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**MOTO G4
REVIEW**
The new
budget king

17

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TRICKS
TO IMPROVE
EVERY
PHOTO



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APPLE
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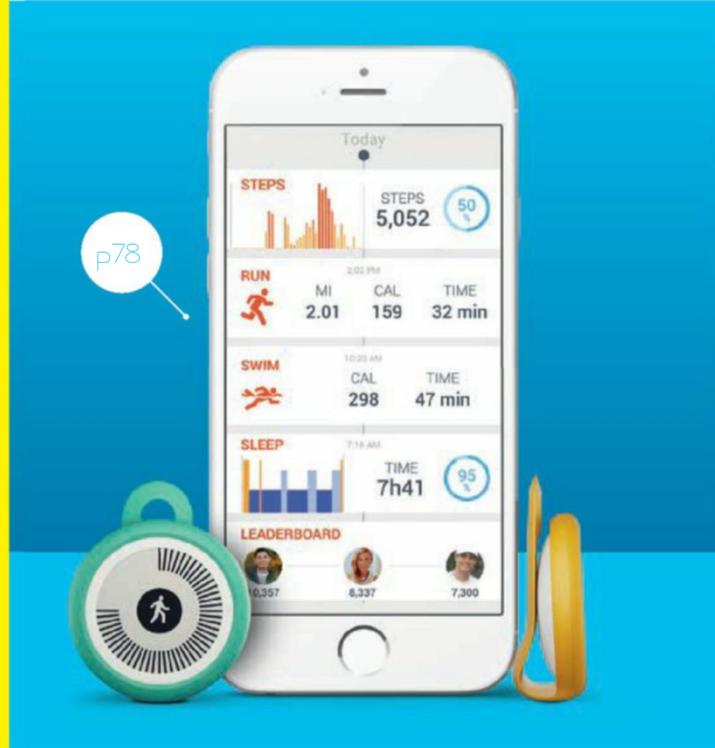
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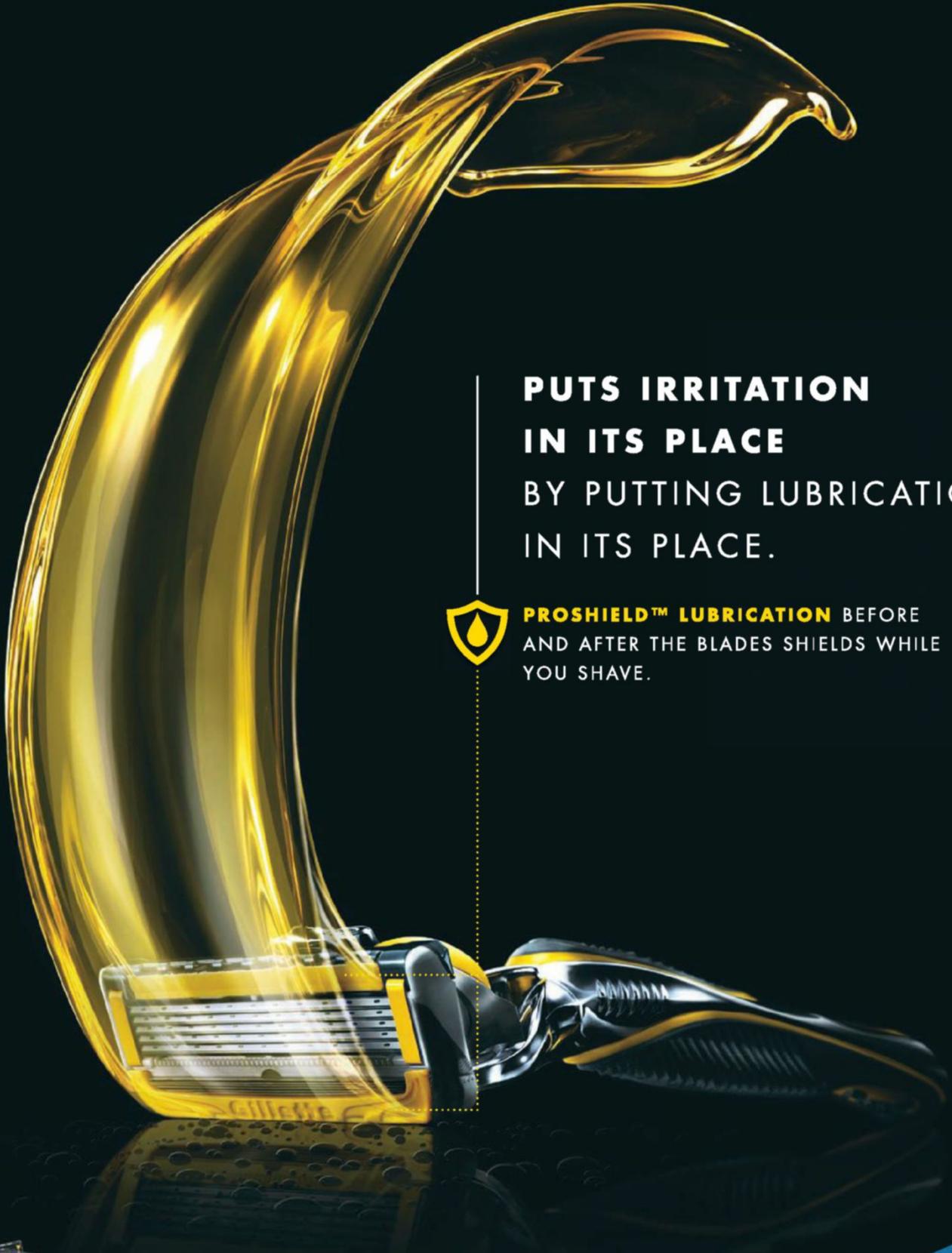
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TOP 10
OF
EVERYTHING

Looking to buy something but need a bit of advice? Turn to our *Stuff* Top Tens: our expert listings of all gadgetry, from p113.



The *Stuff* Top Tens are shoppable on your phone! Find out how on p114.



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WELCOME



Given Instagram launched as a way to make your iPhone pics look like they were taken on an old analogue camera, it's kind of ironic that it's now the biggest digital photo app in the world, with 400 million users.

With the summer now here, those 400m users will be uploading billions of holiday snaps, which is really annoying for those of us stuck at home. But we've put aside our jealousy to make this guide to the cameras, accessories and tips you need to level up your pics. If, like me, you believe the best camera is the one that's with you, then make sure you're always carrying our favourite cameraphone. If you're a semi-pro like News Editor Tom Morgan (@tommorgan3) you'll want to check out the best new DSLRs. And if you're into travel photography, like our own Esat Dedezade (@esatd), you'll enjoy our tips from Instagram king @Jacob.

Before your holiday starts, though, you'll probably need to spend a few hours on a plane. Well, we can help there too: on p66 you'll find our group test of the best noise-cancelling headphones – perfect for drowning out those noises that take the fun out of flying.

Finally, we've pulled together the best new budget smartphones, led by the brilliant Moto G4. Still spending £500 on your phone? Get 90% of the features for less than half the price with one of these bargain superphones.

Guy Cocker, Global Editor-in-Chief / guy.cocker@stuff.tv / @guycocker



GET THIS MONTH'S DIGITAL EDITION

Stuff is also available for iPad or iPhone – download it from the App Store, or see p100 for this month's subscription offer.

Android fan? Stuff is also available on **Google Play**, **Zinio** and **Exact Editions**.

WANT TO TRY REVIEWING STUFF?

Fancy telling Apple how to improve its next iPhone? We're putting together a panel of tech experts, and you could be on it: find out more at techpanel.co.uk

The Tech Panel

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Correction: In the July issue, our review of the Tesla Model S stated: "Tesla's auto-pilot mode lets you drive autonomously, with no need to touch the car's controls." We would like to clarify that Autosteer requires drivers to keep their hands on the steering wheel. We apologise for any confusion caused.

Panasonic

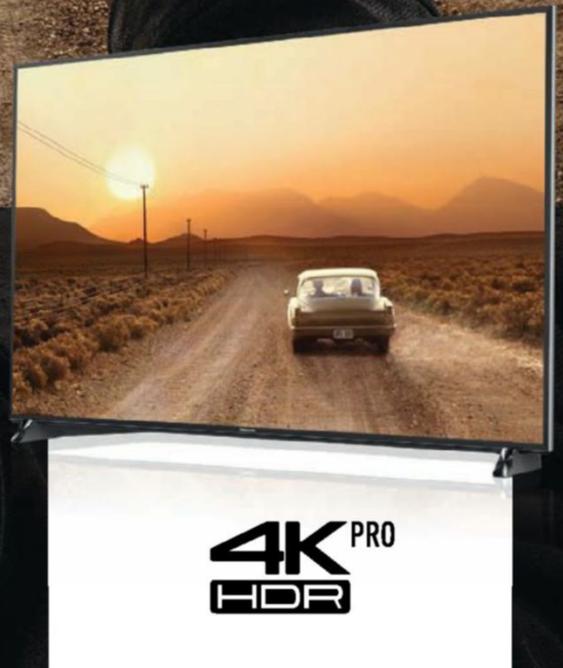
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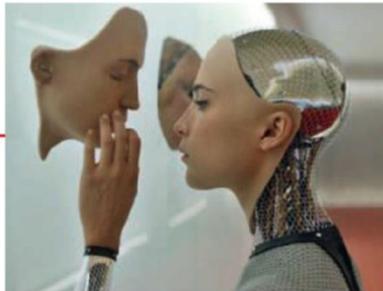
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I WENT ROOFTOP CINEMA-HOPPING

Ever since I went to a drive-in cinema in California last year, I've yearned for a similar experience in the UK. Now London's rooftop cinema clubs have obliged. At Stratford's Roof East, I watched *Back To The Future* for the umpteenth time, but now from the comfort of a director's chair while munching down on hotdogs. And at Croydon's Lost Format Society, I quaffed prosecco while having my mind blown by *Ex Machina*. It's going to be difficult returning to the local multiplex come winter.

Guy Cocker, Global Editor-In-Chief



I SHOVED A SQUARE PEG INTO A ROUND HOLE

Well, 'shoved' isn't quite right. I delicately manipulated the very fabric of space and time, which allowed me to play *Destiny* on my PS4 using Microsoft's super-sexy Xbox One Elite controller. Its rear paddles let me throw grenades and Warlock-slap enemies with more precision, and its metal thumbsticks are totally rad, yo. Yes, I was helped a bit by a little device called the CronusMAX Plus, but it was mostly the space-time manipulation thing. Honest.

Esat Dedezade, Deputy Features Editor



OUR MONTH

Flicks, tricks and gearsticks: how we spent June



I FELT THE NEED FOR SPEED ON A GERMAN AUTOBAHN

I've wanted to drive a Nissan GT-R for years. I finally got the chance this month, in the best way possible: on unrestricted roads. Starting out in Düsseldorf and heading towards Belgium, the aim was to hit top speed – according to Nissan, a pant-wettingly fast 196mph. Not easy to do in traffic, but finally the roads cleared and I let loose. I didn't quite max it out, but 186mph is still enough to tick this off my bucket list.

Tom Morgan, News Editor, Stuff.tv



I WENT ON AN UNNECESSARY EAR-JOURNEY

Having taken temporary stewardship of an LG G5, I found there was no EQ function turning up in Google Play or Spotify. The solution? New headphones! I spent a merry week auditioning any I could get my ears on, and I was just about ready to drop a few hundred quid on hulking new drum-busters when a *Stuff* colleague pointed out that I could just download one of the many free equaliser apps from Google Play... and it would work with whatever app was playing music. Bah.

Fraser Macdonald, Consulting Editor



H O T S T

HOT FIVE #1

TREBLE PEBBLE, YOUR WATCH IS A SUCCESS PEBBLE 2, TIME 2, CORE

The Kickstarter ticker machine has survived another Pebble-fuelled onslaught. Two new watches formed a new standalone fitness device formed a single campaign that skyrocketed to over US\$10m in just a few days. Both the plastic, monochrome-screen Pebble and the metal, colour-screen Pebble Time 2 have optical heart-rate sensors, but the company's realised that fitness tracking is at the forefront of wearable buyers' minds and so the Core has the thing it won't bulk up its watches with: GPS. It's an intriguing, unforeseen option: a clip-on music and location device with wired or Bluetooth headphone connectivity, that also has a 3G SIM card slot and Wi-Fi for streaming Spotify. What's more, it runs Android, not Pebble OS, opening up the Core to developers to make it an Internet of Things device.

As hot as... not jogging with a phone in your sock
US\$130, US\$200, US\$100 / pebble.com



U

F

F

23 PAGES
OF THE BIGGEST
STORIES FROM
PLANET TECH



**ENTER ALEXA,
RIGHT ON CUE**

With question marks over functionality, Pebble announced the Core would work with Amazon's Alexa voice assistant. Handy.

**SHOULD WE
WAIT, AROUND?**

Delivery times are quoted as Sept (Pebble 2), Nov (Time 2) and Jan 2017 (Core). But will Pebble add a round version, as with the original Time launch...?





Eyes bigger than its stomach?

Big screen and big cameras, but the MediaTek processor, 3GB RAM and 2700mAh battery remind us we're in mid-range territory.

HOT FIVE #2

SUPER SELFIE CAM IS SONY'S TARGETED ATTACK

SONY XPERIA XA ULTRA

You've a few days to knock down a wall. You can come at it with a Vulcan bomber, dropping out of the stratosphere like a howling angel of destruction. Or you can grab a screwdriver and chip away at the mortar until the thing falls down under its own weight. Sony is a fan of the latter method, taking another important chunk out of the formidable smartphone market with this another mid-range 'X' series wedge. Aside from its striking edge-to-edge 6in 1080p screen, Sony is again playing to its imaging strength — the XA Ultra has the most powerful front-facing camera we've ever seen in a smartphone, with autofocus, HDR, optical stabilisation and its own LED flash — specs we'd be happy with on a rear camera... although that one is 2.15MP, with largely the same features.

As not as... you in [high-res selfie](http://high-res.selfie.itba/sonymobile.com)

ALTERNATIVELY...

SONY XPERIA E5

Taking yet another chisel to the problem, Sony has also launched the Xperia E5, a more affordable option with a 5in 720p screen.



HOT
FIVE
#3DRIFTING DOWN
MEMORY LANEVOLVO CONCEPT
40.1 & 40.2

If you could send a single sentence back to the '80s, what would it be? "Invest in chia seeds"? "Concussion is a thing"? Or how about: "Volvo is absolutely *smashing it*." Clean fuel pioneers, sportswagons, the insanely capable XC90... and now this double concept launch to show its new Compact Modular Architecture. The **40.1** small SUV is no pipedream — the upcoming XC40 looks just like this, which is good. The **40.2**, though, promises to be a generation-defining all-electric pioneer. It houses a 200-mile-range powerpack, with either two- or four-wheel drive. And it looks, as our '80s friends would attest, totally rad.

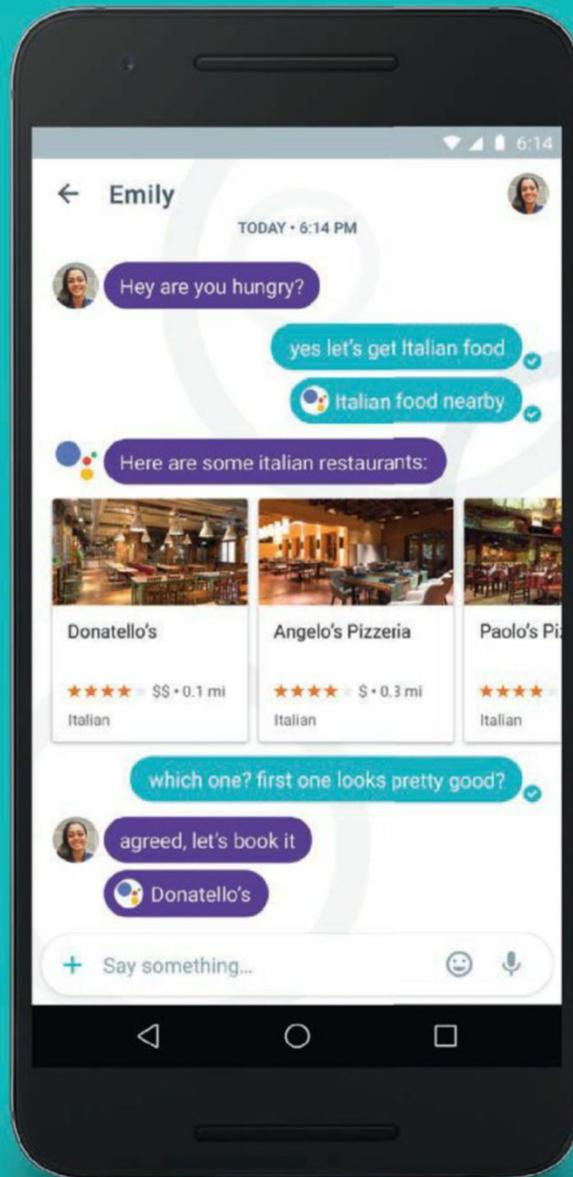
As hot as... Timmy Mallett
[EtbA / volvocars.com](http://EtbA/volvocars.com)



HOT
FIVE
#4WANT SOME
HELP WITH THAT?
OR THAT? THIS?
GOOGLE I/O 2016

Google is clever. Of this you need no telling. But remember, without our input, Google is nothing. Just a blinking cursor in the darkness. As if recognising its existential threat, this year's Google I/O conference was headlined by the enhancement and integration of Google Assistant into your daily meanderings. Messaging app Allo is what you see here, littered with smart, not-at-all-annoying instances of Google cleverness. It's a similar intelligence to the bots that Facebook is building into Messenger, or Amazon's Alexa, or Siri... in fact, we're getting the distinct feeling that the oft-imagined Skynet wars might be started by humans just trying to get our AIs to shut the hell up.

As hot as... **Google, what's hot?**
google.com



MORE NEW GOOGLE STUFF TO GOOGLE

**DAYDREAM VR**

This isn't a hardware reveal but a VR standard that Google's 'dreamed' up (eh? Eh!?) for other makers to adhere to. They're up for it, though: LG, HTC, Samsung and Huawei are all on board to produce compatible smartphones and VR headsets.

**GOOGLE HOME**

How can a speaker also be a listener? This is our question about Home, a new Amazon Echo-style living-room presence for Google Assistant. Somehow it streams music yet responds to your demands for traffic info and meeting times. Witchcraft.

**PROJECT JACQUARD**

Smart fabric and a tag attached to this Levi's jacket will let you tap, swipe and gesture your way to useful info, calls or music. Why? 'Cos you're cycling, or driving, or just being too sexy to look at your phone. When? Next year, at best.

**WEAR 2.0**

A much-needed refresh for Google's wearables OS: slicker design, smarter replies and a keyboard, plus apps can now run without a connected phone. What? You're amazed that wasn't already implemented? You're ahead of the curve, dearest.

**PROJECT SOLI**

So yes, Android Wear 2.0 has a new keyboard. But since touch interaction with a watch isn't any fun, Google's Project Soli is working on watch-screen radar for 'sock puppet without a sock' hand gesture control. It should be with devs by Christmas.

**INSTANT APPS**

The humble hyperlink can lead a smartphone into all kinds of trouble it doesn't have the apps to handle. So a new Android development will let it download what it needs without having to jump to the Play Store for a whole new app installation. Clever.

 *head &
shoulders*

**SHOULDERS WERE
MADE FOR GLORY**

NOT DANDRUFF



Visible flakes seen at 2ft with regular use

HOT
FIVE
#5EVERYTHING ZEN
ASUS ZENBO

Hey, you need to clear your cynicism cache. Admittedly, the same thought crossed our minds when we saw little Zenbo here – that Asus had strung it together purely to jump itself up the news agenda from a not-very-exciting Computex show out in Taipei. But actually, we kind of want one. By removing the need for their home robot to do anything complicated like manipulate its surroundings, making Zenbo purely a roll-around net-connected helper, Asus reckons it can let you have one (in 2017) for not many hundred quid. It can take messages, play games, be a security guard and watch your elderly relatives, and – just occasionally – jump you up the news agenda.

As hot as... "Tell Mum I'm not getting up"
US\$600 / asus.com

IF YOU CAN TEAR YOURSELF AWAY FROM ZENBO'S EYES...

**ZENFONE 3**

The 5.5in Zenfone 3, 5.7in Zenfone 3 Deluxe and 6.8in Zenfone 3 Ultra certainly look like good, clean fun. Actually, not that last one. 6.8in! Disgusting.

**ZENBOOK 3**

Thinner and lighter than an Apple MacBook, the Asus Zenbook 3 is perfect if you want something a little more villainous, a lot more Windows.

**ROG GX800**

Support for dual graphics cards and Core i7 K-Series processors make this more powerful than most desktop PCs. It even uses two 330W power supplies.



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ANDREW ZALASIN
Photo by: Andrew Zalasin

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GOPRO APP

#BEAHERO

SHOOTS AND TRACKS YOUR HOOTS AND STACKS

Olympus TG-Tracker

£280 / olympus.co.uk



This roughy-toughy 4K cam has activity tracking as well as ultra-crispy shooting powers

● **It's got a laser!**

It hasn't got a laser. But it's got an LED that looks like it might be a laser, and along with its brutalist aesthetic – familiar to users of Olympus's stills cams – the TG-Tracker looks every bit the action camcorder. It's got a more 'trad' form than a GoPro, being roughly rectangular with the lens on the end, but it adds up to about the same volume.

● **It's got a screen!**

Many things have screens. But this chunky green monster has a fold-out 1.5in 115k-dot LCD like a grown-up camera. How's that going to work with a waterproof case, you might cry. Well, dry your eyes, for the TG-Tracker is 30m water/shock/freeze/crush-proof without any extra casing. One less thing to worry about as you step off the edge...

● **It never misses a trick!**

Well, as long as that trick happens within the 204° range of its super-wide-angle lens. And if it doesn't, that's your fault for not facing the right way. Or not having a second TG-Tracker on the back of your head – not a completely silly option given that this thing is (a little) cheaper than a 4K GoPro. Yes, 4K: the TG has a 1/2.3in CMOS 5-axis-stabilised sensor that can handle 4K at 30fps. It also has a bank of sensors to log your adventures, including GPS, accelerometer, compass and thermometer.



The TG-Tracker comes with a handy hand-holder. It attaches via a GoPro-compatible three-prong mount, for all of your awesome accessories.

KNOWN TO ROCK THE MICROPHONE



● BRING THE NOISE

The sound of divergence? Far from it – busy old Olympus has also launched the LS-P1 and LS-P2 audio recorders. Just the thing for mounting atop your video-capturing camera (such as the company's own OM-D range, pictured), from which position their directional stereo microphones can handle sounds as loud as 120dB and will save files in either MP3 or high-res 96kHz/24-bit.

The modest silver LS-P1 recorder has 4GB of on-board storage and is £110. Take a step up and the premium black LS-P2 (£170) has 8GB and a more sensitive microphone system. It's also equipped with Bluetooth, so can be controlled remotely using an Android app or stream its audio recordings to a Bluetooth speaker.

THE OLYMPUS ACTION CAM LOGS YOUR ADVENTURE STATS WHILE FILMING IN STABILISED 4K



C is the magic number SOUNDMAGIC E10C

You could count on the toes of one tiger's paw the number of earphones that can control Android phones. You could, except you might get bitten. Better to take our word for it. Better still, just get some of these, the latest additions to SoundMagic's heralded E10 range. Convenient? Control? Conformity-averse? Whatever the 'C' designation means, all three of the buttons on the in-line remote will work for either Android or Apple phones. Which is news enough to put a smile on any tiger's face, even without any toe-tickling. Swankier E50C and E80C versions will follow later in the year.

£40 / soundmagic.com



Eat to the beat GARMIN VIVOSMART HR+

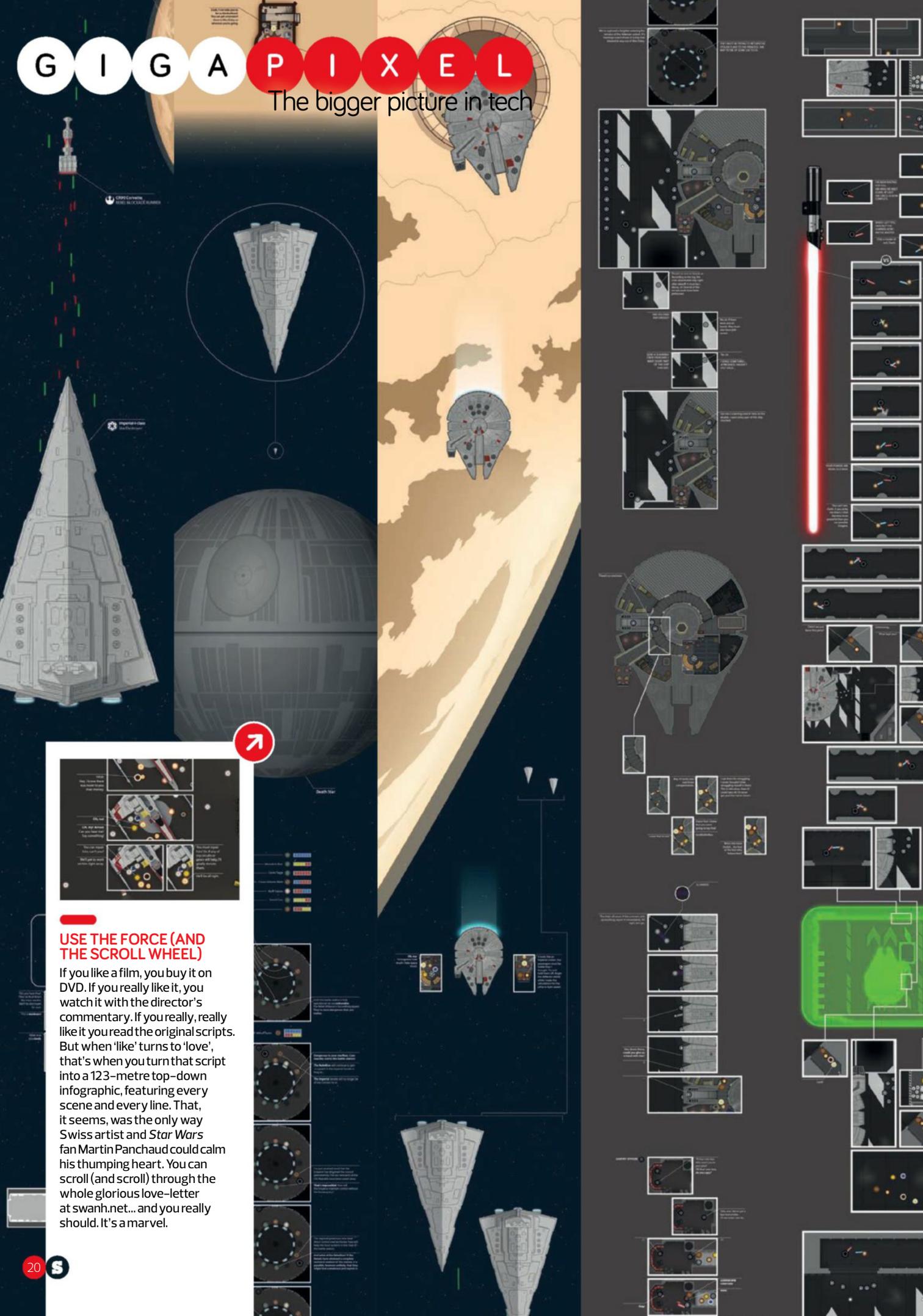
If, by some instantaneous mutation, all food became poisonous and humans could only eat wearables, it's to Garmin you'd turn to ensure dinner times didn't get monotonous. It has so many tasty variations!

Not one month since it stocked the shelves with the high-protein Forerunner 735XT and the snackable Vivomove, here's the Vivosmart HR+. It's an unusual fusion of seemingly low-tech monochrome screen and powerful features. Its battery will last up to five days of normal heart, steps and sleep tracking, but only eight hours of GPS action. But what do you care? You'll have snaffled it minutes after buying it.

£170 / garmin.co.uk

G I G A P I X E L

The bigger picture in tech



USE THE FORCE (AND THE SCROLL WHEEL)

If you like a film, you buy it on DVD. If you really like it, you watch it with the director's commentary. If you really, really like it you read the original scripts. But when 'like' turns to 'love', that's when you turn that script into a 123-metre top-down infographic, featuring every scene and every line. That, it seems, was the only way Swiss artist and *Star Wars* fan Martin Panchaud could calm his thumping heart. You can scroll (and scroll) through the whole glorious love-letter at swanh.net... and you really should. It's a marvel.

NEWS FEED

**XBOX VR?**

By the time you're reading this, we'll know whether Sony launched a 4K PS4 at the E3 gaming show. But a new rumour, at the time we were reading this, was that Microsoft would also announce a powered-up Xbox One, to be launched in 2017, that works with Oculus VR. Well, did it?

**NOKIA NOT FINISHED**

Microsoft might have failed to make anything of the Lumia phone business it bought, but the remaining parts of Nokia have just bought ace wearables company Withings. Coupled with its work on new Android smartphones, the future looks good for the invincible Finns.

**NON-DRIVER'S CAR**

BMW's electric 'i' division has been refocused to work on autonomous cars – a shame, as we were hoping for a follow-up to the i8. Could still be interesting, though – they're unlikely to develop a self-driver like the pictured Vision Next 100 concept and stick a straight-six petrol engine in it.

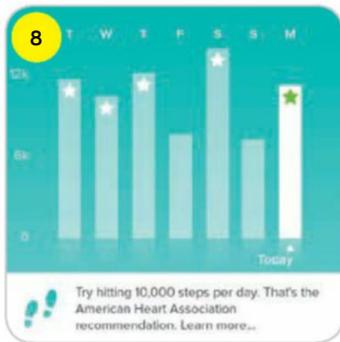
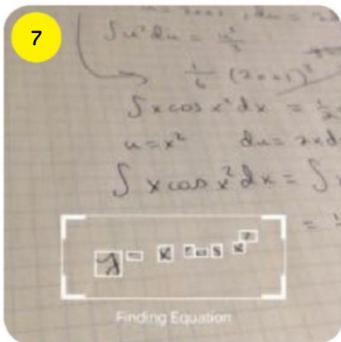
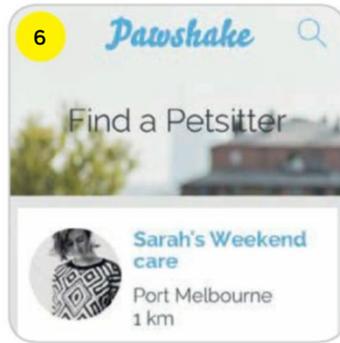
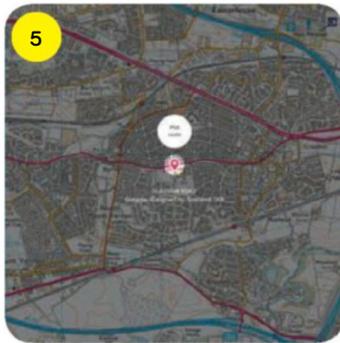
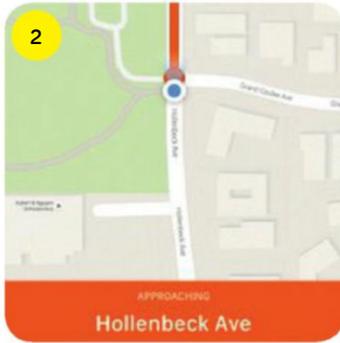
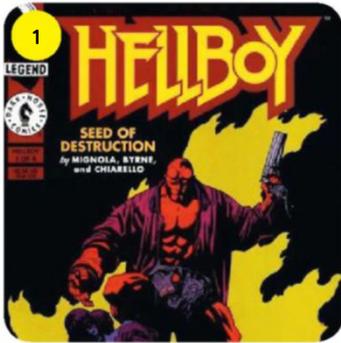
THE END
A Tribute to
Star Wars Episode IV
A New Hope
George Lucas 1977

An adaptation of
Martin Parr's 2016
www.parr.com

Thanks for watching and share if you like!

