Windows
Help & Advice

100 POWER TIPS

Secrets revealed: the hidden settings that squash Windows annoyances

ALL YOUR PC PROBLEMS SOLVED!

TAKE CHARGE OF WINDOWS 10
Master the Start menu and Desktop

SURVIVE THE WORST CRASH!
Make and use a PC recovery disc

LEARN HOW TO...

⚙ **Close problem applications instantly**

⚙ **Manage your laptop's battery**

⚙ **Speed up Windows with gestures**

⚙ **Set your default search engine**

⚙ **Remove junk and free up disk space**

⚙ **Monitor your kids' PC access**

⚙ **Increase your PC's start-up speed**

⚙ **Easily zoom in on small text**

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Windows Help & Advice

Welcome

Windows has improved so much over the years, but there are still little things that can get in the way of enjoying your time on your PC. Whether it's constant pop-up messages or hardware not behaving itself properly, these minor annoyances can often stop you doing the things you need to do.

This issue we want to get rid of as many of these bugbears as we can. To kick things off, on page 16, we have 100 great tips for Windows 10 that will show you plenty of the hidden settings. We also have a great feature on preparing a repair disc (page 68), for those times when something goes really wrong, and don't forget our regular Support Squad feature (page 74) for answers to your PC questions.

Add to that our usual mix of creative tutorials, software roundups and hardware reviews, and you've got a really great read to kick off this new year! See you again on 3 February.

Graham Barlow Editor-in-Chief
www.facebook.com/windowsmag

NEXT ISSUE ON SALE 3 February 2017

Don't miss our NEXT ISSUE, when we will show you how to...
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Windows Help & Advice

FEATURES

REGULARS

SUPPORT

EXPLORE
The best PC tutorials

Your guide Graham Barlow says…

"If you're looking for better ways to use your home computer, then this is the place to start. We'll show you all the tips and tricks the experts use and more!"

ON THE COVER

100 POWER TIPS

16 Discover the hidden secrets of your PC

EDIT VIDEO
LIKE A PRO

63 Use the most advanced video editor on the market for free

ON THE COVER

BUILD THE ULTIMATE
WINDOWS REPAIR DISC

68 Survive the worst crash possible!

UPGRADE

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Discover

▶ NEW THINGS TO DO ▶ AMAZING WEBSITES ▶ FASCINATING FACTS

EASY STREET Controlling the Scratch cat is a straight drag-and-drop affair

Get into coding today
Learn how to program your PC the easy way

Becoming a Windows coder has never been more straightforward – even your kids can do it

Fancy trying your hand as a programmer? It's not nearly as intimidating as it might seem. If you're starting from scratch, you should start with, er, Scratch.

It's a visual language developed by the computer wizards at MIT, specifically designed to help kids aged 6-16 learn coding concepts. That said, it's equally valuable for older minds, although its output is limited to simple animations or games. You don't even need to download anything – just head on over to http://scratch.mit.edu, click the 'Create' button in the header, and you'll find yourself straight into the interface.

Scratch includes many integrated tutorials that, in theory, can teach anyone how to use its drag-and-drop modules to learn the fundamentals of coding, and it's all written in plain, straightforward English. Complete the course, or just read through some of the pre-built programs, and you'll soon know all about the world of

If you're starting from scratch, you should start with Scratch

loops, variables, and other previously baffling programming essentials.

A grounding in Scratch, admittedly, doesn't include every little skill required for the real world of type-it-yourself coding, but the next step up costs nothing but time and a little dedication. First and foremost, Microsoft's Visual Studio – software that's perfect for writing code, organising it and eventually build it into a fully-functioning Windows 10 application – is free.

The very latest 2017 Release Candidate is currently available from www.visualstudio.com.

With that in place, it's probably time to learn a proper language. Microsoft's Virtual Academy, in conjunction with Bob Tabor of Developer Academy, offers a 24-part video series explaining the basics of C# for absolute beginners – http://bit.ly/29kYqVt – and a similar course for developing full Windows 10 apps at http://bit.ly/2gDdbqd. What will you create?

GOOGLE GOES WI-FI Google while you Google

Mesh networks are the biggest thing to happen to home networking since Wi-Fi was first introduced in the late 90s, and Google is getting into the game early. Google Wifi consists of a router and satellite modules to place around your home to eliminate networking black spots – near thick walls, for instance, or on each floor. Currently on sale in the US, Google Wifi should hit the UK in the next few months.

CONTROL IT A simple app helps you manage your mesh network and all of your connected devices

CONCEAL IT Each individual unit is small and inconspicuous enough to tuck away on a shelf

CIRCULATE IT Putting your devices this close together isn't going to get you very far

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The Knowledge... ➕ | ◀ ▶

Minecraft: Education Edition

What's this?
It's a special edition of kid-favourite block-construction game Minecraft, specifically tailored for use in classrooms, introduced by Microsoft following its purchase of the game's publisher, Mojang.

Games? In the classroom?
Don't be too disgusted. What could possibly delight a child more than being allowed to play their favourite game at school, sharing a virtual world with all their friends? Not an awful lot. And Minecraft is the perfect game for the purpose.

What makes it so suitable?
While there are indeed zombies and skeletons to contend with in the endless world of Minecraft, that's a small part of the game. It's built around a huge number of elements that teachers can use to emphasise learning topics: artistry, construction, exploration, experimentation and collaboration are at its core, and setting lessons inside a game is a great way to engage the sleepy kids at the back.

What else does it do?
Older children will be able to learn basic programming in-game, adding life to their architecture – perhaps creating deadly mazes for their friends to traverse – using the game's command block system. It's even possible to take your first steps in electronic engineering with Minecraft, drawing paths with its electrically conductive redstone material that closely resemble real-world circuitry.

How can I try it?
You'll need an Office 365 education account to get hold of the specially discounted Education Edition for your students – find out more at http://education.minecraft.net – but if you're not an educator, you'll need to plump for the full version. It's missing a few of the more school-centric features, like an in-game progress journal and a classroom tour guide, but it's well worth its £17.95 asking price.

Everyone's talking about...

Will there be better broadband for Britain?

Government body steps in to look at quality of service

The UK internet market is somewhat divided. There are the those who live close to a telephone exchange, or who are lucky enough to have fibre-optic cables in their street. These folk enjoy fast internet speeds from some of the best broadband connections in Europe. Then there are the huge number of people who fall outside that coverage area, limping along with sub-par broadband or even, in the cases of some rural areas, dusty dial-up connections or super-expensive satellite internet. Getting a better connection installed can be difficult, and whatever your data rate, you're likely to be paying through the nose for it.

The UK's communication regulator, Ofcom, is aware of this. After reviewing the practices of BT and its broadband infrastructure-owning subsidiary Openreach, it has now demanded that the two companies operate more separately over concerns that BT was favouring its own business interests over the provision of quality broadband for the country's internet users. What does this mean for you? Perhaps, at this stage, not an awful lot – Ofcom has stopped short of enforcing a full split between the companies, merely demanding at this stage that they maintain independent management structures – but it's definite pressure, which could both excite potential competitors and entice BT to up provision and drop prices to prevent any further meddling.

For those with poor connections, there's some bad news: we may be some way from UK-wide cabled broadband connectivity – Openreach currently charges £30 per metre of buried cable, making connecting rural villages too expensive for most councils. Improvements to existing lines should happen slightly faster, however, so expect the UK's average speed to go up. And if you're struggling to pay the bills, check out www.cable.co.uk, on Ofcom-approved broadband price comparison site, which should give you an idea of your options. Send a message: don't be afraid to divorce your current provider if you can get a better deal elsewhere.

Humble Bundle
www.humblebundle.com

If you're a fan of books, comics, games and other digital entertainment, you can get these things for a hugely discounted price from the good folk at Humble. Not only do they run a store with money off the latest games, they run a series of concurrent bundles – packs of products available on a choose-your-own price basis for a limited time. You get to choose where your cash goes – whether it's to the content creators, to Humble itself, to charity, or to a mix of the three. Recent bundles have included a huge pack of coding books, a massive archive of *Doctor Who* comics, and an absurd $30, 50-game bundle (with all proceeds going to charity) from the video-creating folks at the Yogscast. The transient and secretive nature of these things means we can't tell you what'll be there when you read this – you'll have to visit and find out for yourself...

CHEAP TRICKS Line the shelves of your digital library with many a bundle

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NEXT ISSUE ON SALE

February

3

THE 60-SECOND QUIZ
Pens at the ready, your time starts now!

1 What is Microsoft's VR headset called?
A. HoloLens
B. VirtuaLens
C. HoloGoggles

2 Which phone company did Microsoft buy in 2014?
A. Motorola
B. Nokia
C. Ericsson

3 What year was Microsoft founded?
A. 1981
B. 1983
C. 1975

4 What was Microsoft's first product?
A. Microsoft BASIC
B. Microsoft DOS
C. Microsoft Windows

5 Who co-founded Microsoft with Bill Gates?
A. Steve Ballmer
B. Paul Allen
C. Satya Nadella

6 Which of these started off as part of Microsoft?
A. Expedia
B. Ticketmaster
C. Google

Answers 1: A, 2: B, 3: C, 4: A, 5: B, 6: A

Facts & figures

Graham Barlow reveals a host of fascinating digital facts

£31 MILLION

The amount owed by YouTube in unclaimed music royalties for music uploaded by its users in the US between August 2012 and December 2015. The money will be paid out by YouTube following an agreement with the US National Music Publishers' Association (NMPA).

30%

is the amount recommended to safely charge the original Samsung Note 7 battery. A new update aims to encourage the few owners who have not yet returned the faulty devices to hand them in. Samsung issued a global recall for the Galaxy Note 7 in September after batteries seemed to explode.

72%

The growth in London's 'gig economy' (transport and storage) since 2010, thanks to apps such as Deliveroo and Uber. The number employed had risen from about 38,000 in 2010 to about 65,300 in 2016. Typically, workers use mobile phone apps to identify people who require delivery services or small practical jobs.

25 THOUSAND

is the number of installs since the launch of a brand-new plug-in for Facebook, known as 'BS Detector', which flags up "questionable" websites on Facebook and Twitter. It was created by Daniel Sieradski "in about an hour" as a "rejoinder to Mark Zuckerberg's dubious claims that Facebook is unable to substantively address the proliferation of fake news on its platform".

>>Incoming

The hottest new Windows hardware on the horizon
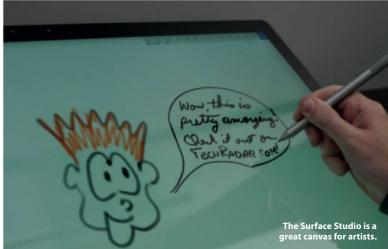
Oakley
Radar Pace

£400 uk.oakley.com

The Radar Pace are smart shades indeed – they come with voice control, fitness sensors and a virtual trainer. A collaboration between Oakley, Intel and design specialist Luxottica, the glasses offer real-time, voice-activated coaching during workouts. Integrated motion, humidity and proximity sensors are used to track movement, and you can pair the glasses with external devices to monitor metrics, such as heart rate. The Radar Pace will adjust your training zones as you improve and automatically make up for missed workouts, helping you stay on track and hit your fitness goals.

During a run you can ask, "OK Radar, how's my pace?" and it will tell you how you're doing and whether you need to speed up or slow down. The sunglasses are IPX5-rated for water resistance, too, and are built to withstand impacts.

The game-changing Surface Dial.

The Surface Studio is a great canvas for artists.

>> Preview

Surface Studio

We go hands-on with Microsoft's all-in-one PC

Microsoft has been all about setting hardware standards. It's done it for 2-in-1 laptops with the Surface Pro 4, and now it seems to have set the bar for all-in-one PCs with the Surface Studio.

Just as the rumours and leaks foretold, the Surface Studio is a 28-inch all-in-one PC with a new iteration on Microsoft's PixelSense display, and an all-new way to control the device in the Surface Dial.

What the rumours and leaks didn't prepare us for, however, was the price: around $2,999 (although pricing is yet to be confirmed).

How does the Surface Studio justify that astronomical price tag? By being a very strong contender for the title of 'Best All-In-One PC Of All Time', that's how.

Release date and price

You can pre-order the Surface Studio right now. It doesn't come cheap, but for that price you'll get an adjustable, 28-inch PixelSense

A great machine that adapts to your creative needs.

display, a 6th-gen Intel Core i5 processor, 8GB of RAM and a 2GB Nvidia GeForce GTX 965M GPU.

If you need more power for your day-to-day routine, however, you can upgrade to an i7 configuration with 16GB of RAM or an i7 with 32GB of RAM and a 4GB GTX 980M GPU from about $2,999 or $3,499, respectively. While a Surface Pen comes standard with every Surface Studio purchase, early pre-orders included a Surface Dial accessory free of charge.

As of right now, however, orders are slated to ship in 'early 2017', with every machine coming with a Surface Keyboard, Surface Mouse and Windows 10 Pro pre-installed, and the Surface Dial available for extra.

Inside and out

Microsoft touted on stage that, at 12.5mm at its thickest point, the Surface Studio is the thinnest desktop monitor ever created. The word 'monitor' is key there, as there's no PC hardware within the screen unit, as with most all-in-one PCs.

Nay, Microsoft shoved all of that stuff – the processor, the graphics, the

Get the job done with all the efficiency of your desktop PC.

memory and the hard drive – into the tiny base that holds the 'zero-gravity hinge'. This hinge absorbs all of the torque required to move the 13-pound display, making it amazingly easy to switch between its standard desktop PC orientation and that of a big drawing surface.

Using the device in its 20-degree-angled drawing orientation feels wonderful, even for someone who isn't a digital artist by any stretch. It's like having the most powerful Wacom tablet in the world, which just so happens to be a complete computer running Windows 10 Pro.

The components inside allow for a seamless drawing experience, in that your taps, swipes and other stylus gestures are rendered so near 1:1 that it seems as instantaneous as creating physical art.

Those components include up to a quad-core Intel Core i7-6820HQ processor at 2.7GHz, Nvidia's GTX 980M graphics chip with 4GB of memory, as much as 32GB of RAM

Mouse and keyboard are part of the package.

and a hybrid hard drive as large as 2TB (128GB SSD).

All of this sits in the Mac Mini-like puck in the base, which in turn powers the 4500 x 3000 touchscreen at 192 pixels per inch.

Now, you might balk at the graphics chip from last year, and Microsoft hasn't had much to say about why this device doesn't include a 10-series Nvidia chip with the latest Pascal architecture. Our best guess is that Microsoft started work on this way before Pascal was even a thing, and got the power it wanted out of the old-hat graphics processor.

Likewise, it's also running an older-generation Intel mobile processor, due to there not being any high-end Kaby Lake processors available yet.

All in all, the Studio feels like the most premium all-in-one we've ever laid hands on.

Surface Dial

One of the most interesting bits about the Surface Studio isn't the all-in-one at all, but its brand-new accessory, the Surface Dial. This is a radial control module that operates over Bluetooth, just like the included Surface Keyboard and Surface Mouse.

But, unless you're pre-ordering a Surface Studio immediately as of

this writing, you'll have to drum up extra to take advantage of it – here's why you might want to do just that.

The Dial offers specific controls in certain Windows apps, like the upcoming Paint3D, allowing for quick access to controls that you'd otherwise have to stop drawing to use. For instance, in Bing Maps, you can use the Dial to zoom and tilt a 3D map image.

In an app such as Paint3D, you can access colour swatches and pen or brush styles by simply long-pressing the Dial. Then, you just turn the dial to your desired selection, and press in once.

Better yet, the Dial can interact with the Surface Studio screen to make its radial options around the device when it's placed anywhere on the screen's surface. Imagine drawing something with the Surface Pen in your right hand and immediately changing the colour of your input with the Dial in your left hand. It's a marvel to watch, much less try yourself.

Of course, the Surface Dial is one of those accessories that only digital artists and other creative professionals are going to get the most out of. But that's who the Surface Studio is aimed at anyway: digital artists that are sick of using separate surfaces to create on.
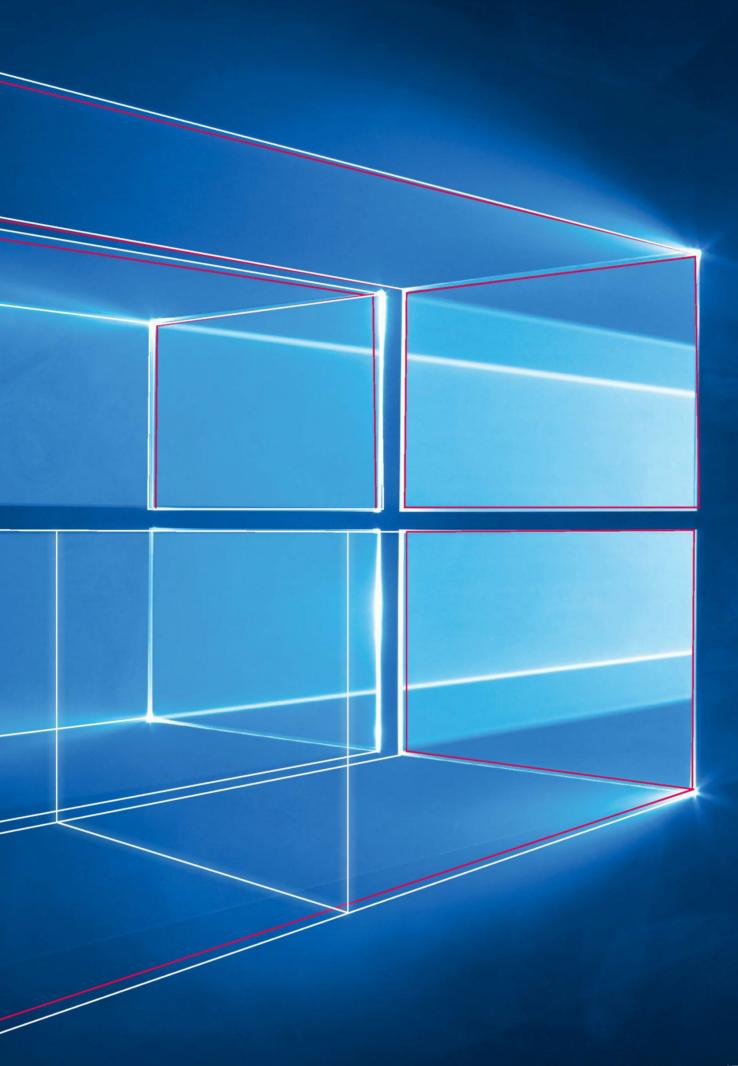
100 POWER TIPS

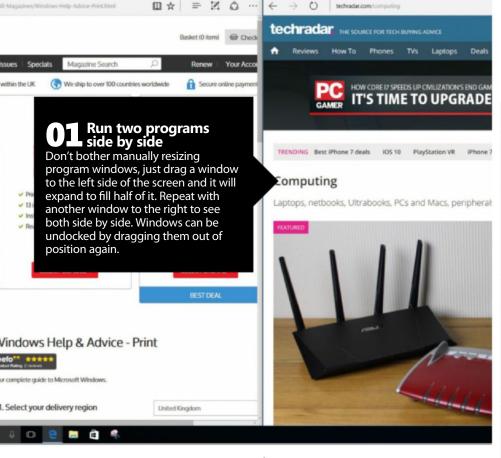## We reveal 100 essential hints, tips and secrets for getting more out of Windows 10

Whether you've been using Windows for years or you are a newcomer to the PC, there's always something new to learn – especially as Microsoft puts out frequent, free updates to improve, and occasionally completely change, the way its operating system works. There are plenty of hidden tricks in Windows 10's Anniversary Update that will make your day-to-day computing life that little bit easier.

Some tools and options are easy to discover, but there are numerous other secrets that you can reveal by scratching beneath the surface of your PC.

Over the coming pages, we'll share some of the best Windows advice, including simple hints such as manipulating your Taskbar items, or locking your computer, to more complex tasks such as clearing storage space or creating an emergency boot disk.

These tips are written for the latest release of Windows 10, but many will work with earlier versions too, as features are carried through the generations. So read on for a wealth of information on Windows 10.

01 Run two programs side by side

Don't bother manually resizing program windows, just drag a window to the left side of the screen and it will expand to fill half of it. Repeat with another window to the right to see both side by side. Windows can be undocked by dragging them out of position again.

07 Scroll inactive windows

Windows 10 makes it possible to scroll windows that aren't active – just roll your mouse over the window, then use your wheel to scroll without clicking to select the window. Switch this feature off via 'Settings > Devices > Mouse & touchpad' if it annoys you.

08 Compatibility mode

Some older software that you rely on may not work as you expect under Windows 10. Try right-clicking the shortcut of a program, select 'Properties > Compatibility' tab. Tick the box in the 'Compatibility Mode' section and select the version of Windows it worked with.
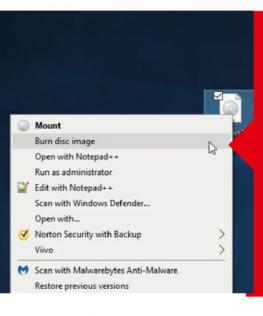
09 Taskbar buttons on your terms

Windows saves space by combining windows from the same app into one Taskbar icon. Prefer to see each window individually? Right-click the Taskbar, select 'Properties' and use the 'Taskbar buttons' dropdown menu to choose between the 'Always combine, hide labels' and 'Never combine' options.

10 Calculate and convert

The calculator is capable of much more than adding and subtracting – click the menu button and you'll find scientific and programmer options, a date calculator and various unit conversions too.

11 Change window sizes with a shortcut

There are lots of ways you can change the size and position of an open window. Hold [Win] and press the up arrow to maximise a window or the down arrow to minimise it. You can also use [Win] in conjunction with the left and right arrow keys to snap the currently selected window to the left or right-hand side of the screen. Quickly tidy things up by pressing [Win]+[Home] to minimise everything except the current window, too.

02 Use pinned folders for really fast access

If you use the same folders often, pinned folders come in handy. To pin a folder to Windows Explorer's jump list, open File Explorer, then drag a folder into the Quick Access list – not only will it be visible from here, when you right-click the File Explorer Taskbar icon you'll find the pinned folder is there too.

03 Launch a new program window

When a program is running and you click its Taskbar icon you'll switch to that app. If you'd prefer to launch a new window, just hold down the [Shift] key as you click the icon.

04 Activate Dark Mode

If you're a night owl or someone for whom a bright screen puts

unnecessary strain on your eyes, press [Win]+[I] to open 'Settings', then head to 'Personalisation > Colours > App Mode' and select 'Dark' to switch Windows' colours to darker hues.

05 Preview program Windows

With more than one instance of a program running you may not be able to tell which one you want to switch to next. To make things a little easier, hover the mouse over a program's Taskbar button to display a preview of any currently running program. Move the mouse over one of the previews and you'll be able to peek at a full-screen preview, then click to switch.

06 Lock with a key press

Stepping away from your computer for a few minutes? Keep it safe by pressing [Win]+[L] to lock it. It's that simple!

22 Burn ISO disc images

Just right-click an ISO file on your machine and select the 'Burn disc image' option. Select the disc burner you'd like to use, insert a blank disc and click the 'Burn' button.

23 Re-order the Taskbar

Inject some order into the Taskbar by moving taskbar icons. Just click and drag one to its new place – you'll see the other icons move to make way.

12 Make a bigger Start
By switching on 'Show more tiles' within the Start pane of the Taskbar screen in 'Settings', it's now possible to maximise the Start menu to squeeze in more Live Tiles. Additionally, Live Tiles now take you directly to the content that is being displayed in the tiles – rather than the app's 'home' screen.

13 Quickly rearrange the notification area
If you don't like how icons are ordered in the notification area of the Taskbar, they can be simply dragged and dropped into new positions. Perfect for tailoring the Taskbar to suit your needs.

14 Free up disk space
To keep your hard drive running well, it's a good idea to clear out the clutter. Type **cleanmgr** into the Search bar to quickly launch Windows' own Disk Cleanup tool or download CCleaner from piriform. com for a more powerful cleaning app.
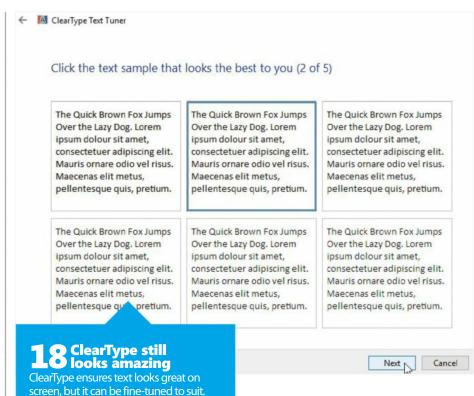
15 Minimise all windows at once
To quickly minimise all of your open programs and windows, press the [Win]+[M] key combo at the same time. Alternatively, grab a window with your mouse and shake it. This gesture will minimise all other windows, but leave the shaken one alone.

16 Preview your fonts
Open the 'Fonts' folder from the Control Panel and you can preview the fonts you have installed without even having to open anything. Any you don't need can be hidden or deleted – we recommend backing these up first by copying them to another folder.

