avg. speed	∞ unlimited	<b>CHEAPEST</b> <b>£204.00</b>
2		Sky: Broadband	<b>£25.00</b> (38.99 after 18 months)	18 months	<b>36Mbps</b> avg. speed	∞ unlimited	<b>£300.00</b>
3		First Utility: Broadband	<b>£29.99</b>	18 months	<b>63Mbps</b> avg. speed	∞ unlimited	<b>£359.88</b>
4		Virgin: Broadband	<b>£40.00</b>	12 months	<b>108Mbps</b> avg. speed	∞ unlimited*	<b>£480.00</b>

Terms & Conditions apply - see ISP sites for details

\* Fair-usage or restriction policy applies.

Data supplied by [www.broadbandgenie.co.uk](http://www.broadbandgenie.co.uk). Correct as of 8 August 2018.

**Ofcom**

Broadband Genie's helpline is powered by Simplify Digital, the Ofcom-accredited switching service

## In the next issue of our sister title Computeractive...

**NEW  
LOOK!**

Computer  
**active**

**YOUR FAVOURITE FREE SOFTWARE - IMPROVED** Secret tricks for enhancing the programs you use every day

- Windows Registry: hidden hacks to beat Microsoft's restrictions

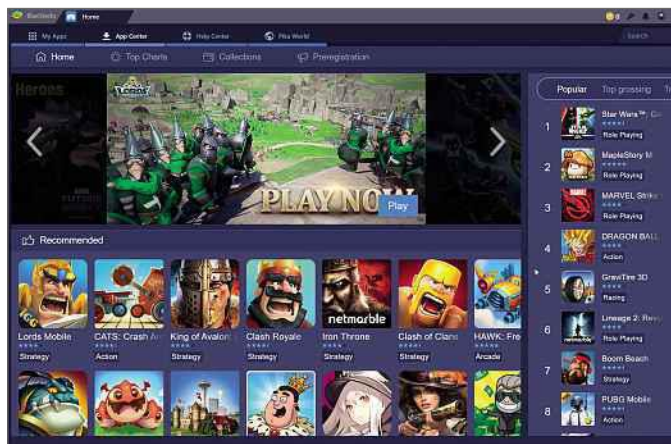
- Block programs that slow your home Wi-Fi
- Share photos, videos and music on a NAS drive

**PLUS...** VPN secrets: the best tricks you didn't know were possible

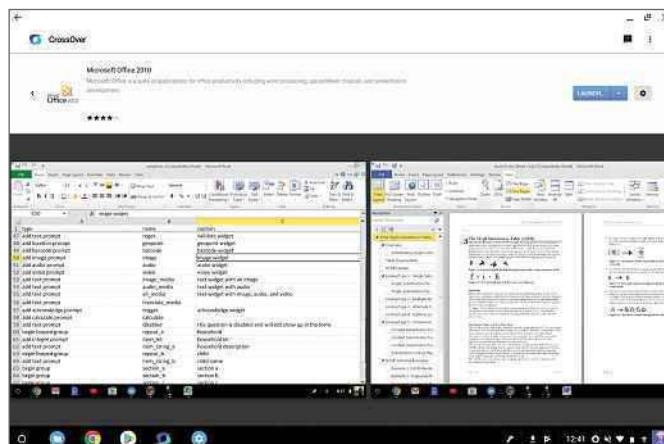
Subscribe at [www.getcomputeractive.co.uk](http://www.getcomputeractive.co.uk)

**On sale  
Weds  
29 Aug**





**Bluestacks lets you download and play Android apps on a Windows PC**



**CrossOver provides an easy way to run Windows software on a Chromebook**

## Run Android apps on Windows

Running Android software on Windows is much easier. All you need is an Android emulator such as Bluestacks ([www.bluestacks.com](http://www.bluestacks.com)) or MEmu ([www.memuplay.com](http://www.memuplay.com)). These emulate Google's mobile operating system on your PC, and you can run any Android app you like on them. You can either run apps that are available on Google Play, or sideload apps you've downloaded in Android Application Package (APK) format from the developer's site.

Bluestacks is the best-known of the emulators and even comes with a few popular Android apps installed, such as Google Photos, Facebook and Instagram.

Another emulator to consider is NoxPlayer ([www.bignox.com](http://www.bignox.com)), which works in the same way and delivers fast

performance, making it particularly suitable for playing Android games.

If you want to experiment with cross-platform software, this is an easier and more satisfying option than running Windows on Android, particularly if you like free games, because there is a much better selection of games and apps available on Google Play than there is in the Microsoft Store.

## Run Windows programs on a Chromebook

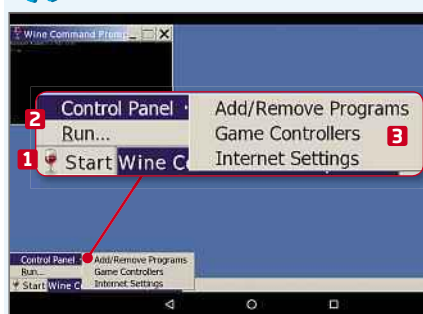
Chromebooks run Google's cloud-based operating system Chrome OS. They can run most online applications, including Microsoft Office Online, but you can also run some Windows programs on Intel-based Chromebooks using CrossOver ([bit.ly/cross456](http://bit.ly/cross456)). The software

is currently in beta, which means it's not completely stable and can feel slow at times, but it's still worth trying. To use it, install the app from Google Play ([bit.ly/cover456](http://bit.ly/cover456)) and give it the permissions it needs. Use the search bar to look for the Windows programs you want to install. Selecting the software may be all you need to do to begin the installation, but some programs require you to take further steps. If you want to see the process in action, watch the YouTube video at [bit.ly/covid456](http://bit.ly/covid456).

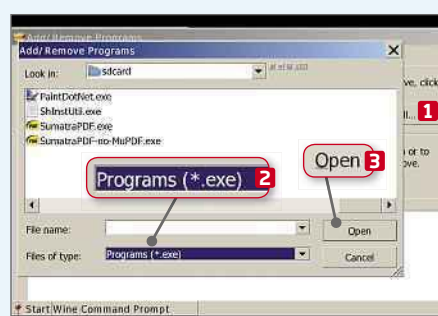
It's important to remember that Windows programs, unlike Chrome OS apps, are often large, and Chromebooks tend to come with relatively little storage space, so you may find you don't have enough room to install as many Windows programs as you'd like. ■



## MINI WORKSHOP | Install Windows software on Android using WINE



**1** When you open WINE, you'll see a classic Windows-style desktop, complete with a tiny Start button. **1** Tapping this gives you two options: Control Panel and Run. **2** Tap Control Panel to open Add/Remove Programs, Game Controllers or Internet Settings. **3**



**2** To install a Windows program, download it on your Android device (or copy it from your PC), making a note of where you save it. Then go to Start, Control Panel and select Add/Remove Programs. Press the Install button **1** and change 'Files of type' to 'Programs (\*.exe)'. **2** Select your Windows program and press Open. **3**



**3** If you're lucky, WINE will install the software and you'll be able to launch it. If not, you'll see some error messages. **1** You can attempt the process again, or install and run a different program. If you're having trouble, check that you've downloaded the Windows version of the program and not the Linux one by mistake.