↓ APPS

This month's mobile must-downloads



1 Comixology Unlimited

US\$5.99/month / iOS, Android

No Marvel or DC – they have their own apps – but Comixology still has a huge comics library – *Walking Dead*, *Saga*, *Hellboy*, etc – and now it has a subscription option. Um, in the US. Yes, we'll let you know.

4 Infuse 4.2

£free / iOS, Apple TV

Once you get serious about digital films, ripping and downloading and whatnot, you'll want a decent video player. This new version of Infuse adds a bunch of features and is well liked by the Apple community.

7 Mathpix

£free / iOS

You know how you can point the Google Translate app at a foreign sign using the camera and it'll render it understandable? Well, that, but for maths equations! Less useful on holiday, to be honest.

2 Strava Premium

£3.99/month / iOS, Android

Strava's just further gamified your commute by adding Live Segments to its mobile apps, a feature only previously on Garmin devices. You'll see an animation of you versus your PB and the segment leader.

5 OS Maps

£20/year / iOS, Android

Most outdoorsy types will have already bungee'd their colours to the mast of one of the many mapping apps, but the Ordnance Survey finally has a subscription app for its (excellent) maps.

8 Fitbit

£free / Android

Not sure which of Fitbit's many trackers to buy? Buy none! Get a Nexus 5X or 6P and the Fitbit app will use its sensors to track steps and calories. Note: buying a new phone will cost more than a Fitbit.

3 Rawr Messaging

£free / iOS

Good luck trying to convince your social network to switch apps, but if they do, you'll be faced with the 'fun' of customisable avatars that can be animated with the use of hashtags, such as #dance.

6 Pawshake

£free / iOS, Android

It's the 'Airbnb for pets', allowing cats that are bored with hotels to book innovative vacations in people's homes, caravans and yurts! Not really. It brings together freelance pet carers and owners.

9 TomTom Speed Cameras

£free / Android

We don't none of us drive nowhere new no more, making sat-nav redundant. What we do want is speed cam warnings and, new to the app, stationary traffic alerts.

ON THE HORIZON

BitTorrent Live

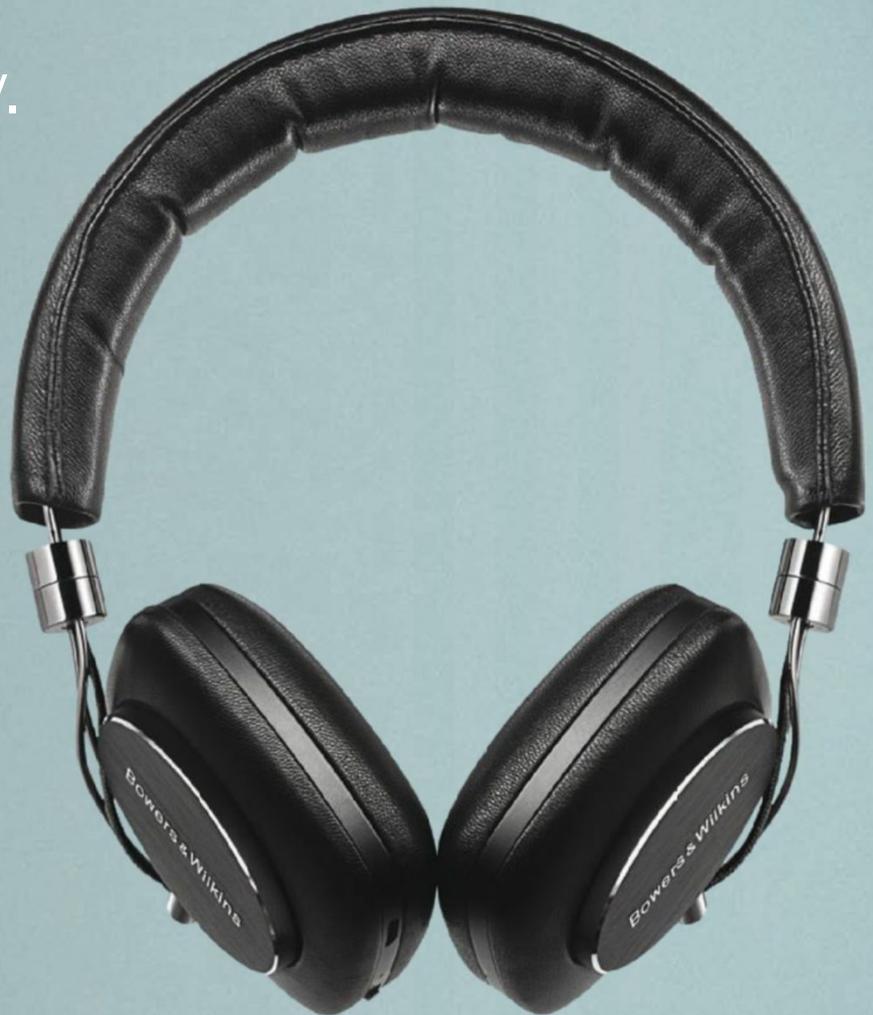
£tba / iOS, Android

Simultaneous live streaming of global sporting events – that's all sorted, yes?

Nope. Turns out that, despite high-profile services such as the BBC's Olympics app and Red Bull TV, the server demands for delivering content to a worldwide crowd are both (a) tricky and (b) expensive. Enter, stage left, BitTorrent, aka the Queen of Streams*, which has launched a platform for hosting live event streaming. It's a peer-to-peer system (as you'd expect), making the viewer double as the broadcaster, removing the need for the aforementioned expensive content delivery infrastructure and slammng broadcast lag times while it's at it. It'll be launching on Apple TV soon, with Android and iOS apps to follow. Now BitTorrent just needs to sign up a few big-name broadcasters. *No-one has ever called them that.



P5 Wireless.
We've taken
away the wires
but kept the
sound quality.



£329.99

from authorised retailers

Buy direct from [bowers-wilkins.co.uk/P5W](https://www.bowers-wilkins.co.uk/P5W)

Two-year warranty

Free delivery

Bowers & Wilkins



VR HEADSETS
HAVE HEFTY
CABLES - GET
RID AND WEAR
THIS PC ON
YOUR BACK

MSI BACKPACK PC

Etba (due winter) / uk.msi.com

That is an odd-shaped PC.

That's because humans do not, on the whole, have PC-shaped backs. Look closely and you'll see that this PC has straps. The Department for Education has decided that children no longer need carry schoolbooks, so they might as well carry their computers around on their backs.

Where does their lunchbox go?

Junior-sized fishing gilets with serving-compartmentalised

pocketry. Hmm, let's end that fictional child-based scenario and come back to the truth, because the 'angling vest' idea is actually pretty solid for the real use of the MSI Backpack PC - freedom of movement in VR.

Why do I need to move? I'm in a virtual reality.

Because cables. The headsets for Oculus Rift and HTC Vive have fairly hefty umbilical ones that connect

you to your PC. Lost in the dreamy realms of *Magic Pony Land HD*, it's easy to get caught up in the wires and come crashing back to Earth. The solution? Put the PC on your back. You'll have a bunch of cables to tidy up, but then you'll be free. FREE!

Why not just put a laptop in a normal bag?

What's that smell? Is it an overheating laptop? No, it's

the pervading odour of a weedy gaming machine. A VR rig needs power, and the MSI Backpack PC is packing Core i7 processing and Nvidia's latest GTX980 GPU, along with all the cooling they require. And batteries, although MSI says you can only expect an hour of VR gaming out of the setup. Come the end of the year (HP and Zotac are working on similar systems), a backpack VR solution might be high up on your Christmas list.



Any wider and it'd be round
D-LINK HD 180 PANORAMIC CAMERA

You could, should you so desire, blanket your house with network-attached security cameras, all reporting to an app on your phone. But think of the management! Number 3's not connecting, 6 is pointing at the ceiling and the cleaner has unplugged 7 for Henry. This D-Link camera might help your staffing issues – with careful placement, its giganto-wide 180° lens could breezily take in an entire room. It will record to microSD in 720p, either continuously, by schedule or triggered by motion. Built-in 'de-warping technology', meanwhile, should minimise the lens's fish-eye effect – otherwise police would be fruitlessly searching for burglars with a giant nose but tiny legs.
£145 / dlink.com



Geo aims to reduce customers' energy use by two thirds over the next 10 years.

Save money, not time
GEO COSY 3 SMART THERMOSTAT

If you want to make your life easier, don't spend days researching smart thermostat systems. Just keep the one you've got. But if it's a more efficient life you want, then break open a fresh Google Sheet and get researching. This new Cosy 3 has optional second zone control and hot water control in addition to its existing portable wireless thermostat display and app-based smarts. Compare it to Honeywell (the multi-zone one), Tado (the people-tracking one), Hive (the British Gas one), Nest (the one people recognise)... and all the other smaller-name systems. Efficiency comes with graft, as any engineer will tell you.
from £180 / geotogether.com



DROP EVERYTHING & DOWNLOAD

Dark Sky
 £free or £2.99/yr / Android

Dark Sky on iOS was a big deal, for a weather app. For British folk, who like to check the weather constantly lest they be caught in the apocalyptic bouts of mild drizzle and serious cloudiness that blight our sceptred isle, it made the process a curiously beautiful thing. And now it's on Android... but, like the climate, things have changed. On iOS the app is £2.99, and on Android it's free, but with the hyperlocal forecasts – the app's key feature – behind a £2.99 annual pay wall. Not big money, but the principle has generated good old British thunderclouds of disgruntlement in the Android community. Nonetheless, Dark Sky is still the best-looking weather app on Android.



DRINK HOLDERS

Unless you've found the DNA hack for a camel hump...

1 Hydro Flask

This wide-mouther keeps things icy for 24 hours or more. And by 'things', we mean drinks. Not amputated fingers or other such grossness. You've been told about that before.
[£35 / ellis-brigham.com](http://£35/ellis-brigham.com)

2 Citrus Zinger Sport

You impale some unsuspecting citrus fruit on the stabby part, then you cart it around all day cackling as its zesty life-juice infuses your water with ill-gotten tanginess.
[£17 / firebox.com](http://£17/firebox.com)

3 Fabric Water Bottle

British cycle accessory brand Fabric hates cages; its water bottle clunks straight into the bike frame bolts, saving weight and space. Take note, zoos of the world: bolt-down animals.
[£10 / fabric.cc](http://£10/fabric.cc)

4 Stanley Classic Vacuum Steel Pint

A single-serving beer cooler designed by sensible Americans. Mocked by Brits, who can't see how you would hold onto a beer long enough for it to get warm.
[£25 / outdoorgb.com](http://£25/outdoorgb.com)

5 Thermos Hydration Bottle with Meter

This has a handy twist-meter for recording the number of times you forgot to record the number of times you refilled it today. (Or, how much you've drunk.)
[£13 / thermos.co.uk](http://£13/thermos.co.uk)

6 Cafflano Klassic

You twist it apart to reveal the hot water poury part, the bean grinder part and the mesh filter part, and then you look up in delight, but everyone is gone. *Everyone.*
[£65 / firebox.com](http://£65/firebox.com)





Stand-nav

SNIKKY BIKE

Combining the wheel design of a Penny Farthing and the electric power of the modern age is the commuter-aimed Snikky Bike. Big front wheel for bump absorption, little back wheel and short wheelbase for manoeuvrability. The battery's in the frame, the motor's in the rear hub and there's no saddle – you stand on footplates. A range of 20 miles and 20mph are promised on Snikky's Kickstarter page; we've suggested a pasty-eating cruise control mode, but have yet to hear back from the developer.

US\$1200 / snikkybike.com



Cartography

RAZOR CRAZY CART SHIFT

The original Crazy Cart was undeniably madcap. Expansive steering and throttle inputs mixed with some careful feathering of the drift bar led to highly agreeable sideways action. But ultimately, we judge all transport by the same question: Can it be operated while eating a Ginsters? Good news, then. A new Crazy Cart Shift is coming in September – without the extra hand requirement of the drift bar, sideways driving now coming purely from interplay between steering wheel and accelerator. Sweet.

£250 / razor.com

DECIPHER

ALLOW ME TO EXPLAIN...



#12 TWITTER RULE CHANGES

Andrew Hayward



Twitter was built for quick, bite-sized missives. But even so, that space can feel awfully crowded sometimes.

Add in usernames of friends or attach images, video links or polls and your precious 140-character count might actually be more like half that. Luckily, changes are coming that will give you more room without dramatically changing Twitter's unique approach.

The social media giant has announced that certain elements will no longer take away from your character count, including other users' names, photo and video attachments, polls, gifs, and quoted tweets from others. So you'll be able to go nuts with media and still have 140 characters for text.

Other upcoming changes include no longer having to put a period before someone's name in a reply to let it be widely seen. Instead, you can retweet

SOON YOU'LL BE ABLE TO GO NUTS WITH MEDIA AND STILL HAVE 140 CHARACTERS FOR TEXT

your reply and put it into everyone's feed; and you can retweet and quote your other tweets too, letting you create chains of them or resurface old favourites.

Some of this might seem like Twitter focusing on relatively minor features while pleas for anti-harassment tools are overlooked. But at least it's a move to 'finesse' the 140-character limit rather than eliminating it, which would change Twitter in a profound way.

The new features will apparently roll out "over the coming months", as the announcement was meant to give developers a heads-up in time to make adjustments before they hit.

ANALOGUE WATCHES

The evolution of the watch species never stops... here are three new wristy wonders

THE THIN ONE



Citizen Eco-Drive One

Your hero is the Jack Russell, born for the chase and ever willing to throw itself into the tightest gap. Confident in your judgement of the available space, you flit and twist through rush-hour pavement traffic to arrive at work on time. Valuable seconds could be lost to the tangle of a bag strap, so your clothes and accessories are slim and figure-hugging. Like this watch, curved to fit snug your wrist and measuring just 2.98mm thick – with a solar-powered Eco-Drive movement. [£4250 / citizenwatch.co.uk](#)

THE LIGHT ONE



Montblanc TimeWalker Pythagore Ultra-Light Concept

You have a tattoo of a hummingbird on your biceps. Power-to-weight ratio is way more important to you than strength. Which is why you desire this Montblanc concept, which weighs just 14.88g. It achieves this through the use of titanium and carbon nanotubes – the true composition of which you don't really understand, having also adopted a slacker's knowledge-to-bluff ratio. [£tba \(concept\) / montblanc.com](#)

THE 'MECA' ONE



Boldr Journey Chronograph

Your *Mastermind* topic is the beaver. You marvel at its speed and grace under the water and sharp teeth up top. This Boldr watch also has twin talents, due to its Seiko VK64 'Meca-Quartz' movement that combines quartz accuracy with a mechanical chronograph action. Also like the beaver – now reintroduced to British waterways – the Singaporean Boldr will be over here once its Kickstarter campaign succeeds. [US\\$260 / boldrwatch.com](#)





ACOUSTICS

MEDIA BT3

Wireless Hi-Fi Speakers



Stunning Style

Available in 3 high gloss finishes

Red Black White

Bluetooth Connectivity

For ultimate wireless streaming from any device

Versatile Design

Can be positioned either portrait or landscape

100W Amplifier

For genuine Hi-Fi stereo sound

The Most Versatile Bluetooth® Speakers Around

Unlike docks and soundbars, the BT3 'Wireless' Hi-Fi Speakers from Q Acoustics delivers real stereo sound separation via its versatile twin bookshelf speakers. Stream music via Bluetooth®, plus connect the audio output from your TV or set-top box* to the BT3's built-in 100W amplifier and enjoy sound quality that comfortably outperforms typical 'single box' soundbars and docks.

*BT3 is compatible with both Sky and Virgin remote controls.

www.qacoustics.co.uk/stuff // £279.95

Follow us on: Q Acoustics @QAcoustics



DUE
29 SEPFIRST LOOK **FIFA 17** PS4, Xbox One

Regardless of what TV commentators say, football doesn't have a script. That's unless you're playing 'The Journey' on *FIFA 17* – a new mode that's basically a Marcus Rashford simulator.

You step into the boots of Alex Hunter, a young player at a Premier League team of your choice. Via matches, training sessions and interviews (there's an RPG-style conversation tree for you to select responses), it'll guide you through his journey from hope-filled nobody to the next Neymar – a bit like

a supercharged version of the existing 'Be a Pro' mode.

Elsewhere, EA's been working on physicality and movement. You'll be able to use a player's strength more effectively simply by squeezing the left trigger, making them better at shielding the ball while waiting for support to arrive; plus they can hold people off at goal-kicks in an attempt to take the ball down rather than just trying to head it on every time.

This will need to be integrated carefully to prevent it becoming overpowered – nobody wants

to see Yaya Toure become an unbeatable Incredible Hulk of a player.

Team-mates now make more intelligent runs in an attempt to draw defenders out of position and create space for others. Set-pieces have also been tweaked in an attempt to make them feel less like a game of roulette, while you have more control over run-ups on free kicks and penalties.

With early reports suggesting *PES 2017* is shaping up well, this year we could have a gargantuan title race on our hands.



RETURN OF A LEGEND

**WATCH_DOGS 2**

PS4, Xbox One, PC

Don't call it a come-back. Seriously, that's a terrible pun, but if you were a little underwhelmed by 2014's *Watch_Dogs* then Ubisoft's newly announced sequel looks well set to remedy your disappointment. Set

in an alternate San Francisco populated by tech companies, hacktivists and weirdos who like to party in giant horse masks, *Watch_Dogs 2* builds on the techy mechanics of its predecessor to open up a world of new opportunities for players.

You're now free to wreak havoc as you please in a city

with real personality and a malevolent underbelly. Chiefly, that means the ability to hack any person, car or network you fancy, rather than those deemed to be a 'target'.

You play in the role of Marcus Holloway, an unlikely creature who is just as hot on this computing malarkey as he is at parkour. He arms

himself with a billiard ball attached to a paracord lanyard. It's lightning-fast and brutally bruising. Plus he carries around a drone and remote-controlled car. 'Cos who knows what kind of trouble this nerdy ninja might run into?

Watch_Dogs 2 is due out in November, so you don't have long to wait to find out.

ON THE GRID UPCOMING RACERS

**F1 2016**

PS4, XBOX ONE, PC

The only way to ensure somebody other than Mercedes emerges victorious in Formula 1 is to win it yourself. *F1 2016*'s newly expanded career mode lasts for 10 seasons and includes expanded testing sessions for you to really hone your race setup each weekend.

**GRAN TURISMO SPORT**

PS4

It's hard to believe that *Gran Turismo* has yet to make an appearance on the PS4 but *GT Sport* will be its debut, bringing with it FIA approval and new tracks including Brands Hatch, the Nordschleife and a street circuit in Tokyo. But where's the weather? Or night racing?

**OBLITERACERS**

PS4, XBOX ONE, PC

If all of that seems overly serious, *Obliteracers* replaces tyre setups and safety cars with weaponised mayhem for up to 16 players. If you're playing on Steam, extra human drivers can join in using their phones as controllers. Console versions are due out this month.



INCOMING

AUGUST

- DEUS EX: MANKIND DIVIDED
- MADDEN NFL 17
- ATTACK ON TITAN
- NO MAN'S SKY

SEPTEMBER

- NBA 2K17

OCTOBER

- GEARS OF WAR 4
- WORLD OF FINAL FANTASY

START MENU

The latest startups, crowdfunded projects and plain crazy ideas

KICK-STARTER

Vi has ways of making you talk LIFEBEAM VI

Creating a personal AI like the one in the movie *Her* is a challenge that's clearly keeping product designers up at night. The latest product to promise truly personal interaction is this running neckband. It needs your phone, but offers motion-sensing in the neckband, heart-rate tracking in the Harman/Kardon-tuned earphones and feedback from Vi (say 'Vee'), the female-voiced 'AI'. She'll learn your physical limits and text you the next day to ask how you're feeling. One thing to bear in mind, though: a real personal trainer, however expensive, might say: "You look like crap. Let's skip today's run and get ice-cream."

US\$250 / life-beam.com



KICK-STARTER



In a world without headphones... SOUNDLAZER

In the future, electronic children will laugh when we say we used to shave with a razor. "Why didn't you use a Soundlazer?" they'll beep. Because, you'll reply, back then Soundlazer was just a directional audio device that let you listen to music privately. They'll pull an emotiface: "What's music?"

\$230 / soundlazer.com

INDIE-GOGO



Not just a camera, a SPACE camera TINY1

Skies and spiders are our hot tips for Instagram this summer. Astronomy photography is tricky on smartphones, but the Tiny1 is out to make planet and moon shots affordable with its specialist 4MP sensor, IR Cut Filter and optional mounts for telescopes and telephoto camera lenses.

\$400 / tinymos.com

INDIE-GOGO



Intruder attack cam HAWKEYE

So, your home security cam has sent you a warning and now you're watching a live feed of a man stealing your stuff. You need Hawkeye, an indoor camera drone that will lift off, swoop at the intruder and arrest him! Not really, it just flashes a bright light, sounds an alarm and evades capture. Amusing, but an attack rabbit would be cheaper.

\$800 / hawkidrone.com

KICK-STARTER



Ping! Pong! (Repeat x30) TRAINERBOT

To heck with AI 'friends'. They can't play table tennis with us, whereas the app-commanded Trainerbot is capable of firing balls down the table using a variety of directions and spin shots. You can even programme in famous shots from famous tournaments. Can HAL do that? Can he smeg.

\$330 / facebook.com/trainerbot

PM-1



Planar Magnetic Headphones

“ PM-1 is painstakingly engineered and a true object of desire... Comfortable to wear and great to listen to, this is easily the most exciting new headphone to be released this year. ”

Hi-Fi News July 2014

“ the OPPO needs to be on your shortlist ”

AV Forums April 2014



“ Its headphone amplifier stage is up there with the finest ”

Hi-Fi+ Feb 2015

“ If you have wanted near benchmark levels of performance for a fraction of what most benchmark components cost, look no further. ”

Hi-Fi Choice July 2014



Headphone Amplifier & DAC

HA-1

oppo

oppodigital.co.uk



SPEED PLUS SCIENCE MAKES BOAT THAT FLIES

Jools Whitehorn takes a ride on Ben Ainslie's America's Cup rocket

Sometimes it just takes one technical loophole to change everything. That was what happened at the last America's Cup in 2013, when the world's oldest international sporting competition was shaken up by the introduction of hydrofoils that let the boats 'fly' on water.

It was no less shaken up by the introduction of Sir Ben Ainslie, the most decorated sailor in Olympic history, who zipped across the Atlantic to play a crucial role in Oracle Team USA's victory. And now he's set about launching a GB team to win it in 2017.

My first taste of Land Rover Ben Ainslie Racing's campaign is at the team headquarters in Portsmouth, which has more in common with the Batcave than it does with most boatsheds. The working home to around 90 people, it's centred around a giant hangar that houses the test boats – T1, T2 and now T3 – and their gigantic wing 'sails', which are similar in size to the wings of a Boeing 767.

In the leadup to next year's main event, the America's Cup World Series tests the crews – pitting them against each other in identical craft that form the basis for the test boats. Out at the Oman

leg of the World Series, I get a chance to climb aboard Land Rover BAR's boat. The crew work hard grinding the winches and trimming the sail constantly with well-oiled precision, trying to squeeze every last knot of speed from the light winds. Alas, we don't work up enough to lift the boat onto its foils, and from my precarious seat on the net at the back of the boat I feel a little guilty for contributing nothing but dead weight.

A few days before, I'd followed T2 out for a run in Portsmouth. With a strong breeze, the wind-powered machine moved at speeds I didn't think possible – and left our powerful, petrol-powered chase boat struggling to catch up. Part of the magic that makes this possible is that, as the boat speeds up, that giant wing starts to make use of the 'apparent' wind generated by its own movement, allowing it to sail at nearly three times the speed of the actual wind.

The test boats run through a rapid development process with every part being continually tested, tweaked and upgraded. The team uses 3D printing to both visualise parts and make final components, such as the complicated hydraulic manifolds that turn the power of

the crew into motion. Meanwhile, over 200 sensors around the wing and platform log every conceivable measurement, from acceleration to pressure and flex.

You can experience the racing first hand when the World Series comes to Portsmouth from 21-24 July. Head to the race village and you can strap on an Oculus Rift VR headset to experience Land Rover BAR's sailing simulator in the TechZone.

AMERICA'S CUP IN NUMBERS

3

TONNES OF LIFT CREATED BY THE FOILS

50

MPH - FASTER THAN ANY RNLI LIFEBOAT

99

% OF THE BOAT OUT OF THE WATER AT SPEED

230

SENSORS ON EACH OF THE TEST BOATS





Money can't buy you love SIRIN LABS SOLARIN

'Surprisingly rational' is one stage of the Tuesday afternoon 'When I win the lottery' daydream. You know, where you decide that you wouldn't let it change you – where you'd keep it quiet and tell people you were visiting your mum in Dudley, not flying to the BVLs to go paddleboarding with Salma Hayek. No, you convince yourself, you'd have nice things, but not crazy things. Not this £11,400 boutique mobile phone, even if it does have 256-bit encryption, 4.6Gbps WiGig networking and a 2K screen. "Even with all the money in the world," you rationalise, as you get back to work, "that carbon-effect leather finish is pretty hideous."

from £11,400 / sirinlabs.com



Backcountry beans generator? WAYV ADVENTURER

The Adventurer is a portable RF food heater that uses LDMOS transistors and lithium-ion batteries. Basically it's an outdoor microwave, and we were winding ourselves up for a super-snide swipe at glampers with their SUVs and inflatable tents. But then we read into it a bit more. Any non-fiery food preparation technique is to be welcomed – just ask an American, Canadian or Australian about the danger of wildfires. And the Adventurer's ability to be powered by removable and solar rechargeable batteries might well have implications for disaster relief. Still, glampers though, eh?

£tba (due 2017) / wayvtech.com



? WTF IS BOx?

Erk. That looks like the tool of a hideously stylish dentist.

It does. You'll notice that, in a dentist's lair, the only tools on show are the dainty, picky ones. Not anything that suggests leverage. Certainly not the thing that attaches your wobbler to the door handle. But, shudder ye not, odontophobics! This Swiss Kickstarter project is nothing to do with teeth, except for the facilitating of the passing of beer over them. It's a bottle opener.

Phew. And, yay!

But not just any old bottle opener, of course. Bottle Opener X (BOx) has hidden gubbins including... wait for it... an AAA battery! Crumbs, eh? It's connected to a circuit board, upon which such Wi-Fi wizardry is activated as to sync your bottle-opening activity with an app on your smartphone. For why? Why, for to keep a celebratory tally of the number of beers you have drunk! And, even better, to automagically send a message to your friends/boss/child that says: "I've just opened a beer! You open one too, and we can clink an imaginary 'cheers', K?"

That sounds very, very irresponsible.

Ah, but the app will also pop up useful little messages like "3 beers in one hour! Remember no driving." And as the makers point out, BOx can also be used to monitor your drinking in a health-conscious way. Abstainers who don't want to watch themselves drop off the app's Strava-style leaderboard can even opt for a non-connected BOx, perhaps using it for Orangina. It is a nice object, after all. Perhaps too nice to waste on drunks.

I still don't get how it works.

Oh, it's all fulcrums and physics and whatnot. The BOx is designed to be used one-handed (lest the need for two hands add unbearable seconds to your race for the top of the leaderboard), so your forefinger goes through the hole, and the whole thing goes over the top of the bottle, with the hook on the underside of the cap facing you. Grip, bish, bosh... cirrhosis.



A weightier option for tracking is Samsung's new Gear Fit2, which has GPS.

Lighter on your lugs, and your lungs
SAMSUNG GEAR ICONX

Some folks are carefree runners. They'll bounce out of the house at any time of day, wearing a hoody and a sunhat and massive headphones. Probably towing a large dog. For others, though, running is a critical physical event entailing the very real possibility of returning home on all fours. It requires planning, and light weight gear. So big over-ear headphones are out... but these new Samsung IconX earphones might be in. They're wireless, with 4GB of on-board music storage or Bluetooth streaming from your phone. They'll also track fitness data, including heart rate, distance and speed, doing away with the need for a separate fitness band. Streaming battery life is only about 90 minutes, but (wheeze) that shouldn't be an issue. [£179 \(due summer\) / samsung.com](#)

Is this a dagger-proof bag I see before me?
SABRE SCOUT BAG

If you see someone with this bag, then this bag might be the only reason you're seeing that someone. The Scout is a knife-resistant courier bag, designed for security professionals and close protection types. It has special grab handles on the back so you can use it as a shield, and for an extra £100 you can get it with a custom trauma kit in the lid (think blast dressings and open chest-wound seals, not Elastoplast). Sound like it might be a teeny bit over-specified for your suburban commute? Maybe. But then it's nice to have things that exceed our needs – that's why people wear divers' watches in a paddling pool, drive 150mph cars to Asda and wear £150 trainers to jog around the park. Besides, one day they might just come in handy. [from £190 / sabre17.com](#)



↓ DROP EVERYTHING AND DOWNLOAD...

Tictures Efree / Android

It's time for us geeks to get out of Emoji Town. It's crowded here. Where are we headed? ASCII Art Bay! Tictures is leading the charge, with its library of user-customisable pics that can be one-click shared to the likes of Facebook Messenger, or copied to the clipboard to run into whatever earth-shatteringly important missive you need to impart to the universe. It's Android only at the moment, but the developer is working on an iOS version. See you later, emoji bandwagoners!



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ON XF LENSES

— **AND** —
DOUBLE THE
CASHBACK*

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SELECTED CAMERAS



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*THE CASHBACK AMOUNT IS ONLY DOUBLED ON ONE LENS WHEN YOU PURCHASE AN ADDITIONAL LENS WITH THE X-PRO2, X-T1 OR X-E2S

29th



NEXT ISSUE
September
All about those games
On sale 4/8/16

Just ask Google
Or Alexa.
Or, if you believe Apple home hub rumours, Siri.

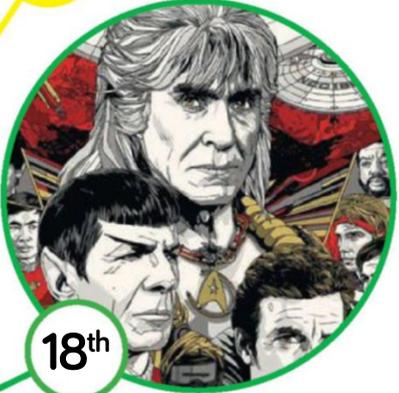


NOW

BATMAN: RETURN TO ARKHAM
PS4, XBOX ONE
Remastered reissues of *Arkham Asylum* and *Arkham City* have got forum fans foaming at the mouth, but we're looking forward to a trip down a Gotham memory lane, with all the violence that suggests. Reworked graphics and shading should add ambience.

80 years ago
Talking Clock launched by the Post Office

THEN

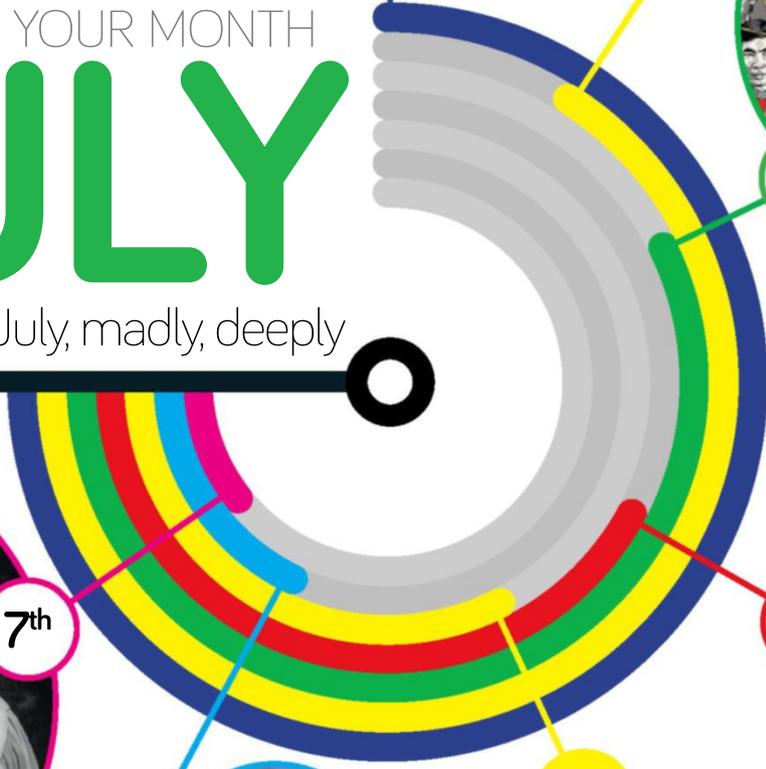


18th

STAR TREK II: THE WRATH OF KHAN (DIRECTOR'S CUT)
BLU-RAY
It's a 50th anniversary year for *Star Trek* – there's a new film in the cinema (see opposite) and they're re-releasing all the old ones on Blu-ray. This rare Nicholas Meyer director's cut is our pick, if you don't get the whole set.