17 Select files more easily
When you need to select multiple files, it can be quicker and easier if you use check

18 ClearType still looks amazing
ClearType ensures text looks great on screen, but it can be fine-tuned to suit. Click 'Start' and type **cttune** to access the ClearType Text Tuner and you'll be guided through the process.

boxes. Open File Explorer and switch to the 'View' tab. Tick the 'Item check boxes' box and when you roll your mouse over a folder or file you'll see a checkbox appear – tick this to select the file, then repeat for all the others you wish to select.

19 Edge extensions
Edge has introduced extensions, which add to its functionality and let you use the web more efficiently. You'll find the usual suspects from competing browsers have already jumped on board – including the likes of AdBlock

and Save to Pocket – in addition other entries, such as OneNote Web Clipper.

20 Avoid the Registry
Want to tweak Windows settings without getting your hands dirty? Download and run Ultimate Windows Tweaker 4 from **bit.ly/uwt-win10** where you'll find loads of handy tweaks and customisation settings that require a single click to apply. Set a Restore Point before you begin.

21 Give network locations their own drive letter
If you have a frequently accessed network folder, why not assign it a drive letter? Navigate to the network location in Explorer, right-click it and select 'Map network drive' and then choose a letter.
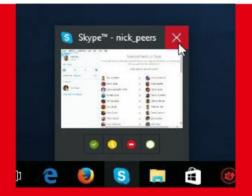

24 Quickly launch Taskbar apps
You don't need to use the mouse to launch programs that have shortcuts in the Taskbar. Press [Win]+[1] to launch the first icon on the Taskbar, and so on.

25 Quickly check the desktop
No need to minimise all your open windows to view the desktop – just move the mouse to the lower right-hand corner of the screen and they'll temporarily vanish!

26 Close apps without switching to them
Just hover the mouse cursor over a Taskbar button and click the red cross located on the upper-right of a preview to close it completely. Simple!
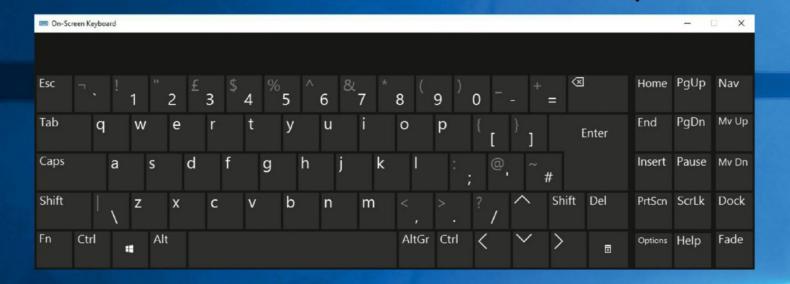
27 Quick and easy command prompt
Hold [Shift] while right-clicking a folder and you'll reveal the previously hidden 'Open command window here' option. This option will take you to that location on your machine in the command prompt window.

28 Show all your drives
If you'd like to see all drive letters at all times, including those with no media in them, click Options under the File Explorer ribbon's View tab. Select this dialog's View tab, untick the box labelled 'Hide empty drives' and then click OK. You'll now see all your PC's drives.

29 On-screen keyboard
If you're having trouble with your keyboard and need to buy a new one, there's a clever on-screen one you can use in the meantime. Type the command **osk** into the Cortana Search bar and press [Enter] to bring it up.

30 View clocks from other time zones
The Taskbar shows you the current time, and it can also be used to check the time in up to two other countries. Go to 'Date and time settings' in Settings. Scroll down and click 'Add clocks for different time zones'. Tick 'Show this clock' and use the drop-down menu to configure it.

31 Take control of UAC
User Account Control is a great, and very longstanding Windows security feature, and you can adjust just how sensitive it is to suit your preferences. Simply click the Start button, type **uac** and press [Enter]. You can then use the slider to choose when warnings should appear on your Windows 10 desktop.

32 Personalised display calibration
If you like to be in complete control over how your display is calibrated, simply type **dccw** into the Search bar to access the Display Color Calibration Wizard. To proceed, click 'Next' and the wizard will help you to choose the best display settings.

33 Restore classic looks
If you don't like the way items are displayed in the Notification area of the Taskbar (battery, time and date display, and volume control – we're looking at you) then you can restore the old look. Fire up Ultimate Windows Tweaker. Go to 'Customization > Windows 10' tab where you'll find the options.

34 Cycling backwards
The Classic task switcher ([Alt]+[Tab]) still remains – tap it to cycle forwards through the list of windows. Hold [Shift] as well as [Alt] and [Tab], and you can cycle backwards too.

35 Disable hibernation, free up space
Windows' hibernation file takes up a lot of space, particularly on machines with lots of RAM. Disable it to recover the space by right-clicking the 'Start' button and choosing 'Command Prompt (Admin)'. Type **powercfg -h off** and hit [Enter].

36 Run as administrator
You can run any program in the Taskbar in the role of an administrator by simply holding down the keys [Ctrl]+[Shift] at the same time.

37 Cycle through a single app
We all know that [Alt]+[Tab] is a handy shortcut for cycling through programs. If you want to cycle through just one program's open documents or windows, hold down the [Ctrl] button and click its Taskbar icon until you access the window you're looking for.

38 Open Explorer at This PC
Open File Explorer and it'll default to the Quick Access folder. If you'd rather it went to your drives instead, select 'Options' under the 'View' tab and choose 'This PC' from the window that pops up.

39 Control AutoPlay
Click 'Start > Settings > Devices > AutoPlay' and you can take control of what happens when you insert a disc or plug in an external drive. You can opt to disable AutoPlay completely as well.

40 Leave yourself a note
There's no need to clutter your desk with a hundred different paper notes and reminders – you can leave electronic reminders on your desktop, instead. To do this, launch the Sticky Notes tool from the Start menu and create notes as and when you might need them. You can even right-click notes to customise their colour. This simple feature is a great way to help them to stand out.

41 Fine-tune your hybrid tablet/PC
If you've bought a two-in-one tablet/laptop device and you're frustrated by Windows switching automatically between tablet and laptop mode when you undock your keyboard, simply open Notification Centre and tap 'Tablet Mode' to switch manually. Click 'Start > Settings' and browse to 'System > Tablet mode' to tweak related settings, such as leaving the Taskbar on-screen at all times, even in Tablet mode.

42 Activate windows without clicking
Want to bring your windows into focus simply by rolling the mouse over them? Type **ease of access** into the Search bar, then choose 'Ease of Access Centre'. Click the link labelled 'Make the mouse easier to use' and then select the option labelled 'Activate a window by hovering over it with the mouse' in the 'Make it easier to manage windows' section.
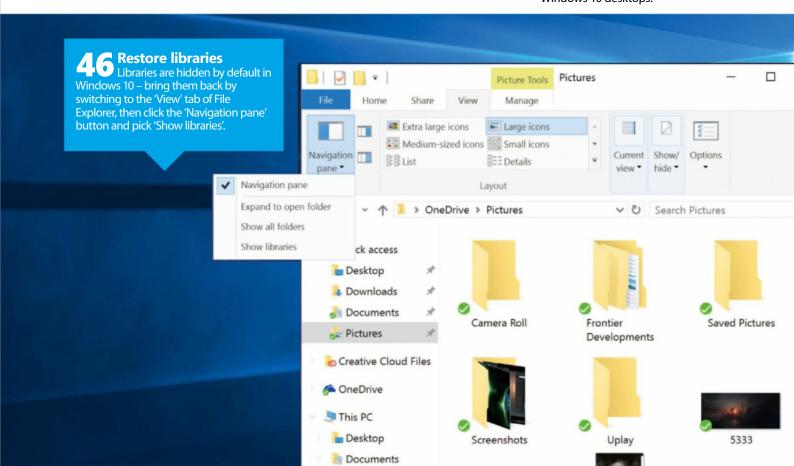
43 Gain more desktop space
The Taskbar is useful, but you may not need it on display at all times. To maximise the size of your desktop, right click an empty section of the Taskbar and select 'Properties'. On the Taskbar tab, tick the box labelled 'Auto-hide the Taskbar' and click 'OK.' The Taskbar will disappear until you move your mouse to the very bottom of the screen – it will then slide into view.
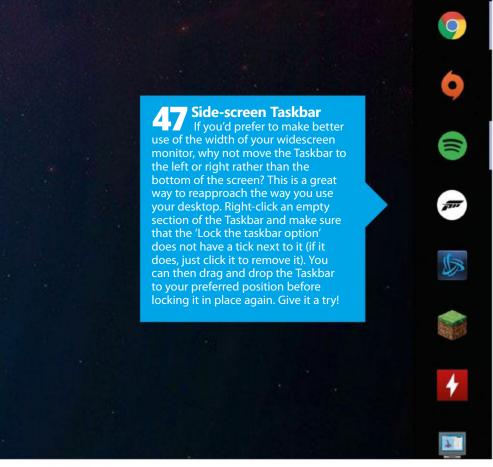
44 Move windows between your monitors
If you've got more than one monitor connected to your computer, you can avoid having to drag and drop windows between screens by simply pressing the keyboard combo [Win]+[Shift] along with the left or right arrow keys.

45 Task switching and virtual desktops
Windows 10 introduces a brand new Task Switcher – press [Win]+[Tab] keys together and you'll see all open windows shrink to fit on-screen. Either click one to switch to it, or drag it to Desktop 2 at the bottom of the screen to transfer it to another (virtual) desktop. You can organise your windows over multiple desktops (click '+' to create new ones) by dragging them to the desired desktop. Hold [Ctrl]+[Win] and hit the left and right arrow keys to move between your Windows 10 desktops.

46 Restore libraries
Libraries are hidden by default in Windows 10 – bring them back by switching to the 'View' tab of File Explorer, then click the 'Navigation pane' button and pick 'Show libraries'.

47 Side-screen Taskbar
If you'd prefer to make better use of the width of your widescreen monitor, why not move the Taskbar to the left or right rather than the bottom of the screen? This is a great way to reapproach the way you use your desktop. Right-click an empty section of the Taskbar and make sure that the 'Lock the taskbar option' does not have a tick next to it (if it does, just click it to remove it). You can then drag and drop the Taskbar to your preferred position before locking it in place again. Give it a try!

52 Create your own shortcuts
Create your own custom keyboard shortcuts to launch your favourite programs. Right-click a program shortcut and pick 'Properties > Shortcut tab', select the 'Shortcut key' field and press the keyboard combo you'd like to use before clicking the 'OK' button.

and hard drive are being used. Press [Win]+[R] type **resmon** and press [Enter]. The graphs reveal how individual programs and processes are making use of your computer's hardware.

53 Repair a problematic PC
Problems can arise from time to time and you may wish to reboot into one of Windows' troubleshooting modes. To do this manually, hold [Shift] as you click 'Start > Power > Restart' to boot into the Advanced Start-up screen. You'll find a number of options here – to get into Safe mode, for example, select 'Troubleshoot > Advanced Options > Start-up Settings > Restart', then select your chosen mode – '4' for Safe mode on its own, or '5' for Safe mode with internet access – to boot into it.

54 Pin Edge tabs
One of Edge's simple yet really smart features is 'pinning' tabs to save space on the tabs bar. Right click an open tab and select 'Pin' to do it, and repeat the action (selecting 'unpin') to expand the tab again.
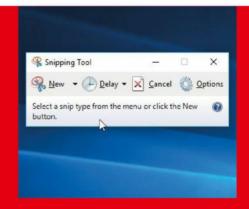
55 Save Office files in WordPad
It might seem like a rather simple tool at first glance, but the WordPad program has more capabilities than you might think. If you click the 'File' option, followed by 'Save As', you'll find that you're able to save in the DOCX format without additional software – great for quick edits.

48 Get more from your large monitor
Massive monitors with super-high resolutions can make on-screen text too small to read easily. Adjust this via 'Start > Settings > System > Display' – use the 'Change the size of text, apps and other items' slider to push things up. Click 'Advanced Settings' to access another dialog box from where you can control specific items.

49 Send To more places
The Send To section of the context menu is very useful. If you hold down [Shift] while right-clicking a file or folder, you'll see an expanded list of options in the sub-menu that then appears. To delete or add locations for the Send To menu just hit [Win]+[R] and type: **shell:sendto** and then hit [Enter].

50 Record any of the problems you experience
There may be times when you run into a problem with your computer and you don't know how to remedy it. It can be difficult to explain what's going wrong to someone else, and this is where Problem Steps Recorder can help – it makes it possible to record what happens on screen and send it to someone who might be able to help. Typr **psr** into the Search bar and choose 'Steps Recorder'. Click the 'Start Record' button and use your computer until the problem you have been experiencing occurs again. Click 'Stop Record' before saving and emailing the file.

51 See how your PC is being used
Windows 10's Resource Monitor enables you to see how your processor, memory

58 Project your desktop
Built-in support for projectors makes connecting your laptop to a projector simple. Simply open Notifications, click 'Expand' near the bottom, then select 'Project'.

59 Take screenshots
The Snipping Tool is the perfect way to capture an image of what's happening on your desktop – handy for screenshots and troubleshooting.

56 Log on automatically
Get to work faster. Press [Win]+[R], type **netplwiz** and press [Enter]. Untick the box labelled 'Users must enter a user name and password to use this computer', select your account before clicking 'Apply' and entering your password when prompted. Click 'OK' and you're done!
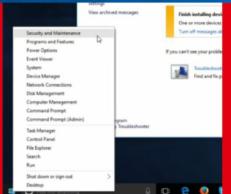
57 Play music on another computer

Windows Media Player can be used to play local or network music files, but you can also push music to play on another computer as well. You need to set this up in advance, so launch Windows Media Player, click the 'Stream' button and then select 'Turn on media streaming'. In the window that appears next, click the 'Turn on media streaming' button. Back in Windows Media Player, click the 'Stream' button again and then select 'Allow remote control of my player > Allow remote control on this network'. Next, select 'Stream', followed by 'Automatically allow devices to play my media' – repeat on other computers on your network. Then right-click a music file and select 'Cast to Device' before selecting a PC or other device for playback.

60 Check PC performance
You can manually run the Windows Experience Index tests in Windows 10 by installing the WEI Tool from **winaero.com/download.php?view.79**
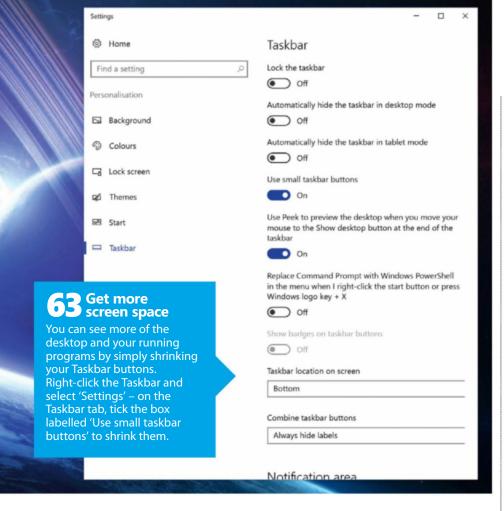
61 Where's the old Action Centre?
Type **action** into the Search box and click 'Security and Maintenance' to find notifications of problems and fixit tools.

62 Check your memory usage
To see which programs are using up your memory, right-click the Taskbar and select 'Task Manager', then click 'More Details'.

Taskbar

Lock the taskbar
Off

Automatically hide the taskbar in desktop mode
Off

Automatically hide the taskbar in tablet mode
Off

Use small taskbar buttons
On

Use Peek to preview the desktop when you move your mouse to the Show desktop button at the end of the taskbar
On

Replace Command Prompt with Windows PowerShell in the menu when I right-click the start button or press Windows logo key + X
Off

Show badges on taskbar buttons
Off

Taskbar location on screen
Bottom

Combine taskbar buttons
Always hide labels

Notification area

63 Get more screen space
You can see more of the desktop and your running programs by simply shrinking your Taskbar buttons. Right-click the Taskbar and select 'Settings' – on the Taskbar tab, tick the box labelled 'Use small taskbar buttons' to shrink them.

64 Old-style Taskbar context menus
When you right-click a button in the Taskbar you gain access to jump lists. If you'd prefer to see options to maximise, minimise and close windows instead, hold down [Shift] while you right-click the Taskbar button.

65 Restore Windows Photo Viewer
You'll either love or hate Windows 10's new Photos app. If you hate it, this following tweak allows you to restore the classic Windows Photo Viewer app as the default: open Ultimate Windows Tweaker again, switch to the 'Additional' section and click 'Enable Windows Photo Viewer'.

Once done, make it the default for viewing photos once again under 'Settings > System > Default apps'.

66 View a slideshow on your desktop
Can't decide which picture to use as your background? There's no need to settle for just one image when you could use a rotating slideshow instead. Right-click the desktop and select the 'Personalise' option. Click the 'Background' drop-down menu and choose 'Slideshow'. You'll be prompted to select a folder containing the images you wish to include – do so and decide how frequently the image will change. This is great for keeping the boring old desktop fresh and interesting.

67 Keep browsing in private
You can keep your browsing history private in the Edge browser by switching to InPrivate mode. You can do this by pressing the combo [Ctrl]+[Shift]+[P].
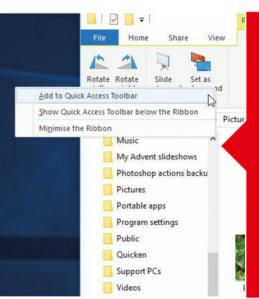
68 Get more Taskbar
Conversely, you might want to have a larger Taskbar so you can see more buttons or extra running programs. Right-click the Taskbar and make sure that the 'Lock the taskbar' option is not ticked. You can then drag the top of the Taskbar upwards to make it even taller, too.

69 Play your music through Cortana
Cortana now allows you to play music on the lock screen before you've signed in by speaking commands, which is cool, particularly if you're trying to run a headless media PC or similar. However, that integration with Microsoft's services goes deeper: you need a Groove Music subscription for it to work.
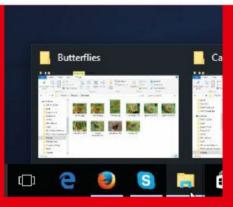
70 Desktop tidying
If you have icons scattered everywhere, just right-click the desktop and choose 'View > Auto arrange icons' to keep them in order.
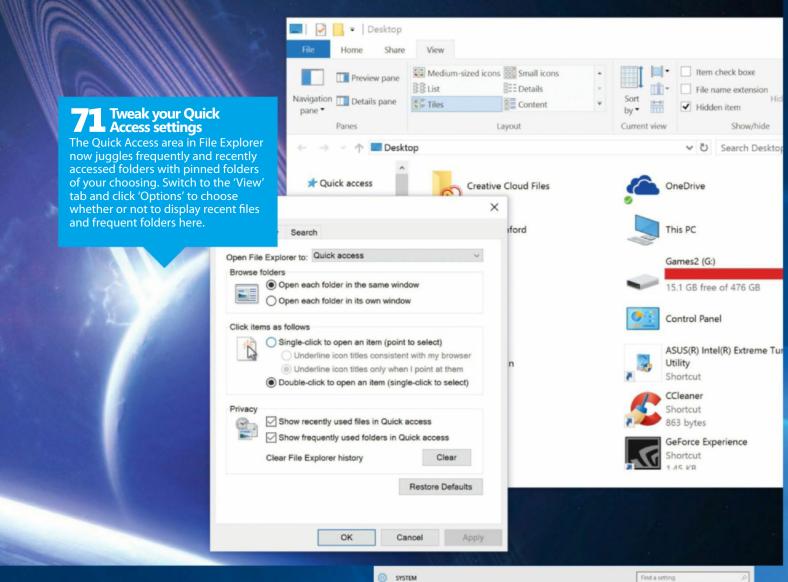

73 Favourite commands
Make your favourite ribbon commands more accessible in any supported app by right-clicking the option and choosing 'Add to Quick Access Toolbar'.
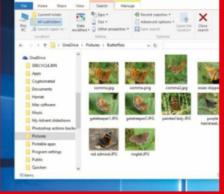

74 Quickly close window
When looking at a Taskbar preview of a program or window, just click the middle mouse button to close the window without having to switch to it.
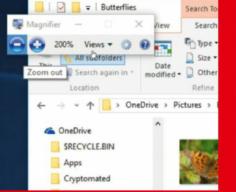
71 Tweak your Quick Access settings

The Quick Access area in File Explorer now juggles frequently and recently accessed folders with pinned folders of your choosing. Switch to the 'View' tab and click 'Options' to choose whether or not to display recent files and frequent folders here.

72 Move your apps to a new drive

If you're running out of space on your hard drive – or have a Windows tablet with limited onboard storage – then navigate to 'Settings > System > Storage' and scroll down to the 'Save locations' section. Click the drop-down menu under 'New apps will save to' and select another drive with more space. You can also move some existing Windows Store apps too if space is tight – switch to 'Apps & features', then click the app you'd like to transfer. If 'Move' isn't greyed out, click it, select your destination and click 'Move' again to transfer that too.

75 Jump to search

When you want to search for a file within a particular folder, simply press [F3] to jump to the search box, enter your chosen search term and hit the [Enter] key.

76 Zoom in and out

To get a better view of what's happening on your desktop, or in a program, press [Win]+[+] to zoom in. Use [Win]+[-] to zoom out again.

77 Arrange your window

Right-click the Taskbar and click either 'Show windows stacked' or 'Show windows side by side'. You can right-click again to access the undo option, too.

78
Reduce system sounds for calls

To prevent the music you're listening to interfering with computer-based phone calls, you can opt to automatically have the volume level of system sounds reduced when a call is underway. Right-click the speaker icon in the notification area and select the 'Sounds' option. Move to the 'Communications' tab and select one of the three options to reduce volume or completely mute sounds.

79 View all notification icons

Windows will save space by hiding some icons from the notification area. To see them at all times, click 'Start > Settings > System > Notifications & actions' and click 'Select which icons appear on the taskbar. Make sure you flick the switch labelled 'Always show all icons and notifications on the taskbar' to 'On'.

80 Undo that unintentional move!

If you accidentally move, copy or send a file to the Recycle Bin on your desktop, you can then press [Ctrl]+[Z] to reverse the mistake. Phew!

81 Check your energy efficiency
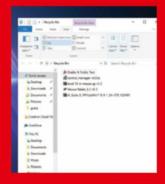
Right-click the Start button and choose 'Command Prompt (Admin)'. Type **powercfg -energy** and press [Enter]. After about a minute or so of loading navigate to the folder you're told about (typically C:\Windows\System32) and open up the file energy-report. html. This will show you what to do to improve energy efficiency.
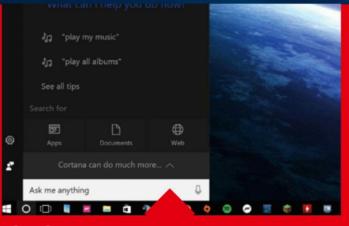
84 Add tabs to File Explorer

File Explorer in Windows 10 is an improvement on Windows 7, but it's still lacking in one key area – no tabbed support to prevent you cluttering up the desktop with multiple windows. Clover 3 is a free extension that adds Chrome-like tabs to File Explorer – go to **www.ejie.me** to get this free app.

82 Make individual Settings accessible

Got a favourite tweak you frequently find yourself burrowing into Settings to find? You can create one-click shortcuts to them a number of different ways. The simplest thing to do is pin it as a tile to the Start menu simply by locating it in 'Settings', then right-clicking its entry in the left-hand pane and choosing 'Pin to Start'.

83 Choose your shutdown options

The power button can be used to do many things – Restart, Shutdown, Sleep, etc – and you can choose what should happen by default. Right-click the 'Start' button and select 'Power options', then click 'Choose what the power buttons do' to access the relevant options.

85 Undelete your files

It's easy to forget just how handy the Recycle Bin folder is. If you've deleted a file, document or folder that you need back, just open up the Recycle Bin from the desktop and you'll find your files are still there ready to be restored.

86
Search with Cortana

Type the name of a file or folder into the Cortana search box and you'll get a load of irrelevant results – click 'My stuff' to search your computer's hard drive and other storage, including your OneDrive folder, for your missing files. Use the 'Show' drop-down menu to filter results.

87 Pin saved searches to the Start menu

File Explorer's search tool is powerful – for example, you can set up a search to reveal all recently modified Word documents in a folder from that location: just type **type:word datemodified:this week** into Search. Click 'Save search' to add it to your Searches folder, then go there, right-click the search and choose 'Pin to Start'.

88
Account shortcuts

Click the 'Start' button followed by the 'Account' button above 'Settings' and you'll see some handy extra options: lock, sign out and switch user, plus access the 'Change account settings' screen.

89 Talk to your PC

If you can't type very quickly or just fancy trying out something a little nifty on your new machine, type **speech** into the Search box and select 'Windows Speech Recognition'. Here you'll find everything you need to configure your PC for voice activated control – it's great for dictation, too.

90 Monitor the children
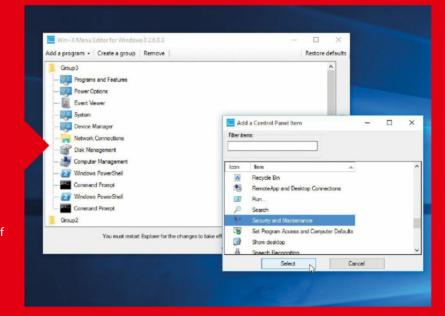
While parents want to let their child use a computer, they also want to ensure their kids are kept safe. Go to 'Start > Settings > Accounts > Family & other users' to set up user accounts for your children that you can configure to protect them while online plus manage their computer usage and monitor what they do.