**NEXT ISSUE**

**How To...** Add USB-C to your computer

On sale  
Wednesday  
5 Sept



# SUBSCRIBE NOW!



Subscribe to **Webuser** today and save on the single issue price.

Each issue of **Webuser** will be delivered directly to your device each fortnight.

SEE NEXT PAGE FOR SET-UP INSTRUCTIONS

# ▶ HOW TO SUBSCRIBE...

## ...on an iPad or iPhone

- STEP 1** Return to the [Web user library](#)
- STEP 2** Choose your subscription term and tap twice on the '[price](#)' box
- STEP 3** Choose whether to create an optional [PixelMags](#) account
- STEP 4** Enter your [Apple ID password](#) to confirm



## ...on a Kindle Fire

Kindle Fire subscriptions come with a [FREE](#) one month trial.

- STEP 1** Tap '[Free Trial Subscription](#)' in the [Web user library](#)
- STEP 2** Chose your subscription term from the drop down menu on the popup that appears
- STEP 3** Tap '[Subscribe](#)'



## ...via the Zinio app

- STEP 1** Search for [Web user](#) via the search box in the [Shop tab](#)
- STEP 2** Tap the '[Subscribe](#)' button
- STEP 3** Choose whether to create an optional [Zinio](#) account
- STEP 4** Enter your [Apple ID password](#) to confirm



**Subscribe to *Web user* today and  
save on the single issue price**



# Web User Masterclass

## Automate settings and actions on Android and iOS devices

### Don't let your phone disturb your sleep

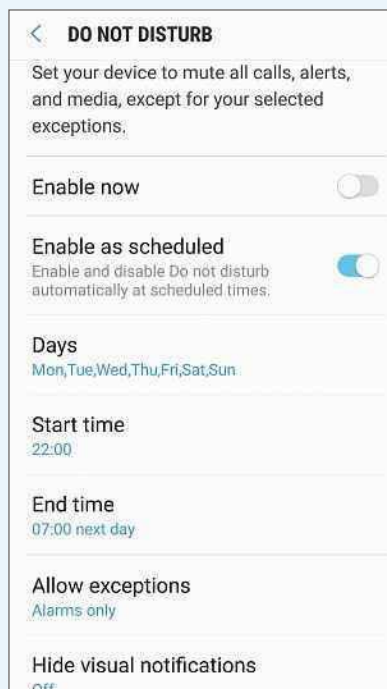
**S**leep better by disabling the rings, beeps and buzzes from texts, calls and other notifications using your phone's 'Do not disturb' feature. You can enable it manually, but it's easy to forget, so automate it instead.

On Android, go to Settings, 'Sounds and vibration', 'Do not disturb' and turn on 'Enable as scheduled'. Options appear that let you choose the days and times you want notifications disabled. Set it to start when you normally go to bed and to stop when you rise.

On your iPhone, go to Settings, tap Do Not Disturb and switch on Do Not Disturb and Scheduled. Tap the times next to From and To, and set them to the hours you usually sleep.

Both Android and iOS let you define exceptions, such as alarms and calls from family members.

*Schedule Do Not Disturb to get an uninterrupted night's sleep*



Which setting is best? Just automate it, depending on what you're doing. Select 'Adaptive display' and the screen sharpness, colour and saturation settings will automatically adjust to your screen's content and ambient lighting.

### Adapt to bright conditions

If you're struggling to see your phone's screen on a sunny day, don't manually adjust the brightness setting – solve the problem using automatic adjustment.

On Android, go to Settings, Display and turn on 'Auto adjust brightness'. On your iPhone, go to Settings, General, Accessibility, Display Accommodations and turn on the Auto-Brightness switch.

### Auto-connect to Wi-Fi

Phones automatically connect to Wi-Fi networks you've used before, but in places where you know the passwords for multiple networks, such as a shopping centre or even at home if you have dual-band Wi-Fi, you might want to automatically connect to one and not another.

Android users should open Settings and press WiFi, Advanced, 'Manage networks' and tap a network. Use the 'Auto reconnect' tickbox to choose whether to automatically connect or ignore it. On iOS, go to Settings, Wi-Fi and tap the 'i' next to a Wi-Fi network. Turn Auto-Join on or off as required.

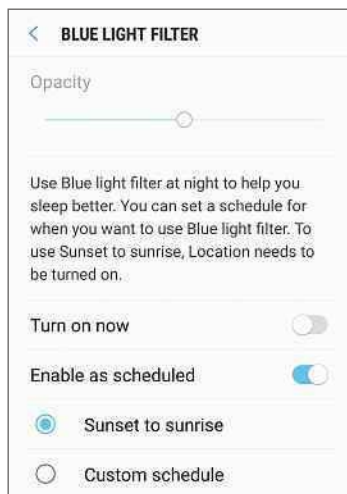
### Keep the screen on

Your device's screen uses a lot of battery power so it's usually set to automatically switch off when it's not

If you see words that look like they've been typed in a typewriter, follow the instructions and type them exactly as they appear, paying close attention to spaces and punctuation.

### Schedule night vision

It's thought that the light from device screens can make it harder to fall asleep, because the blue light makes your brain think it's still daytime.



Reducing the blue light and making screens slightly red before bedtime could help you sleep better.

*Reduce your screen's blue light after sunset to help you sleep better*

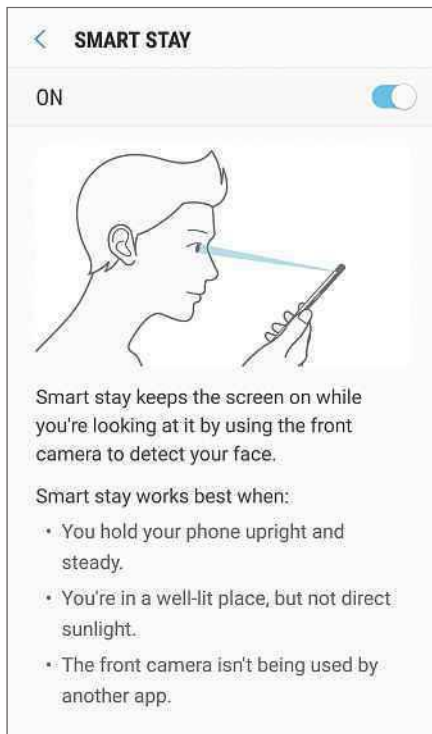
On Android devices go to Settings, Display and see if there is a 'Blue light filter'. Tap it for the option to manually activate it. There is also an option to schedule it to operate automatically, such as from sunset to sunrise, or to create your own schedule. Try using the blue-light filter and see if it makes a difference to your sleep.

On iOS, go to Settings, 'Display & Brightness' and tap Night Shift. Enable the Scheduled switch, then select the From/To settings. Choose Sunset and Sunrise, or create a custom schedule that suits your own hours.

### Automate display settings

Some Android phones have different screen-display modes. To see whether your phone does, go to Settings, Display, then 'Screen mode'. You may see options for Basic, 'AMOLED cinema' and 'AMOLED photo'.





**Keep your eyes on your device's screen and it will stay switched on**

being used. Some phones can override this timeout setting by sensing that you are still looking at the screen. On Android, go to Settings, Advanced features and see if there is a 'Smart stay' option. If there is, switch it on.



## Automate app updates

Many apps receive frequent updates that add new features and fix problems. You can manually check for updates and install them yourself by visiting the Google Play Store, opening the menu and tapping 'My apps & games'. On iOS, tap the App Store, then the Updates icon at the bottom.