YOUR MONTH
JULY

July, madly, deeply



7th

ROMEO & JULIET
Fear not, 'spareophobes! This is a cinema thing, albeit a live screening of a theatre thing so still quite long. But *R&J* is the most Michael Bay of the Bard's plays – all love and fury and fights and death – helped by the fine faces of *Game Of Thrones*' Richard Madden and *Downton Abbey*'s Lily James.



8th

BRITISH GRAND PRIX SILVERSTONE
F1 just keeps on giving. Mercedes' dominance is far from mechanical, with Rosberg and Hamilton at each other like kittens in a jar, while the smile's been wiped off Ricciardo's face. The British race is always exciting, and well worth witnessing live.

10th

Beatles Day



Timelines and intros to the albums at thebeatles.tidal.com

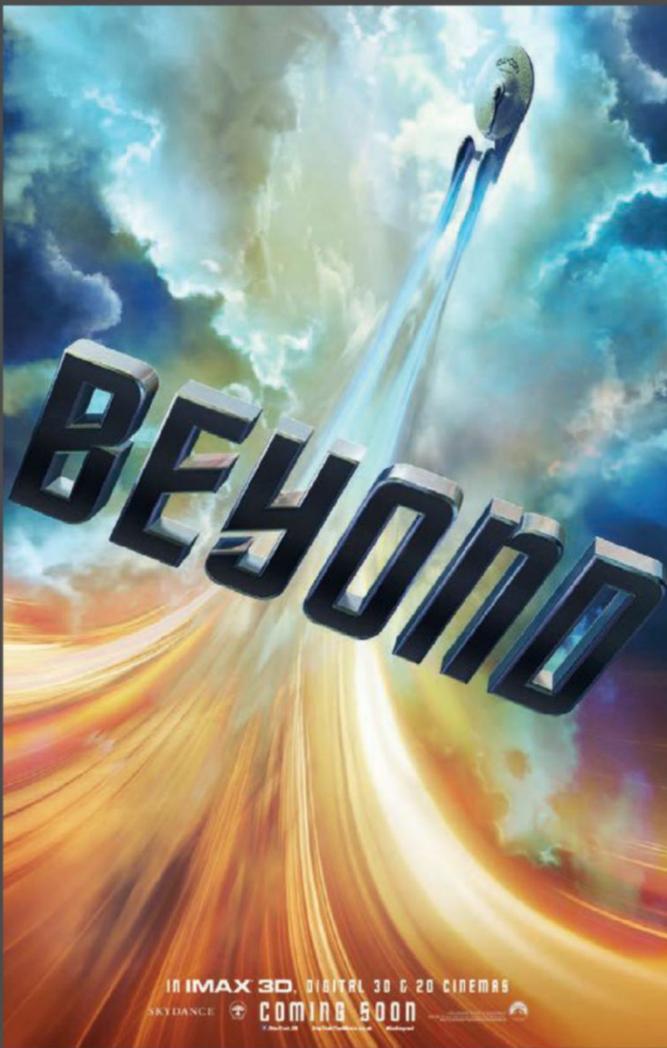
15th

GHOSTBUSTERS
Hmm, tricky. Director Paul Feig has decent form, with *Bridesmaids*, *Spy* and *The Heat*. Melissa McCarthy and a collection of *Saturday Night Live* regulars should ensure the jokes hit home... and Chris Hemsworth is in it too. But we're more concerned than excited about a Bill Murray cameo. Nope, we can't call it.

ON OTHER SCREENS
22nd: *The BFG*, *Star Trek Beyond*
28th: *Jason Bourne*



WIN



OUT IN CINEMAS 22 JULY

TOTAL PRIZE VALUE £1200



WIN A BUNDLE OF FUTURISTIC GADGETS WORTH £1200 WITH STAR TREK BEYOND

So, there's a new *Star Trek* film coming. It's out on 22 July, it's got Simon Pegg and Idris Elba in it, it's directed by Justin 'Fast & Furious' Lin, and it's called *Star Trek Beyond*. If you need to lie down and take some deep breaths after reading that, go for it, we understand... but come back soon, because the next bit is the competition prize – and we've set our phasers to stunningly generous.

We're giving away a bundle of tech treats that even Spock would drool over: a Parrot AR.Drone 2.0 Elite Edition, a *Star Trek Beyond* levitating speaker, an Apple Watch and a 16GB iPad Mini 4, with secure delivery within the UK.

And the film? *Beyond* sees the crew of the USS Enterprise exploring the furthest reaches of uncharted space, where they encounter a mysterious new enemy who will put them – and everything the Federation stands for – to the test. Take a few more of those deep breaths, then watch the trailer at startrekmovie.com

HOW TO ENTER

Ready to get gadgeted up? Boldly go to stuff.tv/win and answer this question:

SIMON PEGG CO-WROTE AND STARRED IN WHICH COMEDY ABOUT A FRIENDLY ALIEN?

- A ...** Paul
- B ...** Jeffrey
- C ...** Star Wars: The Return Of The Attack Of The Revenge Of The New Hope Of The Sith Strikes Back

HURRY!
COMPETITION CLOSING
11 AUGUST 2016

Terms & conditions 1 Open to UK residents aged 18 or over. 2 Entries close 11.59pm, 11 August 2016. 3 Prizes are as stated. 4 Prizes are non-transferable. 5 Only one entry per person. For full Haymarket terms & conditions see www.stuff.tv/legal
Promoter: Haymarket, 69 London Road, Twickenham TW1 3SP



Sony, yet so far

Can the latest Xperia smartphone still compete with the big boys, but at an affordable price? Well, yes and no...

£460 / sonymobile.com

Sony phones are changing. For years the best of them have ended up in the ring with the flagships from Apple, Samsung, HTC and LG, duking it out to see which is going to make the best ridiculously expensive phone of the year. But the Xperia X shows Sony is opting out of that slugfest. This year, at least.

This phone costs £100 less than something like the Samsung Galaxy S7, but it still has sufficiently high-end hardware to feel, look and act like a real bank-balance-drainer. Don't get us wrong, at £460 this is no bargain basement job... but if the X ends up selling better than its premium 'Performance' big brother, then the way Sony rolls in the future could change.

So is the Xperia X a renegade that's worth recommending? Or a false economy that doesn't justify the modest savings you'll be making compared to the price-bracket above it? We wrapped our sweaty mitts around it to find out.



1 Softer, rounder, plasticker

Last year's Sony Xperia Z5 Premium had metal sides and glass plates on its front and back, and was hard-edged in parts as a result. The X is a less self-consciously premium affair, with aluminium on the back, while the plastic sides have a softer feel.

2 Look sharp

This is no 4K monster like the Xperia Z5 Premium, with a more modest 1080p display that's five inches across. You still get 441ppi, enough for pin-grade sharpness. General screen quality is great, and the display deals with sunlight effortlessly.

3 Game old girl

The X feels dead fast, despite having a six-core CPU rather than the octa-core ones you find in some top phones. It also houses an Adreno 510 GPU, so it can use 'High' graphics settings in games such as *Asphalt 8* and *Dead Trigger 2*.

28 hours with the Sony Xperia X

- Good
- Meh
- Evil





4 Appy and you know it

Sony adds a load of its own apps, covering almost every kind of media. There's a photo app, a video player, the PlayStation app and a music app. All but the music and photo apps can quickly be eradicated if you prefer your phone bloat-free.

5 Touchy feely

What else to mention? Oh yeah, there's a fingerprint scanner on the side that doubles as a power button, and we're pleased to report that it's fast and accurate. We do prefer finger scanners on the front, as they're easier to use when your phone's on a desk.

Tech specs

- Display** 5in 1920x1080 IPS LCD
- Processor** Snapdragon 820 **RAM** 3GB
- Storage** 32GB (plus up to 200GB microSD)
- OS** Android 6.0.1 **Battery** 2700mAh
- Cameras** 23MP rear, 13MP front
- Dimensions** 143x69x7.9mm, 153g

Megapixel megalomaniac

The Xperia X has a camera that promises the world... or at least, some very fast pictures



■ Zippy zoom

With a 2.3MP sensor, the Xperia X is higher-res than almost everything else out there, and Sony boasts this is its "fastest phone yet". It certainly has none of the Z5's shutter lag problems.

■ Light and shade

The Xperia X seems to be snapping right as you tap the shutter button when lighting's plentiful; not so at night, which is when the sharpness also tends to suffer at the edge of the frame.



■ Selfie-indulgent

Most phones have fixed-focus selfie-snappers of around 5MP resolution, but the Xperia X has a 13MP front camera with autofocus. So in the right conditions it can easily outdo the Galaxy S7.

■ For 4K's sake

Sony has chopped 4K video out of this phone, presumably because of complaints about the previous model overheating. Despite that setback, this a very tidy camera for video.

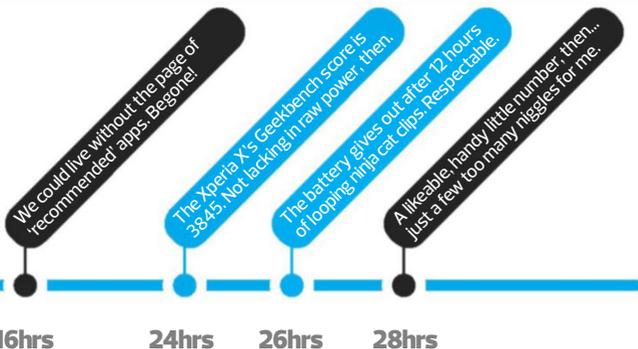


Want the latest and greatest? Or a startling bargain? The Sony Xperia X is neither. Its camera and screen aren't quite top-drawer, but it's fast in use and easy to live with. That might be too much faint praise to pay £460 for; but if the price drops a few months down the line, it might be worth another look.

@wwwdotandrew

STUFF SAYS ★★☆☆☆

Not the biggest or fastest, but still a good bet if you can't stretch to a Samsung Galaxy S7 or LG G5





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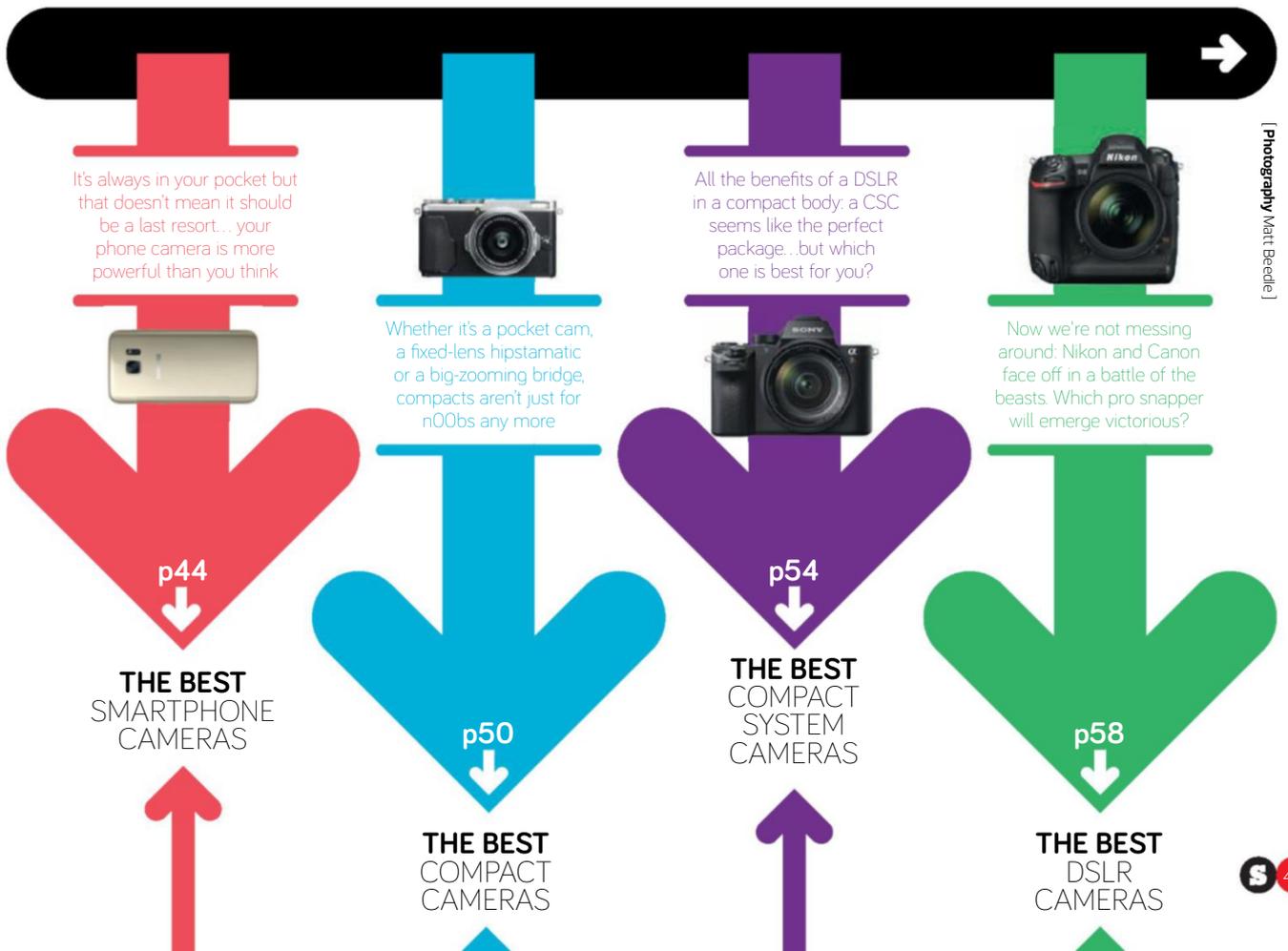
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ALL KILLER, #NOFILTER

From a front-facing selfie cam to a £5k DSLR, have we got a summer snapper for you...



ONE Despite packing in built-in optical image stabilisation, the camera module's protrusion at the back is very slight – it sticks out just 0.46mm.

TWO The S7 Edge's camera uses fast phase detection autofocus – the same method as many DSLRs. Samsung calls this Dual Pixel technology.

THREE At just 7.7mm thick, the Galaxy S7 Edge is far easier to carry around all day than any 'real' camera. And did we mention that it doubles up as a phone?



ONE
TWO

THREE



TOP TIPS

PHOTO PASS

Shooting at a gig? Turn your flash off and wait until the stage is well lit, then take a burst of photos in one go to maximise your chances of getting one that's sharp.

CHEEEEESE!

Encourage kids and pets to look at the camera by using the Look Birdy app (£free, iOS). It'll emit a chirping noise to get their attention just before the shutter fires.



SNAPPY SNAPPER

The S7 Edge's camera is built for speed, opening in a split second via a swipe on the homescreen. The burst mode also rattles off shots like a machine gun.

So what?? Phone camera smarts
Smartphones create photo magic via a tiny module, with a lens and aperture in front of a sensor to turn light into data.

THE BEST PHONE CAM

Want to take eye-popping pics without kit hanging round your neck? Then consider your smartphone's camera – this one's our pick:

SAMSUNG GALAXY S7 EDGE

£640 / carphonewarehouse.com

Smartphones are no longer the poor, red-headed cousins of the camera world. While it's true that they still have to contend with a few limitations – mostly as a consequence of their skinny frames – mobile cameras offer superb image quality, a lengthy list of features, and the convenience of being not only feather-light but available to you at all times. And no smartphone camera epitomises this better than the one found on the Samsung Galaxy S7 Edge.

The dark light rises

Yes, its sensor boasts 'only' 12MP, low by smartphone standards, but who cares about numbers when the results are so rich, vibrant and detailed? There's a pleasing contrast and punch to the Edge's stills straight out of the camera – you won't need to monkey with many of them using an editing app. Photos even retain sharpness and clarity when you're snapping in the dark, because each of its sensor's 'Dual Pixels' is larger than those of most phone cams, and therefore able to suck in more light in a shorter amount of time.

Low-light shooting is aided by the f/1.7 aperture, which means the opening behind the S7 Edge's lens is uncommonly wide – again, to let in more light – and by

the fact that optical image stabilisation cleverly shifts the lens elements around, so even if you do have to take a longer exposure, your unsteady hands won't affect sharpness too much.

Movies, not shakies

And if you want more control over your shots, you can switch to Pro mode and manually tweak settings like ISO, shutter speed, autofocus and white balance. True control freaks can even shoot in the RAW format, retaining all the sensor info to allow for greater editing scope in Photoshop or Lightroom.

The S7 Edge is one of a handful of smartphones able to capture 4K video, and it works like a charm. The optical stabilisation helps prevent the shakes that make clips unwatchable, and the quality itself is excellent: similarly rich and vibrant to the stills, it benefits from a short depth-of-field and bags of sharp detail. And with video modes like slow motion, live broadcast and hyperlapse included in the default camera app, there's plenty of scope to create and share fun clips without having to use third-party software.

Screen 5.5in 1440x2560
Cameras 12 MP, f/1.7, 26mm rear; 5MP, f/1.7, 22mm front **Video** 2160p @ 30fps, 1080p @ 60fps, 720p @ 240fps, HDR
Processor Exynos 8890

STUFF SAYS ★★★★★

Quick and easy to use, the Galaxy S7 Edge delivers eye-popping videos and photos in almost any situation

NOT JUST A CRACKING CAMERA

BATTERY

The Edge's 3600mAh battery will usually last you well over a day, but even if you're a power user you'll appreciate its fast-charging function – plug in the included charger and you'll go from empty to 70% in about 40 minutes.

DESIGN

Unlike most cameras, the S7 Edge is waterproof, so you can shoot yourself in the shower (hey, we don't judge) without worrying about the repair bill. We also think this is Samsung's best-looking phone yet.

OS

The S7 Edge comes with Android 6.0 Marshmallow, and you're given the choice between Samsung's own TouchWiz interface or a 'stock' Google Now setup. Many will prefer the clean look of the latter, but TouchWiz has some nice elements.

POWER

With 4GB of RAM and a beefy Exynos 8890 CPU, the S7 Edge is seriously stacked in the speed department. Whether you're juggling apps or tackling the latest 3D games, it'll keep up, no sweat.



GALAXY S7

£570 / carphonewarehouse.com

While it lacks the wraparound screen of the Edge, trading it for a regular 5.2in AMOLED, the vanilla S7 is much the same phone inside – and that goes for the camera as well as the power. Highly recommended if you're not fussed about the Edge's curved screen.

STUFF SAYS

★★★★★
Equally impressive, and a bit cheaper



BEST OF THE REST

SMARTPHONES FOR EVERY SHOT ↓

**BEST FOR
SUPER-WIDE
ANGLES**



LG G5

£450 / lg.com



Big selling point?

LG's brilliant G5 has turned a lot of heads thanks to its modular design, but it's this phone's camera that is its greatest asset. This dual-lens affair is pretty much the king of pictorial flexibility.

What's it like to use?

It allows you to switch between standard point-and-shoot snaps and sweeping wide-angle photos. Daylight photos are resplendent with bright and natural colours, while the phone's f/1.8 lens and optical image stabilisation tech ensure it gets by just fine at night. Having a wide-angle lens to hand more than compensates for any graininess, especially when you need to squeeze loads of scenery into one pic.

STUFF SAYS ★★★★★

This inventive camera is yet another reason to love the G5

DUAL LENS

16MP

f/1.8

8MP SELFIE CAM

**BEST FOR
DUAL-SENSOR
SMARTS**



HUAWEI P9

£450 / consumer.huawei.com



Big selling point?

At a glance, you might assume the P9's camera works the same as LG's G5. But no. While the G5 gives you two different cameras to snap away with, this Huawei effectively gives you the same one twice.

What's it like to use?

This is the setup we're expecting to see on the iPhone 7 Plus, with the aim of bringing more detail and fewer distortions to your pics. In practice, indoor shots are still noisy, and it's not great at bringing up the light level in truly dark shots. For a glimpse of the photographic future, this phone is impressive. As long as you don't put it into challenging light, the P9's shots are very punchy, with fantastic contrast.

STUFF SAYS ★★★★★☆

A great first stab at the dual-sensor concept

DUAL LENS

12MP

f/2.2

8MP SELFIE CAM

**BEST FOR
SHARPER
ACCURACY**



APPLE IPHONE 6s

£620 / apple.com



Big selling point?

While several Android phones, including the Galaxy S7 and LG G5, come with optical image stabilisation for sharper photos, Apple's iPhone 6s Plus is the only Apple handset to feature this tech.

What's it like to use?

That means it's easily the best iOS snapper you can own and still a good camera in its own right, despite being nearly a year old. Where its competitors' colours often stray towards over-saturation, they're reliably accurate on the 6s Plus. Thanks to some smart processing skills, low-light pics are also on a par with the Galaxy S7's despite the lens's smaller f/2.2 aperture. The 6s Plus still gives you a fab camera.

STUFF SAYS ★★★★★☆

A golden oldie that's soon due a makeover

OIS

12MP

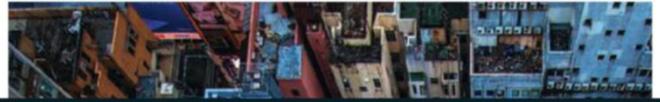
f/2.2

5MP SELFIE CAM



PANORAMAS

Your phone will set its exposure at the point you start the pan, so be careful with scenes that mix light and dark.

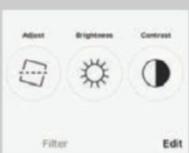


& TIPS TO MAKE THEM BETTER

from Instagram travel photography superstar Jacob Riglin (287k followers and counting)



Jacob shoots with Canon cameras. Find him on Instagram @Jacob



TOOLS, NOT FILTERS

I always sharpen images a little to make them nice and crisp. The Luxe tool is great for bringing out some of the tones and contrast in your photo.



IMPROVISE

I've forgotten my tripod plenty of times. Utilise what's around you. If I have a backpack I'll put the camera on there and maybe put a jumper underneath it so it's steady.

GET REFLECTIVE

1 You might not think puddles would give you great reflections, but a lot of them do – you just need to get the angle right. It's not a case of looking straight down into them; your lens has to be literally just a few centimetres from the water.

2 If you can, put your camera on the ground next to the puddle. If you're using a phone camera, try turning it upside down so the lens on the back is just above the waterline, and use one of the phone's physical buttons to activate the shutter.

3 Most DSLRs are weatherproof so you can get away with sticking them right on the surface – a little water on the bottom won't destroy it – but maybe check the specs beforehand!



EXPRESS YOURSELF

Selfies are all about lighting. Position yourself so your face is lit up by the sun. Evening colours are good because they'll make you look more tanned.



GET SOME PERSPECTIVE

Try to find a viewpoint that nobody else has and think about leading lines. If there's a pier in your shot, use it to draw the viewer's eyes into the photo.

UP ON THE ROOF

1 If you can (and if you dare!) stick the camera that little bit further over the edge and allow it to see the bottoms of the buildings in front of you. Extreme angles give a perspective that people wouldn't usually see.

2 A lot of people like to shoot landscapes in landscape, but shooting portrait from the top of a building can really give you that feeling of altitude. If you're using a wide-angle lens it can sometimes show the ground and the skyline in one shot.

3 I like putting my feet in images because it can give the picture a really great sense of perspective. If you can see your feet and also the people and cars below, you can really get a strong sense of the height there.



GET UP EARLY

It'll mean you can shoot with five other people rather than 500, and you're likely to get a shot of a landmark or location that fewer people have captured before.



FOOD FOR THOUGHT

I like to do a shot where you hold the plate out in front of you and take the shot along your arm. It draws the eye into the shot and gives a nice depth of field.

ANYTHING ELSE?

PHONETOGRAPHY

THE TRIP You didn't think you'd need a camera. But then you bumped into the Chuckle Brothers at Nando's and suddenly having a camera became pretty bloody important. There's one on your phone, but what if the battery dies, or you can't position it properly, or, or... oh, it's all too stressful!



EXOLENS ZEISS

So your Samsung-toting friends have read our phone cam tests on p46 and they're taunting you for the "rubbish" iPhone 6s Plus you carry around with you. But they didn't factor in the ExoLens power-up that you've just bought, did they? It piggybacks on to your iPhone and adds a Zeiss-made wide-angle lens to the camera, giving you the kind of high-end glass that'll make their look about as classy as a disposable point-'n'-shoot. With any luck you'll even know how to use it. **£200 / exolens.com**



POCKET TRIPOD

When is a tripod not a tripod? When it doesn't have any legs at all. But that doesn't make the Pocket Tripod useless. When it's not in use, this transforming phone-holder stays stashed in your wallet; but if you need to go hands-free with your phone, whether it's for a timelapse video, Skype call or stick-free selfie, it folds up into a solid but fully adjustable base for your mobile. You'll need a flat surface, but it's got to be better than waving the wand of Narcissus, surely? **US\$25 / pocket-tripod.com**



SNAPPY SELFIE REMOTE

Unless you're related to Mr Tickle, nature's selfie stick (that's your arm) probably isn't really long enough for taking decent shots of yourself. Even using the self-timer can be hit and miss. Take the strain out of the whole business with a Snappy Selfie Remote. It's about the size of a pound coin and connects using Bluetooth, so you can hide it in your pocket when you're ready for your snapshot, and comes with a neat little stand to prop your phone up. **£15 / firebox.com**



ZAGG NOW CAM

Remember those little Flip video cameras that did the rounds about 10 years ago? No, we're not just trying to make you feel old; there's a point here about how everything comes around in cycles. Like vinyl, those little cams could be on the way back, starting with Zagg's Now Cam. Only this time it also doubles as a Bluetooth speaker and hands-free system. Its 120° wide-angle lens will shame your phone's, and it can shoot stills as well as Vine-ready six-second clips. **£80 / zagg.com**



MOSHI IONBANK 3K

It's all very well carrying around a monster battery pack with enough juice to keep your phone trucking for a whole week, but sometimes you just need an emergency backup for when you get caught short on a night out – something you can tuck in your pocket and forget about. Moshi's Ionbank 3K has the Lightning cable built in, so you don't need to worry about carting one around separately, and it'll give you one full charge with a little bit left over for emergencies. **£55 / moshi.com**

DOWNLOAD THIS



Snapseed £free / iOS, Android

Instagram's editing options are great, but talk to the pros (as we have on p47) and they'll tell you Snapseed's tools are ideal for tidying up images for feeding to the 'gram.

CARRY THIS



Knomo Hanson £130 / knomobags.com

Not only is it named after your favourite sibling band from the '90s, but Knomo's Hanson is made out of old bottles, so you can also fill it with Dr Pepper and drink out of it. Maybe.

VISIT THIS



Bluedot from £35 / discoverthebluedot.com

A new festival at Jodrell Bank Observatory, Bluedot combines science with music, so pack your geekiest pants. Jean-Michel Jarre headlines.



TWO



THREE



FIVE



ONE



FOUR



Alternatively... ExoLens for Galaxy S6
ExoLens isn't compatible with the Galaxy S7, but you can upgrade older phones with this telephoto and macro kit.

ONE Built-in Wi-Fi and a free app mean you can control the X70 remotely, or send your pics to your phone for Insta-upload by pressing the Fn button.

TWO With very little space to play with, the APS-C sensor doesn't have a proper viewfinder, but you can add an external one to the hotshoe if you miss it.

THREE The X70 has an electronic shutter as well as a mechanical one, so you can shoot in silence or whack up the speed past the 1/4000 mechanical max.



ONE



TWO



THREE



TOP TIPS

ZOOM WITH A VIEW

A high zoom factor compresses the perspective, bringing features closer together, helping to convey, say, the buzz of a festival crowd.

CAPTURE YOUR KIDS

Children have huge eyes in relation to their rest of their features, and we see this as cute rather than alien-esque, so be sure both eyes are in focus.



FEATURES ON TAP
The 3in touchscreen tilts, and lets you set focus points with a touch and flick through photos, but doesn't allow access to menus and settings.

Say what? APS-C sensor
The X70's sensor is bigger than the ones in most compacts. A bigger sensor takes in more light, meaning better pictures.

THE BEST COMPACT

So you don't want the bulk of a DSLR, but you still want amazing pictures. Is that too much (or too little) to ask? This lot suggest not...

FUJIFILM X70

£500 / fujifilm.co.uk

To anyone who's been brought up on a zoom-packing compact, the idea of a fixed-lens camera might seem like a lot of unnecessary hard work, but the X70 makes all that stomping about worthwhile. It takes the best bits of Fujifilm's X-range friends and packs them into a body that looks far pricier than the £500 you'll have to spend to own one.

Wheeler dealer

Inside it has the same 16.3MP APS-C format X-Trans CMOS II sensor and EXR Processor II as the more expensive X100T, although the lens Fujifilm has welded on the front is a little wider: 18.5mm, equivalent to 28mm. Don't like it? Then this ain't the camera for you, but it does make it eminently pocketable to all but the tightest trouser.

That low-profile lens isn't just for pocket transportation. It has two rings around it: one for aperture and another that can be instructed to control a variety of other settings. There are dials on top for exposure compensation and shutter speed, but newbies can flick a switch to Auto if they'd rather let the camera look after all that. Focusing is fast and solid too, so you shouldn't have to worry about missing any shots while you wait.

Bring it to light

So what are the snaps like? Colours are bold, vibrant and well saturated, with the camera's metering system doing a great job of keeping exposure levels accurate in almost every conditions you may find yourself in. Detail is great too, better at the lower end of the ISO spectrum, but that's to be expected. Even at 3200, results are still impressive, with surprisingly little noise.

As with other X-range Fujis there are a number of film simulation modes that are designed to give your snaps that authentic 35mm feel. We like Classic Chrome for getting a vintage 'film' look, but it's down to personal preference and some will suit some snapping situations better than others.

But for such a sleek camera to get an APS-C sensor, especially for £500, means you're getting a lot of pic for your pound. You'd normally need to shell out on a far chunkier CSC or DSLR (not to mention the necessary lenses) for that size of light-loving real estate – and that's what makes the X70 such an enticing proposition. Especially when it looks as good as this.

Sensor 23x15mm X-Trans CMOS II
ISO range 30cm – 7.9m **Max frame rate** 8fps
Shutter speed 1/400–30secs
Video 1080p @ 60fps **Wi-Fi** Yes
Dimensions 112x64x44mm, 340g

STUFF SAYS ★★★★★

A veritable Tardis of a camera – the X70 is capable of far better images than its modest size suggests

Best for... compact 4K



PANASONIC TZ100

£550 / panasonic.co.uk

With its big 1in 20.1MP CMOS sensor, far-reaching 10x optical zoom, 4K video and (almost) palm-size dimensions, Panasonic's TZ100 could be the perfect combination of portability and performance.

Extraction stations

Despite being a compact, it manages to squeeze in an electronic viewfinder, and if you're used to having more control than most compacts offer, its ring, top-plate dial and function buttons are customisable. Being able to extract 8MP stills from 4K video is also a nifty way of levelling up your snapping.

STUFF SAYS ★★★★★

Fun and flexible for those who prefer travelling light

Best for... bridging the gap



SONY RX10 III

£1250 / sony.co.uk

There was only one thing missing from last year's five-star RX10 II: a decent zoom range. So with a 25x lens added to the package, is its 'III' successor the ultimate bridge camera? Why yes!

Va-va-zoom

With its brilliant build quality, glorious OLED viewfinder, 4K and a brilliant high-frame-rate video mode, that added zoom range really is the cherry on top, allowing you to shoot wide-angle one moment then push in for a close-up. If you want versatility without lugging loads of lenses around, this is the choice for you.