91 All settings in one place

It's something that has been dubbed as Windows 10's 'God Mode', but in reality it is just a fantastically handy way to access a massive range of system options all in one place. Create a new folder and type the name **xxx.{ED7BA470-8E54-465E-825C-99712043E01C}**. You can change the 'xxx' to anything you like, and when you open up the folder, you'll be presented with a massive list of Control Panel options to work with, including tweaks not found in the newer Settings app. Just don't go too mad with your new found power as you don't want to have to resort to system recovery!

92
Make good use of the Quick Access menu

Right-click the 'Start' button or press [Win]+[X] and you'll open up a hidden Start menu. It provides a number of convenient shortcuts to powerful tools, including various Control Panel applets, Device Manager and the Command Prompt. Add your own, or rearrange and delete existing shortcuts courtesy of the [Win]+[X] Menu Editor. Download the app from **http://winaero.com/download.php?view.21** where you'll find it's easy to add handy presets like Control Panel applets and administrative tools as well as custom shortcuts.

93 Launch a website from the Taskbar

Sometimes it can be too much trouble to switch from the program you are working in, move to a browser and place the cursor in the address bar before typing a URL. Instead, simply type the web address you want to visit into the Cortana search bar and it'll go straight there in your default web browser.

94
Create a USB boot drive

It's good to be prepared and this is where a recovery drive comes into play. Type **recovery** into the Search bar and choose 'Create a recovery drive'. If you already have a Windows installation disc, untick 'Back up system files to the recovery drive' to save space before clicking 'Next', then select a USB flash drive to create the drive on. If necessary, boot from this drive to access Windows repair options when Windows itself won't boot.

95 Use encryption with your drives

If you're running Windows 10 Pro, type **bitlocker** into the Search bar to switch on Bitlocker drive encryption; if not, download the free Veracrypt app from **https://veracrypt.codeplex.com**.

96 Give your start-up a good speed-up

Type **startup** into search and click the best match to be taken to the Task Manager's Startup tab. Disable any programs you know you don't want to start with your computer This can reduce its boot times significantly.
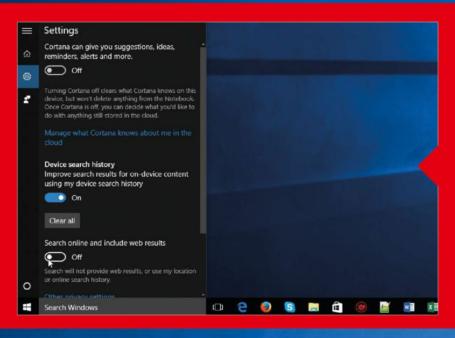
97 Create new folders quickly

There's no need to lift your hands from the keyboard when you need to create a new folder in Explorer – there's a much simpler way! To carry out this handy little trick, just use the special keyboard shortcut [Ctrl]+[Shift]+[N], type a name for the folder and press [Enter].

98 Personalise your PC's information

You can change what's displayed in the System Properties screen to just about anything you like (within reason). The information is held in the registry, but why fiddle about there? Instead, fire up Ultimate Windows Tweaker and navigate to the 'Additional' section. Click the 'Edit OEM Information' button and enter your details – you can even include a logo too. You'll need to prepare a 120x120px image in your image editor and save it with the .BMP extension, otherwise it won't appear.
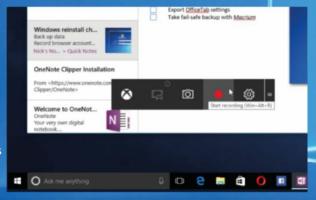
99 Restrict Cortana

By default (see tip 86), Cortana favours web results over locally stored content when using generic search terms. You have to click 'My Stuff' to search locally. If you have no use for Cortana as a web search tool, disable it – open Cortana and click the notebook icon (a rectangle with a circle on it) on the left before selecting 'Settings'. Flick the top switch to 'Off', which will reveal a new switch – 'Search online and include web results'. Flick this to 'off' and you'll see the search box now only says 'Search Windows', confirming it's no longer interested in the web.

100 Record app actions in Windows 10

Windows 10 features a Game DVR function, which allows you to record your progress in a game as a movie if its hardware supports it. What's less well known is that this DVR function works with any app you've installed.

Simply press [Win]+[G] when inside your target app and tick 'Yes, this is a game' when prompted. If you plan to share your video with others, it makes sense to set it to the correct aspect ratio: 16:9 or 16:10 is usually best. ■

Final thoughts...

The Anniversary Update to Windows 10 introduces some great new features, but it's easy to remain trapped in a rut, sticking with what you know, even when there are better and often more efficient ways of doing things in Windows. We've covered a wide range of topics and features in this tips extravaganza, but there's plenty more to be found too. Take the time to explore the many tweaks on offer – you're bound to find at least one extra useful setting.
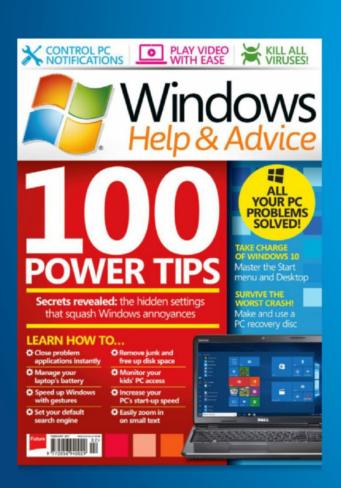
We've hopefully revealed dozens of tips you'll find incredibly useful. Simply researching and writing them has uncovered new and better ways of doing things for us too, and that's ultimately the best barometer of all – if you find something that improves your own way of doing things, then chances are it'll help others too.

Windows
Help & Advice

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Explore

Welcome

In the Explore section this issue we've got three apps that could change the way you use your computer forever.

Firstly, there's the free Mouse Without Borders app so you can use the same mouse and keyboard across multiple PCs, then there's Cameyo, which enables you to upload your apps to the cloud and use them from there. Finally, we've got the brilliant Sandboxie, which enables you to try out new apps safe in the knowledge they won't cause damage to the rest of your system.

Graham Barlow
Editor-in-chief
graham.barlow@futurenet.com

Full listing...

Your guide
Nick Odantzis says...

"It's a simple way to make your pictures look great!"

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Learn how to...

Stop your PC from crashing

Your guide Nick Peers says...

"Take a look under the hood of Windows to track down the cause of stubborn problems"

At a glance

Skill level...
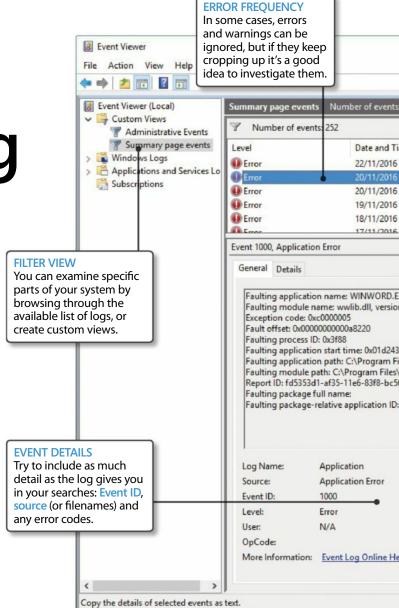
Anyone can do it

Straightforward

▶ Tricky in parts

Suitable for...

■ Windows 10

■ Windows 8.1

⚏ Windows 7

Why is it that your PC always seems to develop problems at the most inopportune moments? While Windows has largely been known to be pretty good at fixing its own problems, there are those frustrating times when its own built-in tools, from self-healing to Troubleshooters, fail to do the job.

There's still no substitute for the self-help approach, and one of the best tools for this is the Event Viewer. It's where you'll find Windows' log files, a record of everything that's going on, including symptoms of problems both evident and still hidden away. By carefully examining these logs you can find out what's causing all kinds of glitches, from obvious – if cryptic – error messages to more vague issues, such as sluggish behaviour or periodic freezes. Read on to discover how to decipher these logs and find a solution to your problem.
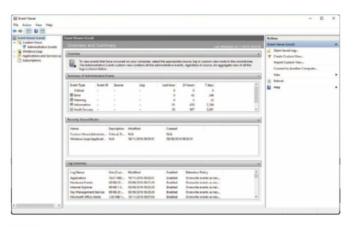
ERROR FREQUENCY
In some cases, errors and warnings can be ignored, but if they keep cropping up it's a good idea to investigate them.

FILTER VIEW
You can examine specific parts of your system by browsing through the available list of logs, or create custom views.

EVENT DETAILS
Try to include as much detail as the log gives you in your searches: Event ID, source (or filenames) and any error codes.

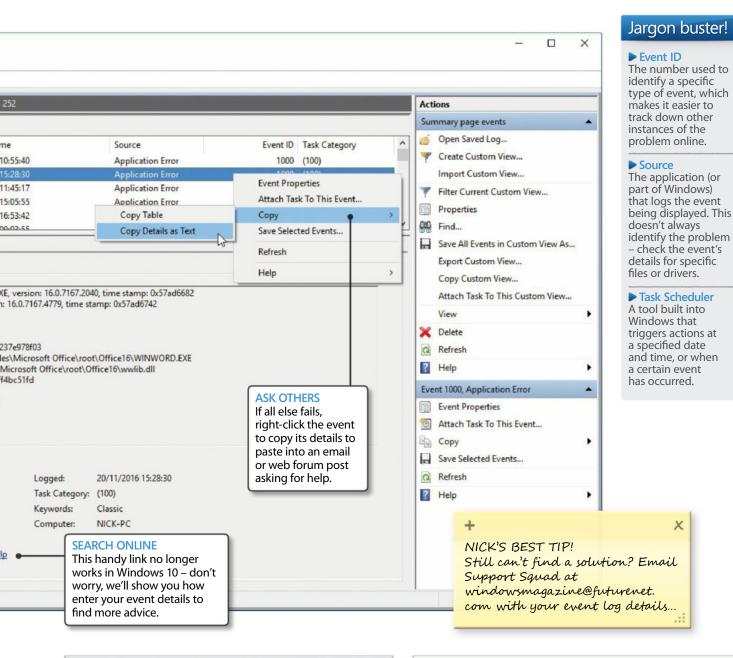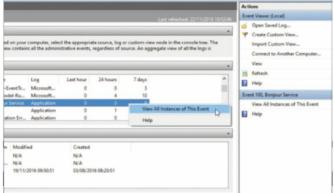### Step-by-step Fix your PC with Event Viewer

1 Launch Event Viewer
If you're running Windows 8 or 10, the simplest way to open Event Viewer is to press [Win]+[X] or right-click the Start button and select it from the Quick Access menu; if you're running Windows 7, press [Win]+[R] to open the Run dialogue box, then type **eventvwr** and press [Enter]. If prompted by User Account Control, click 'Yes' or 'Continue'.

2 Get a summary
The main Event Viewer screen will appear. The middle pane should display three sections of information: concentrate on the 'Summary of Administrative Events' section at the top, which displays a list of each type of event logged in the past hour, 24 hours and seven days. Pay particular attention to 'Critical', 'Error' and 'Warnings' sections (but don't panic – yet!).
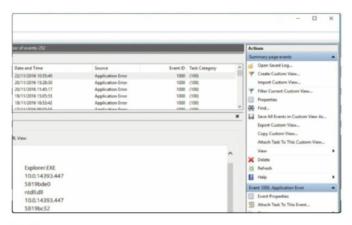
ASK OTHERS
If all else fails, right-click the event to copy its details to paste into an email or web forum post asking for help.

SEARCH ONLINE
This handy link no longer works in Windows 10 – don't worry, we'll show you how enter your event details to find more advice.

NICK'S BEST TIP!
Still can't find a solution? Email Support Squad at windowsmagazine@futurenet.com with your event log details…

3 Browse events
Click '+' next to a section to expand it and view a summary of the events. Focus on event types that last occurred (within the hour, 24-hour or 7-day ranges) around the time your problem manifested itself. Double-click an event to open its Summary page, then use the annotation to help identify possible events that correlate to the problem you're investigating.
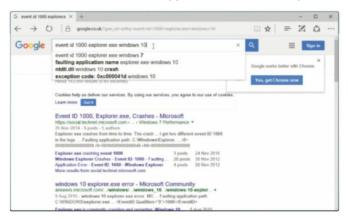
4 View event detail
Review all instances of the event type, focusing on the time and date each instance occurred. This can help link the event to your problem, but go through all event types under 'Critical', 'Error' and possibly 'Warning' to see if there are multiple events linked to the problem. Make a note of each one, then read on to discover how to examine each one in more depth.
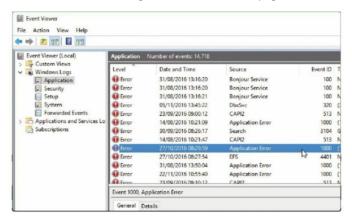
5 Get help online

Make a note of the description – the Details tab provides more technical data. You'll notice an 'Event Log Online Help' link at the bottom of the General tab, which if you click throws up the message shown – sadly, this doesn't work in Windows 10, but don't worry. Instead, open your browser and go to www.microsoft.com/technet/support/ee/ee_advanced.aspx.

6 Search TechNet

Select 'Windows Operating System' for Microsoft Product, but leave '--All Versions--' selected. Type the Event ID number into the 'Event ID' box, and the same source as listed in Event Viewer (for example, 'Application') into the 'Event Source' box. Click 'Go' and a list of matching results will be shown. Click one to read more about the problem; if there are multiple entries, try them all.

7 Broaden your search

TechNet may return no results (or simply return some generic information about the fault that doesn't really help). Don't give up, though. Make a note of the Event ID, Source and description under the General tab in Event Viewer, then type these into a search engine and see what results come up. You may find more troubleshooting information via a web page or forum.

8 Narrow your search

If too few results are returned, search for fewer words or omit the Source or Event ID from your terms. If too many results come back, narrow it by including more information. Include specific references to filenames in the event log, for example, or provide more general information, such as your version of Windows, hardware device or software program.
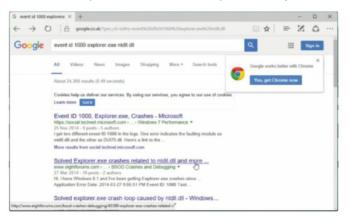

9 Browsing logs

What happens if you can't find the information you're looking for? It's likely the events you need to track are buried away. Manually browse the logs to narrow your search. Expand Windows Logs in the left-hand pane where you'll find logs in categories. Use Applications to search for program-related problems, and System for Windows and hardware.
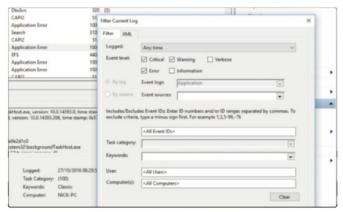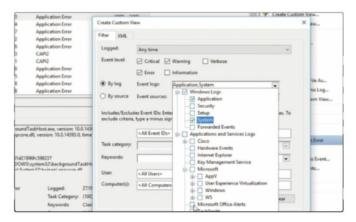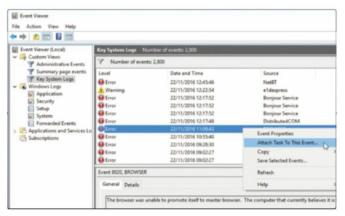

10 Filter logs

Logs record all manner of information, much of it irrelevant – at least when troubleshooting a problem. Click the 'Filter Current Log' button in the right-hand pane to filter the list a number of different ways: by the time it occurred, the type of event (focus on critical, error and warning), Event sources, IDs, keywords or any combinations. Click 'OK' when done.
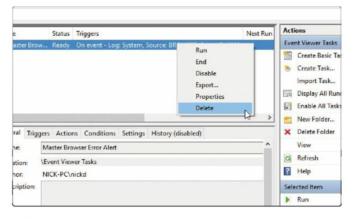
11 **Create a custom view**
If you want to create a filter that provides you with information across multiple logs, or wish to create a filter you can easily access in future, click 'Create Custom View' under 'Actions'. It works in the same way as the filter – to monitor more than one log with your custom view, click the 'Event logs' dropdown menu and tick the logs you wish to include.
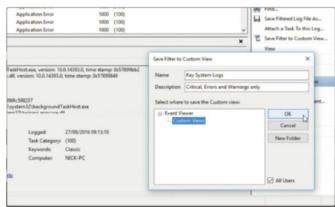
12 **Save your view**
Click 'OK', then give your custom view a suitably descriptive name and choose where to save it within the 'Custom Views' tree in the left-hand pane. Going forward you'll be able to access this view at any time directly from here – it's the perfect shortcut for targeted troubleshooting that will take an extended period of time to monitor and act upon.

13 **Schedule alerts**
Event Viewer also lets you create alerts that are triggered when specific events occur. This can be useful for troubleshooting underlying problems as you may find a seemingly unrelated event is triggering the error, or get early warning that something nasty is about to happen. Once you've located the event you wish to monitor, right-click it and choose 'Attach Task to This Event…'
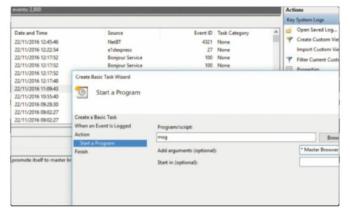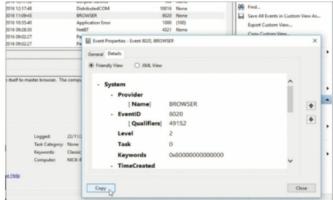
14 **Create alert**
Change the name to something that will help you recognise it in Task Scheduler (see next step), and click 'Next' twice. Neither email or 'display a message' options work, so leave 'Start a program' selected and click 'Next'. Type **msg** into the Program/script box, then type * followed by your message (for example, '*Error Alert') into 'Add Arguments'. Click 'Next>Finish > OK'.

15 **Remove alert**
Eventually you may no longer want that alert popping up (because you've fixed the problem!). To remove it, open Task Scheduler –type **scheduler** into the Search box and click 'Task Scheduler' when it appears, or press [Win]+[R], type **control schedtasks** and click 'OK'. Expand 'Task Scheduler Library > Event Viewer Tasks', right-click the alert and choose 'Delete' then 'Yes'.

16 **Troubleshooting made easier**
Now you've discovered the basics of how Event Viewer works, you can use it to help you track down problems in the future. By examining your system logs using its interface, you should be able to locate the information you need to go out and not just diagnose what's ailing your PC, but also hopefully find a solution to bring it back to good working order too. ∎

Learn how to...
Make better recordings

Your guide *Cat Ellis* says...

"Give your music, podcasts and other sound recordings a coat of professional polish with Audacity"

At a glance

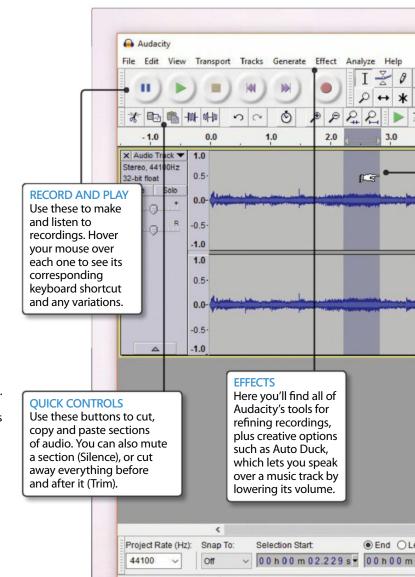### Skill level...
Anyone can do it
▶ Straightforward
Tricky in parts

Suitable for...
▪ Windows 10
▪ Windows 8.1
▪ Windows 7

With an inexpensive PC microphone it's easy to record your own podcasts, music, audio books or narration for videos. The results can sound great, but by taking a little time to enhance them, you can bring them up to professional standards. Audacity is the perfect software for this; it's powerful but easy to use, and it's free.

Audacity does an excellent job of cleaning up audio, but there are steps you can take to ensure you get the best possible recording quality in the first place. First, make sure the input volume is set by right-clicking the speaker icon in the System Tray, selecting 'Recording devices > Microphone > Set up microphone' and following the instructions.

It's also worth using a pop filter to prevent noises created by rapid movement of air as you're singing or speaking. Make your own here: http://bit.ly/2fCcHwU.
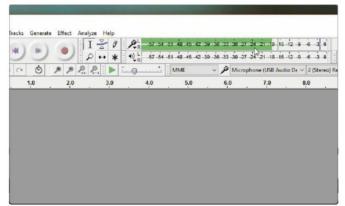
RECORD AND PLAY
Use these to make and listen to recordings. Hover your mouse over each one to see its corresponding keyboard shortcut and any variations.

QUICK CONTROLS
Use these buttons to cut, copy and paste sections of audio. You can also mute a section (Silence), or cut away everything before and after it (Trim).

EFFECTS
Here you'll find all of Audacity's tools for refining recordings, plus creative options such as Auto Duck, which lets you speak over a music track by lowering its volume.

Step-by-step Enhance your recordings with Audacity

1 Get Audacity
Visit www.audacityteam.org/download/windows and select the first option – Audacity 2.1.2 installer. This version contains additional help files, in case you need them later. The download will start automatically; ignore the links that appear on the following page. Run the software installer, leaving the default settings as they are.
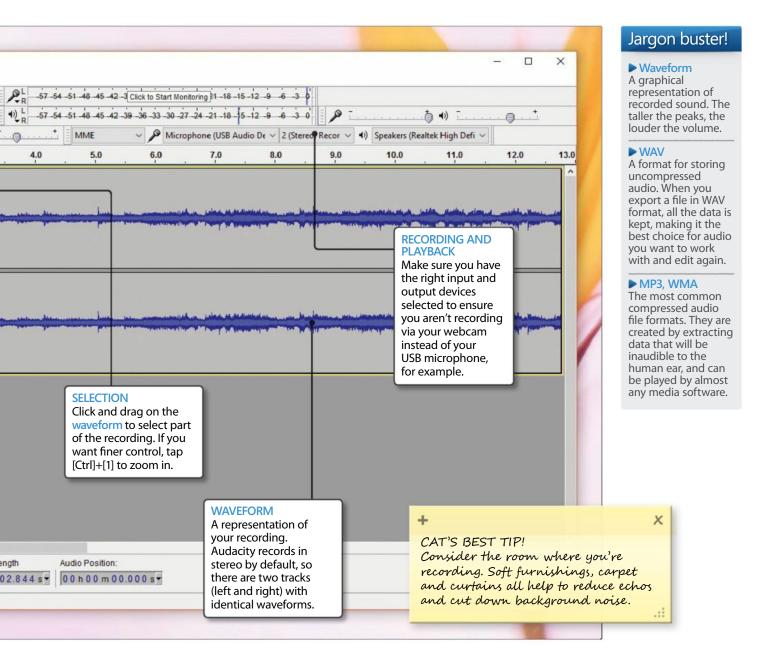
2 Mic check
Launch Audacity and take a look at the microphone and speaker settings at the top. Make sure these are set correctly so you aren't recording from your webcam rather than your USB microphone, for example. If you're not sure which device is selected, click the area marked 'Click to start monitoring' and the input from the selected microphone will be shown as a green bar.
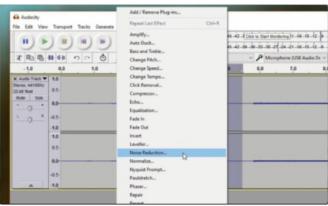
▶ **Waveform**
A graphical representation of recorded sound. The taller the peaks, the louder the volume.

▶ **WAV**
A format for storing uncompressed audio. When you export a file in WAV format, all the data is kept, making it the best choice for audio you want to work with and edit again.

▶ **MP3, WMA**
The most common compressed audio file formats. They are created by extracting data that will be inaudible to the human ear, and can be played by almost any media software.

RECORDING AND PLAYBACK
Make sure you have the right input and output devices selected to ensure you aren't recording via your webcam instead of your USB microphone, for example.

SELECTION
Click and drag on the waveform to select part of the recording. If you want finer control, tap [Ctrl]+[1] to zoom in.

WAVEFORM
A representation of your recording. Audacity records in stereo by default, so there are two tracks (left and right) with identical waveforms.

CAT'S BEST TIP!
Consider the room where you're recording. Soft furnishings, carpet and curtains all help to reduce echos and cut down background noise.
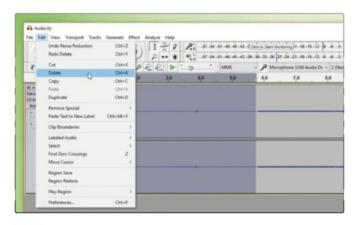

3 Make your recording
Click the red button or tap [Shift]+[R] to start recording. Try to keep a consistent distance from the microphone, and don't worry if you trip over a word – pause for a second and say that part again. You can easily cut any mistakes afterwards. Once you're done, click the rewind button, then click play to see how it sounds. It's best to use headphones for this.
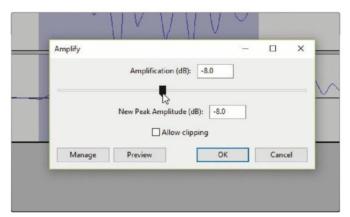

4 Remove noise
If you notice background noise in your recording, select a quiet part of the recording by clicking and dragging on a flat part of the blue waveform. Click 'Effects > Noise reduction', then click 'Get noise profile'. Tap [Ctrl]+[A] to select your recording and click 'Effects > Noise reduction' again, then use the sliders and preview to adjust the strength of the effect. When you're happy, click 'OK'.