You can automate this process to save time and effort. In the Google Play Store app, press the menu button, tap 'Auto-update apps' and select 'Auto-update apps over Wi-Fi only'. This avoids updating apps when you risk using up your data allowance, if you're between Wi-Fi connections when your device notices the update.

Some phone manufacturers (such as Samsung) bundle their own apps, and have their own store and updates. Open Galaxy Apps, press the three-dot menu and select Settings. Press 'Auto update apps' and you'll see options to update using Wi-Fi or any data connection. Choose the Wi-Fi option.

On your iPhone, go to Settings, iTunes & App Stores to see switches for automatic downloads. Turn on Updates but turn off Use Mobile Data, unless you have a particularly generous data allowance.

## TAKE IT TO THE NEXT LEVEL

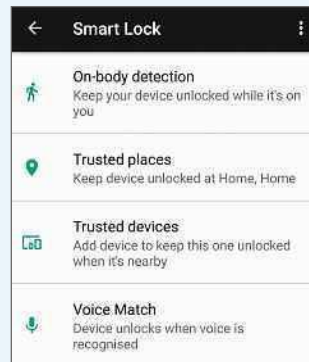
More advanced tips for when you're feeling brave



### Unlock your phone

Mobile devices lock themselves to prevent just anyone from picking them up and getting full access to their content. On Android, you can set a PIN, password or fingerprint as the key to unlock your device. This means having to jump through an extra hoop to access the device yourself, but you can automatically disable the lock when you don't need it, by using other devices and locations. For example, you might see no need to have your phone locked when you're at home.

Go to Settings, 'Lock screen and security', 'Secure lock settings', Smart Lock. The options vary depending on the model of your phone, but some can be set to keep the phone unlocked while it is on your body, in trusted places, near certain devices and when it detects your voice. At home, for example, tap 'Trusted places' and set the current location to disable the phone's lock setting.



**Automatically disable a device's lock setting under specific conditions**



### Automate Android app scanning

Android is more susceptible to malware and dangerous apps than iOS, so Google has built a security scanner into the Play Store app to automatically check for problems. Open the Play Store app, then the menu and select Play Protect. Swipe to the bottom and turn on the two switches to automatically scan for security threats.



### Clear iOS storage

Some iPhones and iPads, particularly older models, have as little as 16GB of storage, which soon fills up. To save space, rarely used apps can be automatically offloaded and stored online until they're needed. Open Settings, iTunes & App

Store and swipe down to the bottom. Turn on Offload Unused Apps.



### Install security updates

You should ensure that your device is kept up to date with the latest bug fixes and patches. To check that an Android phone is up to date, go to Settings, Software Update and tap the button

'Download updates manually'.

To automate the process, turn on the switch for 'Download updates automatically' and the switch for 'Scheduled software updates', then set a time for the phone to automatically install updates, such as 3am or whenever you'll be asleep and not using the device. Also go to Settings, 'Lock screen and security', 'Other security settings', 'Security policy updates' and enable 'Auto update'.

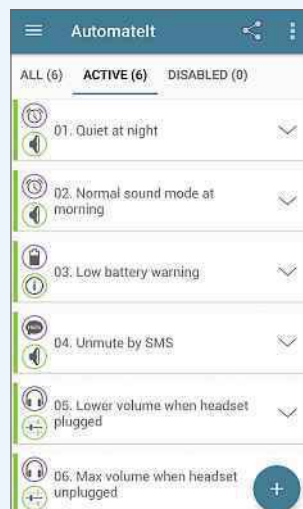


### Automate anything

Android automation apps enable a wide range of settings that use triggers and actions, both of which are customisable. You select a trigger and choose an action, usually by changing a setting.

Automatelt ([bit.ly/ai456](http://bit.ly/ai456)) is just such an app. Open the app and tap My Rules, then tap the plus button to add a new rule. Choose a trigger from the list, such as location, activity,

time, battery level, calls or texts. Select Screen Off for the trigger, for example, then choose an action, such as Set Wifi State, then select Wi-Fi Disabled. This trigger-and-action combination automatically switches off Wi-Fi when the screen is off, saving you battery power. You can create another rule that turns on Wi-Fi when the screen is activated. There are dozens of triggers and actions to explore.



**Automatelt lets you configure settings using rules**

# Ask the Expert

**Roland Waddilove**, computer programmer and PC journalist since 1981, answers all your technical questions. Email us for help at [webuser@dennis.co.uk](mailto:webuser@dennis.co.uk)



## GENERAL PC

### Get Windows 10 apps working

**Q** I can't open any Windows 10 apps, even those that come with Windows. When I try, I get a file-system error and a number, but it doesn't mean anything to me. Should I reinstall Windows?

**Clive Barton, via email**

**A** Resetting or reinstalling Windows is relatively easy, but it's still best used as a last resort. Before you get to that point, there are a few other things you should try.

Open Settings (Windows+i), click Update & Recovery and choose Troubleshoot. Under 'Find and fix other problems', choose Windows Store Apps. It's worth a try, and may solve your problem.

There's also a PowerShell command that reinstalls all Windows 10 apps. Unfortunately, it's complicated to use. Click Start, find Windows PowerShell in the alphabetical list of programs, then right-click it and choose More, then 'Run as administrator'. Type the



*If all else fails, resetting your PC may fix errors with Windows 10 apps*

following command, all on one line:  
`Get-AppXPackage | Foreach {Add-AppxPackage -DisableDevelopmentMode -Register "$($_.InstallLocation)\AppXManifest.xml"}`

To clarify, there is a vertical bar (often called a 'pipe' symbol) before **Foreach** and a curly bracket after it and at the end. There are spaces before **-Disable** and **-Register**.

If all else fails, reset Windows. Open the Settings app (Windows+i) and click Update & Security, then Recovery. Find the section 'Reset this PC' and click the 'Get started' button.

everything these companies do.

Your Microsoft account details give you access to all Microsoft's services, including OneDrive, Outlook, Xbox, mobile apps and even logging into Windows. If someone were to get hold of this password, they could access everything.

The best solution is to use two-factor authentication (2FA), which uses a mobile phone to authenticate logins. With 2FA enabled, Microsoft sends a code to your phone when you log into your account from a new device, app or browser. You have to enter this code into the device you're trying to use to access your account. Without access to your phone, even someone who has your username and password can't access your account.

To set it up, go to OneDrive in a browser, click your picture in the top-right corner and select 'My account'. Click Security in the menu bar, then click the 'more security options' link. Click 'Set up two-step verification', which is another name for 2FA.

Some online services send a login code to your phone by text message, but Microsoft also lets you use an app to generate the code. Install Microsoft Authenticator from the Google or Apple stores, then follow the instructions on the Microsoft website to enable it. Once you've set this up, your account will be much more secure. Apple, Google and others also offer 2FA security, so set those up too.

The downside is that you can't log into services that use 2FA without your phone. What if it breaks or your lose it? PCs and phone apps often remain logged in so you should still be able to access your account and turn off 2FA.

