

CYCLING GEAR SPECIAL VELO, IS IT ME YOU'RE LOOKING FOR?



Stuff

TESTED
LG G3
Feast your eyes
upon the first
2K phone

1000

THE

BEST GADGETS EVER



PLUS! The awesomest tech of tomorrow

PHONETOGRAPHY

How to get rich from
your phone snaps

GEEK WATCHES

Not smart but they
sure are clever

SURFACE PRO 3

Microsoft has finally
got its mojo back



www.stuff.tv / August 2014 / E4.60

Simple is the New Smart

LG G3



QuadHD
Beyond Full HD

OIS+
LASER AF

KNOCKcode

Qualcomm
snapdragon

GLOBAL MOBILE AWARDS 2014

The LG G3 'superphone' is quite simply stunning. Featuring a beautiful 5.5" Quad HD screen (2560x1440 pixels) built within a stylish, metallic design that's both lightweight and comfortable to hold. Plus with a powerful, long lasting 3,000 mAh removable battery, a super fast 2.46 Quad Core Qualcomm Snapdragon 801™ processor and a simplified yet intelligent user interface, this is the device that you've been waiting for.

www.lg.com/uk/g3



Available in Metallic Black, Shine Gold and Silk White

HONDA
The Power of Dreams



honda.co.uk/CivicTypeR

MEN WILL CRY LIKE BOYS



R-RATED

**HONDA RESTRICTED CONTENT
VIEWER DISCRETION IS ADVISED**

Model shown is a Civic Type R concept car only. New Civic Type R available summer 2015



WE HAVEN'T JUST MADE HISTORY. WE'VE MADE AN INTELLIGENT HYBRID ENGINE THAT CHANGES THE WAY WE DRIVE.

With the new Mitsubishi Outlander PHEV, we haven't just made a car – we've made an intelligent hybrid that leaves other cars in the past. The fusion of electric and petrol technology can deliver a staggering 148 mpg¹ and creates a fraction of the CO₂ emissions of even a conventional small car – just 44g/km. As a result you'll pay no road tax or Congestion Charge. Business users will only pay 5% Benefit in Kind rather than the 25%+ that most business users pay². If your commute is less than 30 miles your petrol consumption will be minimal too. That's because, in full electric mode, the Outlander PHEV has a range of 32 miles. Its combined petrol and electric range is an incredible 510 miles³. Plus its battery can be charged in a few hours via a domestic plug socket or a Charge Point⁴ – which can be installed for free⁵. We've made history – you just need to make time for a test drive. We call this Intelligent Motion.

Make time for a test drive | Search: Outlander PHEV

Visit: mitsubishi-cars.co.uk to find your nearest dealer



INTELLIGENT MOTION



MITSUBISHI OUTLANDER PHEV

THE WORLD'S FIRST 4WD PLUG-IN HYBRID SUV

FROM £28,249 - £34,999

Including £5,000 Government Plug-in Car Grant⁶

1. Official EU MPG test figure shown as a guide for comparative purposes and may not reflect real driving results. 2. 5% BIK compared to average rate of 25%+. 3. 32 mile EV range achieved with full battery charge. 510 miles achieved with combined full battery and petrol tank. Actual range may vary depending on driving style and road conditions. 4. Domestic plug charge: 5 hours, 16 Amp home charge point: 3.5 hours, 80% rapid charge: 30mins. 5. Free British Gas plug-in vehicle charging package available – ask your dealer for more information. Offer ends 31st March 2015. 6. Prices shown include VAT (at 20%), exclude VED and First Registration Fee. Metallic paint extra. Model shown is an Outlander PHEV GX4h at £33,399 including metallic paint. Prices correct at time of going to print. For more information about the Government Plug-in Car Grant please visit www.gov.uk/plug-in-car-van-grants.

Outlander PHEV range fuel consumption in mpg (ltrs/100km): Full Battery Charge: infinite, Depleted Battery Charge: 48mpg (5.9), Weighted Average: 148mpg (1.9), CO₂ Emissions: 44 g/km.

S CONTENTS



p22

HOT STUFF

- 12 The Hot Four**
 - LG G3
 - TAG Heuer Monaco V4T
 - Google Self-Driving Car
 - Pinarello Dogma F8
- 18 Vital stats Microsoft Surface Pro 3**
Is it the world's skinniest laptop or the world's skinniest tablet?
- 22 Gigapixel Marc Khachfe's space-shot**
An artist uses mapping software to display the twinkling lights of Earth's cities
- 24 Names to drop Jimmy Wales**
The man behind Wikipedia talks about the 'right to be forgotten' on the web
- 28 Apps**
Dots and dice are the distractions of choice
- 32 Games**
We meet our *Destiny* at the E3 expo
- 34 Choice Geek watches**
Prove your nerd credentials: it's all in the wrist
- 40 I made this B&W Sound System**
Stuart Nevill's hi-fi-quality festival speakers
- 44 Our month**
We walked under the Thames and, in an unrelated incident, socialised with fish
- 46 Your month**
When the sun's too bright for your laptop screen, what the heck should you do?

ON THE COVER



p34
Geek
watches



p18
Surface
Pro 3



p76
LG G3
tested

100

BEST GADGETS EVER

p53
The titans
of tech



p80
Summer
cycling



p92

TESTS

- 76 First test LG G3**
The superphone arms race takes its latest turn with the follow-up to last year's Phone of the Year, the G2 – we find out if LG's new model can live up to soaring expectations
- 78 App:roved Stuff-certified apps for...**
Playing ping-pong, showing off cycle routes and solving first-world problems
- 92 Long-term test HTC One Mini 2**
The HTC One M8 has a younger, more attainable brother – and he's just as handsome, ladies
- 94 Tested Games**
 - Watch_Dogs
 - Mario Kart 8
- 98 3 of the best PS4 headsets**
The finest gear for in-game arguing
- 108 Reviews Sensory snacks**
Scarlett Johansson is both a hungry alien and the voice of an OS this month

p94



08.14



WIN!
p49



p53



p120

FEATURES

53 The 100 best gadgets ever
Nothing like a good list, is there? We've somehow whittled our favourite techie playthings and devices down to a top 100. Let the ill-tempered debates commence...

80 Stuff's guide to summer cycling
With the first stages of this year's Tour de France happening over here, it's time for pedal power to sweep the nation – so here's all the gear you need for speed

101 Design Titanium
Affectionately known as Ti – a tough old element that can look mighty fancy on the right gadget

146 Next big thing? SCiO
The crowdfunded molecule-sniffing marvel that promises to finally make the *Star Trek* tricoder a reality



p80

PROJECTS

114 Beta yourself Smartphone photos
With the quality of phone cameras increasing, can your pics ever rival a 'proper' snapper's?

116 Playlist Holiday reads
Stuck on a beach tech-free? What a bind. Luckily, we're here to get you reading again

118 Super geek Model railways
Put on your top hat, lay out those tracks and become the Fat Controller himself

120 Instant upgrades Surfing
Because the eternal quest for the perfect wave will never be fulfilled in a padding pool

122 Gadget doctor
Tech-related woe? Step into the waiting room and stop snivelling, for heaven's sake

123 5-minute hacks If nothing else, at least...
Recover deleted photos ● Barbecue your Sunday roast ● Invent a new cocktail



p108

TOP 10 OF EVERYTHING

Been away for a while? There are three more *Stuff* Top 10s nowadays: Games machines, Wearable tech and Connected home. Check them out from **p125**



OUR PRICES

Prices in Hot Stuff are RRP's. Prices in features, tests and Top 10s are the best we could find from a reputable online retailer at the time of going to print.

THE BEST VIEW IN THE WORLD



LG ULTRA HD 4K

Representing the next level of TV picture quality, LG ULTRA HD 4K boasts a resolution four times higher than Full HD so that, even when viewed close up, it delivers an image that is so incredibly sharp and crisp, it gives you the best view in the world.

www.lg.com/uk/ultra-hdtv

It's All Possible.

Powered by  IPS



Photographer: Andrew Rowat. Images not to scale.

WELCOME



How do you whittle all the gadgets down to just the best 100? And what the hell is a gadget, anyway?

We've spent a few months wrestling with those questions, and we're pretty happy with the outcome.

I'm sure you'll have your own opinions – is Facebook really a gadget, where's the penny farthing and Stephenson's Rocket, and, of course, why the Rolex Submariner rather than the Omega Speedmaster Pro? Look through our list of **the 100 best gadgets ever** from p53 and tweet me anything you think's missing or, indeed, you don't think deserved to be included. It's good to talk.

And perhaps you'd be right to bemoan the passing over of the penny farthing, as without it perhaps we wouldn't have the Tour de France and the Lycra-clad pedalling culture it inspires. In celebration of Le Tour rolling out from Yorkshire this year, we've compiled a Chris-Hoy-thigh-sized **cycling gear special** (p80).

One gadget that may find its way onto future 'best ever' lists is the LG G3. Will the follow-up to our 2013 Phone of the Year prove to be a mobile milestone? Flick to our **LG G3 test** on p76 to find out. And if all that leaves you in need of a rest, we've rounded up the **best holiday reading** (p116) for your poolside perusal. Enjoy! 

Simon Osborne-Walker, Editor / simon@stuff.tv / [@simon_ow](https://twitter.com/simon_ow)



THIS MONTH IN STUFF'S iOS APP EDITION

- Exclusive 360-degree photography of the new LG G3 smartphone
- More stunning hi-res pics of the hottest tech and the sweetest gear

Good news! Stuff is also available on **Google Play**, **Zinio**, **Exact Editions** and various other services.



SUBSCRIBE TO STUFF & YOU'LL GET...

- 1...this great mag landing on your doorstep before it hits the shops, every month.
- 2...a free Leatherman multi-tool (see p110).
- 3...exclusive reader offers and discounts.
- 4...spiritual fulfilment.

Call 08448 488 806 or visit www.themagazineshop.com/stuff-aug14

 www.stuff.tv  facebook.com/joinstuff  twitter.com/stufftv  google.com/+stufftv

Email us stuff@haymarket.com
Call us 020 8267 5036

Teddington Studios, Broom Rd,
Teddington, Middx TW11 9BE, UK

Editorial

Editor Simon Osborne-Walker
Deputy Editor Tom Wiggins
Production Editor Richard Purvis
Consulting Editor Fraser Macdonald
Associate Editor Will Dunn
Features Editor Mark Wilson
Managing Editor Marc McLaren
Reviews Editor Tom Parsons
Senior Reviewer Tony Horgan
Reviewer Sophie Charara
Art Editor Alex Fanning
Deputy Art Editor Ross Presley
App Art Editor Chee-Chiu Lee
Senior Digital Designer Will Clarke
Online Deputy Ed Stephen Graves
Multimedia Editor Lucy Hedges
Senior Writer Sam Kieldsen
Staff Writer Esat Dedezade
Sub-Editor Emily May
Editorial Assistant Max Langridge

Editor-in-Chief Will Findlater
Content Director Hugh Sleight
Publishing Director Rachael Prasher
Publishing Manager Ollie Stretton
Digital Publisher Sandip Ray
Senior Marketing Executive Sarona Taylor
Marketing Executive Natalya Paul
Secretary Sarah Weetch

Contributors

Julian Whitehorn, Paddy Smith, Tein Hee Seow, Tristan Donovan, Alf Alderson, Andrew Hayward, Ced Yuen, Joe Minihane, Flo Meissner
Thanks to Alexandre Efimov, Neil Earp

Advertising 020 8267 5190
Sales Manager Chris Daniels
Agency Sales Executive Matthew Larkin
Agency Sales Executive Billy Jones
Classified Sales Executive Branton Palin

International Business Dev Manager Amardeep Mangat
Creative Solutions Commercial Manager Andrew Baker
Creative Solutions Project Manager Hannah Pettifor
Creative Solutions Project Manager Liam Maguire
Creative Solutions Editor Edward Craig
Advertising Director Mike Walsh
International Advertising Director Ian Porter

Production 020 8267 5814
Production Manager Ailsa Donovan
Senior Production Controller Paul Skinner
Senior Direct Marketing Executive Seun Akindele
Newstrade Marketing Manager Nick Lyon
Licensing Director David Ryan 020 8267 5024
Licensing Account Manager Isla Friend 020 8267 5058

Senior Licensing Executive Giuseppe Messina 020 8267 5502
Syndication Manager Paloma Gutierrez 020 8267 5396

Subscriptions Hotline 0844 848 8806
World: +44 (0)1795 592 987
Email stuff@servicehelpline.co.uk
Web www.themagazineshop.com

Editorial Director Mark Payton
Creative Director Paul Harpin
Strategy and Planning Director Bob McDowell
Managing Director David Prasher
Chief Executive Kevin Costello

- Volume 18 Issue 8
- ISSN: 1364-963
- On sale 2 July 2014
- Audit Bureau of Circulations: 77,340 (Jan-Dec 2013)

haymarket

Haymarket is certified by BSI to environmental standard ISO14001



© 2014, Haymarket Media Group Ltd. Reprographics by Anthony McDonald at Fresh Media Group. Printed by Wyndeham Heron, cover printed by Stephens & George. Distributed by Frontline Ltd, Midgate House, Midgate, Peterborough, PE11 1TN. The US annual subscription price is \$75.50. Air freight and mailing in the USA by agent named Air Business Ltd, c/o Worldnet Shipping Inc, 156-15, 146th Avenue, 2nd Floor, Jamaica, NY 11434, USA. Periodicals postage paid at Jamaica NY 11431. Subscription records are maintained at Haymarket Media Group, Teddington Studios, Broom Road, Teddington TW11 9BE. Air Business Ltd is acting as our mailing agent. All rights reserved. This publication may not be reproduced or transmitted in any form or by any means without the written permission of the publishers. Liability: while every care has been taken in the preparation of this magazine, the publishers can't be held responsible for the accuracy of the information therein, or any consequence arising from it. In the case of all product reviews, judgements have been made in the context of ware based on UK prices at the time of review, which are subject to fluctuation and only applicable to the UK market.

H O T S T

HOT
FOUR
#1

THE SCREENIEST PHONE EVER LG G3

There are many parallel universes up there. This universe, though, is currently the very hottest slice of existence. Why? Because we've got the new LG G3. It's the first QHD-screened phone from a major manufacturer: 2560x1440 pixels in a 5.5in panel. That's over 530ppi, maths fans, and it's probably unnecessary. Which doesn't detract from its desirability one bit. The G3 also continues the rear-mounted controls schtick that the G2 introduced, and there's little wrong with that. The back cover is metal-look plastic, which is easily forgiven because it can be removed to reveal the swappable 3000mAh battery within. And you can bet there'll be visitors from other galaxies coming to see the G3's laser-guided camera autofocus.

Ashotas... extraterrestrial geek tourists
tba/lg.com/uk



U

F

F

24 PAGES
OF THE BIGGEST
STORIES FROM
PLANET TECH



READ THE FULL REVIEW ON p76 →



HOT
FOUR
#2

TRICKLE-UP TECH

TAG Heuer Monaco V4T

Technology developed for megabucks military machines and racing cars tends to eventually trickle down to more mundane products. Not so with watches, on the whole. The thousands of man-hours that go into developing and refining high-end watch movements are all for exclusivity and marvel. And this is a marvellous watch: the iconic Monaco profile celebrating the ten-year anniversary of TAG's first belt-driven movement by coupling it with that most tricky of mechanisms, a tourbillon. None of it is likely to improve your washing machine any time soon, but we don't care.

Ashotas... trying to see the teeth on the 0.07mm belts

CHF150,000 / tagheuer.com



HOT
FOUR
#3HAIL THE
JOHNNY CAB!

Google Self-Driving Car

With little fanfare, Google has fast-forwarded autonomous vehicles from faceless SUVs, retro-fitted with radar and nervous-looking engineers with laptops, to these cutesy prototypes filled with members of the public.

They're electric, they do a maximum of 25mph and they have no steering wheel – just a start/stop button and a destination screen. The company has stressed that its 100 new smile-o-wagons are prototypes and that it isn't about to turn into a car manufacturer... but it's not a massive leap to imagine real Google cars (made by Tesla, perhaps?) looking a lot like this. Getting home from the pub just got a whole lot geekier.

A shot as... going back to the future at 25mph
£tba / google.co.uk

It's not yours

Why have a car sitting on your drive if you can just call one when you need it? Via your Android phone, natch.

It's not a car

Think of it more as a driverless taxi, a robotic car-pool or an urban transport system that doesn't run on rails.

It's a better driver than you

Well, in theory at least. And just in case it's not, it has foam-covered bumpers.

It's an American dream

Most US cities are laid out in grid format, but European cities are car-confusingly chaotic.



HOT
FOUR
#4FROOME'S
WINNING STEED?

Pinarello Dogma F8

Depending on what point in the month you picked up this copy of *Stuff*, Chris Froome:

- (a) is about to set forth upon his...
- (b) is in the midst of his...
- (c) has had a successful...
- (d) has had an unsuccessful Tour de France campaign upon this very bike. It's been part-designed by Jaguar, who are a Team Sky sponsor, using their wind tunnel and fancy Computational Fluid Dynamics tech. The result is a road bike that breaks new ground for aerodynamics and stiffness and Froome, at the time of writing, is said to be looking forward to taking it to Le Tour. Now we just need to wait and see if we (a) really want one, or (b) wouldn't be seen dead on one.

A shot as... Froomedog's brake-pads on the descent from the Col de Turini

£12,000 / pinarello.com



At the sharp end

Our hedge trimmer blades are laser-cut and diamond-sharpened. And they're driven with enough power to slice through the heaviest growth. This dedication to excellence is why we're trusted worldwide to produce the highest quality tools that leave you with the finest of finishes.

We share your passion.

For more information on
our garden power tools visit
www.stihl.co.uk

STIHL®

MAKE MINE A SKINNY LAPPY

Microsoft Surface Pro 3

from £640 / microsoftstore.com

At just 9mm thick, it's the thinnest device ever to use an Intel Core processor



Bigger, faster, lighter and slimmer. Foldier, writier, quieter, connectier and longer. And, squarer. The new Surface is many things, and all of them strive to make it laptopier than a laptop – without actually being a laptop.

● **The MacBook Air isn't worried** ...despite Microsoft getting out a set of balance scales at the launch and making the world watch as the needle pointed away from the 13in Air and towards the 12in Surface Pro 3. "Just 800g, compared to the laptop's 1350g,"

it crowed while neatly omitting the fact that the £110 Type Cover that makes it a genuine laptop alternative weighs an additional 300g. And that you'd need to buy the US\$200 Docking Station to match the Air's connectivity.

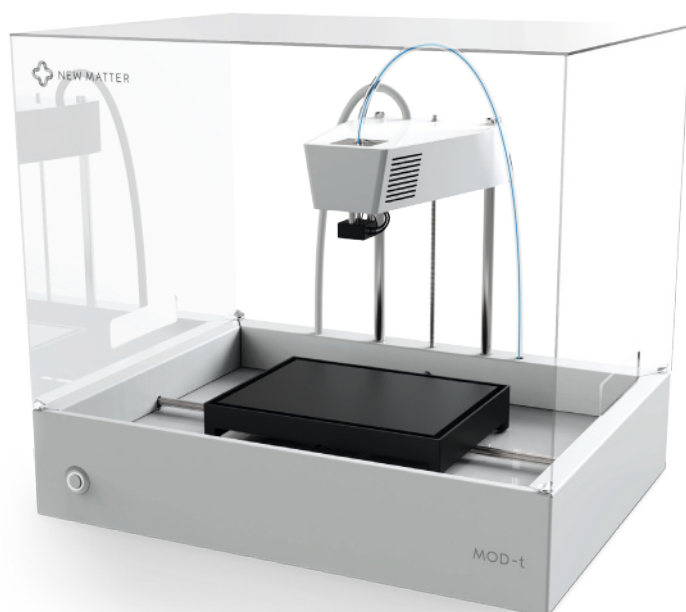
● **But them's just sour apples.** The Surface 3 is genuinely a marvellous thing. It's bigger than the previous version, the screen upped from 10in to 12.1in and 2160x1440 pixels, yet it's thinner at 9mm. It's the thinnest device ever to run Intel Core processors, apparently. And that screen has changed shape from 16:10 to a more usable and ergonomic 3:2

ratio. And it has a new N-trig digitiser and Bluetooth pen that promise the most natural on-screen handwriting ever. Press the button on the lightweight metal pen and you'll launch an instant OneNote screen to scribble on, with no logging in.

● **You can work on it.** Full Windows, innit? A new version of Photoshop was demo'd at the Surface launch that had been optimised for multitouch. Plus, if you've bought that aforementioned Docking Station, you get 4K output via DisplayPort as well as more USB3.0 and USB2.0 sockets. The new Type

Cover has a secondary magnetic position that holds it at a more natural typing tilt, while the kickstand can now be folded almost all the way back for a wider range of viewing angles.

● **It's cheaper than a laptop.** Well, cheaper than some laptops. It starts at £640 for a 64GB Core i3 version, meandering up through 128GB and 256GB i5 variants before ending up in i7 territory with 256GB or a range-topping 512GB that, at £1649, costs £1000 more than its littlest sister. But don't forget that you'll be needing that Type Cover and, probably, the Docking Station.



Prints and the New Plastic Generation

NEW MATTER MOD-T

Designing and printing a really nice 3D graph of the 3D printing market's highs and lows on this new 3D printer would be a quantum of awesome. And you could, because the running costs of the Mod-t are low – it's cheap to buy, it uses relatively cheap 1.75mm PLA filament and it comes with its own easy-to-use software. So you ruddy well can print frivolously, making post-ironic 3D graphs and downloading random things from the Mod-t's own online store and experimenting. You know, as opposed to using your 3D printer for serious things, as so many people do.

US\$250 / newmatter.com

In the treetops with your AVian friend

YAMAHA RX-V677

Imagine that Yamaha's range of AV receivers is like a particularly impressive tree – the higher you climb, the more broadly the branches spread, the more goodies, fruit and flowers you get. In this case we've climbed past the base model 377 with its Spotify Connect, and up past the 477 with its hi-res 192/96 audio support. We've struggled past the 577 level (built-in Wi-Fi, Zone 2 support) and stopped, exhausted at the V677. What delights are here? Why, HDMI 2.0 and 4K upscaling is what. We could climb yet higher to the 777 – its phono stage is an odd temptation. But no, the V677 is just high enough.

£560 / uk.yamaha.com



Monster bantz

DUCATI MONSTER 821

You'll need your cafe car-park spiel well prepared: "Actually, it's not the cheapest Ducati – that's the 696. This is the hot-off-the-Italian-presses 821, with the new 112bhp Testastretta engine. See the artfully forged exhaust? And the badge saying '800'? Yeah?

Well, snootchies, dufus." That last part is optional if, as expected, it's a swarthy veteran biker who initiated this 'cheapest Ducati' ribbing. As is attempting to spray gravel at him when you ride away – it's got a ride-by-wire throttle and eight-level traction control, so you'll just bullet straight through the Little Chef sign.

from £8800 / ducatluuk.com

The Wintopletandphone

ASUS TRANSFORMER BOOK V

Were the tech business a restaurant, we wouldn't want Asus as head chef. It has an all-or-nothing approach to production that would see hungry diners festooned with a bewildering array of dishes with all manner of techy ingredients. The recent Computex show in Taiwan was one such serving – MemoPads, FonePads, hi-res Transformers. But it's this Transformer Book V that's the silicon equivalent of the bird-inside-a-bird-inside-a-bird. It's a 5in Android phone that fits in the back of a 12.5in Windows tablet to make it either a Windows or Android tablet, or a Windows tablet with Android notifications, and it has a clip-on keyboard that makes it a twin-boot laptop to boot. Tasty, but surely inedible.

Etba (duelate 2014) / asus.com/uk



Nirvana unplugged

TOYOTA YARIS 2014

We had a VW e-Up for a while, and it was good. Smooth and quiet and electric and classy; we got to thinking about buying one and... yeeek! Best part of £20,000! Nope. And then the news of the facelifted Yaris range arrived and we saw that it had elements of the new corporate cross-nose thing going on, and the suspension's been tweaked, as has the interior. The one with Toyota's trusty hybrid tech should be quick off the mark, get 80mpg and, now with just 75g/km CO₂, be eligible for both free road tax and no London congestion charge. And so we got to thinking about buying one and... oops! Spent the deposit money on an old Audi S3 instead.

from £10,000 (approx) / toyota.co.uk

Harmony Police

SINGTRIX

"Anyone can play guitar," sang Radiohead, and no doubt inspired a whole generation of spotty oiks to axemanship.

What they didn't sing was that not everyone can sing. You can employ teachers and train hard, but you won't necessarily end up a winning vocalist. Case in point:

Pierce Brosnan in *Mamma Mia!* Enter Singtrix, a device from the makers of *Guitar Hero* that doesn't particularly aim to make you better, but to have fun. It's got various levels of pitch correction, along with instant four-part harmonies and all sorts of effects. You can plug in any music source, or there's an iOS/Android/Kindle Fire app with 13,000 songs and lyrics. £300 for Singtrix, mic, mic-stand and 40W speaker – and as Radiohead didn't sing about singers: "You won't be a no-one any more."

£300 / singtrix.co.uk



Panasonic

THE FREEDOM TO WATCH WHAT YOU LOVE, WHEN YOU LIKE



THE FIRST TELEVISIONS WITH FREETIME BUILT IN

Our new VIERA line-up delivers the stunning picture quality and smart features you'd expect, and now with Freetime* it's easier than ever to watch your favourite channels. Whether you're viewing with Freesat or Freeview, simply roll back and play the shows you've missed – all within your TV guide. And with the AX802 series, you can immerse yourself in every detail with 4K Ultra HD.

panasonic.co.uk/viera



VIERA

4K SMART TV

◀freetime▶



*Minimum 2MB broadband connection required. Some services indicated may require automatic software update. ITV Player unavailable in Scotland and N. Ireland. AX802 series upscales HD broadcasts and IP content to 4K.

G I G A P I X E L

The bigger picture in tech

TWINKLE, TWINKLE, LITTLE GADGETS

There's process here. London-based 3D animator Marc Khachfe saw space-shots of Earth taken from the ISS and wanted one for his office wall. But they weren't available in a high enough resolution so Marc created his own. He used open-source mapping as a guide then just added time. Lots and lots of time. He's done a few different cities now, including London, and he'll do one of your city if you ask him nicely, but it's this one of San Francisco that caught our eye. Underneath those lights were dreamed-up things that light up our life daily. Newbies such as Dropcam, Lyft and AirBnB tend towards the downtown area near the top of the image, whereas folk with more money — Tesla, Nest, Apple, Google, Netflix — have bigger complexes spread through Silicon Valley, near the bottom.



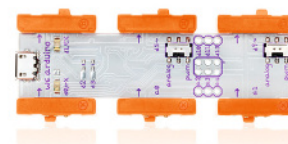
PLAYSTATION TV

This wee box, which was launched in Japan last year as the Vita TV, is renamed and now coming to Europe and North America. It'll cost €100 and give you PS4 Remote Play, as well as PS3, Vita and PSone games via the PlayStation Now streaming service (when that launches).



THE LANDLINE IS DEAD! SORT OF...

A new service called Relish is offering landline-free unlimited broadband for £20 a month. It's operated by UK Broadband, which says it has its own dedicated 4G data network that offers 'fibre-fast' speeds without the fuss and cost of a landline.



MAKING ARDUINO A BIT LESS 'ARD

Everyone's favourite snap-together electronics kit maker, littleBits, has announced a significant addition to its family: an Arduino bit. It can be bought alone or as a bundle with other littleBits (see Adafruit.com) and opens up all sorts of basic coding fun.



NAMES TO DROP #9

Jimmy Wales THE MAN BEHIND WIKIPEDIA

Jimmy Wales runs the world's fifth-largest website and the largest piece of reference work in human history. Over 450 million people use Wikipedia each month. It has over 30 million user-submitted articles, and it's expanding and being refined on a daily basis. Schoolkids use it for their homework, junior doctors use it for diagnosis, journalists use it for pretty much everything.

It all started as a side project.

They are ideas where you find the lowest-cost way to try something, to see if it works. If you think of it as a side project, you'll keep the resources low and try to get the most out of them. If you go all-in, you may over-commit to the wrong thing. With Wikipedia, it just grew and grew and grew. In the first couple of years, traffic was doubling every three or four months, but we were starting from a very low base. The trend was so strong, I knew this was going to be something that could be very interesting and

really quite big. But still, I never contemplated it becoming the number five website in the world.

Adding to Wikipedia isn't an act of charity.

Most of the people who are involved in Wikipedia are happy that what they're doing helps others, but that's not why they're doing it. Mainly they do it because it's fun, you meet interesting people and spend your time being productive, rather than just playing *World Of Warcraft* or something. If you imagine the Wikipedia community as selfless people, you've got the wrong picture. We're just a bunch of passionate geeks doing something we love, and we're happy that other people like it.

"IT'S NOT A SELFLESS COMMUNITY - WE'RE A BUNCH OF GEEKS DOING WHAT WE LOVE, AND WE'RE HAPPY THAT PEOPLE LIKE IT"

Working your brain can be fun.

There is increasing room for intellectual hobbies: things people do that are productive, but aren't done for money. Just look at all the amazing photography that people are creating – keen amateurs financing their hobby with a day job that has nothing to do with it. A lot of programmers, too, are doing something perfectly valid but not that fun during the day, and then at night they're hacking code for quadcopters and making cool new apps and things like that.

Technology is a force for good.

I think it's overwhelmingly a force for good, so that there's no valid question as to whether we should stop innovating. Of course there are always going to be problems, and some of them are quite serious. There are a lot of valid questions about online behaviour – human behaviour, with all of its glory and its ugliness, does come online, and it becomes more visible there. But I think we are maturing in terms of the software and the tools that enable people to have a more civil life online.

The 'right to be forgotten' ruling is censorship by another name.

It's a nice-sounding phrase, but you can't actually have a right to be forgotten. Human brains don't work like that. What you could have is a right to censor what other people have said about you online. Once you frame it that way, it doesn't sound so simple. We should be very cautious about censoring the internet because there are so many ways in which it could be abused. I would say today, lawyers for thousands of shady characters with bad business dealings are thinking about how they're going to scrub all that information from the web, which means we'll all be much more vulnerable.

The last articles I've edited have been on female writers.

Lately I've been specialising in English female authors. One of the things we face in the Wikipedia community is that the gender balance isn't very good, so our coverage of female novelists, for example, is quite weak. So I've picked that area and started making some little changes.

ANIMAL MAGIC



Jimmy and *Dragons'* Den inquisitor Peter Jones are judges in this year's Google Impact Challenge, an initiative the Big G is running with Nesta to award large sums of money to innovative hi-tech charities. London Zoo was one of last year's winners, with a project that puts networked, motion-detecting cameras in much-needed areas to monitor wildlife. The cameras are so smart they can detect a poacher's machete in total darkness. Thanks to its entry, the Zoological Society of London won an extra £500,000 to make more of these cameras and use them to protect endangered wildlife.

[Illustration: Alexandre Elimov]

Losing your hair like your Dad?



If you're losing your hair, you're looking for **facts**, *not fiction*. Fact: for 95% of men, hair loss is hereditary. REGAINE® scientifically proven foam could be the answer. It is proven to help stop and even reverse hereditary hair loss, working deep down at the root.

Find out the facts at regaine.co.uk/facts

FACTS not fiction

regaine.co.uk/facts



Regaine®

official sponsor



REGAINE® for Men products and treatments are for male hereditary hair loss. REGAINE® for Men Extra Strength Scalp Foam 5% w/w Cutaneous Foam contains Minoxidil. ALWAYS READ THE LABEL.

ATHLETE: ALANA BLANCHARD | CAPTURED BY: ALANA BLANCHARD



HERO3⁺
BLACK EDITION



GoPro
Be a **HERO**.



Wear it. Mount it. Love it.™

OVER 60 ACCESSORIES
AND COUNTING

DISTRIBUTED IN THE UK & IRELAND BY
MADISON:UK

gopro.madison.co.uk

SMOOTH OPERATORS

'Continuity' was the buzzword at Apple's 2014 WWDC keynote: iOS and OS X working together...

iOS 8

HEALTHKIT & HOMEKIT

Think 'kitsolidation'. The former centralises and prettifies data from various fitness devices and apps, whereas the latter works with home automation devices such as Philips Hue. And the whole movement means Apple gets to pick its bestie 'partners'. Shrewd.

NOTIFICATIONS

"Android," whispered the crowd in unison when Apple showed a notification bar in which you can directly respond to tweets, make eBay bids or 'like' Facebook posts. Plus third-party devs can make widgets for the pull-down area. Meanwhile, Siri can now be invoked by voice alone.

THIRD-PARTY KEYBOARDS

The keyboard in iOS now suggests smarter auto-completes based not only on your typing history but also on the context of the convo. Then, unexpectedly, Apple announced support for other 'boards. Swype! Swiftkey! SausageFinger! (We made one of those up.)



THE CONTINUITY ZONE

iCLOUD DRIVE

"Dropbox!" we gasped when iCloud Drive came up on the big screen. (One guy said "SkyDrive" and was quietly removed.) Yes, iCloud Drive can store and share docs across platforms, like Dropbox, but it's probably neater.

AIRDROP & HANDOFF

A new cartoony duo to rival Ratchet & Clank? Nope. AirDrop now allows flip-flopping of docs between Mac and iOS. Handoff pops up to let you finish whatever you are doing on one, on t'other, having sensed that you're near another device.

PHONE-SHARING

Another standout feature of Handoff is that it knows if you're receiving a call or message on your iPhone, wherever it is, and pops up on your Mac desktop to let you answer or reply. You can also set up your iPhone to work as a hotspot.

FAMILY SHARING

"Daddy, can I buy *CoD* for my iPod?" "Sure, son, you are a registered Appleton on my iTunes ecosystem family unit, so I can approve any purchase you want to make and it goes on my credit card. What's more, I'll get to play *CoD* too!"



OS X YOSEMITE

MAIL & SAFARI TWEAKS

Big new feature in Mail is Markup, which lets you draw on, annotate and magnify portions of email image attachments... without taking them out of Mail. Safari gets intuitive tab handling — including an overview of all your open tabs on all your devices.

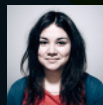
SWIFT

It wouldn't be a conference without some genuinely geeky stuff to get excited about and this time it's Swift, a new programming language for OS X and iOS. It aims to be cleaner and quicker than Objective-C, used by devs up until now; and if you want to test that claim, download it now.

SPOTLIGHT

Apple's search engine got smarter and webtier. Like Google, it now suggests maps, locations and reviews for things you search for, as well as the usual local files and apps. It will also suggest iTunes songs and films related to your search term. Which absolutely won't be annoying.

Is iOS now an open OS? (No)
Sophie Charara
@sophiecharara



Apple has just made a very un-Apple move — not by taking cues from Android's features (though it did that) but by adopting Google's basic principle: openness. iOS 8 is the first evidence

of Apple beginning to entrust and share its core functions with outsiders. Now, don't panic. Apple isn't about to let a bunch of app-makers trample all over its beautiful walled garden and destroy years of painstaking work. Everyone from bedroom coders to

app megacorps will have to stick to the carefully marked paths. iOS is the most polished mobile ecosystem, and its transition into also being your home, car and life OS will still be curated by Apple to make it very different to — but no less exciting than — Android.

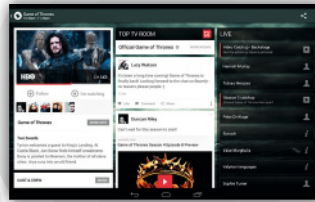
↓ A P P S

This month's mobile must-downloads

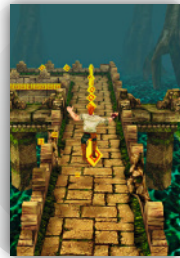
1



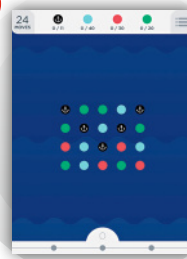
4



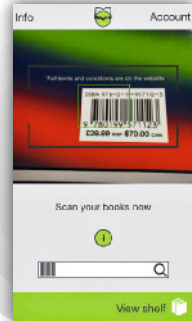
7



5



8



2



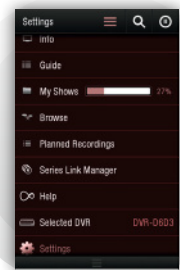
3



6



9



1 Tiny Dice Dungeon

Efree / Android, iOS

Some games aren't quite done justice by their images and description on Play Store or iTunes. Tiny Dice Dungeon is a retro RPG turn-based smasher, but it has a narrative humour and numerous side projects – really worth a look.

4 Beamy TV

Efree / Android, iOS, Windows

The artist Zeebox is now known as Beamy. The aim is the same – to read about the stories about the tweets about the TV shows that you like and tweet about – but it's been tweaked to have a more mainstream appeal.

7 Temple Run

Efree / Android, iOS, Windows

You've heard of Temple Run, and you've probably played it given that last month its creators announced that it had surpassed the billion-downloads milestone. If you haven't yet, it might be time to give it a go.

2 KeroBlaster

£2.99 / iOS

Made by the man who made Cave Story, the runaway indie hit, this is another slice of old-school action. This time your main man is a frog, and his main purpose is blasting. Light-hearted and charming – you should support this sort of thing.

5 TwoDots

Efree / iOS

Where once there was a simple one-board game – Dots – there is now a basic narrative, involving two dots and a journey. Where once there were only dots, there are now other in-game objects, like anchors and fires and bombs.

8 Fatbrain

Efree / Android, iOS

When you were light of wallet but heavy of satchel, you were probably wondering exactly what you were going to do with all this reading matter once you'd finished uni and become unemployed. Sell them using this app is what.

3 Voxal Rush: 3D Racer Free

Efree / Android, iOS

You are a light cycle fleeing from some digital enemy you annoyed by trying to free the pixels. (Probably.) Anyway, you're not escaping from this game: Voxal Rush is endless, fast and fun.

6 Toca Town

£1.99 / iOS

What did we do with our kids before the iPad? (Really, though, what did we do with them? They must be hungry by now.) Swedish app design house Toca Boca is back with another of its high-quality sprogtainers.