5 | Trim to size

If there's a pause at the start of your recording that you don't want, click and drag to select this part of the waveform and tap [Delete]. You can also use this technique to remove any sections of audio where you made a mistake and had to repeat yourself. If you only want to keep a small part of the recording, select that section and click 'Trim Audio' beside the 'Paste' button.
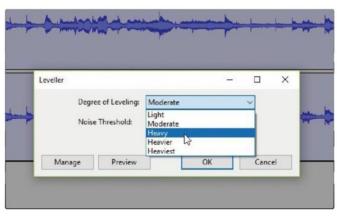

7 | Lower peaks

If there's a single particularly loud part of your recording, select it, then tap [Ctrl]+[1] repeatedly to zoom right in and isolate the specific waves that are causing it. Make sure you have just these waves selected then click 'Effect > Amplify' and reduce the volume by a few decibels. Use the 'Preview' button to check how it sounds before clicking 'OK'. Tap [Ctrl]+[T] to zoom back out.

9 | Tone down harsh sibilance

Re-open your file, selecting the option to make a copy in case you need to undo your changes. Now select 'Effects > Add/remove plugins > SPITFISH > Enable > OK'. Tap [Ctrl]+[A], then click 'Effect > Spitfish de-esser' and experiment with the settings to tone down the sibilance. As before, the exact settings required will depend on your own recording.
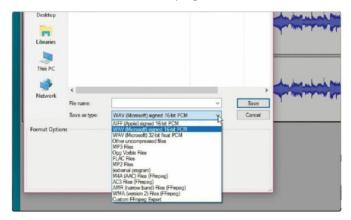
6 | Adjust levels

Did you accidentally move away from your microphone while you were recording? If so, some parts of the resulting audio might be louder than others. If that's the case, tap [Ctrl]+[A] to select everything, then click 'Effects > Levelling' and experiment with the options, checking them with the 'Preview' button (the amount of levelling required will depend on your own recording).

8 | Get Spitfish

Harsh 's' sounds are a common problem in home audio recordings. But, there's a plugin for Audacity called Spitfish that can reduce them. Download it from http://bit.ly/1i1zfRG. Extract the ZIP archive to 'Program Files (X86) > Audacity > Plugins'. Return to Audacity, click 'File > Export Audio', save your audio in WAV format and then restart the program.

10 | Export and save

Your audio should now sound much better! Tap 'File > Export Audio' and choose a file type. If you're planning to edit it again later, or use it as a soundtrack for a video, save it in WAV format to keep the quality high. If it's finished and you're ready to share, save it in MP3 or WMA format; these provide compression to reduce file size, and are supported by most media players. ∎

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Learn how to...
Have fun with your photos for free

Your guide Nick Odantzis says...

"Are you struggling to take interesting photos? Well fear not, because here's a simple way to make all your pics look really great!"

At a glance

Skill level...
▶ **Anyone can do it**
Straightforward
Tricky in parts

Suitable for...
■ Windows 10
■ Windows 8.1
■ Windows 7

Despite the fast-paced progress of photographic technology, taking a great shot still isn't as easy as the experts would like us to believe. There are so many factors to consider at the time of exposure, that it's easy to mess things up. But rather than get stressed when you don't get the instant results you'd like, you can pick up the pieces afterwards, even with a photo that isn't your best effort. And, as ever, software is at hand to help.

Pixlr Express is an easy-to-use internet-based photo-editing application that enables you to give your photos a new lease of life, completely free of charge.

We'll show you how to get the results you want without the photographic prowess, plus we show you how to have some fun with your images too!

NICK'S BEST TIP
Make duplicates of your photos by copying and pasting them into a new folder.

Step-by-step Enhance photos with Pixlr Express

1 Load a photo
In order to edit your photos you'll need to get them onto the Pixlr Express website. Go to pixlr.com/express to upload a photo – there are four ways to do this, but we're going to use the Browse method, so click this, navigate to where your photos are stored, select one and click 'Open'. It's worth mentioning that you can only edit one photo at a time.

2 Basic controls
It's worth familiarising yourself with the basics. With your photo loaded, you'll see it in the main area of the browser window – any changes you make will appear here. In the top-right corner you'll find the main controls, allowing you to zoom in or out of photos, undo or redo changes and more. In the top-left corner you can save or close photos that you're working on.

3 Simple photo editing

Your photo might just need some simple edits to improve it. Click the 'Adjustment' button in the lower menu and a few new options will appear above. Click on the one you want to use and you'll see controls for that option appear in place of the current menu. Make the changes, then either click 'Apply' to make them happen or 'Cancel' to go back.

4 Add effects

The 'Effects' option offers dramatic filters to completely change the way your photo looks, whether it's nightvision or 60s-style vintage. When you click on the type you like, it'll bring up more options that you can flick through left-to-right by using the arrow buttons. When you've chosen one, you can adjust the level of transparency of an effect by using the slider.

5 Bring photos to life

'Stickers' and 'Type' add another dimension to your images. Click 'Stickers' and choose from the selection, but try not to go mad as your photo might look a cartoon explosion! Next is 'Type' – select this and you can make your photo more descriptive. Choose a text type and write into the box below. You can move 'Sticker' or 'Type' boxes around the screen and resize them.

6 Create a collage

As well as editing single images, you can create collages. Close your current image and select 'Collage' from the menu. By default, you'll see a collage of four windows, each of which can have a photo added to it – hover over a window and click to load a photo. If you want a different type of collage, choose a new one by clicking 'Layout' and choosing another.

7 The finishing touches

You can also edit each of the images within your collage to make them stand out. To edit an individual image, hover over the one you want in the collage and three options in the top-right will appear. The left option lets you change the image for another, while the right lets you delete it. The middle button opens up the image-editing option, allowing you to adjust the photo.

8 That's it!

There are loads of features hidden in this free and powerful application, but if you just want to have a play around and find the filters you like without having to commit to anything, tap the heart button (located next to each image) to make them your favourites. The next time you open a filter type, it'll give you an option to choose from your favourites. Have fun! ∎

Learn how to...
Move across multiple PCs

Your guide Matt Hanson says...

"Easily switch your mouse and keyboard between devices without unplugging a thing!"

At a glance

Skill level...
▶ **Anyone can do it**
Straightforward
Tricky in parts

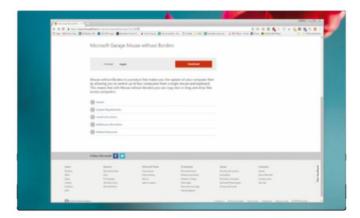Suitable for...
■ Windows 10
■ Windows 8.1
🅰 Windows 7

Mouse Without Borders is a free tool from Microsoft that allows you to use one set of keyboard and mouse across a number of computers without having to unplug them. This means if you have two PCs on your desk connected to two monitors, you only need one keyboard and mouse to control either of them.

It's also useful if you often use a laptop alongside your desktop PC, but find the smaller keyboard and trackpad of the laptop uncomfortable to use. The app comes with loads of other great features as well, such as the ability to remotely log in and out of the connected PCs and easily share files and folders between devices by simply dragging and dropping them. Read on to find out all the amazing things you can do with this software.
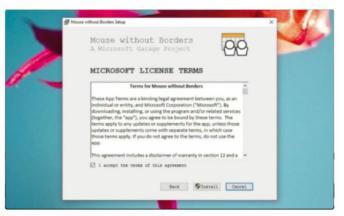
OTHER OPTIONS
For more options on how the app behaves, click on the 'Other Options' tab. This will show you advanced options, so it's best to leave this until you're used to the app.

SECURITY KEY
This is the key you use to allow trusted PCs to connect via Mouse Without Borders. Click 'Show text' to reveal the key, then enter it in during the setup procedure.

COMPUTER ORDER
The Computer Matrix area of the screen shows you the order of your connected PCs. Drag and drop these so they reflect the real-world locations of your PCs.
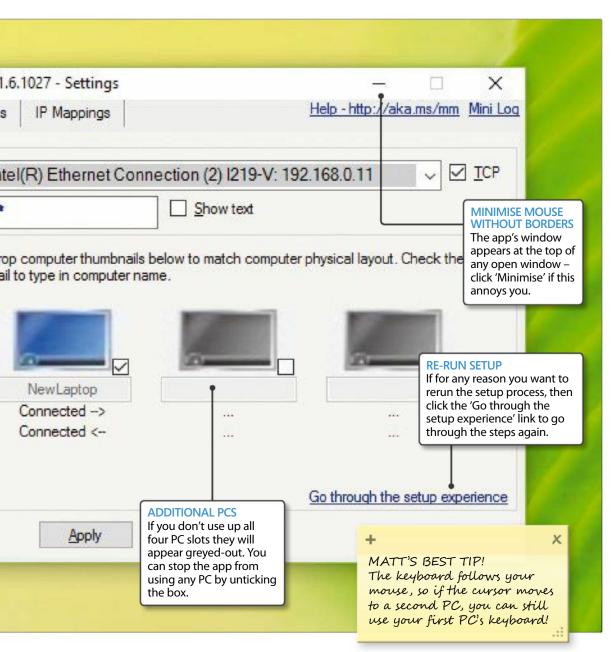
Step-by-step Use Mouse Without Borders

1 Install Mouse Without Borders
Mouse Without Borders is a **Microsoft Garage** project, and it can be installed from http://bit.ly/2go2F4a. Head to that website and click on 'Download'. Your web browser should now start downloading the installer file (which will have the .msi file extension). If the install wizard doesn't start automatically once it's downloaded, click on the file to begin.

2 Install Mouse Without Borders
Depending on your browser, the installation wizard will start automatically, or double-click on the MouseWithoutBorders. msi file – which should be in your Downloads folder. When the first window appears it will explain what the program does. Click 'Next' to continue, then agree to the terms and conditions and click 'Install'. The process shouldn't take long, as it's a light file.

1.6.1027 - Settings — □ ✕

Help - http://aka.ms/mm   Mini Log

s | IP Mappings

tel(R) Ethernet Connection (2) I219-V: 192.168.0.11 ⌄ ☑ TCP

☐ Show text

rop computer thumbnails below to match computer physical layout. Check the
ail to type in computer name.

NewLaptop ☑
Connected -->
Connected <--

...
...

...
...

Apply

Go through the setup experience

MINIMISE MOUSE WITHOUT BORDERS
The app's window appears at the top of any open window – click 'Minimise' if this annoys you.

RE-RUN SETUP
If for any reason you want to rerun the setup process, then click the 'Go through the setup experience' link to go through the steps again.

ADDITIONAL PCS
If you don't use up all four PC slots they will appear greyed-out. You can stop the app from using any PC by unticking the box.

+ ✕
MATT'S BEST TIP!
The keyboard follows your mouse, so if the cursor moves to a second PC, you can still use your first PC's keyboard!

3 Repeat the process for the other devices
The app allows you to control four different devices with one keyboard and mouse, so download and install the application on every PC you want to control. To make the process quicker, go through steps 1 and 2 of this tutorial on every PC you want to use. Remember, as this program was made by Microsoft it only works on Windows PCs.
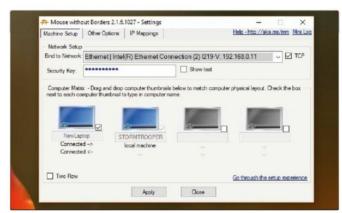
4 Getting started – part one
When the app has finished installing on your main PC, click 'Finish'. This will launch the application. A window will appear asking you if you have already installed the app on another computer. Because this is the main PC we're setting up, click on 'No'. The next window will display a security code made up of numbers and letters, and your main computer's name.

5 Getting started – part two

Keep this window open, then on your other PCs finish the installation process, and when the window appears asking if you have already installed the app on another PC, select 'Yes'. Enter in the security code and name of the first PC you installed the app on. Do this, then click 'Link'. Once the PCs have connected to each other (make sure both are on the same Wi-Fi network), click 'Next'.
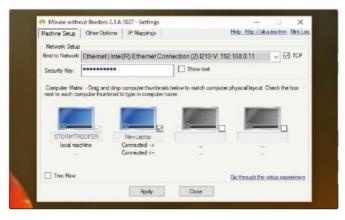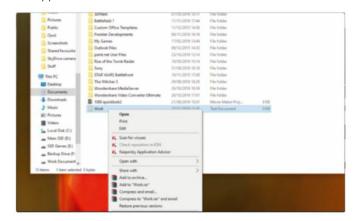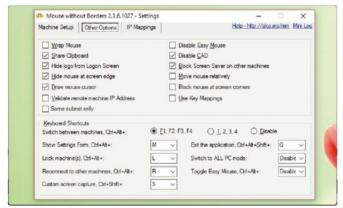
6 Control all PCs with one keyboard and mouse

You can use the app in a similar way to a physical KVM switch, allowing you to share a keyboard and mouse between devices. In the Computer Matrix part of the app's window you'll see the PCs you've installed the app on, with the main one on the left. Move your mouse to the right-hand side of your screen – it will appear on the next PC!

7 Change the order of your PCs

By swapping your mouse cursor from one PC to the next as you go to the side of the screen, it will feel like you have one big desktop. But, if your PCs aren't set up in order (i.e if the main PC is to the right of the second) then it can be confusing. To change the order, click on one in the Computer Matrix and drag. If you have the monitors above and below each other, click 'Two Row' as well.

8 Copy and paste files between PCs

Mouse Without Borders lets you move files and folders between PCs. Just click on the file you want to move, then drag it to the new machine and drop it – the file will be copied across just as easily as if you were moving the file on one PC. You can also right-click on a file, select 'Copy' and then move the mouse to another PC, right click and select 'Paste'.

9 Jump between PCs with keyboard shortcuts

If you want to quickly move your mouse and keyboard to a connected computer, hold down [Ctrl]+[Alt] on your keyboard, then press [F1], [F2], [F3] or [F4] on your keyboard, depending on which PC you want to go to. They are in the same order as the PCs displayed in the Computer Matrix part of the screen, so the computer on the far left is F1, the second is F2 and so on.

10 Other options

For even more control over how the application works, click on the 'Other Options' tab at the top of the screen. Here you'll see a number of advanced options, allowing you to change how the mouse behaves when moving between PCs, while also changing the keyboard shortcuts so that the program works just the way you want it to. ■

Learn how to...

Use your apps anywhere

Your guide Cat Ellis says...

"Upload your favourite software to Cameyo and access it from any PC without installing it"

At a glance

Skill level...

Anyone can do it
▶ Straightforward
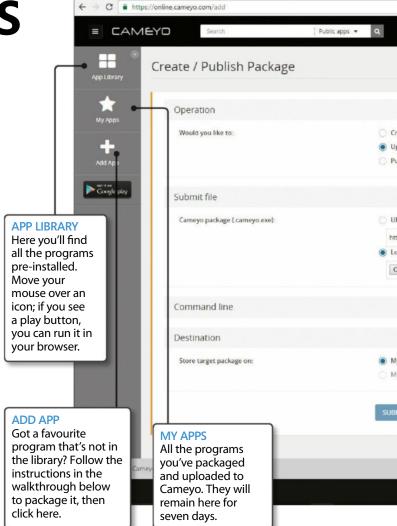Tricky in parts

Suitable for...

🪟 Windows 10
🪟 Windows 8.1
🪟 Windows 7

C ameyo is a great tool that lets you run Windows software in a web browser without installing it. It comes with lots of programs, including popular photo editors, word processors and media players, and you can add your personal favourites too.

Next time you have to use a computer that isn't your own, you don't need to worry if you don't have time or permission to install your favourite programs. Just log into Cameyo's website and there they are, ready to run. You can even use it to run Windows software on a Mac!

Cameyo works by turning any Windows program into a **portable app** – a single file that contains everything the program needs to run. It stores these files on its own web servers, and you can access them through any browser that supports **HTML5**.

APP LIBRARY
Here you'll find all the programs pre-installed. Move your mouse over an icon; if you see a play button, you can run it in your browser.

ADD APP
Got a favourite program that's not in the library? Follow the instructions in the walkthrough below to package it, then click here.

MY APPS
All the programs you've packaged and uploaded to Cameyo. They will remain here for seven days.

Step-by-step Use apps online with Cameyo

1 Make an account and log in

To get started, visit www.cameo.com and click 'Sign up'. Enter your email address and a password, then click 'Register'. Cameyo will send you a confirmation email with a link to activate your account; click this and you'll be logged in and taken to Cameyo's library of public apps, including office software, photo editors, PC optimisation tools and media players.
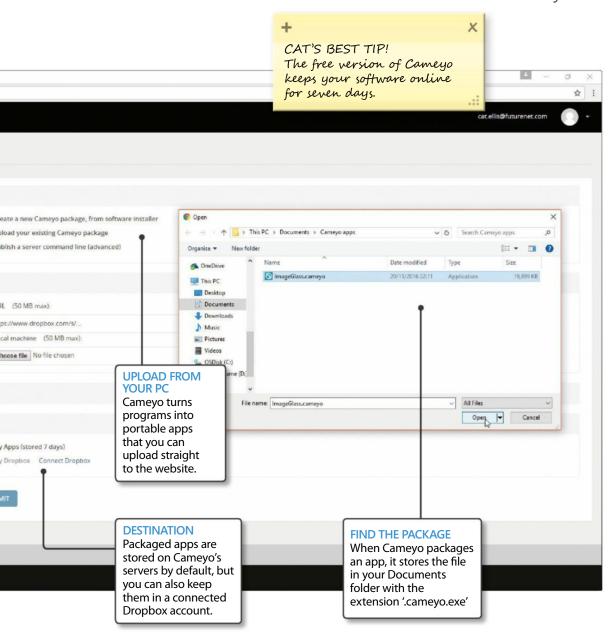
2 Open a public app

Move your mouse over a program's tile and some icons will appear in the top right. The 'i' gives you more information, the down arrow lets you download it, and the play button (if present) lets you use it in your browser right now. Click play and a new tab will open in your browser. After a little while (depending on the speed of your internet connection), the program will open there.
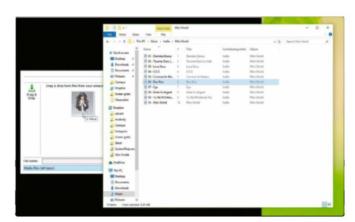
CAT'S BEST TIP!
The free version of Cameyo keeps your software online for seven days.

UPLOAD FROM YOUR PC
Cameyo turns programs into portable apps that you can upload straight to the website.

DESTINATION
Packaged apps are stored on Cameyo's servers by default, but you can also keep them in a connected Dropbox account.

FIND THE PACKAGE
When Cameyo packages an app, it stores the file in your Documents folder with the extension '.cameyo.exe'

3 Work in your browser
Programs running in your browser work almost exactly the same as they do on your desktop – they use the same menus, controls and keyboard shortcuts. The only difference comes when you want to open a file. Use the program's menu system as normal and Cameyo will guide you through the process of uploading files so you can work on them.
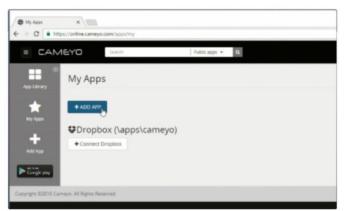
4 Pick your own program
If your favourite program isn't available as a public app, it's easy to upload it yourself. First, download the software you want to be able to run in your browser, but don't install it. We've chosen the free photo viewer ImageGlass from www.imageglass.org. Bear in mind that the program must be less than 50MB in size.
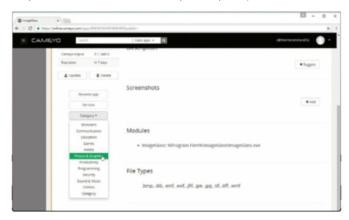
5 Get Cameyo's software

Now go back to www.cameyo.com and click 'Download'. Cameyo warns that some antivirus programs mistakenly flag it as a potential threat. If you receive a warning like this, it's up to you to use your judgement and decide whether you're happy to carry on. If you are, click the downloaded file cameyo.exe and select 'Capture an installation'.
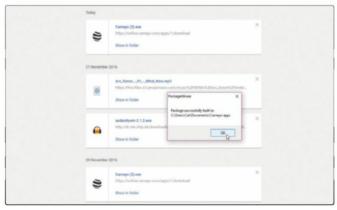

6 Record an installation

Cameyo will now take a snapshot of your PC's files and folders. Don't do anything else while this is happening. When it's finished, find the program you downloaded in step 4 and install it. If you're prompted to reboot your PC during the process, do so. When you've finished click 'Install done' and Cameyo will take another snapshot to see which files and folders have changed.

7 My Apps

Once your software installation has been successfully recorded, Cameyo will 'package' and store it in your Documents folder. Reopen your browser and go to https://online.cameyo.com/apps/my. As the name suggests, My Apps is where all the programs you upload will appear. In the free edition of Cameyo, they will remain here for seven days after you upload them.

8 Upload the package

Click 'Add app', then select 'Upload your existing Cameyo package'. Click 'Local machine', then browse to your Documents folder and open the new Cameyo Apps folder. Inside you'll find a file named after the program you installed – select this and click 'Open'. Click 'Submit' and the package will be uploaded. This might take a little while, so be patient.
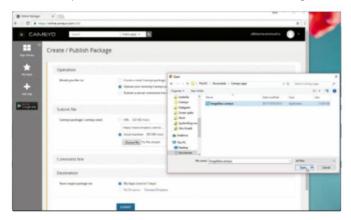

9 Adjust settings

You'll now see a page with information about your uploaded program. Here you can change various settings that will be helpful for other people who might want to use it – pick a category, upload some screenshots, and write a description. You can also create a link to share with other people who might be interested, and choose whether or not it should be listed publicly.

10 Use your app anywhere

Now you can visit www.cameyo.com on any PC, log in using your account details, click 'My apps' and select your program to run it directly in your browser. If you want to use it on your phone, download the Cameyo app from http://bit.ly/2gyQeSO and log in using the same details. You can uninstall the software from your PC now – you don't need it there anymore! ■

Learn how to...
Play any video file or DVD using VLC

Your guide *Nick Odantzis* says...

"VLC is a must-have app for anyone who has an ever-growing library of movies and music in lots of different formats"

At a glance

Skill level...
Anyone can do it
▶ Straightforward
Tricky in parts

Suitable for...
▪ Windows 10
▪ Windows 8.1
▪ Windows 7

There are plenty of media players out there for Windows 10 – including the pre-installed 'Films & TV' media player, which is how your media will open by default. But the one that really stands out is VLC. Available as a desktop version or a player specifically suited to Windows 10 touchscreens, there's nothing better to handle your entertainment needs. VLC can handle most types of file, from the mkv video format to FLAC hi-res audio files, and you can also add subtitles to videos, too.

Here, we're looking at the newer Windows 10 Store version of the app; though not as fully featured as the desktop version (it doesn't play DVDs or Blu-rays), it'll do almost everything else. And since the app is designed to work with Windows 10, if you have a very high-res screen, the controls scale up, unlike the desktop version.
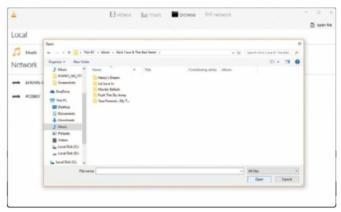
NICK'S BEST TIP
Keep off the mouse cursor for a few seconds and the menu in a video will auto-hide, giving you a clear view.

Step-by-step Get VLC and enjoy your media more

1 Install the app
To get VLC you'll need to head to the Store – click on the icon in the Taskbar at the bottom of the screen (the shopping bag) and in the search bar at the top of the app, type **vlc** and select the VLC app from the drop-down menu that appears. Now click 'Get' next to the app icon and it'll download and install on your PC. Once finished, click 'Launch'.

2 Find your media
Any videos contained in your Videos folder, or any music in your Music folder, will appear in the main area of the VLC app. To refine the type of media you see, use the options at the top of the app. If you want to search for a specific video or music file, hit browse to navigate to a file within the videos or music folders. Or, click 'open file' to browse to a location on your hard drive.
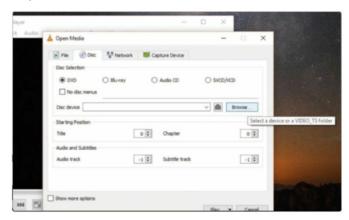
3 Play movies

To open a movie, double-click it and the VLC player will appear in place of the file menu. Within the player you can control your movie using the options in the lower menu. The play button is located centrally, volume on the right and minimise/maximise on the left. The timeline enables you to skip to any part of the video.

4 Control audio or subtitles

As well as basic controls, the video player window offers some more advanced adjustments – should you need them. Just click on the speech bubble to change the default audio language and subtitles, if they're available. Alternatively, you can select 'Open subtitles' and add your own if they don't appear in the options.