## GENERAL PC

### Fix Recycle Bin problems

**Q** I seem to have a problem with Windows 10's Recycle Bin. At random times, as far as I can tell, a message appears on the screen saying that the Recycle Bin is corrupt. Sometimes my PC locks after this message and I have to restart it. After

## SECURITY

### Improve security on Microsoft accounts

**Q** I've just taken the plunge and started using OneDrive ([onedrive.live.com](https://onedrive.live.com)) but I'm using the same password for my Outlook webmail ([outlook.live.com](https://outlook.live.com)). I'm worried that this is a security risk, so can I change one of the passwords to make OneDrive more secure?

**Don Ramsey, via email**

**A** The best advice for password security is to use a different password for each online service or website. That way, if one account is compromised, the hacker can't use the password to access any of your other

accounts. However, some companies, such as Microsoft, Google and Apple, have a single username and password for all their services.

This is a trade-off between security and convenience. It would be irritating to have separate passwords for



*Make your Microsoft account more secure with two-factor authentication*



this, it works fine – until the next time, at least. Is there a fix?

**P Lightfoot, via email**

**A** The message is probably correct and the Recycle Bin (which is really just a folder on the hard drive) or something in it is corrupt. There are two things you can try to fix this.

The first is to empty the bin. Right-click the Recycle Bin icon on the Desktop and select the option to empty it. You can also try to open it, select all the files inside and delete them. Go to the Start menu, find the Windows Administrative Tools folder in the programs menu and select Disk Cleanup. After the initial drive scan, make sure the Recycle Bin is selected and click OK.

If the problem persists or you can't empty the Recycle Bin, you can delete it instead. Open File Explorer, select the View tab and click the Options button. Select the View tab in the next window and select 'Show hidden files, folders, and drives'. Clear the tick from the box next to 'Hide protected operating system files' and click OK. Select the C: drive in Explorer. Select \$Recycle.Bin and press Shift+Delete to delete it.

If that doesn't work, there is one final powerful option, but take care not to make any mistakes when you're typing it in. Click Start, find the Windows System folder, right-click Command Prompt, click More, then choose 'Run as administrator'. Enter the following command:

```
rd /s /q C:\$Recycle.bin
```

Repeat the process with any other drives you have by replacing C: with D:, E: and so on.

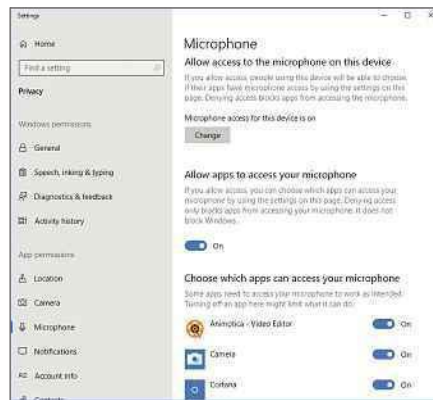
## HARDWARE

### Let your software hear your microphone

**Q** I've been having problems with the microphone in my new webcam. I just can't get it to work. Everything is installed but it doesn't record audio properly. If I go to Sound in the Control Panel and select the Recording tab, I can see that it's picking up sound. However, when I close the Control Panel and try any other software, it doesn't work. Can you suggest anything?

**Claire Baker, via email**

**A** The lack of audio recording could be due to having incorrect permissions set. There's probably nothing wrong with the hardware and drivers, but Windows isn't giving apps



*Use the Settings app to ensure Windows lets apps access your microphone*

the access they need. Windows is becoming more and more like mobile operating systems, where permission must be granted to allow apps to access things like the camera and microphone.

Open Windows Settings (Windows+i), click Privacy, then select Microphone in the sidebar. On the right, turn on the microphone access using the two switches. Go through the list of apps below and use the switches to enable access for those apps that need it.

That should fix the problem, but if it doesn't, open the Control Panel, select Troubleshooting, click the 'View all' link and run 'Hardware and Devices', Recording Audio and Playing Audio.

## GENERAL PC

### Restart the lock-screen slideshow

**Q** I have been using Windows 10 since the start and love the photographs that appear on the lock screen when I power up or lock my PC. However, for the past two weeks, it has been stuck with the same image and isn't updating.

I tried going to Settings, Personalisation, 'Lock screen', then selecting Picture for the background, rebooting and selecting 'Windows spotlight' again, but the same old image remains. I know it's a fault because another computer in the house changes the lock-screen image absolutely fine. Mine does not.

**Kevin Davies, via email**

**A** Sometimes Windows Spotlight gets in a muddle and clearing out the folder that stores the settings usually solves the problem. Open Settings (Windows+i), Personalisation,

## GENERAL PC

### Restore Windows Store

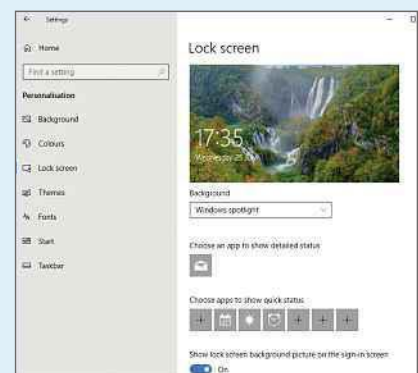
**Q** I'm having problems with the Windows 10 Microsoft Store app. I haven't been able to install any apps since the last Windows 10 update (1803, I think it was) a month or so ago. The Store opens and I can browse the apps and even click the Get It Now button, but nothing downloads or installs.

I've tried restarting Windows, restarting the app, scanning for viruses and so on, but nothing seems to fix the problem. Is there anything else I can try?

**Dan Turner, via email**

**A** The Windows Store suffers from various problems and has occasionally stopped working for some users, but getting it working again is usually easy. A solution that has worked for some people is to open the Store app, click your icon in the top-right corner and then Sign Out. Now find the app you want to install and click Get. Sign back into the Store app with your Microsoft account, and you should find you can download and install the app.

That should do the trick, but if it doesn't, open the Settings app and click Update & Security. Select Troubleshoot on the left and click Windows Store Apps on the right.



*Set the lock screen to 'Windows spotlight' to see a new photo every day*

'Lock screen' and set it to Picture.

Open File Explorer, click the View menu and tick the box next to 'Hidden items'. Then go to:

```
C:\Users\YourName\AppData\Local\Packages\Microsoft.Windows.ContentDeliveryManager_(random letters)\Settings
```

Delete everything in the folder. Return to the Settings app and set the lock screen to Windows spotlight again.



This fortnight Roland turned his phone into a dashcam and has been recording examples of bad driving (not his own).



# Your Top Tips

Our pick of the best advice from our readers. To get help or offer it to others, visit [forum.webuser.co.uk](http://forum.webuser.co.uk)



## TOP TIP

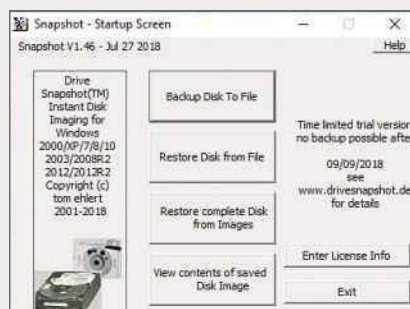
### GENERAL PC

## Snapshot your drive to prevent disaster

I'm always trying out and installing new things on my Windows 7 PC, but when things go horribly wrong, you either have to restore from an earlier point or, worse still, completely restore the operating system. This can be extremely time-consuming but I've found a way to get my PC up and running again almost immediately.