STUFF SAYS ★★★★★

Not so much a bridge too far as a bridge too fabulous



ANYTHING ELSE?

BACKPACK TO BASICS

THE TRIP You've got everything you need on your back. You might not have access to power, a proper lav or one of those posh deli sandwiches you like, but whether it's a festival, a Himalayan trek or a Whitstable weekend, you'll need simple, effective kit to pack alongside your camera...



MASTER LOCK 5900 PORTABLE SAFE

It's always nice to head somewhere sandy and remove yourself from the world. But you don't want to leave your phone at home. Someone might be wrong on the internet and you'll need to put them straight. This code-locked safe might be small enough to run off with but it comes with a cable so you can attach it to something less removable, such as a park bench or 4000-year-old yew tree – whatever's to hand. **£30 / masterlock.eu**



UE ROLL 2

You've stumbled upon an amazing festival at the bottom of a Swedish quarry, but once the music's over you're not quite ready to end the party. One of your new friends knows of an after-party going on in the forest, but when you arrive the sound system's packed up. Not to worry, you've got your trusty UE Roll 2 Bluetooth speaker clipped to your shorts, and it's 15% louder than its predecessor. Sure, you'll have to make sure nobody sings along too loudly, but it's got to be better than Sven's crooning, right? **£80 / ultimateears.com**



ANEVAY HORIZON STOVE

Unless you're Bear Grylls there's a decent chance you're not very good at starting fires from scratch. But there's no shame in admitting you need help. No, not the highly flammable kind, the rocket stove kind. Simply fill its little furnace with a few sticks or driftwood and through the magic of physics you'll have a perfectly serviceable cooking surface in no time at all, with the outer cage staying cool so you can still pick it up. **£68 / anevay.co.uk**



CYGNETT CHARGEUP DIGITAL 10000

Portable battery packs: seen one, you've seen them all, right? But Cygnett's new ones use polymer rather than lithium-ion, which not only makes them a lot lighter, but is also less prone to spontaneous combustion. This 10,000mAh version can hold enough juice for around five charges, with a pair of USB ports so it can replenish two of your gadgets at once, or focus all of its power on one at much higher speed. **£40 / uk.cygnett.com**



MATADOR DROPLET WET BAG

Now that plastic bags cost 5p, we've developed an unhealthy obsession with hoarding things to carry our kit in – but Matador's Droplet Wet Bag might just be the best of the lot. When not in use it squashes down to the size of a conker, complete with a keyring to hook it on somewhere safe, but unroll it and you've got a 3-litre sack that can either keep dry stuff dry, or stop wet stuff getting dry stuff wet. Ideal if you fancy a quick dip. **£13 / eskimoagency.com**

DOWNLOAD THIS



Hopper £free / Android, iOS

If you want to jet off somewhere but you're in no hurry, Hopper will alert you when flight prices are at their lowest, or warn you if they're about to rise.

CARRY THIS



Case Logic Larimer Rolltop Backpack from £40 / caselogic.com

More suited to a few days than a few months away, this neat-looking rolltop bag has you covered for gadget pouches and pockets.

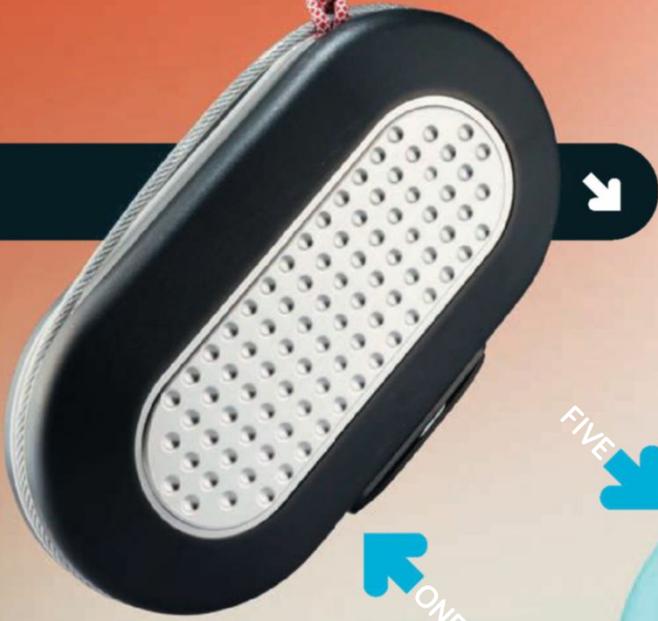
VISIT THIS



Way Out West wayoutwest.se

If you've recently 'found yourself' on a beach in Vietnam, head to Sweden's Way Out West, a completely vegetarian festival. Leave those Ikea meatballs at the gate.

Alternatively... Cygnett ChargeUp Digital 6000
Don't need too much back-up power? The 6000mAh version
will give you a couple of full charges to last a weekend away.



FIVE



FOUR



THREE

TWO



ONE There's plenty to tweak and customise on the A7R II, including the option to shoot uncompressed RAW files. Just be sure to have a big enough memory card.

TWO The A7R II is snappy and easy to use. We found the 399-point autofocus system to be obedient and responsive, even in tricky low-light conditions.

THREE Like many top-end DSLRs the A7R II is weather- and dust-proof; so while you can't take it for a dip, you don't need to stop shooting just because it's spitting.



TOP TIPS

GO PRIME

A prime (fixed focal length) lens is an easy upgrade. They're less versatile than zooms, but generally offer better optical quality as they're built specifically for one focal length.

GO MONOCHROME

Not only can you get great contrasty pictures, but switching to black and white can help hide noise. If possible, shoot in RAW, otherwise use colour and convert it afterwards.



Angles from above
The tilting LCD is great for reviewing pictures or shooting over your head, but we preferred the OLED viewfinder for composing our shots.

So what?? CSC lens standards
Panasonic and Olympus models can share lenses, but all the rest have their own proprietary standards. Choose wisely.

THE BEST CSC

If you want all the pro options (including a variety of lenses) but not the bulk, a compact system camera is the travel buddy you need

SONY A7R II

£2600 / sony.co.uk

Putting a full-frame sensor in the body of a CSC is a bit like fitting a Ferrari engine to a Fiat 500 – it doesn't guarantee great performance but the necessary ingredients are definitely there. In the case of Sony's A7R II, this is a Fiat that's firing on all of the Ferrari's cylinders.

You've been framed

It might not be the most pocketable system camera around, but with 42.4 megapixels on its back-illuminated, full-frame sensor, it's no mystery what's taking up all the space. That big, bright OLED viewfinder on top only adds to the bulk, but it's better for composing snaps than the 3in LCD... and the whole package is still tiny compared to any full-frame DSLR. Taking its 4K video skills into account, this tank-like snapper is surely worth lugging around all day.

The dark night

The benefits of that big sensor are obvious: image quality is fantastic. In good lighting, contrast is punchy, there's stacks of detail even in the shadows, and noise levels are low. Five-axis image stabilisation and ISO all the way up to 102,400 boost its low-light credentials too, even when shooting handheld with low shutter speeds. In fact, you'll find all

the qualities prized by photographers here. And that means you can blow up your pics without taking a hit on detail.

Action!

It's not the A7R II's main focus but the addition of 4K video is certainly a welcome one. The large sensor helps with both lower-light situations and providing a Hollywood-esque low depth of field in videos, plus you can add external microphones and other accessories to further boost its movie capabilities. If only the record button weren't so annoyingly difficult to hit.

Ideas above its station

While this is technically a 'mirrorless camera' or a 'compact system camera', the drawbacks and disadvantages that those names convey don't apply here. In the A7R II, Sony has made a no-compromise camera that combines impeccable build quality with a class-leading full-frame sensor, five-axis image stabilisation, a huge ISO range, fast autofocus, an excellent viewfinder and 4K video recording. And it's far more compact than a DSLR.

Sensor 42.4MP 35mm Exmor R CMOS **Viewfinder** 1.3cm XGA OLED **Screen** 7.5cm TFT **ISO range** 100-25,600 (expandable to 102,400) **Dimensions** 127x96x61mm, 625 g

STUFF SAYS ★★★★★

Pricey but mighty, the A7R II manages to excel in all areas, making it the finest camera Sony has ever made

Best for... an all-round bargain

Best for... stylish shooters



FUJIFILM X-T10

£450 / fujifilm.eu

On the face of it, Fujifilm's X-T10 looks like a camera that has it all: a stylish retro visage, a 16MP APS-C sensor and intuitively positioned, photographer-friendly controls that beg to be touched and twiddled – all for £500.

Against the grain

Where's the compromise? Well, it's not weatherproof, and battery life could be better, but the colours are incredible. There's grain visible as early as ISO 800, but it gives pictures a film-like quality rather than spoiling them. You'll be too busy marvelling at the sharpness and rich, vivid tones to notice anyway.

STUFF SAYS ★★★★★

This could be the best pound-for-pound camera around



OLYMPUS PEN-F

from £1000 / olympus.co.uk

Originally from the '60s but resurrected by Olympus in 2009, the Pen range is mighty and the F is its king. At a glance, it could be mistaken for a vintage 35mm model, such is its indisputable retro charm.

Mo' money

It's the first Pen to have a built-in OLED viewfinder. It's also highly tweakable: the F is covered in buttons and dials that can be customised to control the functions you use most. Coupled with the speedy autofocus and a tiny prime lens, the Pen-F is a capable companion for fast-on-your-feet street snapping.

STUFF SAYS ★★★★★

Skilled and stylish: they don't get much more desirable



ANYTHING ELSE?

CSCITY SLICKER

THE TRIP Your idea of a good time is a hop across to a continental city you can't quite pronounce. You've booked a quirky Airbnb and your to-do list bulges with forensically researched must-sees that you want to get to before TripAdvisor ruins them forever. Here's what to take...



TWELVE SOUTH TIMEPORTER

Back in the disused chemical weapons factory you've hired on Airbnb, you notice there are no clocks. But it's not a problem because you have Twelve South's TimePorter. By day it's a case for your Apple Watch accessories (extra strap, charger and cable); by night you can open it up and attach the charger to the underside of the lid, and it doubles as a stand that'll keep your Watch juiced and show you notifications through the night. Neat. £45 / twelvesouth.com



KINDLE OASIS

You're people-watching at a quaint cafe in whichever former Soviet territory is cool to visit this year. But... all the people here work in the tourism industry and you have an EU banning order after taking those pictures of that waiter that time. Never mind. You've packed Kindle's Oasis e-reader. Even if you can't take photos, your Kindle can paint pictures in your mind via its 300dpi display, and it will still be going strong long after you get home thanks to the battery in its cover. from £270 / amazon.co.uk



TWIST+ WORLD ADAPTOR & 12W USB CHARGER

What is it with hotel rooms never having enough sockets? We'll just use the single socket you've fitted on the far side of the room to plug in this multi-country adaptor. Twist it to select the relevant locale's socket type, plug in your chosen charger and use the high-power USB socket and underslung MagSafe Mac adaptor to juice almost anything you can think of. £20 / oneadptr.co.uk



AUDIO-TECHNICA ATH-MSR7NC

Always make sure you have the essentials: passport, boarding pass, noise-cancelling headphones. Without the first two you'll struggle to get on the plane but without the third you'll wish you'd never bothered. Audio-Technica's noise-cancellers are also made to work like earplugs, so you can put them on just to sleep in silence. The battery will last for 30 hours (that's Heathrow to Buenos Aires and back). For more noise-cancelling cans, see our test on p66. £250 / johnlewis.com



TRACKR BRAVO

TrackR's Bravo could spell the end of those "Has anyone seen my camera/bag/irreplaceable teddy?" moments. About the size of a 10p coin, it uses low-energy Bluetooth and GPS to constantly monitor its location. If it goes out of range of your phone (about 100 feet), it'll send out a distress call to other TrackR users nearby, using their phones to send updates on its location to TrackR's servers, allowing its rightful owner (that's you) to be alerted of its whereabouts. £25 / thetrackr.com

DOWNLOAD THIS



Citymapper
£free / Android, iOS
Citymapper works in 31 cities and counting (Sydney and Dublin are next), so you'll have to go pretty far off the beaten track to find one where it doesn't have your back.

CARRY THIS



RiutBag Go
£30 / riut.co.uk
The zips on RiutBag's Go rucksack sit against your back, so people can't fiddle with them when you look away. This one holds 12 litres and there's also a fetching mint green version.

VISIT THIS



Warsaw
Poland has World War II to thank for the brilliant mish-mash of old and new that is its capital, and its Neon Museum is great for giving your camera's low-light performance a workout.



FOUR

ONE

TWO

THREE

Alternatively... Kindle Paperwhite
It won't turn as many heads, but the Paperwhite is now a whopping £180 less than an Oasis – and it's still brilliant.

FIVE



ONE This is the first full-frame Canon with a touchscreen, but it's a bit odd. You can use it to set autofocus points, but not for image playback or menus.

TWO No Wi-Fi? Supposedly, the magnesium build of rugged cameras blocks it. Then again, those external Wi-Fi transmitters must be real moneyspinners...

THREE You get a lovely bright viewfinder with a 100% field of view. The super-high-res screen is great for viewing images, or composing in Live View.



ONE The D5's touchscreen not only allows you to set AF points when shooting in Live View; you can also use it to pinch-to-zoom, or to swipe through images.

TWO Two small joysticks let you move the AF points on screen. There are 153 AF points, but you can only choose 55 yourself – the rest act as support points.

THREE 4K video is limited to three minutes at a time. Presumably, Nikon hasn't figured out how to solve the overheating issue. Switch to full HD if you need longer.

For full reviews of both cameras, go to Stuff.tv



TOP TIPS

GO LONG

Stability is everything with long exposures. Use a tripod and the self-timer so you're not touching the camera when it opens the shutter.

BLUR THE BACKGROUND

Or create 'bokeh', as the pros call it. Use a lens with a wide aperture, or ensure a long distance between subject and background.

So, what's ISO?
The ISO number refers to how sensitive the camera is to light. You'll need higher settings after dark, but it can add 'noise'.

THE BEST DSLR

For truly professional results, sometimes only the best will do... so we played two of the big brands' high-end DSLRs off against each other

NIKON D5 VS CANON EOS-1D MARK II

£5200 / nikon.co.uk

It's not just the pixels that are measured in the millions on DSLRs these days: you can push the ISO on Nikon's D5 right up to 3,280,000 (extended). Paired with a 153-point AF system, which includes 99 more sensitive cross-type points that are more useful in low light, this is a camera that's practically got night vision.

Nightingale?

Image quality straight out of the D5 is as good as you'd expect from a £5k camera, but push it up to the top of that ISO range and, unless you're into surveillance, the pictures lose so much detail they won't make your portfolio.

It's nippy, though. If you've got an XQD card inside it'll hit 12fps (up to 200 in RAW mode) and its continuous auto-focus has been upgraded a touch, even in the gloom.

Battery life from the D5 is nothing short of incredible. From a single charge, you can get almost 4000 shots. That, combined with its low-light performance, means it just edges the Canon, particularly if you're already a member of Team Nikon.

Sensor 20.8MP
Max ISO 102,400 **Screen** 3.2in touch LCD
Dimensions 160x159x92mm, 1405g

STUFF SAYS ★★★★★

Nikon's top DSLR aims for pros with nocturnal leanings

£5200 / canon.co.uk

Faster than Usain Bolt racing Jamie Vardy with jet-heeled boots on, Canon's replacement for the 1DX puts speed front and centre, with better tracking focus and a nippy CFast memory card format that can shoot 14fps (up to 170 in RAW).

Fast life

The 1D Mark II can record 4K for one second shy of 30 minutes, with 'Frame Grab' allowing you to extract 8.8MP stills from the footage – also handy when snapping high-speed subjects.

Image quality is fantastic, as you ought to expect for the price. We've got vibrant colours and wonderfully detailed images here, and they stay impressively noise-free up to around ISO 25,600.

Battery life is a tricky one to call. On almost any other camera, stamina that offers 1210 shots is excellent; but if using the Canon professionally you'll probably want to buy a spare battery.

With some minor improvements to the way it handles, the MK II hasn't changed massively from its predecessor, but those upgrades add up to a hugely impressive, more capable camera.

Sensor 20.2MP
Max ISO 51,200 **Screen** 3.2in LCD
Dimensions 158x168x83mm, 1340g

STUFF SAYS ★★★★★

A worthy 1DX replacement with stunning image quality

Best for... a budget all-rounder

Best for... stylish shooters



NIKON D5500

£500 / nikon.co.uk

Tempted to take the step up to a DSLR but don't know where to start? Nikon's £500 D5500 offers an easy way in but won't run out of talent when you find your feet, thanks to a 24MP sensor and Insta-friendly filters.

Mono-what?

The D5500's monocoque construction means it's small and light, but the extra battery life on offer means it'll also keep on snapping way after an equivalently priced system camera has conked out.

STUFF SAYS ★★★★★

A great DSLR that's built with beginners firmly in mind



CANON EOS 80D

£1000 / canon.co.uk

Trouble focusing? Canon's 80D gives you four ways to do so and 45 individual focus points.

Focus pocus

Its autofocus system is incredibly fast and sophisticated, so even trying to capture the high-octane flailing of the kids' garden football will remain sharp as a tack. If the pictures weren't up to much none of this would matter, but they are, so there. The 80D, it's fair to say, takes the hard work out of photography.

STUFF SAYS ★★★★★

The do-it-all camera that does it all for you

ANYTHING ELSE?

DSLR EXPLORERS

THE SITUATION Armed with your DSLR, you head into the wilderness. Your target? The Northern Lights, or the elusive beast you heard about on that Channel 5 documentary. Either way, patience will surely be a virtue. Here's some sweet kit to make the long wait more bearable:



HELINOX GROUND CHAIR

As your wait for Aurora Borealis enters a third night, your legs will thank your brain for picking up a Helinox Ground Chair, not to mention your backside. Just imagine the bum-based situation you could find yourself in after sitting on the frozen ground for all that time. It weighs just 520g and packs up to the size of a large rabbit. Ground clearance is minimal, but it'll be easy to spot what's going on in the sky above you. Oh, you missed it? Next time, eh? **£90 / ellis-brigham.com**



IPAD PRO 9.7

No, not so you can play *Hearthstone* when you get bored. Apple's most powerful iPad is an Insta-editor's dream. Transfer photos to it as soon as you take them, and the extra space and better colour saturation of its gorgeous Retina display mean it's the perfect tool for a spot of on-the-go post-production. Get the LTE version and you can upload your shots straight away (signal permitting). And, yes, we suppose you can play *Hearthstone* when you get bored. But only on the way home. **from £500 / apple.com**



MANFROTTO PIXI EVO MINI TRIPOD

If you're serious about your shooting you'll probably have a bunch of tripods ready to provide stability at various heights and in varying conditions, but for many of them you'd need to book an extra seat on the plane. For an everyday stabiliser you can't go far wrong with Manfrotto's almost pocketable Pixi Evo. As long as you're not using a zoom lens over 200mm, its two-section legs will take the wonk out of any bumpy surface. **£45 / manfrotto.co.uk**



UCO GRILLIPUT DUO

Wild animals aren't like your vain friends. They don't pose for pictures on command, so you might be in for a long, hunger-inducing wait. Unroll the Grilliput Duo and you'll have a solid set of bars to light a fire under and get cooking. If nothing else, you can use one of the nuked sausages you don't eat to attract some subjects to photograph. And in a bear / wolf / squirrel emergency you can roll it back up and use it as a makeshift cosh. **£31 / heinnie.com**



SUUNTO KAILASH

Your search for a picture of that elusive gold-tongued pygmy unicorn has taken you to so many countries across multiple continents that you've forgotten where you are. Luckily, Suunto's hard-wearing Kailash has a better grasp, using its built-in GPS to track your movements, including altitude and steps taken. It also has alerts for sunrise and sunset, because everyone knows pygmy unicorns only come out when the colour of the sky matches their tongues. **£785 / suunto.com**

DOWNLOAD THIS



PhotoBuddy iOS / £1.50

PhotoBuddy helps you to calculate all kinds of snapper stuff, including exposure, depth of field, colour temperatures and moon phases. There's even Apple Watch support.

CARRY THIS



Bluesmart Black Edition £600 / bluesmart.com

You won't want to take it out shooting, but suitcases don't come techier. Secure it via an app and track its location using GPS and an onboard SIM card.

VISIT THIS



Iceland

Even if you don't often see the Northern Lights in Iceland, the island's bordering-on-alien terrain offers more dramatic landscapes to photograph than a whole trilogy of *Lord Of The Rings* movies.



Now add this... UCO Grillput FireBowl
Set your fire in this collapsible stainless steel bowl to avoid scorching your pitch.

FOUR

FIVE

TWO

THREE

ONE





ZEPPELIN RIDES FRIEDRICHSHAFEN, GERMANY

Clambering into an oversized picnic basket and clinging on for dear life. Just two reasons to give hot air balloons a wide berth – especially when there's a chance to go up and away in Germany's infinitely cooler cousin instead. Friedrichshafen's Zeppelin NT lets you take to the skies in this most colossal achievement of aviation history, flying high over the Bavarian countryside and central Munich. This Zeppelin is a modern airship rather than a creaking 19th-century model, but we promise you'll still feel like a monied German baron for the duration of the flight. Handlebar moustache optional.

zeppelin-nt.de/en

TECH WORLD TOUR

PEEKY GEEKY BLINDERS

THE SITUATION Forget open-top bus tours, crumbling cathedrals and gallery jaunts around major European capitals: christen your new camera at these classic nerdy destinations



AMERICAN CLASSIC ARCADE MUSEUM

Laconia, in deepest New Hampshire, is home to the American Classic Arcade Museum, and there are 250 vintage machines here for old-school fanatics to coo over. The museum is part of the Funspot complex, the world's largest arcade. classiccademuseum.org



CERN

Here in the suburbs of Geneva are the labs where the World Wide Web was created and the Higgs Boson was discovered. Learn how CERN's Large Hadron Collider (LHC) has changed the way we understand the universe, and see how the LHC's parts work up close. Physics-loving staff act as free guides and the exhibitions are also free. visits.web.cern.ch



MINIATUR WUNDERLAND

Hamburg is home to the world's largest miniature railway, with eight sections connected by 13km of track covering a colossal 1300 square metres. Head here and the chances are you'll soon want to turn over your entire house into a miniature recreation of your hometown. miniatur-wunderland.com



VERY LARGE ARRAY NEW MEXICO, USA

Sure, you copped a view of the ISS from your back garden last Christmas. And yes, you've got a telescope stashed away at the back of the wardrobe. But if you want to take your astronomy skills into orbit, then you need to head to the Very Large Array (VLA) in New Mexico. Twenty-seven 25m-wide antennae are set up in a Y shape, allowing pro stargazers to pick out gas motions in the Milky Way and discover the true extent of the universe. If the physics gets too complex, the vast dishes provide the perfect opportunity for moody desert photography. vla.nrao.edu



SKELLIG MICHAEL

Hop on a plane to south-west Ireland and take a ferry 12km to reach Skellig Michael. This vertiginous, Unesco-protected outcrop doubled up as Luke's Jedi hideaway in *The Force Awakens* and is set to feature in *Star Wars Episode VIII*. Awesome, it is. skelligexperience.com



BOEING FACTORY

For real engineering and aviation obsessives, a trip around Boeing's factory near Seattle is as good as it gets. The 90-minute tour includes the chance to design your own plane and get the inside line on what Boeing is planning next in its battle for supremacy with Airbus. futureofflight.org



WETA CAVE WORKSHOP

Weta Cave in Wellington, NZ, is where the special effects and props for Peter Jackson's *Lord Of The Rings* trilogy were crafted, from the frames of hulking orcs to the extras' chainmail. Weta's work on *Mad Max: Fury Road*, *District 9* and *Avatar* is also on show. weta.com

STAYING AT HOME?



Kelvedon Hatch Brentwood, Essex

Kelvedon Hatch is a secret (oops) nuclear bunker deep underneath the Essex countryside – and you can pay it a visit. Don't forget your tinfoil hat. secretnuclearbunker.com

App:roved

FOR
KEYBOARD
WARRIORS

Moog Model 15

You might think the price tag of this synth is a bit rich, but it's a hell of a lot cheaper than the recent \$10,000 Model 15 hardware reissue. And for your 23 quid, you get something that sounds just like the real thing (as in amazing), works in much the same way (so many patch leads!), but takes full advantage of digital. So there are presets aplenty, inter-app connectivity, and several virtual controllers. In short, it's superb — the best standalone iOS synth bar none.

Stuff says ★★★★★
£22.99 / iOS

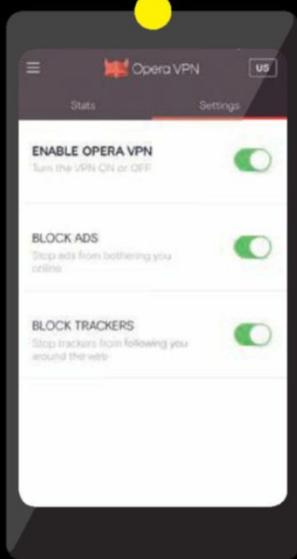


FOR
PRIVATE
PIRATES

Opera VPN

If you're frustrated at being in the wrong country to view certain online content (or, worse, are stuck somewhere that blocks pretty much the entire internet), you'll need a Virtual Private Network (VPN). Most cost money but Opera is free, works reliably, and blocks ads and trackers. So what's the catch? Well, anonymised user data is sold and, apparently without irony, Opera is considering introducing ads of its own. For now, though, it's a solid download.

Stuff says ★★★★★☆
£free / iOS



FOR
PHONE
TAPPERS

Uncharted: Fortune Hunter

Like *Hitman* and *Lara Croft*, *Uncharted* has morphed into a touchscreen mobile puzzler. Drake hotfoots it around grid-based challenges full of poison darts, switches and moving floors. All the while, associate Sully snarks from the sidelines. This one lacks the style of the *GO* games, and the atmosphere of its console-based cousins. But it's engaging and smart, and gives you the chance to win a snazzy hat for Drake in *Uncharted 4*.

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



FOR
THUMB
LOVERS

Leap Day

A new challenge beckons daily in this platformer, likely to have you embedding devices in a wall through sheer frustration. Your little blob pootles about and you tap to make it jump, threading your way through spikes and nasties to reach the top of each tall, narrow level. It visually echoes '80s classics like *Bubble Bobble* but has the brutal heart of *Super Hexagon*. On each death, you'll swear at your thumbs (or just swear), fume a bit, but be drawn back for 'one more go'.

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



Mini meme



SNAP UP A CAMERA UPGRADE

Replace your smartphone's standard camera app with something miles better, capable of mimicking a DSLR or creating deranged abstract art



● Hipstamatic

Originally a resolutely old-school app, Hipstamatic was all about virtual film and lenses, its interface even aping a point-and-click camera. You can now opt for a modern design with a raft of controls. Either way, this app is superb if you want the convenience of a smartphone combined with the character of 'real' photography.

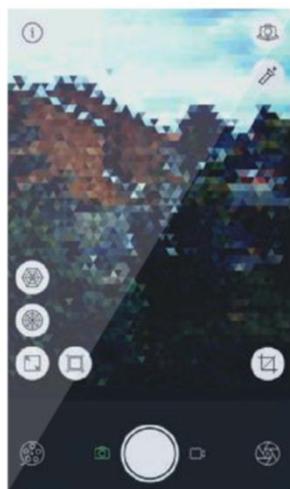
Stuff says ★★★★★
£2.49 / iOS



● VSCO

If your camera app must come with a side order of social network, chances are Instagram will come to mind first. VSCO, though, is a much better camera, providing more advanced controls and some decent editing tools. The interface feels a bit arty and opaque, but once immersed you'll find it great for snapping and sharing.

Stuff says ★★★★★
Efree / Android, iOS



● GeometriCam

If you feel reality's a bit boring, even when swathed in filters, GeometriCam can convert your photography into abstract geometric art. This can be done live or to existing shots, and the settings range from retro-style pixelation to mad glitches and patterns that Mondrian would have killed for, had he been armed with an iPhone.

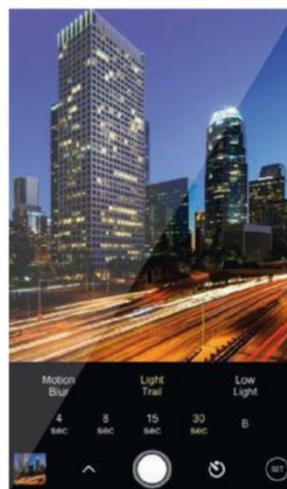
Stuff says ★★★★★
£2.29 / iOS



● Camera Zoom FX

Android has plenty of great camera apps. This one is our favourite, balancing power and friendliness: you get all kinds of chunky icons to prod, DSLR-like controls, filters, and capture aids. For the wary, there's a free version to experiment with. Also consider Camera FV-5 (£2.49), which more overtly doffs its 'serious' hat.

Stuff says ★★★★★
£1.49 / Android



● ProCam 3

iOS is also drowning in great camera apps, such as Camera+ and, confusingly, the entirely separate Camera Plus. But ProCam gets the nod, marrying a gorgeously usable interface with a huge range of controls and features. The various modes and release options work well, and the app adds editing capabilities to enhance your snaps.

Stuff says ★★★★★
£3.99 / iOS



● Retrica

More geared towards having fun than serious photography, Retrica nonetheless has a lot going for it. It includes a load of live filters and vignettes, adding a unique feel to every shot. The best bit, though, is the multi-shot, which can stitch together a series of snaps into a user-selected grid, or animate them as a gif.

Stuff says ★★★★★
Efree / Android, iOS

Silent but deadly

Chasing the sun this summer? Blot out the droning jets and bawling children with a pair of these noise-cancelling headphones...



Bose QC35

£290 / bose.co.uk

The longest non-stop passenger flight is currently Emirates' Auckland-to-Dubai trek, which takes 17hrs 15mins. You know what lasts longer? The 20hr battery in Bose's QC35s.

The QuietComfort range has long offered users a sterling combination of marshmallow-like comfort and baby-blocking noise-cancelling. The 35s add

freedom-enhancing Bluetooth and produce very clear, crisp and balanced sound. Others have more bass or attack, but the QCs deliver a clarity and spaciousness that makes them suited to whatever movies or music you travel with.

STUFF SAYS ★★★★★
A fine wireless choice for the discerning traveller



Taking the mic
You can take calls hands-free, and there's noise-cancelling in the mic to ensure your voice is broadcast clearly.



Phone home
The app makes setup, updates and managing multiple devices (you can connect to two at once) simple.



Come fly with these
The bundled case is rigid enough to keep the QC35s safe and has a flight adaptor in the corner.

NOW STREAM THESE...



■ Audible

There's no need for an airport paperback with Audible. For £7.99/month, the audiobook subscription service lets you download a narrated title every 30 days. Naturally, the first one is free.



■ Spotify

The best music streaming service out there lets you download a whopping 3333 tracks to your smartphone of choice, and the same number to two other devices. All for £9.99 a month.



■ Amazon Prime Instant Video

Unlike Netflix, Amazon's video service does downloads so you can relax poolside with a whole series of *Preacher*. A subscription to Prime? That'll be £79/year.



Lindy Cromo NCX-100

£100 / lindy.co.uk

Noise-cancellers don't often come cheap but the Lindy Cromo NCX-100s are a bargain. That said, you'll have to feed them with AAA batteries and they're not as effective as Bose's QC35s. But for less than half the price of those cans, we can hardly quibble with the performance here.

Clear, upfront and detailed from top to

bottom, their sonic presentation is instantly charming, like a big grin from George Clooney. Wolf Alice's *Your Love's Whore* pulsates with a breathless, echoey quality, while more bassy fare is well served by the Lindys' welcome energy.

STUFF SAYS ★★★★★

For £100, you can't say much fairer than these



AKG N60 NC

£200 / akg.com

Noise-cancelling champs by a country mile, AKG's N60 NCs are nigh-on perfect at bringing silence. Flick the switch and any distractions surrounding you are almost completely drowned out.

Better still, sound quality is superb, with a fine tonal balance struck in even the most cluttered of songs. Elsewhere, there's plenty of bite

and clarity to be had from the N60 NCs, with precision and clarity being prized above all else. With a highly portable build and a whopping 30hrs of noise-cancelling battery life, these cans are supremely easy to recommend.