9 Virgin TV Anywhere

Efree / Android, iOS

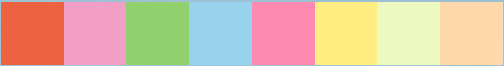
It's been a careful roll-out for Virgin's TV Anywhere app – now we see the Google Nexus 5, Sony Xperia Z2 and Samsung Galaxy S5 join the list of Virgin-approved homes for its TiVo-controlling and TV-watching app.



APP SPOTLIGHT TRIALS FRONTIER

Efree / Android, iOS

If we describe this as a big-budget bike game, we mean it's you who needs the big budget, as the game is packed with micropayment mechanisms. ROFL. It's a long way from the original desktop RedLynx trials games – it has a narrative, cutesy graphics, bike upgrades and surprisingly complex missions.



PERFECT PICTURES THIS SUMMER

whatever happens



PowerShot
SX700 HS



EOS 70D



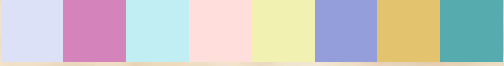
LEGRIA HFR56



PIXMA MG7150

UP TO
£100
CASHBACK
on selected
products*

Canon
you can



Find out more at canon.co.uk/summercashback



*Offer subject to full Terms and Conditions - see canon.co.uk/summercashback. Available on selected European products purchased between 15.5.14 and 13.8.14 from UK retailers, EXCLUDING e-Bay and Amazon third party sellers (i.e. not from Amazon directly) whether fulfilled by Amazon or not.



Under the surface ACER SWITCH 10

Microsoft has just launched the Surface Pro 3 – a rootin', tootin', Windows-shootin' megatab. But where tablets are doing good business is down in the Android part of town: the Asus Transformers and so forth. Which is why this Acer Switch 10 is worth a look. It's a Windows-convertible tablet that's likely to cost in the region of £400, and has a quad-core Atom processor with 2GB of RAM and a 32GB SSD. The 10in screen won't melt any eyeballs with its 1366x768 res, but then the whole kit, keyboard included, only weighs 585g. This could be a doozy for road warriors who need Microsoft software in their gunbelt.

£tba (due summer) / acer.co.uk

This isn't the 'droid you're looking for SAMSUNG Z

First things first: this phone is not available in the UK. Put that information in an emotional suitcase, take it down to the left luggage office and throw away the receipt. OK? What's interesting about the Z is that, while it looks a lot like an Android-running Samsung smartphone, it's actually a Tizen-running Samsung smartphone. The company's own OS, first seen by us in its Gear smartwatches, is building momentum and they're now testing this 4.8in, 720p, 2.3GHz Snapdragon, 16GB Tizen-o-phone in Russia. An early move away from Google's Android? Or just broadening its product base? You heard something here first.

£tba / samsung.co.uk



? WTF IS BAROBOT?

Is this an industrial drinks rack?

Nope – this is Barobot, a robotic bartender. It can mix up to 1000 different cocktails and, its creators say, you're guaranteed a perfect drink every time. A hundred times, to be exact – assuming you fill it with 12 bottles. It'll take bottles up to 2.5l capacity, and can pour 20ml and 50ml plus part measures.

How do I choose my tipples?

Barobot is controlled using a 7in Android tablet and Arduino-compatible electronics. The control app lets you pick drinks by ingredient, flavour or even colour; there's also an 'I feel lucky' option for the brave. Of course, you can also create your own concoctions if you're determined to make use of the dusty bottles in the back of your drinks cabinet.

What about later in the evening, when everyone's merry?

The Barobot interface is designed to be simple, so even the booze-filled shouldn't have trouble ordering. If you're feeling lazy, you can even download the app and pre-order your drink from the couch. The next step, surely, is drone waiters.

Does it come in black?

Yes, Bruce Wayne. Yes it does. The Barobot's available in clear or black acrylic glass finishes – and both pack 106 LEDs that allow you to customise the colour to match your party's mood. You can even sync it with your music. It comes as a kit or fully assembled, and as it's open-source you can add your own sensors if you want to add to its capabilities.



How much is it?

Barobot is currently seeking funding on Kickstarter; you can pledge £860 for a kit or £1300 for a fully assembled system. If you're feeling really generous, you can get a custom-designed model for £3500.



DON'T MISS OUT ON A SINGLE MOMENT!

Isaw 
Free your action!

BUILT IN LCD, BUILT IN WIFI

EXTREME
1080p 60fps ACTION CAMERA

Full HD 1080P 60fps
High Definition Picture Quality



ISAW Extreme supports full HD 1080P which means 1920 x 1080 resolution. Make your own videos with broadcast image quality.

12 Mega Pixel
Sony Exmor Sensor



With its 12M pixel advanced performance CMOS sensor, you can always capture the best videos and photos in its highest quality.

60M Waterproof



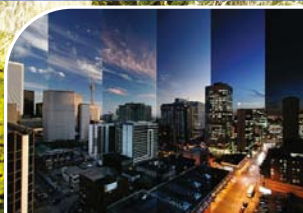
With ISAW Extreme, you will shoot without fear and get a clear and satisfying picture in the water.

720p 120fps,
WVGA (480p) 240fps



ISAW Extreme offers high frame rate video option, with which you can create slow motion videos with very smooth movement.

Time Lapse Video



"Time Lapse Video" which is an interesting technique that records a scene or objects that have a slow state-of-change and turns it into a video that plays back in high speed.

150° Wide Angle Lens



When you are wearing Extreme, with its wide angle, you don't have to worry about missing any of the beautiful scenes you see.

4x Digital Zoom



ISAW Extreme has got even stronger with 4x Digital Zoom. It will maximize your utilization not only in action but also in everyday normal sight shooting.

Built in LCD, Built in WIFI



With the 2" built in LCD view finder and the built in WIFI, you may control the camera anytime, anywhere.



PXS DISTRIBUTION
ENDLESS SOLUTIONS
UK • GERMANY • SOUTH AFRICA • KENYA

• 0844 879 4212
• sales@pxsdistribution.co.uk
• www.pxsdistribution.co.uk

MORE ON
STUFF.TV

FIRST PLAY DESTINY (ALPHA RELEASE) PS3, PS4, Xbox 360, Xbox One

Of all the big launches and reveals at E3, few carry the weight of expectation of *Destiny*. And we've played it.

First impressions? That it bears the hallmarks of developer Bungie's other big game, *Halo*: the shotgun has the same circular reticule, and there's a shield that recharges between hits. But there's also RPG-influenced gameplay, such as picking a character type and levelling up (sometimes laboriously) to get access to certain levels. Ditto frequent visits to The Tower – *Destiny*'s non-combative hub for recruiting other players to

your 'Fireteam', choosing missions and getting paid for completed ones.

From the game's beginning, we were joined by the Traveller, a mysterious, white, spherical entity that acts as a guide. We headed to a tutorial level, set in a bleak, snowy future Russia... and into a fight. The shooting startles other enemies, but rather than coming straight at you they dive for cover and seem to plan before launching a cohesive attack. The character details are stunning.

Tutorials complete, the game becomes more free-roaming. We

quickly come across enemies we can't defeat – a curse of early access, as there's no-one online to team up with! The skirmishes are great, though, even if they involve much scuttling behind rocks to recharge shields.

Based on what we've played of *Destiny*'s alpha build – there's a more in-depth preview on stuff.tv – we're excited about its overall quality. It looks gorgeous, plays well and is incredibly polished. It also has a mix of established genre tropes that, while they may be borrowed, fit into it well and produce something that feels unique.



THESE GOT US GIDDY AT GAMES EXPO E3...

**FORZA HORIZON 2**

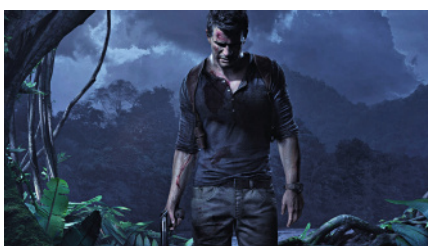
Xbox 360, Xbox One

Forza is back, and it's stunning. We were blown away by the simulated weather, the reflections on every panel of the 20+ cars, and of course the vast open world. Over 700 driving events and at least 100 hours of gameplay. Vroom, indeed.

**NO MAN'S SKY**

PS4

Hello Games' sci-fi exploration and combat game is one of the most ambitious titles we've seen in ages – you have a whole galaxy of planets to roam, each with its own ecosystem. So every player's game will be different.

**UNCHARTED 4: A THIEF'S END**

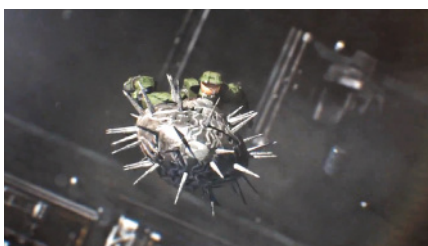
PS4

Nathan Drake is coming back in 2015 – but the game's name and the dialogue between Drake and Sully in the new trailer suggest that this may end up being the final game in this incredible action-adventure series. Bring it on, though.

**SUNSET OVERDRIVE**

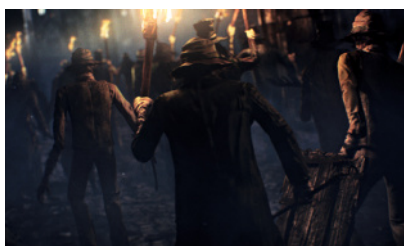
Xbox One

Sunset Overdrive is an insane third-person, free-running, high-jumping shooter that's cranked up monster-killing to a whole new level. Retina-searing colours, crazy guns, and a soundtrack littered with manic guitar riffs.

**HALO: THE MASTER CHIEF COLLECTION**

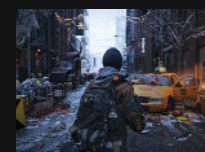
Xbox One

We shed tears of joy at the announcement of this collection of every *Halo* from *Combat Evolved* to *Halo 4*. With over 100 maps remastered in glorious 1080p (running at 60fps), it's a fan's dream.

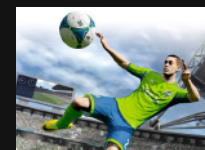
**BLOODBORNE**

PS4

The mysterious 'Project Beast' has been revealed as *Bloodborne*, a PS4-exclusive gothic horror. Given that it's coming from Hidetaka Miyazaki, he of *Demon's Souls* and *Dark Souls*, we're sure it'll be suitably brutal.

...BUT THESE WE KNEW ABOUT**Tom Clancy's The Division**

Highlighted on this very page a year ago, the delayed *Division* is looking closer to completion. And it's also looking utterly eye-burstingly awesome.

**FIFA 15**

There's a full preview on stuff.tv, but ball control is tighter, improved physics enables super-fast tiki-taka passing, and player runs are a lot more intelligent. Much to look forward to.

**Project Spark**

The good news is that badass drunk squirrel Conker (of 2001's N64 title *Conker's Bad Fur Day*) is to turn up in the PC and Xbox user-generated *Project Spark*.

INCOMING

AUGUST

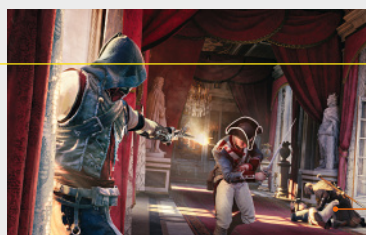
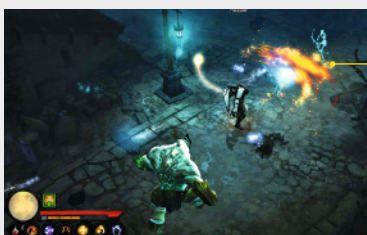
- SACRED 3
- DIABLO III: REAPER OF SOULS (ULTIMATE EVIL EDITION)

SEPTEMBER

- DESTINY
- CRIMES & PUNISHMENTS

OCTOBER

- ASSASSIN'S CREED: UNITY
- THE EVIL WITHIN



GEEK WATCHES

Because looking at the time on your phone has become mainstream

1 Keypad Watch

Imagine you could move in time by simply punching in the new time. Would you jump forward in chunks? Or would you use it as an Apple-Z, endlessly retrying unsuccessful social interactions? (The Keypad Watch can enable neither of these options; it just tells the time.)

£40 / red5.co.uk

2 Lego Happiness

In the spirit of Lego itself, its new adult watches come with extra colourful links and bezels that can be swapped in and out in seconds. There are ten designs, ranging from blatantly, awesomely Lego to more subtle toy-related timekeepers that can be your little secret.

£85 / legowatches.com

3 Romain-Jerome Space Invaders Reloaded

Maybe you love *Space Invaders*. More likely is that you love watches; this astronomically priced model comes from the company that makes watches with moon dust and metal from the Titanic.

£11,000 / romainjerome.com

4 Tokyoflash Kisai Rorschach

The Rorschach psychology test was designed to eke out the subtleties of your personality, but buying a Rorschach watch asks many questions even before you decipher its mirrored E Ink display to work out what time it is.

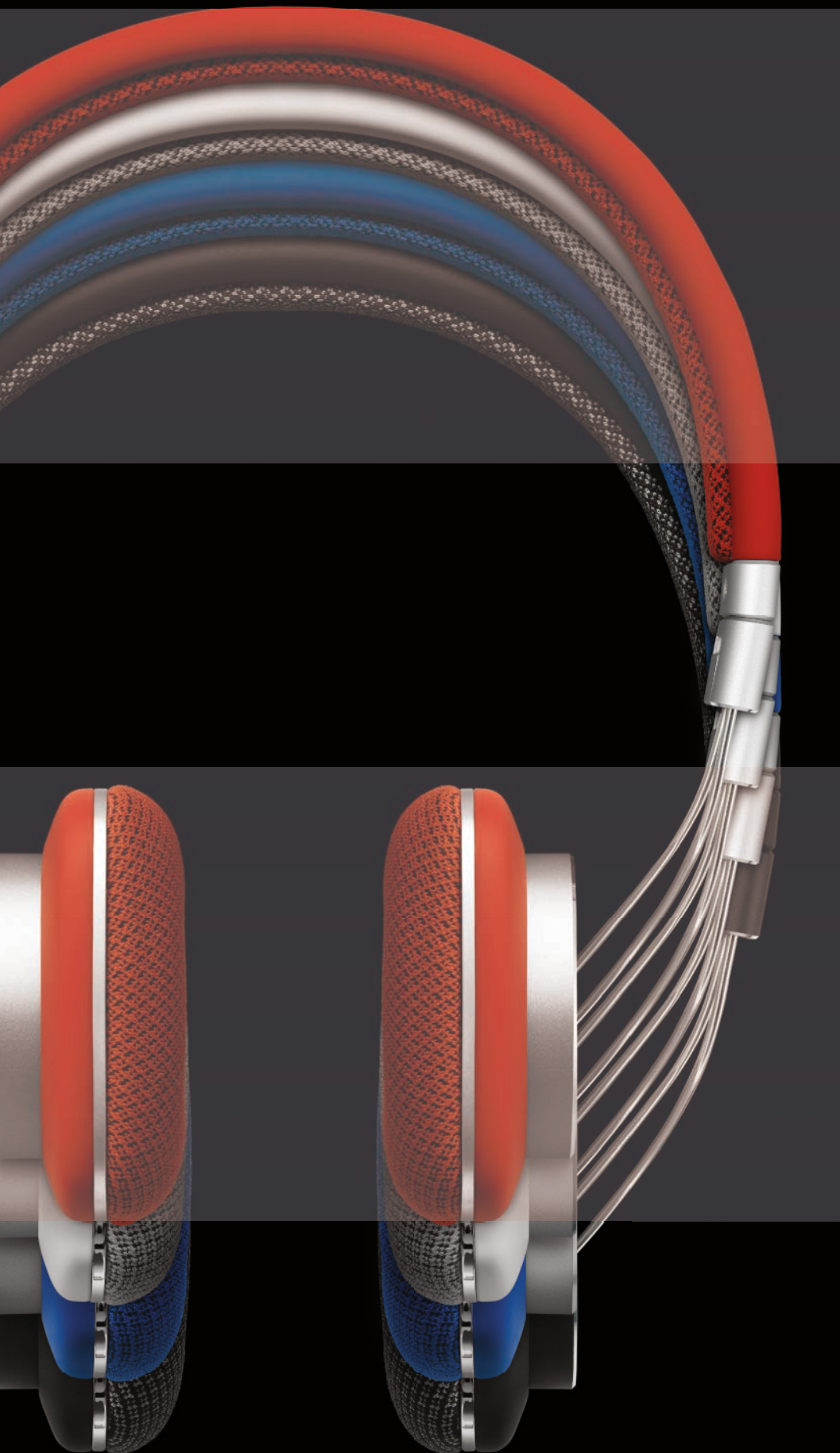
£120 / tokyoflash.com

5 Equation Watch

Each equation works out to reveal the number of the hour at which they are placed. A reminder of man's mastery of numbers, as well as the many time-wasting time devices. You could also work out how many of these would add up to the cost of the Romain-Jerome above.

£10 / menkind.co.uk





Hear the full
spectrum

P3 Bowers & Wilkins have been established as masters of sound engineering for almost 50 years. We are now able to bring that same expertise to the world of headphones; the same precision, the same care, the same extraordinary range and depth of detail is now available from an ultra-light, highly portable set of headphones superbly designed to fit into your life.

Bowers & Wilkins

Soft rock MARBLUE HEADFOAMS

Oh, what a mess. Granny Hyacinth bought all the kids Beats headphones for Christmas and, far from the silent musical appreciation that was envisaged, there's been nothing but trouble. Little Timmy took his to bits and they've never made a peep since.

Ruth dipped hers in taramasalata to prove some point or other, while Alice discovered dubstep and will forever have a twisted idea of what balanced bass should sound like. Maybe it's time to take a step back and get them these age-three-and-up squidgy

HeadFoams: non-toxic, tough and limited to 85dB.

US\$40 / gomarblue.com



He shoots, he pores LOMO'INSTANT

Of the three things that Lomo photography always involved – time, money and uncertainty – one has been removed. The name of the product gives it away somewhat. This new camera uses Fujifilm Instax film, so you no longer have to wait until your shots come back from the developers to see what's occurred. Money remains an issue – a pack of 20 Instax sheets is £15 at Currys. As does carefully curated uncertainty – the Instant has a wide-angle lens to which you can add portrait or fisheye attachments. You can shoot manual long exposures or – a first – multiple exposures on one instant print.

£tba (due Nov) / lomography.com



DROP EVERYTHING AND DOWNLOAD...

SXPD iPad / £1.49



It is the future. The cops are women who ride armoured hoverbikes, as do the baddies. SXPD is part comic book and part game; the story unfolds over several pages before you get to take control of the bike and blast your way through fiends and obstacles to unlock the next chapter. The rich artwork flows seamlessly into the racing sections, which makes it mighty challenging. Rocks and walls and foes abound, while you tilt to turn and attempt to line up guns and missiles. It's a hoot, though, and this is only the first episode.

MEN UNITED V PROSTATE CANCER



**PROSTATE
CANCER UK**

Join the team at
prostatecanceruk.org/football
to find out more information



ALL THE RIGHT
ELEMENTS



79
—
Au
—
GOLD

PERFORMANCE

With tuned all-round road geometry, 955g full carbon monocoque frame and hybrid electronic-ready internal cable routing, Orro Gold enables peak performance.

STYLE

The clean, simple design lets your performance stand out. Ride with elegance and finish in style.

COMFORT

Experience a level of comfort not seen on other high performance road bikes thanks to Orro Gold's slightly relaxed geometry and longer wheel base.

PRICE

Ultegra 11
£1999 SRP

—
Ultegra Di2 11
£2599 SRP

Orro Gold is the perfect blend of a high performance road bike with the comfort of a sportive bike. Meticulous engineering and technology form a seamless bond between bike and rider, transferring all of your body's power onto the road.

www.orrrobikes.com



ride
i-ride.co.uk



I MADE THIS



AUDIOPHILES' KILLER FESTIVAL SOUND SYSTEM

B&W Sound System by Stuart Nevill

We asked ourselves why people go to gigs and festivals. Nothing beats the rush of live music, but all too often there's something missing: sound quality.

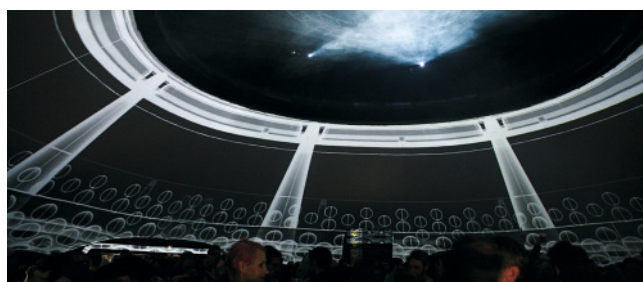
A lot of sound systems have a horn between the moving element and the air, which produces 'colourations' (or distortions). Don't get me wrong, horn systems are great and are designed for a purpose: to be extremely loud and sensitive. But we wanted to bring hi-fi quality to live music, with all the realism you'd expect from a top-end speaker but delivered at scale for the first time.

Our brand director Danny Haikin had been nagging me for years about making a sound system. We had some idea how to do it from an unofficial system we did for one of Coldcut's tours of war-torn Eastern Europe. We knew the direct radiator approach – a system with

lots of direct-facing drive units formed into a 'line array' – could work. So we did some calculations, and on paper it looked like we could go loud enough and get the quality.

We tested the Sound System in a massive warehouse, which is a development space next to our factory. Everybody heard it – it was rattling cutlery in the kitchen. I think that helped everybody get on board. Though we're making loudspeakers, some people go through the day without hearing music, so for them to experience it first-hand made it feel like a real product. There were predictions saying it wouldn't go loud enough, or would blow up! But it really did sound like a giant hi-fi, which was very impressive.

Lots of festivals, including Bestival and Glastonbury, asked us about the Sound System, but we wanted the right bill – and the



DJ line-up for Primavera Sound 2014 was so good. Obviously the event couldn't move, so there were some frightening moments where we weren't sure if we could pull it off from a timing perspective. We put the Sound System together in five months – our product cycle is usually two years.

We'll be taking it to Womad festival (24–27 July) next. It's much more about listening there, so it won't come with the 360° moving projections we had in Primavera's Igloo tent. We'll use it to demonstrate all the things you can listen for, so it's going to be more like a TEDx event. Next year we'll look at doing two or three festivals.

Unless a customer wanted quality above all else, they wouldn't go for something like our system, because it's big, heavy, inefficient and takes a lot of power. But the quality speaks for itself. The best hi-fi speakers aren't light weight things, they're heavy. You can't change the laws of physics. So we paid the same amount of attention to the cabinet design as we do in our normal hi-fi speakers, hence why each speaker stack weighs one tonne!

We're not saying, "This is the way it should be done." But it's proving a point – that if you use really good ingredients, you can scale it up and make something really great.

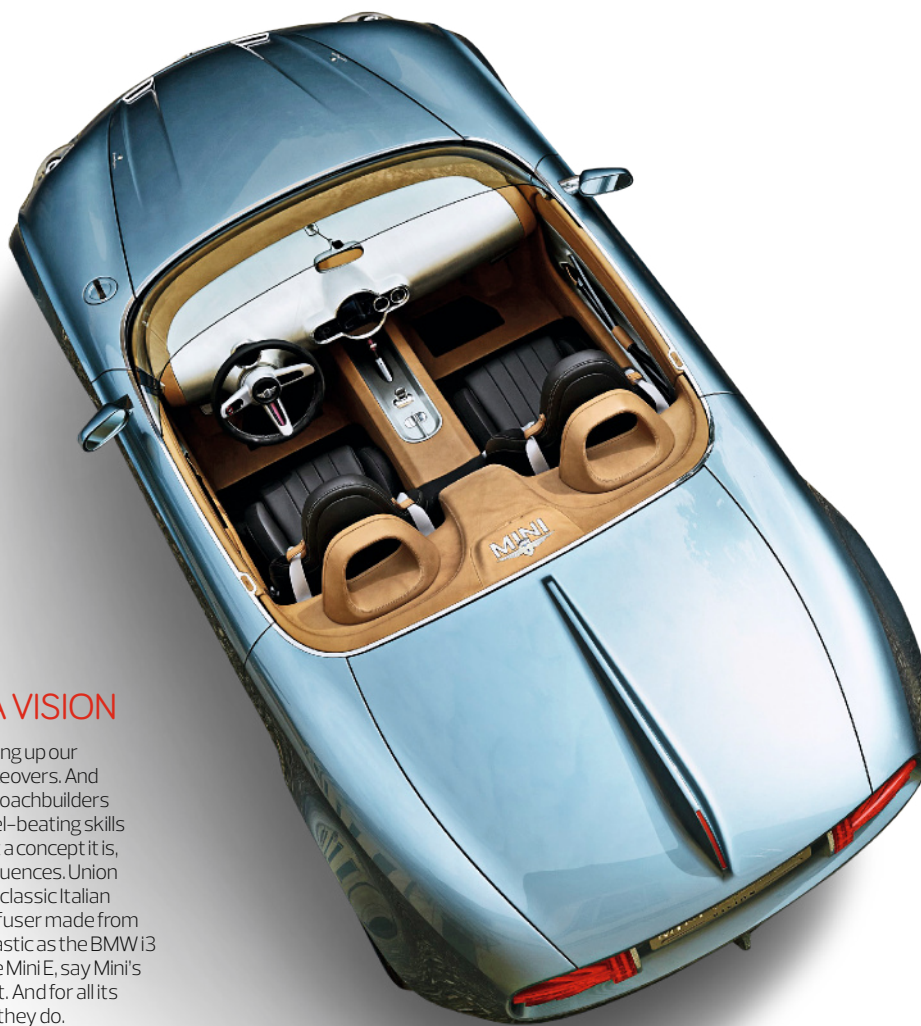
"WE TESTED IT NEXT TO OUR FACTORY AND EVERYBODY HEARD IT – IT WAS RATTLING CUTLERY IN THE KITCHEN"

drinkaware.co.uk
for the facts

ADD TO FAVOURITES




Heineken
open your world



Mini Euro-vision?

MINI SUPERLEGGERA VISION

The Germans have no shame — offering up our beloved Mini brand for all sorts of makeovers. And this time, those Italians are involved: coachbuilders Touring Superleggera gave their panel-beating skills (and name) to this concept. And what a concept it is, even if it's a weird mix of European influences. Union Flag rear light clusters at the end of a classic Italian touring line, with side sills and rear diffuser made from the same carbon-fibre-reinforced plastic as the BMW i3 and i8. It'll be electric-powered like the Mini E, say Mini's spokespeople, if we decide to make it. And for all its identity issues, we really rather hope they do.

[Etba \(concept\)](#) / [mini.co.uk](#)



START MENU

The month's best concepts, start-ups, crowdfunded projects and plain crazy ideas



Switch off

HOMEY

€400 / [athom.nl](#)

Home automation. Blah, blah, blah, right? Wrong. You need to get with the times, Buster, or getting out of your La-Z-Boy to switch off the light is going to get you laughed out of your nursing home. The Homey uses Wi-Fi, Bluetooth, ZigBee, Z-wave, 433MHz and plain Jane infrared to control just about anything, and as it does so using Javascript, you could write your own routines for it. Or maybe that nice nurse will.

Status

Funded (Kickstarter)



Portable playtime

BND/ONE

from US\$50 / [bndproducts.com](#)

The reason you never take your guitar to the neighbourhood jam night is not because you've grown out of the speed metal shape, and it's not because those YouTube lessons got to be such a chore, and it's certainly not because you're all thumbs. Obviously it's because you'd worry about it getting damaged. Enter this flexible, folding guitar stand that can fit in your guitar case or rucksack. No excuses.

Status

Seeking funding (Kickstarter)



Beer goggles

TENS

from £36 / [tenslife.com](#)

"Life looks better through a tobacco-tinted lens," someone might have said; and had they done so, it would have been picked up by the marketing guys at Tens sunglasses. "The real-life photo filter" is its actual tagline, referring to the carefully refined warm hue that the lenses imbue on your surroundings. Not revolutionary, perhaps, but for less than the price of a night out, worth a punt.

Status

Seeking funding (Indiegogo)



It ain't half hot, Mum LA FENICE

La Fenice is the first coffee machine to use electromagnetic induction to heat the water. That means it doesn't need to maintain the water at brewing temperature, so it uses 80% less energy than conventional coffee makers... according to its creators. It balances pressure, flow rate and temperature to suit different types of coffee and is compatible with Keurig K-Cup or Lavazza Espresso Point FAP capsules as well as boggo ground coffee. Finally, it looks magnificent, available as it is in black, chrome and a limited-edition copper, brass and chestnut model.

US\$500 / lafenicemilano.com



Precise, not profound GARMIN FORERUNNER 15

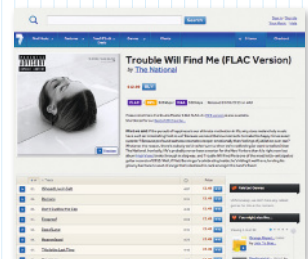
Like so many fitness devices, the Forerunner excels at 'what'. Day to day it'll measure your steps like a Fitbit, giving you a general outline on what a bouncy dandy-about-town you are. Come Sunday night, when the slobbish excesses of the weekend are driving you out for a run, it'll up its game to GPS recording of speed and distance, as well as playing nice with a heart-rate strap and foot pod. It'll also sync with Garmin's Connect online records service, telling you and others what a little fitty you are. But there's one thing the Forerunner 15 will never tell you, and that's 'why'.

from £140 / garmin.com



TOM WIGGINS MEDIA HOARD

Don't you wonder sometimes 'bout sound and vision?



● Apple might have failed to add any hi-res audio skills to iOS 8 (see p27) but that hasn't stopped **7digital** teaming up with Japan's biggest HD music store, which launched over there in 2005. e-Onkyo (yes, of home cinema fame) will provide the tunes in FLAC format "in the coming months". 7digital already sells some 24-bit hi-res files, including Radiohead's *The King Of Limbs* and The National's 2013 album *Trouble Will Find Me* (pictured), but neither are exactly current. Having e-Onkyo on board should help to put that right.



● Over in New York, **Netflix's** chief product officer Neil Hunt has been chatting about the next stage for the all-conquering streaming service. At the Internet Week conference, Hunt said Netflix's personalised recommendation tech is advancing at such a pace that within the next 10 years it will be able to offer options to perfectly match your mood at that particular time. Creepy, eh? He also hinted (very vaguely) at a move into live sport. More importantly, though, when is Netflix going to bring back *Goodnight Sweetheart*?

OUR MONTH

What the past 30 days have brought us by way of geekery

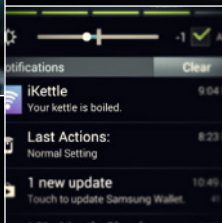


I ORDERED LILY ALLEN TO STOP SINGING...

...while driving a Ford EcoSport fitted with the Sync AppLink system for controlling Spotify and other phone apps using voice commands. It was Ford's playlist, not ours, honest.



Tom Wiggins
deputy editor / shouty driver



I COOLED MYSELF WITH HOT WATER...

...using an iKettle from Firebox. Who needs air-con when, reportedly, copious amounts of hot tea will 'cool you down'? I simply used my smartphone and waited for my 'iKettle is boiled' notification. If only it filled itself up with water, too.



Chee-Chiu Lee
app art editor / remote brewer

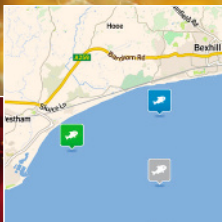


I HAD GODZILLA IN MY HEAD...

...acoustically speaking, by going to see his film at one of the two UK cinemas equipped with Dolby Atmos up-down-and-all-around sound: the Olympic in London's leafy Barnes.



Fraser Macdonald
consulting editor / lizard listener



I SOCIALISED WITH THE FISHES

I've started using the FishBrain social app to share fishing catches. There are two problems: fishermen don't like revealing their favourite spots, and I'm not catching any fish.

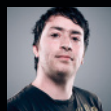


Simon Osborne-Walker
editor / fisherman's friend

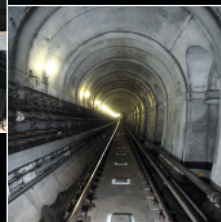


I ZOOMED IN ON SOME SPIDERS

Want to try macro on the cheap? A £5 reverse coupling ring lets you mount one lens on to the front of another, giving your camera super-macro skills. I used it to shoot the above photo of a cluster of newly hatched arachnids.



Marc McLaren
managing editor / spiderman



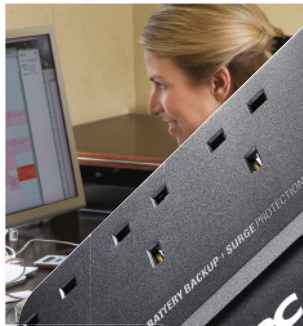
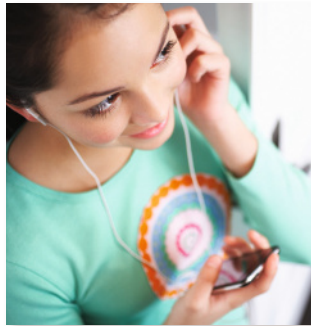
I VENTURED BENEATH THE THAMES

TfL opened up the Thames Tunnel for guided walks in May – originally intended for foot traffic, it's now an Overground route. It's a bit dank these days, but seeing up close this engineering marvel of the 19th century was fascinating.



Stephen Graves
online deputy ed / tunnel bore

With APC Back-UPS, your digital life goes on...



even when the power goes off

Preserve what's most important to you

Reliable power backup for 24/7 availability

Whether DVRing your favorite show, updating your Facebook status, or playing a live network game, you depend on your home electronics every day, all day. That's why APC by Schneider Electric™ has designed battery backup solutions that protect the constant availability and connectivity you expect... and depend on.

Peace-of-mind protection on two levels

When the power goes out, our popular Back-UPS™ units go to work. They instantly switch your home technologies to emergency power, allowing you to work through brief power outages or safely shut down your systems so you won't lose valuable files — such as digital photos and media libraries. They also feature surge outlets to guard your electronics and data from 'dirty' power and damaging power surges — even lightning. So you get two levels of protection in every APC Back-UPS unit!

Energy-saving insurance for what matters most

Our Back-UPS units protect your home office, digital living and home media applications, notebook computers, DVRs, and gaming application. And since we now offer energy-efficient models that reduce electricity costs through unique power-saving outlets, you can realize true energy savings regardless of the applications you're backing up. Throughout your home, the APC Back-UPS is the cost-saving insurance you need to stay up and running and reliably safeguarded from both unpredictable power and wasteful energy drains.



Keep your electronics up and your energy use down!

ES Series

The ever-popular ES models are priced affordably yet provide enough extended runtime to allow you to work through short and medium power outages. Some power-saving models have been designed to actively reduce energy costs.

The energy-efficient ES Series

The new ES boasts innovative power-saving outlets, which automatically shut off power to unused devices when your electronics are turned off or asleep, eliminating wasteful electricity drains.

BE 700G-UK

- 8 outlets
- 405 watts/700 VA
- Up to 80 minutes runtime
- Telephone/network protection

BE 550G-UK

- 8 outlets
- 330 watts/550 VA
- Up to 55 minutes runtime
- Telephone/network protection



Find out more by downloading our UPS Selector tool and stand a chance to **WIN a Samsung Galaxy Note™ 3!**

Visit www.apc.com/promo Key Code 48400p

APC
by Schneider Electric



YOUR MONTH JUL

Summertime, and the livin' is easy – *Stuff's* guide to days off and fun in the sun



05

TOUR DE FRANCE

The world's biggest show on two cranks splurges across the Channel this year for two stages in Yorkshire and one from Cambridgeshire to London. The opening stage will be particularly suited to our man Cavendish's sprint abilities, so that'll be the one to see.



07

MANIC STREET PREACHERS: FUTUROLOGY

Twenty rocking years have passed since the Manics released *The Holy Bible*. Objectively speaking, it is one of the greatest British albums ever. Subjectively, it's amazeballs. Can they re-find their bite this time?



14

UNDER THE SKIN (BLU-RAY)

An alien dresses up in the skin of Scarlett Johansson and takes to the byways of Scotland looking for men. So far, so dreamy. But she/it only wants their skin for more alien sleeves. This creepy sexy horror gothic is about identity. And death. LOLZ!



18

LATITUDE FESTIVAL

Arguably too huge for its Hunters, but Latitude is still the finest way to force-feed culture into your painted face. Music by Damon Albarn and The Black Keys, jokes by Dara O'Briain and Kevin Bridges, plus a whole load of poetry, dance, talks and cabaret.



21

THE LEGO MOVIE (BLU-RAY)

You can keep your Hobbitses and Godzillas; to truly test your telly's abilities, animation should be your tool. *The Lego Movie* is a fast-paced study in dynamic range and motion tracking. And it's funny.



26

BROMPTON WORLD CHAMPS

Inspired by the Tour de France, like so many people will be, you can gird your loins and take to the track. For this, though, you'll need to be on a Brompton folding bike, wearing a jacket and tie. You'll be in the oh-so-English environs of Goodwood.

Do you demand the highest standards in security?

So do we.

With the range of threats to corporate and personal information multiplying daily, it has never been more important to deploy security products that operate to the highest standards. Standards that give product buyers reassurance and which are independently recognised as best-in-class. Checkmark is the world's leading independent certification system and, with a 17 year track record, provides the highest standard of independent performance validation.

So when you are considering security products to deploy, ask yourself one question: has this product's performance been validated by the most rigorous testing system in the world?

Demand it carries the Checkmark.