My hard drive is partitioned into three volumes: Win7x32, Win7x64 and Backup. By default, I use Win7x64. This is the one I usually mess up, so I have a complete copy in the Backup partition, created using MiniTool Partition Wizard ([www.partitionwizard.com](http://www.partitionwizard.com)). I keep it up to date using the brilliant free Drive Snapshot ([bit.ly/drive456](http://bit.ly/drive456)).

When I get into trouble, I follow these steps: reboot into the Backup partition to give me a fairly up-to-date



**Drive Snapshot is free and can help avoid a total Windows meltdown**

Windows; update Windows with the things that weren't in the backup; and take another drive snapshot and restore it into the Backup partition ready for the next disaster.

Hope this helps – it works for me!

**Coops, via email**

Back Issues disc winner



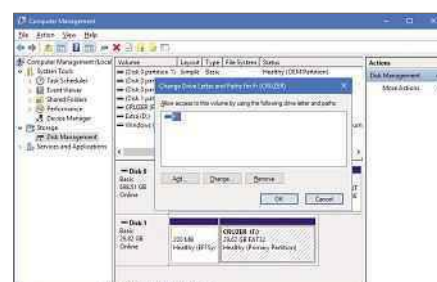
### HARDWARE

## Find missing portable drives

Every once in a while, I plug in my USB memory stick and nothing happens: no drive appears in Explorer. Here's a tip if you have this problem. In File Explorer, right-click This PC and select Manage. In the Computer Management window, select Disk Management (under Storage) to see all the drives and partitions, even ones that can't otherwise be seen.

Find the USB drive, right-click the primary partition (the biggest one) and select 'Change Drive Letter and Paths'. If there's no drive letter assigned, it can't be seen in Explorer, so click Add and select a drive letter. Usually the one suggested is fine. The drive will now appear in Explorer.

**Colin Hunter, via email**



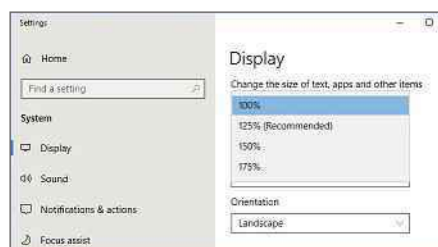
**Use Disk Management to assign letters to missing drives**

### GENERAL PC

## Increase text size on high-res screens

Laptop screens aren't getting any bigger, but resolutions are increasing, which means smaller individual pixels and smaller text. To make text bigger, I tried using a lower-resolution screen mode but it just makes everything look fuzzy.

The best solution I've found is to open the Settings app in Windows 10 (Windows+i), click System and select Display. Under 'Scale and layout' is an option to change the size of the text. I use 125%, which is actually the



**Select a scaling setting if the text on the screen is too small to read**

recommended setting on my laptop. It keeps the resolution the same, but makes text and other items bigger. Click the 'Advanced scaling settings' link, then turn on the option to 'Let Windows fix apps so they're not blurry'. If 125% is too much, use the 'Custom scaling' option to set any percentage you want. Restart Windows after making the changes.

**N Moore, via email**

### BROWSERS

## Unlock Google's new Material Design on Chrome

If you fancy trying Google's lush new Material Design interface, you can now get it on desktop and iOS just by opening Chrome and visiting [chrome://flags/#top-chrome-md](http://chrome://flags/#top-chrome-md).

At the top of the page, look for "UI Layout for the browser's top chrome". Use the drop-down menu to change your current setting to Refresh, then relaunch Chrome and you can now experience Google's extra-special UI.

**Frank Byford, via email**

### INTERNET

## Keep an eye on idle internet activity

Your computer may look like it is idling when you're not working on it, but there's a lot going on under the surface. If you want to peek at some of the things Windows gets up to without your knowledge, click Start and type powershell. When it appears in the list, right-click it and select 'Run as administrator'.

In the PowerShell window type:

```
netstat -abf 5
```

Press Enter. Your internet connections are listed in a live, constantly updated



list. Press Ctrl+C after about 20 seconds and take a look at the activity. I see internet connections being made from apps I'm not even running, such as Edge and the Windows Store. To get more information on what the netstat command does, type `netstat /?`.

Patrick Knowles, via email

## MOBILE

### Share web addresses with your microphone

If you regularly share links with People around you, the Google Tone extension is even easier than copy-and-paste. Make sure you and those nearby install it from [bit.ly/tone456](http://bit.ly/tone456). Then, when you're on a web page you want to share, click the Google Tone speaker icon. The extension, which needs a microphone and speakers to work, plays a little ditty to any nearby computers also running Tone and they can receive your link. It's easier than clicking those tiresome share buttons or copy-and-pasting URLs into emails.

Rhodri Bennett, via email



Why email links when you can share them with a tune?

## YOUTUBE

### Open YouTube in Incognito Mode

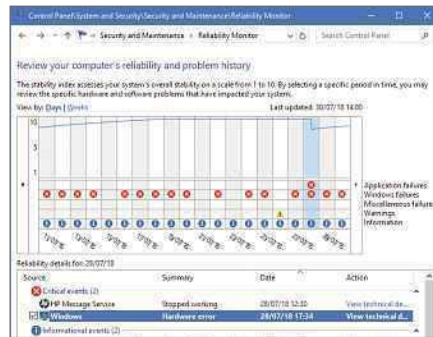
If you want to keep your viewing habits secret when using the YouTube app on an Android phone, activate Incognito Mode by opening the app and tapping your profile picture in the top-right corner. You should see an option to 'Turn on Incognito'. Clicking this works as it does in the Chrome browser, erasing your data when you leave. Now, no-one can tell I've been watching awful 1980s pop videos (it's my guilty pleasure).

S Kelly, via email

## GENERAL PC

### See a reliability report

How reliable (or unreliable) is your computer? Windows can tell you exactly! Open the Control Panel (click Start and type `control panel` if you can't find it), and type `reliability` into the Control Panel's search box. Click 'View reliability history' to see a chart that shows every fault and when it happened. Click a day in the chart and a list of the faults that occurred on that day is displayed below. There is a link to view



### Check your computer's reliability with the Reliability Monitor

the technical details of some faults.

It's a good idea to check this once a week to see any problems that have occurred, and monitor whether they are getting better or worse. It can help you to diagnose PC problems.

Simon Young, via email

## GENERAL PC

### Run EXEs with Task Manager

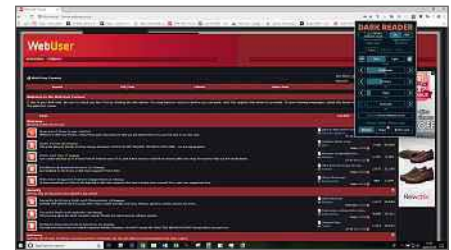
Most people use Task Manager to close unresponsive programs, but it can also be used to run apps and programs. Open Task Manager by right-clicking the taskbar or typing `task manager` into the Windows search box. Click File, then select 'Run new task'. When the 'Create new task' box pops up, enter the full EXE name (such as `winword.exe`) and click OK to run it.

Mark Halliday, via email

## BROWSERS

### Get dark mode on any site

Dark modes have become very popular and every week sees another program or website unveiling the option to switch from white to black backgrounds. But now, you don't have to wait until your



### Dark Reader lets you switch on dark mode, wherever you are

favourite website introduces the feature, just visit Dark Reader ([darkreader.org](http://darkreader.org)). There are browser extensions for Chrome ([bit.ly/drc456](http://bit.ly/drc456)) and Firefox ([bit.ly/dr456](http://bit.ly/dr456)) that turn out the lights, as it were, on any web page. A toggle switch makes it easy to flit between the two, but what I really love are the customisation options, so if night mode isn't your thing, you can always aim for dusk mode!