5 Try advanced video settings

There's a handy feature available with VLC that enables you to adjust the video and audio synchronisation, which helps if you're having problems with a delay in audio when something happens on screen. To adjust this, click the 'player settings' button. Play with the 'audio delay' slider to get video and audio in sync.

6 Play music

To listen to songs, click 'music' in the top menu. Any music contained within the Music folder on your PC will appear here; you can refine selection by artist, album or song using the sub menu. You can play an album, or just a song. If you want to create a Playlist of tunes, hit 'Playlists' in the top, click the + button and select a name. When you right-click a song, add it to that playlist.
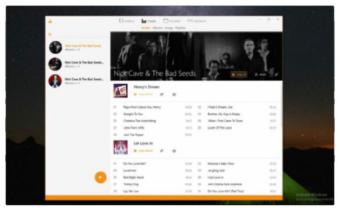

7 Play DVDs or Blu-rays

You can't play optical media using the Store app version, so open the desktop version of VLC instead. If don't have it, go to www.videolan.org and the Downloads area. When VLC desktop version is open, insert your DVD or Blu-ray. Then go to 'Media > Open Disc' and in the 'Disc Selection' area choose the type of disc. Now click 'Browse', and double-click its location under 'This PC'.

8 Sit back and enjoy...

By using the VLC app for Windows 10, you'll have all your media needs covered, giving you the ability to watch any type of videos and listen to all kinds of music, whether your files are stored locally, or if you've got them on a network drive somewhere around the home. Now all that's left for you to do is get hold of some good media to keep you entertained! ■

Learn how to...
Run apps in a sandbox

Your guide *Matt Hanson* says...

"Don't want an app to access the rest of your system? Run it in a sandbox, instead"

At a glance

Skill level...
Anyone can do it
Straightforward
▶ Tricky in parts

Suitable for...
🪟 Windows 10
🪟 Windows 8.1
🪟 Windows 7

When downloading files from the internet, there's always the risk that you may download a program that's actually a virus. Sometimes even downloading a safe file comes with additional software you didn't ask for, which installs itself and plays havoc with your system – changing default settings or switching the home page of your web browser, for example. To ensure these apps don't damage your system you can run them in what is known as a sandbox. This runs them separately from the rest of Windows, which means the program won't access important files and make changes. Running a program in a sandbox is quite advanced, but the Sandboxie app makes it easy. We show you how!

WEB BROWSER
Click the 'Sandboxed Web Browser' shortcut on your desktop to open your web browser in a sandbox. It will appear and behave just like your normal browser, but, when you hover over it, a yellow outline will appear.
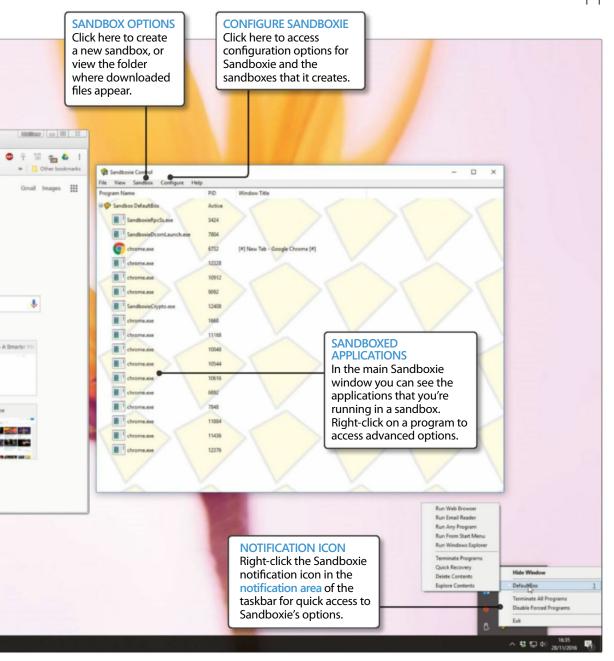
MATT'S BEST TIP!
Move a program out of the sandbox once it's safe — running apps in a sandbox can make them slow.

Step-by-step How to use Sandboxie

1 Download Sandboxie
Head to the Sandboxie website (www.sandboxie.com), and where it reads 'Sandboxie now supports Windows 10' click on the 'Click here' app. Once downloaded, open up the **.exe** file and the installation wizard will begin. Click 'I Agree' on the Licence Agreement page, select the location to install the app, then click 'Next'.

2 Installing drivers
As part of the installation, Sandboxie will ask you to install a system-level driver. This is essential to allow Sandboxie to emulate Windows and run software in a sandbox environment. Click 'Next' to install the drivers – you'll need to have administrator privileges. In the event of something going wrong with the drivers, restart Windows in Safe Mode and uninstall Sandboxie.

SANDBOX OPTIONS
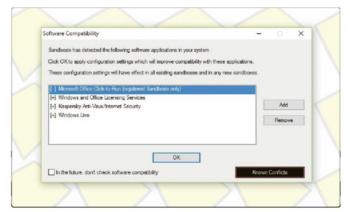Click here to create a new sandbox, or view the folder where downloaded files appear.

CONFIGURE SANDBOXIE
Click here to access configuration options for Sandboxie and the sandboxes that it creates.

SANDBOXED APPLICATIONS
In the main Sandboxie window you can see the applications that you're running in a sandbox. Right-click on a program to access advanced options.

NOTIFICATION ICON
Right-click the Sandboxie notification icon in the notification area of the taskbar for quick access to Sandboxie's options.

Jargon buster!

▶ **.exe**
Files that end with .exe are executionable files that launch a program. Sandboxie is the perfect place to test these files.

▶ **Notification area**
The Notification area is located on the far right-hand side of Windows' task bar, just next to the date and time. This is where icons for many programs that run in the background reside.

▶ **Email program**
An app such as Mail, Outlook or Mozilla Thunderbird that allows you to read and reply to emails from your desktop, rather than having to log into a website.

3 Running Sandboxie for the first time
When you launch Sandboxie for the first time, a window will appear and it may list a number of applications already installed on your machine that need to be configured to work better with Sandboxie. Press 'OK' to allow Sandboxie to configure them, but if there's any you want to leave alone, select them, then tap on 'Remove' to remove it from the list.
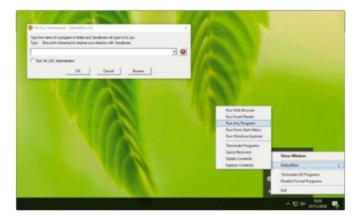
4 Known conflicts
Some apps – such as antivirus software – may not allow Sandboxie to run correctly. If you have any of these programs installed, the 'Known Conflicts' button will flash. Click on it, and a Window will appear telling you what programs were found with that conflict. Click 'Yes' to open the Known Conflicts web page and search for what workarounds you need.
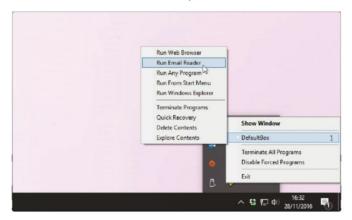
5 **Open the sandboxed web browser**
Once Sandboxie has finished configuring itself and other programs, a tutorial will take you through the basics of how Sandboxie works. At the end of the tutorial, you'll be invited to hide the Sandboxie window and open up the sandboxed web browser. You'll see an icon on your desktop for the Sandboxed Web Browser. Click this to open it.

6 **Using the browser**
Some websites are infected with viruses that try to download themselves in the background when you visit them. These 'drive by' viruses won't harm you if you use the sandbox. When you download a file using the web browser in the sandbox, the file will be saved in the sandbox, so you can test it before you move it to your main PC.

7 **Run programs in the sandbox**
If you want to run a program in the sandbox to try it out, right-click on the yellow Sandboxie icon in the notification area. You may need to expand the notification area by clicking the up arrow. Select 'DefaultBox' then 'Run any program'. Now add the location of the program's .exe file into the text box. You can also click 'Browse' to find the .exe file on your hard drive.
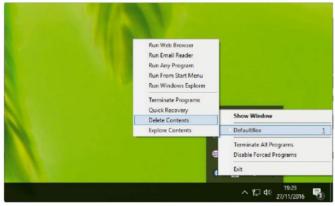
8 **Delete the contents of the sandbox**
Once you've finished downloading and testing files you can easily delete them from the sandbox, leaving no trace of them on your PC. To do this, right-click on the yellow Sandboxie icon in the notification area and select 'DefaultBox', then 'Delete Contents'. Remember to move everything you want to keep onto your PC before doing this.

9 **Run your emails through Sandboxie**
Another regular source of viruses is through emails. To make sure you're completely protected you can run your email program through Sandboxie. This means you can then open up attachments from emails without worrying about if its infected. Right-click the Sandboxie icon and select 'DefaultBox' then 'Run Email Reader'.

10 **Go pro**
You now know how to use Sandboxie to keep your computer safe! And, while Sandboxie is really great for keeping your home PC safe, it can be also used in a work environment to keep essential files and programs free from infection, but you will need to buy a commercial licence. Go to www.sandboxie.com to find out more. ■

Learn how to...
Solve eight major Windows 10 annoyances

Your guide *Nick Odantzis* **says...**

"Here are eight quick fixes for the sort of problems that can stop you getting stuff done on your PC. Let's get started!"

At a glance

Skill level...
Anyone can do it
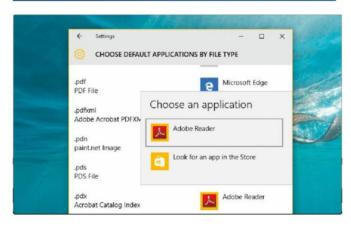▶ **Straightforward**
Tricky in parts

Suitable for...
⊞ **Windows** 10
⊞ **Windows** 8.1
⊞ **Windows** 7

T here are so many different settings available in Windows 10, but it's hard to know where they all are. Quite often you know what you want to do, but you don't know where to start looking to get it done. Over time, you might find certain things start to grate, such as prompts that frequently remind you of something you don't care about, or not being able to open files the way you're used to. While it's easy to ignore such things, it's also easy to make some simple tweaks and have a better version of Windows 10 at your fingertips.

And, that's just what we'll show you how to do. We have eight 'hacks' that make your PC experience a much smoother one. Don't let the word 'hack' scare you either – these are just simple tricks that anybody can try out, and if you don't like the result, just put it back how it was before.
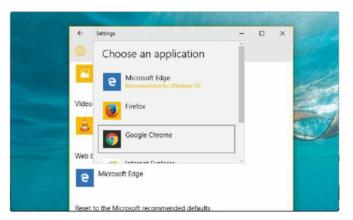
NICK'S BEST TIP
An easy way to improve Windows 10 is to learn some shortcuts – this will instantly make you more productive.

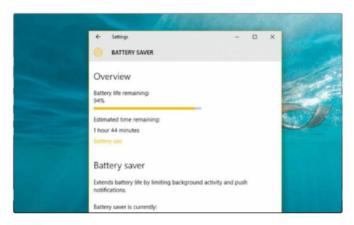**Step-by-step** Solve Windows 10 annoyances

1 Open PDFs your way
We like opening PDFs the old-fashioned way in a dedicated PDF reader. You can do this by typing **default app settings** into the Taskbar search, then clicking on 'choose default applications by file type'. Scroll down until you see a .pdf file type. You'll see Microsoft Edge is the default app. Change this to another default by clicking on it and choosing it from the list that appears.
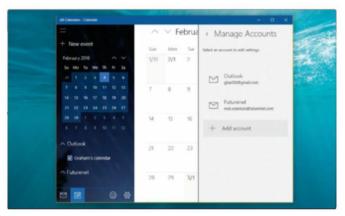
2 Use Google search
When you click on the search box in the Taskbar and type something in, Cortana will also search online using Microsoft's search engine Bing. If you prefer to use Google, go to 'Settings > System > Default apps > Web browser' and set this as 'Google Chrome'. Now open Chrome and install Chrometana Chrome from http://bit.ly/1M3qcno and choose Google in the page that opens.

3 Manage your battery

Turning on Power Saver is a quick trick for hanging onto power on long excursions. Windows 10 also comes with a Battery Saver feature, which kicks in when your power drops below a certain amount and turns off battery-draining features. To get to this feature, type **battery saver** into the Taskbar search, and click on the result. Then toggle the switch to 'On'.

4 Speed up Windows with gestures

Boost your productivity levels through speedy shortcuts, such as dragging two fingers up or down to scroll on your touchpad. See which gestures are available by typing **Mouse and touchpad** into the Taskbar search and clicking the result. In here you can toggle gestures on or off, and you can also change what Windows does when you do a three-finger tap or drag and slide.
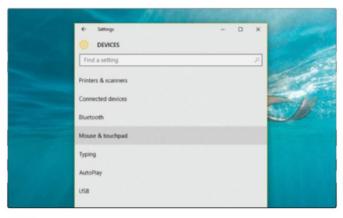

5 Get your life organised!

To use your calendar, type **calendar** into the Taskbar search, open the result and click 'Get started'. If you have an email account set up, you'll see it under 'Accounts'. Hit 'Ready to go' to open 'Calendar', then click '+ New Event'. If you use other calendars, you can sync events. Hit 'Settings > Manage accounts > Add account', and choose your email you'll now see all events.

6 Make Autoplay work for you

Insert a USB drive, or other type of media device, into your machine and you'll see Windows 10 recognises it and asks what you want to do with it each time. If you want to avoid this prompt, turn it off. Head to the Taskbar search and type **Autoplay settings**. Switch 'Use Autoplay for all media devices' to 'Off', or choose an action that occurs only when you insert specific media.
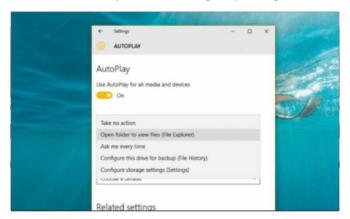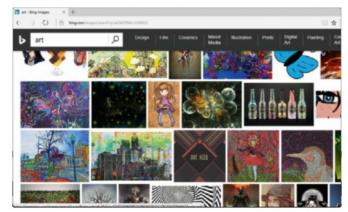

7 Disable the login screen

If you have little need for a password it can be annoying to always have to enter one at the login screen. But there's a trick that allows you to remove that process altogether. Go to your user accounts area by typing **Run** into the Taskbar search and then type **netplwiz** into the box and hit 'Enter'. Where it says 'Users must enter a password…' uncheck the tick box, then restart.

8 Grab a screenshot

There are many instances where screenshots are handy, but how do you take one? The easiest way is by holding the Windows key and pressing the [PrtScn] button. Windows will capture your whole desktop and pop the resulting image into your 'Pictures > Screenshots' folder. To capture a specific part of your desktop, use the Snipping Tool (type **snipping tool** into the Taskbar search). ■

Learn how to...
Avoid distractions on your computer
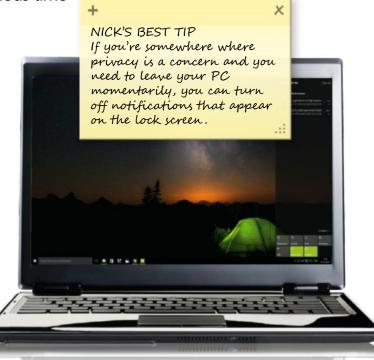
Your guide Nick Odantzis says...

"Got a busy day ahead? I'll show you how to keep pesky Windows 10 notifications under control so you can do more with your precious time"
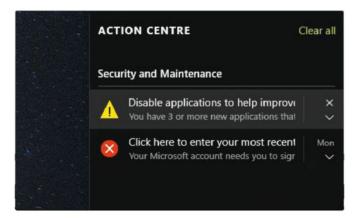
At a glance

Skill level...
▶ **Anyone can do it**
Straightforward
Tricky in parts

Suitable for...
▪ **Windows** 10
▪ **Windows** 8.1
▪ **Windows** 7

The brain is a wonderful thing, capable of memorising many things. Only, it doesn't always work that well in practice – some of us are more forgetful than others! This is why Windows notifications are such a valuable thing to have – they warn us of upcoming events, such as appointments in the calendar, new emails that arrive throughout the day and it even tells us if our Windows machine needs some kind of maintenance or app action that we may have forgotten to carry out. But sometimes you just want to focus your attention on one task, and when you've got Windows reminding you of dozens of emails that need checking or some other event, it can get in the way of what you want to do. Luckily, it's easy to take care of notifications and minimise their impact on your life.
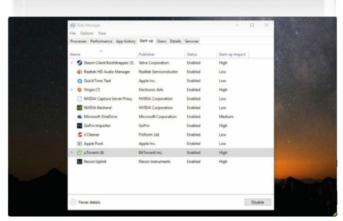
NICK'S BEST TIP
If you're somewhere where privacy is a concern and you need to leave your PC momentarily, you can turn off notifications that appear on the lock screen.

Step-by-step Master all incoming notifications
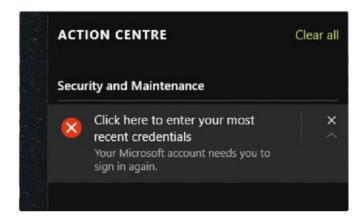
1 See new notifications
When you receive a notification, a pop-up window will appear above the Taskbar at the bottom of the screen. If you miss the alert, opening the Action Centre will allow you to view all notifications that you've received at any time by clicking the message bubble icon on the Taskbar. All notifications are displayed in a list, in order of when they appeared.
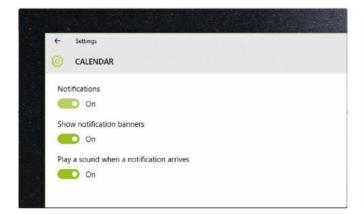
2 Check out all notifications
With the Action Centre still open, you can quickly deal with all open notifications by clicking the 'Clear all' link above. If you want to be a little more methodical with your approach, you can view individual notifications by clicking on each one – doing this will show you what exactly needs addressing, such as a pending system update or a forthcoming calendar event.

3 Action individual notifications

To quickly deal with events that you don't need to open for further information, you can hover your mouse cursor over them to reveal more notification controls. If you're satisfied that you don't need to know any more, click the cross next to it to dismiss it. If you want to quickly find out more without actually opening the notification, click the down-facing arrow.

4 Control general notifications

If you want to control when notifications appear, you can alter this in the settings. Type **Notifications and action settings** in the search bar on the Taskbar, and click on this heading from the list that appears. Here you'll see options that you can toggle on or off, such as showing tips on using Windows, app notifications and even being able to hide notifications during a presentation.

5 Fine tune notifications

If turning off *all* notifications bothers you, turn off notifications just on individual apps, keeping the ones you want to see. Once again, in Notifications and action settings, scroll down and you'll see individual apps with a toggle switch next to each one, allowing you to turn them off individually. Or, click on one to turn on specific features, such as a notification noise.

6 Turn on Quiet Hours

The easiest way to avoid distracting notifications is to use the 'Quiet Hours' function. This one-click feature silences everything in an instant. Turn it on or off by right-clicking the notifications icon in the right-hand side of the Taskbar and selecting 'Turn on quiet hours' from the menu that appears. When you want to turn this feature off, just do the same thing again.

7 The power of touch

If you're using a touchscreen PC there's a more touch-friendly way to turn 'Quiet Hours' on or off. To find this, simply tap (or left-click) the notifications icon in the Taskbar to open the Action Centre. At the bottom of this pane is a Quiet Hours tile – tap this to turn it on or off. If the tile doesn't show, just tap the 'Expand' setting above and to the right of the tiles.

8 That's it!

You should now be able to take control of the way you view notifications on your PC! You can easily view and deal with notifications in the Action Centre, or turn them off in the notifications settings or in individual apps. Finally, 'Quiet Hours' allows you to quickly turn off notifications altogether, ideal if you're in a meeting or going to sleep at night. ■

T3

The Gadget Magazine

GET FIT FAST IN 2016 WITH THE VERY BEST TECH FOR RUNNING, CYCLING AND MORE...

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GARMIN

LIFE'S BETTER WITH T3

EDIT VIDEO LIKE A PRO

Get A-list results for your mini movies with DaVinci Resolve, free professional video-editing software

Video editing is necessary if you need to stitch together a family video or put together some footage you took on your travels, to put online or share with friends. The good news is many video-editing programs are free, however, the bad news is a lot of this software isn't great. Windows Movie Maker does a passable job, but don't rely on presentable results to put on YouTube; ShotCut, recently made its way over from Linux, but is unstable. And, there's a stack of other packages out there that promise to do the trick, but they're so buggy we wouldn't touch them.

But, fear not! DaVinci Resolve now has a free version (the full version of this software is used for Hollywood-grade films), and it includes full editing facilities to boot.
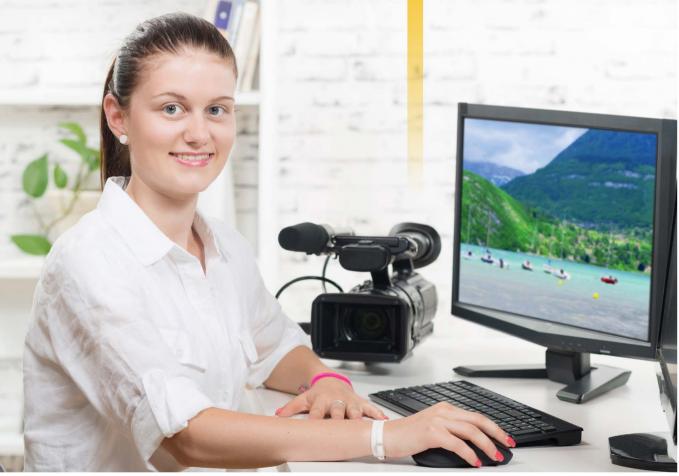
Lights, camera, action!

YOU'LL NEED THIS
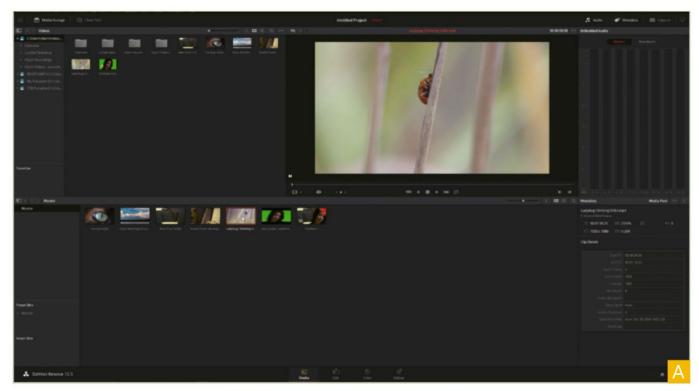
BLACKMAGIC DAVINCI RESOLVE 12.5
Download it for free from
www.blackmagicdesign.com

SOURCE VIDEOS
Use your own, or grab some from Archive.org for testing

A

1 PREPARATIONS

Begin by downloading and installing DaVinci Resolve. It's a reasonably big package at over 400MB, and there are a few dependencies you may need, although the installer takes care of these for you. You need to register in order to download it in the first place, and there are no nasty hidden extras to watch out for in the installer, as far as we can tell. Launch the software and take the tour to see a preview of a few of Resolve's key features, then let it check your computer to see how well it'll perform. You can now create a new project. Bear in mind the maximum resolution of the free version is 1080p, because 4K editing is locked to the paid-for version. The next choice is for the editor's keyboard shortcuts, which you can set to match those of a number of other high-end editors – we're using DaVinci's default set, but you may be familiar with Premiere, Final Cut or Avid Media Composer.

2 LOOK AROUND

Resolve's interface is split into four parts, which you can access using the bar at the bottom of the window, or by selecting them in the 'Workspace > Primary Workspace' menu. The first one you'll see is the media workspace [Image A], so let's take a quick and very basic tour. Starting at the top-left, there's a list of folder locations, which you use to locate your media; once a folder is located, a list of clips appears to its right, which can be previewed in the window to the right of that. You add your clips to your project by dragging them to the large pane at the bottom of the interface, or view information about the

B

currently selected clip in the bottom-right pane. Drag a few clips into the bottom pane, and hit [Shift]+[4] to head to Edit mode.

3 THE EDITING ROOM

Now we're into the meat of Resolve's editing facilities [Image B], which will be familiar to anyone who's used a non-linear editor before. You get access to the clips you've selected, a timeline at the bottom of the screen, a couple of preview windows at the top, and a limited list of effects and transitions. Begin by dragging one of your clips onto the timeline – we're using freely available public domain footage sourced from Archive.org, so if you're looking to try Resolve, but don't yet have any footage to use, that's a solid legal source. When you drop your clip in, two tracks are created: one for the video, and one for its associated audio track. Each of these elements can

be edited independently, although they begin (usefully) linked together, so your audio won't end up out of sync.