STUFF SAYS ★★★★★

Fantastic price and sound, unbeatable noise-cancelling



Parrot Zik 3.0

£280 / parrot.com

Pretty much every bit of tech now comes with its own app, including these cans. Aside from looking the part and offering a solid 18hr battery life, the lavish Zik 3.0s connect to your handset allowing for techy shenanigans.

Chiefly, you can track how much kerfuffle your ears are being saved from — Parrot claims its latest Ziks can block up to 30dB.

Alas, the sound quality doesn't quite live up to this promise, with poorly pronounced bass and pedestrian dynamics. While these headphones talk a good game, less showy models will really make your music sing. And that's what matters.

STUFF SAYS ★★☆☆☆

A slick app and design can't hide mediocre sound



B&O BeoPlay H8

£400 / beoplay.com

These B&O headphones have 'business class' written all over them. Made from a plush combo of aluminium, leather and plastic, they're priced well out of reach of your average ruffian.

What does £400 of no-noise luxury get you? Lambskin earpads, that's what, and boy do they treat your lugs like royalty. Tunes ooze with clarity

and texture, with nary a hiss to betray the B&Os' wireless build.

With over 14hrs of Bluetooth and noise-cancelling playback from a three-hour charge, the H8s come impressively close to justifying their exorbitant asking price.

STUFF SAYS ★★★★★

The best-looking pair of headphones you can buy

0 for the wings of a SUV

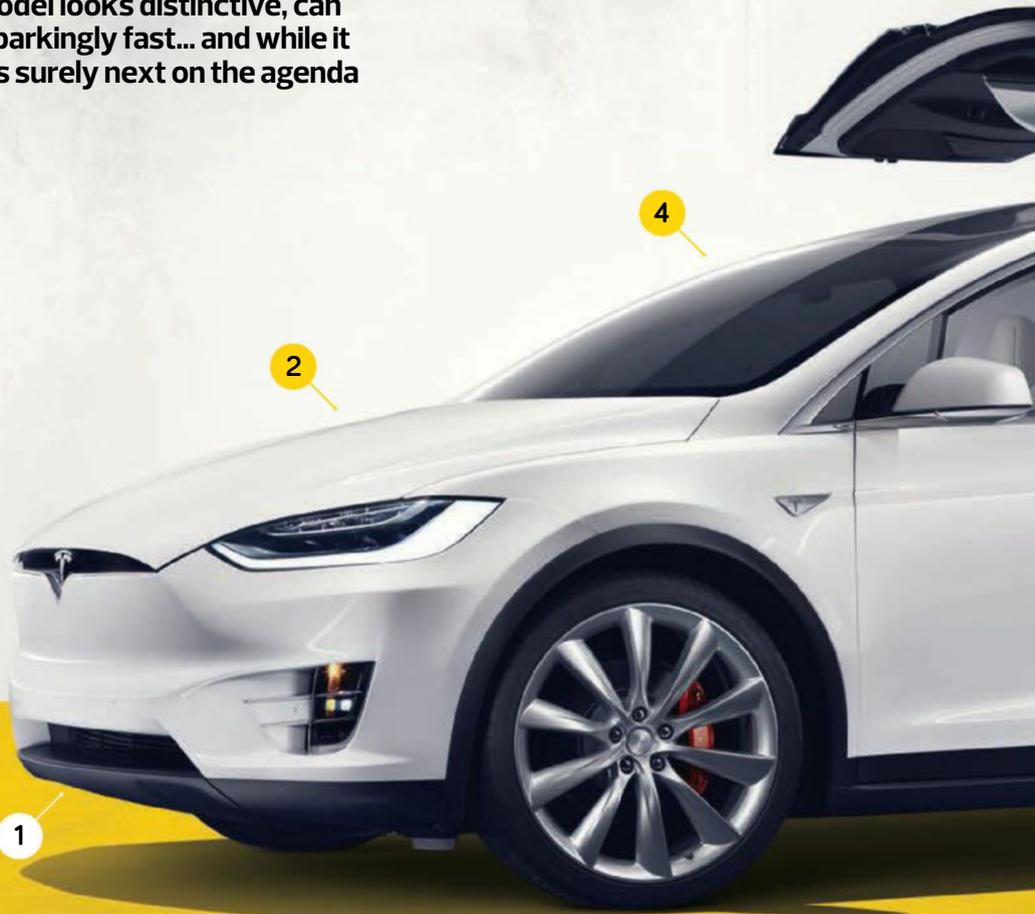
Tesla's new electric utility model looks distinctive, can hold its own off-road, and is barking fast... and while it only *looks* like it can fly, that's surely next on the agenda

US\$83,000 / teslamotors.com

Despite being a company that's been making cars for less than 10 years, Tesla has already managed to make a significant impact on the luxury auto market. Not that Elon Musk is the kind of man to sit back and wallow in his achievements: as well as the affordable Model 3 saloon to look forward to, there's also this, the Model X.

Following the trend towards SUVs over conventional cars, the Model X combines a range of almost 300 miles with the kind of performance that would shame plenty of supercars... particularly if you opt for this version, the sporty P90D, and then make it even more peppy by going for the 532bhp Ludicrous Speed upgrade (named after the setting in 1987 Mel Brooks sci-fi parody *Spaceballs*, we suspect).

The big question is whether it can live up to the hype – this car's launch has, after all, been delayed several times before finally reaching production. So we went to Munich for a test drive.



1 Mixed grille

The Model X is clearly a Tesla from the front end. Aggressively sculpted headlights sit either side of a small grille with plenty of bare metal beneath it. It's very different from traditional cars with chrome grilles up front, and makes Tesla's cars stand out.

2 Let's on-road!

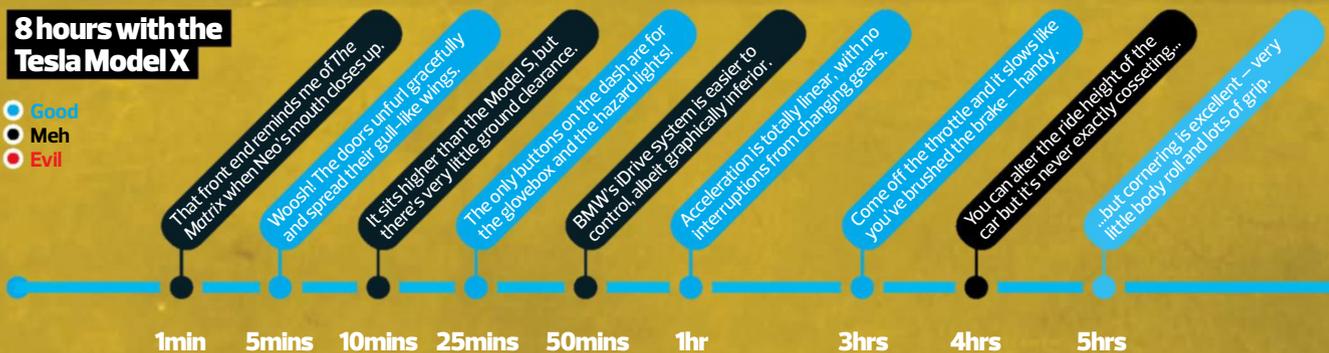
The ground clearance, wheels and tyres show a clear bias towards road use rather than rough terrain. But air suspension means you can raise the ride height by a significant margin should things get bumpy, while all models have four-wheel drive.

3 Get your motors running

Thanks to the drive system, front and rear ends each get their own electric motor, helping to ensure the rear passenger compartment has a totally flat floor. There's only one gear, so once you've selected 'drive', that's it until you need to reverse or park.

8 hours with the Tesla Model X

- Good
- Meh
- Evil



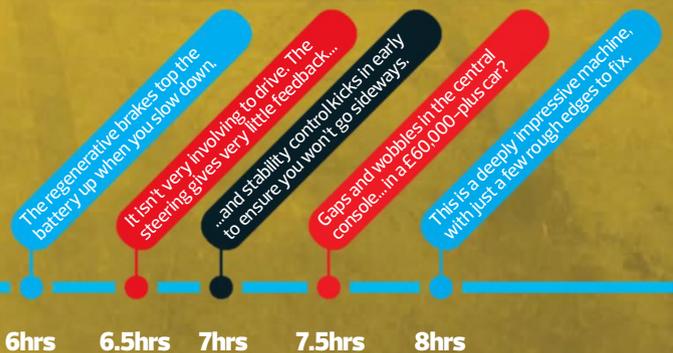


4 X-tremely quick

Our test car was the mighty P90D, a car capable of 0–60mph in 3.8 seconds. Even with four adults on board, acceleration is stronger than most sports cars. And the Ludicrous Speed battery upgrade delivers even more grunt: 0–60mph in 3.2 seconds.

5 What's on the menus?

There are two touchscreens, and the sheer size of the central one allows icons that are big enough to select easily. You soon get used to the menus, and both screens react quickly to input, without the lag of some rival infotainment systems.



Tech specs

Engine Lithium-ion battery pack with twin electric motors
Transmission Single-speed automatic
Power 464bhp **0–60mph** 3.8 seconds (3.2 with Ludicrous Speed upgrade)
Top speed 155mph **Range** 290 miles

Tesla's techie toys

The cabin of the Model X is a gadget-lover's playground – which delights will push your buttons?



Wings of desire

The falcon-wing doors may seem impractical at first, but extra hinges just above the windows allow the doors to be opened electrically with just 11in of space. The tailgate also opens electrically.



Must dash

A huge 17in touchscreen in portrait orientation dominates the dashboard and controls your driving experience. So no physical controls for music, sat-nav, climate control or suspension settings.



Car in a car

Joining the big screen is a smaller unit where you'd expect the dials to live. This has an animated Model X showing what the sensors are picking up, your speed, battery life and sat-nav instructions.



Stop and steer

Then there's Autopilot – the closest you can get to autonomous driving from a production car. If road markings are clear, it'll accelerate, brake and even change lane. But you need to keep hold of the wheel.



Although the Model X isn't a giant leap forward like the Model S was, it's still seriously impressive. There's room to get up to seven adults inside, the performance is mind-boggling and it should cost peanuts to run. It's not perfect, but if a few of the issues are sorted by the time UK deliveries start, it'll be among the best luxury SUVs out there. *Alan Taylor-Jones*

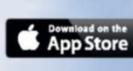
STUFF SAYS

It's too early for a final verdict, but Tesla's first SUV looks as though it could be a real game-changer

The first 360° VR Action Cam.

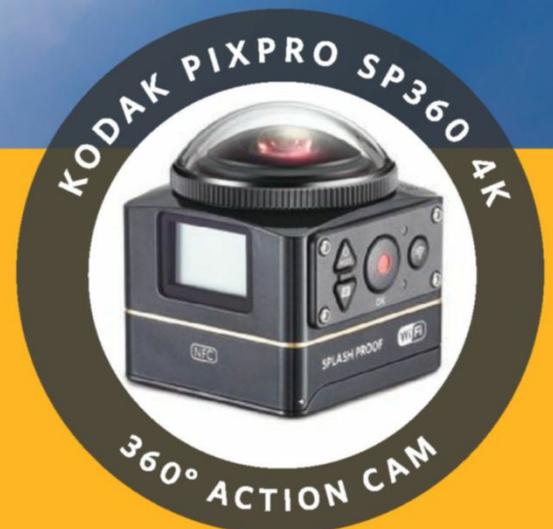


#explorein360



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TRAVEL SPEAKERS

▷▷ STUFF PICKS

Stuff writers select the best Bluetooth blasters to soundtrack their summer

▷▷ USE IT WITH...



Pocket Casts

This speaker is ideal for the gentle pleasure of tent-based podcasts. Our favourite podcast app, Casts has a host of handy tricks including auto-skipping boring intros.

£2.99 / iOS • 2.49 / Android



Outdoor Technology Buckshot Pro

Mark Wilson, Features Editor

Did I remember to bring the Bluetooth speaker, phone charger and torch? Sure did – this is all of them. OK, the Buckshot Pro's sound is only really capable of filling a tent (your one, not the dance tent) and its 2600mAh battery will at best last a weekend's camping. But the rugged, splash-proof build and three handy torch settings (including a tent-illuminating 'lamp' mode) make it pretty much the best thing to take to a festival short of a stash of forged beer tokens.

£40 / outdoortechology.co.uk

PUSH TO ROCK

If your phone is playing hide and seek in your rucksack, you can also boost each speaker's volume by pressing these handy blue buttons.



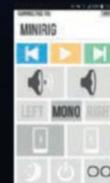
Minirigs 2.1 Blue

Esat Dedezade, Deputy Features Editor

Music helps me concentrate in lonely press trip hotel rooms when my soul has been crushed by jet lag, and the Minirigs have served me better than any other speaker I've tried. The full 2.1 set will set you back £370. They'll pump out up to 50 hours of sound (depending on volume), and the new improved sub offers proper lows for all those tasty bass drops. They're water-resistant too, and you can use them to top up your phone battery in a jam.

£370 / minirigs.co.uk

USE IT WITH...



Minirig

This wireless 2.1 setup can require various combinations of button presses and cables. The app helps speed things along, as well as offering extra settings and controls.

Free / Android, iOS

USE IT WITH... <<

Pyro

This app mixes together songs in your Spotify playlists based on BPMs, so you don't get any 'dead air' between tracks. It can also build playlists for you.

£free / iOS

**NIGHT SHIFT**

The Oslo has basic volume buttons, but its app's 'late night' mode is a neat optimiser for boosting sound at quieter, neighbour-friendly levels.

**Vifa Oslo**

Marc McLaren, Stuff.tv Editor

My home is approximately 80% black plastic boxes.

I play games on a black plastic box. I even change my heating via one. That's a lot of black plastic. The Vifa Oslo, thankfully, is yellow or red or blue wool, or a colour that looks suspiciously like black but is instead called Anthracite Grey. With mains-only charging, it's definitely more at home in an Airbnb apartment than on a camping trip. But it can fill any home with music to an impressively loud volume. Oh, and it goes nicely with my pink wool TV.

£400 / www.vifa.dk

USE IT WITH... <<

Flo Music

Flo lets my trusted group of trendsters add music to the playlist on my Soundboks-connected phone. Or create a synced playlist on a group of phones, which is also fun.

Free / iOS



BEACH TOY

It won't survive a full dunking in the sea, but the Soundboks' aluminium case can handle being splashed and chucked about (if you can lift it).



Soundboks

Fraser Macdonald, Consulting Editor

Marc can agonise about decor clashes all he likes because his tunes will be drowned out by my party speaker... 10 streets away. The Bluetooth or 3.5mm-jacked Soundboks has just shy of 120dB on tap, making it loud enough for a field, let alone a garden. Its huge, removable batteries last 60 hours at high volume, or 16 hours turned up to 11 (yes, that's on the volume knob.) Down sides? It weighs over 14kg... and it's not the most dynamic listen. Best stick to the happy hardcore.

£600 / soundboks.com

▶▶ USE IT WITH...

**SoundCloud Go**

SoundCloud's new subscriber option is ad-free. Like Spotify, eh? Well, does Spotify give you access to DJ Wiggo's Yuletide turbo-folk mixes? No, it does not.

£10/m / soundcloud.com

PICK 'N' MIX

The left and right sliders control the levels of each source, while the middle one allows you to crossfade between tracks like some kind of holiday Skrillex.

**Braven Balance & Fuse**

Tom Wiggins, Deputy Editor

On its own, Braven's Balance would probably be more than adequate for soundtracking my famous South London pool parties: it's waterproof, and has a Boost mode and 18-hour battery life. But it comes into its own when paired with the Fuse, a miniature wireless mixer that allows you to treat two phones as individual turntables. Just make sure you don't have one phone loaded with turbo-folk and the other with Christmas carols, or nobody will ever come to one of your parties again.

£120, £100 / braven.com



Fancy six shooter

Yuneec's new drone, the Typhoon H, adds two extra rotor blades to the usual formula in a bid to blast DJI out of the sky... Sam Kielsen spends some quality air time with it

£1100 / yuneec.com



The camera can capture video in 4K at up to 30fps, and 1080p at up to 120fps.

DAY 01

If DJI is the Coke of the consumer drone world, Yuneec is Pepsi: a big, successful name, but lagging behind the leading light. The Typhoon H is the model that aims to tip the balance, and on paper it has the chops to do it.

It's cheaper than DJI's Phantom 4, but offers a beefier features list. Plus it's held in the air by six motors rather than the Phantom's four... while offering a similar blend of 4K video

recording, trick flying modes and user-friendliness. In fact, the Typhoon H seems more in the league of DJI's step-up model, the Inspire 1 (£1770), than the Phantom 4.

With all six arms extended it's a fair bit larger than a Phantom, but they can be folded down, making the thing easier to haul around.

After take-off, I flick a switch on the controller and the Typhoon H's feet swivel up 90°, giving the

gimbal-mounted camera the ability to pan a full 360° unobstructed. That's something the DJI Inspire 1 can do, but not the Phantom 4.

The six rotors should give this drone more in-flight stability than a four-rotor rival. Flying around my local park on a cold, windy day, it does feel very stable – and the footage looks like it was taken from a crane rather than a dinky flying platform. Another advantage of having six motors, Yuneec claims, is that if one fails the drone will remain airborne. I'm not keen on risking a crash, so I'll just have to trust them on that.

DAY 02

The Typhoon H's remote control, which connects via Wi-Fi and radio, has a 7in touchscreen through which you can observe a real-time 720p feed from the drone's camera. There are also a ton of buttons and switches that control many of the features. You don't need to partner it with a smartphone or tablet.

The control and drone should pair automatically... alas, most times the RC pairs but the Wi-Fi doesn't. I suspect the problem can be fixed through a software update, but it's a pain at present.

[Words: Sam Kielsen]



After flying around my local park, the footage looks like it was taken from a crane rather than a dinky flying platform

Donut of Truth™

- 01 Stable flight in windy conditions
- 02 Good-quality footage and photos
- 03 Supports dual-operator controls
- 04 Battery takes far too long to recharge
- 05 Annoying Wi-Fi pairing issues

Tech specs

- Flight time**
25 minutes
- Battery** 5400mAh
- Maximum flying height** 123m (restricted by CAA)
- Maximum speed** 30mph
- Dimensions**
520x456x296mm, 1965g
- Video** 4K @ 30fps, 1080p @ 120fps
- Stills** 12.4MP



DAY 05

I'm enjoying flying the Typhoon H – it's zippy and responsive, it holds its position well if you take your thumbs off the sticks, and you can use collision detection to prevent it crashing into objects in front of it (but not to the sides or rear). Yuneec claims it can fly about a mile away, but as the law requires you to keep drones within visual range, I'm keeping that to a few hundred feet.

If you do lose sight of the drone, flicking the flight mode switch to 'H' makes it automatically fly back towards you. A bunch of other autopilot modes are also included. You can even make it follow you around, always pointing the camera at you.

DAY 07

The Typhoon H's flying time of 25 minutes per charge is roughly the same as that of the DJI Phantom 4. However, while you can recharge the Phantom's battery in under an hour, the Typhoon H's takes about two. That might not sound a big deal, but it puts the limiters on how much aerial photography I can get done in a day. An in-car charger is included in the box, but a second battery would really be preferable.

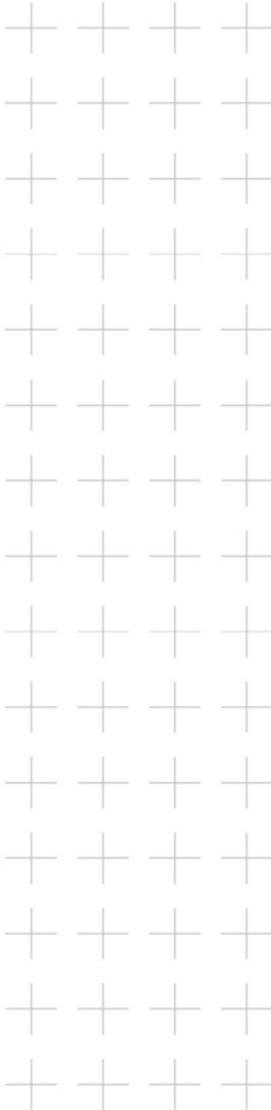
DAY 10

Yuneec has bundled a second 'Wizard' controller with the Typhoon H. It resembles a TV remote and allows one person to control movement while another uses the main remote for the camera. This lets you pull off trickier camera moves.

The camera itself is similar to that of the DJI Phantom 3 and 4, able to capture video in a range of resolutions up to 4K, as well as 12.4MP stills (in jpeg or RAW format). 1080p proves best for fast-moving subjects, due to its faster frame rate, but the 4K stuff is the most impactful. Is it better than the Phantom 4's footage? There's very little in it.

DAY 14

The Typhoon H is a fantastic hexacopter. It's easy to fly, has a lengthy flight time, takes great footage and folds up to a (reasonably) portable size. On top of that, the landing gear that folds up out of the way is potentially a godsend, as is the dual-operator option. It's a really classy product. Sort out the slow charging time, and the Typhoon H would be the Yuneec model we'd recommend over a Phantom. For now, it's still lagging just behind.



STUFF SAYS

A fantastic camera drone, only slightly held back by its snail-like charging times



Go faster strap

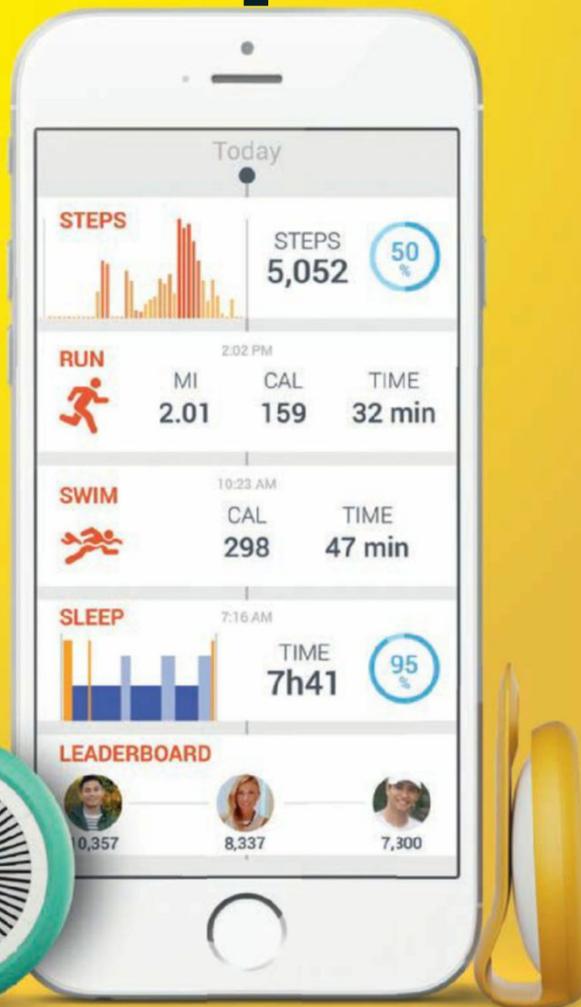
Withings' tiny tracker has got fitness covered, as long as your idea of exercise is more meander than marathon

£50 / withings.com

- Forget heart-rate tracking and fat-burning zones – the Go is all about simplicity. You get basic step and sleep tracking in a super-simple wearable that's barely bigger than a £2 coin.
- It clips onto your clothes, your shoes or your keys, or you can wear it on your wrist like a watch. No need to slip it off to hop in the shower either – it's waterproof down to 50m, so you can even hit the pool or open water.
- The steps you clock up fill the E Ink screen, with a smartphone companion app working out distance and calories burned. It automatically throws in duration, start time and distance when it thinks you're running or swimming. Sleep tracking is a more basic affair, working out when you fell asleep and whether it was a light or deep sleep.
- Reminders are handy, giving you a nudge to hop on the scales, or not to shirk from that run you've been planning since the extra bagel at breakfast. They only show up on your phone, though, not the Go.
- The coin cell battery keeps ticking for around eight months, and replacements will only set you back a few quid each. That's definitely a preferable option to plugging it in every night.

Tech specs

Screen E Ink
Sensors Accelerometer only
Battery life Up to 8 months
Dimensions 34.5x34.5x9.4mm, 9g (fits wrists up to 230mm circumference)



■ **Appy landings**
 Withings' Health Mate app (iOS and Android) can keep an eye on your weight, heart rate and blood pressure, and be used as a food log. You've got to stick all that info in manually, though – the Go only measures steps and sleep.

■ **Wristy business**
 The E Ink screen doubles up as a wristwatch, which is a really useful but all-too-rare feature for a device at this price. Just prod the screen and it switches from showing your steps to telling the time.

STUFF SAYS The Go's E Ink step tracker does the basics, but not a great deal else ★★★☆☆

It'll get you off the sofa, but once you are active you want more

Tom Morgan



The clue's in the name with this clever clip-on: the Go is about getting you started on your way to more exercise. It won't bombard you with stats and workout routines, but when you're ready for them you will have to move onto a smarter fitness tracker. It's simple, sure, but the watch mode is a nice little bonus and it helps that it doesn't put a massive dent in your bank balance either.

Be summoned by the sound

naimaudio.com



Spotify Connect®



TIDAL



AirPlay



Bluetooth®/aptX®



iRadio™



Multiroom
Streaming

Controlled by a powerful audio brain, Mu-so Qb is alive with custom features that can deliver music seamlessly to every corner of your home in a compact 21cm³ enclosure. Simple to control and easy to connect, Mu-so Qb delivers a staggering 300 watts of power to unmask your music with a sound that defies size.

Go Deeper



Experience at John Lewis | Selected Apple stores | www.apple.com | Specialist Naim retailers

AirPlay is a trademark of Apple Inc.

Stuff

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BEST SMARTPHONES UNDER £200

POCKET (MONEY)
ROCKETS

£170

Motorola
Moto G4

£170

Oppo F1



£120

HTC Desire
530

£75

Vodafone
Smart Prime 7

£100

EE Harrier
Mini

£190

Huawei
Honor 5X

With these cheap but very cheerful handsets, skimping on your next phone is common sense. But which is the budget blower to jump on?

Don't fancy shelling out more for a phone than you paid for your first car? The iPhone 6s and Galaxy S7 aren't the only ones out there, you know.

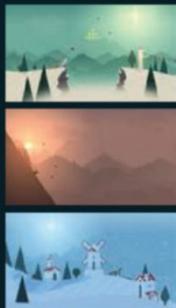
There's a whole class of great smartphones you won't see on billboards, and the best of them get you 90% of the smart joy of an expensive model for a quarter of the price – and they don't have to look and feel cheap either. Now that's the kind of maths we can get behind.

Pick up the right handset from a brand you may have never heard of, and you could save hundreds of pounds in charges over a couple of years. That means you'll be able to snag a bargain contract, or even roam free on Pay As You Go.

So what's the catch? Well, you won't be able to find all the best budget phones on the high street. A bit more research is required, lest you end up with the smartphone equivalent of a stay in Fawlty Towers. Naturally, we've gone and done all this hard work for you, and bagged the latest Moto G4 to see how it stacks up against some fierce sub-£200 competition.

With even the likes of Vodafone and EE making great cheap offerings nowadays, there's no telling where the best bargain phone for you might be found. Well, that is unless you pay close attention to the following eight pages. Then you'll know exactly what you need...

GAMES TO GET GRATIS



ALTO'S ADVENTURE

Poor Alto should be spending his days catching llamas. Instead, our hero is messing around on snowy slopes, performing stunts and avoiding his elders who reckon he'd be better off sitting in a pen that smells of poop.

£free / Android, iOS

CLASH ROYALE

This mash-up of RTS and card collecting has you battle opponents online in single-screen arenas. Although it's freemium, canny players can progress for free. Although your bank balance might be safe, your free time won't be.

£free / Android, iOS

BEST FOR...
ALL-ROUND
CLASS



The G4's 5.5in 1080p screen is a significant step up from the old Moto G's 5.0in 720p display, but it's a slimmer phone.

Motorola Moto G4

£170 / motorola.co.uk



For a personal design spin, buy from the Moto Maker website. You can get 'I love Stuff' engraved on the back. We won't mind.

Give us a break, Motorola. We've been recommending the Moto G to all our cash-strapped friends for three years now – can't you just make one little dud to give someone else a chance?

The Moto G4 is going to continue making us sound like a broken record. It's great, once again showing every other big phone maker what can be done for £170. It's just not fair, really.

New bits for this generation include a slimmer 9.8mm-thick design, metal-effect sides and, the one bit not everyone will like, a bigger screen. The G4 has a 5.5in display, making this bigger than any Moto G to date. It's a pocket-filler, like an LG G5 or Samsung Galaxy Note 5.

The G4 otherwise seems like a scaled-up classic Moto G, though. Resolution has been bumped up to 1080p, making the big screen look sharp, while colour and contrast are top for a low-cost phone. Something like this would normally cost you at least £100 more.

The 13MP camera remains unless you pay up for the 16MP Plus version (an extra £30), but it's still about the best you can get at the price. It gets you the dynamic range to make your shots look like they haven't come from a budget mobile. The camera app has turned itself around, dropping a quirky look for a practical one. It's a doddle to use.

Motorola has upped the power to suit this new high-res screen too, using an octa-core Snapdragon 617 CPU. It's no molten metal powerhouse, but is enough to make Android fly and top-end games play just about perfectly. What more do you need?

Great software too? Check. The G4 has pure Android 6.0.1 aside from just the one Motorola app. No bloat, no mess, just smooth Android joy. You can even get a fingerprint scanner if you upgrade to the Plus version. The normal phone looks better, mind.

Like last year's version, there's still just the one speaker on the front, but it's a bit beefier-sounding this time around. Max out the volume and it can sound a little distorted, but that's one of the few bum notes in this blinder of a phone.

£170

TECH SPECS

● **Screen** 5.5in 1080p IPS LCD ● **Processor** Snapdragon 617 octa-core ● **Storage** 16GB plus microSD ● **RAM** 2GB ● **OS** Android 6.0.1 ● **Cameras** 13MP/5MP ● **Battery** 3000mAh

STUFF SAYS The no.1 budget phone as long as you're up for a big screen ★★★★★

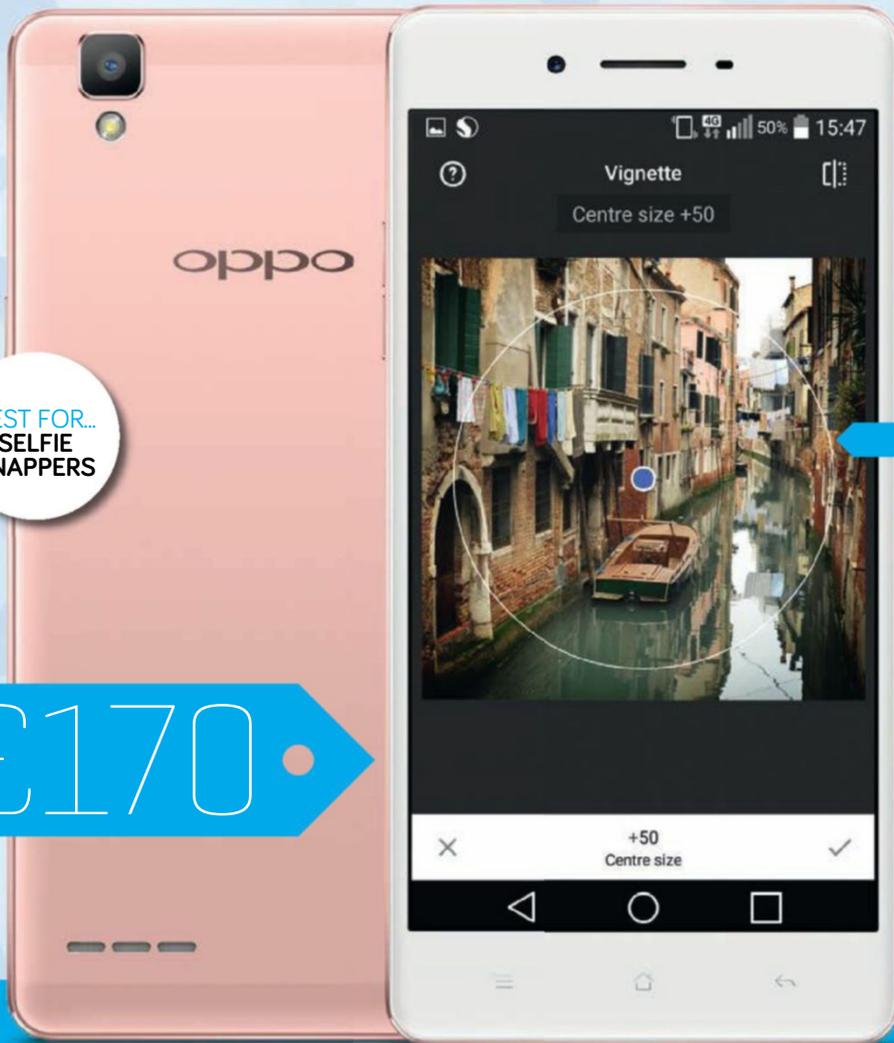


Oppo F1

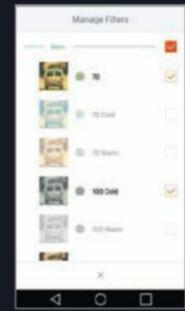
£170 / oppo.com

BEST FOR...
SELFIE
SNAPPERS

£170



A TOUCH OF RETOUCHING



SNAPSEED

A no-brainer for photographers, Snapseed is a brilliant way to lavish your pics with pro-level TLC. Stack effects, then go back and tweak or remove them to perfectly finesse a photo. It's a killer feature that's easy to use.