Fred Stone, via email

## GOOGLE

### Search smarter with Google

We all know how to search with Google but did you know the company offers free online courses?

The Power Searching ([bit.ly/search456](http://bit.ly/search456)) and Advanced Power Searching ([bit.ly/adsearch456](http://bit.ly/adsearch456))

classes teach you some cool tricks, techniques and strategies for better, more accurate search results.

Google says classes are 'self-paced', so you can complete them in your own time.

Rikki Hanson, via email



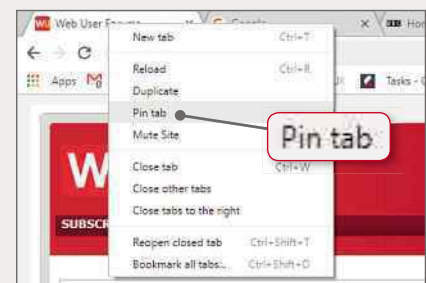
Learn new ways to use Google search

## BLUNDER OF THE FORTNIGHT

## BROWSERS

### Quickly retrieve lost tabs

I recently found a way to retrieve messages when I'd accidentally or carelessly closed a tab. This tends to happen when I have a lot of tabs open and the displayed title is very small so when I click to reopen it, I click the X and close it instead! It finally dawned on me that if I pin the tab it will stay there and not close, and because pinned tabs shrink and move to the left of the tab bar, they're less easy to click



### Pin a tab to avoid accidentally closing it

by mistake. Another solution is to use Typio Form Recovery ([bit.ly/typio456](http://bit.ly/typio456) – see page 32) – either method is better than that 'uh-oh' moment!

Madeline, Web User Forums

Have you managed to fix a PC-related disaster?

If so, please send your story to [webuser@dennis.co.uk](mailto:webuser@dennis.co.uk)



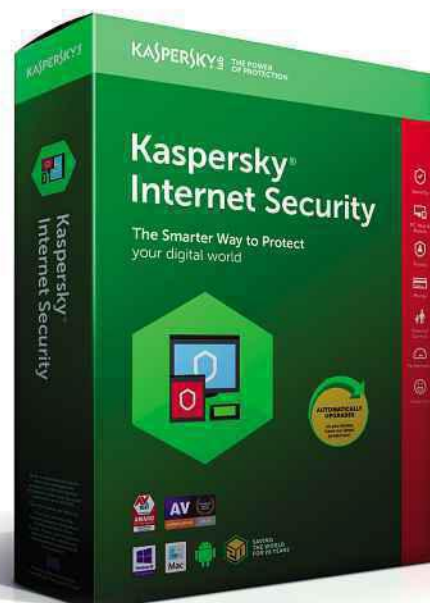
### OFFER OF THE FORTNIGHT

## Kaspersky Internet Security 2019 - on sale now

Our sister title *Computeractive* is now selling the new and improved 2019 edition of the multi-award-winning antivirus Kaspersky Internet Security at a special discount for readers

### WHAT'S NEW IN KASPERSKY 2019:

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



**SINCE WINDOWS 10 LAUNCHED 18,642 READERS  
HAVE BOUGHT KASPERSKY SOFTWARE  
FROM THE SOFTWARE STORE**

**One PC for one year NOW ONLY £19.99\***

**Normally £34.99**

Buy it from our Software Store at [bit.ly/kaspersky1pc](https://bit.ly/kaspersky1pc)

**Three PCs for two years NOW ONLY £39.99**

**Normally £79.99**

Buy it from our Software Store at [bit.ly/kaspersky2019](https://bit.ly/kaspersky2019)

\* while stocks last

**WINNER OF THE PAST NINE COMPUTERACTIVE  
ANTIVIRUS TESTS**





# Readers' Helpdesk

Our pick of the best solutions posted on our reader forums. Visit [forum.webuser.co.uk](http://forum.webuser.co.uk) – it's friendly and free!

## WINDOWS 10

### Log into Windows 10 using a new PIN code

**Q** I can log into my Windows 10 PC using either a password or PIN, but I tend to use the PIN. About a week ago, however, my PIN login disappeared. I went into Settings to add a new PIN, but it wouldn't let me. I was told I had to be set up as an administrator to proceed, even though I am – I even double-checked using Command Prompt.

**dawill, Web User Forums**

**A** If all else fails, enter an incorrect PIN twice. On the third attempt, you'll get a prompt to use an emergency login. Log in using that temporary number, then you'll be able to remake and save your secure code.

**Bedstor, Web User Forums**



**Enter a wrong PIN for the opportunity to reinstate PIN access in Windows 10**

## BROWSERS

### Stop Microsoft Edge running slowly

**Q** I've noticed over the past week that Microsoft Edge has been very slow to start up and run. When I timed it this morning, it took 30 seconds to open, then closed and opened again. Surely it should be faster than that? I gave Edge a good clean with CCleaner and disabled all startups in Task Manager, but it made no difference. Can anyone help, please?

**d307, Web User Forums**

**A** Check to see if other browsers have similar performance issues, and whether they perform any better in 'Safe Mode with Networking'. All third-party

## SECURITY

### Avoid 'unusual traffic' on your computer

**Q** I've been using the free version of Proton VPN ([protonvpn.com](http://protonvpn.com)) for a few months and it has generally been fine, except when it wanted me to reconfigure one of my email accounts in Outlook 2007. However, I noticed today that every Google search I perform in Firefox, Internet Explorer and Opera prompts the message 'unusual traffic from your computer', followed by five to seven picture validations.

I'm confident that I don't have any viruses, and I changed the VPN location, but the message appears every time. Windscribe ([windscribe.com](http://windscribe.com)), however, sails through Google unchallenged. Does anyone have any



**Is Google expressing concern about your VPN use?**

idea why Google is behaving like this? Maybe the company is launching its own VPN.

**The Shadow, Web User Forums**

**A** I had this problem when I first used the Opera browser and its built-in VPN. I suspect Google is tracking you and noticing that you're suddenly in a different location. I used to have a Gmail account that I'd use

when I *had* to give an email address but didn't want to use my proper one. If I logged in from a different computer or location, I would get the same message. It's one of the things that makes me mistrust Google.

**Castman, Web User Forums**

programs are isolated in that mode. You could also try these Command Prompt or PowerShell commands, launching your preference as an administrator. Type each one, followed by Enter:

```
netsh winsock reset
netsh int ip reset resetlog.txt
ipconfig /release
ipconfig /renew
ipconfig /flushdns
ipconfig /registerdns
shutdown /r /t 00
```

If there's still no improvement after the reboot, try resetting the network adapters with the commands:

```
netcfg -d
shutdown /r /t 00
```

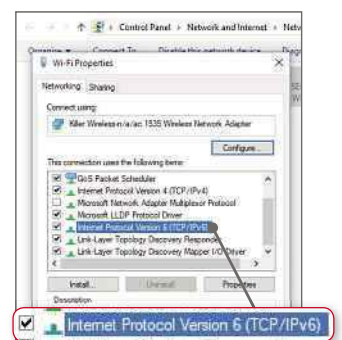
I've read that TCP IPv6 can cause this problem. I have left it unticked because it can also cause internet connectivity problems. To do this, go Start, type `ncpa.cpl` and press Enter.