WEST COAST LABS ✓

USA Headquarters & Test Facility

Newport Beach, California, USA · Telephone: +1 (949) 748 8002

Europe Headquarters & Test Facility

Cardiff, UK · Telephone +44 (0) 2920 548 400

China Headquarters & Test Facility

Beijing, China · Telephone: +86 (0) 10 5890 2501

Asia Headquarters & Test Facility

New Delhi, India · Telephone: +91 (0) 11 4602 0622

Full details of West Coast Labs product testing, certification and performance validation services can be found at www.westcoastlabs.com



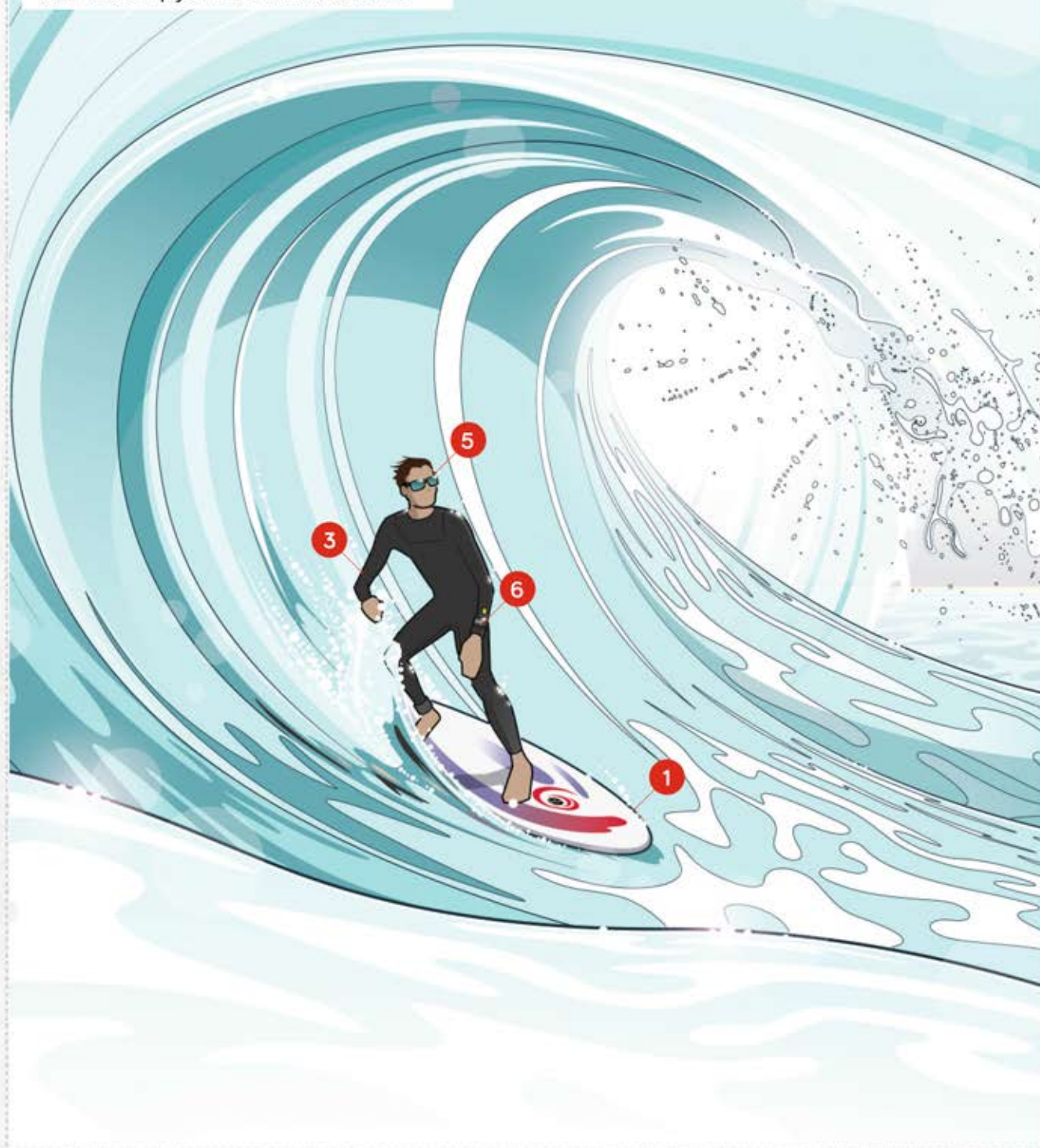
Quality is Assured



6 INSTANT UPGRADES

SURFING

With Britain's chilly waters warming up for surf season, it's 'high tide' you started gathering this 'swell' kit to help you catch its finest waves...



[Words: Alf Alderson Illustration: Jamie Smedden]

WIN



WIN A PENTAX K-3 DIGITAL SLR WITH TWO LENSES WORTH £1149

They used to say Aborigines didn't like having their photo taken because they believed the camera would steal their soul. This was probably a myth begun by explorers who didn't understand that the natives were just telling them to sod off.

But if a camera could steal your soul, the Pentax K-3 would be a spiritual lethal weapon. This digital SLR was hailed in *Stuff's* own review as "a serious camera that takes seriously good stills". It was also likened to "a well-heeled butler standing by with a jar of pomade", but heaven knows why.

Anyway, team up the K-3 with the SMC Pentax DA 18-55mm F3.5-5.6 AL WR lens, plus the DA 50-200mm F4-5.6 ED WR zoom lens, and you're ready to step out for some serious soul-raiding. Pentax's fully weather-resistant DSLRs are protected against rain and dust with 92 seals, while the lenses both have weather-resistant construction and a lens coating that repels water and dust. Good news for one lucky *Stuff* reader...

HOW TO ENTER

For your chance to win this high-quality Pentax DSLR complete with two equally enviable Pentax lenses, go to **stuff.tv/win** and answer this question:

WHAT IS POMADE ANYWAY?

- A** ... An old-fashioned ointment for the hair and scalp
- B** ... A fizzy drink made from liquidised pom-poms
- C** ... A gooey brown substance extruded by dying grasshoppers

Terms & conditions 1 Open to UK residents aged 18 or over. 2 Entries close: 11.59pm on 13 August 2014. 3 Prize is as stated. 4 Prizes are non-transferable. 5 Only one entry per person. 6 For full Haymarket terms and conditions see: www.stuff.tv/legal
Promoter: Haymarket Media Group, Teddington, Middlesex TW11 9BE

HURRY!
COMPETITION
CLOSES
13 AUGUST
2014

MAKING TV SIMPLE

LG has turned back the clock to the days when TV was simple: the Smart TV with webOS interface means its TVs do far more, more simply, than any TV so far



HOW TO LIVE IT
MAKING THE MOST OF NOW

WWW.HOWTOLIVEIT.CO.UK

▼ Setting up your new TV is a piece of cake thanks to Bean Bird...



Television should be simple: just lean back into your sofa and enjoy a stream of top-flight TV, blockbusters and games in the comfort of your own living room. The Smart TV has made things even better: the days of wrestling multiple remote controls as you manage a set-top box, games console and AV receiver are numbered.

But with that explosion of choice has come added complexity, and if you've ever become entangled in an endless series of menu options on a modern TV set you're not alone. Just changing the input can be brain-boiling.

LG is making TV simple again. It's the only TV manufacturer using the clever, smooth webOS platform to drive its modern Smart TVs, and that means more simplicity all-round.

It starts as soon as you turn the TV on for the first time: LG's usability hero, Bean Bird, makes himself useful, walking you through the setup of your new TV from setting the clock to searching for channels and finding connected devices.

That simplified experience runs through the whole TV. Changing inputs is simplicity itself, and webOS lets you flip through apps as easily as flipping channels. Because the process is simpler than ever, you're more likely to find new apps and content, whether it's short streaming video clips or the latest blockbuster TV series.

Tempted? Take the gorgeous LG LB730V for a spin. Available in sizes from 42-65in and loaded with services from BBC iPlayer to Demand 5, Sky's awesome NOW TV, Netflix and Amazon Instant, the LB730V Smart TV with webOS is the perfect place to say goodbye to frustrating TV menus and inaccessible apps forever.

SIMPLE CONNECTION

Connecting a new device, such as games console or Blu-ray player, is simple. WebOS detects new devices and prompts you to switch to them, again without interrupting what's on.

SIMPLE SWITCHING

WebOS breaks down the inputs on your TV in simple terms and allows you to switch to a new one quickly and easily.

That means no more hunting through menus for the one you want.

SIMPLE DISCOVERY

If switching apps takes forever, you'll never find anything new. Not so with webOS. You can browse apps without stopping what you're watching. A truly seamless experience.

▲ LG TELEVISION MODEL IS LB730V



LG Smart+ TV
webOS

LG
Life's Good



STAND TOGETHER
OR FACE EXTINCTION

A MICHAEL BAY FILM
TRANSFORMERS
AGE OF EXTINCTION

IN IMAX 3D, DIGITAL 3D & 2D THEATRES
IN CINEMAS JULY 10

To celebrate the release of

TRANSFORMERS
AGE OF EXTINCTION

Otone Audio has teamed up with Paramount Pictures
to give you the chance to

WIN A TRIP FOR 4 TO HOLLYWOOD!

To enter the competition buy one of OTONE's
shape-shifting speakers today and register it online*

SOUNDSHIP MICRO
Android Bluetooth MicroDock

£99.99

Available from selected retailers
and online stores



Follow us on
Facebook & Twitter

facebook.com/otoneaudio
twitter.com/otoneaudio

www.otoneaudio.co.uk

*Terms and Conditions apply

OTONE[®]
SOUND WITH VISION

THE

100

BEST GADGETS EVER

CLEVER, COOL, CLASSY, CRAZY:
STUFF PRESENTS THE GREATEST HITS
OF THE TECHNOLOGICAL AGE

[Illustration Alexander Efimov Main gadget shots Stuart Fisher]



Red is the classic but you can also get knives in white, wood, camo and a rather fetching 'sneakers' design.

1891

SWISS ARMY KNIFE

Little wonder the Swiss take an evasive attitude to war when their army's best-known weapon is a combination corkscrew and paper knife. Face it, you're going to look a bit silly turning up to a cruise missile fight brandishing a nail-file. Still, no Scout worth his woggle has ever been caught without a Swiss Army Knife to hand. Victorinox's classic double-hinge design remains essentially unaltered since its introduction 123 years ago, and while more and more tools have been added to this trusty pocket shed – the largest version has 87 tools and weighs nearly a kilo and a half – no one has ever used the hoof pick for anything other than vandalising a school desk.

1925



LEICA I

The first mass-produced 35mm camera paved the way for generations of hobby photographers to invite the neighbours round for nibbles and see slides of them amusingly holding a finger on top of the Eiffel Tower. The original Leica I (A) had a custom-fitted lens with a distinctive 'hockey stick' lock, but interchangeable lenses were introduced on the Leica I (C) in 1930.

1938



MINOX RIGA

For all Q's endless supply of gadgetry, nothing says "I'm a spy" like having a Minox Riga in the inside pocket of your tux. Using miniaturised 8x11mm film, the tiny camera was ideal for snapping top secret papers in an evil lair. And not just in fiction: at the outbreak of the Second World War, British intelligence services bought all the available stock they could get their hands on.

Some of the new knives come with USB memory sticks attached. They probably didn't have those in 1891.

1946



PIAGGIO VESPA

With the war over, the Italians were free to get back to drinking espressos and ogling women, but the country's crushed economy meant few could afford a car to get to the local piazza. Piaggio, which had been building fighter planes, went beyond the call of duty to produce this timeless two-wheeled design classic, which became a 1960s icon across Europe.

1948



LAND ROVER

"Land Rover's a luxury car maker now, but it all started with two brothers drawing this boxy shape on a Welsh beach. It became the ultimate go-anywhere car, used and abused by farmers and armies for over 60 years. Along with the Jeep, it heralded a global love affair with 4x4s and SUVs – and the 20 million buying those each year are buying a little piece of Land Rover." *Chas Hallett, Autocar*

1950



FENDER TELECASTER

From Led Zep to Tammy Wynette, the Tele has nearly as varied a CV as its later sibling, the Stratocaster. But it was the Broadcaster (the name under which the Telecaster was originally marketed) that changed the electric guitar industry forever. It was cheap to make, nearly impossible to break and made everyone who brandished one look untouchably cool.

1950



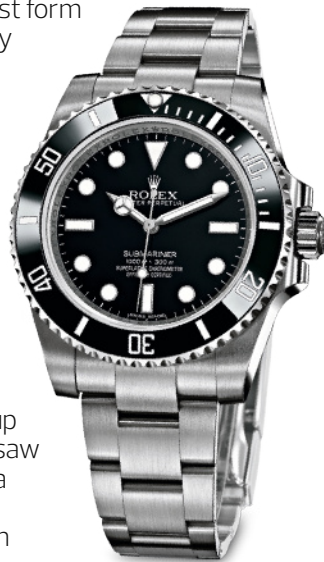
WESTERN ELECTRIC 500

Whenever you feel a nostalgic pull towards the physicality of a rotary-dial phone, remember there is a reason we have moved on – the ire born of misdialling on the penultimate number. Fortunately, the Western Electric 500 (and its legion of imitations) was sturdy enough to take a bit of kinetic stress relief, one of many reasons nearly every American household had one of these iconic blowers.

1953

ROLEX SUBMARINER

If imitation is the sincerest form of flattery, Sean Connery must live a contented existence. And so must his watch – the Rolex Submariner is the most copied watch design of all time and was the original bit of 007 wristwear. It was the first to be waterproof to 100 metres, setting the standard for diving timepieces of its day. Roger Moore's souped-up model had a handy buzzsaw hidden in the bezel, and a powerful electromagnet with which to tease open the zip on the back of an Italian agent's dress.



1957



SCALEXTRIC

Starting life as a clockwork racing system, Scalextric only gained popularity when creator Freddie Francis switched to electricity as a power source. He had spawned a 1:32-scale toy monster, and within months couldn't keep up with demand. He sold the business to Tri-ang, who switched his pricey metal cars for plastic ones. Even 60 years later, very little has changed.

1957



QUAD ESL 57

The first production electrostatic speaker did away with such vulgarities as cones and bulky enclosures in favour of a space-age design that virtually eliminated distortion and had near-perfect frequency response. The BBC quickly requisitioned them to use as reference monitors, but got rid of them before they reviewed the audio on *Jamaica Inn*. A hi-fi classic.

The F-mount introduced by Nikon for the F is still in use – albeit in modified form – on its cameras today.



eBay's hardly awash with them but you can still pick up an old F from around £200 without much fuss.

1959

NIKON F

Until the F came along, most professional photographers used pricey rangefinder cameras, but this single-lens reflex model offered so many features at such a low price that it flipped the camera world on its head. Interchangeable lenses, a pentaprism viewfinder, a full 35mm frame, swappable focus screens – all of these things had been seen before, but never all on the same model. It also happened to be nigh-on indestructible, a trait that made it hugely popular with photojournalists out in the field. Many of the most famous photos of the Vietnam War were taken on a Nikon F – and more than any other camera it helped establish Japan as the pre-eminent country for manufacturing photography gear.

1959



BMC MINI

It looked like a toy and handled like a go-kart, but Sir Alec Issigonis' fuel-efficient pocket rocket was a revolution. Every front-wheel-drive hatchback built since owes it an engineering nod and its plucky design made it a defining icon of the swinging '60s. But the Mini was by no means exclusive – its owners have run the spectrum of cool from Steve McQueen all the way to Mr Bean.

1963



SCHWINN STING-RAY

Yes, it's the ridiculous wheelie bike that inspired the Raleigh Chopper. But what many people don't realise is that the Sting-Ray heralded the birth of BMX. Rugged frames, 20in wheels, dirt-friendly tyres... Sure, banana seats and ape hanger handlebars were ousted by later, more rad fashions, but the foundations were all there for a craze that went on to dominate the world.

1964



MOOG SYNTHESIZER

Created by Robert Moog in 1964, this synthesizer was a collection of modules – each of which performs its own signal-generating function – crammed inside a wooden cabinet. Essentially the first all-electronic instrument, its ability to make sounds that couldn't be created traditionally made it instantly popular with recording artists such as The Beatles, The Rolling Stones... and The Monkees.

1965



FISHER SPACE PEN

Also known as the Zero Gravity Pen, this ballpoint pen was engineered to write (yep, you guessed it) in zero gravity – but it'll also apply ink to wet or greasy paper, in a wide range of temperatures, and even works underwater. Famously adopted by NASA (legend has it Russian cosmonauts simply used pencils instead), the secret to its zero-G success is a pressurised ink cartridge.

1966



SHURE SM58

The SM58 is the industry standard for live vocal mics. Why? Well, it's durable – a godsend if you like swinging the thing around like Roger Daltrey – but just as importantly, its cardioid response design means it only picks up what comes out of the singer's mouth, not everything else on stage. It's pretty impressive that a mic introduced in the '60s is still the world's best-seller.

1972



TECHNICS SL-1200

The SL-1200's robust, high-torque direct-drive motor was a key factor in the invention of hip-hop and it has an iconic status in electronic music culture. Without it, New York DJs like Kool Herc wouldn't have been able to perfect scratching and beat-mixing. Just think: if not for Technics' ingenuity, we'd all still be listening to disco and trainers would only be worn at the gym.

1972



POLAROID SX-70

The first instant camera that ejected prints automatically without covering your hands with chemical residue, the SX-70 was an idiot-proof bombshell – and it could be folded down small enough to fit in a coat pocket. It became an instant success (no pun intended), because who doesn't love instant gratification? And do you remember how expensive prints used to be?

1973

APHELION TV

You only have to look at the Aphelion to understand its cult status – in 1973, in a world of boxy grey or wood-panelled tellys, nobody had seen anything quite like this *Jetsons*-esque pod. It's a '70s idea of what TVs would look like in the future – but has instead become compellingly retro, because TVs never did end up looking like that.

Being honest, it's better-looking than 90% of modern screens, and we can't imagine many would complain about having this glorious astronaut's helmet as their family idiot box.



1976



BROMPTON BICYCLE

With a design that has remained practically unchanged since the late 1970s, the Brompton is able to squeeze down to about 50x50x25cm but, when unfolded, has handlebars, pedals and a saddle that sit in exactly the same position as those on a regular bicycle. An essential tool for thousands of commuters – and now the UK's most manufactured bike.

1976



JVC HR-3300

Launching in 1976, the HR-3300 VHS VCR was a life-changing product. No more would you miss your favourite episode of *Columbo* because you were out disco dancing – because this hulking beast would record every Peter Falk-filled minute of it for you. Amazingly, it didn't use any custom-made parts: all its innards can be purchased in any electronics store – even today.

1977



ATARI 2600

With its wood-effect case, simple one-button joysticks and blocky graphics the 2600 looks like a bit of a relic today – but then again, it's easy to underestimate what a revelation it was being able to play *Battlezone* and *Pac-Man* at home with your friends. This was the console that really brought the arcade machine experience into the front room – the grandfather of the PS4, if you will.

1979

SONY WALKMAN

Before the Walkman, listening to your own music involved a plugged-in hi-fi or a giant boombox on your shoulder. The idea of a 'personal stereo' was a mere fantasy until the magicians at Sony managed to shrink a cassette player to a size that would run on batteries and clip to your belt, though to begin with it was still pretty big. They continued to be produced until 2003, overlapping with the first iPod by two years.



1980



ROLAND TR-808

A gadget that was out of the limelight but still touched the lives of nearly every music lover through the tracks it produced and styles it influenced. The TR-808 was an '80s analogue synth drum machine that provided the signature sounds for everything from Marvin Gaye's *Sexual Healing* to tracks by Public Enemy. The band 808 State even named themselves after it.

1980



AUDI QUATTRO

"Nissan, Porsche and even Ferrari are proving that you can often go much faster with power in all four wheels. And, obviously, rally cars have been 4WD for years. The daddy of them all is the Audi Quattro, which proved devastatingly effective as both a road and rally car, not to mention one of the coolest cars of the '80s. Audi keeps threatening to bring it back. Let's hope so." *Chas Hallett, Autocar*

1981



IBM PERSONAL COMPUTER

The start of the movement of computers into the home was heralded by IBM's entry into the burgeoning market. By flinging open the doors to its technical specifications and software, IBM encouraged the development of third-party software and peripherals, helping to create the 'IBM PC-compatible' standard and helping young companies such as Microsoft get a foothold at the same time.

1982



SONY CDP-101

Introducing Sony and Philips' own 'compact disc' format to the world, the CDP-101 was the very first commercially available CD player. It brought digital music to the masses and was the death knell for the magnetic cassette tape thanks to CDs' higher quality, longevity (when treated well and put back in the case) and ability to skip almost instantly between tracks.



▲
This is an original
with 16KB of RAM
and the famous
rubber keyboard.
It would have set
you back £125.

1982

SINCLAIR SPECTRUM

The Spectrum is one of Britain's great computer triumphs, cooked up by the brilliant but bonkers Sir Clive Sinclair, who went on to invent the even more bonkers Sinclair C5 electric trike. The Spectrum was tiny (everything was contained inside the keyboard) and it was cheap thanks in part to the fact that you could plug it into the TV you already owned. It also allowed users to write their own programs, encouraging a flood of bedroom programmers to begin tinkering and eventually create some mighty fine games such as *Jet Set Willy* and *Manic Miner*. The unmistakable sound it made when loading a game off a cassette tape is imprinted in the minds of a generation.

1983



SEIKO TV WATCH

With a tiny 1.25in LCD screen that you could watch TV on, this watch was nothing short of miraculous considering electronic digital watches had only been around for a decade. Still, when you did want to watch telly, you had to connect it up to a receiver box that would fit in your shirt pocket. It even appeared on James Bond's wrist in *Octopussy*, though with a fake colour screen.

1983



NINTENDO NES

The console that launched Nintendo's unique brand of gaming and introduced the portly plumber Mario and his pals, the 8-bit NES took three years to make it from Japan to the UK. Bringing Nintendo out of the arcades and into the home revitalised the market that many thought had run out of steam after the Atari 2600. It even let us shoot ducks from our sofa with its light gun accessory.

1983



TOMYTRONIC 3D

Its binocular stylings, complete with neck strap, belie the fact that the Tomytronic 3D was the first ever 3D home gaming system and the envy of all '80s playgrounds. OK, so its gameplay and graphics were a bit repetitive, but chasing high scores in games such as *Shark Attack* and *Thundering Turbo* ensured a full immersion experience packed with flashing, beeping fun, even despite your aching arms.

1984



TAMIYA HORNET

The Hornet was neither Tamiya's first nor its fastest radio-controlled car, but its lightweight polycarbonate body meant it could take a Grasshopper at the playground lights. Although it was a sturdy piece of kit, few Hornet owners spent as much time racing as they did fiddling with wonky steering servos or mixing epoxy to glue the spoiler back on after yet another full-speed wall smash.

This is actually the Classic II from 1991. It's more powerful than the original Mac but looks almost identical.



1984

APPLE MAC

Try to imagine using your computer without a mouse. Go on. Given up already? That's because it's practically impossible — and the mouse's existence is all down to the Apple Mac. What it lacked in expandability (a Mac theme that still pops up frequently) it made up for in performance (ditto) and price (er, never mind); but there were other neat touches that would prove influential. The all-in-one design lives on today in the iMac while the top handle for easy transporting demonstrated the kind of fresh thinking Apple would become famous for. Microsoft's Windows-powered machines might have gone on to rule the world, but they'd be nothing without the Apple Mac.



1984



CASIO DATABANK CD-40

While you couldn't exactly call it a smartwatch by today's standards, the Databank was a trailblazer in wrist tech. Casio had already made watches with calculators in them, but this was the first watch to include a 'databank' that would hold up to 10 phone numbers right there on your wrist. Finally, people could stop carrying their personal organisers. Wearable digital storage in 1984? Nice.

1987



ACORN ARCHIMEDES

The Archimedes was the first home computer to use an ARM chip. That makes it an ancestor of your iPad, your Kindle, your Pebble and, well, pretty much every smartphone and tablet around today. More powerful than the Amiga and the Atari that came just before it, the Archimedes reigned in classrooms for the next five years, partly thanks to 'computers for schools' supermarket vouchers.

1987



COMMODORE AMIGA 500

While Commodore 64 owners sat waiting for their tapes to load, the Amiga 500 galloped ahead with its newfangled 3.5in floppy discs. The Atari ST's MIDI support meant it was popular with musicians such as Jean Michel Jarre, but gamers took to the stunning 16-bit 'HAM' graphics of the Amiga 500, which gave us classics such as *Sensible World Of Soccer*, *Lemmings* and *Prince Of Persia*.

1989



NINTENDO GAME BOY

The Wii wasn't the first Nintendo console to succeed against the odds. Despite the Game Gear having a colour screen and the 16-bit Atari Lynx also being more powerful, the Game Boy's dual-pronged attack of *Tetris* and *Mario*, plus a longer battery life than its technically superior rivals thanks to the greenscale screen, meant Nintendo won the first handheld console battle.

1990



SUPER NES

Following swiftly on the heels of the Game Boy was the SNES. School playgrounds buzzed with debate over which was better: the SNES or the Mega Drive. SNES, obviously, with its 'Mode 7' 3D graphics (remember the polygons of intergalactic nature-reserve-at-war *Starwing?*), the greatest multiplayer ever (*Mario Kart*) and the first console version of *Street Fighter II*.

1992



IBM THINKPAD

The Thinkpad might be about as exciting to look at as sloth royal rumble but, as laptops go, it's one of the most influential ever made. It introduced us to the TrackPoint – a pressure-sensitive nubbin for moving the mouse pointer – and a system that shuts down the hard drive when the laptop detects it's been dropped. And did we mention it's the only laptop certified for use by astronauts on the ISS?

1992

SONY MZ-1

A cross between a floppy disc and a shrunken plastic CD, MiniDisc might've turned out to be just a stepping stone between CDs and MP3s, but it's one mixtape fans will always remember fondly for its cassette-thrashing sound quality and recordable versatility. The MZ-1 was its inaugural vessel – a real slab compared to what came in the years after, when the players slimmed down to barely bigger than the disc itself and also allowed you to record directly from a computer. Of course, as soon as the MP3 player emerged MiniDisc's days were numbered, but it lived on in radio – and our hearts – for some time.



1992



LOTUS TYPE 108

After mustard and Alan Partridge, Norfolk's finest export is probably the Lotus Type 108, as ridden by Chris Boardman at the 1992 Barcelona Olympics. Designer Mike Burrows used carbon fibre mouldings to create a monocoque frame that broke the world record and more importantly won Great Britain's first cycling medal in 72 years. And just look where we are now.

1993



DYSON DC01

Or the DA001, as vacuum hipsters call it; this was James Dyson's first dual-cyclone vacuum cleaner sold under his name. Subsequent models have seen the addition of digital motors, a ball, and most recently the Cinetic technology that removes the need for a suction-sapping filter. Despite its success, the verb 'to Dyson' still hasn't replaced 'to Hoover'. Poor Jimbo.

1994



NETSCAPE NAVIGATOR

Or THE INTERNET, as it represents here. It's quite a big deal, actually. Do you remember the fuzzy cacophony that spewed forth as a 56K modem connected to the world wide web, clogging the phone line for hours at a time and connecting you to a glacial feed of very little information? Bet you never thought that just 20 years later we'd be streaming 4K video now, did you?

1994



SONY PLAYSTATION

When Sony entered the console market it was still a two-way battle between arch rivals Sega and Nintendo. Many thought there was no room for a third way. But they didn't count on the quality of games such as *Tekken*, *Gran Turismo* or *Metal Gear Solid*. Developed over eight years, originally in partnership with Nintendo, the PlayStation emerged victorious, leaving Sega all but out for the count.

1996



BANG & OLUFSEN BEOSOUND 9000

Denmark's stylish hi-fi house Bang & Olufsen has a reputation for turning high-end hi-fi into something that wouldn't look out of place in an art gallery. The Beosound 9000 is a classic example, although it perhaps took the whole minimalism thing too far, with space for just six CDs. That's probably still enough for at least one album by each successful Danish band, mind.

1996



PALM PILOT

Kind of like a fossilised smartphone, the Palm Pilot was the first of a new breed: the PDA. Tech archaeologists can trace the modern smartphone way back to this digital organiser with its 128kb of internal memory, enough to store the names and addresses of all your yuppie mates. Plus it came with *Solitaire* which, if we have to explain it, is a bit like black and white *Candy Crush*, kids.

Not just a pretty face, the StarTAC was also one of the first phones to let you switch the ringer to vibrate.

MOTOROLA STARTAC

There are those who consider a phone to be nothing more than a tool to talk to people with. To those the Motorola Star TAC meant nothing. To anyone with even the faintest love of technology within them, it marked the point when the mobile phone became more than that. Its new clamshell design – one that was copied many times afterwards, most notably by the fashion-conscious RAZR – meant it folded neatly in half, instantly setting it apart from the bricks everybody else had. Like it or not, the age of the mobile phone as a fashion accessory was here, and the Star TAC was one of the first mobile phones to sell like the proverbial warm afternoon snack.

1996



1997



NETFLIX

It's older than you may think: although nobody was streaming *Breaking Bad* on Netflix in 1997, that was the year it set up a pay-per-rental DVD service. A decade later it started streaming via the internet and in 2013 its very own *House Of Cards* won the first ever Emmy Award for an internet-only TV show. Plus, this year it became the first place you could watch 4K content. Quite the rise, huh?

1998



APPLE iMAC

The all-in-one design wasn't new but the lounge-friendly choice of colours certainly was, turning the home computer from something you'd hide in the study into a dinner party talking point. Not everything about the iMac (technically the G3) was a success, though, with the 'hockey puck' mouse a particular target for scorn. Still, it remains one of Apple's most iconic designs.

1999

PRO-JECT DEBUT

In the year that Napster changed music forever, Pro-Ject released a turntable – essentially a development of the phonograph invented by Thomas Edison in 1877. Obviously Pro-Ject didn't get the memo. But its great that affordable turntables like the Debut and its two sequels that have kept vinyl alive, resulting in the mini-renaissance seen over the past few years (thanks to many records coming with free MP3 downloads as well). More money will get you more frills and better performance, but for a portal into the warm-sounding world of vinyl the Pro-Ject Debut is impossible to beat.



1999



SONY AIBO

With AIBO, Sony demonstrated that the ideal pet of the future might well be an intelligent hunk of metal and plastic – after all, there's no need to housetrain a robot. While cute, AIBO was in fact a deceptively advanced robot packed with sensors allowing him to 'see' and to recognise speech commands – but tragically for techno-pet lovers, a cost-cutting Sony put him permanently out to pasture in 2006.

1999

NOKIA 3210



It's a tough call between the 3210 and its slightly smaller offspring the 3310, but the chances are you owned one of them. For most people the memory of a 3210 doesn't go much further than *Snake*, but there was more to the phone than that. It was one of the first to squeeze the aerial inside, making it instantly more pocketable. Plus it came with T9 predictive text, use of which became a vital skill for much of the next 10 years. Aside from calls and texts it didn't do all that much, but what it did do, it did better than pretty much anything else.



1999



NAPSTER

While the MP3-friendly media player Winamp appeared two years earlier, digital music didn't take off until peer-to-peer download service Napster showed what was possible with an internet connection and some (OK, a lot of) patience. Yes, it was illegal, but without this pair the digital music revolution would never have happened and without that we wouldn't have iTunes, Spotify et al. Every cloud, eh?

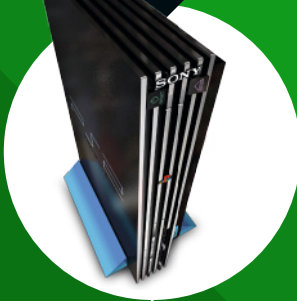
2000



CREATIVE DAP JUKEBOX

Inexplicably shaped like an overweight portable CD player despite the 6GB hard drive nestled inside, the DAP arrived a full year before Apple's Ive-designed iPod – although, given that you're not reading this on a Creative tablet while listening to music on your Creative smartphone, it doesn't take a genius to work out which one took off. Still, props for getting there first, Creative.

2000



SONY PLAYSTATION 2

Officially the best-selling console of all time, over the course of its 12-year lifespan the PlayStation 2 saw more classic games than Wembley, including *Grand Theft Auto III*, *God Of War*, *Ico* and the birth of the *Guitar Hero* series. It also put a DVD player in every home that bought one – a cunning stunt later copied by the PS3 to help Sony's own Blu-ray disc format gain traction.

This original had a 5GB hard drive inside. 2007's Classic (which is still available today) comes with 160GB.



2001

APPLE IPOD

Apple has a reputation for making existing technology work where others have failed. Apple didn't invent the MP3 player, but the iPod made it massive. That didn't happen immediately, though: it was Mac-only to begin with and used Firewire rather than USB. However, the click wheel is a design landmark and the signature white headphones, while hardly the best in the world, became iconic. The iPhone effectively killed it in its 'Classic' form, with touchscreen tech giving birth to the iPod Touch. Eventually the iPod was so successful it had all but eradicated the competition, despite a U2 special edition. And that's the sign of something truly unbeatable.

2001



SKY+

Remember adverts? They were the annoying things between TV programmes that we had to watch before Sky+ came along and enabled us to fast-forward through them. The original had just 40GB storage but these days there's up to 2TB on offer to cope with HD content, plus mobile apps for remote recording and built-in Wi-Fi. Series Link, one of its original features, is now standard in all PVRs.

2002



BLACKBERRY 5820

With the state BlackBerry's in now it's hard to believe there was ever a time when full QWERTY workhorses such as the 5820 often had to be surgically removed from the hands of helpless email addicts. A few devotees remain, but with all smartphones now offering instant email access and better on-screen keyboards the BlackBerry has become almost as antiquated as the Filofax or Rolodex.

2003



PENTAX OPTIO S

In the early noughties, the world was teetering upon a precipice. The heights were built upon the glory days of film photography and a billion disposable cameras, while below was a new digital land of pixel-papping snappers. A hero emerged, its visage hewn from aluminium, and persuaded us to jump into its world of convenience and decent digital image quality. And we've never looked back.

2004



FACEBOOK

Fundamentally changing the way we remember birthdays and discover our old classmates are not-so-closet racists, Facebook has done more for social interaction than even the 'Blah Blah Blah I Can't Hear You' earmuffs. If it were a country it would now be the second-largest in the world by population, while its purchase of Oculus Rift means our online friendships could soon become even more virtual.

2004



NINTENDO DS

With a folding form factor reminiscent of Ninty's own Game & Watch devices from the 1980s, the DS made touchscreen gaming massive, long before the iPhone came along and all but killed handheld consoles. Its simple, pick-up-'n'-play games hooked kids (*Pokemon*) and adults (*Brain Training*) alike. Its newer, less two-dimensional sibling, the 3DS, is an underappreciated gem.

2004



PHILIPS AMBILIGHT

As TV tech goes it might not be up there with colour or hi-def, but everyone who watches an Ambilight TV immediately wishes they had one in their lounge, throwing coloured hues onto the surrounding walls in response to what's happening on screen. These days it's even compatible with Philips' Hue lightbulbs, so you can get the whole house in on the colour-changing action.

2004



TOMTOM GO 300

In the time Before TomTom (BTT), swathes of people meandered blindly around the land, crashing into each other or hurtling off cliffs in the course of their quest to find the nearest Greggs. Then, the GO 300 arrived, with its integrated touchscreen and changeable bezels. All of a sudden sat-nav could be plonked on the dashboard and used by the masses, not just the military. Steak Bakes for all!

2005



GOOGLE MAPS

The beginning of the end for London's A-Z, Google Maps (and particularly its mobile versions) means millions of people now travel around with absolutely no idea where they're actually going. Instead they rely upon the phone in their pocket to tell them where they are, which way to turn, and what the fastest route is. Traffic info, public transport details and Street View have turned it into an absolute essential.

2005



SONOS

Until Sonos came along, multi-room music was the exclusive domain of megastars such as Craig David and Francis Rossi from Status Quo, but these understated grey and white boxes made it easy. Since then it's gone from strength to strength, adding various standalone speakers, support for music streaming services and even a soundbar – but it's the falling-off-a-log simplicity that makes it a winner.

2005



SONY ERICSSON K800i

Back in the days when phones were categorised by their main feature, the 3.2MP K800i was the first cameraphone you could consider taking out instead of your actual snapper. The pictures couldn't quite compete on quality, but the xenon flash meant it was a worthy companion for a night out – and your incriminating photographic evidence was always much better than everybody else's.

2005

XBOX 360 + KINECT

Firing first in a console battle isn't always crucial, but it certainly helped the Xbox 360's case in its fight against the PS3. What it lacked in Blu-ray powers it made up for with a superior online system, a far better control pad and in 2010 the addition of Kinect, a camera capable of tracking your whole body and translating your gestures into in-game movements or menu navigation. In practice it was often hit and miss, but what Kinect has done for gaming can't be ignored. It now forms an integral part of the Xbox One package, with Sony also offering a motion-sensing cam as an accessory for the PS4.



The Zeppelin's protruding iPod plinth lets you wrap your hand around it, making it easier to browse the menus.

2006

B&W ZEPPELIN

Bowers & Wilkins makes the speakers used at Abbey Road Studios, the spiritual home of The Beatles. That should give you an idea of how highly regarded the company is. So when it produced a speaker dock for the iPod and embraced the (then) anti-audiophile world of digital music, it was a pretty big deal. The Zeppelin shared Apple's taste for premium design, but more importantly it sounded brilliant. Since then other hi-fi heavyweights have weighed in, including Marantz, NAD and B&O, dragging the stuffy old kingdom of turntables and interconnects into the brave new world of lossless file formats and, eventually, wireless streaming. This is one Zeppelin that didn't go down in flames.

2005



YOUTUBE

What started with a clip of a man at the zoo and a desire to let people share their videos has become a cultural phenomenon, with over six billion hours watched every month. Ever expanding, YouTube now allows you to rent movies and TV shows, live stream a man falling from space in Full HD, discover new music and share videos of your pet squirrel piloting a Parrot AR. Drone around the kitchen.

2005



YAMAHA YSP-1

"In 2005 no one knew they needed a soundbar or really believed there was an alternative to bulky 5.1 surround systems. It took five years or more for the genius of the YSP-1 to resonate with the world at large. So far ahead of the curve it was barely a gentle incline, the YSP-1 set standards that rival manufacturers still struggle to replicate." *Simon Lucas, What Hi-Fi?*

2006

TWITTER

On the face of it, Twitter is merely a playground for egotists and bores. But enough about the *Stuff* editorial team's personal accounts – what Twitter has done for the way we consume information and interact with both brands and people is huge. Have you tried flicking through a daily newspaper recently? Why bother? Almost every single story you'd want to read, you've already seen on Twitter, neatly summed up in 140 characters (along with more than your fair share of cute cat photos and dinnertography). It's also empowered whole societies, exposed wrongdoing and created the 'second screen' for TV commentary. Before too long there'll be an account set up purely to tweet old photos of newspapers and clips from the six o'clock news. How sweet.