£free / Android, iOS

The Oppo F1's 8MP front snapper is a rarity among smartphones... and an Instagram narcissist's dream.

If you know of Oppo at all, it's probably for weird tech tricks like rotating cameras. But now it's all grown up, and has released the eminently sensible Oppo F1.

There's still a trick, though: it's a £170 phone that feels like a £300 one. It's ultra-slim and the back is gold-coloured metal. And there's the substance to match – 16GB storage is enough to install a bunch of games, and there's a microSD slot. Bung in a 128GB card and you're laughing.

The screen is classic upper-crust budget fodder, a 5in 720p LCD. It's sharp enough,

bright enough, and its colours are decent. The brightness sensor is slow, but at least it has one, unlike Samsung's Galaxy J3.

The camera is fairly fast, and with 13MP resolution you get snaps worth saving. It isn't as hot on pure image quality as rivals such as the Moto G4; the front camera, however, puts other budget phones to shame, Oppo branding the F1 the 'selfie expert' thanks to its 8MP resolution.

So what's wrong? The F1 uses ColorOS rather than stock Android, and it doesn't look or feel as good. It's currently stuck with 5.11

rather than the newer Android 6.0 too. But make a few tweaks and you'll have a budget star on your hands, not least because this is one of the more powerful phones at the price. With an octa-core Snapdragon 616 and 3GB RAM running things, it's a turbo-charged coupé among hatchbacks.

TECH SPECS

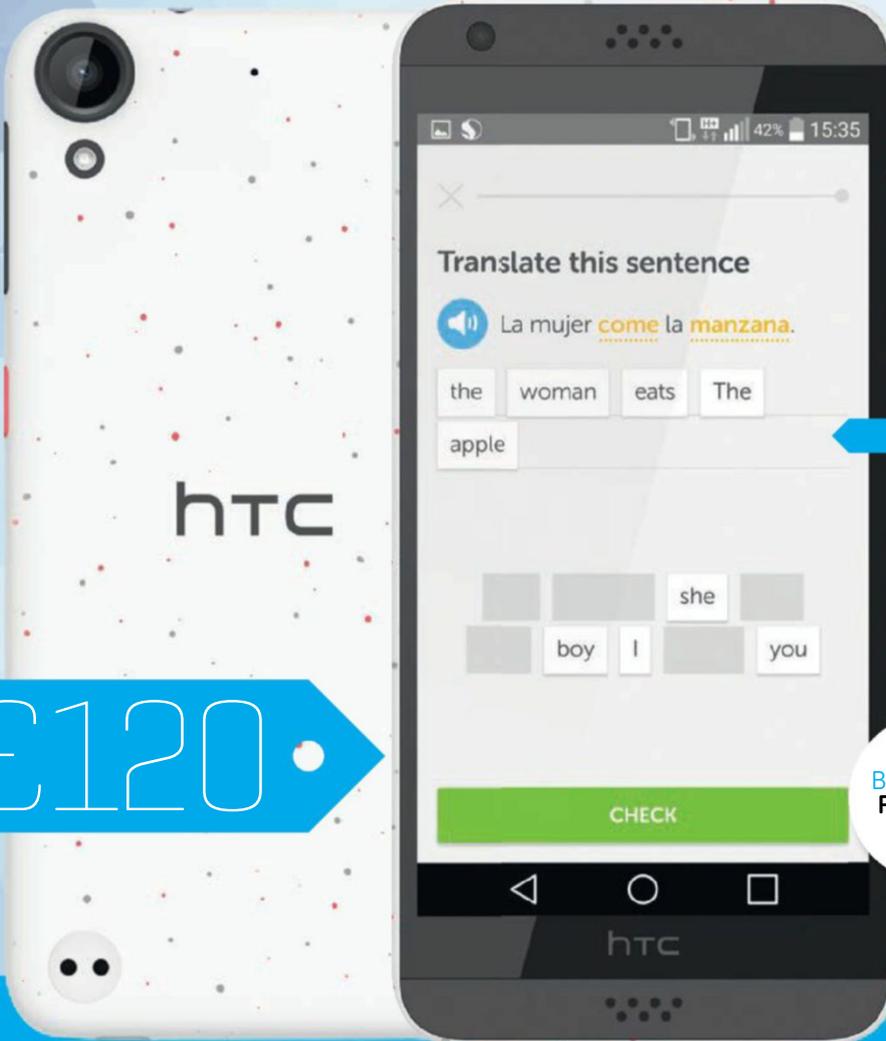
● Screen 5in 720p LCD ● Processor Snapdragon 616 octa-core ● Storage 16GB plus microSD ● RAM 3GB ● OS Android 5.1.1 ● Cameras 13MP/8MP ● Battery 2500mAh

STUFF SAYS Not quirk-free, but you get lots of power for a good price ★★★★★☆



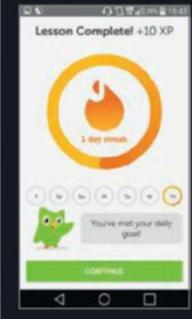
HTC Desire 530

£120 / htc.com



£120

FRENCH FOR FREE



DUOLINGO

Short of finding a sexy Parisian, Duolingo is the most alluring way to learn a new language thanks to its progress tracker. There's a good mix of reading, writing, speaking and listening exercises to race through.

£free / Android, iOS

BEST FOR...
POLLOCK FANS

The Desire 530 tries to distract from its cheapo leanings with that cover, but it has the opposite effect.

What's the easiest way to stand out? That's right, wear a spangly shirt. It's advice HTC has taken to heart with the Desire 530, using a speckled rear cover that looks a bit like a postcard from the Tate Modern.

It's a departure from boring old black, but it's a shame this is clamped onto the back of a phone that looks like something HTC has recycled from a couple of years ago.

It also doesn't have the BoomSound speakers HTC phones are famed for. There's only one speaker... and it's not very good. On the bright side, the screen is solid. It's a

classic 5in 720p LCD, and has good colour. But the main stinger is that the Desire feels slow throughout – a lot slower even than the Vodafone Smart Prime 7 that uses the same quad-core Snapdragon 210 CPU. There's a lot of lag. System updates may help, but not enough to make this a winner.

The camera is dead basic too, an 8MP sensor with a slow-ish f/2.4 lens. Colour handling is quite bad and shots look like the products of an even cheaper phone.

Like most HTC phones, the Desire 530 uses Sense, an interface that has a look all

of its own. It's not too different from what HTC uses in its more expensive phones.

There are some interesting bits to the Desire 530, but it doesn't nail enough of the basics. And it costs too much when other phones at this price offer just about perfect day-to-day performance.

TECH SPECS

● **Screen** 5in 720p LCD ● **Processor** Snapdragon 210 quad-core ● **Storage** 16GB plus microSD ● **RAM** 1.5GB ● **OS** Android 6 ● **Cameras** 8MP/5MP ● **Battery** 2200mAh

STUFF SAYS A budget dud – far too much is wrong with the Desire 530 ★★☆☆☆



Vodafone Smart Prime 7

£75 / vodafone.co.uk

Phone networks make money off us when we pay for their services – they love it when you switch on roaming abroad. This means they can use all that cash to make phones that would cost more if they came from a pure phone maker.

The result is phones like the Vodafone Smart Prime 7. It costs £75 but in most respects is just as good as what HTC and Samsung trot out for double the price. The bargain bell is ding.

There's bad stuff too, but let's start with the good. The Smart Prime 7 is much more eye-catching than the older Vodafone mobiles, which had about as much personality as a bag of flour. You now get a neat carbon-fibre-style back that looks and feels better than plain plastic, and there are real metal accents across the phone. That camera lens ring has low-key bling. Even in hand, you could believe this phone costs £150.

The screen is a smash too. It's a familiar 720p 5in LCD, but its colours really pop. There's no hint of that undersaturated budget vibe here. And even Vodafone's software approach is solid.

The basics are all built on Android Marshmallow; there's no bloated custom interface here that changes how it rolls. There are a handful of Vodafone apps, but a lot of these can be uninstalled if you like.

So far: mind-blowing bargain. But let's get real. The Prime 7 costs £75 so there are going to be some compromises. This thing has a low-end Snapdragon 210 CPU and just 1GB of RAM.

The top layer of the phone feels fast and it doesn't seem like you're waiting for the thing to catch up when you type. But apps take longer to load, especially 3D games that have a load of data to crunch. We've seen more grating lag in more expensive phones, though.

Its camera is also fairly basic. You can take some shots worth sharing, but its 8MP sensor feels the budget kosh and images become both soft and noisy in anything approaching low light. HDR shots take an age to capture, although mercifully, normal ones don't.

If you can afford to spend more on something like the Moto G4, you won't regret it. But the quality Vodafone offers for just £75 is amazing.

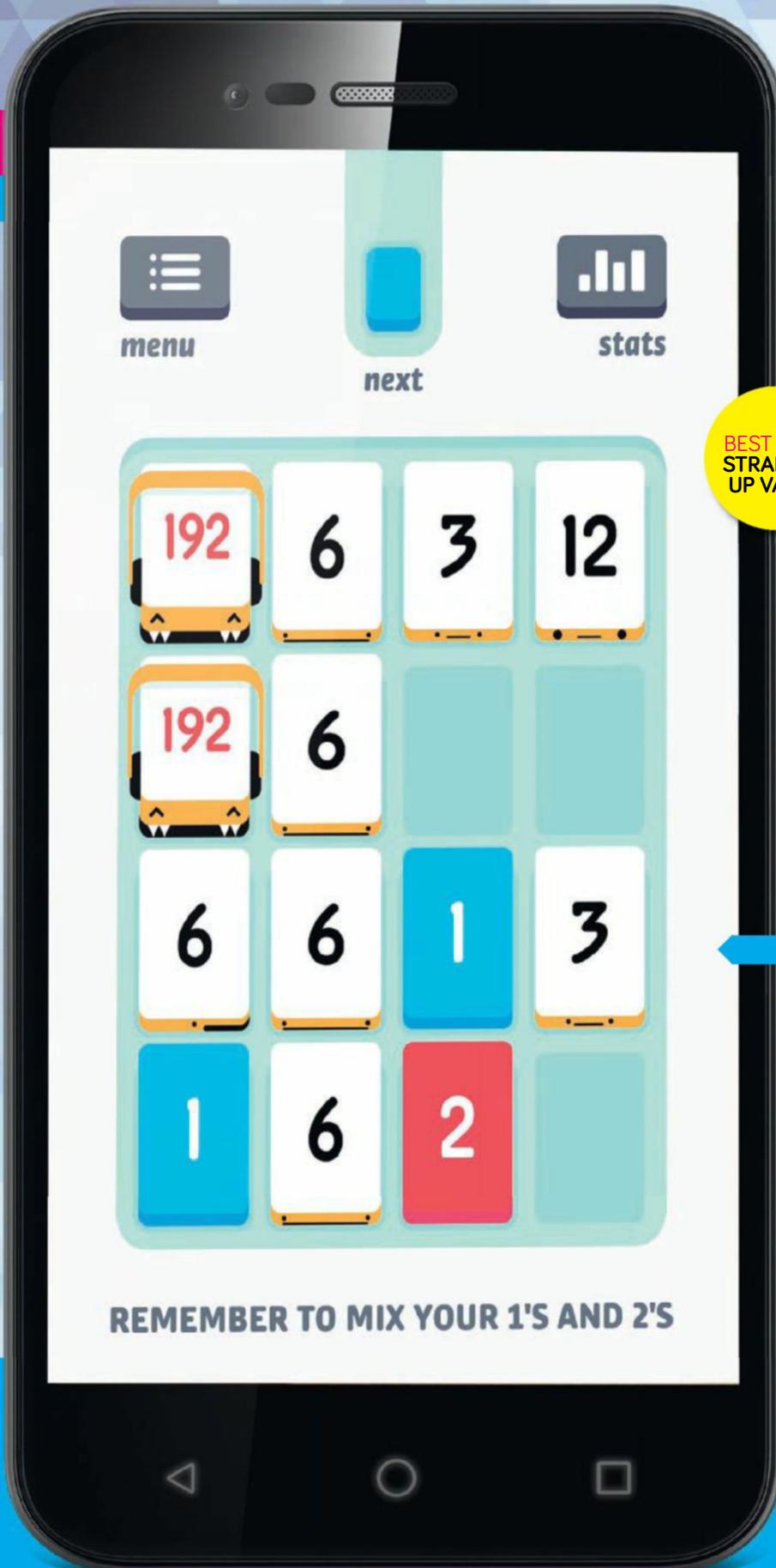
The Smart Prime 7 is an incredible achievement by Vodafone at such a low price. Don't forget, though – you'll need to be on its network.

£75

TECH SPECS

● Screen 5in 720p LCD ● Processor Snapdragon 210 quad-core ● Storage 8GB plus microSD ● RAM 1GB ● OS Android 6.0.1 ● Cameras 8MP/5MP ● Battery 2540mAh

STUFF SAYS It may pootle a bit, but for the cash this phone is exceptional ★★★★★



BEST FOR...
STRAIGHT-
UP VALUE

WASTE TIME,
NOT MONEY



RIDGE RACER
SLIPSTREAM

Like its coin-op ancestors, *Ridge Racer* is still all about insane speeds and fun. Here, though, you should only drive like a semi-maniac, slipstreaming the opposition, drifting through bends and boosting past rivals.

£free / Android, iOS

THREES!

In *Threes!* you move cards on a four-by-four board, merging pairs, which then double in value. Each time you slide your finger, all cards move the same way. And after every move, a new card shows up in an empty spot. The result is a brilliantly fun balancing act.

£free / Android, iOS

Many budget phone screens give away their low cost with their pallid hues. The Prime 7's 5in 720p LCD pumps out colours that pop.

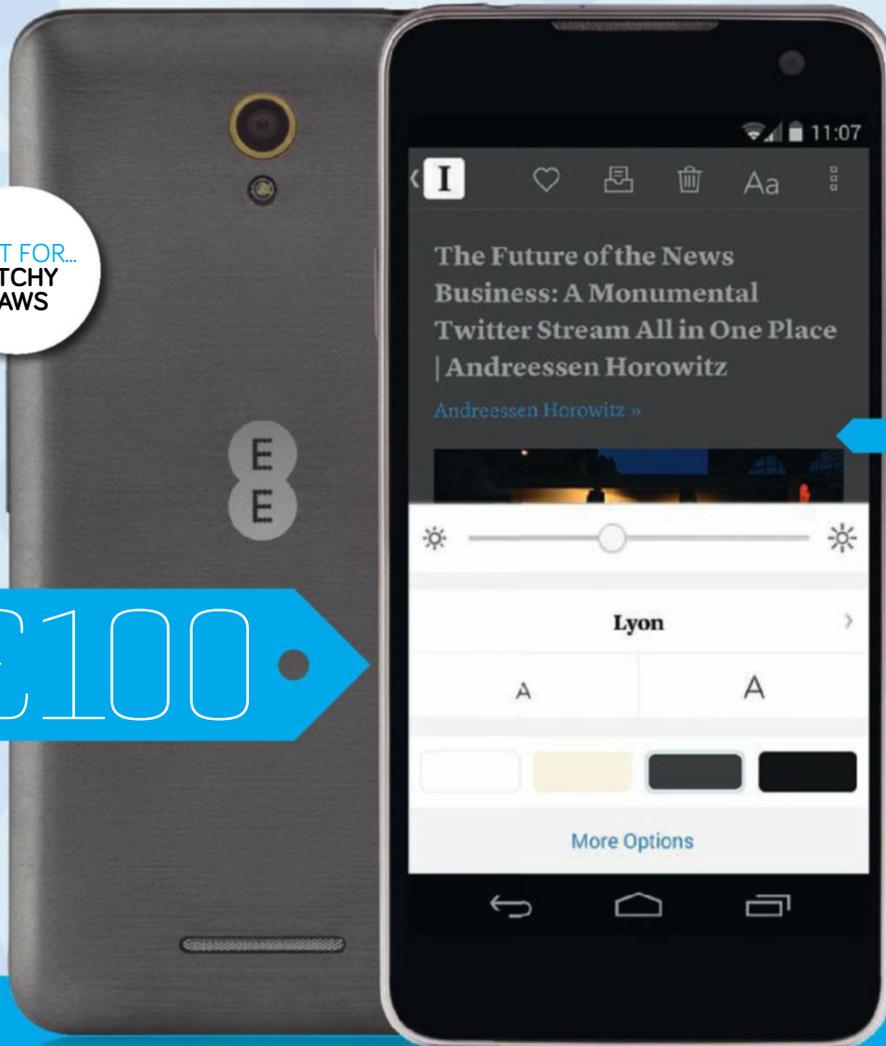


EE Harrier Mini

£100 / ee.co.uk

BEST FOR...
TITCHY
PAWS

£100



TIMESHIFTED FREEREADING



INSTAPAPER

The web isn't great for long reads... hence apps like Instapaper. Send content to it from a browser and it arrives without the clutter. Start scrolling and the app shifts to full screen, for a much more pleasing reading experience.
£free / Android, iOS

Got small hands or small pockets? The EE Harrier Mini is the only phone here with a screen under 5in.

Want a bit of budget bling? Check out the EE Harrier Mini's faux brushed metal back and gold camera ring. It's no wallflower.

Of course, this is a plastic phone – you're not getting the world's cheapest all-metal mobile. It's not all that fancy in hand, and like the Moto has a bit of curvy bulk to it.

The Harrier Mini has a 4.7in 720p display, a cute little thing. But one of this phone's problems is that the software lops off the bottom of the screen, making it look like a poky little window. Games and apps can use the whole area, though. Aside from

looking a bit tiddly, the screen is pretty good. It's sharp, and colours look natural enough.

EE hasn't fiddled with Android too much either. You get a bunch of preinstalled apps, but the look is exactly like Lollipop. Yep, we mean the old version. You'll want a microSD card as the storage is only 8GB.

The Harrier Mini does have a fair bit of power. Like the third-gen Moto G, it has a quad-core Snapdragon 410 CPU. It isn't super-slick, though. Like the competition at the price, apps can take a little while to load. There's an 8MP camera on the back and a

2MP job on the front, and neither captures lifelike colours. The camera app is a bit ropey too – there's better at this price.

Like most network-branded phones, you can't argue with the sheer value for money, but bear in mind these phones come locked to their parent networks.

TECH SPECS

● **Screen** 4.7in 720p LCD ● **Processor** Snapdragon 410 quad-core ● **Storage** 8GB plus microSD ● **RAM** 1GB ● **OS** Android 5.0 ● **Cameras** 8MP/2MP ● **Battery** 2000mAh

STUFF SAYS A dinky budget mobile that shouts for your attention ★★★★★



Huawei Honor 5X

£190 / honor.com



£190

BEST FOR...
SECURITY
FANS

COIN-FREE COMPILING



RETRICA

This app is designed to slather your photos in all kinds of filters, but what could have been a throwaway camera app is an essential download. Best of all is the multi-shot mode that compiles several photos into a single grid image or a gif.

£free / Android, iOS

Huawei's Honor budget brand is gathering pace and a decent rep... and everyone can pronounce it.

It's sensible, if your company's name sounds like a drunk Geordie asking for directions, to sell your affordable phones under a name that's easy for idiot Westerners to get their tongues around.

That's what Huawei has decided, and it's why the Honor brand appears on the back of the 5X at roughly 50 times the size of the firm's own name. At 5.5in, the 5X offers a lot of screen for your money – and that's not the only way it's big. The spec list is extensive: Snapdragon 616 octa-core CPU, 13MP and 5MP cameras, and two SIM trays (micro and

nano) so your 5X can be two phones. There's even a fingerprint sensor – usually the preserve of high-end handsets.

While its 'Emotion UI' reskinning of Android Lollipop (5.1.1) is OK in an "I wish I were an iPhone" sort of way, it's by no means the quickest or most responsive interface.

Elsewhere it's generally positive. Battery life is heroic – even power users should get a full day, and two is achievable. The rear cam is sharp, colourful and detailed, the screen is correspondingly high-contrast, and the fingerprint sensor isn't too pedantic. It's a

well made and finished unit, and the materials feel upmarket enough despite the relatively flyaway 158g weight.

The Honor 5X has little cachet, and is priced accordingly. But it's a competitive budget smartphone which, if nothing else, indicates just how serious Huawei is.

TECH SPECS

● Screen 5.5in 1080p LCD ● Processor Snapdragon 616 octa-core ● Storage 16GB plus microSD ● RAM 2GB ● OS Android 5.1 ● Camera 13MP/5MP ● Battery 3000mAh

STUFF SAYS Not the cheapest 'cheap' smartphone, but one of the best ★★★★★



SENNHEISER AMBEO BOTTLING REALITY IN SOUND

New immersive 3D audio technology puts the listener in the centre of the action for a completely fresh sound experience

Sennheiser's latest technology has a lofty ambition: to transform the listening experiences across music, broadcasting, VR gaming, and beyond.

It means you'll be placed inside the music, the game, the movie or the soundscape – a completely new experience – and you'll hear fine details like never before.

The technology is called AMBEO, and it forms the company's range of 3D immersive audio products and activities. Sennheiser has been involved in immersive audio for a long time, through 9.1-channel mixing and recording, and audio design for high-profile exhibitions – so it's little surprise that it's at the cutting edge.

AMBEO is as versatile as it is powerful. Take Sennheiser's upcoming VR microphone: it captures high-quality audio in three dimensions, allowing the finest nuances of any environment to be accurately sound-mapped. It's impressive stuff.

AMBEO's sense of 'being there' also hugely benefits recorded music. Composer, musician and producer Simon Franglen, known for his work on *Titanic*, *Avatar* and *Spectre*, says his 3D immersive mixes boast super clarity. "The extra playback area allows individual voices and instruments room to breathe in a way that the flat plane of a stereo mix can never hope to accomplish," he says.

Tonmeister Gregor Zielinsky, who masterminded Sennheiser's 3D audio

installations for the David Bowie exhibition, agrees. While it's notoriously challenging to capture emotion when recording music, he says 3D gives us back that emotional experience, fully immersing you in sound that retains depth and colour. By comparison, stereo and even 7.1 are like "looking through a small slot into the music of the artist," he says.

In other words, AMBEO is reality, bottled. And who wouldn't want that?



Turn around, bright eyes

This little Android phone accessory wants to immerse you in 360° photos and video

£200 / lg.com



■ One of the 'LG Friends' peripherals to arrive along with the LG G5 smartphone, the 360 Cam creates 360° photos and videos using two 13MP wide-angle cameras facing in opposite directions. Each captures an image wider than 180°, which the software meshes together to create an all-round picture.

■ The 360 Cam is nicely compact, very light, and when not in use it can be slid into a hard case to keep its lens free from scratches and dirt. The case also doubles as a sort of tripod – if you flip it and stand it on a flat surface, you can insert the 360 Cam the other way around.

■ There is a standard tripod mount on the bottom, and a hatch that flips up to reveal a USB-C port and microSD card slot. The USB port handles charging and data transfer, but if you have a G5 you can wirelessly transfer photos and videos from camera to phone.

■ So, are these immersive photos and videos any good? Yes – with limitations. While LG boasts of 2K resolution, a couple of tiny sensors aren't going to deliver Hollywood-style colour reproduction. There's some blocking of flatter areas of colour, while lines of high contrast show purple fringing.

■ But what's really impressive about these videos and stills is that they really do put you virtually into a place where you once stood/cycled/snowboarded, and let you turn your gaze in any direction.

Tech specs

Cameras 13MP, 206° x2 **Video** 2K @ 30fps **Storage** microSD up to 1TB **Connectivity** USB-C, Wi-Fi **Battery** 1200mAh **Dimensions** 40x97x25mm, 77g



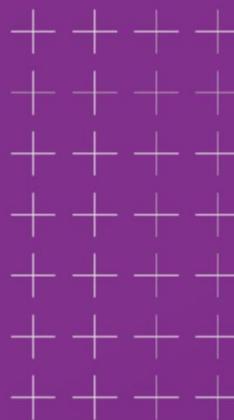
■ One-button wonder

There's a single button on the front for turning the device on and off and toggling between 180° and 360° settings. Another button is used to take a still or start filming. A red LED pulses to tell you when the camera is recording video.



■ Remotely interested

You can also control the 360 Cam from its companion app... and this is the best way to use it. You can see what it's recording or snapping live on screen, and trigger it remotely if you want a 360° photo without you in it.



STUFF SAYS One of the best and easiest ways to make 360° and VR content ★★★★★☆

The image quality is just about good enough... for now
Sam Kiildsen



If you remain aware of the 360 Cam's limitations, it's unlikely to disappoint. In a year or two, 360° cameras will probably have come a long way in terms of image quality, and LG's first foray into the market will look dated. But as we stand today, it's one of only a handful of solutions you can actually buy. So its easy operation and compact design make it one of the best options currently available for taking 360° video and stills.

Blu on Blu: which is the 4K player to watch?

The Panasonic looks more stylish than the Samsung, with a subtle display behind a two-way mirror finish. It hides a disc tray, USB port and SD card slot.

TEST WINNER



With resolution four times higher than normal HD, the UBD-K8500 offers crisp, detailed images in UHD – the better your screen, the more impressive they'll look.

Panasonic DMP-UB900

Both these 4K Blu-ray players represent the future of home cinema, but neither would pass muster as a prop in a sci-fi epic. The Panasonic's shiny, brushed metal aesthetic and mirrored front is the more alluring, though.

With 4K and HDR (high dynamic range) smarts, these players offer a leap forward in picture quality from standard Blu-ray machines. But the Panasonic is slightly better at shading, definition and providing a sense of depth.

These players may be closely matched for picture quality, but sound quality is a different battle. Stick *The Martian* on 4K Blu-ray into the Panasonic and it'll bowl you over with a rich, weighty delivery and plenty of blockbuster oomph.

VS

Samsung UBD-K8500

Samsung's gone for something different with its curved disc-spinner. Why? It'll match that curved 4K TV you bought with it. Trouble is, that trend is on the way out and odd-shaped players tend to age like a pint of milk in a heatwave.

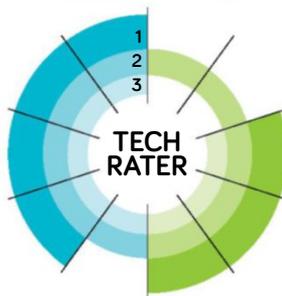
Although it can't quite match the Panasonic, HDR on this Samsung is still splendid. The colours are amped up to resplendent levels, giving a more diverse range of hues. Bright areas sparkle enough to make you squint.

Alas, this Samsung's sound isn't quite as spacious or engaging. When Matt Damon is struck by a satellite, you don't feel the same thunderous impact. Elsewhere, voices and sound effects often have a hard edge to them.

- 1. DESIGN
- 2. PICTURE QUALITY
- 3. SOUND

Connections HDMI, optical digital, coaxial digital **Features** Internet streaming, screen mirroring, web browser, 4K upscaling **3D** Yes **Ethernet** Yes **Wireless LAN** Yes **Weight** 2.4kg

● **Price** £600 / panasonic.com



Connections HDMI, coaxial digital, USB **Features** 4K upscaling, internet streaming, web browser **3D** Yes **Ethernet** Yes **Wireless LAN** Yes **Weight** 1.9kg

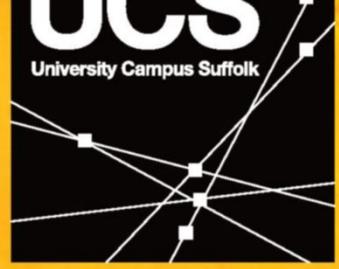
● **Price** £429 / samsung.com

★★★★★

STUFF SAYS

★★★☆☆

Samsung's 4K Blu-ray is cheaper, but Panasonic's player is worth splashing out on



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 #UCSgofar

Next big thin

Beautiful looks, 4K and HDR: Sony's future-proof wonder fits the latest tech into a barely-there form... so what more could you want from a TV?

£2000 / sony.co.uk

As we may have mentioned once or twice already, now is the time to take the plunge into the new TV technologies of 4K and HDR. It's been a while coming, but content is finally becoming available – not quite in torrents, but at least we can now say the stream from the likes of Netflix and Amazon is flowing faster.

Plus, 4K Blu-ray players and discs are finally a reality, and Sky's broadcast contribution is just around the corner. It all looks absolutely incredible, and this 55in Sony makes it more incredible than most.

With all four of its HDMI inputs HDCP-compatible, it's ready to accept whatever new 4K source you can lay your hands on. The Android TV implementation is also excellent, giving you access to a wide range of apps in a neat and intuitive layout.

You're getting an awful lot of TV for your money here. Which is ironic as, considering its waif-like form, you're not getting an awful lot of actual telly.

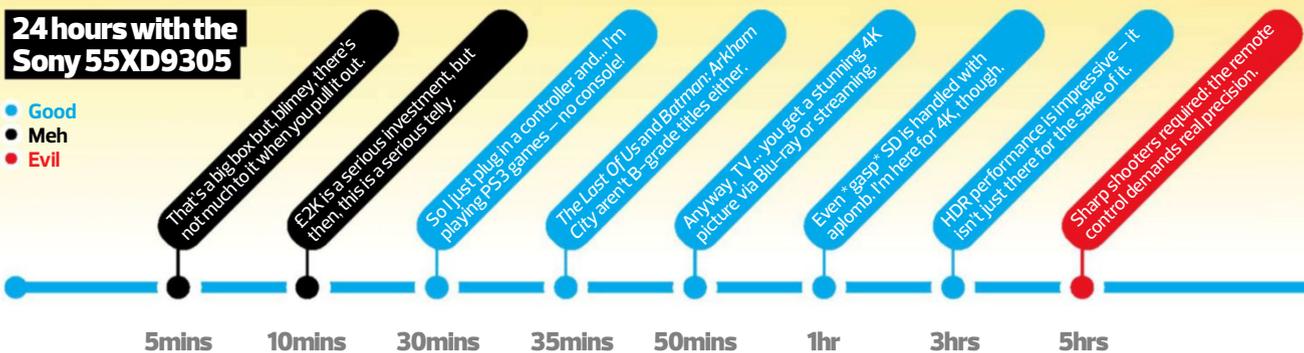


2

1

24 hours with the Sony 55XD9305

- Good
- Meh
- Evil





4

1 Ain't nothing like the real thin

We're talking stick insect, pro marathon runner, "waffer-thin mint". And yet, despite that svelte profile, this TV packs a powerful techno-punch – all of it geared towards giving you as stonking a picture as you're going to get this side of three grand.

2 Range life

So, 4K? Of course. HDR? You bet... and then some. Sony has shoehorned in a couple of extra tech treats (X-tended Dynamic Range PRO and a Triluminos display, if you must know), for delivering high dynamic range to its best ability.