4 TRIM AND SPLICE

Hover your mouse over the ends of your clip – scroll, or use your mouse wheel to zoom out, if you can't see all of it – and you can top and tail it by left-clicking and dragging. While this is a viable tactic, it's far from the most useful way to trim a clip, mainly because you have to keep previewing it to see exactly where you've trimmed to. Better, then, to splice, putting a break in your clip at the exact point it needs to be cut. Use the controls of the rightmost preview window to view your clip, and stop it at the exact point you'd like it cut. Alternatively, drag the red position marker to your splice location. Then select the razorblade tool along the top edge of the timeline pane, and click on the position marker to break the clip

System requirements

Resolve is not for the faint-hearted, and not for the faint-of-PC. It absolutely requires OpenCL support to operate, so forget about it if you're looking to edit on a machine that doesn't have a modern discrete graphics card. You'll probably need to click through a couple of error messages when you load it, mainly due to Resolve looking for specialist editing hardware you probably don't have – don't worry about these, it'll work just fine without. You may also find that it doesn't play nicely with your monitor; we had some issues getting it to run on a 4K panel, and it needed a little convincing about our Windows scaling options.

If you want to take Resolve further, you could consider an upgrade. The full version weighs in at an eye-watering $995, and if you're really serious about using it, you can pick up the software with a dedicated control surface (shown above) – featuring a host of buttons, jog wheels, and integrated LCD panels for fingertip control – at a positively eye-loosening $29,995. This really is one for the professionals.

into two. Since this is non-linear editing, there's no need to worry about this brutality: you won't affect your original files at all. Go ahead and clean up by selecting the arrow tool, clicking the excess, and hitting 'Delete'.

5 LAYERING UP

Let's add a second clip now, and look at Resolve's hierarchy. Drag your next clip and drop it above the original one, which creates a new video track. Overlap it with your first clip, and preview your video; you'll see that the original has basically disappeared, since this new clip is at the top of the pile. This order matters, because it means you're able to reliably mix video tracks together using transitions and cross

fades. So, let's do that. Move your upper clip close to the end of the lower one, overlapping just slightly. Hover, using the arrow tool, over the top-left edge of your top clip [Image C] to reveal a white handle; drag it to the right, and drop it in line with the end of the first clip and you've created a cross fade.

6 MAKING THE GRADE

You could spend all your time in Resolve's editing interface, and not worry about the rest of it. But Resolve was built as a colour-grading tool and, frankly, its non-linear editing portion is not quite as tasty as that of some of its competitors. The real meat, then, lies in the 'Colour' section, which hosts the grading, compositing, and

effects tools. You're working with a lesser collection than in the full version, but this is still a broadcast-standard selection. The only problem? The node-based system that Resolve uses can be a bit of a dog to get your head around. So, before we even touch the controls, let's explain it with a little analogy. Many editors allow you to add effects to video using layers; think of this as a nice cream cake. If you've missed something out, it's going to be a very messy job to pull it apart, put in the additional ingredient, and assemble the whole thing back into some presentable order. Using nodes is more like working with cupcakes; each one can be revised and decorated exactly as you wish; filling up your cupcake stand doesn't mean they're locked in place – if one looks a bit shoddy, you can pull it out without ruining the rest – and you're free to eat them in any order you like. It's an incredibly flexible way to add effects, and efficient, too. Once you've created a node, you can reuse it as you wish.

7 COMPOSITION

So, let's try out this section with a bit of green screen – otherwise known as chroma key – compositing. We're using the clip 'Hair Detail' from www.hollywoodcamerawork.com/greenscreenplates.html as our test, since it gives us a good chance to fiddle with some relevant settings. If you're creating your own green-screen shot, make sure your lighting is consistent, your surface

Render time

Completed your video? Then it's time to deliver it – or, at least, it's time to use Resolve's 'Deliver' section to render it. It's another portion of the program that's intuitive once you get the hang of it, but utterly alien until you do. Head to the 'Deliver' section by hitting [Shift]+[8], and you'll see your timeline, a preview of the complete video, and a few more controls. When you're happy

with your video, choose your settings in the top-left panel – there are presets, usefully, for things such as YouTube – then click the 'Browse' button to set where your video will be saved. Now click 'Add To Render Queue,' and hit 'Start Render' on the right-hand side.

If you're only using Resolve to process clips for use in another editor, use the 'Individual Clips' button in the

left-hand pane to render each element individually. And if you've (sensibly) left small gaps at the start and end of your video, you can ensure it comes out at exactly the right length by changing the render to 'In/Out Range' (at the top of the timeline), and using the grey bar above the timeline to set the exact point at which you'd like your video to be cut.

as flat as possible, and your camera set with enough saturation that the green doesn't tend toward the grey. Head back to the timeline section, and clear it off by dragging a box over all the clips within, and hitting 'Delete', then place the green-screen footage on top of whatever background footage you'd like

to use – head back to the 'Media' section to import it, if you've not done so already. If you're using the same source file as us, you'll notice that it comes as a series of png files. Resolve treats these the same as it does videos, so rather than importing it frame-by-frame, drag the folder into the bottom pane. Our clip

has a slight issue in that it's anamorphic, so it looks squashed. Select the clip in the bottom pane, then select 'Clip Attributes' – setting 'Pixel Aspect Ratio' to '16:9' worked to pull our clip to the correct scale.

8 SEE THE RESULTS

Head back to the 'Edit' section, and layer up a couple of clips, placing the green-screen footage on top of your background. Use the preview window to ensure that you can see the green-screen footage, then head to the 'Colour' section. Click on your green-screen footage to show it in the preview window, then add a new serial node by hitting [Alt]+[S]. Click the eyedropper tool (the Qualifier) on the menu in the centre of the screen, then click an area of green screen to select it. Not much seems to have changed, but click the sparkling magic wand icon above the preview, and you'll see that Resolve has created a mask [Image D], based on your selected colour. At the bottom of the screen, under 'Selection Range,' clicking the rightmost icon

D

E

F

inverts the effect – because we're looking to keep the foreground, rather than the background – and you can see how well you've done. Click and drag the values beneath hue, saturation, and luminance [Image E] in the Qualifier window to increase the range of colour you're selecting, which should (hopefully) pull your chroma key much closer to the content you wish to keep visible. In our case, it hasn't worked well, because the green background is massively over-saturated.

9 COLOURATION
We need to bring that colour down a little before our chroma key will work. Right-click the second node in the top-right pane, and select 'Create serial node before.' On this node, linked in the chain prior to our chroma key operation, we'll adjust the clip's colouration, so click it to start editing it.

But, if we just pull out a load of green from the clip, our cut-out subject starts to look purple and unwell. But we can be more selective. Toward the bottom-left, click the icon that looks like a dot inside a circle to find the colour wheels, then head to the third page. Drag the slider below the 'Highlight' wheel, and you'll start pulling down the brightness of the background, leaving the main image intact. Click on the original node, and drag the same slider back up a little, which should correct any disturbance to the original image. Make no mistake, we're hacking here. There's no adding quality to poor footage, and the green-screen clip we're using is supplied because it presents challenges; if you're using your own stuff, you may not find it as difficult to work with. Sometimes, you just have to do the best job you can, and that means a lot of manual tweaking. Thankfully, pretty much every

tool in Resolve's Colour section has a reset button, so you can try your tweaks, and undo them quickly.

10 QUALIFICATION
Click the node with the chroma key applied to it, make sure the Qualifier tool is selected in the bottom-centre pane, and drag the blur radius to increase its value slightly. Don't go crazy, but apply at least a small amount, which will go some way to offsetting the harsh lines often present around the edge of a keyed image. Now it's time to take a look at our results. In the nodes panel, right-click, and select 'Add Alpha Output,' then click and drag a line between the triangular output of the rightmost node to the blue item that's appeared. Switch off highlight mode by clicking the magic wand above the video preview, and the mixed picture appears. You may want to move the overlaid element; this is ridiculously easy. Just find the sizing tool on the central menu (third from right), and drag the values to move, rotate, or skew your overlay. The edges of the overlaid image block out the background, so head to the window tool (third from left), and click 'Linear' at the top to draw a box around your image, and use it [Image F] to clip the edges. If you have a poorly keyed background – perhaps with inconsistent green screen, or other elements you don't want in shot – the window tool is a perfect way to get rid of them. So here we are – you've been given a glimpse of Resolve's power, and we've spent four pages skimming the surface. Head to the 'Help' menu to open its reference manual. ◾

BUILD THE ULTIMATE
WINDOWS
REPAIR
DISC

Turn panic into minor irritation by crafting your own customised recovery disc

Words: Nick Peers

One of the most stomach-churning moments in any PC user's life is when you switch on your computer to do some work or let off some steam, only to find Windows won't boot. You may get lucky – Windows 10 is smarter than previous versions, and can resolve certain issues on its own, but in many cases, you're left in an endless reboot loop. Assuming Windows even gets that far.

If Windows can't fix itself, what next? Do you have a recent backup of your data? What about Windows itself? Of course, it's perfectly possible to reinstall Windows from scratch, but that's the best part of a day lost to restoring your PC. And did we mention your data?

The solution lies in creating a bootable recovery disc – one that gives you the tools to repair most Windows woes, remove malware, and lets you pull data off the drive in case you're forced to bite the bullet and reinstall. In an ideal world, you'd be able to build a single rescue disc to cover all your needs. Linux users can smirk at this point, and bring out their Live CDs, giving them full-blown access to the OS they know and love. Wouldn't it be great if you could do the same in Windows? The answer is: you can.

In this feature, we'll show you how to create all the recovery media you'll ever need. The first disc will give you access to basic Windows recovery options, plus allow you to reinstall Windows if all else fails. The second offers more quick fixes to resolve common boot and loading problems, plus provides opportunities to recover files and back up or restore disk images. The final disc gives you the closest thing to a Linux Live CD – that is a fully functioning Windows-like environment to work in, with tools to help you troubleshoot problems, get online, and even add your own custom apps to beat malware and perform other tasks.

The time to create this media is right now, while your PC is still working, so turn the page, and protect yourself against disaster.
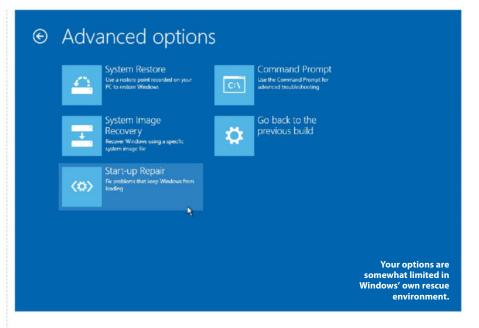
Our first recovery disc is – as it's always been – the humble Windows installation disc. Can't boot into Windows? Boot from this instead, choosing the 'Repair your computer' option when prompted. From here, you can attempt to fix startup problems automatically, launch System Restore to try rolling back to a previously working installation, or even restore Windows from a disk image. Advanced users can dig deeper, with access to the command prompt, too.

These days, most of us don't bother with DVDs, so it's unlikely that you have any installation media to hand. Let's begin, then, by rectifying that situation. Start by typing **recovery** into the Cortana search box, then choose 'Create a recovery drive'. You're prompted to back-up system files to it, which effectively creates a full-blown reinstall disc – you need an 8GB flash drive if you go down this route. Alternatively, uncheck the 'Back-up system files to the recovery drive' box, and make do with the basic repair options – in which case, all you need is a 512MB USB flash drive, although you won't be able to reinstall Windows if you go down this route.

(Note: If you want to create a bootable DVD, you need the Media Creation Tool – download the latest version from www.microsoft.com/software-download/windows10, and choose the ISO option when creating media for another PC, then right-click this file, and choose 'Burn disc image' to burn your disc.)

From here, if Windows fails to boot, pop in your installation disc or drive, and either make it your first bootable device in the BIOS. Or, look for an option to choose the boot device at startup, choosing the rescue media when prompted – note, if you're shown two options (typically 'UEFI' and 'USB'), choose 'UEFI'. From here, you can follow the prompts to hopefully bring your PC back to life, or – if all other avenues fail – reinstall Windows from scratch.

BEYOND THE BASICS

The Windows repair tool is all well and good, but there are times when it can't help. It can't disinfect your malware-infested drive, for example, and neither can you easily copy files from a badly mangled Windows installation, before formatting the drive, and starting again. If you want to protect yourself against either of these two possibilities, you need to augment it with something else.

Most anti-malware vendors offer a recovery-disc solution that specialises in rooting out malware – see the box opposite for details about creating a fourth recovery disc if you decide against the full-blown Live CD option later on in this feature. In the meantime, our second recovery disc takes things one step further than the Windows install disc. Lazesoft Recovery Suite Home Edition is free (for non-commercial use), so start by downloading and installing it from www.lazesoft.com/lazesoft-recovery-suite-free.html.

Lazesoft Recovery Suite contains four key components, all of which can be run directly from Windows (even in Safe mode). Of course, we're interested in building recovery boot media, so after launch, click the 'Burn CD/USB Disk' link. You're asked to specify the target version of Windows – leave the default 'DO NOT specify' setting applied for Windows 10 support, then click 'Next'. Choose your target media: CD/DVD, USB, or ISO file, then click 'Start'. Once created, check out the box over the page to find out what sort of problems Lazesoft can attempt to fix.

ONWARD AND UPWARD

Lazesoft Recovery Suite is well worth using in case it can fix your problem with just a few clicks, but what if it can't? In an ideal world, you'd be able to boot into a more complete Windows-like environment – one that employs the familiar point-and-click interface, while giving you access to a wider range of tools, full internet access (being able to research error messages online could be a crucial step toward solving your problem), and more besides.

The good news is that all of this is

Win10PESE provides you with a recovery environment based on Windows.

It can take a while to build your customised recovery disc.

possible – Microsoft produces a specialised version of Windows called Windows PE, with 'PE' standing for 'Pre-installation Environment'. It's designed to be run directly from removable media, and has been adapted over the years by various individuals to provide recovery discs that can give you the best of all worlds – think Bart PE (based on Windows XP) and AOMEI PE Builder (Windows 7 or 8, but not 8.1 or 10).
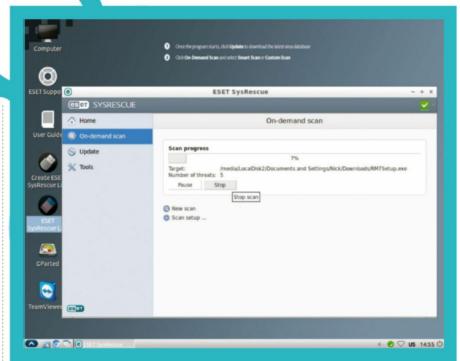
One of the most successful PE-building tools is WinBuilder, and one user-friendly variant for Windows 10 comes in the form of Win10PESE. It's a flexible custom recovery tool builder that enables you to incorporate additional apps and tools if you need them, and can be burned to DVD or USB flash drive (1GB or larger).

BUILD A CUSTOM RECOVERY DISC

Start by visiting http://win10se.cwcodes.net/Compressed/, and click the link under the 'Package' column to save the recovery builder tool in zip format to your hard drive. Once done, right-click the zip file, and choose 'Extract All', then open the Win10PE_SE_<date> folder (the <date> corresponds to the latest build number), and double-click 'BuilderSE.exe' to get started. The WinBuilder main screen reveals all the basic steps that you need to follow.

One of those steps involves giving the builder access to Windows 10 installation media – sadly, your recovery drive (or a disc created using the Media Creation Tool) doesn't count. Instead, click the 'Microsoft Windows and Office ISO Download Tool' link in WinBuilder to access a tool that downloads the Windows 10 ISO. Once downloaded, launch the app, select 'Windows 10', then choose the 'Windows 10 Home/Pro' link from the drop-down menu, before clicking 'Confirm'. Choose your language, click 'Confirm' again, then pick the 64-bit or 32-bit download, based on which version you currently

Malware recovery discs

One of malware's nastiest tricks is to cripple your PC so it's impossible to clean. The malware suppresses known security tools from running, plus locks down your system in various ways, such as restricting which websites you can visit, barring access to Registry Editor, and even crippling Safe mode, inside which most anti-malware tools can attempt to clean up the mess.

The solution here lies in visiting your security vendor's site to locate recovery media that includes a special version of your anti-

malware product that has network access to update itself, then focuses on detecting and cleaning malware. Depending on the tool and the infection, you should find any collateral damage has also been repaired, although tools such as Windows Repair (www.tweaking.com) and Complete Internet Repair (www.rizonesoft.com) can be used in Windows proper after the malware has been scrubbed, if this doesn't prove to be the case.

These tools are free. Just download the ISO file to the hard drive of a clean, working PC,

then right-click it, and choose 'Burn disc image' to burn a DVD from it, or use a tool such as Rufus (https://rufus.akeo.ie) to create a bootable USB flash drive from the ISO's contents, if the vendor in question doesn't provide a live CD/USB creation tool. Major anti-malware vendors offering bootable recovery discs include Kaspersky (https://support.kaspersky.co.uk/4162), Norton (https://security.symantec.com/nbrt/nbrt.aspx), ESET (www.eset.com/int/support/sysrescue), and AVG (www.avg.com/ww-en/download.prd-arl).

have (press [Win] + [Pause/Break] to find out if you're not sure), to download the ISO file.

Next, double-click the ISO file to allow Windows to mount it as a virtual CD/DVD drive (it'll be visible in File Explorer). Now return to Win10PESE, and click the 'Source' button. Click the folder button under 'Source Directory' to select the virtual disc drive.

In the program's left-hand pane, you'll see a number of collapsible folders that, when opened, revealed additional settings. If you're in a hurry, you can skip all of these to generate a basic, but usable, ISO file – just click the play

button, sit back, and wait for the disc to be created. Once complete, look inside the Win10PE_SE_<date>\ISO folder for the ISO file you can subsequently burn to disc, by right-clicking the file and choosing 'Burn disc image'.

If you're creating a bootable USB recovery drive, however, you should take the time to expand the 'WriteMedia' section. If your PC has a 64-bit UEFI (check with the manufacturer), select the 'Copy to USB-Device' box; if not, select 'Copy to USB-Device BCD Bootloader' instead, and check 'Add Grub2-EFI (x64 UEFI only)' to ensure it boots. Click the

folder button under 'Please select the root directory of your USB-Device', to select the correct drive letter if necessary, then click 'Copy to USB' to build your recovery drive from the ISO you just created.

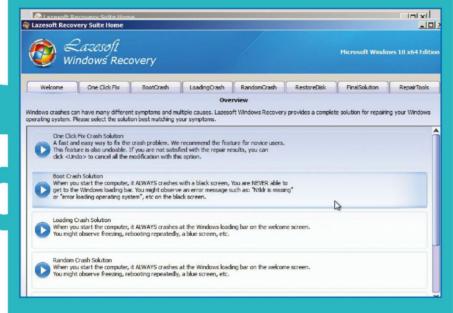You can now test the recovery drive by booting from it in the same way you'd boot from the previous two recovery options. A menu appears – select 'Win10PESE' to boot into your recovery environment. When the desktop environment pops up, you're prompted to choose your network connection type, if one is detected – the default DHCP is automatically selected after a five-second pause.

You then find yourself at a close approximation of the Windows 10 desktop, albeit one employing a more 'classic' Windows look and feel. You'll see convenient shortcuts to File Explorer, the Command Prompt, and PENetwork on both the Taskbar and desktop – there's also a shortcut to Firefox, giving you access to the web. PENetwork merely launches the network manager, which should already be running and accessible from the Taskbar Notification area, alongside other controls, including one that enables you to set a different desktop resolution if you wish (note this feature doesn't work very well on UEFI systems – you're likely to find only the 1920x1080 and 1024x768 options work).

Click the 'Start' button, and select 'All Programs' to see what tools and utilities are included with the vanilla Win10PESE disc – shortcuts to critical Control Panel and system management applets are included, as are a handful of file-related tools (including 7-Zip), BootICE (for managing the boot manager), a PDF viewer, and some handy system tools, including Remote Regedit (for manipulating your Registry in case your boot problems stem from there), as well as access to the System Recovery options found in Windows itself.

These tools are all welcome and helpful, but you may be hankering after different tools and utilities – you may even simply want to be able to run a particular app, such as a word processor, while you try to fix your boot problem. The good news is that your Win10PESE environment can support third-party applications and programs, too.

We say 'some' because, while certain program installers work, on the whole you're limited to portable apps, namely those that run directly from a folder. You can download these from the internet (look under X:\Users\Default for the Downloads folder), but be sure to copy portable apps and key files to another drive if you want to keep them

Fix Windows boot problems

Lazesoft Recovery Suite offers a number of handy tools for fixing problems with Windows, plus it can help you recover data, too. Once created, reboot your PC from the Lazesoft rescue media. You'll eventually find yourself at the main Lazesoft Recovery Suite, with four recovery-based options: 'Windows Recovery', 'Data Recovery', 'Disk Image & Clone', and 'Password Recovery'.

All four options are largely self-explanatory. Before running any recovery tools, we recommend taking a drive image of your current setup, which ensures you can always roll things back should the cure prove worse than the malady. Select 'Disk Image & Clone',

and choose 'Drive to Image' to back up to a suitable external drive. Second, 'Data Recovery' contains the full range of data recovery options, including pulling off regular files, as well as searching for lost and deleted files and partitions.

'Windows Recovery' attempts to fix your boot problems, offering a wide range of options across a series of tabs. There's also a one-click solution if you'd prefer the software to try to diagnose and repair on its own, with an 'Undo' button that promises to reverse any changes made if the problem isn't fixed or gets worse.

If this fails, try the other options: 'BootCrash', 'LoadingCrash', and 'RandomCrash'. Each

one steps you through a series of potential fixes to try, from repairing the MBR and restoring missing or corrupted files, such as Ntosknl.exe ('BootCrash'), to running memory diagnostics, and recovering the Registry ('RandomCrash').

The final tool – 'Password Recovery' – promises to reset your Windows password if you've forgotten it, plus can reveal your Windows and Office product keys, should you need them. The former option only works with local passwords – in other words, if you sign in to Windows using your Microsoft Account, you need to visit https://account.live.com/password/reset to try to fix the problem.

Lazesoft provides a wide range of data recovery tools.

Win10PESE enables you to run portable apps from other drives.

for another session – the 'X' drive resides only in memory, which means it's wiped the moment you reboot.

BRING YOUR OWN

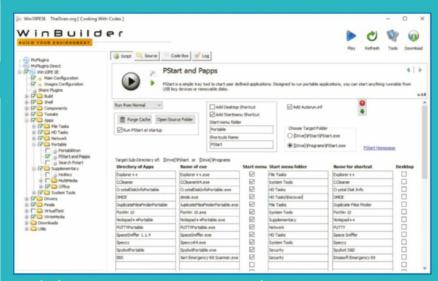Luckily, you have a number of options should you wish to build up a more permanent collection of tools and utilities. Portable apps can be stored on another drive – a USB flash drive, say, or shared network folder. Access them via the Windows PE environment when needed.

A more elegant solution, and one that incorporates your applications directly into your recovery drive (with shortcuts through the Start menu), is to follow the 'Add apps to your drive' box on the right. Also take the time to explore some of the other options that Win10PESE provides. Explore the various sections of the disk-creation tool; expand 'Shell', for example, and you can change the packaged Start menu, plus configure its appearance. Expand 'Components', and you can choose which Windows tools and accessories to include – add the .NET Framework to support a wider range of applications, for example.

If you have a virtual Windows machine to hand using a tool such as VirtualBox (www.virtualbox.org), use it to test your recovery disc – open 'VirtualTest', and select 'VirtualBox Emulation' to set up a dedicated virtual machine to test the ISO file with. It's a great way to check to see what effect your tweaks have, without having to recreate a USB flash drive or boot from your PC each time. But do remember to test the final disc or drive on your actual PC when you've got it working to your satisfaction, to make sure.

TROUBLE-SHOOT YOUR PC

Your recovery discs have been created, waiting for the time they'll be needed.

Add apps to your drive

Why plug in another USB drive, or download tools from the net, when you can embed any portable tool directly into your recovery drive? Once embedded, the tools can be directly accessed through Win10PESE's Start menu, or via an icon in the Taskbar Notification area.

To add apps to your drive, first expand the 'Apps > Portable' section in Win10PESE's left-hand pane, then check 'PStart and Papps'. Next, click the 'Open Source Folder' button to open the folder where your portable apps need to be collected, each inside its own folder. Once you've copied them into

here, return to Win10PESE, and enter the folder name of each app under 'Directory of Apps', plus the name of the program's executable file under 'Name of exe'.

To add a shortcut to the Start menu, check 'Start menu', and then specify the folder (get this from Projects\Win10PESE\Apps), and shortcut name; you can add a desktop shortcut, too, by checking the appropriate box. Finally, if you're burning a DVD, be sure to select 'Run from RAM' to allow any anti-malware tools to download and process updates. Then create the disc in the usual way. What sort of portable apps should you be

looking to add to your toolkit? Two recommended anti-malware tools are Emsisoft Emergency Kit (www.emsisoft.com/en/software/eek), which utilises two anti-malware engines, and Malwarebytes Junkware Removal Tool (www.malwarebytes.com/junkwareremovaltool) for PUPs.

Piriform (www.piriform.com) provides portable versions of CCleaner (cleanup tool), Recuva (data recovery), and Speccy (system information). Another data recovery tool worth adding is DMDE Free (https://dmde.com), while a wide array of tools can be found at www.portableapps.com.

Now your PC is refusing to boot, and you've whisked out your recovery discs. What to do? First, we recommend taking a drive image of the system partitions before you start attempting to fix things. Use Lazesoft for this task, unless you have an emergency boot disc coupled to your existing system imaging tool (such as Macrium Reflect Free), in which case use that.