2006



FLIP VIDEO

A gadget that just records video might seem quaint in today's world of 4K-capturing mobiles but that's exactly what makes the Flip so important. Its popularity showed that people wanted to shoot quick and easy video for that newfangled YouTube without worrying about focus, white balance or any of that Spielberg nonsense. Until phones caught up, a Flip had the answer.

2006



NINTENDO WII

The Nintendo Wii's heyday might've been short-lived in console terms, but its effect on gaming is still evident in the motion-tracking PS Eye and Xbox Kinect. It got lazy gamers up from the sofa and using muscles they didn't know they had, and even made gamers out of people who'd never inverted a Y-axis or pwned a n00b in their lives. For that, Nintendo, we salute you.

2007

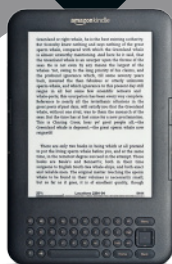
APPLE iPhone

With the benefit of hindsight, the iPhone is in its rightful position on the tech timeline. It sits alongside the Walkman or colour television as something that completely changed the way we see technology. It put the internet in our hands (albeit quite slowly until the 3G version arrived), made touchscreens useable with capacitive tech and multi-touch input, created a whole app industry, and spawned a new category of smartphones designed to be used by everyone rather than just those with a good grasp of JavaScript. Yep, even your mum's got an iPhone these days. It's got to the point where the call functionality is secondary to all of the other stuff it does, meaning you can take our phone, but you'll never take our iPhone.



For all that was good about it, the iPhone didn't get copy and paste until version 3 of the OS in 2009. Sloppy.

2007



AMAZON KINDLE

The 'iPod of books' hasn't had quite the same effect on publishing as Apple's thin white jukebox did on the music industry, but its low price, ease of use and whopping library of titles has made the Kindle a hit far beyond your average gadget fan and into the hands of commuters. Like the Walkman, the Kindle's been so successful it's become the default term for an ebook reader.

2007



NOKIA N95

While the arrival of the first iPhone eclipsed the N95 in many ways, the dual-sliding Nokia was a superior smartphone – it just required a bit more tinkering to get the best out of it. Still, it came with an army of features: 3G, video recording, a camera flash, Bluetooth and support for third-party apps out of the box, which is more than could be said for the iPhone.

2008



BBC iPLAYER

For a company with a reputation for being stuffy and uptight, the BBC's iPlayer was way ahead of its time. Seven-day catch-up for TV and radio meant you no longer had to bother watching telly when the channels wanted you to, plus iOS and Android apps meant you didn't even have to be at home to watch it. The entire broadcasting world followed suit. iPlayer is worth the licence fee alone.

2008



CANON EOS 5D MK II

Not just an incredible digital SLR, Canon's 21MP 5D Mk II was also the first to shoot 1080p video. Combined with the full-frame sensor, good low-light performance and relatively low price, it became popular among amateur (and not so amateur) film-makers for the cinematic look its footage produced. In 2010 an entire episode of US medical drama *House* was shot on one.

2008



MONSTER BEATS BY DRE

It's hard to imagine a time when Dr Dre's Beats headphones weren't just decorations to hang off the head of every professional footballer on the planet, but the original Monster-made cans were genuinely brilliant. The latest ones don't sound so good, but what they've done to the headphone industry is impossible to ignore – just ask Apple's bank manager.

2008



TESLA ROADSTER

"Tesla's on a roll now with the S, an electric-powered luxury saloon. But it all started with the Roadster, the world's first battery-powered sports car. Despite the fact that it was actually run by thousands of laptop batteries it was fast and fun. A lot of the credit for that can go to Lotus – the Roadster was also built by them in Norfolk. It didn't sell well, but it will go down in history." *Chas Hallett, Autocar*

2008



PIONEER KURO

"None more black" was the unanimous verdict on Pioneer's first Kuro plasma TV. Producing the deepest, darkest blacks ever seen on a flatscreen, it presented films with a vibrance and depth no rival telly could come close to. Even now, years after a broke Pioneer left the TV business, many claim Kuro's picture quality has never been bested by a subsequent screen.

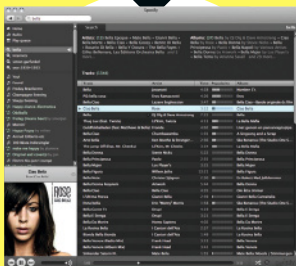
2008



APPLE MACBOOK AIR

Famously removed from a manila envelope on stage by Steve Jobs, the MacBook Air redefined what you could do with a laptop. It also redefined what you couldn't do, removing the disc drive, ethernet socket and all except one USB port. These days the speed of its all-flash storage and an all-day battery make it the best laptop on the planet — and it still fits inside that envelope.

2008



SPOTIFY

Pretty much all the music most people want, available on pretty much anything with an internet connection? Yeah, that sounds OK. And you only have to pay if you want to get rid of the adverts? Even better. We'll take 40 million, thanks, with a quarter of those subscribing to Premium. And did we mention it fights pirates better than a bag of termites let loose on their wooden legs?

2009



OLYMPUS PEN E-P1

In 2009, Olympus returned to its past in order to create its camera of the future, the first with the Micro Four Thirds system standard: a mirrorless, interchangeable-lens camera that was much smaller than a DSLR while offering the same flexibility and performance. The PEN's real charm came from its retro design, which harked back to Olympus' Pen cameras of the '60s and '70s.

2009

HTC HERO

The Hero was only the third Android phone to go on sale — and the first that showed the world that Google's OS was capable of competing with Apple. HTC did that by making some drastic changes to the stock Android platform. The result was 'Sense', a UI that added multi-touch support, excellent widgets (including one for Twitter) and no fewer than seven homescreens.

But it wasn't just a winner on software. The Hero's 5MP camera was a match for the iPhone's, and it also featured a proper 3.5mm headphone socket — a rarity in 2009. And as for that trackball... Well, even brainbox designers get daft ideas sometimes.



Most Heroes have had distinguishing features but the HTC's Coulthard-esque chin is one to remember.

2010



GOPRO HD HERO

Tiny, lightweight and nigh-on unbreakable, the GoPro became the Hoover/Kleenex/Sellotape of action cameras. Not only would it bolt onto almost anything (your car, your bike, your head, your dog), it'd provide glorious hi-def footage – the best way to preserve your extreme exploits for posterity. Even Hollywood legend Peter Jackson was smitten, using GoPros in the filming of *The Hobbit*.

2010



INSTAGRAM

Instagram could have ended up being just another Hipstamatic-style vintage photo app – but it understood the power of social sharing better than anyone else, and within months of launch it had surpassed all rivals to become the de facto way to show your pals (and 150 million or so other users) how amazing your life was – or at least how delicious your dinner looked.

2010



PARROT AR.DRONE

Proving you didn't need a billion-dollar defence budget to deploy a drone, this cut-price quadcopter, controlled via an iPhone app, is almost impossible to crash thanks to a bevy of sensors that kept it stable, upright and airborne. A pair of cameras let you view the world through its eyes, as well as playing the various augmented reality games that give it its name.

2010



APPLE IPAD

Tablets were the sad white elephant of the gadget world – they'd been around for ages, but nobody could think of a reason to buy one. That changed the day Steve Jobs unveiled this sleek slab of glass and aluminium: not a PC, not a smartphone, the iPad found – or perhaps created – a sweet spot somewhere in between the two. And suddenly, everybody had a reason to buy a tablet.

2011

LYTRO

Once, cameras could only capture a single snapshot of a moment – whatever image the camera took, you were stuck with its focus point, exposure and perspective forever. With its light field sensor, Lytro's rectangular camera ripped up the rulebook. Thousands of microlenses on its sensor captured a complete four-dimensional 'light field' of a scene (the direction and intensity of each ray of light) and this information allowed the user to take a 'living photo' that could be refocused or have its perspective shifted days, months or even years after it was taken. Nothing short of sorcery.



2012



SAMSUNG GALAXY NOTE 2

With its massive 5.5in screen the Note 2 went bigger than its already huge 5.3in predecessor, forcing us to rethink phone sizes and boldly declaring that phablets were here to stay. With much the same spec as the Galaxy S3, and a lovely full HD Super AMOLED screen for movie watching, it seduced many, though it took a while to get over the embarrassment of holding it to our ear.

2012



NEST THERMOSTAT

There was a time when we would have said making a thermostat a desirable object was impossible. Then Tony Fadell, former senior VP of Apple's iPod division, proved us wrong with the Nest and its designer looks. It has made itself indispensable thanks to its habit-learning skills and anywhere app-control, which help to lower energy use and earn it a place in the hi-tech eco-chic elite.

2012

OCULUS RIFT

Bringing another dimension to gaming, and making good on a tech promise first made by the likes of Virtuality arcade machines in the '90s, the Oculus Rift is one of Kickstarter's biggest successes, pulling in over US\$2 million in extra funding. Though still not on full consumer release, it has gained momentum thanks to its compatibility across console and PC platforms and the enthusiastic reception by developers. At a time when 3D TV uptake has been poor, sticking your head into the Rift's lag-free immersive 3D gameworld has got everyone excited.



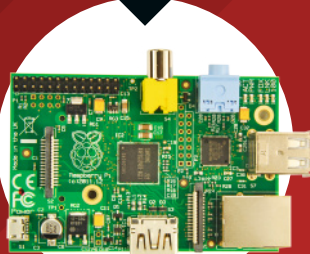
2012



GOOGLE NEXUS 7

Google's first foray into tablets with this Asus-built 7-incher was the first to really rival the iPad, changing the tabletscape from a land full of Apple imitators to an exciting place of real competition. Launched months ahead of the similarly sized iPad Mini, the Nexus showcased Google's slick new Jelly Bean OS – and it was astoundingly good value. Hurrah!

2012



RASPBERRY PI

It may look like an old PC soundcard, but this tiny, cheap computer opens up programming and physical computing projects to the masses. From simple media streamers to Brew Pi – which controls a fridge to keep your latest batch of ale brewing at the perfect temperature – it's a versatile little board indeed. And the fact that it's UK-designed and built is something to shout about.

2012



SAMSUNG GALAXY S3

When the S3 arrived it did something no other phone had managed: it knocked the latest iPhone (the 4S) off the top spot in our *Stuff* smartphones Top 10. With bags of power enabling it to play videos even while gaming, and a dazzling Super AMOLED screen, it was unprecedentedly slick for an Android phone and marked the start of a fierce battle for supremacy.

2013



UP! PLUS 3D PRINTER

It certainly wasn't the most polished of products, but what the Up! lacked in aesthetics was more than compensated for by the fact that it was the first 3D printer we tested that delivered consistently good results. While scattered all around us were failed prints and heartache, the Up! gave us a taste of the home fabrication future we always dreamed of.

2013



NOKIA LUMIA 1020

Nokia's brightly coloured Windows phones are deserving of a position on this list for the achievement of cramming a 41MP camera into a smartphone alone. The 1020 not only blew our minds with its camera-smashing pixel count, but also showed what a cameraphone could really be capable of. The battery grip add-on was a bit much, though.

2013



PEBBLE WATCH

Finally, a smartwatch that made smartwatches cool, and saw the hunger for wearable tech really take off. A runaway Kickstarter success, it uses E-Ink tech to give it week-long battery life and a host of useful apps to make it more than just a novelty. Plus, while it's become natural to look at the time on your phone these days, this gave us a reason to wear a watch again.

Flex is fitted with a vibrating alarm rather than one that makes a racket – to wake you (and only you) up.

2013

FITBIT FLEX

Because we lack the willpower to get fit on our own and can't face forking out for a personal trainer to shout at us in the park, the Fitbit Flex was the answer to our prayers. One of the leaders of the fitness tracking revolution, the Flex packs leading step-tracking tech and adds an app that turns tracking daily activity levels, getting fit and even keeping a watchful eye on your sleeping habits into a big game with achievements, pretty graphs and everything. So while it may be easier to ignore than an intimidatingly ripped personal trainer in your ear, it's turned us from couch potatoes into borderline fitness freaks. While the likes of Nike's Fuelband beat it to the shelves, the Flex was far cheaper and features handy extras such as its vibrate alarm.

The Flex lights up to indicate your progress towards that day's goal, so no doughnuts until you've hit it, OK?

THE BEST GADGETS EVER... IN 2024



SONY PLAYSTATION 4

Right now it's too early to include the PS4 in our 100 best gadgets ever – but with games consoles traditionally getting better as they get older, it's fair to say the PS4's potential is there to be realised. With 4K a likely addition and Sony's Project Morpheus on the horizon (due in 2015), the PS4 will be leading the home virtual reality revolution.

Tom Wiggins



SELF-DRIVING CARS

Images of cutesy Google cars bimbbling around sunny Silicon Valley and Volvos not hitting trucks on frozen fjords are rendered meaningless by 10 seconds spent watching Trafalgar Square roundabout. True self-driving might be a way away yet, but cars are going to become a part of our personal cloud – talking to us and each other, and knowing what we want from them.

Will Findlater



4K TV

3D was a flop, so why should you buy into the next big TV technology? Unlike 3D, 4K doesn't give you eye strain; it just pumps out a formidable 3840x2160 pixels, letting you sit right next to the screen without any loss in picture quality. In 10 years' time we'll all be streaming *Game Of Thrones* in 4K; and George RR Martin might even have finished writing it.

Stephen Graves



MOTO 360

What wearables need is an OS; a lovely picnic blanket on which tasty treats from major and minor manufacturers can be laid for the enjoyment of all. And early evidence of Google's Android Wear kit from LG and Motorola look damned appetising. Yes, Apple is likely to be in the park too, but it'll be with a Bento box: pretty and efficient, but a bit restrictive.

Fraser Macdonald

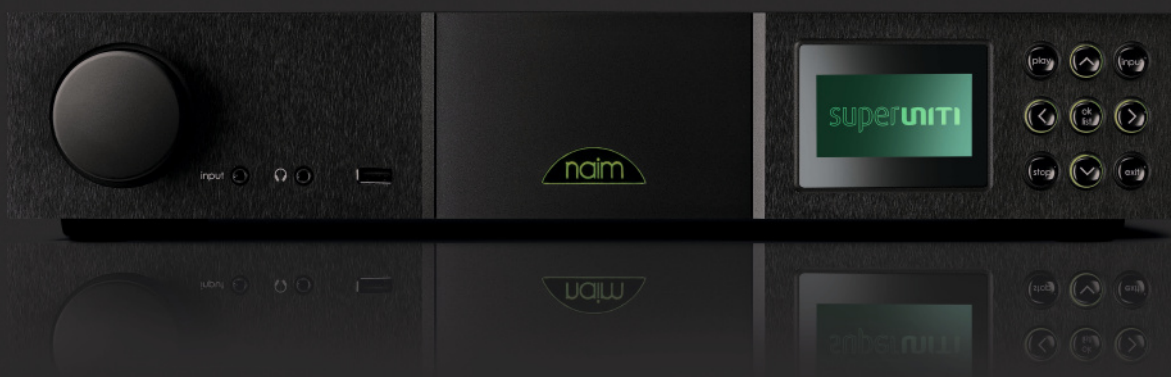


ALIENWARE X31

This was (or will be, if you're on linear time) the first gaming PC to take over people's TVs. After the big next-gen games consoles fail to show the disposable fun of mobile gaming or the high resolutions of high-end PCs, they will be replaced by the new breed of Steam Machines: affordable, upgradeable PCs offering a much more open, interesting way to play on your telly.

Will Dunn

We spend years developing our products. Carefully choosing materials. Mapping every detail. From the custom low-noise power supplies to the torque on individual screws. Then we take the design to our listening room to test every decibel for that trademark Naim clarity and pace. We never said the job didn't have its perks.



SuperUniti.

Reference digital
music streamer
and integrated
amplifier.

Next generation audio systems,
hand built by Naim.



Discover more at naimaudio.com

Pixel propulsion

The G2 was the phone to beat in 2013. Can history repeat itself with the G3?

£tba / lg.com

The LG G2 took us by surprise: not even future-gazing *Stuff* staffers predicted its 2013 reign over our Smartphones Top 10 and its Gadget of the Year win. So this time we made absolutely sure we were ready for its successor, the G3. We've been double-tapping the sleeping screens of copycat smartphones; hiding microUSB cables so we'd really test the big battery to its limits; and tracking down huge 3MB images to prepare for the first 2K phone screen we've clapped our eyes on.

There's been plenty of prep time, as LG has been beaten to the shelves by Sony, Samsung and HTC. But if you've held out this long for the G3, you won't be disappointed.



1 Metal-ish design

The G3 looks like metal, feels like metal and... isn't metal. A few taps confirm it's plastic. But we don't care. It's sleek and stylish where the G2 was a glossy ugly duckling. It's lighter than the HTC One M8, and easy to hold despite the 5.5in screen, thanks to LG's allergy to bezels. Plus its back buttons have a lovely new textured finish.

2 2K display

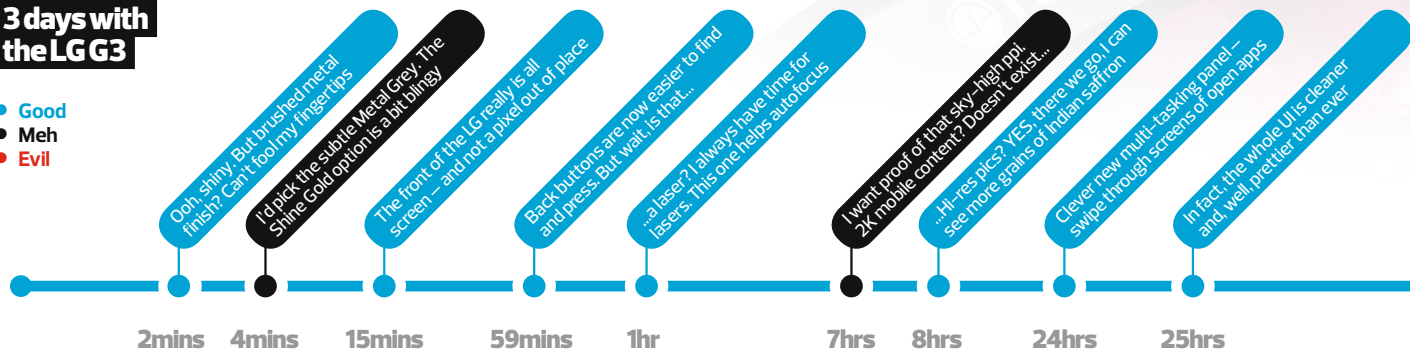
This display is absolutely dripping with pixels — the futureproof 1440x2560-resolution screen is the sharpest we've ever seen at 534ppi. Colours are accurate but at the cooler end of the spectrum and it's easily readable in sunlight. OK, so it's not perfect — Sony bests it on contrast — but it's still a beauty.

3 Power

Like other 2014 superphones, the G3 is powered by a Snapdragon 801, here clocked at 2.5GHz. And like last year's G2, it can handle anything from a heavy *Injustice: Gods Among Us* session to simply opening and closing apps quickly. The international model gets 3GB of RAM but don't fret, LG's UI is optimised for the 2GB UK model.

3 days with the LG G3

- Good
- Meh
- Evil





4 Laser-shooting camera

That's right — LG reckons its nifty new laser autofocus will focus the G3's main 13MP cam faster than the blink of an eye. And it really is fast, working with LG's OIS+ software to produce brilliant shots in low light. Outdoor snaps are just as impressive: crisp, detailed and vibrant. Smooth 4K video shows off the hi-res screen nicely, too.

5 Phew! Killer battery life

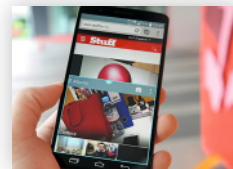
You might be worried that the 2K 5.5in screen might cripple the G3's battery, stuck at 3000mAh. Wrong. The LG's been putting in 15-hour days between charges, standby is just as great as on the G2 and the cell is now swappable. Wireless charging is built into the rear case, too — still not as fast as USB, but LG's dock looks tidy.

Tech specs

OS Android 4.4.2 **Screen** 5.5in, 1440x2560px, 534ppi
Processor Qualcomm Snapdragon 801@ 2.5GHz
RAM 2/3GB **Storage** 16/32GB (expandable by up to 128GB) **Connectivity** microUSB, Bluetooth, Wi-Fi, 3G/4G, NFC **Camera** 13MP, 2160p@30fps (rear), 2.1MP (front) **Battery** 3000mAh
Dimensions 146.3x74.6x8.9mm, 149g

Keep it simple, stupid

LG has built a new 'simple', almost clutter-free UI for the G3. And only the fittest features have survived.



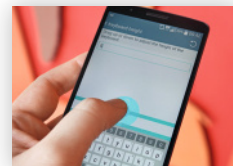
■ Dual Window

Like the S5, the G3 can run two Google or LG apps as split-screen windows. There are a few more third-party apps for Samsung but it's still a great addition for what's essentially a phablet.



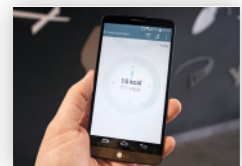
■ Knock Code

KnockOn lives but Knock Code adds security. Tap a pattern of up to eight taps onto the screen to wake and unlock. It works no matter where or how large you recreate it, and it's also coming to the G2.



■ UI Smarts

Smart Notice is a Google Now for phone info, while Smart Clean helps hoarders to delete unused apps and media. The new Smart Keyboard improves predictions and lets you adjust its height.



■ LG Health

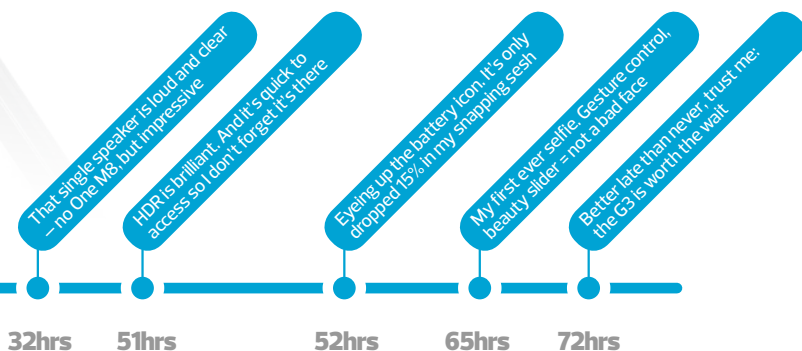
One of the only instances of LG keeping up with its fellow Koreans, the G3's health tracking app is one for casual fitness fans. It tracks steps, distance and calories accurately and has its own widget.



Squeezing in both style and rival-slaying specs to the G2's successor can't have been easy. But LG stuck to its guns: those now-signature skinny bezels wouldn't have worked with a metal build. Heart-rate monitors and fingerprint scanners aren't for everyone; battery life is still brilliant. To see if it's enough to get to No.1, head to stuff.tv @sophiecharara

STUFF SAYS ★★★★★

More specs, more style and more simplicity – the G3 is the most futureproof flagship of 2014 so far



App:roved

FOR
FLEXIBLE
PHOTO FUN

Fotor

It might not initially blow your mind, but Fotor could become one of your most-used apps. It's two things: a tool-up replacement for your phone's default camera app and a cracking photo editor. What makes Fotor stand out is its combination of genuinely useful camera features and the range and quality of its quick-fix and enhancement filters. Oh, and because it doesn't demand that you sign up to yet another 'service' in order to use it.

Stuff says ★★★★★

Efree / iOS, Android, Windows

FOR
INDUSTRIOUS
APPLE FANS

Office For iPad

Not everyone gets excited about spreadsheets and word processors. Some people prefer to get their kicks from slideshow presentations instead, the Jezebels. But whichever is your favourite industry-standard productivity application, you'll be thrilled at the arrival of Microsoft's Office suite for iPad. This trio of apps makes the iPad a viable workalong mobile device for anyone who chooses (or is forced) to use Office software on a daily basis.

Stuff says ★★★★★☆

from £60/year / iPad

FOR
PING-PONG
PLEASURE

Table Tennis Touch

The combination of a simple game mechanic with depth and regular bonuses makes us happy – and Table Tennis Touch has all of that. It uses a format first seen in the 1985 coin-op *Ping Pong*, right down to the disembodied bats. Just swipe up and across the bottom of the screen to fire the ball over the net. The pin-sharp 3D graphics make this a nice place to be, and the 'career' mode gives it a lifespan beyond that of most casual games.

Stuff says ★★★★★

£2.49 / iOS

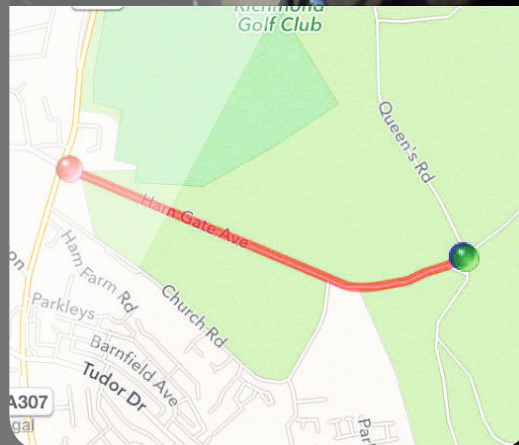
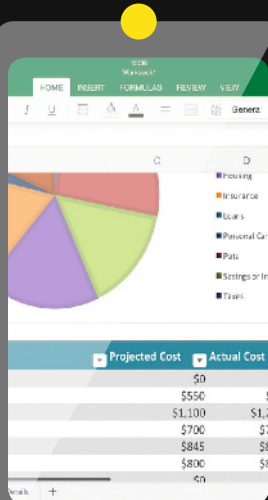
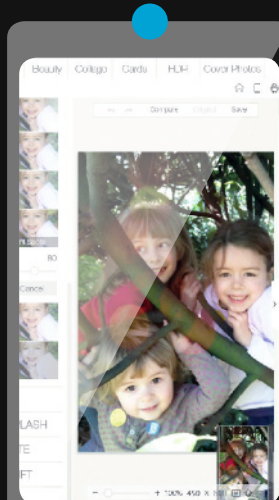
FOR
INTREPID
CYCLISTS

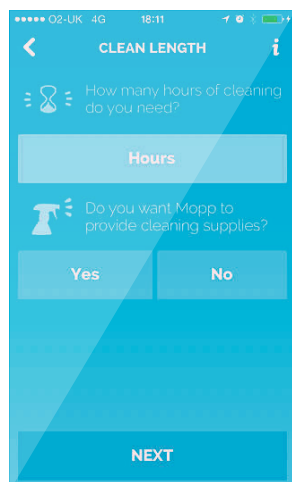
RouteShoot

As much as we like 1080p action cams, they're slight overkill for someone who embarks on a video-worthy adventure perhaps twice a year. Of course, in your pocket is a clunky but capable video camera called a smartphone, which also has GPS and an accelerometer built in. If only you could combine all these talents to, say, record and preview new cycling routes... Well, that's the idea behind RouteShoot: a mixture of GoPro, Strava and Streetview.

Stuff says ★★★★★☆

Efree / Android, iOS



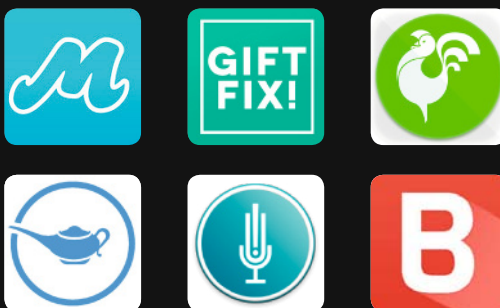


● Mopp

Panicking over the state of your En Suite of Doom? Book a cleaner for £10 an hour using Mopp instead. The payment process is speedy and it's already operating in ten UK cities. Mopp cleaners need at least 24 hours' notice (fair enough) but otherwise it's a blemish-free service.

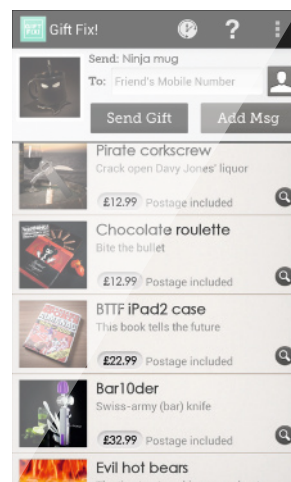
Stuff says ★★★★★
£free / iOS

Mini meme



FIRST WORLD PROBLEMS

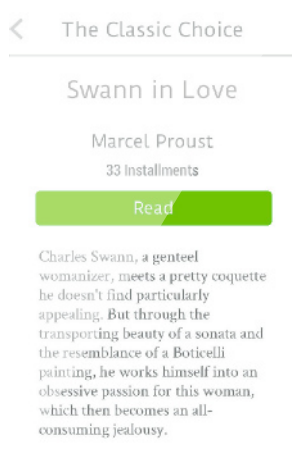
Too busy to cook? Clean? Find birthday presents? You are a terrible person. Repent, with help from these time-saving apps



● Gift Fix!

If you order a present by the birthday, that counts as on time. Fact. Gift Fix! sells last-minute Firebox gifts with zero fuss. All you need is a mate's number – they enter the delivery address. A snag: the catalogue's regularly refreshed but there are only around 50 things to choose from. More toy choice, please.

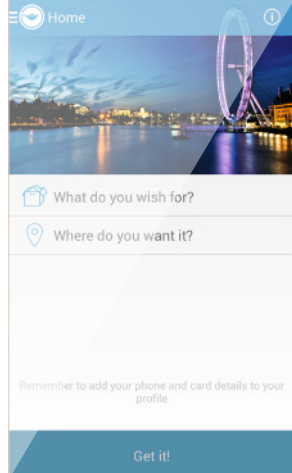
Stuff says ★★★★★
£free / iOS, Android



● Rooster

For £3 a month, this book club for the busy sends bite-sized chunks of one classic and one contemporary ebook to get you to read during that half-hour break. Push notifications at your preferred time of day are just the nudge that's needed and Kindle-style customisation is a bonus.

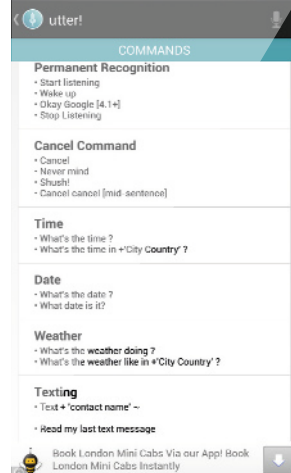
Stuff says ★★★★★
£free with sub / iOS



● Jinn

London-only for now, Jinn takes the First World Problems crown. Type in any exact item (that fits in a car) from any open shop/restaurant plus your postcode. Jinn sends a 'genie' (courier) to buy and deliver it for £5.95 plus 10% of the value. After a few texts, genies turn up in 60 mins. Mmm, Nandos on the sofa.

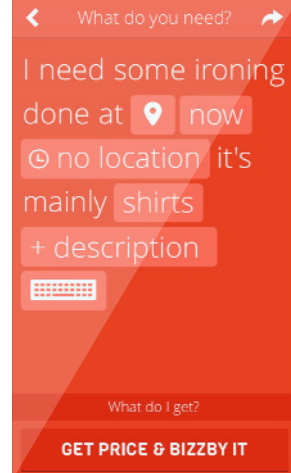
Stuff says ★★★★★
£free / iOS, Android



● Utter!

Can't get the (virtual) staff? This Android voice app is quicker than Google's own and it's able to defer to Google Now when it gets stuck. It works with Facebook, Spotify, YouTube, Dropbox and plenty more apps. We tested the slightly buggy beta but a version 1.0 Google Play app was due to land in June.

Stuff says ★★★★★
£free / Android



● Bizzby

Jinn finds stuff quickly... Bizzby finds people. Handymen, movers, plumbers – this friendly app guides you through query dropdowns, shows available prices per hour and alerts its army of vetted contacts. It's London-only for now, with Manchester, Bristol and maybe NYC coming soon. Lifesaver.

Stuff says ★★★★★
£free / iOS, Android (beta)

STUFF'S GUIDE TO SUMMER CYCLING



The Tour de France is coming, so tuck into our slipstream as we reveal the tech that will help you cling to the back of your own personal peloton





6.8KG

Minimum approved
race weight for a
Tour de France bike

3656KM

Total racing
distance of the
2014 Tour

40.55KM/H

Chris Froome's
average speed to
win the 2013 Tour

237.5KM

Length of stage
16, the longest
this year

8000

Average calories
consumed per day
by a Tour rider

**TOUR DE
FRANCE IN
NUMBERS**





THE PROLOGUE

With the Tour de France 2014 starting this side of the Channel, there's never been a better time to get back on the saddle. Get inspired by these pedal-powered films

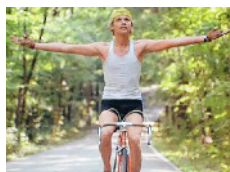
2014 PANTANI: THE ACCIDENTAL DEATH OF A CYCLIST

Winner of both the Tour and the Giro d'Italia in 1998, Marco Pantani was a flamboyant cyclist and legendary mountain specialist who died just six years later at the age of 34 in 2004, alone in an Italian hotel room. This excellent documentary explores the tragic final descent of the man known as 'The Pirate', from the pinnacle of sporting glory to cocaine-fuelled oblivion.
£14 / DVD, Blu-ray, iTunes



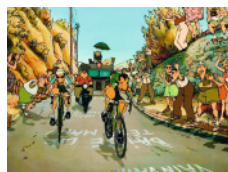
2006 THE FLYING SCOTSMAN

Graeme Obree went from a bullied childhood to champion cyclist, by designing his own bikes and revolutionising body-position aerodynamics. Playing Obree, Jonny Lee Miller does a good line in paranoia. It's missing Obree's more recent revelations, though.
£8 / DVD



1979 BREAKING AWAY

This coming-of-age classic has small-town boys versus college jerks, a cyclist obsessed with Italians, and some of the best fictional road-bike action ever committed to film. It'll make you want to find an old Masi Gran Criterium, chase lorries and start talking Italian. "Ciao, Papa!"
£16 / DVD



2003 BELLEVILLE RENDEZVOUS

French cartoon comedy without dialogue? Er... quelle surprise, this is utterly charming. A young rider is kidnapped during the Tour de France. His granny and her dog enlist the help of a trio of old-time entertainers to track him down. More bonkers than it sounds.
£7 / DVD



1976 A SUNDAY IN HELL

Jørgen Leth's stunning follow-up to *The Stars And The Water Carriers* is a doc about the Paris-Roubaix, one of cycling's legendary fixtures. Leth captures the drama, heartbreak and torturous conditions with an atmospheric score. Most of road-racing's '70s elite are here.
£26 / DVD



THE GRAND DEPART

Cycling legend and yellow jersey collector Chris Boardman fills us in on Le Tour Yorkshire via his new OS Ride app



STAGE 1

5 JULY

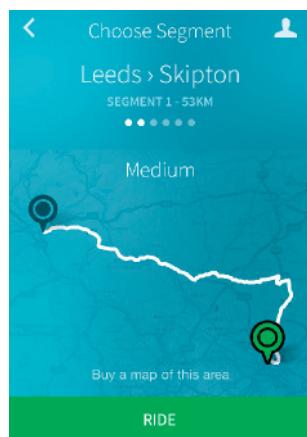
Leeds – Harrogate

"The Dales is, as the name suggests, all rolling hills, so there's no specific feature that will define this stage. It will be an attritional day, and they'll have sore legs by the end of it for sure. I think we can expect to see a sprint finish, with the vast majority of the field coming in together for a huge spectacle. This is a beautiful part of the world, coming into the finish at Harrogate."

Cycle this bit...

LEEDS > SKIPTON (53KM)

Though many riders extend the route all the way to Liverpool, this mostly traffic-free towpath cycle is a more sedate half-day ride. If you've still got energy in the tank, you can always head into the Dales.



STAGE 2

6 JULY

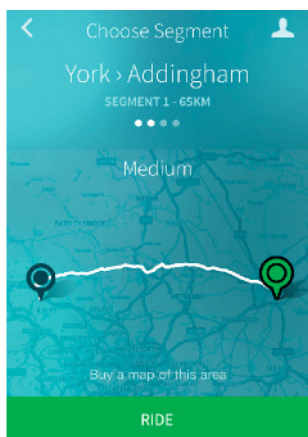
York – Sheffield

"This is a much more mountainous stage than Stage 1 so it's a different kind of challenge. This day is going to make the General Classification (GC) riders, the guys going for the overall win, really nervous. They're going to use their team to look after them to make sure they're kept out of trouble. The race is really going to kick off at the biggest hill in the Peak District, Holme Moss."

Cycle this bit...

YORK > ADDINGHAM (65KM)

Take a leisurely tour of York, gawping at Clifford's Tower and the River Ouse, before heading out into the Yorkshire countryside through to Knaresborough and the superbly named Blubberhouses.



STAGE 3

7 JULY

Cambridge – London

"This stage is pretty flat and will almost certainly be a sprint finish. There are a lot of riders who know they can't win a sprint, though, so there'll be a lot of attacking at the start to try and get a break away. Then the responsibility will be with the sprint team to try to control the race and bring it back together for the finish in London. Hopefully we'll see Mark Cavendish taking a win on home soil."

Cycle this bit...

CHELMSFORD > LONDON (78KM)

A 'Tour de Essex' might not sound glamorous, but this route heads from Chelmsford down into Epping Forest and towards Buckingham Palace, where your imaginary roaring crowd awaits.



PAPPING THE PELOTON?

Alex P (alexp.com) gives some pro tips



1 SCOUT A LOCATION

What story do you want to tell? The lonely long-distance cyclist or the sprinting bunfight? Work out where the bikes will be in relation to you and the background.



2 TURN TO 'S'

Fast shutter speeds freeze motion and help sharpness, so set it no slower than 1/125. Move the camera with your subject (called 'panning') to provide an added element of speed.



3 PREPARE TO BURST

Rapid-fire shots (10–15fps) give you more chance of getting the right shot, but slow down the auto-focus. Choose jpegs as your file format for quicker buffering.



4 MIX IT UP

Don't just snap the cyclists. Crowd reactions with the action in frame give great results, as do 'behind the scenes' shots of rider prep and post-race emotions. Get stuff that others won't.