3 Famous Blu-ray cope

Playing a 4K Blu-ray of *The Amazing Spider-Man 2* (not forgetting to reconfigure the HDMI port to 2.0), it's soon apparent that the 4K picture is as crisp as a Walkers warehouse. Motion is handled beautifully and the picture is remarkably natural.

4 Paler shade of white

Where in the past we've got rightly excited about HDR's broad scale of contrast – the bright whites and the impressively distinctive dark shades – this set provides a broadened colour palette in terms of gradation that benefits the more subtle hues.

5 Games without frontiers

Being near the top of the Sony foodchain, this set is smarter than a kitten in a top hat. Link it to a DualShock 4 controller and you can play certain PS3 games – *The Last Of Us* and *Batman: Arkham City* for starters – without a console.

Tech specs

Screen 55in LCD, 3840x2160

3D Yes (active) **HDMI inputs** 4 (HDCP 2.2)

USB inputs 3 **Wi-Fi** Yes **OS** Android TV

Other inputs RF, SCART, Ethernet, digital audio, composite, component **Dimensions** (without stand) 124x72x3.6cm **Weight** 22kg (24.9kg with stand)

Picture perfect

This Sony isn't just about ticking the boxes for 4K and HDR on a spec sheet: it performs on all fronts



SD upscaling

Standard-def pictures can't be pin-sharp – this is what they were looking at in the '80s, for flip's sake – but Sony takes SD in its stride, with excellent upscaling for remarkably natural motion and colour.



Next-gen connected

Naturally, the 55XD9305 has all the connections you could need. As 4K HDR becomes more mainstream, it'll ensure you have access to that increasingly elusive 4K HDR content.



Remotely in control

One minor niggle is that the remote requires the steady aim of a wild-west gunslinger. Aim just a touch off target and the TV will not respond. Got shaky hands? The remote app for phones works nicely.



More subtle HDR

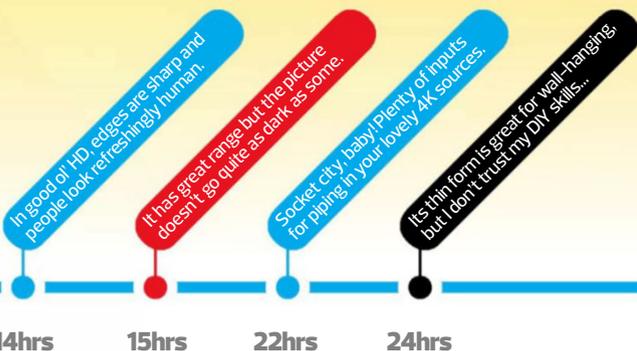
Skin tones appear natural, and even bolder colours highly nuanced. This provides a more subtle effect than some other HDR-capable sets give, and over time it's the better for it.



The Sony 55XD9305 is a superb TV. You get the full 4K and HDR package in a set that's large but not enormous-ridiculous for the average UK living room. Indeed, for a 55in television, it's as svelte as we can possibly imagine. It looks great and it performs, if anything, even better. If you've got two grand for a TV, you owe it to yourself to try it out. @robleedham

STUFF SAYS ★★★★★

A whole lot of superbly performing 4K HDR TV for your money – even when that money is two grand





PS4, Xbox One, PC / mirrorsedge.com

Mirror's Edge: Catalyst

Believe it or not, it's been eight whole years since *Mirror's Edge* was first released. Never heard of this dystopian parkour classic? Don't worry, the *Catalyst* reboot is a great introduction...

Once again, we slip into the red trainers of Faith, a free-running freedom fighter from the totalitarian City of Glass. And this time EA has fleshed out one of gaming's few female protagonists. There's only a nine-hour story to cram it into, but Faith comes alive over that time.

Each of the game's five districts, from the spectacular Anchor to the subtle, golden Downtown, has its own aesthetic that you'll want to charge right into. And while *Catalyst* has a linear story, you'll find side

missions including timed dashes, billboard hacks (like futuristic graffiti) and package deliveries. Because, hey, there might be a huge conspiracy to unravel, but you still have a day job.

Catalyst manages to stop these diversions from feeling like pointless fluff by giving you insights into how ordinary people are surviving under the brutal regime.

Leaping over obstacles like a new-age Super Mario is the focus here, and it's just as fun as before.

Movement feels smoother than ever, as a red trail guides you to your destination, highlighting interactive obstacles. If you want to move quickly or explore, it's worth breaking away from the red line from time to time.

Combat in *Catalyst* plays to Faith's speed and agility. Traversal attacks combine heavy and light hits with parkour moves to deal extra damage and attacks that enemies can't counter. Slaying the forces of Kruger Security feels like a natural extension of your

movement, instead of something akin to running into a brick wall. However, there are moments where you'll be locked into a combat situation with no way out. *Mirror's Edge* is still about speed and momentum – and that's why these bits are frustrating.

From Faith's slicker combat style to her more nuanced personality, there's much more to this game than its wondrous design. Fans can rest easy – Faith's status as a cult hero remains intact.

Emma Boyle

STUFF SAYS Stumbles aside, this fun free-running experience is a waft of fresh air ★★★★★



Traversal attacks deal heavy damage without interrupting Faith's flow...

...which is great for taking down unavoidable enemies and zipping by the others.



Running with the pack

If you want to test your competitive edge in *Catalyst*, as with most games, it's time to fire up multiplayer. Unlike most other games, though, instead of featuring a live mode *Catalyst* hands you a Social Play system with two elements that can impact on other players' game worlds: Beat LE and Time Trials.

To break down *Catalyst*'s terminology: 'The Beat' is the system runners use to communicate in the City of Glass. Each Beat Location Emitter (Beat LE) allows players to mark a location in the city for other players to reach. It's a great way to highlight interesting sights or secret locations you might not have found alone.

Time Trials, as the name suggests, let players create timed runs almost anywhere in the game world and then push them to their friends and strangers with the challenge of besting their time. No sense of direction? You can follow 'echoes' of previous runners' attempts, which guide you through the route.

Each course has its own leaderboard, bringing a competitive playground rivalry to the game world and, more importantly, some new, creative ways to explore your environment.



Media hoard

This month's verdicts on the most notable new releases in film, music and books include a widowed bride on a bike with a goat called Phillip (we may have mixed those up a bit)

WATCH

Now You See Me 2 _cinema

In a summer where multiplexes have been once again dominated by bombastic superhero epics, *Now You See Me 2* is a remarkably quaint affair. A sequel to the magic-themed heist movie of 2012, it sees Jesse Eisenberg, Mark Ruffalo and the rest of the Horsemen crew dazzle their way through a series of wildly implausible set-pieces while trading snarky one-liners. It's pure popcorn with few ambitions beyond a slick two-hour runtime, and that's OK up to a point.

To be sure, you'll have fun with this film. Its rollercoaster pacing and commitment to silliness mean it rarely lulls into indulgence *à la* David Blaine and his massive block of ice. Lizzy Caplan's turn as the

whip-smart Lula is a constant delight, outshining Daniel Radcliffe's droll villain.

It's this last bit of wizard casting that shows up *NYSM2*'s Achilles heel: it's not nearly as clever as it thinks it is. Too many of the movie's 'tricks' rely on CGI to be convincing and there are several plot points that defy all credibility – which, for a flick about magic, really is saying something. One particular scene involving a card trick and a computer server room combines all these failings into one big melange of nonsense.

Still, for a silly blockbuster that's lacking in Spandex, *NYSM2* just about pulls the rabbit out of its hat.

Rob Leedham

STUFF SAYS ★★★☆☆



The Witch _Blu-ray, DVD, VOD

A spooky forest, an aggressive goat called Black Phillip, creepy twins, failed harvests... *The Witch* could hardly tick any more classic horror boxes. Ye olde worldie dialogue may irritate, but it adds to the sense of otherworldliness. And while it may be light on jump-scares, we doubt you'll see a creepier film this year.

Tom Wiggins

STUFF SAYS ★★★★★



10 Cloverfield Lane _Blu-ray, DVD, VOD

Michelle (Mary Elizabeth Winstead) wakes up after a car crash, locked in a bunker with Howard (John Goodman), a conspiracy theorist who says there's been "an attack" outside. Is the air really poisoned, or is it all a ruse? She – and you – will be kept guessing right up to its monstrous end.

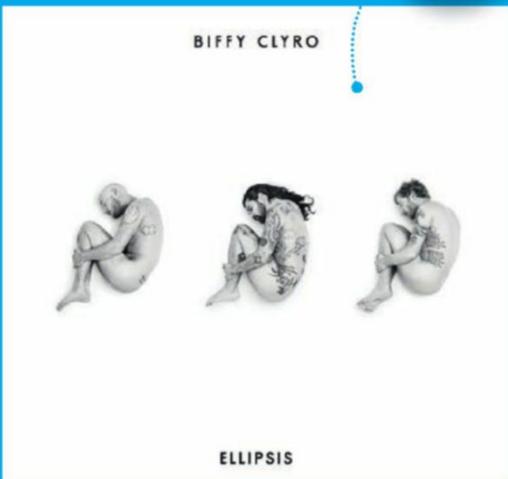
Tom Wiggins

STUFF SAYS ★★★★★

LISTEN

READ

BIFFY CLYRO



ELLIPSIS

Ellipsis _Biffy Clyro

For a band that used to name their songs *There's No Such Thing As A Jaggy Snake* and *Kill The Old, Torture Their Young*, the clichés that clang through *Ellipsis* are more than a little disappointing.

Opener *Wolves Of Winter* sounds like classic Biffy but it's let down significantly by lyrics that belong on a pseudo-motivational Facebook post: "You can achieve anything, just remember

no 'I' in team." Then *Friends And Enemies* offers: "With a friend as good as you, who needs enemies?" Backed by tribal drums and a child choir.

What made Biffy great was the way they used to send even the most straight-up rock song off on weird tangents. *Ellipsis* sounds like a band that's run out of fresh ideas.

Tom Wiggins

STUFF SAYS ★★☆☆☆

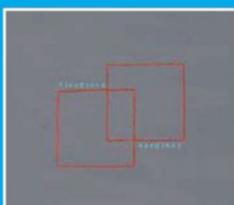


The Bride _Bat For Lashes

An old-fashioned concept album, *The Bride* sees Natasha Khan (aka Bat For Lashes) tell the story of a woman whose fiancé has been killed in a crash on their wedding day. Not a cheery affair, then, but Khan knows how to hold your attention across a helter-skelter melodrama. *In God's House* is the thunderous highlight.

Rob Leedham

STUFF SAYS ★★★★★



Cardinal _Pinegrove

If you're looking for a groundbreaking genre mash-up then steer clear of *Cardinal*, which follows a billion other albums in ploughing the fertile furrow between alt-country and indie-rock. But what it lacks in originality it makes up for in infectious hooks, peaking with the urgent *Visiting* and the excellent *New Friends*.

Marc McLaren

STUFF SAYS ★★☆☆☆



The Science Of The Tour De France _James Witts

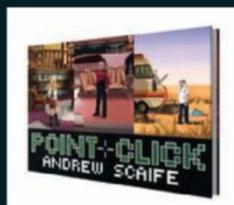
Twenty years ago, this would have been a list of prescriptions. Now that pro road cycling is 100% drug-free (cough), we get an in-depth study of the ongoing arms race in bike and rider tech that Tour teams are having to use for their 'marginal gains' instead of just pumping everyone full of EPO.

It's a fluent enough read, and Witts has consulted

a wide range of riders, makers and boffins... including Chris Boardman, who's sort of all three. It's just a pity the design isn't Team Sky standard, and the sloppy editing suggests it was chucked together even more hurriedly than this magazine. (Hey, at least we can spell 'Colombia'.)

Richard Purvis

STUFF SAYS ★★★★★



Point + Click _Andrew Scaife

So you've bought yourself a fancy new 4K UHD TV. But now your favourite episode of *Friends* looks like 8-bit art on that titanic 65in screen thanks to the crappy YouTube link. Stop crying, plonk this book on your coffee table and keep dipping into its pixelated recreations of classic TV scenes 'til they remaster *Friends* in 4K.

Ross Presly

STUFF SAYS ★★★☆☆



Juggalo _Steve Miller

The face-painted 'Juggalo' fans of soda-spraying Detroit horror-hop duo Insane Clown Posse are one of music's few remaining genuine subcultures, suspicious of any mainstream attention. Miller fails to get entirely inside their brains but he paints a more sympathetic and well-rounded portrait than you'll find elsewhere.

Tom Wiggins

STUFF SAYS ★★★★★

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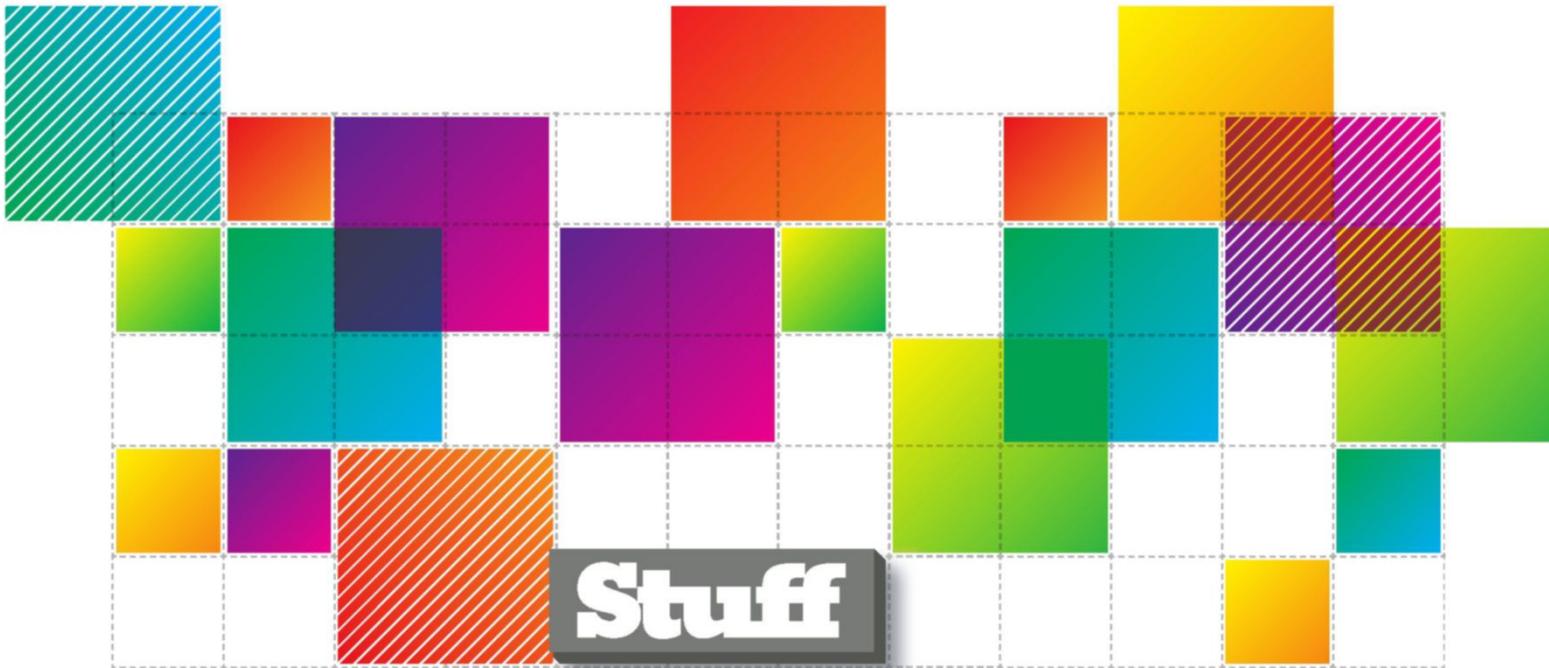
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BBC
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PROJECTS



p104
**BETA YOURSELF:
BUILD YOUR
OWN DRONE**
Just promise you
won't use it to do
anything naughty



p106
**PLAYLIST:
SPORTS DOCS**
Tales of triumph,
tragedy and
despair (may
contain wrestling)



p108
**HOW TO...
CUSTOMISE
YOUR PHONE**
Give that bashful
blower a dose
of personality



p110
**THE BIG
QUESTION:
HOW CAN I
BOOST MY
HOME WI-FI?**
Little rad router

BETA
YOUR-
SELF



BUILD A DRONE

Hobbies don't get more sci-fi than building a first-person view (FPV) racing drone. Engineer Alex Elliott maps your three-hour journey from soldering to flying...



WHAT YOU'LL NEED

All parts from unmannedtech.co.uk

QUADCOPTER

QAV ZMR 250 Mini DIY Quadcopter Kit / £75
1300mAh 45C 4S LiPo Battery / £17
RadioLink T4EU 4-channel radio control with R7EH receiver / £35
SkyRC E3 LiPo Balance charger / £9

TOOLS

DroneBuilder Tool Kit / £25
50W soldering iron / from £15
Servo tester / £2.75
Multimeter / from £8

FPV KIT (OPTIONAL)

Headplay HD FPV headset with 40-channel raceband receiver / £230
FPV 200 Bundle Pack / £27
Circular polarised antenna set / £10



THE BASICS

■ **Learn to fly.** The best way to start is to buy one of those budget mini quadcopters you can find for £10. You'll learn the basics of flying quickly and you won't have to worry too much about costly crashes while you get to grips with it all.

■ **Forum friends.** Online forums are a great place to talk to knowledgeable people about your project. They're invariably a friendly bunch, but don't expect them to do all the work for you. dronetrest.com and rcgroups.com are useful hangouts for all types of radio control projects.

■ **Pick your kit.** A great thing about simple FPV racers is that they're at the cheap end of the drone scale. They're tough, light and generally quite basic. This helps them go fast and not bankrupt you if and when you crash. There's no GPS, sonar or camera gimbal to worry about smashing to pieces when you get it wrong.

■ **Start basic.** Mini quads are the best to play around with while you're still learning about drones before moving on to more complicated projects. The basic ones just have flight controllers – you're still flying manually and you'll find that it drifts around in the wind.

■ **Upgrade later.** As you get more confident you can add more advanced things like GPS or a sonar sensor that enables you to keep an exact altitude. If you're feeling really adventurous, you can even look at the firmware code and add custom functions.

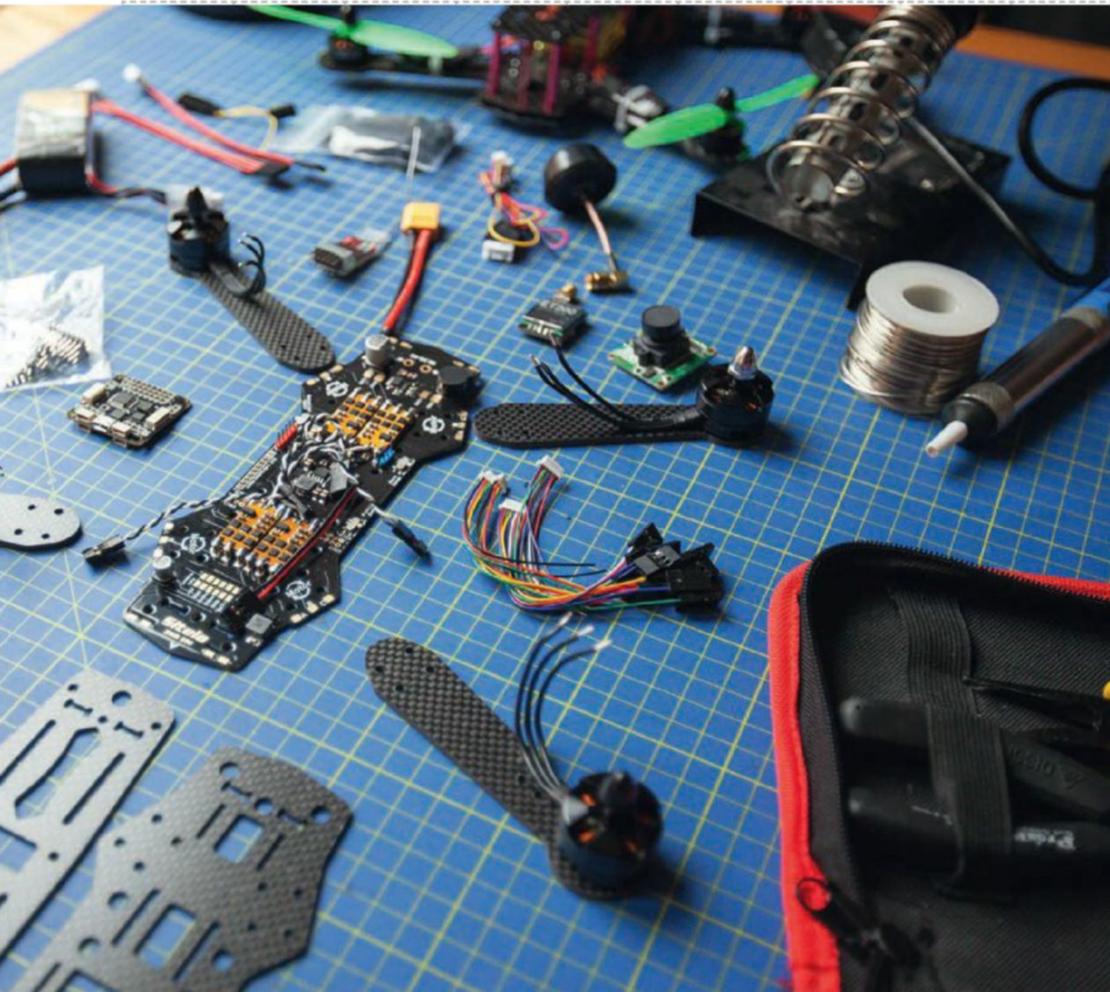


GATHER YOUR KIT

■ **Tool up.** You'll need a soldering iron (with solder) and a multimeter (for testing connections). A good set of hex key screwdrivers and sockets, as well as a set of needle-nose pliers, will help massively here.

■ **Space to work.** A nice big cutting mat will mark out your building area and help keep all your components organised.

■ **Be patient.** You'll definitely make a few mistakes, but as long as you're careful and don't rush they'll be easily fixable. It's a bit like a puzzle – getting it wrong is all part of the fun.



LEVEL UP WITH...



THE BOOK BUILD YOUR OWN DRONE

£23 / haynes.co.uk

Alex Elliott's Haynes manual gives you a solid overview of drone tech and follows up with detailed, step-by-step guides to building your own – whether it's a quadcopter like the one here or a fixed-wing surveillance drone. There's also a history of drones and some handy details about UAV law to help you avoid getting clobbered by a hefty fine.



THE WEBSITES FPV DRONE RACING

If you're looking to start racing – or just want to see what it involves – take a look at FPVUK and BFPVRA, who are both involved with races in the UK. Go along to spectate, meet people and ask lots of questions. Who knows, you might be ready to come back and race yourself next time.



THE SIMULATOR FPV EVENT

Want to test your flying skills to the limit without doing the same to your bank balance? This flight simulator uses your RC controller via USB and lets you fly around real-life courses. There's even an online league so you can race other drone pilots from around the world before perhaps meeting them face to face. The game *Liftoff* (£15, liftoff-game.com) is another good alternative.



START BUILDING

■ **Solder on.** Buy a cheap learn-to-solder kit to practise on before starting the real work.

■ **Add the brawn.** The two pairs of motors need to rotate in opposite directions. You'll need to test them using your servo tester so you know which wires to cross over. Then attach them to the arms, bolt the arms to the frame and solder the motor wires to the main board.

■ **Attach the brains.** Solder the connectors to the board and then test them using a multimeter. Lastly, solder the battery terminals to the base.



GET TESTY

■ **First contact.** Give all the connections a once-over before powering up...

■ **Attach the battery.** See any smoke? If so, disconnect the battery and check those connections again. If not, hook up your quad's flight controller to your PC/Mac via USB and load up the free Cleanflight (cleanflight.com) Chrome browser extension for testing.

■ **Are you receiving?** Hook up your receiver to your quad and fire up your transmitter. If you're adding FPV, it's time to do that too.



TIME TO FLY

■ **Learn from the pros.** Watch YouTube vids showing FPV footage from racing drones and freestyle competitions. But start with an easy oval course marked out with cones.

■ **Don't fly blind.** If you've hooked up an FPV camera, start with a monitor rather than goggles so you can glance up to see your quad in flight. You'll also need a friend to act as a spotter.

■ **Let's race.** Ready to fly? Go to fpvracingworld.com and check out the map of nearby quad pilots and events.



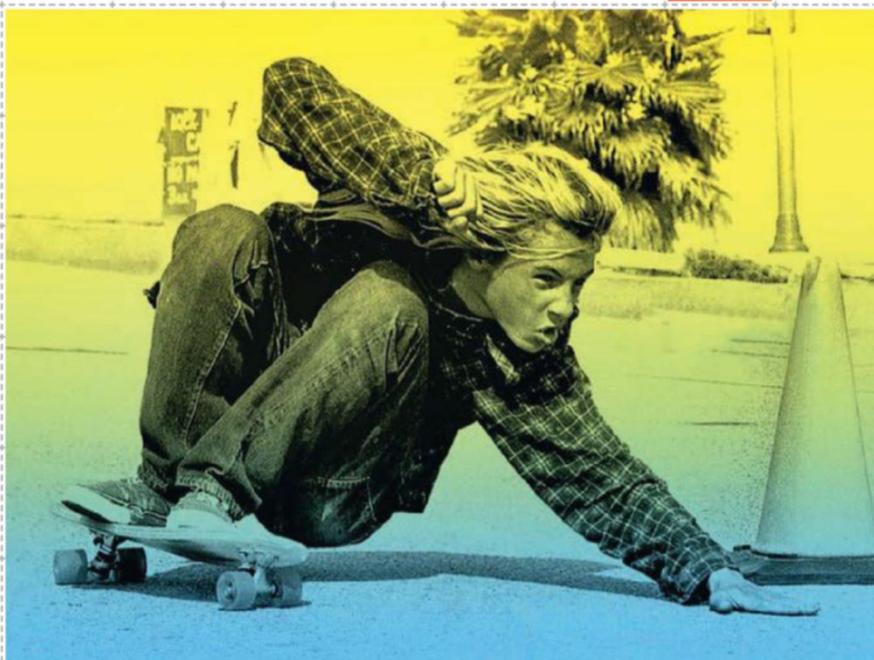
PLAYLIST

SPORTS DOCUMENTARIES

Whether or not you're engrossed in the summer of sport, make sure you watch our pick of the best non-fiction sporting movies currently streaming to a screen near you

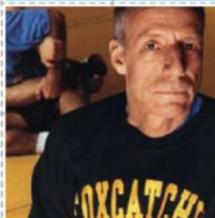
Dogtown And Z-Boys 2001

Skateboarding began as surfing's slightly nerdy offshoot. Enter the Zephyr Team (aka the Z-Boys), led by such legends as Stacy Peralta. This doc explores how their pioneering style sparked a boom in popularity that's led to it being considered for the next Olympics. [Amazon](#), [iTunes](#)



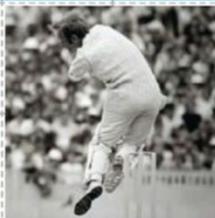
Hoop Dreams 1994

It might be 22 years old, but *Hoop Dreams* remains peerless, throwing a street-level spotlight on urban America through the lives of two 14-year-old NBA hopefuls from the Chicago ghetto. The result is a touching portrait of how society can stack the odds against sporting talent. [Netflix](#)



Team Foxcatcher 2016

If you've seen the *Foxcatcher* movie starring Steve Carell, this non-fiction treatment is an excellent, tragic companion to it, telling the tale of wrestlers Mark and Dave Schultz, and their fateful sponsorship by the increasingly unstable benefactor John DuPont. [Netflix](#)



Fire In Babylon 2010

Facing a 95mph fast bowler is one thing; facing a 95mph fast bowler fired up by anti-colonialist rage, without a helmet and without restrictions on bouncers, is quite another. Wince at the short stuff in this portrait of the Windies team that never lost a Test series between 1980 and 1994. [Amazon](#), [iTunes](#)



Red Army 2014

Soviet Russia was a world leader in three fields: chess, furry hats and ice hockey. *Red Army* lifts the iron curtain on the third, telling the story of the 'Big Red Machine' through the eyes of its greatest player, Slava Fetisov. A dash of Cold War intrigue helps *Red Army* transcend sport. [Netflix](#)



Pantani 2014

A combination of excess Lycra and drug scandals might have reduced pro cycling's cred to a kind of WWE-on-wheels during the '90s, but this portrait of Italian legend Marco Pantani blends footage with interviews to produce a moving study of one of sport's most tragic downfalls. [Netflix](#)

Next Goal Wins 2014

After losing 31-0 to Australia and propping up FIFA's world rankings, American Samoa brought in Dutch coach Thomas Rongen with the impossible goal of reaching the World Cup finals. If you're not a fan by the end, you have the heart and soul of a referee. [Amazon](#), [iTunes](#)

K5 INTERNAT
MUSIC BY ROGER GOU





NEXT GOAL WINS

THIRTY ONE: ZERO

TO NATIONAL HEROES

ONAL PRESENTS AN AGILE FILMS & ARCHER'S MARK PRODUCTION
A EDITOR JULIAN QUANTRILL EXECUTIVE PRODUCERS MYLES PAYNE

A FILM BY MIKE BRETTE & STEVE JAMISON "NEXT GOAL WINS"
DAVID STANILAND PRODUCED BY KRISTIAN BRODIE MIKE BRETTE STEVE JAMISON

BASED ON TRUE GLORY: THE BEST SPORTS DRAMAS

MONEYBALL

Netflix
Head coach Billy Beane, played by Brad Pitt in this film adaptation of the Oakland Athletics baseball team's 2002 season, uses all sorts of numerical wizardry and stat shuffling to sign on the best possible players he can with a limited budget. Don't worry – you won't need to be a baseball fan to appreciate the on-field action and superb acting by Pitt and the late Phillip Seymour Hoffman.



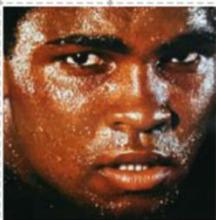
THE FIGHTER

Netflix
Taking a different tack to other classic boxing movies, *The Fighter* tells the tale of two half-brothers (Mark Wahlberg and Christian Bale). Wahlberg plays Micky Ward, whose ring-bound glory is contrasted with the pitfalls of his family life. So can he fight off his many demons and earn a final shot at the big time? Either way, you can guarantee he'll go down swinging.



EDDIE THE EAGLE £14 (iTunes, Amazon Instant Video)

The 1988 Winter Olympics was a bit of a goldmine for film-friendly underdog stories. First there was 1993's bobsleigh-tastic *Cool Runnings*, still the set text for feelgood sports films, and now there's the tale of the UK's favourite hapless ski-jumper. The 'heroic failure' angle might not be original, but it sure beats yet another superhero origin story.



When We Were Kings 1996

Why are boxers such cocksure gobshites? Because they all want to be Ali. And once you've seen this account of his 1974 'Rumble in the Jungle' with George Foreman, you'll want to be Ali too. There's no better way to remember the great man's swagger, wit and courage.

Documentary Heaven



Riding Giants 2004

If you've ever paddled nervously back to shore after 'wiping out' on a three-footer in Cornwall, you'll appreciate this history of surfing's 'big wave' pioneers. Built from home movies and re-enacted scenes, it reveals why so many are seduced by oceanic Everests.

Google Play Movies



Salute 2008

The 'black power' salute from the 1968 Olympics is one of sport's most iconic photos, but less well known is the story of the three sprinters forever bound together by it, and in particular, how the solidarity of 'guy on the left' Peter Norman came at a huge personal cost.

Amazon, LoveFilm



Senna 2010

Before Formula One turned into a procession of wealthy charisma vacuums, there was Ayrton Senna, a man seemingly born with his foot on an accelerator pedal. Like *Titanic*, everyone knows how it ends, but that doesn't stop *Senna* being hugely affecting.

Amazon Prime

HOW
TO

CUSTOMISE

YOUR SMARTPHONE

Familiarity breeds w'evs... so rekindle your love affair with your phone by pimping it until it's sexy, shiny and practically unrecognisable

JUICIER FRUIT

Colorware's online design tool even lets you mess with people's heads by turning your Apple orange.