Right-click whichever adapter you're using and select Properties. Untick the

box for (TCP/IPv6). Click OK, then reboot and see if there's any improvement.

If this problem started after the recent Windows Update, see if you have a restore point that lets you roll back to the time before you got it. This won't resolve the issue because you'll end up installing the update again, but at least you can eliminate it as a cause. Failing that, I don't know if you want to go to the trouble of resetting Windows, retaining your personal files, but it's cheaper than buying another computer.

**Cantriel, Web User Forums**



**Selecting TCP/IPv6 slows some people's PCs**

## Star Email

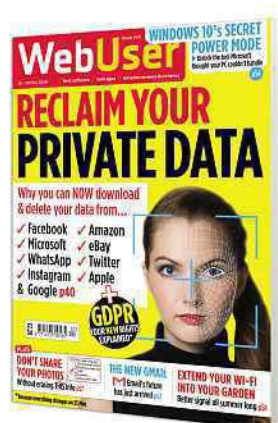
### Companies are failing to comply with GDPR

Back  
Issues  
disc  
winner



I found your 'Reclaim your private data' article in Issue 449 ([bit.ly/webuser449](http://bit.ly/webuser449)) very interesting. It was obviously well researched and very clearly set out to help readers understand the intentions behind the new GDPR regulation. The theory is clear and concise, but in my recent experience it doesn't seem to work to the consumer's advantage in practice.

Maybe I'm just unlucky, but many companies either don't seem to understand or appear unwilling to observe the details, far less the spirit, of the regulation. For example, you



state that "unsurprisingly Facebook decided to transfer 1.5 billion users out of the EU's jurisdiction". That's in spite of the fact that, in theory, any company that handles EU citizens' personal data still has to comply.

I have unsubscribed from LinkedIn at least twice but still it retains my personal information and regularly emails me with

'offers', such as salary surveys. Other websites ask for more and more data so they can 'keep your data secure'. One major retailer waited the absolute limit of 30 days to respond to my right-of-access

request, and even then it was only to ask me for more information.

Some companies claim that you have an online account even if you have never dealt with them before, while another notified me of a possible data breach in order to keep itself 'in the clear', but is unable to provide any further information. One company advised me that it was unable to remove information from public access on its website because it had to retain the data for many years.

The Information Commissioner's Office is completely overwhelmed, but even if it weren't, it has no ability to enforce the regulations. It can only "offer support and advice". So much for hefty fines for breaching GDPR!

David A Jarvis, via email

### Get your fax right!

I was disappointed to read in Webometer, Issue 454, that you didn't like the news that the NHS still uses fax machines. While I'm sure everyone will agree that fax is less efficient than other means of communication, the reality is that we have to work with what we've got, and to the best of its capability. There is clearly a reason why most NHS trusts still use fax machines, and I am certain they help ensure patients are seen by the right people at the right time. I'd rather you placed this story in the 'We Like' section of Webometer, not because it concerns outdated technology, but because of what it represents in the real world of the NHS and to the public we serve.

Lee Sharp, RN,  
Lead Clinical Nurse Specialist

### Linux is a better choice

I read with a wry smile the letter from Clive Davies in Issue 454, 'We need a united front against Luddites'. He seems to be a Windows 10 fanatic. That's fine, but his assertion that Windows 10 is the

best operating system is plainly mistaken.

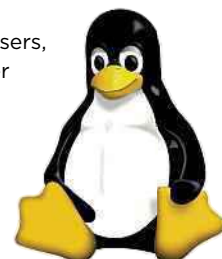
Like many Windows users, I ditched Windows and moved to Linux when XP bit the dust. This liberated me from slow updates, costly new 'improved' versions and Microsoft's prying activities. But I'm not here to promote Linux. There's no need to do so when lots of businesses run it on their servers. The world's financial systems mostly run on Linux.

Perhaps Mr Davies will think I'm a Luddite, too. I liked Betamax, but like

many other savvy computer users, I didn't close my eyes to newer ways of working.

I'd also like to take this opportunity to ask for a few more Linux-based items in your excellent magazine. Incidentally, I still have Windows 10 on my laptop (dual booting), simply because there are programs that only work with Windows.

Hendrik Hays, Tonyrefail



## Quiz Answers: Issue 455

1 Donkey Kong



2 Pac-Man



3 Sonic the Hedgehog



4 Paperboy



5 Mario Brothers



6 Castle Wolfenstein



WINNER!

Well done to John Muir who wins a Web User Back Issues Disc



TECH YEAR

2003



## Windows 7 users are not Luddites!

I found the letter from Clive Davies in Issue 454 extremely offensive. I may have been called some things in my life, and perhaps some of them might be true, but I have never been called (nor do I consider myself) a Luddite just because, like millions of other people throughout the world, I continue to use Windows 7.

In my mind, the old saying 'each to his own' applies to which Microsoft operating system one decides to use. Like Mr Davies, I started using computers at work with MS-DOS, and have moved through all the different versions of Windows up to Windows 7, which will hopefully continue to serve me well for a long time yet.

I can't think of any reason why I should

change this arrangement just because something new comes on the market. As for Microsoft ending support for Windows 7 in the future, I and

countless others will have to review the situation when the time comes. For all its supposedly brilliant features, Windows 10 will be replaced by Windows 11 one day. Then I presume Mr Davies will take up his keyboard once again to tell everybody that Windows 11 is the best thing since sliced bread and only a Luddite would use Windows 10.

*Brian Walbey, via email*

## DaVinci Resolve is the best free video editor

I've just read the article about video-editing software in Issue 453 of your marvellous magazine. The programs cost from £45 upwards, and none of them offer a 'lite' version – only a trial period. There are a few freebies to be had, however, one of which is the fabulous DaVinci Resolve 15 ([bit.ly/davinci456](http://bit.ly/davinci456)). There are two versions of the software: the free version is more than you'll ever need for the most exacting video-editing jobs, while the Studio version costs a mind-boggling £299. Both can be regarded as professional-standard tools.

Once you have worked out how to use the program, you will never need anything else. I haven't seen it mentioned in your Best Free Software section yet.

*Trevor White, via email*

## What you say...

### WILL YOU STOP USING CCLEANER FOLLOWING THE RECENT PRIVACY CONTROVERSY ([bit.ly/ccleaner456](http://bit.ly/ccleaner456))?

I still use the Pro version on my phone, tablet and PC, but Avast is slowly destroying it.

*Paul @abertawejack*

CCleaner has been brilliant for many years, but since Avast took over there have been quite a few issues. I'll continue to use it for now.

*John Hewett*

I will still be using it. Seems an overreaction, but I'm glad they responded.

*Chris Armstrong*

Nope, still using CCleaner Portable ([bit.ly/portable456](http://bit.ly/portable456)). Great program.

*Zoran NeoGeo @zoran\_neoGeo*

### FACEBOOK HAS ADDED A TIME-LIMIT TOOL ([bit.ly/limit456](http://bit.ly/limit456)). DO YOU THINK YOU NEED IT?

No, but I could do with one for YouTube. I spend about 90 minutes on it every day.

*Si Mellor*

It's easy to lose track of the time when browsing social media, so I think I would use it.