[Photo: flickr.com/pulianfanita]

DOWNLOAD THIS

OS RIDE Efree (iOS)

Rather than throwing yourself at entire 100-mile stages, use this app to guide you through more leg-friendly segments. Its Ordnance Survey maps show handy height and elevation data, and the app's Strava-style tracking will record your Dales adventure through valleys (and pubs) as you go.

THE PRO TECH

Robby Ketchell, director of sport science at Garmin-Sharp, gives us a tour of his team's mountain-devouring tech

1 CERVELO S3

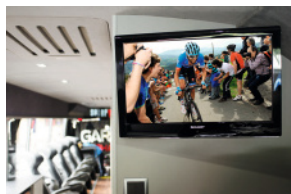
"Each rider has a unique bike fit for the best physiological and aerodynamic performance. On the S series we use a Shimano Di2 11-speed electric gear-shifting system, which works via the brake levers. The wheels and frame are paramount to aerodynamics. Choices we make depend on the gradient and the weather conditions. David Millar's average cadence during a bike race is between 80-100rpm depending on the terrain and conditions."

£3300 / cervelo.com

2 GARMIN EDGE 1000

"Edge bike computers display power, cadence, heart-rate, speed, distance, elevation, grade, temperature and time. Some riders prefer a small screen and use the Edge 510; others like larger ones with more data fields. From this we can analyse how a rider performs at each position of the race. After training it's all uploaded to Garmin Connect, where our sports science team analyse the day's data."

£440 / garmin.com



THE SOLAR BUS

This is the Garmin-Sharp team's home – a hotbed of tech that allows riders to relax and analyse their stages. There are Sharp PCI air purifiers and Plasmacluster fridges with ion generators, which neutralise airborne viruses. Riders will dissect their stage performance using Sharp's ultra-crisp Quattron Pro TV.



3 Poc Octal helmet

€270 / pocsports.com

4 Castelli Climber's Jersey

€85 / castelli-cycling.com

5 DO Blade sunglasses

€230 / pocsports.com

6 Castelli Inferno bibshort

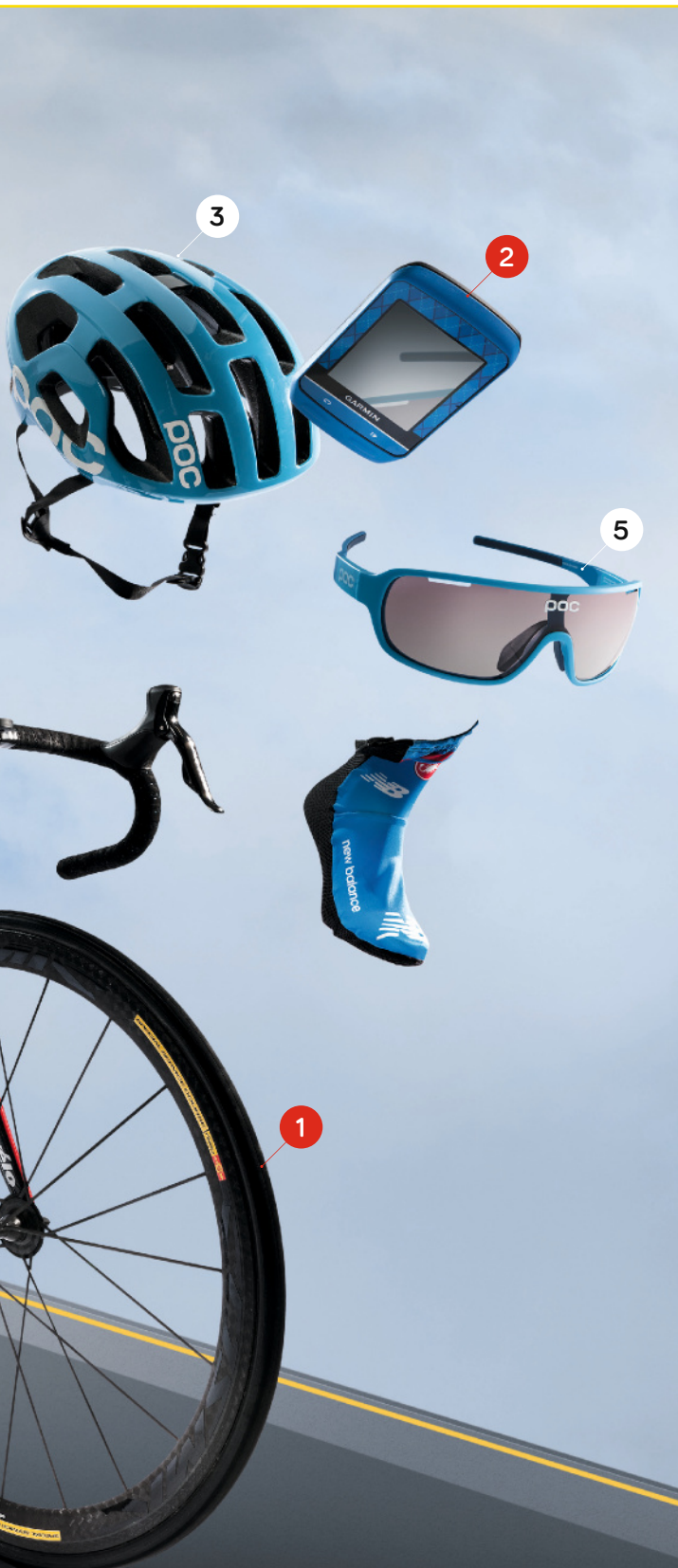
€150 / castelli-cycling.com

7 Castelli Aero Race shoe cover

€45 / castelli-cycling.com

8 Garmin Vector power meter

£1350 / garmin.com



TOUR-WINNING TECHY STEEDS



1903 LA FRANÇAISE

The first bike to win the Tour was ridden by Maurice Garin (aka the Little Chimney Sweep) and it only had one gear. It did have toeclips, though – an invention only a few years old.



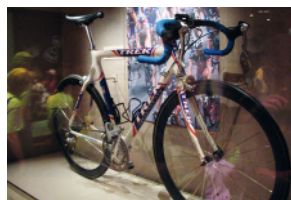
1937 ALLEGRO

Roger Lapébie won on one of the first bikes sporting a Super Champion derailleur, which meant he no longer had to get off his bike and loosen the back wheel with every gear-change.



1989 BOTTECCHIA

Greg Lemond's time-trial bike was one of the first to pay close attention to aerodynamics, with Scott aero bars designed by ski coach Boone Lennon to mimic the position of a downhill skier.



1999 TREK 5500

The 5500 OCLV was the first carbon-fibre-framed bike to be ridden from start to finish, and it took Lance Armstrong to his first Tour victory – later stripped from him, of course.



LIVE FROM THE SADDLE

You'll soon have a Froome with a view

Formula 1 has had on-board cameras since 1985, so where are they in pro cycling? Until recently, regulations have stifled their use.

But at the Tour of California in May, the UCI (Union Cycliste Internationale) allowed a trial of Shimano's CM-1000 cam, which captured the final stage's thrilling sprint finish. This is just the start, according to Shimano and GoPro.

Shimano's Rudy Bouwmeester told us: "The main obstacle to including footage on live TV is creating a stable connection between camera and broadcaster. But the camera is able to transmit a live stream via Wi-Fi, so there should be possibilities." Naturally, GoPro has plans to boost on-bike video too. Its director of global sports marketing Todd Ballard said: "The GoPro camera feed is already available for live TV broadcast.

The upcoming Ironman World Championships in Kona relies on our cameras for unique and compelling perspectives. For 2015, we are looking to get more involved in cycling. There's a lot of heritage and passion for road cycling within the GoPro team, so we are very excited to be gaining a foothold in it."

[Photos: bit.ly/RWmihE, bit.ly/1nWBaNN]



CHOOSING YOUR STEED

Use our guide to road, off-road and all-rounder bikes to find your hill-shredding, commute-friendly or knobbly-tyred match



ROAD

CANNONDALE SYNAPSE 5 CARBON 105

A road bike is a thoroughbred tarmac-eating speed machine, built thin and light, with drop handlebars to coax you into an aerodynamic position: as at home on Sunday rides as it is conquering the mountain passes of the Alps. The Synapse has evolved over a number of years, and this latest carbon-fibre-framed version pulls out all the stops in its inventive design. Engineered to be stiff and responsive in all the right places, it's an aggressive bike that aims to provide a comfortable ride too. That's achieved by its 'micro-suspension system' frame design that smooths out road vibrations – saving your bum and making it stick to the road better.

£1850 / leisurelakesbikes.com



FOCUS IZALCO CHRONO MAX 2.0

Looking to shave time off triathlons? You'll need a time-trial machine built for all-out speed and aerodynamics, like this one. It might not be comfy, but it'll be fast. This Focus's skinny carbon-fibre tubing cuts drag, while its Shimano Di2 electronic gear set puts programmable shift buttons on the end of the aerobars.

£3445 / twenty3c.co.uk

ALTERNATIVELY



FOLDING

Riese & Muller Birdy World Sport

Turn heads as well as pedals with this folding bike and its innovative full suspension. It weighs in at just 11.9kg. £940 / en.r-m.de



BMX

United X Cinema '14

Fitted with high-spec Cinema components, this tough-as-nails BMX is ready to tear up the streets and skateparks. £480 /

winstanleysbmx.com

RIDE IT HERE

ETAPE CYMRU Wrexham, Wales

With challenging ascents and thrilling descents in a beautiful Welsh setting, this 142km closed road event passing through the Clwydian Range is the closest thing you'll get to doing a stage of Le Tour right here in the UK.





OFF-ROAD

LAPIERRE SPICY TEAM E:1

If you like to head into the wilderness or hammer down hills, or just have a penchant for particularly gnarly towpaths, a mountain bike will take you there with its combination of tough frame and knobby tyres. This big mountain downhill specialist isn't just a dumb brute, though. While you're desperately pumping your legs and arms to soak up the hits, it's using its probably-cleverer-than-you E:1 shock tech to fine-tune the rear suspension according to data it receives from sensors in the suspension fork, and how much you're pedalling. The end result is that, even if you're not ready for that big rock that "jumped up out of nowhere", your bike definitely will be. **£5900 / evanscycles.com**



CANYON GRAND CANYON CF SL 6.9

Looking to ride longer distances without the need for a lift to the top of hills? Then a light cross-country bike with less suspension travel is for you. Its carbon-fibre frame and lightweight components mean this Canyon goes like a whippet uphill, while large 29in wheels and suspension soak up the bumps. **£1510 / canyon.com**

ALTERNATIVELY



FAT BIKE On-One Fatty

With ridiculous 4in-wide balloon tyres, this bike is designed to float over sand and snow, but it's just as much of a hoot tearing up muddy trails. **£1000 / on-one.co.uk**



ELECTRIC KTM e-Race P27

Not just for sweat-averse commuters, KTM's electric steed will tug you up hills so you can throw yourself straight back down. **£2250 / wheelies.co.uk**

**RIDE IT
HERE**

FORT WILLIAM

This Scottish trail centre provides stunning scenery and will test you and your new bike to the absolute limit. It's the venue for this year's UCI Mountain Bike World Cup, so that gives you an idea of the quality of trails on offer.





ALL-ROUND

HOY SHIZUOKA

A hybrid/city bike is for roadgoing souls who don't necessarily love the full-on road-racing drop handlebars. If you're looking for a more upright riding position and doing lots of road miles, these light and quick bikes are for you. The hybrid bike from Chris Hoy's range keeps things simple with a single chainring at the front and a total of eight gears. Coupled with a light weight aluminium frame and powerful hydraulic disc brakes that work brilliantly whatever the weather, this is the perfect low-maintenance commuting machine with a sporty edge. The range goes up to the £900 Shizuoka .004, which comes with more gears and higher-spec componentry.
from £550 / evanscycles.com



KINESIS CROSSLIGHT PRO 6

If you like the road riding position but want to get muddy, a 'crosser is for you. Like a tough roadie with knobbly tyres, it's fast, versatile and bonkers. This is one of the new breed of 'cross bikes built with the extra power and mud-dodging properties of disc brakes. A carbon-fibre fork and Shimano 105 kit make it like a road bike on steroids.
£1400 / kinesisbikes.co.uk

ALTERNATIVELY



SINGLESPEED Fuji Feather

This retro-look singlespeeder with steel frame is great for city riding and – unlike some – it comes with a full set of brakes.
£420 / evanscycles.com



CARGO BIKE Riese & Muller Load

This oddity is built to hump up to 200kg in style. Luckily, it has a leg-saving Bosch hybrid drive electric system to take the strain.
£4400 / practicalcycles.co.uk

RIDE IT HERE

SUSTRANS

For your own mini adventures on a bike, the sustainable transport charity Sustrans (sustrans.org.uk) has a variety of routes that take advantage of the National Cycle Network, ranging from urban adventures to foodie tours.



FASHION CITY COMMUTE



1 Rapha Classic Wind Jacket
£180 / rapha.cc

2 Rapha Long-Sleeve Shirt
£150 / rapha.cc

3 Oakley Holbrook
£105 / uk.oakley.com

4 Chrome Barrage Cargo
£160 / chromeindustries.com

5 Howies Crosstown Stretch Chino
£70 / howies.co.uk

6 Chrome Storm Kursk Black
£115 / chromeindustries.com

7 Genesis Day One Alfine 8
£1000 / genesis.co.uk

FASHION SUMMER TOURING



1 dhb Clear Race Jacket
£30 / wiggles.co.uk

2 Vulpine Short-Sleeve Merino Polo
£75 / vulpine.cc

3 Assos Zegho Werksmannschaft
£280 / yellow-limited.com

4 Cafe du Cycliste Paulette Short
£95 / alwaysriding.co.uk

5 Carradice Super C SQR Tour
£85 / carradice.co.uk

6 Giro Republic
£125 / alwaysriding.co.uk

7 Kinesis Decade Tripster ATR
£2350 / kinesisbikes.co.uk

FASHION MOUNTAIN BIKE



1 Specialized Enduro Comp 3/4 Jersey
£50 / cyclesurgery.com

2 Dakine Breaker Jacket
£55 / cyclesurgery.com

3 Evoc FR Guide Touring Backpack
£150 / silverfish-uk.com

4 Oakley Airbrake MX
£130 / uk.oakley.com

5 Madison Flux Deluxe Shorts
£80 / madison.cc

6 Five Ten Impact Low MTB Shoes
£75 / cyclesurgery.com

7 Saracen Myst Team
£4900 / saracen.co.uk

 TWO WEEKS WITH THE

HTC One Mini 2

Esat Dedezade hangs out with the M8's little brother to find out if smartphone perfection runs in the family

£370 / htc.com

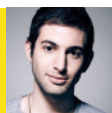
DAY 01

It's time to meet the mighty HTC One M8's smaller sibling, the HTC One Mini 2. As well as being dinkier than the world-conquering M8, its price tag is considerably lower. So, where are the compromises?

One glance at the M8 was all I needed to fall in love with it, and thanks to its shared design DNA, I'm similarly enamoured with the Mini 2. A closer look reveals plastic edges, but its metal rear feels cool to the touch and oh-so-premium. It might be cheaper than its 20g-heavier brother, but it still screams class and shrugs off its second-class status. Excellent job, HTC.

And what's this? The power button's on the left-hand side, which is much easier for your right index finger to reach.

The Mini 2 eschews the Snapdragon 801 or 805 processors of the latest flagships for a run-of-the-mill quad-core Snapdragon 400. This is the same silicon you'll find inside last year's One Mini or a Motorola Moto G. We were hoping for more, particularly as it's



"The Mini 2 might be cheaper than the M8, but it still screams class and shrugs off its second-class status"

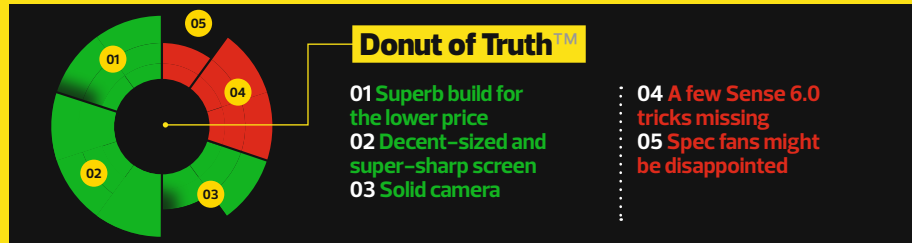
complemented by 1GB of RAM rather than the performance-boosting 2GB or 3GB of modern flagships.

Right, time to see how that 4.5in screen stacks up. There's no noticeable difference in sharpness despite the M8's 1080p display, which is good to see, but colours on the Mini 2 are a little washed out in comparison. Viewing angles are just as impressive, though, and it shows up slightly finer details than its key rival, the Sony Xperia Z1 Compact. A solid start.

Ah, and there's BlinkFeed showing me the latest posts from catsinhats.com — my home away from home. It looks just as slick as it does on the M8, and I'm happy to dive into its warm instant newsfeed embrace.

Turning the One Mini 2 around to admire its backside once again, I'm met with a stark realisation: there's only one camera lens. Of course, the Mini 2 doesn't have the dual UltraPixel offering of the M8. No fancy depth sensors here. We'll just have to see if this hurts its chances...





Tech

Screen 4.5in, 720x1280, 326ppi
Processor Qualcomm Snapdragon 400
RAM 1GB
OS Android 4.4.2
Storage 16GB
Battery 2100mAh
Connectivity USB, Bluetooth 4.0, Wi-Fi, 3G/4G
Dimensions 137.4x65x10.6mm
Weight 137g



DAY 03

The One Mini 2 isn't actually that mini. Its screen is 4.5 inches – bigger than the one on an iPhone 5s. For my shovel hands, it's easier to navigate one-handed than the M8, but reaching the status bar could be a bit of a problem for shorter fingers.

DAY 06

After a while, a few cutbacks are highlighted. The M8's double-tap wake-up feature is AWOL, and its super-cool dot view case is sorely missed. A real loss as it's genuinely brilliant, delivering notifications in a fun yet 'wow, look at that!' sort of way. Sadface.gif.

DAY 08

Today I've managed to run down the battery to 50% after four hours of heavy usage. Despite its Snapdragon 400 processor and 1GB of RAM (as opposed to the Z1 Compact's Snapdragon 800 and 2GB), it didn't falter once. It should last a day with moderate usage, but I still need to charge it at bedtime. The 2100mAh battery is non-removable, so there's no option for an instant on-the-go power boost either. Thankfully it retains Sense 6.0's Extreme Power Saving Mode.

DAY 11

HTC's BoomSound speakers grace the front of the One Mini 2, and they're almost as rambunctious as the ones on the M8. Their clarity is superb, and while they don't reach quite the same volume they still embarrass other smartphone speakers. I'm not ashamed to admit I held the Mini 2 in front of my face and got lost in a stereo trance. Next time, I'll make sure not to do that on a public bench.

DAY 13

After extensive photos of flowers, rivers and, er, brick walls, I've decided that the Mini 2's camera is a solid all-rounder, though it doesn't excel in any one area except maybe HDR shots. It also provides more detail than the M8, thanks to its larger 13MP sensor, though it's bested in low light.

DAY 14

Looking at the Z1 in more detail reveals a stark contrast between the Mini 2's curvy package and the angular, industrial appearance of the Sony. The Z1 remains the only no-compromise mini smartphone, thanks to its pixel-packed camera and more powerful innards, but the One Mini 2's stunning design is hard to resist.

STUFF SAYS

The gorgeous metal shell belies its budget label and it outclasses pricier phones

★★★★★

PS4, PS3, PC, Xbox 360, Xbox One, Wii U / watchdogs.ubi.com

Watch_Dogs

The promise of a *GTA* base with a geeky hacking topping has had *Stuff's* excitement receptors tingling; Tristan Donovan finds out if it really delivers

It's a recipe that should whet any console gamer's appetite. *Watch_Dogs* promised to take the open world of *Grand Theft Auto*, spiced up with near-future tech and a completely networked, entirely hackable city, while sprinkling on some of the variety and flow of *Assassin's Creed*. And as if that wasn't enough, it promised a smattering of seamless multiplayer where other players invade your game for some cat-and-mouse action. Perhaps

asking the game to deliver on all of that was an expectation too far, but we can't help but feel a little disappointed with the end result — despite some clearly awesome elements.

We're in a near-future Chicago under constant surveillance, where citizens' phones are tapped, their private lives monitored via their computers and the streets scanned by CCTV. Sound familiar? Given its similarities to the present day, it's a pity the game does not say more about the Big Brother

state it portrays. In the end this is all surface and contradiction, which would be fine if Ubisoft hadn't hinted at far deeper commentary in all its marketing hype.

You play the renegade hacker Aiden Pearce, a moody and somewhat unlikeable outsider who wants to exact revenge on the shadowy people who killed his niece. Aiden can hack pretty much everything, from traffic lights and bridges to CCTV; but while this is all good fun, the hacking is often rather prescribed

and disappointingly lacking in the freedom for really creative use.

One unexpected pleasure is the huge range of diverting side missions, which span everything from car races to taking insane 'digital trips' that include bouncing around the city on giant flowers or robotic spiders.

So, while it promised big and doesn't quite match the level of expectation, *Watch_Dogs* is not far off — and is entirely worthy of your time.

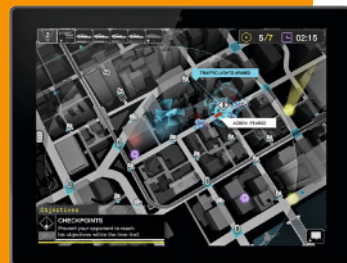
@tristandonovan

STUFF SAYS Not quite what we were craving, but it's packed with enjoyable action ★★★★★☆



Track or hack another player, or discover and kill your attacker against the clock

A 'digital trip': blowing things up using a giant, mechanised spider-tank



Windy wonder

While the game's open-world Chicago is an approximation rather than a recreation, it's still an impressive playground. The world stretches from The Loop, where overhead rail-lines wind through the skyscrapers, to the ganglands of South Side and small towns on the city edge, all rendered in enough detail to match *Grand Theft Auto V*.

While this doesn't quite feel as alive as Rockstar's virtual cities, Aiden's ability to hack into the phones of passers-by and snoop in on conversations about last night's date, or what they're having for tea, helps bring the citizens to life – as does watching people whip out their smartphones to take snaps of car crashes.

Watch Dogs' take on the Windy City isn't just there for eye candy: the ability to hack its infrastructure is integral to the game. At the touch of a button, Aiden can – among other things – hack traffic lights to cause crashes, make steam pipes explode, or raise and lower bridges.

He can also take control of CCTV, jumping from camera to camera, which is great for scouting out enemies and then using hacks to cause their own grenades to explode – or freak them out by making doors open and close as if controlled by a ghost.

Wii U / mariokart8.nintendo.com

Mario Kart 8

Can everyone's favourite plumber reverse the struggling Wii U's fortunes? Andrew Hayward plays the eighth instalment of the faithful party favourite

Mario Kart 8 combines the biggest tweaks from the last two Wii and Nintendo 3DS entries by including customisable bikes and karts, underwater driving and aerial gliding moments. And then it adds wild looping terrain and wall driving, thanks to new anti-gravity segments and transforming rides. Weirdly, this is the freshest the series has felt since *Double Dash* on GameCube.

You'd think Nintendo would have run out of fresh locales for racetracks by now, right? Not quite, thankfully: *Mario Kart 8* features a diverse array of new courses, and these looping, physics-taunting designs are really something.

Electrodrome spins and shimmers like a mirror ball, while Sweet Sweet Canyon's glossy taffy roads are a treat — even if it looks like it was yanked out of Disney's *Wreck-It Ralph*. Eight games deep into the series, the 16 original tracks here comprise perhaps the most diverse set to

date, and as always, it culminates in a rather fun new incarnation of Rainbow Road.

Mario Kart 8 is at its best in multiplayer, and you can hop online for frantic 12-player showdowns or jump into the classic local four-player split-screen battles. You can even merge the two, with two local players and another 10 waiting to pummel you both over the interweb. Single-player remains a rather straightforward and unexciting affair.

The vivid graphics are a surprising highlight. It may not be pushing polygons the way games on Xbox One and PS4 can, but neither is pumping out charming art design like this — and it's their loss. Forget realism: this is one of the most attractive games on any platform of late.

Mario Kart 8 may not be the Wii U's single-handed saviour — it isn't quite new and exciting enough for that — but if you already have the console, consider it essential.

@ahaywa



The twisty new courses are delights and the revised older courses mostly stellar



The glossy, cartoonish aesthetic is fantastic, and it moves fluidly throughout

STUFF SAYS Adding new flash and fun twists, *Mario Kart 8* is a rare Wii U highlight ★★★★★



open your mind.

smart eBike

save

£700

MRP £2,500

NOW £1,800



£150 deposit

33 payments at

£50 per month

0% representative APR*

Join the urban mobility revolution. The smart ebike is fitted with innovative, state of the art technology with an emphasis on functionality, desirability and safety.

- > Integrated smart phone technology
- > Energy recuperation
- > Maintenance free carbon toothed belt replaces standard bike chain

- > Impressive 62 mile range
- > Braking assist
- > Innovative smart design in two colour frame choices

smart of Stockton-on-Tees

Concorde Way, Yarm Road, Stockton-on-Tees TS18 3RB
www.sytnersmart.co.uk

Contact Louise Smith on
01642 660757

3 OF THE BEST

PS4 headsets

Quality headgear is essential for the full gaming experience.
How else to boss around your team-mates in the midst of battle?



Tritton Kama

What's the story?

This isn't the cheapest PS4 headset out there but it's close, and nicer than the budget alternatives we've tried. It's dead simple, too: plug the short cable directly into the bottom of your DualShock 4 and change the 'output to headphones' option in the settings menu to 'all audio' and you're golden.

Gaming to win?

You're not getting the same build and sound quality of the other two here, but you're not paying for it either – and for £25 (we've seen it for under £20 online) the Kama is actually very impressive. Sound effects and voices come through clearly and there's plenty of weight for the big bangs of *Battlefield 4*. There's a little digital fuzz in the background of your voice, but it's low enough to not prevent your commands and swearing from being broadcast clearly to your friends and enemies.

Stuff says ★★★★★

The perfect solution for i33ts on a tight budget.

Price £25 / trittonaudio.com

Sony PlayStation Wireless Stereo Headset 2.0

What's the story?

Sony's own PS4 headset has a dinky USB dongle for total wirelessness, a lovely design, invisible mics in the earcups, virtual 7.1 surround sound and a dedicated app for custom sound profiles.

Gaming to win?

Yes, but not for the reasons you might think. Firstly, the virtual surround sound isn't good. You get a decent sense of sounds coming from around you but it messes around too much and makes everything feel unnatural. The custom profiles are a waste, too – the standard 'flat' setting is best. Disappointing, sure, but you're still left with probably the best-looking gaming headphones ever made.

Stuff says ★★★★★

Great looks, comfort and stereo sound, but the special features aren't very special.

Price £85 / sony.co.uk

Turtle Beach PX4

What's the story?

Turtle Beach takes this sort of thing seriously, and the PX4 is a pretty serious bit of kit. It's got a whole little processing unit that needs to be connected to your PS4 via optical. It then handles Dolby Digital signals and sends them wirelessly to the headset in proper surround sound.

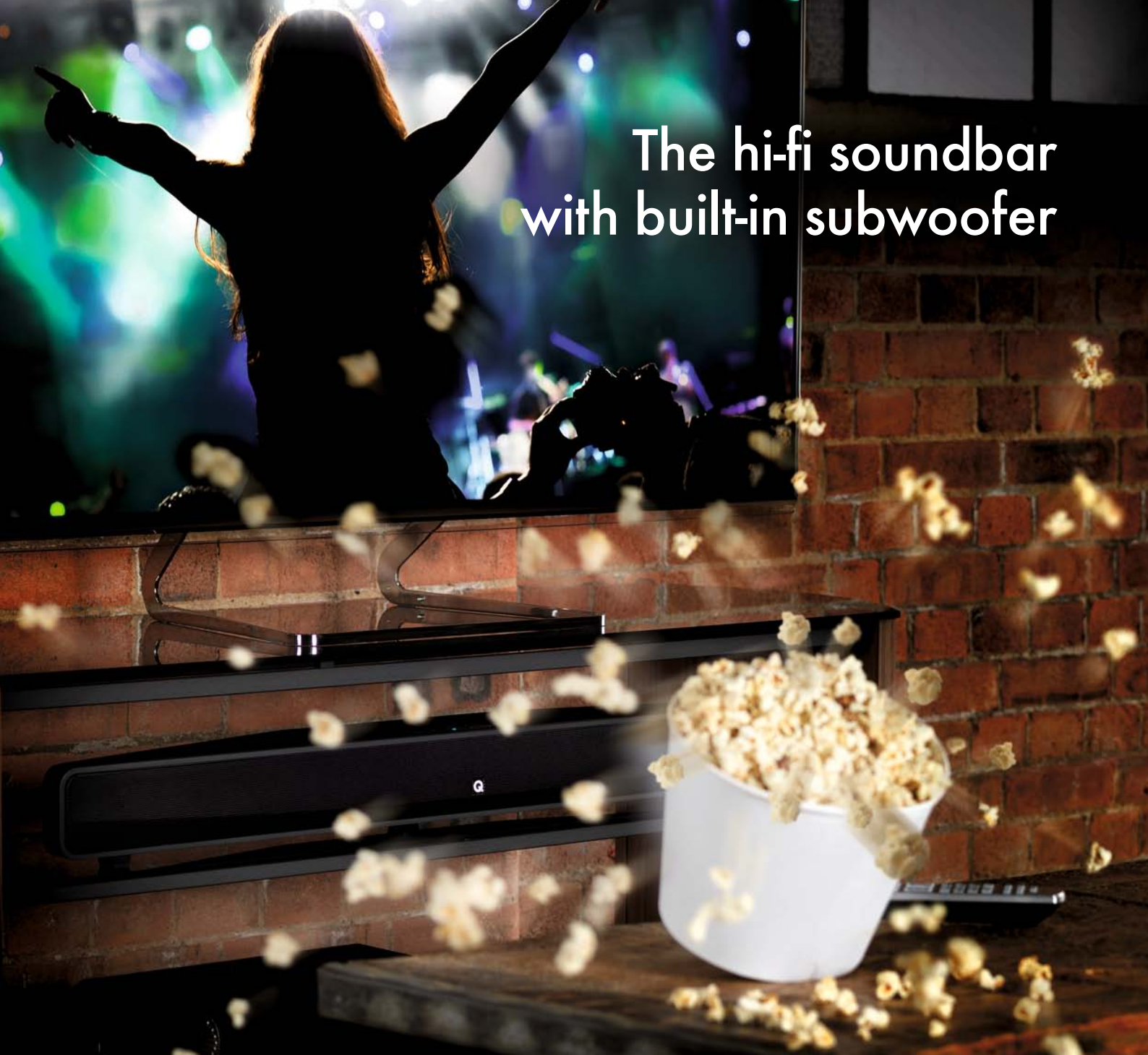
Gaming to win?

We're yet to hear a pair of headphones that truly recreate a 5.1 home cinema experience, and the PX4 doesn't buck the trend. But it's not far off, and you do get an extra level of immersion in game worlds, while more accurate placement of effects such as footsteps can give you a competitive edge. You do still need to use a cable between the headset and controller, which is a slight shame, but for crisp, dynamic sound that won't wake the neighbours, the PX4 is currently hard to beat.

Stuff says ★★★★★

An impressive headset for hardcore gamers.

Price £150 / turtlebeach.com



The hi-fi soundbar
with built-in subwoofer



The M4 Soundbar made for music and movies

Plays music, TV and movies equally well with no extra boxes required

Wirelessly connects smart phones, tablets and laptops using aptX Bluetooth

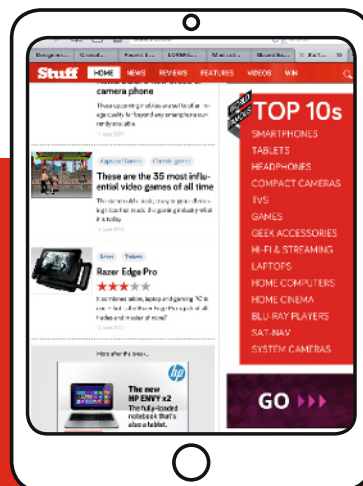
Wall mounts with built-in bracket or shelf-mount with supplied anti-vibration feet



www.Qacoustics.co.uk



THE ALL-NEW **STUFF.TV** DESIGNED FOR EVERY SCREEN



NOW ON DESKTOP, TABLET & MOBILE

www.stuff.tv

GLASS TITANUMS

Stand aside, brushed
aluminium gadgets.
You're heavy, weak and
humbled by the latest
titanium-bodied tech

[Words: Paddy Smith Pictures: Pete Gardner]



PORSCHE DESIGN P'3135 SOLID

Now, do you take cheque? Confusingly, Porsche Design's P'3135 Solid comes with a protective aluminium case. Since the fountain pen is milled from a single piece of titanium – a material ten times the strength of steel – and finished with a scratchproof PVD coating, that's a bit like sending RoboCop out on his beat wrapped in a protective woollen onesie. More likely, Porsche Design is protecting customers of its eye-catching writing utensils from the envious glances of other passengers in the first-class lounge.

£650 / porsche-design.com





TAG HEUER MERIDIIST INFINITE

The downside of having Obsessive Gadget Upgrade Disorder is the regularity of a punch to the wallet.

Enter Tag Heuer: spend a pretty unruly sum on its titanium-shelled "communication instrument" and it promises the holy grail of gadgets: an everlasting phone. The provisos are a supply of light to its photovoltaic screen, leaving it in standby mode and not asking too many questions about operating systems or core specs. Will there be enough loaded retroist eco-warriors to buy its limited run of 1911?

€8900 / tagheuer.co.uk

LEATHERMAN CHARGE TTI

Yeah, your friends will tell you you've just bought the world's most expensive bottle-opener, but you'll be able to explain that the Leatherman Charge TTI's material credentials run deeper than its titanium shell. The jewel in Leatherman's multitool crown, it's lighter and stronger without scrimping on the necessities. There's an S30V stainless steel blade and diamond-coated file camping out among the usual utensils. And of course there's a bottle-opener Ray Mears wouldn't be ashamed to crack open a cold one with.

[E180 / heinnie.com](#)





CHARGE BIKES COOKER 5

Most of the world's titanium is used to build aircraft engines and frames. Submarine and rocket manufacturers are also partial to the metal's lightweight, corrosion-resistant properties. An element that's equally happy getting massive air or sluicing through the world's biggest, saltiest puddle should be able to handle even the most demanding trails, then. Throw in SRAM X9 20-speed gearing, RockShox fork and Maxxis Ardent Race tyres and the Cooker 5 starts looking like a bargain; an Airbus A380 would set you back a cool US\$300m. [£3200 / \[chargebikes.com\]\(http://chargebikes.com\)](#)

HASSELBLAD HV

Spare a thought for the humble camera. Once a staple of every gadget lover's arsenal, it has been relegated to luxury status by the ease and ubiquity of phone-mounted sensory smarts.

With that in mind, Hasselblad's HV (based on Sony's Alpha A99) pushes out the material boat with a machined aluminium top emblazoned with – you guessed it – titanium controls. This means the HV can withstand smartphone-killing extremes of climate and weighs into a lighter class than its Sony doppelgänger.

As if you needed an excuse.

€8500 / hasselblad.co.uk



THE SOUNDSHIP MICRO

BLUETOOTH SPEAKER DOCK

"A good investment in the long term,
with optimum sound quality and original design"

"Streamlined to Perfection"



Portable speaker dock which also charges your smartphone*
Wirelessly connect any device using Bluetooth
A staggering 8-10 hour battery life



Come and test our great sound for yourself
On stand J95
www.gadgetshowlive.net



View our other groundbreaking devices
www.otoneaudio.co.uk

*Available in either lightning for iPhone or Micro USB for Android

TAYLORMADE SLDR DRIVER

For some reason, sci-fi has never explained how we will all come to have a perfect swing in our utopian future. Surely a genre that can foresee an end to poverty and illness and imagine life on Mars doesn't think we'll be happy with erratic golf shots? Luckily, TaylorMade has forged the titanium SLDR with 21-point moveable weighting to skew the trajectory of your drive up to 30 yards, ensuring your future swing has nothing to do with your ball ending up in a sandy crater on the red planet's links course. £350 / taylormadegolf.co.uk



CHEMICAL CURIOSITY THE ELEMENTS OF SURPRISE

● Osmium

Earth's rarest metal makes hens' teeth look abundant. Shunning a life in the glamorous world of spacecraft, osmium (left) is best known for its role in fountain pen nibs. Whoop.

● Indium

Like sodium, indium can be cut with a knife. Although it won't react wildly with water like its malleable friend, bend it and it emits a high-pitched squeal. Because metals have feelings too.

● Iridium

Only about three tonnes of iridium are produced per year here on earth. Space is full of it, though – most of ours probably came from the meteorite that killed the dinosaurs.

● Polonium

So radioactive it glows blue, polonium is 250,000 times more toxic than cyanide. The lethal dose is less than a millionth of a gramme. Among other places, it turns up in tobacco smoke.

Sensory snacks

From naughty aliens to quantum physics: the best things to watch, read and listen to this month

WATCH

Under The Skin_Blu-ray

An alien takes the form of a woman and travels across Scotland, seducing men to harvest their flesh. The premise is simple enough for a low-budget indie flick but there's much more than meets the eye here, as the title implies. Rarely has there been a bolder piece of cinema. And by that I mean it unapologetically screws with your head.

To classify this as sci-fi would be a gross oversimplification. It starts off like a straight-up predator movie but morphs into a coming of age/road-trip story, told from the alien's perspective. Scarlett Johansson's performance is disturbing and mesmerising.

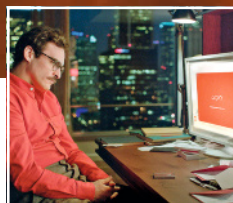
This is an aggressively artsy experiment. Director Jonathan Glazer mixes heavily stylised

visuals with hidden-camera footage; much of the film doesn't make sense, and the rest sits somewhere between baffling and impenetrable. But often this doesn't matter. It's chilling enough to command attention, and the sense of unease is so gripping it will affect you regardless of your understanding.