With the drive image in place, you can start to attempt a fix for your problem. Begin with your Windows installation disc, to see if its Automatic Repair tool can get Windows up and running again. Make a careful note of any error messages if the problem persists, then move on to Lazesoft's

Windows Recovery component (see the box on the previous page). If Lazesoft's fix-it tools fail to fix your loading problems, bring out the Win10PESE disc. Boot from this, then use the tools onboard – such as Remote Regedit – to try to fix known problems. Don't forget your internet connection – use Firefox to browse for possible solutions to error messages, plus download additional software you might need, but didn't include on the disc. This is particularly handy if you're battling malware infections – you can track down specific removal tools, or locate your vendor's portable scanning toolkit, should our other suggestions fail to yield results. ◼

Meet the... Support *Squad*

Support

▶ WINDOWS HELP ▶ HARDWARE FIXES ▶ SOFTWARE SOLUTIONS ▶ INTERNET TIPS

Do you have a PC problem? Get in touch…
Email full details of your problem to the support team and we'll do our best to help **windowsmagazine@ futurenet.com**

Security
HOW TO ENCRYPT MY USB FLASH DRIVE?

Q I have recently bought a Sony laptop and want to password-protect my USB memory sticks that I'm going to use with it. However, I can't seem to find **BitLocker** on my laptop (which is running Windows 10). Is there a good alternative? Any advice would be gratefully received!
John Hollingsworth

SAFE SPACE Rohos Mini Drive allows you to encrypt your flash drive.

Graham's solution
BitLocker only comes with Windows 10 Professional, but thankfully there are plenty of alternatives out there. Assuming you're looking for something free, then DiskCryptor (https:// diskcryptor.net) would enable you to encrypt the entire flash drive, although it can be tricky to install and set up. In most cases, you're only looking to encrypt particularly sensitive files, in which case Rohos Mini Drive (www.rohos.com) would offer a more user-friendly alternative. The free version allows you to create a hidden and encrypted storage container up to 8GB in size, which should be ample for most people's needs, and it doesn't delete existing files on the drive either.
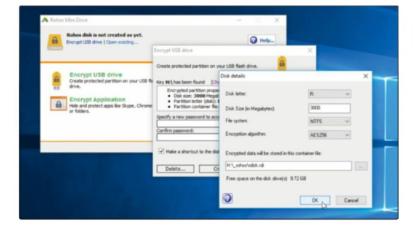
Email
WHY CAN'T I LOG INTO HOTMAIL VIA THUNDERBIRD

Q I hope you can help. I've tried switching from Windows Live Mail to Thunderbird, but can't get it to recognise my Hotmail password, even though it's correct. Can you advise, please?
Ursula Franklin

Graham's solution
We eventually traced the problem to the fact that Ursula has **two-step verification** enabled for her Hotmail account. This sensible security step means that she needs

REGION FIX
Purchase a secondary DVD drive to play region 1 discs.

to confirm any attempt to log on to her Hotmail account from a new device or program, but Thunderbird doesn't support this. Luckily, there is a workaround that ensures she doesn't have to disable the feature. First, log into your Microsoft Account via https://account.live.com – once logged in, select 'Security & privacy' and click 'More security settings' under 'Account security'. Scroll down to the 'App passwords' section and click 'Create a new app password'. Select the app password that's generated and press [Ctrl]+[C] to copy it to the clipboard, then switch back to Thunderbird and use that password in place of your regular password – you should find you're now able to access Hotmail. Going forward, you'll need to create a new app password for each device or app that doesn't support two-step verification.

Multimedia
REGION-LOCKED DVDS WON'T PLAY

Q I have a US laptop set to play Region 1 discs and recently purchased a few UK DVD boxsets. I've been trying to bypass region-coded discs by playing them in VLC Media Player, but, while some work, others throw up errors such as 'VLC cannot set the DVD's title'. Can you provide a workaround at all?
Nathaniel Aharon

Nick O's solution
Our first suggestion was to install DVDFab Passkey Lite (www.dvdfab.cn/passkey-lite.htm), which can bypass region encoding and allow you to play most region-locked DVDs through any DVD player, including VLC Media Player. This fixed our problem, but Nathaniel reported it ended up disabling his drive altogether – he

had to remove the software and delete a Registry key to get things working again.

This could be down to the presence of other third-party DVD software interfering with the process, but a simple, catch-all fix would be to purchase a slim external DVD drive for around £20-25. Each drive can be set to a specific region, so the internal drive could be left to play native DVDs while the external drive is used exclusively to play Region 1 discs.

Windows 7
CAN'T GET WINDOWS 7 TO UPDATE

Q My wife's slow netbook has not updated for almost a year, and the setup log has several lines reading: 'Error 41227 – Downloader system error has occurred'. I've tried everything to correct this – including following the advice in issue 125's Support Squad, but I can't get it to work. Can you help please?
Bill Skidmore

DELVE DEEP
See what's running on your PC using HijackThis!

I accidentally moved the wrong application using Steam Mover as outlined in issue 129's Support Squad. How do I reverse this?
Benny Deacon

Just select the program in the list, then click the back arrow at the bottom of the screen to move it back.

Is there a quick way to remove a batch of Tweets from Twitter?
Stuart Linklater

Try www.tweetdelete.net, which allows you to delete all Tweets older than a certain date (from one week to one year). Use its Tweet Download service to save them locally before erasing.

"Passkey Lite allows you to play region-locked DVDs through any player"
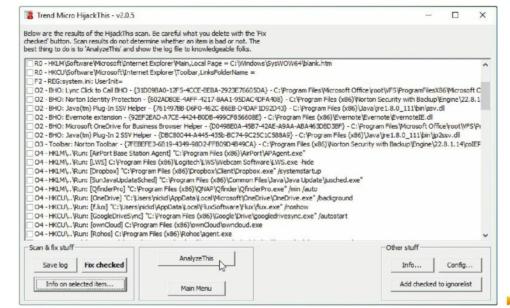
Jargon buster!

▶ **BitLocker**
A file-encryption tool found in Professional and Enterprise versions of Windows. It's used to encrypt entire hard drives as well as USB flash drives.

▶ **BSOD**
Stands for 'Blue Screen of Death' and refers to STOP errors that halt the computer, forcing a restart.

Quickfire questions

I need to perform multiple edits to a group of photos. Is there a free tool that can simplify this process for me?
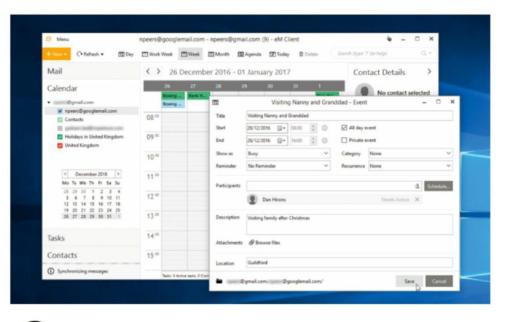**Ann Renard**

imBatch (www.highmotion software.com) is a batch-processing tool that utilises a Task Structure to allow you to combine multiple edits into a single taskflow, then simply select which images you want to apply those edits to.

If I switch to signing in using a Microsoft Account, what happens if my PC is offline? Will I still be able to sign in?
Gordon Lees

Yes, but note that if you change your Microsoft Account password on another device before you next go online with your PC, you'll still need to log on using your old password.

I've upgraded to the Vivaldi web browser, but although I've paired my Philips Hue hub to it, I can't link in my lights to the browser?
Paul Querry

Vivaldi introduced support for using Philips Hue lights in version 1.5, but it currently only works with coloured bulbs, which change colour based on the colour scheme of the website you're visiting.

Matt's solution
The key is getting Windows 7 up to date – at some point over the past year, a problem with slow and malfunctioning updates was addressed. The best way to do this is by downloading the updated July 2016 update rollup for Windows 7 SP1 from https://support.microsoft.com/kb/3172605 – make sure you download the correct package for your system type (x86 for 32-bit, x64 for 64-bit).

Once downloaded, click 'Start > Run', type **services.msc** and click 'OK' to open the Services management console. Locate the Windows Update service, right-click it and choose 'Stop'. Now double-click the downloaded package and wait for it to run – there will be a lengthy delay, but be patient and it should move on to install the updates. Once complete, reboot your PC when prompted and you should find Windows Update is now working correctly again.

IN SYNC emClient keeps cloud calendars and email in sync.

Windows
BLUE-SCREEN ERRORS ARE PLAGUING MY NEW WINDOWS INSTALL

Q For a long time now, whenever I start or restart my Dell XPS 8700 PC (running Windows 10) I get an immediate **BSOD** referring to NETIO.SYS and with the following Stop Code: Kmode Exception Not Handled. The computer then attempts to fix the problem and after several reboots Windows will load. I've come across the same error on another PC we own, but this only occurred once. I've tried rolling back to a system image and numerous clean reinstalls, all with no success. Hopefully you can save me the cost of a new PC!
Jim Thomas

Nick P's solution
The netio.sys file is a generic Windows one, so there were no clues there. We asked Jim to send us his

---

LIMIT STORAGE SPACE TO SPECIFIC USERS

Q I enjoyed your article in issue 128 about reclaiming ownership of your PC. One of my family members keeps filling up the hard drive – is there some way to put a limit on that?
Don Taylor

Nick P's solution
The answer to your dilemma lies with the Disk Quotas tool, which allows you to specify the maximum amount of storage space each user has on each attached drive. Here's how to set it up.

1 Enable Disk Quotas
Quotas must be set individually for each hard drive. Open 'File Explorer > This PC', right-click the drive in question and choose 'Properties > Quota' tab. Click 'Show Quota Settings' and start by ticking 'Enable quota management'.

2 Set universal limits
Now, tick 'Deny disk space to users exceeding quota limit' and select 'Limit disk space to'. Set your chosen limit (probably in GB) – we also recommend setting a warning limit, around 10-20% less than the limit you've picked.

HijackThis! log to see what was running on his PC – he revealed that AVG Internet Security was installed, and our Google searches for the netio.sys error did turn up one that was linked to AVG. Jim dutifully uninstalled the program and the BSOD errors immediately ceased. We dug a little deeper and found numerous references to AVG causing this kind of error, so Jim has subsequently switched antivirus products – Avira (www.avira.com) is one that currently scores highly for those looking for free protection.

Internet
CAN'T SYNC CALENDAR IN WINDOWS LIVE MAIL

Q We've had sync problems with a Hotmail mail account, so converted it to **IMAP** protocol for use in Windows Live Mail, not realising the calendar would no longer function. What's the best solution for a Windows 10 desktop, Windows 7 laptop and Android tablets – we need a calendar that syncs between all of them? Thanks!
Tim Kaye

Cat's solution
By the time we got in contact, Tim had already switched to a Google calendar, which synced seamlessly on his Android devices. Now he was trying to keep it in sync using Thunderbird and its built-in Lightning calendar add-on. Results were mixed, and so we steered him towards the free version of emClient (www.emclient.com), which supports up to two email and calendar accounts. Tim was pleased at how easy it was to set up and sync, and has now moved exclusively across.

Hardware
CAN'T USE HEADPHONES IN WINDOWS 10

Q I recently purchased a new Lenovo PC to replace my dead Advent, but have discovered that I can't use my headphones. My speakers work normally, but there's no sign of my headphones under 'Device Manager' or 'Devices & Printers'. I've tested them using the TV and they work fine, but there's no luck when plugged into either front or rear port on the PC.
John Colton

Mayank's solution
The fact you've tested them in your TV makes us think they're traditional headphones that connect via a phono plug to your computer. If this is the case, they won't show up in 'Device Manager'. Instead, you need to check the Taskbar Notification area for a speaker-like icon, which you should click or right-click to open the sound manager. You should see a list of audio ports appear – plug in your headphones and the sound-manager tool should detect the presence of the headphones, allowing you to test if they work and verify the settings are correct. If you have purchased USB headphones, you need to visit the manufacturer's web page to verify they're compatible with Windows 10 and download any drivers. ■

DETECT AND TEST
Use your PC's sound manager tool to check your headphones.

> Do you have a PC problem? Get in touch…
> Email full details of your problem to the support team and we'll do our best to help: **windowsmagazine@ futurenet.com** Or write to the support team and we'll do our best to help: **Support Squad, Windows Help & Advice magazine, Future Publishing Ltd, Quay House, The Ambury, Bath BA1 1AU**

"Traditional headphones that connect via a phono plug to your computer won't show up in Device Manager"

3 Set individual limits
To set the limits for any individual users, simply leave 'Do not limit disk usage' selected and click 'Quota Entries' instead. Then select 'Quota > New Quota Entry'. Click 'Advanced' followed by 'Find Now' to list all available users.

4 Set quota
Select a name from the list (they must have a user on your PC) and click 'OK' twice. Set their quota and warning limits as required, then repeat for other users you wish to apply limits to. Once done, close the window and click 'OK' twice.

Jargon buster!

▶ **IMAP**
Stands for 'Internet Message Access Protocol', and is a form of email that leaves messages on the server when accessed to allow easy retrieval from multiple devices.

▶ **Two-step verification**
A form of security that requires users to enter an access code they receive on a secondary device (such as a phone) as an extra form of identification when logging into a service.

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Welcome

Just starting your Windows journey? Stumbling over the changes made in the recent Anniversary update? Or maybe you just want to learn something new about Windows 10. This is the section for you!

There's not enough space to tell you absolutely everything you need to know here, but *Windows Help & Advice* always has your back. In this month's Explore section, we help you take control of the Start Menu, so you can customise it to your every whim. We also show you how to get more from the Action Centre.

Matt Hanson
Associate Editor

www.facebook.com/windowsmag

Featuring...

80 Take charge of the Start Menu

83 Stay notified in Windows 10

Windows 10 tip of the month	Lock screen settings

Change the Lock screen background

The sign-in screen in Windows 10 is known as the Lock screen, because your comptuer is effectively locked until you sign in with a correct password. You can actually change quite a few of the things that happen on the Lock screen once you access the correct settings, including the background image, the apps that can show their status, and the amount of time to wait before turning off your screen.

LOCK SCREEN SETTINGS Open the Settings app then type in 'Lock screen settings' in the search bar.

CHANGE SETTINGS Here you can change the Lock screen image and also the time it takes to activate.

Learn how to...

Take charge of the Start menu

Harness the Start menu and Taskbar in the latest Windows 10

TIME TAKEN
10 minutes

One of the changes in the latest version of Windows 10 is that the Start menu and Taskbar have been updated. While the changes are visible the moment you click the Start button, they're not as radical as you might think. Behind the intuitive redesign, which makes certain popular features like the 'All apps' menu more accessible, the Start menu continues to work as it's always done since its heralded return to Windows 10.
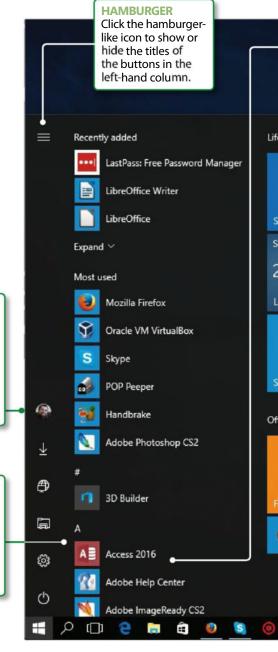
Here, we look at the Start menu changes, plus we'll take a look at how the Taskbar has evolved too.

SIGN OUT QUICKLY
Click your user picture to access the account menu previously found at the top of the Start menu.

OTHER SHORTCUTS
These icons give you access to File Explorer, Settings and the Power button – put user folders here too.

How to master the Start menu

1 The new Start menu
Click the Start button to view the updated Start menu. The main changes are to the left-hand portion of the menu, as our annotated screenshot reveals. Now all your installed programs and apps are no longer hidden behind the 'All apps' sub-menu, and can be found underneath the 'Recently added' and 'Most used' lists, which remain in place.
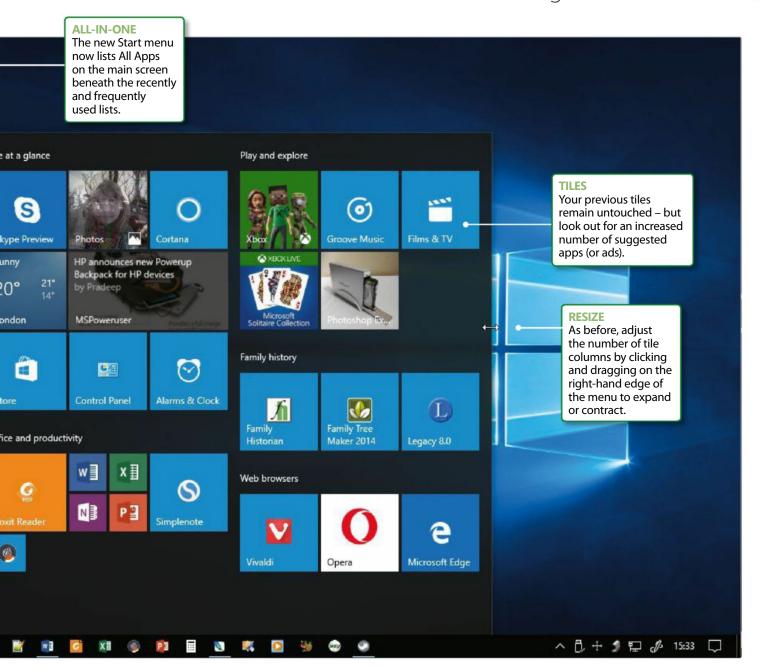
2 Speed up app launches
When you click the Start button, the Cortana search box is immediately highlighted – you can then start typing the name of the program you wish to launch and it'll appear in the list, saving you the hassle of wading through the full 'All apps' list. The search is smart too – type 'office' for example, and it'll list associated Office apps such as Word, Excel and PowerPoint.

ALL-IN-ONE
The new Start menu now lists All Apps on the main screen beneath the recently and frequently used lists.

TILES
Your previous tiles remain untouched – but look out for an increased number of suggested apps (or ads).

RESIZE
As before, adjust the number of tile columns by clicking and dragging on the right-hand edge of the menu to expand or contract.

3 Browse 'All apps' quickly

Alternatively, speed up browsing by clicking the 'Recently added' header to reveal an A-to-Z list, and click a letter to jump to that letter in the apps list. You'll also see a clock icon – select this to jump back to the top of the list. Right-click an app entry to access the same options as before, including the 'Don't show in this list' option if you want to trim the apps list back.
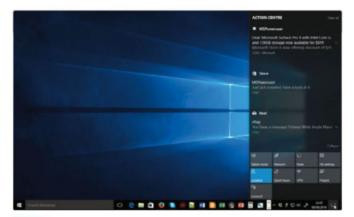
4 Chaseable live tiles

One big change to the way Start menu tiles behave is they can now be coded as 'chaseable' by the app developer. This means that if they're displaying live content like a news headline, then clicking the tile will take you directly to the content rather than the app's main screen. This requires app support – at time of writing, MSPoweruser is one such app.
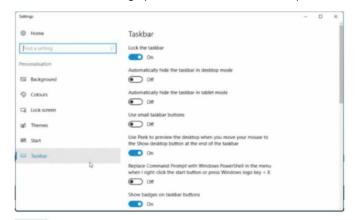
5 Start menu icons

The left-hand column displays four icons. Click the user photo for sign-out options, and right-click File Explorer for Quick Access shortcuts and a 'More' sub-menu with options for 'Computer Management' and 'System Properties'. Go to 'Start > Settings > Personalisation > Start to add user folder shortcuts here' to add other user folder shortcuts.

6 Tablet Mode changes

The Start menu's appearance has changed in Tablet Mode too, and it now more closely resembles the old Windows 8 Metro user interface. Pinned tiles are shown by default, but you can quickly switch to 'All apps' view with one click, while once again the options on the left have been reduced to single buttons – click the 'hamburger' icon to expand them and reveal their titles.

7 Taskbar tweaks

The only real visible change to the Taskbar is the new Notifications button, which now sits on the far right and displays the number of unread notifications it contains (see page 38 for a tutorial). There's also a new Windows Ink option when you right-click the Taskbar. Ticking this reveals a pen-like button – click it to bring up the new Windows Ink Workspace.

8 Tweak Taskbar settings

The Anniversary Edition moves Taskbar settings from their own pop-up box to a Taskbar section inside the main Settings app, which you'll find under 'Personalisation' adjacent to the settings for tweaking the Start menu. The quickest way to access the Taskbar portion of Settings is by right-clicking the Taskbar and selecting 'Settings', which takes you to it.

9 New Taskbar settings

Previously the Taskbar settings were split across three tabs – now they've all been merged into one section, with the options mixed up. One new setting allows you to hide the taskbar when in Tablet Mode, while there's a new 'Multiple displays' section that enables you to configure how the taskbar behaves when you've spread your display over two or more monitors.

10 Customise the Notification area

You'll also find a shortcut to choosing how programs' Taskbar notification icons are displayed – this has been moved from its old location under 'System > Notifications & actions'. A simpler way to customise how these icons behave is to drag and drop them to and from the Taskbar (using the hidden area that appears when you click the ^ button to the left of the icons). ■

Stay notified in Windows 10

Discover how to take advantage of the Action Centre's improved notifications system

The Action Centre is a vertical pane that appears at the right-hand side of the desktop when you swipe in from the right or click (or tap on a tablet) on a button in the notification tray. It combines the function of several previous Windows features, such as Charms, to provide you with one place where you can get your notifications, access commonly needed functions like WiFi and security, and Airplane mode for silencing your PC and cutting all connections.
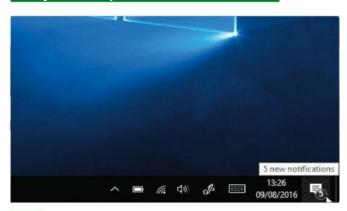
The Action Centre had a big makeover in Windows 10, and the Anniversary Edition sees some welcome refinements that make it even more configurable, customisable and helpful.

One particularly clever new feature is the ability to sync notifications between your Windows-powered devices. Join us for a tour of your Action Centre, starting with how to access it.

Stay on top of notifications
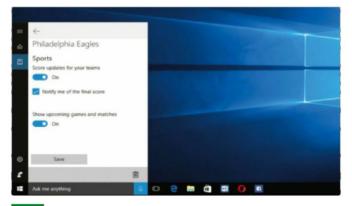
1 A new icon
The new Notifications icon has moved to the far right of the taskbar, and while the basic design (a speech bubble) hasn't changed, the icon now updates to show how many unread notifications you have. When you click to review these, the speech bubble will empty to indicate the notifications have been acknowledged – see Step 3 for details on reviewing these.

2 Notification banners
Pop-up notifications – known as toasts – display useful information. They're capable of displaying 'richer' information, such as message details, the app icon and even pictures. As before, click on a pop-up notification to respond directly to it or the 'x' button to dismiss it. Alternatively, you can ignore it and it'll be added to the list in the Action Centre.

3 Action Centre redesign
The Action Centre's look has also been updated in the Anniversary Edition, along with its functionality. Notifications are now grouped by Sender, with the app icon shown here rather than next to individual updates. You can now view more unread notifications per app and not just the last three received – click the 'See more' link underneath the notifications to view them all.

4 Wider notification support
You can now receive notifications from other sources such as Cortana's notebook. For example, browse to 'Notebook > Sports' and tap on a team you're tracking, then tick 'Notify me of the final score'. The same is true of Edge – if you're using certain websites that support notifications like web.skype.com, then you can get toasts while the site is open in a browser tab.
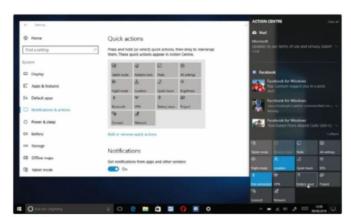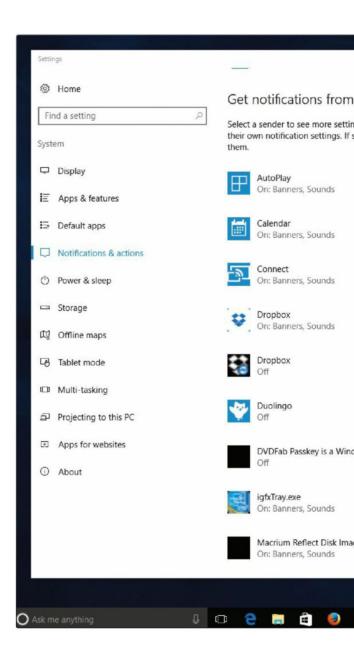
5 Link in with your phone

You can share notifications between PCs and Windows phones and tablets, such as a low-battery warning. Cortana needs to be signed into your Microsoft Account on both devices – then open its settings (tap the 'Search' box on your PC and click 'Settings'). Make sure 'Send notifications between devices' is on, then tap 'Edit sync settings' to send and/or receive notifications.

6 Tweak Notification settings

If you right-click the Notifications button you'll see there are two new options to go with 'Turn on quiet hours'. 'Don't show app icons' prevents an app icon briefly appearing when a notification appears from an app that doesn't use toasts, while 'Don't show number of new notifications' prevents the Notifications button distracting you with an unread count.