*Pamela J Anderson*

Speaking as an adult, I know when it's time to come off Facebook, so no, I won't be using the tool.

*Brian Brown*

Whatever happened to self control and a watch?

*Gavin Green*

### IS THE RISE OF STREAMING SERVICES THE REASON WHY FEWER PEOPLE DOWNLOAD MUSIC ILLEGALLY ([bit.ly/streaming456](http://bit.ly/streaming456))?

Yes, definitely. Unlimited data on my mobile means I can stream all the music I want, even in my car. I don't need to carry an MP3 player or CDs around because my phone does it all.

*Darren Branagh*

Most new cars come without a CD player now, so Spotify's cheap subscription is an effortless solution.

*Jason 'Boz' Bowyer*

Pirating music used to be the easier option, but after nearly two decades, 10 of which were spent fighting the tide, the industry has finally caught up with the tech.

*John Moore @ondrive*

Possibly, because streaming music has become the "in thing" so there's no need to own music any more.

*Fitzsip @fitsip*

### GOOGLE HAS RELEASED ANDROID 9.0 PIE ([bit.ly/pie456](http://bit.ly/pie456)). WHEN DO YOU THINK YOUR PHONE WILL GET IT?

My Samsung A8 is still on Nougat, so I'm not holding my breath. I'm very happy with Android 7 though – it's much better than 5 and 6.

*Geoffrey Boow*

I have a OnePlus 6, which was in the beta program ([www.google.com/android/beta](http://www.google.com/android/beta)), so not long, I hope.

*Paul Wallace*

I've yet to get Android 8 Oreo – I'm still using Nougat. Very much doubt it will upgrade unless I root my phone.

*Phil Graham*

Three years! Only joking – I've got an iPhone X. I like the security of iOS and it doesn't come with loads of preinstalled junk apps. However, I do prefer Android's customisation tools.

*Ben Ward*



# ! Page 404

Barry Collins gets nostalgic for the days when you could easily fix a messy laptop



## Crumbs! Why are laptops so sensitive?

About 10 years ago, there was a rather big row in our house. We'd had our new Dell laptop a matter of weeks when my other half decided to check her Facebook feed with a glass of Merlot in her other hand. You don't need me to finish the rest of this anecdote.

The next morning, I removed the keyboard from the laptop to inspect the damage. It looked like a scene from a Quentin Tarantino movie – claret everywhere. The keyboard was a write-off, but the rest of the computer was working fine. I ordered a new keyboard from eBay, spent a tense half-hour refitting fiddly ribbon cables and soon had the laptop back in full working order. Stand down the divorce lawyers.

Make no mistake: if you tip a glass of wine over almost any of today's laptops, it'll be game over. In fact, a colleague on our sister mag *PC Pro* had to buy himself a new MacBook Pro when his young daughter did just that. Don't worry, I've informed Social Services.

Today's laptops barely let you repair anything – they are so slim and slender that everything is glued or soldered into one homogenous lump. You don't need a steady hand and a couple of YouTube videos to repair the latest laptops, you need a PhD in electrical engineering. In fact, you could no more repair most of today's laptops than you could perform open-heart surgery. It is simply beyond the average mortal. Worse still, it doesn't take a full glass of supermarket plonk to ruin a laptop keyboard these days. A few stray crumbs are enough to consign it to the scrapheap.

Apple recently announced a 'Keyboard Service Program' for nine models of its MacBook and MacBook Pro laptops, following persistent complaints that even the slightest bit of debris from your lunchtime sandwich can cause keys to stick or fail altogether.

**“ You could no more repair most of today's laptops than you could perform open-heart surgery ”**

This is due to the design of the aptly-named Butterfly keyboard – presumably so-called because it's about as robust as a fluttery insect. Once a crumb from your BLT gets under the keyboard, there's no way of getting it

out again. It's only a matter of time before it works its way into the sensitive keyboard membrane, leaving it (to use

a technical term) knackered.

So, Apple is now offering to provide free-of-charge keyboard replacements to customers for four years when their keyboard shows signs of malfunction. “The type of service will be determined after the keyboard is examined and may involve the replacement of one or more keys or the whole keyboard,” Apple's starchy website confirms.

I get why today's laptops aren't as robust and replaceable as those of a decade ago. The Dell model I repaired myself was more than

two inches thick, weighed the equivalent of a small child and could drown out Tom Jones with its fan noise. The MacBook Pro and the other ultraportables that have followed its lead are delectable devices that you can slip into a bag without risking a hernia.

But we've gone too far. When a few crumbs are enough to cripple a £2,000 laptop, it's time to go back to the drawing board. Just stay well away from the breadboard.



Illustration: Andrew Torrens

# ENJOYED THIS ISSUE?

## GET THE NEXT ONE EARLY!

**T**hank you for reading this issue of *Web User* – we hope you found the tips and advice useful. The good news is that you don't have to wait too long for the next issue. If you subscribe to *Web User* by **Friday 24 August (8pm)\***, you'll receive it through your letterbox before it's available in the shops!

### What's inside the next issue:

### COVER FEATURE: BETTER TV STREAMING

#### PLUS:

- Compare your PC's performance with others
- Don't let your home spy on you
- Customise your PC desktop

#### AND...

Best free voice-dictation software

*\*Don't worry if you miss this deadline –  
you can subscribe to Web User at any time!*

# GET BETTER... TV STREAMING

Subscribe to *Web User* today and you'll pay just **£22.49\*** for the next 13 issues – that's a 21% saving on the shop price. As an added bonus you'll also receive a free gift – **a USB desk fan**



Subscribe online at

**subscribe.webuser.co.uk**

or call now on **0330 333 9493**

(calls to 03 numbers will be charged at your standard local rate)

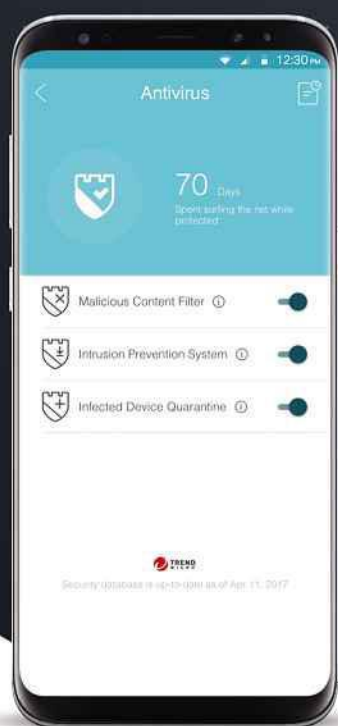
*\*Includes FREE DELIVERY*

Quote offer code: **P1817**



## SEAMLESS, SECURE WHOLE-HOME WI-FI

Antivirus & Parental Controls  
Powered by Trend Micro™



### Deco M5 Whole Home Wi-Fi System



#### Antivirus

Protects every connected device from viruses and malware - even the devices that visitors use at your home.



#### Parental Controls

Restrict content, schedule Wi-Fi access by user or device, view activity reports or pause the internet.



#### Bandwidth Prioritisation

Quality of Service (QoS) assigns bandwidth to the devices you use the most or prioritises your favourite activities.

# deco™



Compatible with the **Deco App**  
(available from the Apple App Store  
or Google Play)



facebook.com/TPLINKUK

uk.tp-link.com

twitter.com/TPLINKUK