No doubt about it: *Under The Skin* will polarise opinions. Those expecting a mainstream sci-fi thriller will be frustrated and disappointed. But if you're open to something very different – and don't expect to understand all of it – this is a singular and utterly compelling experience.

@CedYuen

STUFF SAYS ★★★★★



Her_Blu-ray

Her is Spike Jonze's tale of a recently divorced man (the excellently named Theodore Twombly, played by Joaquin Phoenix) who falls in love with a Siri-like operating system (voiced by Scarlett Johansson). It's nice to see a vision of the future that doesn't have us all fighting off cannibals, but the tone of *Her* does make it feel a little too much like a two-hour Google advert.

@WiggoWiggo



The Lego Movie_Blu-ray

Emmet (Chris Pratt) is a bog-standard Lego man, until he discovers he's the chosen one who will save the world... Knowingly eviscerating adventure movie clichés, this clever kids' film celebrates the imagination and the individual, pointing a stern finger at the sort of adults who collect children's toys. You know who you are.

Stephen Graves

LISTEN



Once More 'Round The Sun

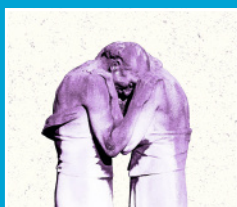
_Mastodon

The most jagged shards of Mastodon's sound may have thawed and broken away since 2009's *Crack The Sky* but they can still bludgeon like the early days of *Remission* when they want to. *Chimes At Midnight* sounds like it was buried under the studio where they recorded their debut, only now stirring to lay waste to the earth, while *Aunt Lisa* peaks with

a chanted, foul-mouthed witches' chorus from fellow Atlanta residents The Coathangers. Older fans might skip the gentler rides offered by tracks like *Asleep In The Deep*, but if you're partial to a slice or two of riff cake there really are no better bakers in the business.

@WiggoWiggo

STUFF SAYS ★★★★★☆



Familiars

_The Antlers

If you like your dreampop to lean towards 3am heartache, dunk your head in this nocturnal album. Mellow and claustrophobic, it sees Peter Silberman's yearning falsetto glossed with lush production. Fans of the *Hospice* album might find it too one-paced, but it's a fine soulful nightcap. @markydwilson

STUFF SAYS ★★★★★☆



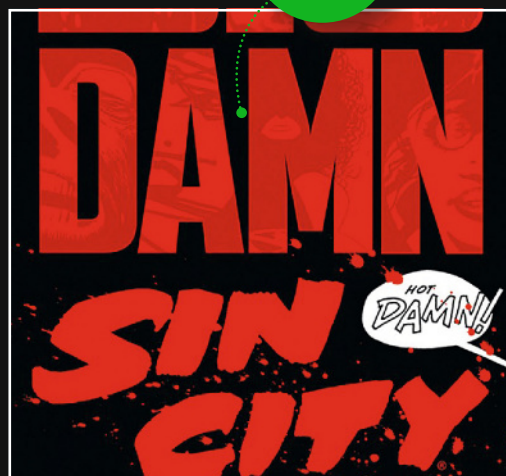
Glass Boys

_F*cked Up

Like roaring? Then you'll like this record. You might also like that it combines roaring with some of the most rousing major-chord punk rock ever recorded. It's complex and subtle enough to get lost in, and the poignancy of the title track betrays deep emotional intelligence. Delivered through the medium of roaring. Will Findlater

STUFF SAYS ★★★★★☆

READ



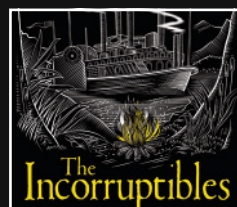
Big Damn Sin City

_Frank Miller

With a new *Sin City* movie coming out, what better time to revisit Frank Miller's monochromatic masterpiece, collected in this hardcover edition? Miller's comic-book homage to pulp fiction and film noir walks the mean streets of a town where every politician is crooked, every cop is looking for solace at the bottom of a bottle, and every woman is either

a hooker-with-a-heart-of-gold or a femme fatale luring some poor schlub astray with her wiles. Gorgeous, evocative black-and-white artwork sets the tone, while the hardboiled dialogue pays tribute to Raymond Chandler and Dashiell Hammett. Best enjoyed with a whiskey. Neat. Stephen Graves

STUFF SAYS ★★★★★☆

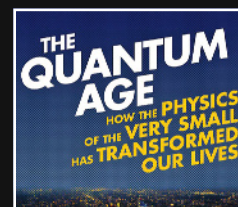


The Incorruptibles

_John Hornor Jacobs

Taking a confusing bag of random categories – the characters include elves, dwarves, daemons and... Romans, but the scenery and dialogue are straight out of a western – Jacobs nonetheless crafts a gripping, entertaining story full of blood, whiskey, daemon-powered six-guns and damnation. @willydunn

STUFF SAYS ★★★★★☆



The Quantum Age

_Brian Clegg

Quantum physics might make 'rocket science' look like a Year 3 spelling test, but pop-science writer Clegg does a brilliant job of simplifying the slow dance between atoms and light in this series of essays. Particularly exciting for tech fans are his ideas on superfluids, quantum computing and even a quantum internet. @markydwilson

STUFF SAYS ★★★★★



FREE LEATHERMAN STYLE CS MULTI-TOOL

WHEN YOU SUBSCRIBE TO *STUFF* MAGAZINE

OPTION 1
£19.99

- FREE Leatherman Style CS Multi-Tool
- SAVE 28% on the cover price
- Just £19.99 every 6 issues by Direct Debit
- FREE delivery direct to your door

OPTION 2
£22.49

- All the above plus the *Stuff* iPad or iPhone edition
- Just £2.50 extra to include digital access
- SAVE 51% on the cover price
- ACCESS anywhere, everywhere



S SUBSCRIPTION ORDER FORM

☐ Yes! Please start my print subscription to *Stuff* and send me my Leatherman Style CS Multi-Tool worth £30! (PRINT ONLY)

☐ Yes! Please start my all-access subscription to *Stuff* and send me my Leatherman Style CS Multi-Tool worth £30 (ALL ACCESS)

☐ Please tick here if this is a new subscription
☐ Or here if it is a renewal

YOUR DETAILS BLOCK CAPITALS PLEASE (must be completed)

TITLE..... NAME.....
 SURNAME.....
 ADDRESS.....
 POSTCODE
 TELEPHONE
 EMAIL
 MOBILE.....

INSTRUCTIONS TO YOUR BANK OR BUILDING SOCIETY TO PAY BY DIRECT DEBIT



TO: THE MANAGER
 BANK/BUILDING SOCIETY
 ADDRESS
 POSTCODE
 NAME(S) OF ACCOUNT HOLDER(S)

BRANCH SORT CODE

--	--	--	--	--	--

BANK/BUILDING SOCIETY ACCOUNT NUMBER

--	--	--	--	--	--

Reference number (for office use only)

--

Instructions to your bank or building society

Please pay **Haymarket Media Group** Direct Debits from the account detailed in this instruction subject to the safeguards assured by the Direct Debit guarantee. I understand that this instruction may stay with Haymarket Media Group and, if so, details will be passed electronically to my bank/building society.

SIGNATURE

DATE

Terms and conditions This offer is open to UK residents only. Overseas rates are available on +44 (0)1795 592987. Please allow 35 days for delivery of your first issue. Should you wish to cancel your subscription it will be cancelled on expiry of the current term which will not be refundable, other than in exceptional circumstances. Savings are based on the standard UK print cover price of £4.60 and digital cover price of £2.99. Offer ends 6 August 2014. If you require any assistance following the purchase of your subscription, then you can speak to a member of our customer service team on 03337 773 325. Calls are charged at local rate. **Haymarket Media Group** Ltd uses a best-practice layered Privacy Policy to provide you with details about how we would like to use your personal information. To read the full privacy policy please visit our website www.haymarket.com/privacy or call us on 08448 482 800. Please ask if you have any questions as submitting your personal information indicates your consent, for the time being, that we and our partners may contact you about products and services that will be of interest to you via post, phone, e-mail and SMS. You can opt-out at ANY time by emailing the datacontroller@haymarket.com or by calling 08448 482 800.

UK readers please send this form (photocopies acceptable) to:

S **STUFF, FREEPOST RBSU-TALE-BXJT,
 PO BOX 326, SITTINGBOURNE, ME9 8FA
 QUOTE REF M0814P OR M0814B**

SUBSCRIBE ONLINE AT www.themagazineshop.com/stuff-august OR CALL 08448 488 806

Please have your bank details ready and quote the promotional code **M0814P** for print only, or **M0814B** for an all-access subscription. Offer ends 6th August 2014.

themagazineshop.com

Haymarket's Official Magazine Subscriptions Website

CALLING FROM ABROAD?

Save money on international subscriptions. For information on rates, call +44 (0)1795 592987 or visit www.themagazineshop.com



A



THE GLOBAL STAGE FOR INNOVATION

PRODUCED BY  CEA®

JANUARY 6-9, 2015

2015 International CES® • Las Vegas, Nevada • CESweb.org

DATE

Save the date for the 2015 International CES®. Better yet, reserve your space now. With our all-new Tech East and Tech West venues, we promise a powerful attendee and exhibitor experience, including greater access to the companies, ideas and innovations shaping our industry.

WITH

POWER

Stuff

PROJECTS

MAKE. DO. UPGRADE.



p114
BETA YOURSELF:
SMARTPHONE
PHOTOGRAPHY

Yes, it's not a 'real' camera, but look what it can do...



p116
PLAYLIST:
HOLIDAY READS

Unputdownables to pick up before you head for the sunshine



p118
SUPER GEEK:
MODEL
RAILWAYS

Tiny train tracks can be cooler than you think



p120
INSTANT
UPGRADES:
SURFING

All you need to go into battle with the salty spume

BETA
YOURSELF

SMARTPHONE PHOTOGRAPHY

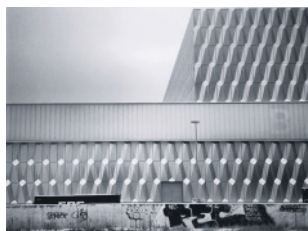
Think taking photos with your phone is just about analogue filters? Let Flo Meissner, CEO of mobile photography site eyeem.com, show you how to unleash your mobile's award-winning talents...

THE BASICS

■ **What are you trying to say?** Centre subjects or push them to the edge of the frame to make us wonder whether they're coming or going.

■ **There is no 'magic' app** ...or a 'magic' combination of 15 apps. Just find one that you feel comfortable with and stick to it. Practice makes the decisive moment perfect.

■ **Be prepared.** Don't miss that magic moment. Place your favourite camera app in a reachable spot, such as the bottom-right corner. Tap the power button to



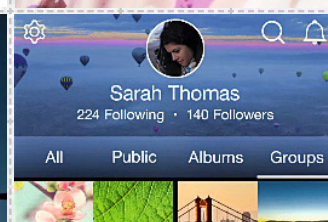
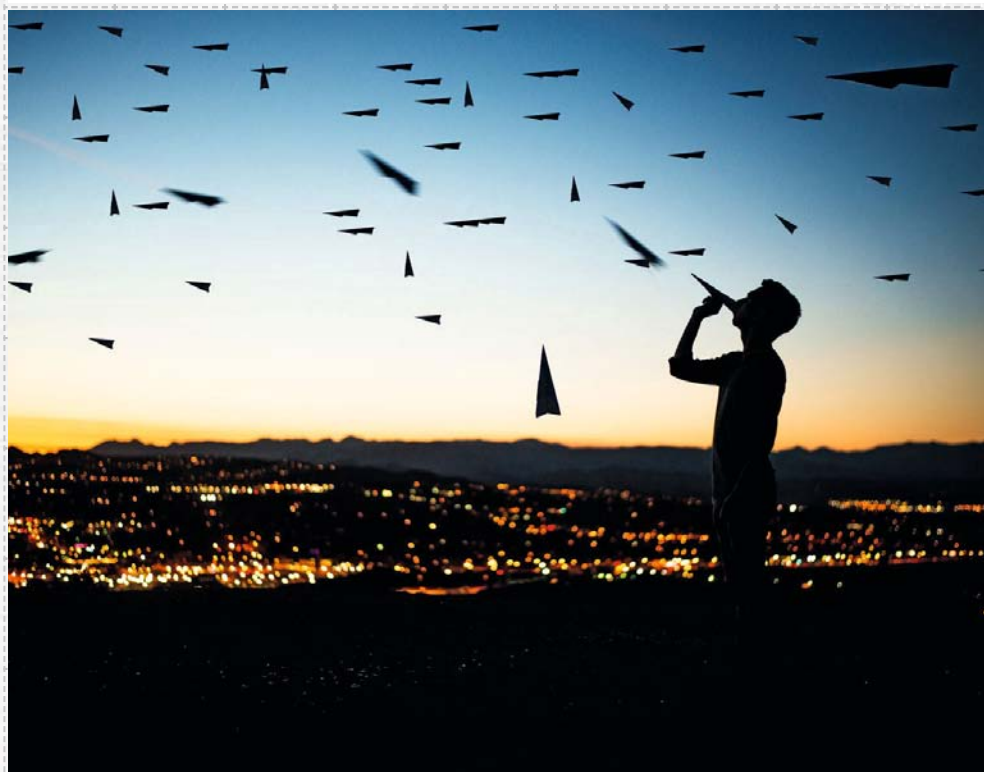
minimise it — now you're ready to shoot as soon as you swipe to unlock.

■ **Don't be shady.** Be confident when shooting on the street, as people can tell if you're trying to be sneaky, especially with a smartphone. And safety first — don't edit and cross the street at the same time.

■ **Aim to surprise.** Use scale to make small items look large or vice versa. Or use perspective to flatten objects in the foreground so they continue shapes from the background.

■ **Make a series.** Shooting a series is great because it adds a certain weight to your worldview. Simple images repeated with intention often have a stronger impact than complex images without a story.

■ **Always back up.** Make sure your photos don't disappear by using a cloud service like Dropbox, Google Drive or Flickr, which now gives you 1TB of space for free.



NEXT STEPS

■ **Zoom with your feet.** Don't be tempted to use the digital zoom as it will only produce an ugly, pixelated image. Either use your feet to get closer to the subject, or take the photo without the zoom and crop in later using an app.

■ **Use the timer.** If the scene you're photographing isn't time-critical, put it down somewhere secure and use the self-timer. Less contact with the phone means less chance of camera-shake. Burst mode is also good for reducing blur.



LEVEL UP WITH...



EYEEEM

£free, eyeem.com

More than just another Instagram clone with retro filters, EyeEm's site is packed with features that complement its slick smartphone app. Its blog is a fine source of tips from phone-loving pro photographers, while the EyeEm Market (currently invite-only) promises to let you turn a coin from your best snaps.



PHOTOJOJO PHONEOGRAPHY 101

\$10, photojojo.com/university

This four-week online course is for anyone looking to go to smartphone snapping school. You get two emails a week containing lessons and challenges, all of which are tailored to your flavour of smartphone (iOS or Android). The Photojojo store sells some nifty accessories too.



LOW LIGHT TIPS

■ Find your light source.

Look for lamps, lanterns, spotlights or even moving light sources like car headlights. Don't shoot against them but use their glow to light a bigger part of the scene.

■ **Use the backlight.** At concerts, use the light behind performers to add contrast and create interesting silhouettes.

■ **Get the right app.** Most smartphones don't allow you to control shutter speed, so to simulate this effect for long exposure shots, try the Slow Shutter Cam app (£0.69, iOS).

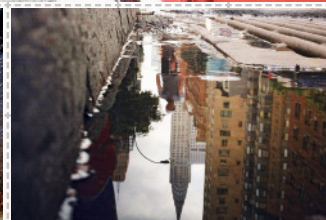


ACCESSORIES

■ **Bring the power.** A spare phone battery pack is the difference between destiny and despair. Get one like the 6000mAh SwitchEasy Tanks (£45, amazon.co.uk).

■ **Seek stability.** For advanced shots like star trails you'll need a mini-tripod. The Glif (£18, amazon.co.uk) is great. Or check out Joby's GripTight range (joby.com/smartphones).

■ **Experiment with lenses.** Pick up an Olloclip 4-in-1 photo lens (£60, store.apple.com/uk) and play around with its fisheye, wide-angle and macro lenses.

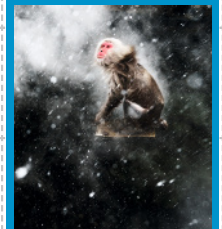


TRICKS

■ **Lose your head.** Download Camera+ (£1.49, iOS) and Blender (£2, iOS). Take a photo of your background, and another with you in the foreground. Use Blender to combine the images.

■ **Embrace puddleography.** Using puddles to reflect your scene can add depth and complexity. Get low and hold your phone upside down, with the camera close to the water.

■ **Make your own filters.** Use coloured wine glasses, sunglasses, a magnifying glass or film negatives to create Instagram-trumping effects.



WILDLIFE PHOTOGRAPHER OF THE YEAR 2014

£free, nhm.ac.uk

It's too late to enter it this year, but the exhibition (at the Natural History Museum in October) is always an eyeball-pleasing destination. Increasingly smartphone-friendly, in 2013 it featured an iPhone photo and there's a new category for under-17 phone photographers.

[Main pic by Markus Spiering, @splerit; other images by Brian Podolsky, Knight Vision, chapumin, Jim Blackstock, Anthony Garcia]



PLAYLIST

HOLIDAY READS

You're on your hols, which means time to stop snacking on internet junk food and start feeding your brain a nutritious book. Here are summer's finest delicacies...

THE BEES Laline Paull

In the Imagination Olympics, Laline Paull has pulled off a gold medal high-jump, successfully creating a host of believable characters from a hive of bees. Flora 717 starts out as a sanitation drone but, having discovered hidden talents, comes to challenge her society's rigid structure.

THE BEES

LALINE
PAULL



THE GIRL WITH ALL THE GIFTS M R Carey

Full of grisly surprises, this is about Melanie, a young girl who goes to a special school. To her it's just school, but you won't be able to sleep until you know why she sleeps in a cell, why she's only allowed out when under restraint, and why her armed guards seem terrified of her.



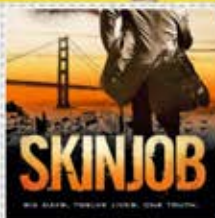
ANOTHER GREAT DAY AT SEA Geoff Dyer

Taking part in a 'writers in residence' programme, where well-known authors are assigned to a large organisation, novelist Geoff Dyer spent two weeks on board a US Navy aircraft carrier. His account is full of fascinating detail, great characters and humour.



HATCHING TWITTER Nick Bilton

The New York Times' Nick Bilton delves deep into the story behind the world's favourite micro-blogging service – and does so in rather more than 140 characters. It's a page-turning read, with the alleged conflicts between its colourful co-founders ensuring things stay spicy throughout.



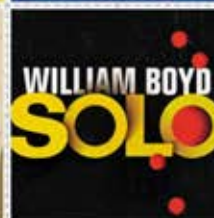
SKINJOB Bruce McCabe

Technology writer Bruce McCabe looks a decade into the future and finds a polarised society where nihilistic porn addicts do battle with religious fundamentalists in this fast-paced techno-thriller, which has drawn comparisons with Robert Ludlum and Michael Crichton.



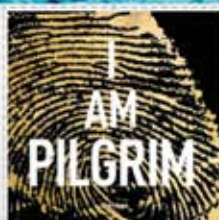
PARASITES LIKE US Adam Johnson

Re-published in paperback this year, Adam Johnson's accidental apocalypse follows in the footsteps of Kurt Vonnegut with a funny, poignant story about a bumbling archaeologist who breaks into the tomb of an ancient hunter and unleashes the end of the world. Oops.



SOLO William Boyd

It's half a century since Ian Fleming died, but a succession of distinguished authors have kept Bond alive; Kingsley Amis was the first, and now William Boyd has taken up the mantle. If you've read any of Boyd's superb novels, you're probably already in the queue for this one.



I AM PILGRIM

Terry Hayes

A thumping great 700-page doorstep of murder, espionage, exotic locations, murder, sex, intrigue, thrills, spills and murder. A nameless man chases a faceless killer around the world while the dark threads of a grand conspiracy unspool around him, in a plot that will keep you gripped right from take-off.



CONNECTING NOTHING WITH SOMETHING

Gary Budden

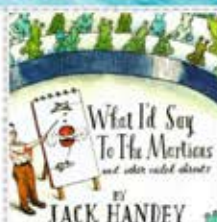
An anthology of fiction, poetry and illustration trains its unflinching gaze on the south-east coast. The secret lives of dilapidated seaside burghs like Margate, Hastings and Dover are brought into sharp focus in these tales of youthful rebellion and faded glory.



AN ASTRONAUT'S GUIDE TO LIFE ON EARTH

Chris Hadfield

Colonel Chris Hadfield spacewalked into all our hearts with his videos sent from the ISS – particularly his incredible cover of Bowie's *Space Oddity* – but in this book he details the years of training and backbreaking work that go into becoming an astronaut.



WHAT I'D SAY TO THE MARTIANS

Jack Handey

This collection of short essays and scripts from veteran *Saturday Night Live* sketch writer Jack Handey is perfect for dipping in and out of. But possibly not in public, where Handey's facility with language and sneaky one-liners might have you guffawing uncomfortably loudly.

ALTERNATIVES TO AMAZON

Tired of buying books from the omnipotent 'Big A'? Try these other sources of free-books and ebooks



HIVE

hive.co.uk

Support your local bookstore without giving up the sheer laziness of online shopping: order books from Hive and it'll send them for free to your local bookshop for collection, giving them a cut of the fee in the process.



GREEN METROPOLIS

greenmetropolis.com

Like a cross between eBay and a giant charity bookshop, this site lets you buy or sell unwanted second-hand reads and give charities a portion of the fee. Every book is £3.75, of which £3 goes to the seller to at least cover postage.



EBOOKS.COM

ebooks.com

The web's first dedicated ebook store is still going strong. Its variety of formats makes it suitable for virtually any ebook reader or tablet, and it's strong on new releases – it has all but one of our featured books.

SUPER
GEEK

MODEL RAILWAYS

Simon Osborne-Walker explains
why there are still thrills to be found
in laying teensy railroad tracks

Growing up, there was magic in our loft. Up the telescopic ladder and through the hatch was a fantastic Lilliputian world – and rails ran through it.

My dad's model railway was a wonder; a testament to his enormous patience and ingenuity, and his passion for the glory days of British steam power. The main station was beautifully detailed and bustling with tiny people, there were sheep and cows grazing in the little fields, and – the most amazing thing to me – an

intricate trestle bridge, handbuilt from balsa wood, that crossed a wide expanse of river.

None of it felt quite alive, though, until those occasions when he rubbed down the track, plugged in the controller and set some trains in motion, charging through the countryside powered by their electric motors. The locos provided the real magic.

That railway is long gone, but my dad has built others since, and now my own kids are discovering the same joy in them.

I've even built a garden railway that my son will happily control for

hours on end, stopping his little American steam train at the Wild West-style station I made for him. It's all for the children, I tell you, I hate every minute...

There are plenty of choices to be made, but the first is to pick a size, from tiny Z scale (1:220) up to the impressive G scale. Then you'll want to decide on a track system, as most manufacturers' tracks aren't compatible with each other (though the locos are).

Opting for a starter set such as the ones below gives you solid foundations on which to build, and there are usually track expansion

packs available that add points, sidings, stations and suchlike, without you having to worry about track geometry. You can work out your own layouts later, and upgrade from an analogue controller to a digital one as you get more engines and more complicated tracks.

With model railways, it can all be as simple or as complicated as you want it to be.

If nothing else, they can be a reminder that, once upon a time, travelling by train was a wondrous adventure, not just a tortuous, delay-riddled commute.

JARGON
BUSTER

■ DCC

Digital Command Control is the standard for operating model railways digitally. It enables you to control locos individually, wherever they are on the track, plus trigger lights, sound, smoke and points.

■ ROLLING STOCK

Carriages and trucks are known as rolling stock. There's a vast array, from cabooses to observation cars, but most makes have proprietary couplings.

■ OO GAUGE

The most popular scale in the UK, with trains modelled at 1/76th of their real size. HO gauge (1:87) is the dominant scale in the USA and can run on the same size track as OO engines.

■ N GAUGE

A bijou scale (1:148/1:160) that's gaining in popularity: perfect if you need to fit your layout into a small space. Just don't expect small to equate to cheap – miniaturisation comes at a price.

HORNBY FLIGHT
OF THE MALLARD

Sure, there are cheaper OO-gauge starter sets, but we'd hop on board at this particular station. Why? Because it comes with a model of the Mallard, the British streamlined engine that reached 125.88mph in 1938 to become the world speed record-holder for a steam engine. That record still stands. In addition to the legendary loco, this set contains three coaches, an oval of track with a siding, and an analogue controller – although the Mallard is DCC-ready, so you can add a decoder chip and upgrade to a digital control system such as Hornby's own PC-connected eLink.

£150 / hornby.com

GOING
LOCO

ROCO 41507 Z21 LITE

Analogue is a fine starting point, but you can't control it with your iPad, can you? The Z21 system takes model rail into the mobile age, with a Wi-Fi adapter and a control app for phones and tablets (Android/iOS). As with other digital systems, you can switch control between multiple trains on your layout, and trigger points, sound, etc. Unlike other digital systems, you can take photos of your locos to assign as their avatars, and also skin the tablet app with downloadable control cabins from real engines. This HO set comes with a deliciously retro diesel, three coaches and some track to get you started.

£470 / gaugeMASTER.com

RAILROAD
TYCOON



THE BIG SMOKE



PIKO 38240 CAMELBACK

There's nothing quite like seeing a train steaming past the hydrangea while you're sipping tea on the lawn. For the outdoors, you'll want to go G-scale – around 1/20th of actual size – like this super-detailed electric model from PIKO. It's based on a wonderfully bonkers American engine from the 1920s and can produce steam when filled with special oil, as well as making a pleasant chuffing sound. You'll need to lay some suitably weather-proofed brass track, of which PIKO makes a selection to build almost any layout. Couple with some trucks and spread the picnic blanket.

£450 / gaugemaster.com

KEEPING ON TRACK



MODEL RAIL

There's no shortage of magazines for model railway enthusiasts. *Model Rail* is a great place to begin for inspiration and new releases, mostly for British OO, O and N-gauge kits. Try *Model Railroader* (mrr.trains.com) for American stuff, or *Garden Railways* magazine (gardenrailways.com) if you want to know more about G-scale. model-rail.co.uk



RMWEB

Anything you need help with – anything – will have already been covered on this busy forum. And if, somehow, you come up with a new problem or challenge, the huge, knowledgeable and friendly community will be sure to lend a hand. Especially useful if you start setting up a DCC track with remotely switchable accessories. rmweb.co.uk



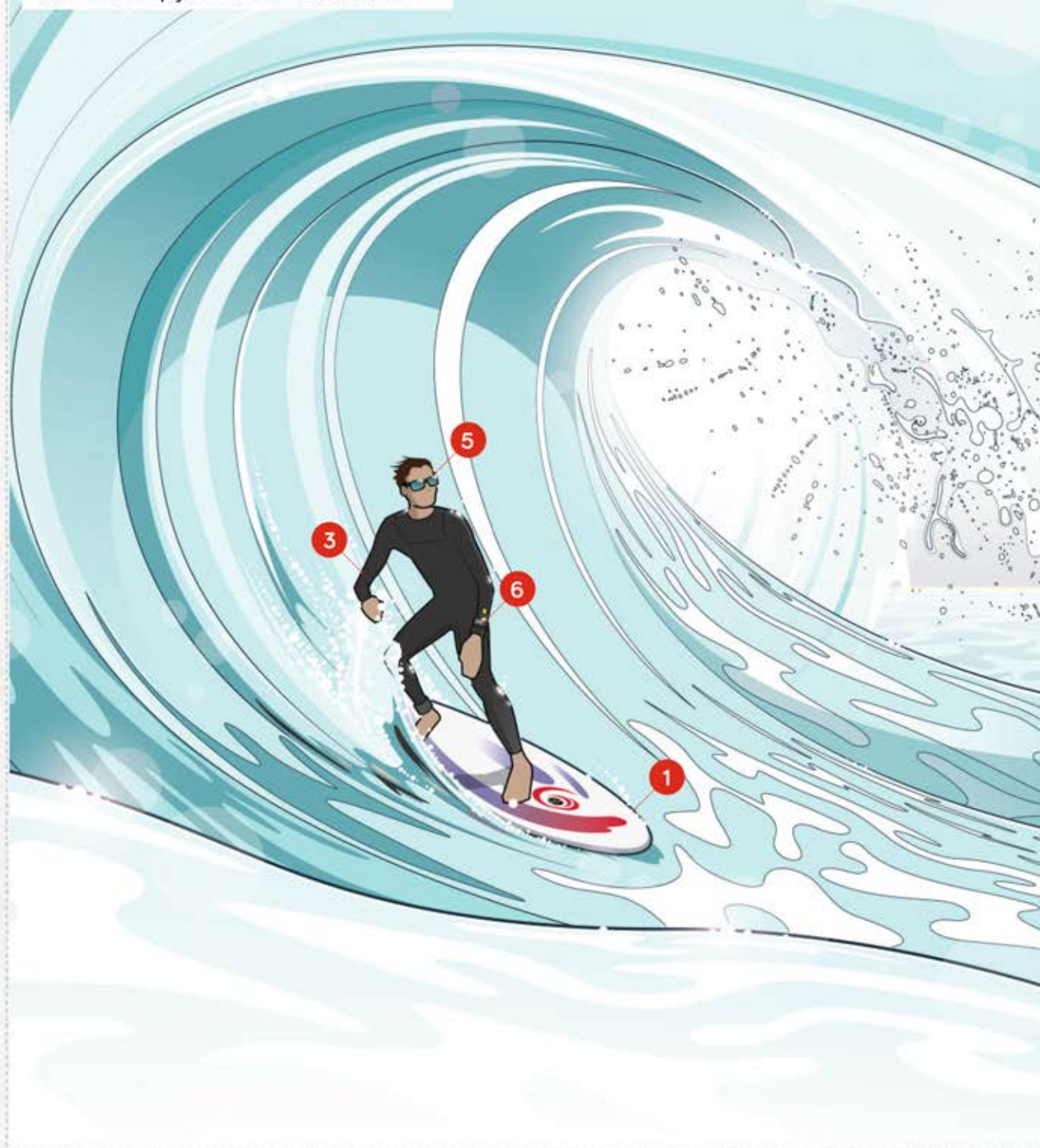
WARLEY NATIONAL

There are few better ways of finding out the possibilities of a hobby than going to a show. The Warley National Model Railway Exhibition, at the NEC in November, will be full of clubs exhibiting layouts, as well as all the major makes. Until then, it's worth visiting shops with displays, such as The Engine Shed in Arundel or SP Models at Snetterton. thewarleyshow.co.uk

6 INSTANT UPGRADES

SURFING

With Britain's chilly waters warming up for surf season, it's 'high tide' you started gathering this 'swell' kit to help you catch its finest waves...



[Words: Alf Alderson Illustration: Jamie Smedden]



1 GUTS DOODLEBUG

The Holy Grail for surfing the UK's varied coastline is a board that can handle conditions. The handmade Doodlebug fits the bill nicely. Its high volume provides plenty of float, while the shortboard design and tail make sure it's fast and easy to turn. Shaped by former European Longboard Champion Chris Griffiths, it's designed to be ridden four to six inches shorter than your normal board length, and can be given a custom paint job to help mark you out from the mass-produced hordes.

from £420 / gutssurfboards.com



2 VANGO DRY 20

Here's your solution to carrying a dripping wetsuit around without getting the rest of your kit soaked. Made from fully waterproof ripstop nylon, the pack's roll-top is completely sealed and can be compressed via an air valve. If your wave-hunting involves long coastal walks, a ventilated back system, sternum strap and removable waist strap keep things comfortable. There are also three external zipped pockets (two of which are waterproof) for essentials like surf wax and spare leash.

£55 / vango.co.uk



3 PATAGONIA MEN'S R3 FRONT-ZIP FULL WETSUIT

For mid-summer to autumn in the UK, you need a wetsuit that's at least 2mm thick. The R3 does the job, with a mix of 2.4mm and 3.4mm-thick neoprene and a snug merino wool lining that keeps you warm without too much bulk. Any 'flush through' is kept to a minimum by the one-piece front and back panels, plus internal and external neck gaskets. The seams are also triple-glued for extra durability and strength.

£380 / downthelinesurf.co.uk



4 FINISTERRE EKMAN JACKET

If you're planning to stay in the UK rather than jet out to Oahu, you'll need a post-surf jacket to help you warm up. The Ekman has a soft, brushed inner to make it comfortable against bare skin, but is also roomy enough for layering up. It's waterproof and breathable, packs up into its own inside zip pocket, and has an excellent adjustable hood (with enough room for beanie-wearers). Two zipped outer pockets are on hand to swallow your camera and phone.

£275 / finisterreuk.com



5 DRAGON H2O JAM SUNGLASSES

Even if you don't manage to stay afloat after a wipeout, it's always useful if your sunglasses do. These shades have a light nylon frame that helps them stay on the surface and save you buying a new pair in the event of catastrophic slippage (unless a very fashionable seal gets there first). Polarised lenses and complete UV protection help you see clearly in all conditions, and they're available in six different colour schemes to help you find a match for your board.

£140 / dragonalliance.com



6 RIP CURL SEARCH GPS WATCH

Triathletes have long sported GPS watches, and now it's the turn of surfers. Rather than serve up pre-loaded wind and swell stats, the Search GPS locks onto satellites to grab the latest tide information from 1300 surfing locations around the world. Once you're on the water, it then provides live stats like top speed, total distance and number of waves caught, before syncing data and maps with an iOS map and Rip Curl's site. There's no 'live shark cam' available yet, though.

£290 (due Sept) / ripcurl.com

THE BEST UK SURF SPOTS



THURSO, SCOTLAND

Thurso's world-class reef break may be cold, but it's worth putting up with that for the quality of ride it provides. If that's a bit too daunting there are plenty of less challenging beach breaks in the area, including one in Thurso itself.



LLANGENNITH, WALES

Generations of Welsh surfers have cut their teeth on the waves that break along this stretch of golden sand, and the throngs here on a good swell mean there's always a good party scene in the campsite above the beach.



SALTBURN, CLEVELAND

Saltburn has been the centre of the northern England surf scene for decades. The coastline has everything from great beginner waves to more challenging reef and point breaks, along with surprisingly consistent and good-quality waves.



NEWQUAY, CORNWALL

The self-styled surf city has a big après-sea scene. August sees the Relentless Boardmasters festival with the world's top surfers and gigs by Snoop Dogg, Bastille and Chase & Status. boardmasters.co.uk

GADGET DOCTOR



ALWAYS ON CALL

facebook.com/joinstuff @stuffTV
google.com/+stufftv stuff@haymarket.com



MAIL OF THE MONTH

Q LETTERS OF NOTE

I want to take notes at work and I've narrowed it down to a Livescribe pen or Samsung Galaxy Note 10.1. I want to be able to sync everything with OneNote on my Windows laptop at home so I can go back later and search for stuff easily. Which do you recommend?
Jim Thorn

A The easiest thing, Jimbo, is probably a kind of combo of the two. The Note 10.1 can recognise handwriting and turn it into text, so you could use the stylus to write directly onto the screen while you work. There's an Android version of OneNote as well, so that should sync with the one on your laptop as long as you

have a Microsoft account. We're also big fans of Evernote, which does much the same thing. The only drawback with the Livescribe is that it requires special notebooks (and you have to remember to charge the pen). Have a Qobuz subscription to listen to some music while you ponder your decision.

Speak your brains and you could win a 6-month **QOBUZ HIFI SUBSCRIPTION** worth £120. This letter wins 6 months of unlimited streaming in lossless-quality FLAC from Qobuz, worth £20/month

qobuz

Q BLAME THE BEER

I smashed my iPhone 5 after falling off the beer scooter last weekend but I'm not due an upgrade until November. I'd like something SIM-free and affordable to keep me going until then but I've got a 4G contract so it must be able to make the most of my extra bandwidth. What do you recommend?
Den Broody

A Ouch. You should always wear a beer helmet when riding the beer scooter, DB, but luckily it's only your phone that suffered this time. Motorola has just released a 4G version of its excellent E150 Moto G which, on

top of its 5MP camera and 4.5in 720p screen, should make it a more than adequate stop-gap until your upgrade.

Q BACKPACK TRACKS

I'm going travelling this summer and want to pick up a new pair of headphones before I go. I'm not bothered about noise cancelling as I don't want to have to worry about charging batteries when backpacking but they need to be pretty hardwearing in case they get knocked about while in transit. What do you suggest?
Jason Greaves

A A lot of noise-cancelling headphones still work when the battery dies but we'd go for Sol Republic's Master Tracks (£170, solrepublic.com). They're comfortable and sound great, plus they twist and bend like a contortionist being badgered by a bee, so you won't have to worry when you chuck them in your bag.

Q SKY'S THE LIMIT

I've had a Sky account for about 10 years now and Sky Go on my iPad has been a lifesaver when my wife is watching

something else, but it won't let me connect it to the telly in the bedroom using the HDMI adaptor. Do you know any way around this? It seems a bit unfair.
Raymond Byrd

A Sky charges an extra tenner a month for multiroom, Ray, so you can see why it won't work, but there is soon to be a way around it. If you've got a PS3 or PS4 you'll be able to download a Sky Go app for it some time later this year. Until then, you'll just have to hold the iPad closer to your face.

Q CAR CABLES

My car stereo has an auxiliary port but when I plug my Galaxy S4 in there I keep getting the cable caught on the gearstick. Is there some sort of transmitter I can get that will turn it into a wireless streamer?
Sarah East

A You're in luck, Easty: Belkin's AirCast Auto Handsfree is a Bluetooth receiver that plugs into the aux port of your head unit. Just connect your phone



and stick the control pod to your dashboard. A microphone even lets you take calls.

Q FIELD TRIP

I'm looking for a new camera to take away to festivals this summer so it needs to be sturdy and not too pricey, in case I lose it somewhere in a field in Hampshire. Can you recommend something for about £200?
Dom Bennett

A It's old enough to remember last year's Glastonbury but we're still fond of our Nikon Coolpix AW110, which you should be able to find online for £170. The zoom's not great so don't expect nostril shots of the headliners, but it has all the ingredients for 1080p video and excellent stills.