7 Customise Quick Actions

You can now rearrange the order of your Quick Action buttons – click 'All Settings' and navigate to 'System > Notifications & actions'. Click and drag buttons to rearrange the order in which they appear on the Action Centre, or free up screen space by removing those you don't need – click 'Add or remove quick actions' to do so using a series of on/off switches.
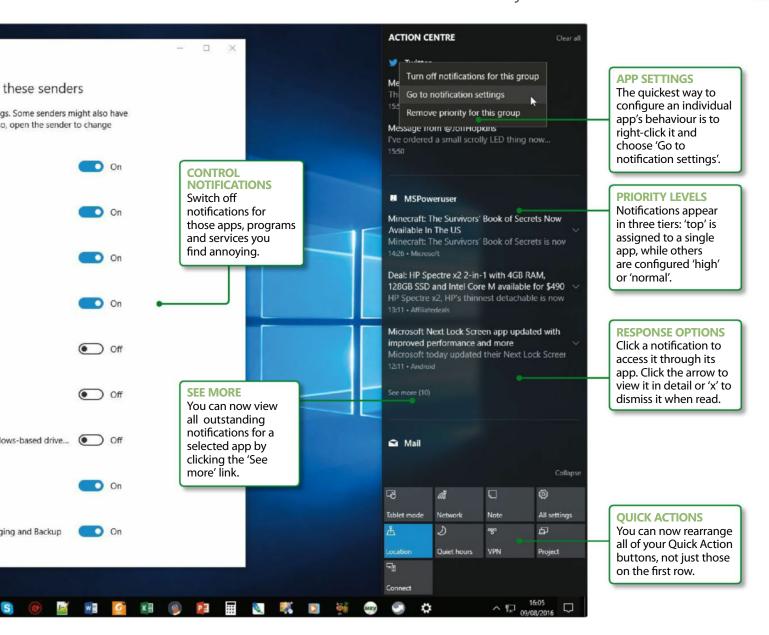
8 Tweak notification settings

The main Notifications options are the same as those in the original Windows 10. Scroll to see all senders that can be configured to display notifications or not. Use the switches to enable or disable apps from using the Action Centre to notify you of updates, or click an app to reveal more granular settings.

ACTION CENTRE   Clear all

Turn off notifications for this group
Go to notification settings
Remove priority for this group

Message from @JonHopkins
I've ordered a small scrolly LED thing now...
15:50

MSPoweruser

Minecraft: The Survivors' Book of Secrets Now
Available In The US
Minecraft: The Survivors' Book of Secrets is nov
14:26 • Microsoft

Deal: HP Spectre x2 2-in-1 with 4GB RAM,
128GB SSD and Intel Core M available for $490
HP Spectre x2, HP's thinnest detachable is now
13:11 • Affiliatedeals

Microsoft Next Lock Screen app updated with
improved performance and more
Microsoft today updated their Next Lock Screen
12:11 • Android

See more (10)

Mail

Collapse

Tablet mode | Network | Note | All settings
Location | Quiet hours | VPN | Project
Connect

16:05
09/08/2016

APP SETTINGS
The quickest way to
configure an individual
app's behaviour is to
right-click it and
choose 'Go to
notification settings'.

PRIORITY LEVELS
Notifications appear
in three tiers: 'top' is
assigned to a single
app, while others
are configured 'high'
or 'normal'.

RESPONSE OPTIONS
Click a notification to
access it through its
app. Click the arrow to
view it in detail or 'x' to
dismiss it when read.

QUICK ACTIONS
You can now rearrange
all of your Quick Action
buttons, not just those
on the first row.

**CONTROL
NOTIFICATIONS**
Switch off
notifications for
those apps, programs
and services you
find annoying.

SEE MORE
You can now view
all outstanding
notifications for a
selected app by
clicking the 'See
more' link.

these senders

gs. Some senders might also have
o, open the sender to change

On
On
On
On
Off
Off
lows-based drive... Off
On
ging and Backup On

9 Customise how apps notify you

You'll see two new options when configuring individual
apps' notification settings. The first allows you to set the number
of notifications displayed at once in the Action Centre – three is
the default, but you can choose between one, three, five, 10 and
20. The priority settings allow you to restrict which notifications
appear – and where they appear in the Action Centre.

10 And finally...

There's no doubt that the Action Centre and Notifications
system in Windows 10 is much better than it's ever been. One
final improvement can be found when you click the time and
date to the left of the Notifications button – you'll see a list of all
upcoming events from your calendar, as well as any reminders
you've set through Cortana, which appear under the calendar. ◼

Upgrade

NEW HARDWARE ▶ **ESSENTIAL ACCESSORIES** ▶ **LATEST GADGETS**

Welcome

Even the owners of the most expensive new PCs need to be aware that computer viruses are still out there and can wreak havoc on their systems. This issue we take four of the best antivirus programs for Windows and put them through their paces to find our favourite. They're all free, so you have no excuse for not being protected! Also this issue, we look at the Amazon Echo Dot, which gives you all the power of the full Dot experience, but you need to bring your own speakers to the party. Enjoy, and I'll see you next issue!

Nick Odantzis Deputy Editor
windowsmagazine@futurenet.com

This issue's highlights

88 Amazon Echo Dot
It's all the power of the Amazon Echo but without the speakers and high price

90 Canon EOS 750D
This is one of the best entry-level DLSRs around. Find out more in our review

92 Astro gaming A50 Wireless
Gaming headsets have come a long way. Check out one of the latest models here

95 Antivirus group test
Four of the best antivirus apps for your PC tried and tested to the limit

Our promise to you...

The Upgrade section is your key to finding out about the latest products, all designed to help you get more from your PC

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RATING EXPLAINED ★★★★★ Superb ★★★★☆ Very good ★★★☆☆ Good ★★☆☆☆ Disappointing ★☆☆☆☆ Poor

Amazon Echo Dot

£50 | $50 www.amazon.co.uk

Alexa the voice-controlled PA for just 50 quid, and you can plug in your own speaker

For the purposes of this review, it'll be particularly easy to get straight to the point. Assuming you already own a speaker of some sort (and we're thinking you already do), then you should buy the Amazon Echo Dot.

Our reservations about the full-size Amazon Echo (see our review in Issue 129), beautiful and full of promise though it is, were that it wasn't amazing as a speaker for music, and it maybe felt a little over-priced. But, we're pleased to say, there's no way we could ever say the same about the much smaller Dot.

Speaker cornered

Granted, its onboard speaker is barely audible, but, unlike the Echo, it has a line out (which is 3.5mm only, if you want to quibble), so you can plug it into whatever you like. We tried it out with a Denon Heos, a Naim Mu-so Qb and the much cheaper Marshall Kilburn and the improvement in sound quality and volume over the Echo was very *very* marked.

Smaller is better

So, what is the Dot in comparison to its big sister, the Echo? Imagine the rotating portion of the full-sized Echo has been sawn off – that's what the Echo Dot is like. It comes with a little speaker so the Alexa voice service, Amazon Echo's AI hostess with the mostest, is able to reply to you when you need it to.

In its most basic form, you could use a Dot as an extra portal for Alexa, in addition to an Echo. That would be a handy bonus to your already smart home. However, we wouldn't particularly recommend that you listen to music through it. Use the 3.5mm output to plug in a decent-enough speaker, however, and the Dot instantly becomes just like the Echo, but with far superior sound quality.

As such, it's suitable for use anywhere in the house, meanwhile the Echo's natural home is probably in the kitchen.

When you consider that this version of 'Echo But With Better Sound Quality' will cost you just a mere £50, it quickly becomes a must buy. Or if you don't think it's a must-buy, then at least it's a you-might-as-well-buy…

Music Unlimited

The sheer affordability of Echo Dot (assuming you already own a speaker) makes it particularly easy to overlook a key fact. And that is other than playing music and serving as a kitchen timer and to-do list maker, Alexa doesn't *yet* excel at much else.

However, the new Amazon Music Unlimited streaming app (or 'Skill' to use the official Echo terminology) is undeniably

fantastic. Spotify might not exactly be trembling with fear right now, not least because its app works very well on Echo too, but it should be a little concerned.

With Echo, Music Unlimited gives you a whopping 40 million tunes for just £3.99 per month. That is a very good deal, indeed.

If you want to use it on your other devices it's £7.99 or an extremely attractive £79 per year for Amazon Prime subscribers (this

you can also ask it for "happy 80s music" or "melancholic heavy metal" or even "sad Abba tunes from the 70s". If you are that way inclined, that is.

Even more fabulously (in our opinion), you can actually ask for "That song that goes: [insert the relevant lyrics here]", with lyrics allegedly available for "70-something per cent" of the 40 million tracks on offer. Try it for yourself, but try not to blame it

"With a stellar selection of music, the Echo Dot is a really great device to have in the home"

means the cost is on top of the usual £79 per year for Prime).

However, if you're not a Prime user and want Music Unlimited on your mobile, then it'll set you back a tenner.

The great thing about Music Unlimited and the older, more limited, Amazon Prime service on Echo, is the particularly brilliant way it uses Alexa's voice recognition and cloud database-mining skills.

Tracks can be easily selected, favourited and skipped in all the usual ways you're used to, but thanks to the miracle of metadata

when it doesn't recognise your misheard lyrics…

Function

Functionally, the Dot is identical to the full-sized Echo, so when you add Alexa's acknowledged skills (did we already mention this is what Amazon is calling its apps…) with timers, lists and turning your smart bulbs on and off, we'd say any music lover has more than got their money's worth.

This really is AI on the cheap, with perhaps the ultimate music service also at a giveaway price. For us, it's a done deal.

Final verdict

So, as you can guess, we're fans of the Echo Dot. With a stellar selection of music on offer, as well as to-do list and timer apps, the Dot is a great device to have in the home. And then, on top of that, you have handy news, weather, smart home and calendar stuff too.

Also, it's compact and smart to look at. We like that you can plug it into any speaker with a line-in. This will make it a versatile gadget around the home. It's futuristic tech at an old-fashioned price. If you have an old, beloved but underused speaker, it'll give it a new lease of life. To be honest, at this price, even if you don't want to use Music Unlimited, the Echo Dot is still worth it. ■

A voice-controlled wonder for less than £50. If you own a speaker, buying this is all but obligatory.

Windows *Help & Advice*
Verdict

★★★★★

Canon EOS 750D

£569 | $715 www.canon.com

One of the best entry-level DSLRs around

The EOS 750D is Canon's key entry-level DSLR, but comes with a few more features designed to tempt slightly more experienced users.

In a first for Canon DSLRs, the 750D features both Wi-Fi and NFC (Near Field Communication) technology to enable it to be connected to a smartphone or tablet for remote control and image sharing. It's even possible to connect two cameras just by touching the NFC logos together, to transfer images wirelessly.

It has a 3.0-inch 1,040,000-dot Clear View II TFT screen that's touch-sensitive. Plus, there's an aspect ratio of 3:2 to match the uncropped ratio of the imaging sensor, while the vari-angle hinge on the side of the body means it can be placed in a range of positions.

There's also a 19-point phase-detect AF system when shooting through the viewfinder. The choice of AF point can be left to the camera to decide in 19-point AF mode, or it can be set in Single point AF or Zone AF mode. In the latter mode you have the choice of five groups of points for selection, whereas in Single point mode all 19 points are available for selection.

Build and handling

The 750D's aluminium alloy and polycarbonate resin with glass-fibre chassis gives it a durable feel. And, reassuringly, it doesn't creak when it's gripped tightly.

Following the design of other Canon DSLRs, the 750D has a Quick menu that is accessed by pressing the Q button. This gives a quick route to some key features for adjustment. Setting adjustments can be made using the physical buttons and dials or by touching the screen. If you're not used to using a touchscreen camera, you may find you start out using the buttons and dials, but gradually move over to using the touch-screen, because it's so intuitive.

Being a DSLR, the 750D has an optical viewfinder. Canon has used a pentamirror design that shows around 95% of the scene, so you need to take care with composition to avoid including unseen elements around the edges.

As the screen is on an articulating joint, it can be seen from a wide range of angles. Reflections are an issue in very bright light, but it is usually possible to see enough detail to compose images. In Live View mode it's especially helpful to use the screen to set the AF point, or even set the AF point and trip the shutter when composing images at very awkward angles.

The camera relies on an exposure compensation button. In manual exposure mode this button needs to be pressed while rotating the dial near the shutter release to set aperture, in the semi-automatic modes it's used with the dial to

adjust exposure compensation. It's a quick and easy task, but the Quick Control dial on the 760D makes these adjustments a little faster.

The exposure mode is set using the dedicated dial on the right of the top-plate. There's no lock on the dial, but it doesn't get knocked out of position easily and it provides a route to the same exposure modes including program, shutter priority, aperture priority and manual, as well as options such as Full Automatic (Scene Intelligent Auto), Creative Auto (which allows you to take control with simple instructions

on the screen while composing images in the viewfinder as you can with some Panasonic cameras and the Nikon D5500.

The phase-detection AF system that's available when composing images in the viewfinder is fast and accurate, even in quite low light with the kit lens mounted. It means it's a much better choice when shooting sport or action. In 19-point mode it does a pretty good job of identifying the subject, but Zone-AF and Single-point mode are a better choice, provided you can keep the active area over the right part of the scene.

"Connect two cameras by touching the NFC logos together to transfer images wirelessly"

using non-photographic terms) and a collection of user-selectable scene modes, including some within Special Scene (SCN) mode.

Autofocus

Pressing the AF Area selection button once allows the navigation buttons to be used to set the desired AF point. Pressing it multiple times toggles through the AF-point selection modes (Single-point AF, Zone AF and 19-Point automatic selection AF). There's also an AF point selection button, but this doesn't allow you to toggle through the modes. It would be nice to be able to set the AF point

When using Live View mode we found the 750D can get subjects sharp quickly, so it's possible to compose images on the main screen when hand-holding the camera. However, it's not really fast enough to use it to shoot moving subjects, and there's no servo option, so it can't adjust focus as subject distance changes when your finger is on the shutter release.

The 750D can also shoot continuously at up to 5fps. This may not seem fantastic by current standards, but it's still very useful when shooting sport. Plus, the burst depth has been increased from the 30 JPEG or 6 raw files of

the 700D to a whopping 940 Large/Fine JPEGs or 8 raw files.

Viewed at 100% on-screen, the 750D's high-sensitivity JPEGs look softer than simultaneously captured raw files, but even at ISO12,800 some look good at around A3 size (16 x 12 inches).

As usual, when all noise reduction is turned off, the raw files have more visible noise at 100%, but it's fine grained and there's no banding, so it's possible to produce images that have a bit more 'bite' than the JPEGs.

Chroma noise is only obvious at 100% in raw files captured at ISO1600 and above (when noise reduction is turned off). Meanwhile, the softening of detail that tends to go hand-in-hand with noise reduction in the default settings becomes apparent at 100% in JPEGs captured at ISO3200.

Verdict

The 750D can trace its heritage back to the early days of digital photography and it shows. A very polished and well thought-out camera, the 750D is a great intro to DSLR photography for those looking to make the step up from a compact or smartphone. ■

Capable of superb image quality, with the touchscreen interface making it much quicker to use.

Astro Gaming
A50 Wireless + Base Station

£250 | $300 www.astrogaming.co.uk

Astro ups its game with this fantastically mature and powerful headset

When it comes to wireless gaming headset, then these are an excellent, top-of-the-range choice. And, if this sounds like something you're in the market for, then you can stop reading this right now, head on over to your retailer of choice, and pick up this gadget – you will not be disappointed.

You get Dolby® Headphone 7.1 surround sound with built-in MixAmp™ technology, a 5GHz low-latency wireless connection over 30 feet, 15 hours of Lithium-Ion battery life on a single charge, a pro-grade microphone with flip-up mute and and headset with three distinct EQ profiles that can be added to or tweaked with Astro's bundled software.

In other words, you get a lot of bells and whistles in the Astro A50 Wireless + Base Station box (which for the money requested, you certainly should do).

The A50s come in a black-and-blue colour scheme for PS4 compatibility or grey and green for Xbox One compatibility (both sets also work with PC and Mac). They also come in a large black box. Slide off the outside sleeve of said box, and you are presented with (yep, you guessed it) another black box. However, this one opens down the centre and is decorated with a cool-looking robot.

With the inner boxed now opened (are you still with us?) you are finally presented with the A50 headphones themselves, which are securely nestled in a moulded plastic inner. Also embedded in the inner are digital audio and USB-to-micro-USB cables, which are required to transfer audio data and power from your console or computer to the Base Station.

Underneath the plastic inner is the Base Station itself, which is a cool, black slab of thing indented at

the top with a recess for depositing the headphones in when they are not in use.

Within this recess lies a brace of small-scale power prongs which, when the headphones are slotted in, make contact with small receptive power plates on the bottom of one of the headset's ear cups, thereby charging them for wireless operation.

Back to Base

Sticking with the Base Station, on its front lies a number of indicator lights, highlighting things such as power and charge level, while at its rear lies a brace of digital optical ports (one for in and one for out), a micro USB port and an AUX out.

As such, not only can you connect the Base Station to your console or computer of choice, but you can also bring in sources from elsewhere too, overlaying music from a phone, for example, while

gaming. You can also feed the gaming audio, voice included, into another system for capture.

The headset itself is an over-ear thing of industrial, futurist beauty. Chrome, perforated, hollow tubes extend from the chunky, rubberised-finish earcups up to a robust, cushioned headrest, joining them together in a wide profile.

On the earcups themselves lie a small quantity of buttons, switches and dials, which handle things like power, profiles and volume, as well

profile by sliding a switch to one of three different positions, you are good to go.

Audio quality is, as you would expect from a gaming headset, inclined slightly toward the low-end, with absolutely cracking distortion-free bass, while the immersive surround sound is absolutely superb. In addition, the headset fits just as snugly if you are using PlayStation VR. The volume range is also excellent.

Connectivity range, providing you don't put thick stone walls

"Connect to your console or PC, or bring in sources from elsewhere too, music from a phone, for example"

as the headset's raise-to-mute microphone, which is positioned on exterior of the left cup. In a nice touch, all the switches are positioned at the rear of the right-hand cup, hiding them from view, while also making them easily accessible while gaming.

Once the Base Station is connected to your system of choice, operation is then as easy as simply lifting the A50 from the dock, flicking the power switch, and placing the cans over your ears. Then, aside from selecting an EQ

between you and the Base Station, is also pleasingly large and secure. You can walk around, sit, perch, loll, balance, jog or whatever else takes your fancy around the Base Station and, from our testing at least, not experience any distortion or dropouts. Having the Astro A50s operating on a frequency north of 5GHz clearly does have its advantages after all.

Power up
Battery life too, despite us not sitting there with a stopwatch, also

seems on the money at around the 15-hour mark. Charge the A50s to full power – indicated by four power bars on the front of the Base Station – and you can forget about having to charge them for quite a while, which in our case sometimes stretched out over a week.

That ability to just pick up and play, without frequently being met with low-battery warning beeps, was most welcome.

Verdict
Overall then, we had a great experience with the Astro A50 Wireless + Base Station. Everything about this gaming audio system just screams premium – well, everything but the fabric ear-cushions and headband cushion (which can be upgraded to synthetic leather) – and we were impressed with its commitment to kill compromise across the board.

Factors such as the fabric ear-cushions, and the price, stop it from landing a perfect-5 score-wise, but we have no problem otherwise recommending the Astro A50 Wireless + Base Station if you are on the market for a premium gaming headset. ■

This gadget offers some game-changing performance and style that is hard to ignore.

★★★★☆

WHICH IS THE BEST
FREE ANTIVIRUS
APP?

Top-quality antivirus doesn't have to cost a penny – here are four great options

Every PC that's connected to the internet needs antivirus software, but that doesn't mean you have to pay for it. Many of the biggest developers of premium security software also offer free antivirus software that offers excellent protection from online threats.

We've used the findings of expert virus lab AV-TEST (www.av-test.org) to evaluate the true effectiveness of their virus protection, but that's only half the story. Your free antivirus software has to be running all the time, and if it annoys you with pop-up notifications or hits your system resources too hard, you'll soon become frustrated.

With all this in mind, we've collected four of the best free antivirus programs for your PC. So, let's see which titles float our boat. Oh, and remember never run more than one antivirus app on your PC at once – like a guard dog, they can be great at scaring intruders, but they don't always play well with others.

The best
FIREWALL APP FOR YOUR PC
See next issue, details page 98

1 Avira Free Antivirus

www.avira.com

Avira Free Antivirus took the top spot on our previous free antivirus roundup, and here it is again. Yes, AV-TEST's results show it to have a micron less protection than the likes of AVG, but it's the slickest, cleanest and least system-intensive antivirus package going.

It's almost as if the programmers sat down to determine what users would want out of an antivirus package and somehow stumbled on the correct answer: something that isn't in your face every two seconds and doesn't slow your PC to a halt just by existing.

So hooray for Avira. It doesn't even install a host of other packages (including a secure browser, VPN and safesearch plugin) by default, although they're there if you want them.

It's not the glossiest package, and the install process is a bit pre-emptive, with Windows 10 repeatedly shouting at us to update Avira before it had even finished making its way onto our test machine, but we're inclined to blame Microsoft for the latter glitch. Overall, Avira Free Antivirus is brilliant, and is our pick for this year's best free antivirus software.

Winner!

Fast, effective and discreet – Avira is the best free antivirus software available.

Windows Help & Advice

RATING

★★★★★
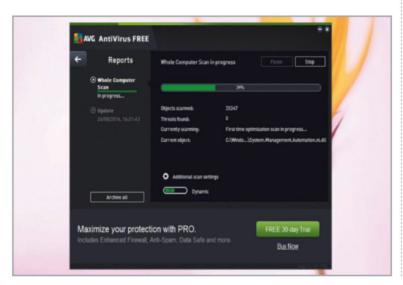
2 AVG AntiVirus Free

www.avg.com

Even though AVG Antivirus Free's virus protection is wrapped in AVG Zen – essentially a large advert designed to encourage you to install all of AVG's products on all the PCs in your home – we won't hesitate to recommend it.

AV-TEST gave AVG AntiVirus a 100% rating for its protection against zero-day attacks during its May-June 2016 testing, for a start. It's reasonably quick to scan after the first initial pass, and the interface – ignoring the Zen bit of

it – is clear and easy to use. Combine it with the mobile app and you can set it to scan and disinfect a machine without having to be close to it, which is a feature you won't know you need until it's too late.

There are a few downsides. For example, we're not that fond of the level of permissions that AVG's Web TuneUp extension asks for – everything from 'read and change all your data on the websites you visit' to forcing your start page to AVG's own Yahoo-powered search engine – but that's an optional component.

Superb free antivirus with a clear interface, AVG is a great choice for your whole home.

Windows Help & Advice

RATING

★★★★☆

3 Panda Free Antivirus

www.pandasecurity.com/uk/homeusers/solutions/free-antivirus

Although Panda Free Antivirus claims to be the world's lightest antivirus – offloading much of the processing work that would normally be done by your PC to the cloud – we found it to be slightly slower than Avira in our tests, and AV-TEST agreed. It's also right on the industry average in terms of virus detection, sitting at around the 98% mark for zero-day attacks and a hair under 100% for established threats.

Those are good numbers, and Panda is good free antivirus software – as long as you remember to deny it permission to hijack your browser's home page and search facility upon installing. Its process monitor is very useful, it scans quite quickly, and it's simple enough in its presentation for even the most technophobic user to find their way around. Switch on its automatic USB vaccination to ensure you won't get a nasty infection when you insert something you shouldn't into one of your ports.

Free antivirus that uses the power of the cloud to take the load off your computer.

RATING

★★★★☆

4 Comodo Free Antivirus

https://antivirus.comodo.com

This is among the hardest-nosed free antivirus packages out there, built as it is from Comodo's serious systems administration background. Comodo Free Antivirus features a 'default deny' mode, which essentially blocks every single program that's not on its whitelist – if you let something through and your machine becomes infected, it's going to be your fault.

There's cloud scanning, so it theoretically keeps up with the latest found threats and automatically updates all users based on the newest discoveries. And, indeed, Comodo scored a perfect 100% against AV-TEST's barrage of zero-day threats, but its historical protection lags behind somewhat at just over 97%.

While Comodo's free antivirus software has a sharp design all of its own, we'd also say it's also something of a mess, unleashing window upon window on your machine and not really shutting up and giving you any peace.

You certainly know when you have it installed. At least it includes a game mode, automatically dialling back on its actions when you need maximum performance from your machine.

Serious free security software for Windows, Comodo Free Antivirus pulls no punches.

RATING

★★★☆☆

In the next issue...
Get more from your Windows PC

ON SALE Friday 3 February 2017

SPRING CLEAN YOUR PC

Get rid of junk files for a faster, more efficient and reliable PC

MANAGE YOUR APPS
Take back control of the apps on your PC

HOW TO...
- Get rid of spam email from your inbox
- Stop your PC from crashing with our great tips
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RAZER™

MAN O'WAR

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AVAILABLE AT:

box.co.uk   OVERCLOCKERS UK   SCAN⁽ˢ⁾

POWERED BY
RAZER
CHROMA

9012

9000