5-MINUTE HACKS

IF NOTHING ELSE, AT LEAST...

...RECOVER LOST HOLIDAY SNAPS

1

So you've just accidentally deleted some irreplaceable memories from your holiday camera. Before you book your own funeral, try some free software to get them back:

1. Download and install Photorec (Efree, Windows/Mac, cgsecurity.org). Connect your SD card to the computer and open the program.

2. Try not to be scared off by the Terminal/DOS interface. Follow the instructions and choose a directory for it to place your (hopefully) recovered files.

3. Click 'search' and make a cup of tea. It will scan the whole card, so this might take a while – but a short wait is worth a happy family regained, isn't it?



2

...BARBECUE YOUR SUNDAY ROAST

Summer's no time to slave in a hot kitchen – roast on the barbie with help from Rebecca Smith of deliciousmagazine.co.uk:

1. Put a large foil roasting tray, half-filled with water, in the bottom of the barbecue, then pile charcoal either side. Light it. Oil and season a 3-rib of beef.

2. When the coals turn white, put the beef on the grill, directly above the tray. Replace the lid and cook for up to two hours, poking the meat periodically with a digital thermometer.

3. When the beef is 50–55°C in the centre, remove and rest for 20 minutes. Done!



3

...INVENT A NEW COCKTAIL

For mid-afternoon merriment, nothing beats Master of Malt's range of cocktail bitters (from £10 each, masterofmalt.com). Here's how we made a White Truffle White Russian:

1. Assemble the following: vodka, Kahlúa, whole milk, ice and a bottle of Bitter Bastards White Truffle bitters (£20).

2. To serve four people, combine in a shaker with ice cubes: five shots each of vodka and milk, three of Kahlúa and ten drops of bitters. Shake hard.

3. Strain into tumblers with ice. Have your butler serve with a shaving of white Alba truffle.

TUNE IN NEXT MONTH TO...

- Avoid those dreaded bunkers and bogeys
- Boot yourself up for the new football season
- Find the best online courses

FREE EVERY THURSDAY!!!

FOOTBALL WEEKLY

AVAILABLE ON ALL MOBILE DEVICES... APPLE OR ANDROID



INTERVIEWS

ANALYSIS

MATCH PREVIEWS

FUNNY STUFF





Stuff

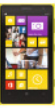
TOP

TEN

OF EVERYTHING

Smartphones	126
Tablets	127
Hi-fi streaming	128
Headphones	129
Home cinema	130
Blu-ray / Speaker systems	
PVRs	
TVs	131
Laptops	132
Best of the rest	133
Home computers	
Sat-nav / Camcorders	
Games	134
Games machines	135
Geek accessories	137
Compact cameras	138
Digital SLRs	140
Wearable tech	142
Connected home	143

 For full reviews of every product in the top 10s, visit stuff.tv/reviews

HOT BUY 1		HTC One M8 How to solve a problem like the LG G2? If you're HTC, you take your already gorgeous phone and add more metal, more screen and more power. Enough power to take it to the top of the AnTuTu benchmarks, in fact. It's a beaut to look at and to use, and it's even got a whole load of Lytro-style post-snap refocus features for photographic fun. It's an awesome phone, and the new benchmark for LG, Apple and Samsung to aim for.	STUFF SAYS HTC fires first in the 2014 flagship smartphone war, and draws blood – the new One is an absolute killer £520 ★★★★★
2		LG G2 Its 5.2in screen is razor-sharp, its Snapdragon 800 processor handles demanding tasks with ease and its 13MP camera takes amazing photos. And the new G3 is even better – but can it topple the HTC One M8? Find out next month, or check stuff.tv	£290 ★★★★★ BEST FOR SUPERPHONE VALUE
3		Samsung Galaxy S5 Big, bold and stuffed with tech, the Galaxy S5 is a bona fide superphone that will delight Samsung fans, although it has some very stiff competition. It has a faster processor, a slightly bigger screen and a more solid (if not quite stylish) feel than the S4.	£480 ★★★★★ BEST FOR FUN FEATURES
4		Sony Xperia Z2 Classy, clever and with talent in spades, the water-resistant Z2 oozes quality. It flies in use and is capable of taking brilliant photos and playing videos at 4K cinephile quality. If the design had just been a bit more practical, it would have been unstoppable.	£600 ★★★★★ BEST FOR THE CONNOISSEUR
5		Google Nexus 5 Delivering top-end spec at a mid-range price, the new Nexus has a bigger 4.95in screen, faster processor and satisfactory 8MP snapper. But the biggest improvement is its chocolatey-smooth Android KitKat 4.4 OS. Astounding value.	from £290 ★★★★★ BEST FOR PRICE TAG
6		Apple iPhone 5s A curious blend of tried-and-tested – 4in screen, design, huge cost – with new-and-exciting features like a 64-bit processor, fingerprint-sensing home button and iOS 7. What it adds up to is an easy purchase for most... but we're ready for iPhone 6.	from £490 ★★★★★ BEST FOR APPLE FANS
7		Sony Xperia Z1 Compact With a 4.3in, 720p screen, Snapdragon-powered performance, solid, waterproof body and a 20.7MP camera, the Z1 Compact is the first small superphone that delivers with no ifs or buts. If you're small of hand but demanding of phone, it's the Android for you.	£350 ★★★★★ BEST FOR DAINTY HANDS
8		Samsung Galaxy Note 3 Verily, 'tis indicative of the age in which we live, when a supercharged superphone gets five glowing stars, but only makes No7. By Crumbles, though, it's good. Blistering processor, 5.7in screen and stylus smarts. It's the best giantophone there is.	£400 ★★★★★ BEST FOR SAUSAGE FINGERS
9		Motorola Moto G Google's sprinkled some magical Nexus dust over its latest Motorola blower: the Moto G costs a mere £160 yet has a distinctly non-budget 4.5in 720p screen and quad-core processor. Paltry storage and poor camera count against it – but then again: £160!	from £160 ★★★★★ BEST FOR RECESSION BUSTING
10		Nokia Lumia 1020 Finally, a cameraphone worthy of the name. The WP8-running 1020 takes superb 38MP snaps, or super-detailed 5MPers. Optical stabilisation and xenon flash too. We also like the 1520 – a 6in WinPhone phablet with plenty of power, good looks and stamina too.	£370 ★★★★☆ BEST FOR CAMERA OBSESSIVES

● Prices quoted are for handset only unless otherwise stated

FOR THE FULL REVIEWS AND OUR SMARTPHONE BUYING GUIDE, VISIT STUFF.TV/TOP-10S/SMARTPHONES

Available online at:

www.argos.co.uk

N Touch - Connect - Play Connectivity

HOT BUY 1		Apple iPad Air The more things change, the more they stay the same. As the addition of the 'Air' moniker implies, the iPad's been slimmed down on the outside and beefed up on the inside, while retaining all the other goodies that made previous versions great. So it now rocks the 64-bit A7 chip and M7 motion coprocessor that debuted with the iPhone 5s, while keeping the gorgeous screen, quality build and abundance of tablet-optimised apps that first won our hearts.	STUFF SAYS Now thinner, lighter and more powerful than ever, the iPad Air is a beautiful sliver of gadget heaven from £340 ★★★★★
2		Apple iPad Mini With Retina Display Apple's baby tab has been in for a nip and a tuck and emerged with a youthful-looking 2048x1536 screen. The flawless build quality, creativity-friendly 7.9in form and oodles of apps remain; only a few colour inaccuracies keep it behind the Air.	from £280 ★★★★★ BEST FOR CREATIVITY ON THE MOVE
3		Google Nexus 7 The Nexus has moved further ahead of the Android pack by virtue of getting an update to OS 4.4 KitKat. It's now smoother, faster and more battery-friendly than ever, while its 323 pixel-per-inch 1080p screen and quad-core power still impress.	from £160 ★★★★★ BEST FOR VALUE AND PERFORMANCE
4		Asus Transformer Pad The Transformers have always been more about laptop replacement than tableteering, and this one is the laptopiast yet. A 2560x1600 screen, two-day battery life (with keyboard dock) and quad-core Tegra processor all work Android up into a frenzy.	£410 ★★★★★ BEST FOR ALL-ROUND EXCELLENCE
5		Amazon Kindle Fire HDX 7in The Fire HDX presents a sanitised version of Android cloaked in a user-friendly Amazon skin. There's even a 'Mayday' button for instant video help. A great build, fast processor and stunning screen round off a package that'll appeal to families and less techy types.	from £200 ★★★★★ BEST FOR SAFE & SIMPLE TABLETEERING
6		Asus Transformer Book T100 This 10.1in tab-and-dock combo has enough grunt to run full Win 8.1 thanks to Intel's new Baytrail CPU. The 1366x768 screen is a good'un, with crisp text, great contrast and colours that pop, while dual-band Wi-Fi and a day-long battery are also welcome.	from £350 ★★★★★ BEST FOR DESKTOP VERSATILITY
7		Microsoft Surface Pro 2 The hardware boys and girls at Megahard do try awfully hard. But it's taken a second iteration of the Surface Pro for us to raise a languid eyebrow. Improved ergonomics and a battery-saving Haswell processor finally make the superslate a worthy buy.	from £715 ★★★★★ BEST FOR SUITED ROAD WARRIORS
8		Samsung Galaxy Note 10.1 (2014) The new 10.1 is fit to bursting with clever tricks, comes with the note-tastic S Pen and has a stunning 2560x1600 screen. But while we can forgive it its tacky looks, minor performance glitches deny it that fifth star; we hope firmware updates will fix them.	£400 ★★★★★☆
9		Advent Vega Tegra Note 7 With Nvidia's 1.8GHz quad-core Tegra 4 processor, and a 72-core GeForce GPU also thrown in, the Advent serves up a speed that shouldn't be possible at this price. The build quality is a bit flimsy, but for movie-watching and gaming it excels.	£140 ★★★★★☆
10		LG G Pad 8.3 Life's good for the LG team at the moment, with their smartphones making a genuine impression. A good time, then, to bring out a decent tablet, sensibly pitching it out of the all-sewn-up Nexus 7 territory. Great 8.3in screen, quad-core power; merely OK price.	£200 ★★★★★☆

FOR THE FULL REVIEWS AND OUR TABLET BUYING GUIDE, VISIT WWW.STUFF.TV/TOP-10S/TABLETS

@iT7Audio f iT7Audio ● www.iT7Audio.co.uk

You've Not Heard
Tunes This Good Before!



HOT BUY 1		Sonos multiroom system Who needs to drill holes and re-plaster walls to get a multiroom music system? Not you. With the addition of the cracking little Play:1 (£170) Sonos has made it easier than ever to start spreading your tunes around. Then maybe hook up a Connect to your existing hi-fi and router, and add speakers to a Connect:Amp in another room, or a SUB for a bass boost. You'll run out of rooms before you run out of options. For a further upgrade, the Arcam rSeries SonLink DAC works a treat with the Connect.	STUFF SAYS Infinite music in every room without the need for custom installers? Sign us up now, please from £340 ★★★★★
2		Cambridge Audio Stream Magic 6 Our favourite music streamer is only kept from the top spot by the brilliant flexibility of the full Sonos system; as a single player, we'd go for this every time. Team it with the Azur 651A amp (£350), feed it high-resolution 24-bit tunes and you'll never look back.	£700 ★★★★★
3		Naim UnitiQute 2 Awarded 'Best Music System £800-£1500' by our friends at <i>What Hi-Fi? Sound And Vision</i> , this punchy little system delivers a superb performance. With streaming smarts, DAB+ and internet radio it's highly capable. Just don't feed it low-quality music.	£1150 ★★★★★ BEST FOR TOP SOUND QUALITY
4		Bowers & Wilkins Z2 The baby of B&W's AirPlay range is a little belter, and it adds a proper Lightning dock to Apple's wireless tech. It'll easily fill a small to medium-sized room with chunky bass, punchy beats and lovely, clear vocals. You'll buy it for the look, but love it for the sound.	£330 ★★★★★
5		Denon CEOL Piccolo This diminutive standard-bearer for next-gen micro hi-fi has Spotify and a control app, and it'll stream your own tunes, right up to 24-bit. The dock's 30-pin, but who cares when you've also got AirPlay? Add Q Acoustics 2020i speakers for awesome sound.	£200 ★★★★★ BEST FOR VERSATILITY AND VALUE
6		Audio Pro Addon T10 Available in orange, white or black, the Addon T10 is a Bluetooth speaker that also has analogue inputs and a USB socket for charging your MP3 player. Sound-wise it's punchy and deep, with just a little too much bass. It sounds best in orange, obviously.	£250 ★★★★★
7		Libratone Zipp A fuzzy, cylindrical, colourful AirPlay dock that will deliver detailed, punchy 360-degree sound anywhere at all, thanks to a built-in battery that gives it four hours of outdoor life. Direct Wi-Fi skills free you from cables, routers and everything but the boogie.	£370 ★★★★★ BEST FOR AL FRESCO PARTIES
8		Sony SRS-BTM8 Forget that this Sony looks uncomfortably like a handbag because it's actually one of the biggest bargains in hi-fi right now. Pop in four AA batteries (old-school, right?) and it will power a party in the park. It's got fancy NFC too, but the best thing is that it sounds ace.	£55 ★★★★★ BEST FOR BARGAINOUS BLUETOOTH
9		Q Acoustics BT3 These ultra-versatile Bluetooth speakers have an optical input for waking up the audio of your flatscreen TV. The styling is simple and so is the sound – brilliantly so, with perfect hi-fi balance and an impressive focus to the stereo image.	£350 ★★★★★
10		Sony NWZ-ZX1 The latest Walkman is a premium high-res audio player, and it's the best-sounding portable device we've ever heard: you'll notice parts of songs you never knew were there. We're not so keen on the high price and lack of expandable storage, though.	£550 ★★★★★☆

FOR THE FULL REVIEWS AND OUR HI-FI BUYING GUIDE, JUMP OVER TO WWW.STUFF.TV/TOP-10S/HI-FI



CROMO[®]
 by **LINDY[®]**
NCX-100
 NOISE CANCELLING
 HEADPHONES
£99.98 RRP
www.lindy.co.uk



loaded
 RECOMMENDS



HOT BUY 1		AKG K451 They've actually been around a little while now, but what put the K451 on-ears back on to our radar was an official price drop from £130 to £80, and a real-world price of just £50. For that money they're unbeatable – awesomely agile and punchy sound wrapped up in a subtly stylish and foldable design. Add both standard and three-button control cables for maximising compatibility and there's practically no excuse for not getting brilliant sound from your phone.	STUFF SAYS Fantastic sound and great portability at an almost unbeatable price: the perfect PMP upgrade £50 ★★★★★
2		Bowers & Wilkins P3 Superb sound and a solid and achingly stylish design make these the best portable on-ears around. The fact that two cables come in the box – one with a mic and remote for iPhones, one without – only sweetens the already candyfloss-like deal.	£125 ★★★★★ BEST FOR ON-EAR EXCELLENCE
3		SoundMagic E10 Yes, we also gave the very similar SoundMagic ES20s in-ears five stars. And they thoroughly deserve it. But we chose to keep these here because the more expensive E10s still represent a killer smiles-per-pence, sound-per-pound ratio.	£25 ★★★★★
4		Sony XBA-4iP These chunky in-ears have four drivers pumping exceptionally punchy, detailed sound into your gloriously spoilt eardrums, but despite the fairly hefty design they're surprisingly comfortable too. They were £400 at launch, so £250 is a fantastic deal.	£250 ★★★★★ BEST FOR IN-EAR EXCELLENCE
5		Sol Republic Master Tracks Really tough things are usually really ugly, which is why the lovely styling of the "virtually indestructible" Master Tracks headphones is so refreshing. Loud, punchy, fast and controlled, the sound is just as attractive as the design. Worth every penny.	£170 ★★★★★
6		Final Audio Design Adagio III Calling a pair of headphones Adagio seems a bit pretentious, but these decidedly affordable in-ears from a Japanese company that usually occupies the most bonkers reaches of high-end earn it with brilliantly detailed and endlessly attacking sound.	£70 ★★★★★
7		Bose AE2w We're not going to pretend that the protruding Bluetooth module isn't a rather ugly touch, but what's most important is that these Bose headphones deliver wireless sound of superb quality. We'll put up with looking a wee bit daft for musical magic.	£200 ★★★★★ BEST FOR GREAT SOUND WITH NO WIRES
8		SoundMagic P30 We love SoundMagic's E10s, and our toe went into tap-spasms from the get-go with these on-ear P30s. Delivering a really easy-going yet dynamic sound, they aren't perfect, especially in the treble, but they'll do great work on low-res Spotify tracks.	£70 ★★★★★
9		Sennheiser Momentum Classily styled, cushion-comfortable and smooth-sounding, the Momentums are the perfect over-ears for the dapper man about town. There's also an on-ear version – smaller and cheaper at £170, available in pink, blue, green and, um, ivory/brown.	£210 ★★★★★ BEST FOR QUALITY AND STYLE IN ONE
10		PSB M4U2 Yes, the M4U2s have got great noise-cancelling, but that's only half the story. Using the built-in amp produces a sound that's almost unbelievably punchy, clean and exciting. They might be a bit heavy, but that audio quality really is worth the weight.	£270 ★★★★★ BEST FOR SHUTTING OUT THE WORLD

FOR THE FULL REVIEWS AND OUR HEADPHONE BUYING GUIDE, VISIT STUFF.TV/TOP-10S/HEADPHONES

Bowers & Wilkins

Hear the full spectrum

P3 Bowers & Wilkins have been established as masters of sound engineering for almost 50 years. We are now able to bring that same expertise to the world of headphones; the same precision, the same care, the same extraordinary range and depth of detail is now available from an ultra-light, highly portable set of headphones superbly designed to fit into your life.



BLU-RAY PLAYERS

HOT BUY	1		Sony BDP-S790 A quite remarkable device, this Sony sounds great, has a wonderful picture in 2D or 3D and is crammed with on-demand content including Sony's own Movies Unlimited. Its trump card is 4K video upscaling: you may not need it yet, but you soon will.	£380 ★★★★★	BEST FOR ON-DEMAND FILMS
	2		Panasonic DMP-BDT330 Panny's latest Blu-ray player just pips the Sony above on pure picture and sound quality, but loses out on smart features and on-demand options. So if disc-based viewing is more your thing than streaming, go for this one. Plus it looks great too.	£175 ★★★★★	BEST FOR SOUND AND PICTURE
	3		Marantz UD7007 Pricy like an Aston Martin is pricey and about as satisfying to own, this Marantz can play any disc you like, streams music at high-def resolutions and can withstand an earthquake. If you really, really take movies and music seriously, this is your player.	£495 ★★★★★	BEST FOR THE ULTIMATE IN QUALITY

SPEAKER SYSTEMS

HOT BUY	1		Sony BDV-N590 The biggest bargain in home cinema, the Blu-ray-packing N590 has a massive spec but a micro price. Picture and sound are excellent, Sony's smart services are immense and its stylish curves and touch-sensitive controls add a dash of premium quality.	£240 ★★★★★	BEST FOR AWESOME ALL- IN-ONE VALUE
	2		Sonos Playbar A characteristically Sonos take on the soundbar, the Playbar hooks up to your TV via its single optical input and fills your room with a big, detailed sound. And as with all Sonos kit, it can stream your own music files, Spotify and more wirelessly around the house.	£600 ★★★★★	BEST FOR ALL-YOU-CAN- STREAM MUSIC
	3		Denon DHT-T100 Soundbases – deep soundbars that you put your TV on top of – are all the rage, because they are bassier than soundbars but still fairly space-efficient. The Denon is our favourite right now for its sweeping musicality in addition to its movieness.	£230 ★★★★★	BEST FOR BASS AND SPACE

PVRs, ETC

HOT BUY	1		Sky+HD The new Sky boxes come with built-in Wi-Fi, to make it easier to access on-demand programming, and you can opt for a 2TB drive. Which, with more than 65 channels of HD, might well be worth the outlay. On the move, the Sky Go app is supremely slick.	from £free + £21.50/month ★★★★★	BEST FOR DELIVERING EVERYTHING
	2		Virgin TiVo Hardware-wise, the taste-learning TiVo is a Sky+HD-beater, but it loses out on content. Mind you, subscribers to the 'XL' package now have free access to all the BT Sport channels: Premier League kickyball, MotoGP and more, in lovely HD.	from £free + £24/month ★★★★★	BEST FOR SMART TELLY- WATCHING
	3		Humax DTR-T1010 YouView Delivering free-to-air TV with the convenience of Sky or TiVo, the Humax lets you browse the last week's catch-up TV direct from the EPG or record your own on its HDD. The iOS/Android app's remote record is handy, and it's all without a costly subscription.	from £170 (500GB) ★★★★★	BEST FOR SUBSCRIPTION- FREE TV

FOR OUR COMPLETE HOME CINEMA TOP 10 LISTS, POINT YOUR CLICKER AT WWW.STUFF.TV/TOP-10S

PLUG INTO STUFF'S
SOCIAL NETWORK

 twitter.com/stufftv



HOT BUY	1	SONY KDL-50W829B If you'd suggested two years ago that a 50in, edge-lit LED LCD TV as good as this would soon be available for less than a grand, you'd have been burnt as a witch. Or at least laughed at. It excels in almost every regard, from its stylish design to its bright, vivid picture and well-thought-out smart TV offering. Would we buy one? You bet we would. And if you're in the market for a smart TV this year, we recommend you give it a look too.	STUFF SAYS Thank you, Sony. A great picture and tons of smarts for less than a grand... what's not to like? £900 ★★★★★
	2	Panasonic TX-P55VT65B Wow. The picture is nothing short of exceptional, with rich colours, deep blacks and outstanding depth in 2D or 3D. It's packed with clever tech, from voice commands that actually work to multiple homescreeens and smart apps. The TV of your dreams.	£1900 ★★★★★
	3	Samsung UE46F7000 The F7000 might just be the sweetest spot in Samsung's current range – the same spectacular performance as the F8000 series but without the show-off design. Great picture quality and slick online functionality in one box.	£1200 ★★★★★
	4	Panasonic TX-L32E6B Time was when buying a budget bedroom TV meant making major sacrifices on performance and features. Not any more. This 32in Panasonic serves up a vibrant, detailed picture and comes with on-demand treats such as iPlayer and Netflix built in.	£380 ★★★★★ BEST FOR SMALL-SCREEN SMARTNESS
	5	Samsung UE40F6400 All of the UK's catch-up TV services? Exciting and immersive picture? Costs less than £500? Yes, please. The Samsung comes with all the bells and whistles of a modern smart TV, including active 3D and voice control. It's an amazing TV bargain.	£450 ★★★★★ BEST FOR BARGAIN HUNTERS
	6	Finlux 40F8073-T Finlux is fast becoming the go-to brand if you're after a decent TV at a proper budget price. The strengths of this screen – the crispness, the level of detail, the on-demand video services – far outweigh the sound quality shortcomings.	£300 ★★★★★ BEST FOR TV ON A BUDGET
	7	Sony KD-55X9005A Welcome to the cheap end of the 4K spectrum. Yes, it's all relative. This 55in Sony looks amazing when tasked with proper 4K content, but its main drawback is that very little of that exists yet. That said, normal HD stuff looks wonderful too.	£2100 ★★★★★☆ BEST FOR 4K EARLY ADOPTERS
	8	Samsung UE55F8000 Yep, the F8000 has taken one hell of a fall from its previous position at the top of this tree. Has it suddenly got worse? No. But now that it's been tested against newer sets, its picture flaws are more apparent. If not for its price it'd be higher, though.	£1550 ★★★★★☆ BEST FOR FEASTING ON SMART TV
	9	Sony KDL55W955 Sony claims its new 'wedge design' gives greater internal volume and lowers the centre of gravity. The excellent colours, motion and sound quality are all admirable, but for a flagship, it lacks a wow factor and is hindered by a lack of depth in its black levels.	£1600 ★★★★★☆
	10	Samsung KE55S9C A TV with a twist – well, a bend, actually. This beautiful OLED set's curve divides opinion – some find it immersive, some find it annoying – but boy does it have a great picture. Its preposterous price and lack of future-proofing 4K are the only things that let it down.	£6150 ★★★★★☆

FOR THE FULL REVIEWS AND OUR TV BUYING GUIDE, NAVIGATE TO WWW.STUFF.TV/TOP-10S/TVS

IN CASE
YOU
MISSED...
ANDROID
SUPERTEST



Sony Xperia Z2
from £600 / sony.co.uk
The Z2 makes almost zero compromises – on screen, sound, camera or battery life. The design is gallery-worthy, with rounded metal corners and minimalist details, but your hands might not like it – both the S5 and One M8 are easier to hold than this 163g block.
★★★★★



Samsung Galaxy S5
from £480 / samsung.com
The S5's screen is easier to read outdoors than those of its rivals, but the HTC and Sony bring out more detail. Features rule, with a swappable battery, microSD storage, the ability to run two apps side by side and even a heart-rate sensor round the back.
★★★★★



HTC One M8
from £520 / htc.com
When it comes to Android hardware, the HTC is in a class of its own. This is a device you have to hold in your hand to understand the appeal: the extras on the S5 and Z2 simply don't compare to the pure gadget joy you get with the One M8.
★★★★★

HOT
BUY

1



Apple MacBook Air (2014)

The 2014 MacBook Air update means, once again, our favourite old laptop is now our favourite new laptop. Nothing's changed on the outside, and under the skin there's just a slight processor boost from 1.3GHz to 1.4GHz, but combined with a price cut of £100 on each model we're still happy with that. The very top model, which comes with a 256GB SSD, is now just under a grand, too. Stay tuned for our full review of the lightly tweaked MacBook Airs on stuff.tv

STUFF SAYS

It's not a major upgrade, but Apple has improved the Air's already awesome spec and lopped £100 off the price

from £750 ★★★★★

2



Apple MacBook Pro with Retina Display 13in (2013)

We're all agreed that the best laptop is a MacBook, but choosing between Air and Pro is getting steadily harder. Both now run on Haswell chips, but the Pro is faster. It also gets a 4K-capable Thunderbolt 2 port, and then there's that Retina screen. Tough call.

from £1100

★★★★★

BEST FOR
EVERYTHING
BAR THE PRICE

3



Alienware 17

A brute of a machine in every way, the Alienware 17 weighs as much as four MacBook Airs and probably frags harder than 10 of them. Core i7 Haswell processor at 3.4GHz, Nvidia GeForce graphics, up to 32GB of RAM... Our trigger finger's already itching.

from
£1500

★★★★★

BEST FOR
SERIOUS
GAMERS

4



Asus Zenbook UX302

Asus has done a wonderful job of creating an ultra-slim laptop that's as far removed from Apple's influence as possible, while maintaining a stylish and unique aesthetic. The 13.3in display is razor-sharp and colourful – this is our favourite Ultrabook.

£1000

★★★★☆

5



Acer C720 Chromebook

Bargain Chromebooks are everywhere right now, but the C720 stands out even so. It's well made, well specced (for a Chromebook) and crucially, has proper ports: HDMI, USB3.0 and SD are all here. The HP at No.7 is prettier, but the Acer's the one we'd buy.

£200

★★★★☆

BEST FOR
VALUE AND
PORTABILITY

6



Acer Aspire S7

The Aspire S7 is almost the perfect Ultrabook – it matches the MacBook Air for weight, beats it for slimness by 6mm, and has a gorgeous 1920x1080 touch-friendly screen. Only its battery, which lasted a mere 5hrs on test, prevents it getting that fifth star.

£1100

★★★★☆

7



HP Chromebook 11

HP's done a fine job with the 11 (ignoring the recent faulty power supply recall): it's small, light and everything a neo-netbook should be. However, the Chromebook 14 has since launched on the HP store and is worth a look if you want a larger screen.

£200

★★★★☆

8



Asus S200E

The touchscreen makes it ideal for Windows 8, but the S200E's also got a top keyboard, bags of connectivity and enough power for 3D gaming. Specs aren't top notch, but with an i3 Sandy Bridge core, 4GB RAM and a 500GB HDD, it's good enough at this price.

£285

★★★★☆

9



Lenovo IdeaPad Flex 15D

Lenovo's latest contorting computer is hefty, which is handy in that you get a full keyboard and 15in screen, but a bit of an issue in terms of portability – and it means the 1366x768 resolution looks a little soft. It stands up nicely for movie-watching, though.

£475

★★★☆☆

BEST FOR
LITERAL
FLEXIBILITY

10



Maingear Pulse 17

The brazen Maingear is fire-engine red and, at a colossal 17 inches, it certainly stands out. For gaming, its dedicated mode, smooth frame rate and storage make it a winner, but an unresponsive keyboard and average battery life hold it back from greatness.

£1300

★★★☆☆

FOR THE FULL REVIEWS AND OUR LAPTOPS BUYING GUIDE, VISIT STUFF.TV/TOP-10S/LAPTOPS-NETBOOKS

THIS
MONTH
IN...
2001



Nintendo Game Boy Advance

£100

Stuff said We can't emphasise it enough: Game Boy Advance is utterly superb, and cheap as chips into the bargain. Ten hours' playtime dwarfs the other travel entertainment options. It's the must-have console for 2001.

★★★★★



Mini Cooper

£11,600

Stuff said BMW's new Mini retains all the heritage, ride and spirit of the original. It's a pity about the lacklustre 1.6-litre engine, but with a hotter Cooper S and an Alpina-inspired Mini in sight, the acceleration problems will be a thing of the past.

★★★★☆



Compaq iPaq

£450

Stuff said Add a PC card jacket (£90) and a Nokia Cardphone 2.0 (£150) for a bulky solution that flies – you can receive data at up to 28kbps, which is fast enough to browse without pain. All pages look absolutely stunning, with clear graphics and perfectly formatted text.

★★★★☆



Canon PowerShot G1

£800

Stuff said The combination of a 3x optical zoom lens and 3.3MP image resolution ensures results are consistently sharp, while the USB interface and PowerShot desktop browser make downloading and uploading images simple. This is hard to beat.

★★★★★



HOME COMPUTERS

HOT BUY	1		Apple iMac The iMac is thinner and more powerful than ever: Core i5 or i7 and at least 8GB RAM running the none-more-elegant OS X Mountain Lion. A 2013 update brought Intel's Haswell CPU, a hybrid storage option, speedy 802.11ac Wi-Fi and a price increase.	from £1050 ★★★★★	BEST FOR ALL-ROUND BRILLIANCE
	2		Sapphire Edge VS8 This mini-PC may look like Terminator's lunchbox, but instead it houses AMD's 1.6GHz A8 APU and dedicated HD7600G graphics with 4GB of RAM. A capable little fellow, the VS8 even does a decent job with the latest gaming titles (with the detail dialled back a little).	from £280 ★★★★★	BEST FOR COMPACT POWER
	3		Alienware X51 (2014) The X51 hasn't changed a huge amount, but the wee size matched with powerful components make it perfectly suited to HD gaming. Steam Machines are going to liven this market up but right now it's the best balance of power and form in PC land.	from £600 ★★★★★	BEST FOR HARDCORE GAMERS

SAT-NAV

HOT BUY	1		TomTom GO 6000 The four-figure model name marks this an 'Always Connected' device with a SIM card for live traffic updates, while the '6' in the name refers to its crisp 6in, 800x480 screen. It's rather good, if huge. Smartphone-connected versions (600, 500, 400) are cheaper.	£250 ★★★★★	BEST FOR TOTAL TRAFFIC KNOWLEDGE
	2		Google Maps Navigation Apple's Maps app remains pretty, but flawed. With Google Nav now back in the iTunes Store, there really is one solid choice for both iOS and Android users and this is it. Street View, accurate public transport info, cycle maps and decent traffic warnings. Bingo.	£free ★★★★★	BEST FOR BUDGET TRAVELLERS
	3		Garmin nüvi 3598LMT-D Still pricier than the TomTom, the flagship Garmin has a similarly crisp (if only 5in) 800x480 screen, with clever photo-realistic junctions and 3D terrain. The DAB traffic works fine, but the extra cable is a faff too far for us.	£280 ★★★★★	BEST FOR TRAVELLING WITH STYLE

CAMCORDERS

HOT BUY	1		Sony HDR-CX410VE Our choice for full-fat filming at non-professional prices, the Sony records razor-sharp footage at a TV-style 50fps, has a monster 55x zoom, a three-hour battery and image stabilisation that lets you run and shoot handheld simultaneously. Just don't trip up.	£360 ★★★★★	BEST FOR TOP-QUALITY HOME MOVIES
	2		Canon XA10 Canon's ultra-compact XA10 handles fine detail superbly due to its f/1.8 lens and 2.37MP chip. It might not look big enough to play with the big boys, but twin XLR inputs on its detachable handle give would-be filmmakers professional prowess right out of the box.	£1100 ★★★★★	BEST FOR SERIOUS SHOOTERS
	3		GoPro Hero3+ Silver Edition You may well wonder why the flagship Black Edition of the Hero3+ isn't in this slot, but for our money the extras don't quite justify the extra expense. We reckon the Silver Edition is the current, umm, hero of the range, and a killer cam for your killer stunts.	£220 ★★★★★	BEST FOR ACTION-JUNKIE FILMMAKERS

FOR THE FULL REVIEWS IN EACH CATEGORY AND OUR BUYING GUIDES, VISIT WWW.STUFF.TV/TOP-10S



Stuff DIGITAL

Every gadget, every review, every page,
available on PC, Mac, iPad and Android
www.stuff.tv/digital-magazine

+
FULL iPad
APP OUT
NOW!

HOT
BUY

1

**Grand Theft Auto 5** PS3/Xbox 360

You probably think you already know everything there is to know about *GTA 5*. After all, if you've been alive anywhere in the world for the past year you'll have read all about life in Los Santos. So you'll already know that it shines a satirical torch on the 21st century religion of celebrity. And that everything from social media to self-help gurus gets a kicking. And that it's better-looking than ever. But really you only need to know one thing about it: it's the most fun you'll have on a console this month.

STUFF SAYS

The gargantuan gameworld of Los Santos is the most entertaining place to hang out since *Vice City*

★★★★★

2

**The Last Of Us** PS3

The best zombie-apocalypse game ever? Definitely. *The Last Of Us* looks magnificent and plays even better, with a genuinely moving story and frights aplenty. It's tough – but then a real-life zombie apocalypse would be. Think of this as essential prep.

★★★★★

BEST FOR
ZOMBIFIED
HORROR

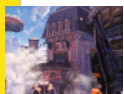
3

**Tomb Raider** PC/PS3/Xbox 360

Yes, it's a Franchise Reboot, but the well-paced mixture of puzzles, action sequences, gun fights and stealth make the latest Lara Croft adventure an immersive, cinematic experience. Possibly the best fun we've ever had pretending to be a 21-year-old girl.

★★★★★

4

**Bioshock Infinite** PC/PS3/Xbox 360

From its achingly gorgeous setting in the skies to a super-intelligent story that tackles religion, racism and metaphysics, *Infinite* is an innovative *tour de force*. None of that would matter if the gameplay lagged – but it barely puts a foot wrong either. Stunning.

★★★★★

BEST FOR
MIND-BENDING
STORYLINES

5

**FIFA 14** PS4/Xbox One

The next-gen edition of *FIFA 14* is, perhaps unsurprisingly, better than the PS3/Xbox 360 version, thus its recent leap a couple of places up the table. Players and crowd are more realistically presented, and there are improvements in gameplay and flow.

★★★★★

BEST FOR
SIT-DOWN
KICKYBALL

6

**Batman: Arkham Origins** PC/PS3/Xbox 360/Wii U

The third game in the *Arkham* series sees the caped crusader go back to the beginning for a not-so-merry Christmas in Gotham. New multiplayer mode and new gadgets freshen things up, but otherwise it's more of the same. For once that's no bad thing.

★★★★★

7

**Titanfall** Xbox One

The biggest Xbox One game launch so far, this FPS robot-fighting sim came with high expectations... and just about lives up to them. It's a brilliant smash-fest, in a world where it rains massive 'Titan' robots to board and attack. The storyline is weak, though.

★★★★☆

NEW

8

**Mario Kart 8** Wii U

Building upon lesser recent entries while adding flashy new twists and delightful physics-defying courses, *Mario Kart 8* is a rare Wii U highlight. Although single-player still lacks punch, multiplayer is endlessly entertaining: it's glossy and fluid throughout.

★★★★☆

9

**Dark Souls II** PC/PS3/Xbox 360

You might never play a tougher game than this old-school action-RPG sequel, which drops you into the mystical land of Drangleic and lets you figure things out for yourself. Mostly by being killed... but that just makes it all the more rewarding when you get it right.

★★★★☆

NEW

10

**Wolfenstein: The New Order** PC/PS3/PS4/Xbox One/Xbox 360

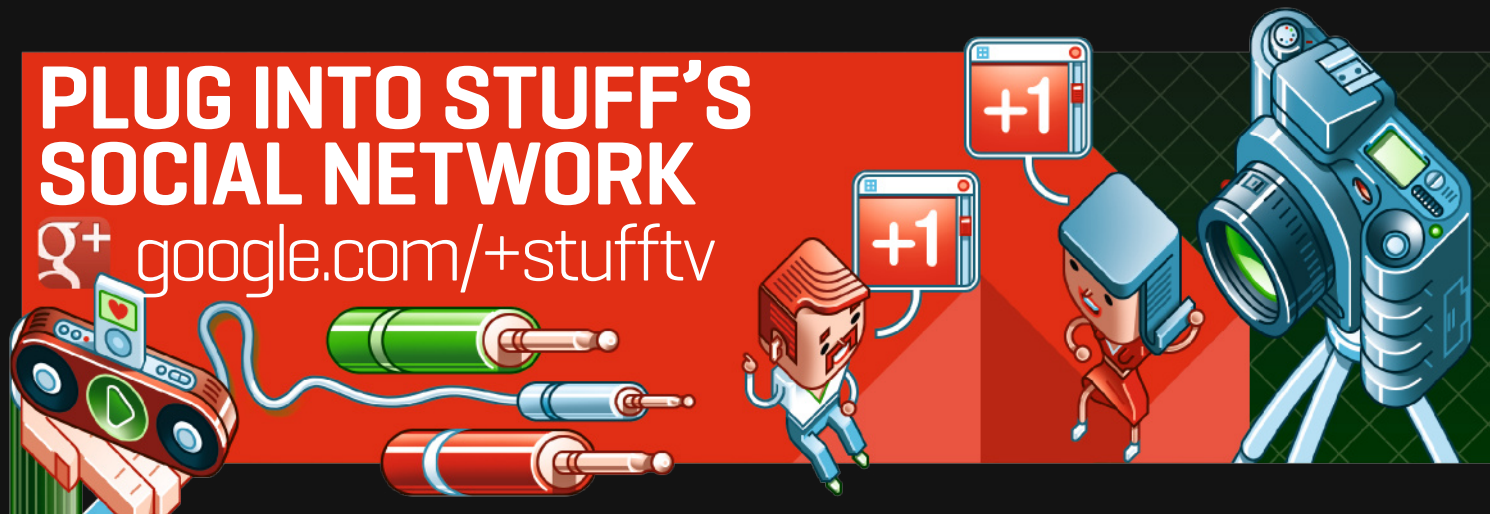
How do you solve a problem like Nazi world domination? With guns. Lots of guns. Even so, this remake might not be exactly what you're expecting: as well as carnage and genetically engineered soldiers, there's a sombre message on the pointlessness of war.

★★★★☆

FOR THE FULL REVIEWS AND OUR GAME-BUYING GUIDE, VISIT STUFF.TV/TOP-10S/APPS-GAMES/GAMES

PLUG INTO STUFF'S SOCIAL NETWORK

google.com/+stufftv



HOT BUY 1		Sony PlayStation 4 Sony's next-gen console may not quite be the finished article, but it's already the best games machine on the planet. With whisper-quiet operation and a sleek form, it'll slot neatly into your lounge setup, but more importantly it offers bags of power, with full 1080p on all titles and not a whiff of lag. The controller's vastly improved, too, while remote streaming to PS Vita is a nice bonus. All that and it's also cheaper than the Xbox One. When proper media streaming arrives, it'll be unstoppable.	STUFF SAYS Slick, powerful and packed with stand-out features, the PS4 delivers on the next-gen console promise £350 ★★★★★
2		Microsoft Xbox 360 Yes, it's been succeeded by the One, but the years have been kind to the 360. With an amazing catalogue of recent games that use its full potential, brilliant media streaming skills and a low, low price it's impossible not to recommend it to cash-strapped gamers.	from £155 ★★★★★ BEST FOR BUDGET GAMING
3		Sony PlayStation 3 The PS3 has been around a while, but, like the Xbox 360, that just means it has plenty of great games. Online gaming via PlayStation Network is still brilliant and still free (it's £40/yr for PS4), and it's worth buying for its Blu-ray and media streaming alone.	from £150 ★★★★★
UPDATE 4		Alienware X51 (2014) The X51 hasn't changed a huge amount, but the wee size matched with powerful components make it perfectly suited to HD gaming. Steam Machines are going to liven this market up but right now it's the best balance of power and form in PC land.	from £600- ★★★★★
5		Microsoft Xbox One The new Xbox aims for the stars and, if it falls short on occasion, it should be applauded for trying. Next-gen games run beautifully – albeit in 720p, in some cases – and it's packed with tricks such as Kinect voice control. Once the minor UI flaws are fixed it'll get 5 stars.	£400 ★★★★★☆
6		Nintendo 3DS XL The bigger version of Nintendo's latest handheld serves up a larger 3D sweet spot and slightly more premium finish than its smaller sibling. There's still only one thumb stick, but it's a tried-and-tested design that's served Nintendo titles very well over the years.	£160 ★★★★★☆
7		Sony PlayStation Vita Slim The Slim (aka PCH-2000) is comfier to hold than the original Vita, it lasts longer, it no longer relies on proprietary cables and the screen is an improvement... but Sony could have gone so much further, not least by adding more than 1GB of internal storage.	£155 ★★★★★☆ BEST FOR PORTABLE PLAYTIME
8		PC Specialist Nvidia GTX Titan Battlebox This powerhouse delivers mind-blowing 4K gaming, bringing eye-searing detail to Arkham Origins in our test. But twin Nvidia GTX Titan graphics cards and liquid cooling don't come cheap, and neither will the 4K monitor you'll need to go with it.	£3900- ★★★★★☆ BEST FOR FLUSH 4K FETISHISTS
9		Nintendo Wii U While it hasn't had the same impact as the original Wii, don't underestimate the Wii U's fun factor. Nintendo's bottomless bag of superb game franchises rolls on, with the excitement of the Mario Kart 8 release (with its anti-gravity karts and submarine racing).	£240 ★★★★★☆ BEST FOR NINTENDO FANS
10		Nvidia Shield Like an Xbox controller with a 5in screen stuck to it, this Android console is (just about) portable enough to play on the bus. As well as having access to hundreds of games via Google Play, the Shield can stream full PC titles from your PC – pretty damn cool.	£220 ★★★★★☆

FOR FULL REVIEWS OF ALL THE CONSOLES FEATURED HERE, VISIT STUFF.TV/TOP-10S/GAMES-MACHINES

**CAR
NAME
GAME**

AVAILABLE TO DOWNLOAD FOR FREE NOW

SEARCH

"CAR NAME GAME"

IN THE APP STORE



NOW ON
iPHONE

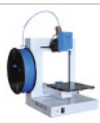
Stuff

iPAD EDITION

DOWNLOAD FROM THE APP STORE THIS MONTH



FULLY INTERACTIVE • EXCLUSIVE HANDS-ON VIDEO
360° PHOTOGRAPHY • ZOOMABLE IMAGES

HOT BUY 1		Amazon Kindle Paperwhite There's a new Paperwhite out on the streets of the world, and it's brighter, whiter, faster and no more expensive. Contrast is improved, making your text blacker and the background less grey, while a claimed 25% faster processor goes largely unnoticed because it was always the fastest of the e-readers. A handy new Page Flip feature lets you keep your current page while flicking through the chapter in a pop-up window: finish the chapter, or go to sleep now?	STUFF SAYS The best screen, the best ebook store and new book-challenging features: Kindle's still on top £110 ★★★★★
2		3Doodler Essentially a 3D printer nozzle in a pen. Sticks of plastic are fed through like a glue gun and extruded at 200°C into thin air, where it immediately cools and solidifies, letting you 'draw' 3D structures. Amazing, and we've only burnt ourselves once. Maybe twice.	£100 ★★★★★ BEST FOR 3D SPACE CREATIVES
3		Korg Volca Beats This Roland TR-808-aping drum machine uses analogue and digital beats to amazing effect given the bargain price, offering a studio's worth of wizardry in a tablet-sized package. If this doesn't get the nation's youth making amazing music, nothing will.	£120 ★★★★★ BEST FOR ANALOGUE MAESTROS
4		Sennheiser X 320 These gaming cans – with a noise-cancelling mic, bass boost and controls for in-game and voice channels – are aimed at Xbox 360 users. Not of the Xbox persuasion? Look out for the U 320s, which will play nicely with your PS3, PC and Mac.	£25 ★★★★★ BEST FOR GAMEWORLD IMMERSION
5		Smart ebike This electric bike may be heavy and expensive, but its futuristic design, 250W motor and range of up to 62 miles make it ideal for the daily commute. And don't get hung up over the price anyway – petrol and car insurance for a year would cost you way more.	£1800 ★★★★★ BEST FOR POWERED-UP PEDALLING
6		DJI Phantom 2 Vision Want to recreate those <i>Apocalypse Now</i> sequences at your local lido? This quadcopter offers great filming potential thanks to its 14MP/1080p HD camera and videolink, built-in GPS and ability to beam images to your smartphone from 300m away.	£750 ★★★★☆ BEST FOR HIGH-FLYING FILMERS
7		Leap Motion Huge Kickstarter funding and promises of <i>Minority Report</i> -style PC input have come to this: a silent, KitKat-sized block of tech. It is very accurate, and the taster games are a blast, but it'll need more consistency between apps to become truly useful.	£50 ★★★★☆ BEST FOR ALT-CTRL FREAKS
8		Moga Ace Power This click-on controller adds two analogue sticks, a D-pad and all the usual buttons to an iPhone 5/5c/5s or 5th-gen iPod Touch. It's not brilliantly built and only works with selected games, but dedicated iOS gamers will swiftly get their money's worth.	£60 ★★★★☆ BEST FOR iGAMING ADDICTS
9		BMW i3 Finally, an electric car that doesn't feel like a compromise. Far from it – the i3 is in many ways the ultimate urban runabout, thanks to its superb handling, astounding acceleration and great fuel economy. It's packed with gadgets too. Only its price rankles.	from £25,680 ★★★★☆ BEST FOR ELECTRIC ROAD-WARRIORS
UPDATE 10		Up! Plus 2 Not since the early days of video encoding has a <i>Stuff</i> test caused such emotional rollercoasting. The Up! is the least frustrating – and least commercial – of the 3D printers we've tried, and the updated Plus 2 has a helpful auto-levelling build platform.	£1600 ★★★★☆ BEST FOR EARLY ADOPTERS

FOR THE FULL REVIEWS OF ALL THE GEAR ABOVE, BROWSE YOUR WAY TO WWW.STUFF.TV/REVIEWS

smart eBike
save £700

MRP £2,500 | Now £1,800



£150 deposit
33 payments at
£50 per month
0% representative APR*

smart
open your mind.

smart of Stockton-on-Tees
Concorde Way, Yarm Road, Stockton-on-Tees TS18 3RB www.syntnersmart.co.uk

Contact Louise Smith at smart of Teesside on **01642 660757**

*Terms and conditions apply. Finance is subject to status.

smart - A Daimler Brand.

HOT
BUY

1

**Sony DSC-HX60**

Last year's HX50 was our previous pick for the best compact camera around, and 2014's HX60 isn't a huge departure from its predecessor in terms of build quality, ease of use, specifications and performance — all of which are excellent. And thankfully the superb 30x zoom lens remains. What it does add is NFC (for quick pairing with a tablet or phone) and a newer Bionz X processor, making it a slightly nippier performer.

STUFF SAYS

Sturdy, simple to use and offering a huge zoom range for its size, this is a hugely capable all-rounder

£260 ★★★★★

2

**Fujifilm X20**

The X20 isn't all retro looks and no trousers. It excels in Advanced Auto mode and has manual controls and RAW shooting for creative days. The optical viewfinder, though small, is linked to the 4x zoom and frames well. All this, and it looks damn cool.

£310

★★★★★

3

**Nikon Coolpix AW110**

With a metallic body, sturdy locking mechanism and optional camo finish, our new favourite tough cam has got that whole military chic thing nailed. Its army — geddit? — of features includes excellent 16MP stills, 1080p@30fps video and glove-friendly controls.

£215

★★★★★

**BEST FOR
ADVENTUROUS
SNAPPERS**

4

**Sony DSC-RX100**

The 20MP RX100 is just what we're looking for in an advanced compact: pocketable with a huge 1in sensor that serves up great images. After something a bit different? Sony's crazy lens-without-a-body, the QX100, has much of the same tech.

£365

★★★★★

5

**Panasonic Lumix DMC-FZ200**

If you want a superzoom cam, the Lumix FZ200 wipes the floor with its rival snoopy snappers. A small and solid build is coupled with a 24x optical zoom, an excellent auto mode and spot-on exposure abilities. The downside is the video, which is a mixed bag.

£330

★★★★★

**BEST FOR
AT-A-DISTANCE
SHOOTING**

6

**Fujifilm FinePix X100S**

Fujifilm's souped-up its fixed lens retro shooter, with faster focusing and a big APS-C sensor. It's not all new though, keeping the 35mm-equivalent f/2 lens and hybrid viewfinder from the X100. A less retro version with black finish is now available too.

£700

★★★★★

**BEST FOR
DSLR PICS IN
A SMALL BODY**

7

**Canon PowerShot G16**

The G16 packs a lot into its sturdy body: optical viewfinder, loads of manual controls and an f1.8-2.8, 28-140mm (equivalent) zoom lens. Upgrades over the G15 include Wi-Fi and faster burst shooting of up to 12fps, while image quality is as good as ever.

£320

★★★★★

8

**Canon PowerShot S120**

Replacing the S110, the S120 is a compact camera for DSLR users on their days off. Its 12.1MP stills, low-light prowess and useful long-exposure modes are welcome, while its slightly laggy lens-ringing control and hit-and-miss Wi-Fi features take the shine off.

£260

★★★★☆

9

**Samsung Galaxy Camera**

The king of snap-sharing has a 4.8in screen, Android 4.1 and lots of filter and editing apps. Its 16.3MP images aren't the best, but it's a sexy slice of the future. Alternatively, there's the flawed-but-still-good S4 Zoom cameraphone, also awarded 4 stars.

£205

★★★★☆

**BEST FOR
ON-THE-GO
IMAGE SHARING**

10

**Nikon Coolpix S6700**

Your phone can probably match it for wide-angle photos in good conditions, but if you want to go equipped with a bit more creative control without loading yourself down with kit, the S6700 will be a useful addition to your gadget arsenal.

£150

★★★★☆

FOR THE FULL REVIEWS AND OUR CAMERA BUYING GUIDE, VISIT STUFF.TV/TOP-10S/COMPACT-CAMERAS



**DISCOVER A WORLD
OF FOOTBALL AT
YOUR FINGERTIPS**

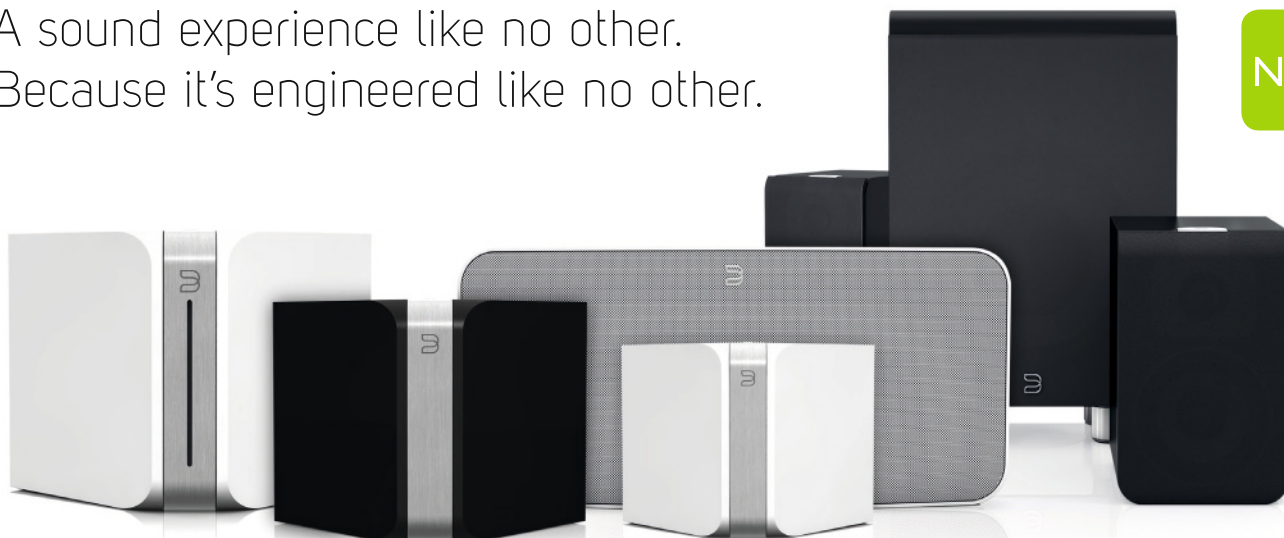
FourFourTwo
DIGITAL EDITION



BLUESOUND

A sound experience like no other.
Because it's engineered like no other.

NEW



BLUESOUND IS STREAMING, WIRELESS, MULTI-ROOM, 24-BIT TRUE HIGH-DEFINITION SOUND.

FOR THE LATEST PRICES AND OFFERS VISIT WWW.SSAV.COM OR CONTACT YOUR LOCAL STORE

Samsung **UHD TV** Curved

Ultra High Definition 4K



NEW

SAMSUNG

HU8500 SERIES • CURVED 4K UHD TV

Introducing a breakthrough in TV viewing that will change the way you watch TV forever – the Samsung HU8500 Curved UHD. Wider viewing angles, pure and accurate colour reproduction and a sense of depth never experienced before are only possible on a curved Samsung screen, specifically shaped for UHD viewing at its very best.

55 65 78 FREE 5 YEAR WARRANTY



NEW

CLAIM UP TO
£300
CASHBACK
Offer valid until 16/07/14

Panasonic

AX800 SERIES • 4K UHD TV

Supreme 4K Picture Quality and Full Network Connectivity

A high-end model that combines 4K picture quality with high-level innovative functions in a stylish design.

The use of the 3840 x 2160 4K panel produces high-definition picture quality. The newly developed high-brightness, high-color-space panel and 4K Remaster Engine provides a higher dimension of 4K picture quality.

As with the other models in the new VIERA range, you get Freetime built in. This allows you to get the advantages of roll back TV (for the past seven days) and easy access to all major catch up services directly from the Freetime programme guide including BBC iPlayer, ITV Player, 4oD and Demand 5.

<free time>

FREE 5 YEAR WARRANTY

50 58 65

SONY



4K

OFFICIAL TV OF THE 2014 FIFA WORLD CUP™

X9000B SERIES • 4K UHD TV

Picture quality that must be seen to be believed. With a screen resolution of 3840 x 2160 – that's 8 million pixels – 4K technology offers four times the detail of Full HD. Take a movie you've seen hundreds of times and you'll see things that you couldn't before, from an individual leaf on a distant tree to a tear drop in the heroine's eye.

55 65 79 FREE 5 YEAR WARRANTY



FREE SONY WIRELESS SUBWOOFER WORTH £249 + 1 IN 5 CHANCE TO WIN A PS4

Model: SWF-BR100W Offer valid until 13/07/14



NEW

PLEASE NOTE: SOME BRANDS/PRODUCTS ARE NOT AVAILABLE AT ALL STORES. SPECIAL/ADDED VALUE OFFERS ARE NOT IN CONJUNCTION WITH ANY OTHER OFFER (NICWAOO). ADVERT VALID UNTIL 30/07/2014. E&OE

www.SSAV.com

SEVENoaks
SOUND & VISION

HOT BUY 1		Olympus OM-D E-M1 Olympus' new flagship is armed with the same excellent 16.3MP sensor as its predecessor the E-M5, but now has an improved autofocus system, a startlingly good electronic viewfinder and masses of direct controls. Look out soon for the E-M10: pretty much an E-M5 minus the weatherproofing and with only 3-axis stabilisation, but with an improved EVF, better metering, enhanced Wi-Fi and built-in flash in a smaller, cheaper body.	STUFF SAYS Take the E-M5's amazing speed and quality, then add pro controls and you get the best system cam so far £900 ★★★★★ (body only)
2		Canon EOS 700D Look, it's a new Canon at No2. No, wait, it's the old one. Actually, it's kind of both. The 700D is a minor upgrade over the 650D, keeping the latter's 18MP sensor, flip-out touchscreen and autofocus during video and adding little beyond a new kit lens. It's still great though.	£380 (body only) ★★★★★ BEST FOR ALL-ROUND VALUE
NEW 3		Sony A7R We love this camera. It's light weight but tough and delivers results that outstrip pretty much any other compact system camera on the market. It has a huge full-frame 36.4MP sensor and noise-suppression. Your wallet might weep, but your photo album will sing.	£1350 (body only) ★★★★★ BEST FOR SHOOTING LIKE THE PROS
4		Nikon D600 Pro power has never come at such a reasonable price. A full-frame 24.3MP sensor combines with accurate 39-point autofocus for stunning results. Dual SD card slots, built-in flash and 5.5fps shooting speed complete a seriously powerful proposition..	£960 (body only) ★★★★★
5		Canon EOS 70D The 70D is Canon's best camera in years. It's the first 'proper' DSLR to nail autofocus in videos and Live View, offers a multitude of manual controls and can take stunning pics in almost any situation. Amateurs who've outgrown the entry level should look no further.	£680 (body only) ★★★★★ BEST FOR ADVANCED AMATEURS
6		Fujifilm X-T1 There's lots to love about this snapper, from its clever viewfinder and lightning-speed focus to the weatherproof body. One for the analogue lovers, it has actual buttons and dials with no touchscreen. The lack of in-cam image stabilisation is our only complaint.	£880 (body only) ★★★★★
7		Panasonic Lumix DMC-GX7 The 16MP Panasonic is a versatile beast that, while not being much of a looker, has added tricks such as a tilting EVF and a handy touchscreen LCD. It's great for smooth hi-def video recording and, with the bijou 20mm f/1.7 lens, is a great travel companion.	£550 (body only) ★★★★★
8		Pentax K-3 With a 24MP APS-C sensor, advanced autofocus system, snappy burst shooting and clever anti-aliasing simulator, the K-3 is a stills snapper <i>par excellence</i> . A weatherproof body and in-camera stabilisation are welcome, too, but it's not quite so hot with video.	£800 (body only) ★★★★★
9		Canon EOS 6D Canon's cheapest ever full-framer is an awesome little SLR with a few clever tricks up its lens. As well as its all-new 20.2MP sensor, it boasts a GPS receiver for geotagging your pics and Wi-Fi for direct uploading or remote control from an iPhone or Android device.	£1080 (body only) ★★★★★
10		Panasonic Lumix DMC-G5 The G5 is one of the few snappers with the pace to keep up with the Olympus E-M1's autofocus. Beginner-friendly controls, decent 16MP pics, touchscreen control and superb full HD 60fps AVCHD video recording all add up to a compelling package.	£300 (w/ 14-42 lens) ★★★★★

FOR THE FULL REVIEWS AND OUR DIGITAL SLR BUYING GUIDE, VISIT STUFF.TV/TOP-10S/DIGITAL-SLRs

SUBSCRIBE TO STUFF

Check out our great subscriptions offer on **p110**.

Terms and conditions apply, see **p110** for details.

FREE
LEATHERMAN
STYLE CS
MULTI-TOOL



wellman®

"I have been taking **Wellman®** for many years now and I just don't feel the same when I'm not using it. Anyone competing or living a healthy lifestyle should consider **Wellman®** in their life. I'm a champion and I recommend it."

Ashley Theophane

Ashley Theophane

- British Champion 2011 - 2012
- World Welterweight Champion (GBC)
- International Champion (IBO)
- Welterweight World Number 4 (IBF)

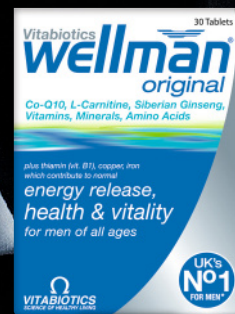
Wellman® is an advanced range of nutritional products, tailored to the specific requirements of men. It has helped **World Champion boxer Ashley Theophane** so whether you're competing or not, why not see what it can do for you?



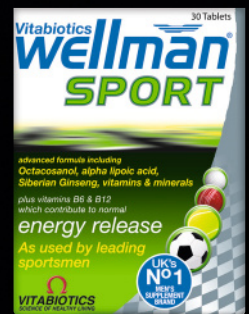

Britain's No.1
supplements*



www.wellman.co.uk



Wellman® Original
tablets



Wellman® Sport
tablets


VITABIOTICS
SCIENCE OF HEALTHY LIVING

From Boots, Superdrug, supermarkets, Holland & Barrett, GNC, Lloydspharmacy, pharmacies & health stores
*(IRI value data.52 w/e 02 Nov, 13). **UK's No1 men's supplement brand.

 facebook.com/Vitabiotics

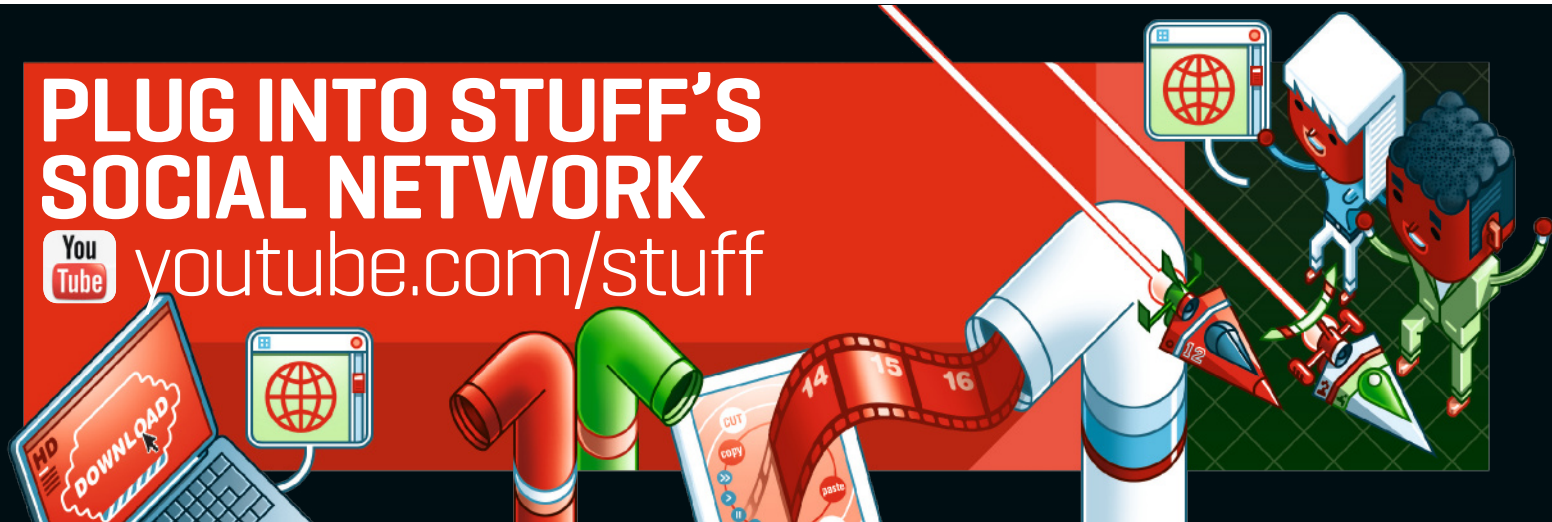
HOT BUY 1		Pebble Steel Unveiled at CES 2014, the Steel keeps the straightforward looks, crisp display and five-day battery life that helped the standard Pebble win our hearts. But it holds more RAM, apps and customisable faces this time, and swaps the plastic for either a 'Steel' silver or matte black stylish suit, making it look and feel more like an actual watch. The Steel goes beyond the gimmicks and into the world of real-world wearable tech. Pop it on your wristwear wish-list.	STUFF SAYS The best smartwatch money can buy... and the original plastic Pebble is still available for £50 less £140 ★★★★★
2		Fitbit Flex The Flex delivers all of Fitbit's activity-tracking smarts but in a form factor that's less fiddly than its belt-clip counterparts. It's packed with Bluetooth, NFC, vibratamotor and a display. America already has the new Force band, with a proper display. Here soon.	£70 ★★★★★ BEST FOR TRACKING YOUR LIFE
3		Jawbone UP24 Now with Bluetooth for hassle-free syncing, the stylish UP24 is worth the extra £25 over the Jawbone Up. The app introduces new challenges and tracks your sleep patterns. It will also gently nudge you, if you're lazing around, to get back on the move.	£120 ★★★★★
4		Nike Lunar TR1+ The TR1+s are the smartest gym clogs we've seen, packed with pressure sensors and accelerometers. The Nike+ training app tracks your exertions and helps refine your technique, for example telling you to shift more weight to your heels during squats.	£125 ★★★★★ BEST FOR STEPPING UP YOUR STATS
5		Garmin Forerunner 620 Garmin's wealth of experience in wrist-mounted GPS shines through, offering up a cacophony of stats, including vertical oscillation (how much you jiggle while running) thanks to the smart heart-rate belt. Could be cheaper and more user-friendly, though.	£280 ★★★★☆
6		TomTom Multi-Sport Cardio The new version of the TomTom Multi-Sport adds an impressively accurate heart-rate sensor to an already strong formula, allowing for more focused and personal training. It'll track runs, cycles and swims, and the companion app is also much improved.	£280 ★★★★☆ BEST FOR TRIATHLETES IN TRAINING
7		Samsung Gear 2 Neo It's the 'budget' plastic version of Samsung's Gear 2, but does 99% of what the more expensive device can do, although it does not have a camera. Only compatible with certain phones, it is the Gear we'd be most likely to buy, but it's far from essential.	£170 ★★★★☆
8		Nike Fuelband SE The original Fuelband was early to the fitness tracker scene, doling out Nike Fuel points like slices of fitness carrot. Though now updated, it's still easier to fool than other fitness bands and its high price and iOS-only app mean it comes in at three stars.	from £120 ★★★☆☆
9		Samsung Gear Fit Durable, comfortable and only 55g, the Gear Fit looks great but is ultimately a bit disappointing. It has unreliable heart-rate tracking and an unresponsive curved OLED screen that's awkward to read, especially on a run. Fit by name, but not by nature.	£170 ★★★☆☆
10		Sony Smartwatch 2 With businesslike looks, decent battery life and the biggest app selection of any smartwatch, Sony's Android 'smartphone remote' shows plenty of promise. However, an unresponsive touchscreen and crippling software glitches dumb it down.	£100 ★★★☆☆

FOR FULL REVIEWS OF ALL THE KIT ON THIS PAGE, VISIT STUFF.TV/TOP-10S/WEARABLE-TECH

PLUG INTO STUFF'S SOCIAL NETWORK



youtube.com/stuff





HOT BUY 1		Philips Hue It might seem like a gimmick, but having Wi-Fi-enabled, colour-changing lightbulbs isn't just good for impressing mates and spooking guests at seance parties. These smart LED bulbs come into their own when paired with 'recipes' on ifttt.com – set them to change colour with the weather or when it's time to run to the train. They also tie in neatly with Philips' own Ambilight TVs, casting the colours from the screen across your entire room. A great thingernet starter.	STUFF SAYS The humble lightbulb is reborn as a net-connected, colour-changing, mood-sensing smart device from £50 ★★★★★
2		Sonos Play:1 You don't need to be planning a multi-room system to buy the Play:1, as it's a stellar speaker in its own right, streaming from Spotify <i>et al</i> at the command of your phone or tablet. But team it up with another Sonos and you'll be multi-rooming in minutes.	£170 ★★★★★ BEST FOR MULTI-ROOM AMBITIONS
3		Synology DS214SE Within this entry-level hardware beats the best NAS (network attached storage) software yet. Not gorgeous to look at, but at least it's small and easy to hide away. If you're new to the NAS party, the DS214se is the cheapest way to get onboard.	£120 ★★★★★ BEST FOR BACKUP AND STREAMING
4		Devolo dLAN 500 Wi-Fi Not that sexy, perhaps, but the Devolo system is faultless in its execution. Putting the 'Internet' in your 'Internet of things', it pipes broadband from your router, through your mains wiring and into the farthest reaches of your home, no messin' 'bout.	from £50 ★★★★★ BEST FOR HOMES WITH THICK WALLS
5		Roku Streaming Stick 'Streaming Stick' tells you all you need to know, really: this is a stick, and it streams. It streams plenty, too – Netflix, iPlayer, Spotify, Sky Now and Sky Go to name a few. And unlike Chromecast, it's also a dab hand with your own video and music files. Lovely stuff.	£50 ★★★★★ BEST FOR DISCREET STREAMING
6		Ninja Blocks This little box is a hacker's dream. With everything from temp/humidity sensors to remotely switched power points, it has boundless potential for giving your home 21st century smarts. It's open-source and has a devoted developer community, too.	US\$200 ★★★★★☆ BEST FOR THINGERNET LEVELLING UP
7		Koubachi Wi-Fi Plant Sensor Why have real plants when you can 3D print space-age fake plastic trees? Because if you have real plants you can use this Wi-Fi-connected thingernet device to monitor their vitals and relay their photosynthetic desires back via an iOS app. That's why.	from £80 ★★★★★☆ BEST FOR GEEKY GREEN FINGERS
8		Belkin WeMo It started as an unassuming Wi-Fi-enabled socket that let you set lights or other mains-powered items on a schedule via an app. Now the range includes a motion sensor and a baby monitor (left), while a Hue-style lightbulb was announced at CES.	from £35 ★★★★★☆ BEST FOR THINGERNET FOR BEGINNERS
9		Netatmo With an indoor and an outdoor module, the Netatmo monitors the conditions all around you, checking temp, humidity, air pressure, CO ₂ levels and noise. Use the info to fine-tune your sleeping conditions, or just tap into the global community of Netatmo users.	£145 ★★★★★☆ BEST FOR ATMOSPHERIC AWARENESS
10		Google Chromecast Finally available in the UK, this USB memory stick-sized cord-cutter is compatible with Netflix, YouTube, Google Play movies and BBC iPlayer. It's a cheap, simple way of getting web-sourced movies and shows onto your living-room TV.	£30 ★★★★★☆ BEST FOR CASTING ON A BUDGET

FOR FULL REVIEWS OF EVERYTHING ON THIS PAGE, VISIT STUFF.TV/TOP-10S/CONNECTED-HOME

All the latest
gadget reviews
www.Stuff.tv



theQ camera review

★★★★★

Jump to: [review](#) [specs](#) [price](#)

This 3G-connected hipster camera offers instant social media snap uploads. But are those snaps worth sharing?

COMPACT CAMERAS

1. Sony Cyber-shot HX50 ★★★★★
2. Fujifilm X20 ★★★★★

iDevices®

iGrill[®]mini

UPGRADE YOUR GRILL



**Know when your food is ready
from your mobile device.**

Your friends and family will be left wondering how you fired
up such a delicious meal without getting stuck by the grill.

Shop online at store.iDevicesinc.com

Available in Apple Stores UK
and Currys PC World stores

Currys  PC World

Also available online at currys.co.uk

Shreddies

FLATULENCE FILTERING
UNDERWEAR

WINNER OF THE ACA
'LOOK GOOD, FEEL GOOD'
AWARD



www.myshreddies.com - 01509 610610

ZIPWIRESHOP
EXTREME AERIAL RUNWAYS

**GARDEN ZIP
WIRES FROM
£99.95**



ALSO SUITABLE FOR ADULT USE

USE CODE STUFF-05 FOR 5%
DISCOUNT ON ALL ORDERS

FREE UK
DELIVERY

zipwires.co.uk
T: 08455 199 388



www.watertogo.eu

Water-to-Go^{Ltd}

A REVOLUTIONARY NEW WATER BOTTLE

We all need to stay hydrated to maintain a healthy body and mind but clean water is not always available and it's an expense to keep buying bottled water. Well, No more!

With our Water-to-Go bottle you can fill up from any non-salt water source and our unique patented filter will clean the water, removing over 99.9% of all contaminants even bacteria and chemicals!!

Sounds space age? It is. Our filter technology was developed by NASA for the Space Programme.

Great tasting '**better than bottled**' water, on the go. Ideal for backpacking, travelling or even the gym, because you can fill up from the washroom tap, dubious shared water fountain or even a stream without the fear of picking up a dreaded stomach bug.

Each replaceable filter treats over 200 litres of water - that's about 3 months worth.

PERSONAL WATER FILTRATION SYSTEM

ENTER STUFF2 AT
CHECKOUT
FOR 20%
OFF



NEXT BIG THING?



APPLE GRANNY SMITH

Calories	116
Total fat	0g
Cholesterol	0mg
Sodium	2mg
Potassium	238.61mg
Carbohydrates	30.8g
Protein	0g

KNOWING WHAT THAT IS

W

hat, that?

No, not that. If you don't know what that is, well, you're beyond any of our help. Anyway, the thing with humans, bless us, is that we're fascinated by ourselves and the world around us. We like – nay, strive – to know what makes things tick. What's inside our blood, what's radioactive, and what's the point of celery. Exactly how edible a thing is. Heck, we've spent millennia trying to find out what love is. Though mainly through poetry and song: two investigative techniques with pretty poor data return history.

I want to know what love is.

I'm not going to show you. Now scientists, bless 'em, have ways of finding out what things are, but those ways generally fall under the categories of huge, expensive, dangerous or icky. Which, on the whole, keeps them out of the sphere of us normal citizens. But currently conquering the crowdfunding community are a number of devices that bring the science of knowing-what-that-thing-is to the street. Spearheading the movement is SCIO, the over-1000%-funded device that purports to be the *Star Trek* Tricorder for weight weenies.

The weenie what now?

The SCIO is basically a miniaturised handheld spectrometer. It measures the molecules and tells you useful stuff like exactly how many calories a foodstuff contains, or how ripe it is, or the name and strength of pills. It could tell you how hydrated a plant is, or whether those pants really are 100% cotton. Currently it's just a Bluetooth accessory, but imagine if its abilities were built in to your phone. Imagine the chaos if every shopper could analyse every product for its nutritional info, occasionally pointing them at each other to try and quantify potential love.

[Words: Fraser Macdonald]

DON'T MISS THE NEXT ISSUE! ON SALE 6 AUG

Swiss movement, English heart



C7 ITALIAN RACING RED CHRONOMETER – LIMITED EDITION

Made in Switzerland / Worldwide limited edition of only 500 pieces / ETA 251.233 COSC 1/10ths second split-timing / 316L marine-grade stainless steel case / Anti-reflective sapphire crystal / Unique serial number / "Toro Bravo" leather deployment strap

EXCLUSIVELY AVAILABLE AT christopherward.co.uk

CHR. WARD
LONDON

D3300



I AM LIFE AT ITS BEST



24.2
MEGAPIXELS

GUIDE MODE

**WIRELESS
ADAPTER**

I AM THE NEW AND EASY TO USE D3300. I will help you to find the perfect settings with my Guide Mode. Even in low light, I capture stunning pictures with my 24.2 megapixels, 11 focus points and ISO 100-12800 and let you share them with my optional Wi-Fi connection*. I am your moments in the quality they deserve. www.nikon.co.uk

*Wireless connection with smart devices available with WU-1a Wireless Mobile Adapter, sold separately.

**2YEAR
WARRANTY**

For 2 year warranty on any camera and lens kit simply register your new Nikon within 30 days of purchase. Offer applies to UK & Republic of Ireland stock only. Call 0800 597 8472 or visit www.nikon.co.uk/register

At the heart of the image