1 GET A PAINT JOB

Custom paint jobs aren't all flaming skull decals and go-faster stripes, y'know. They can be tasteful. Sure, you could do it yourself, but we suspect Colorware's professional tech-transforming service will do a much, much better job. You can either send in your own handset or buy one outright, settling on your perfect design using the online preview tool. Unlike vinyl wraps, this service is permanent, so don't tattoo your handset bright green unless you're sure you can live with it.

colorware.com





2 SKINS

Beauty may only be skin deep, but that doesn't mean you can't wrap your beloved handset in a snazzy layer of protective vinyl. Not only do dbrand's precision-cut skins offer dent and scratch protection, but you can also mix and match different styles and textures to create your own look. They're easily removable and won't leave any sticky residue behind – perfect for new fashion trends and/or a mid-life crisis (especially if you need something to match that new crocodile leather waistcoat).

dbrand.com



3 DESIGN YOUR OWN CASE

Google's Live Cases service has yet to land on UK shores, but there are other options available. Casetify is one such option, offering a selection of different cases for various Android and Apple smartphones, along with the ability to customise the design and add your own photos. You can plug in your Instagram or Facebook account, letting you plaster your smartphone's booty with artistic cat shots or duck-face selfies, with text an optional extra.

casetify.com



4 GO RETRO

If you're an Apple Watch-wearing iPhone owner, with an iPad in your bag, an iMac at home and a Steve Jobs quote tattooed on your back, then we've got news for you – you might just be an Apple fanboy. And that's OK. Regardless of whether or not you opt to wrap your precious iPhone in a case or skin, covering the modern Apple logo on its rear with this retro-tastic decal will instantly add +7 to your geek street cred, while allowing you to strike up conversations with fellow Apple fans at Android Hate Fest 2016.

amazon.co.uk



5 THE DIY ROUTE

If you really, really want to make your smartphone your own, you can always have a crack yourself. This can involve tools, masking tape, spray paint, and a very brave soul. Android handsets will be far easier to customise than Apple's near-impenetrable aluminium slabs. Take the speaker grilles on a Nexus 5X, for example. To spraypaint them blue, simply prise off the front cover, mask the sensitive areas, spray on the paint, and reassemble. Just don't blame us if you end up with a dead phone.

imgur.com/a/PKiWW

CUSTOMISE ANDROID ON THE INSIDE



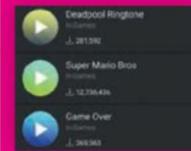
LAUNCHERS

A launcher is the quickest, easiest way to totally revamp the look and feel of your handset. Nova Launcher is our Android weapon of choice, thanks to its customisable icons and handy gesture support for slick navigation.



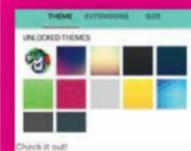
WALLPAPERS

Wallpapers are an obvious choice, but you can take them further with Muzel: an app that pulls in the best photos from sources such as Reddit and lets you customise how often it cycles through them.



RINGTONES

Does it become just a little bit annoying when the Sonic ring sound plays each time you get a text message? Yes, but with a sound customisation app like Zedge, you can move on to thousands of other sounds in no time.



KEYBOARDS

There are tons of different keyboards available for Android, offering scarily accurate predictions, novel input methods and different themes to match your typing style. We like Fleksy for its functional, minimalist style.

CUSTOMISE IOS ON THE INSIDE



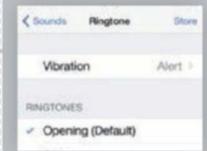
LOCKSCREEN

Despite the annoying ads, Mediadevil Magicscreen lets you create custom backgrounds and wallpapers with your own photos and effects, letting you stamp your mark on your handset in an instant.



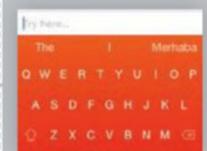
WALLPAPERS

The iPhone doesn't support custom icons without jailbreaking, but you can still give yours a makeover with some classy wallpapers. The App Store's rubbish for this, so choose your favourites from iphonewalls.net instead.



RINGTONES

iPhone ringtones need some hoop-jumping. Trim a song to the desired length, drag it to iTunes and convert it to an AAC file. Rename it with .m4r at the end, drag it back, and sync. Yes, Android fans are laughing at you.



KEYBOARDS

Apple is fairly new to the third-party keyboard party, but that doesn't mean you can't load up the likes of the excellent SwiftKey. Incredibly accurate predictions and a swipe input option for one-handed use make it a winner.

? THE BIG QUESTION

How can I boost my home Wi-Fi?

BEST FOR BIG CRIBS TP LINK AV1200 POWERLINE STARTER KIT

£70 / currys.co.uk



The sort of tech that barely sounds real, a Powerline setup passes internet through your home's power cables. Bonkers, right? It works like a dream, though, and you can pepper these things throughout your house, getting you flawless internet in every room.

It's like an internet take on Glade plug-ins: just jam one into a plug socket and attach it to your router, then plug in the other one in whichever room isn't getting enough Wi-Fi love.

The idea here is that you use a TP Link AV1200 node right by your most beloved gadgets' own power sockets. You don't even lose a socket: there's one on the

back of these little beauties. It's the next best thing to having a router that follows you around the house. (Better, actually. Who wants a router for a stalker?)

The AV1200 has a maximum bandwidth of 1200Mbps, so unless you have the fastest internet in the world, you'll see very little slow-down. There's a three-output version for £15 more, and cablephobes

can also snag a Powerline with a Wi-Fi transmitter at the business end. If you don't mind spending a bit, Powerlines rule.

GOOD FOR...

- Up and running in minutes. Almost no performance loss.

NO GOOD FOR...

- Pricier than a repeater (see below). Can cause interference with radio reception.

THE BARGAIN BOOSTER ZYLXEL WRE2206 WI-FI RANGE EXTENDER

£26 / box.co.uk



The simplest way to give your home internet that bit of extra pep is to buy a Wi-Fi repeater. This little box sucks up the signal from your router then spits it back out with extra force.

Plug it in away from your router, but not so far that the signal starts fluttering like Beyoncé's vibrato. Setup is dead easy and no wires are needed, although it has a bonus Ethernet port on the bottom, letting you give a little boost to devices whose own Wi-Fi chipsets aren't so hot.

Speeds won't always be quite as good as a Powerline. If you want something in between the two, consider a Wi-Fi booster such as the Netgear EX3800

(£55, scan.co.uk), which boosts the signal via powered aerials.

GOOD FOR...

- A dinky, inconspicuous thing. Affordable. Easy to set up if your router supports WPS.

NO GOOD FOR...

- Comes with a performance hit. You need a conveniently placed free socket.



FOR SPEED FREAKS ASUS RT-AC88U

£290 / ebuyer.com

A high-end router like the Asus RT-AC88U will boost range, speed and reliability like nothing else. But it'll cost you. That's because it has its very own 1.4GHz dual-core processor and a max data rate of 3167Mbps, way faster than a normal hard drive.

There's even a gamer's feature called WtFast that's out to reduce your ping to within a gnat's stiletto of 0ms. No, really.



THE QUICK FIXES

1 / Change the channel

Log into your router, find its address (usually on the underside of the case) and type it into your browser window, then enter its settings. Apps like **Wi-Fi Analyser** (Efree, Android) can tell you which channels are being used the most.

2 / Take the cable route

If you've got a gaming PC or set-top box that needs bulletproof internet, why not move your router nearby and use an Ethernet cable? It's always faster than Wi-Fi.

3 / Move away from the telly

Some gadgets don't like other gadgets, and routers make almost no friends. RF and electrical interference from other tech, and even some cables, can send your wireless reliability down the tubes.

4 / Stay centered

Wi-Fi signal blooms out in all directions, so try to position your router in the middle of your house. An extension cable is worth the few quid's expense.

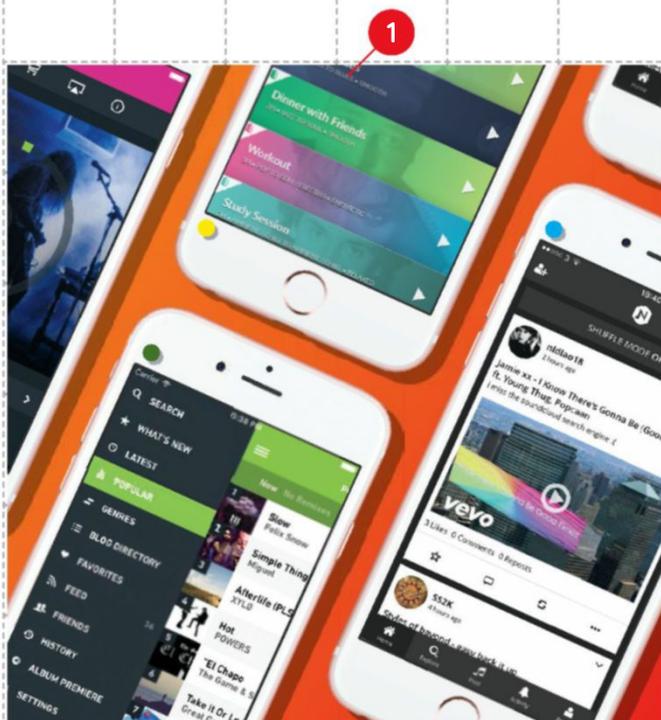


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5-MINUTE HACKS

IF NOTHING ELSE, AT LEAST...



1...SUPERCHARGE YOUR PLAYLISTS

Spotify's Discover Weekly might be your favourite muso friend, but other tools can help you unearth new musical gems:

- **Muru Music** (Efree, iOS). Like Discover Weekly, Muru makes you personalised playlists to help introduce you to new artists, only this time you choose two genres for your selection of new bangers.

- **Noted** (Efree, iOS and Android). Like a music-focused Twitter, this app lets you follow friends or dozens of blogs like Pitchfork and Consequence Of Sound to keep tabs on the best new music vids.

- **Hype Machine** (£2.99, iOS / Efree, Android). The original web-based music discovery service (which started back in 2005) now has an excellent app, which sees the most popular, user-voted tracks bubble to the top of its feed.



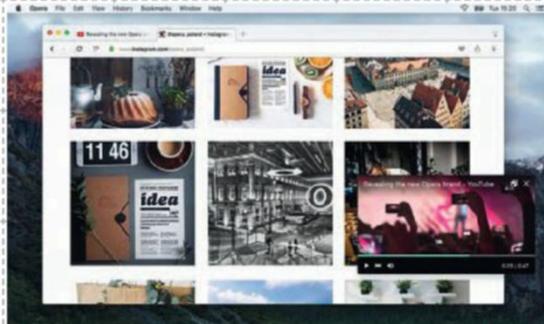
2...GIVE YOUR COMPUTER A TUNE-UP

If your PC or Mac is feeling a bit run down, give it the equivalent of a spa break with these speedy servicing tools:

- **Dust its drive.** If your computer is a bit sluggish, its corners have probably collected some unused files and settings. Clear these digital cobwebs with CCleaner (Efree, PC and Mac).

- **Boost the battery.** Is power-hungry Chrome sucking your laptop's battery dry? Try the latest version of Opera (Efree, opera.com), which claims to be capable of doubling battery life thanks to a juice-saving mode.

- **Clear out the loft.** Still can't figure out what's clogging up your hard drive? Get an overview of everything taking up space with Disk Inventory X (Efree, Mac) or WinDirStat (Efree, Windows).



3...TAKE ALEXA FOR A TEST DRIVE

Amazon's voice-controlled Echo speaker might be coy about when it's coming to the UK, but you can now give its 'Alexa' virtual assistant a spin in your browser to compare her with Siri:

- 1. **Go to Echosim.** The Amazon Echo Simulator (echosim.io) is a browser-based portal to Alexa. She responds in the same way as a real Echo only without certain functions, eg. music streaming.

- 2. **Sign in.** Log into your Amazon account (a UK one is fine), hold down the microphone button and start talking to Alexa via your computer's mic. Break the ice with "Are you Skynet?"

- 3. **Easter egg hunt.** You can't use Echosim to add products to your basket, but browser-based Alexa does have her full range of Easter eggs, including beatboxing and the likes of 'set phasers to kill'.



TUNE IN NEXT MONTH TO...

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- Turn your garden into an earthly paradise
- Go online shopping for summer T-shirts

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TOP TEN

OF EVERYTHING

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 For full reviews of every product in the Top Tens, visit stuff.tv/reviews

<p>HOT BUY</p> <p>1</p>		<p>Samsung Galaxy S7 Welcome to the age of 'sensible Samsung', a smartphone maker of dependable excellence. The Galaxy S7 is straight up brilliant, setting a high bar for all of Samsung's competitors. It looks almost identical to last year's Galaxy S6 (except the camera bump has been trimmed), but it has a better camera, and has brought back the S5's water-resistance and microSD card slot. Plus it's got an always-on display and a whopping 4GB of RAM. We're smitten.</p>	<p>STUFF SAYS An imperious update of our favourite phone from last year: this is the best smartphone you can buy from £550 ★★★★★</p>
<p>2</p>		<p>Samsung Galaxy S7 Edge Compared to the brilliant S7, the S7 Edge has a bigger 5.5in display, a higher-capacity battery and, of course, that curved touchscreen with its swipeable row of widgets. If you can afford it, then paying £70 more seems reasonable for a better-looking phone.</p>	<p>from £640 ★★★★★ BEST FOR CUTTING-EDGE GADGETEERS</p>
<p>3</p>		<p>HTC 10 This handset barely puts a foot wrong, but it's a marketer's worst nightmare. What's it good at? Everything. What's special about it? Battery life. Stamina may be the least sexy of features, but knowing the 10 will survive an impromptu pub trip feels pretty good.</p>	<p>£550 ★★★★★</p>
<p>4</p>		<p>Apple iPhone 6s "Everything's changed" is pushing it, but within the 6s's familiar body lies a surprising amount of innovation. You'll really notice the A9 processor's added speed, the 12MP camera's scope and quality, and of course, the time-saving delight that is 3D Touch.</p>	<p>from £490 ★★★★★</p>
<p>5</p>		<p>LG G5 The scale of the LG G5's ambition is breathtaking. It's a unique modular smartphone, allowing you to swap out its parts for improved ones, such as a bigger battery, camera controls or Bang & Olufsen audio tech. It's a big, ballsy move that we hope pays off.</p>	<p>£450 ★★★★★</p>
<p>6</p>		<p>Google Nexus 6P The 6P gets the Nexus series back on the rails. Camera? Design? Performance? Software? All get a serious thumbs-up. Standouts include the finger scanner and the front camera, which are among the very best available at any price.</p>	<p>from £420 ★★★★★</p>
<p>NEW</p> <p>7</p>		<p>Moto G4 Motorola once again ups the ante and shows every other big phone maker what can be done for £170. With a slimmer design, metal-effect sides and a bigger screen than the old Moto G, this is the new no.1 budget phone.</p>	<p>from £170 ★★★★★ BEST FOR BUDGET BUYERS</p>
<p>8</p>		<p>OnePlus 2 The second OnePlus phone massively undercuts the big names with performance, software and battery life that far exceed some of the £500-odd competition... and now you can buy one without having to get hold of a silly invite.</p>	<p>from £250 ★★★★★</p>
<p>NEW</p> <p>9</p>		<p>Vodafone Smart Prime 7 The Smart Prime 7 is a lesson in quite how cheap phones can get before they seem cobbled together out of bits found in bargain bins. On specs alone it easily holds its own against rivals that cost twice the price – a solid gold bargain.</p>	<p>from £75 ★★★★★ BEST FOR SUPER VALUE</p>
<p>10</p>		<p>Apple iPhone SE The cheapest iPhone ever made packs pretty much all the power of the iPhone 6s into the 4in aluminium shell of the iPhone 5s. Its compact, no-compromise concept should tempt plenty of newbies into Apple's world. The SE is the best small phone you can buy.</p>	<p>from £360 ★★★★★</p>

● Prices quoted are for handset only unless otherwise stated

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Looking for the best deal on the Samsung Galaxy S7? You can now find it – and buy it – by scanning this page...



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2. Open the app, hold your phone 10cm over the page and wait for the swirly vortex.



3. Scroll through the products and pick your options, then hit 'buy' or save it for later.

HOT BUY
1



Apple iPad Pro 9.7

The iPad Pro 9.7 takes everything we loved about Apple's original 12.9in Pro tablet, makes it a lot more portable, and even adds in a few extras of its own. The True Tone display, which changes automatically based on ambient conditions, is a marvel, while the 12MP shooter is frankly overkill for those brave enough to use it out and about. It's expensive, but perfection usually comes at a price.

STUFF SAYS

Incredible power, superb features and near-flawless design: the iPad Pro 9.7 is pure tablet perfection

from £500 ★★★★★

2



Apple iPad Mini 4

This is the mini tab we've been waiting for. It's 1.4mm thinner and 32g lighter, just the right size for a great portable entertainment hub, and subtle display tweaks will do justice to games and graphic novels alike. Plus it will easily last three days on a charge.

from £320
★★★★★

BEST FOR FUN ON THE GO

3



Samsung Galaxy Tab S2 8.0

This is the best of the small-screen Android tablets, bringing you all the fab features of its bigger brother but in a smaller, even lighter form design. The 8in model is great for reading mags, playing games and watching films, while being easier to hold in one hand.

£260
★★★★★

4



Google Pixel C

The Pixel C is our new favourite tabtop. This 10in tablet with keyboard and 2K display is excellent for working on the go, and it'll handle demanding games easily. The Android OS is a major advantage – the choice of apps is years ahead of Chrome OS.

from £400
★★★★★

5



Samsung Galaxy Tab S2 9.7

Slimmer and faster, with a brilliant screen and serious stamina, the Galaxy Tab S2 sees Samsung back in the running for the Android throne. The Xperia Z4 almost pips it with its bundled keyboard, but the S2's a versatile, big-screen tab first and foremost.

£290
★★★★★

6



Apple iPad Mini 2 with Retina display

Yes, it's not as good as the new Mini 4... but believe it or not, Apple's iPad Mini 2 is the best cheap-ish tablet on the market. At this price, it's frankly bargain-tastic. That's why the 'old' model stays in our Top 10 – it's still a mini tablet of real quality.

from £195
★★★★★

BEST FOR SMALL BUDGETS

7



Samsung Galaxy TabPro S

If you want to get some serious work done without feeling like you're doing it on a toy, the TabPro S is a better option than even the iPad Pro 9.7. It's basically a full-on PC slimmed right down to skinny tablet dimensions.

£840
★★★★☆

8



Apple iPad Pro 12.9

Apple's tablet colossus, the supercharged iPad Pro, is for serious creatives with deep pockets: the perfect digital coffee-table book that just about doubles as a laptop. To make best use of all that screen, remember to also buy a Smart Keyboard and Pencil.

from £680
★★★★☆

BEST FOR ARTISTIC TYPES

9



Asus ZenPad S 8.0

A top affordable tablet with a dazzling display – getting 2048x1536 pixels at this price is a big win. It's also dead slim and light, at 7.9mm and 316g; and with 8.5hrs of video between charges, the Zen Pad feels like a tablet you can take everywhere.

£150
★★★★☆

NEW

10



Huawei MediaPad M2 10.0

This is a solid stylus-ready tablet, though it might have a tricky time given how nicely priced some alternatives are these days (iPads start even cheaper than this). It's not a standard-setter, but it does have great battery life, solid design and a funky stylus.

from £250
★★★★☆

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HOT BUY

1



Sonos multiroom system

Who needs to drill holes and replaster 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 £170 ★★★★★

2



Naim Mu-so

How much for a wireless speaker?! Well yes, but what a wireless speaker it is. Naim has ploughed all of its high-end hi-fi experience into delivering a beautifully made, great-sounding device with AirPlay, Spotify Connect and aptX Bluetooth all on board.

£895

★★★★★

BEST FOR ONE-BOX WI-FI HI-FI

3



KEF Muo

The KEF Muo sounds as good as it looks, which is very nice indeed. It may be the size of a beer can, but it creates a room-filling sound, brilliantly balanced and packed with vim and vigour. The Muo has the audio solidity of the B&W T7, but with even greater detail.

£300

★★★★★

BEST FOR PORTABILITY

4



Naim Mu-so Qb

This can-do cube complements its big brother's more refined character with a confident presentation that pays no attention to its physical size. And its features list makes it more flexible than Madonna's yoga teacher. A stunning addition to the Mu-so family.

£595

★★★★★

5



Google Chromecast Audio

The original Chromecast was a very bright idea: a device to stream TV directly from the internet. Chromecast Audio has arrived to do the same to your hi-fi. It's smart and highly affordable, and makes a huge variety of apps such as Spotify and Deezer more fun to use.

£30

★★★★★

6



Bowers & Wilkins Zeppelin Wireless

'Wireless speakers' and 'quality' don't always go hand in hand. But this is a desirable product through and through – and in terms of sound and design, not a penny is left unaccounted for. It's the ultimate wireless speaker for the streaming-savvy audiophile.

£500

★★★★★

7



Bowers & Wilkins T7

The T7 is B&W's first attempt at a portable Bluetooth speaker, and its good looks and real hi-fi sound combine to make it a real winner. It's solid and easy to use, and has an attractive honeycomb structure that helps reduce cabinet vibrations.

£300

★★★★★

8



Monitor Audio Airstream S200

It may look a bit like a floppy skyscraper, but the Monitor Audio's Bluetooth-plus-AirPlay speaker makes a lot of sense, mostly because it takes up very little shelf/desk/table space but makes loads of lovely noise. It's a bit of a steal at this price.

£200

★★★★★

BEST FOR PICNIC PARTIES

9



Cambridge Audio Go

There are loads of very cheap Bluetooth speakers out there, but we reckon it's worth spending that little bit more to get something that's really good – and that's the Go. It sounds awesome, it's really nicely built and its battery lasts a massive 18 hours.

£100

★★★★★

10



Bluesound multiroom system

Fancy a bit of Sonos-style multiroom but with better-than-CD-quality sound thrown in? You want Bluesound. There are all-in-one speakers, adapters for your existing hi-fi, and a Vault that rips and stores all your CDs. All can handle high-resolution audio.

from £270

★★★★★

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



Download the **Shop Stuff** app

Looking for the best deal on some Sonos speakers? You can now find it – and buy them – by scanning this page...



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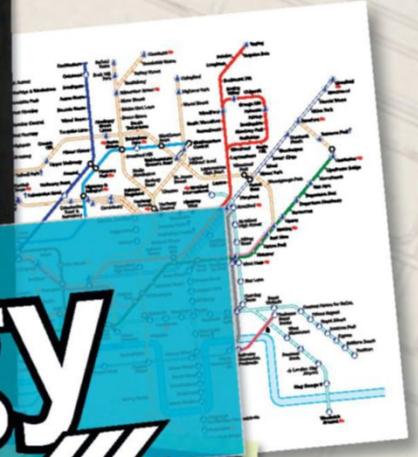
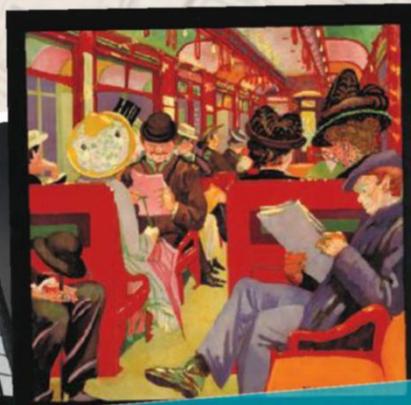




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NEW ROUTEMASTER BUS



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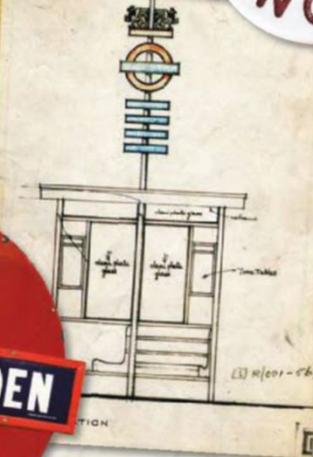
Shaping London

Exhibition opens 20 May 2016

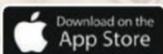
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HOT BUY 1		AKG K451 They've actually been around for a long time now, but what put the K451 on-ears back on to our radar was an official price drop from £130 to £80, and a real-world price of just £50 or less. For that money they're unbeatable – awesomely 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 phone upgrade £45 ★★★★★	
2		AKG Y50BT Proof that good wireless sound doesn't have to cost the earth: with none of the horrid hiss, whine, crack and pop that's often a glitch of Bluetooth headphones, these serve up truckloads of detail, with a full charge promising 20 hours of juice.	£125 ★★★★★	BEST FOR GREAT SOUND WITH NO WIRES
3		Bowers & Wilkins P5 Wireless The brand's first foray into wireless brings luxury for your ears inside and out: these are the Aston Martin DB10s of wire-free cans. If you like your sound authoritative, dynamic and subtle (and who doesn't?), you'll feel right at home with these P5s.	£330 ★★★★★	
4		SoundMagic E10S This is actually the third version of SoundMagic's awesome, affordable in-ears – not that you'd tell by looking. They sound even better, though: a little smoother and more refined, with tight, weighty bass. Plus there's now a mic and button for smartphone use.	£30 ★★★★★	
NEW 5		Bose QC35 The QuietComfort range has long offered a sterling mix of comfort and noise-cancelling, but with the new 35s you can add freedom-enhancing Bluetooth. These QCs are high on clarity and spaciousness, making them perfect for your next long-haul journey.	£290 ★★★★★	BEST FOR SHUTTING OUT THE WORLD
6		Soul Electronics Flex These simple in-ears are brilliant for workouts, as they stay put thanks to the comfortable and unobtrusive ear-hooks. Sound quality is excellent, with crisp treble notes, clean vocals and even a decent amount of bass for the money.	£45 ★★★★★	
7		Sennheiser Momentum 2.0 The original Sennheiser Momentums were an almost perfect pair of on-ears, and we're pleasantly surprised that the sequel is even more thrilling. They're pricey, but dapper looks soften the blow, as does the lively, hugely transparent sound.	£200 ★★★★★	
8		JBL Everest 100 The size of a pear drop, JBL's wireless buds are all about fuss-free fit. Their eight-hour battery life will help get you through the daily grind and their sound is one you could easily listen to for that long... if you don't mind your music on the meaty side.	£80 ★★★★☆	
9		Fidue A65 Chinese brand Fidue has a style-conscious audience in mind for these all-metal, well-balanced earbuds. For a fun yet detailed pair of headphones with a full-bodied sound and snappy dress sense, the A65s are well worth considering.	£50 ★★★★☆	
10		Jabra Sport Pulse A tech-packed but easy to use pair of wireless buds with good enough sound. The big draw here is connection to the Jabra Sport app, delivering heart-rate monitoring and pretty much any other stat you might want. There's also an inline remote and mic.	£100 ★★★★☆	

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Looking for the best deal on a pair of AKG K451s? You can now find it – and buy them – by scanning this page...



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Sevenoaks Smart Home
Great value home automation and home entertainment, including Ultra HD TV, hidden speakers, multi-room audio and home cinema. Plus we will come to your home for a **FREE** no obligation consultation.

www.ssav.com/smarthome

SONY

NEW

KD-55XD9305 • 55" 4K UHD ANDROID TV Ask in-store for the latest promotion

The Sony Bravia XD93 is a 4K HDR TV with spectacular image quality and a beautiful design. It also comes with the Android TV platform, that includes all your favourite apps and online features. Experience incredible contrast, real-life colours and exceptional 4K detail with the new 4K High Dynamic Range technology. Whether you're watching a movie or a regular broadcast, 4K HDR brings you close to reality, thanks to Sony's unique technology.

FREE 5 YEAR WARRANTY

4K HDR

Also Available
65



NEW £595 OR LESS



NAIM • MU-SO QB WIRELESS MUSIC SYSTEM

New compact wireless music system. Its advanced yet simple to use connectivity includes Spotify Connect, TIDAL, UPnP, Internet Radio, USB, analogue and digital inputs. Supports WAV, FLAC and AIFF files up to 24bit/192kHz. **Optional orange, red or blue grille £49.95**



£599 OR LESS

SONOS • PLAYBAR SOUNDBAR & WIRELESS SPEAKER

This plug-and-play unit incorporates 9 integrated amplified speakers. Simply connect it to your TV with the supplied optical cable to deliver an epic home cinema sound in your own living room. PLAYBAR can also expand your existing Sonos system.

WHAT IS FIT? **7.1**

ULTRA HD
Blu-ray

NEW £599 OR LESS



PANASONIC • DMP-UB900 4K UHD BLU-RAY PLAYER

Premium player that features playback of Ultra HD 4K Blu-ray discs, HDR playback and 4K content from Netflix and other streaming providers.

BLUESOUND
HiFi for a wireless generation

Hi-Res
AUDIO

WHAT IS FIT? **7.1**
5 YEAR WARRANTY

BLUESOUND HI-RES WIRELESS MUSIC SYSTEM

Take hi-fi to new heights with Bluesound's next generation. Features improved wi-fi performance, more digital and analog connectivity options and Bluetooth aptX along with support for premium music services like Tidal and Spotify.

Prices from £269



HOT BUY



Amazon Fire TV 4K

Amazon's new Fire TV is faster and more powerful than last year's model, but more importantly, it supports ultra-detailed 4K video: TV and movies in four times the resolution of Full HD. Of course, you'll need a 4K set to enjoy all those extra pixels, but if you're thinking of making the upgrade soon, this streamer is a tele-futurist's delight. With the added attractions of neat voice controls and great gaming functionality, it's the most complete streaming box you can buy.

STUFF SAYS

Netflix, iPlayer, Amazon video and Android games in one 4K-capable box

£80

★★★★★

2		Sky Q A Sky subscription is already an expensive option, but Sky Q works flawlessly and could change the way you watch TV – especially when 4K arrives. Undoubtedly the best TV experience you can get, but only early adopters need to dive in right now.	from £100 +£42/month ★★★★★	BEST FOR TELLY ADDICTS
3		Q Acoustics Media 4 Sure, it doesn't look like much. And yet, this soundbar has won awards two years in a row from our friends at <i>What Hi-Fi?</i> The Media 4 combines subtle detail with precise surround effects to be the best-sounding and best-value soundbar you can buy.	£280 ★★★★★	BEST FOR TRUE-TO-LIFE SOUND
4		Roku 2 Roku's new mid-range offering is the most compelling yet. It's essentially identical to the Roku 3, just without the smart remote. With a customisable feed, Netflix, Now TV, Google Play, YouTube and all the UK catch-up services, it's unbiased, slick and simple.	£70 ★★★★★	
5		Canton DM55 This soundbase is a bit like dark chocolate: it may look plain and unassuming, but it's packed with a rich and full-bodied character. If you want that extra oomph to your films without breaking the bank or sacrificing too much space, the DM55 is worth a look.	£330 ★★★★★	
6		Google Chromecast The new Chromecast lets you search multiple streaming services from one app, offers better Wi-Fi and lets you use your phone to control Android games. For the seriously impatient, its smart preloading also plays Netflix episodes almost instantaneously.	£25 ★★★★★	BEST FOR BUDGET STREAMING
7		Dali Kubik One Dali knows a thing or two about making great-looking, great-sounding loudspeakers, and the Kubik One is a riveting listen. It can handle high-res files and offers a gorgeous high-end sound. If you've got the cash, this is a talented system worth investing in.	£800 ★★★★★	
8		Geneva Model Cinema The impeccably built Model Cinema looks rather lovely (for a soundbase), and being a fairly slim box, it has no business sounding this huge and cinematic. It does so with authority and insight – it's like you're sitting in your own personal theatre.	£500 ★★★★★	
9		Philips Fidelio B5 This Philips isn't just a soundbar. It's a shape-shifting 4.1 system with detachable ends that can double up as surround or multiroom speakers. Clever, eh? Detail levels are sky high, while the rumbling bass charges along with accuracy and power.	£550 ★★★★★	
10		Apple TV (2015) Cupertino still hasn't given us a real telly, but this powerful streaming device brims with potential. Its Siri Remote could be a game-changer and it works well as a platform for third-party apps and games; but for now it's more pricey and less open than its rivals.	from £130 ★★★★☆	

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HOT BUY 1	 LG OLED55C6V This is a truly stunning television. LG's OLED panel can go blacker than most TVs and will dazzle your senses with its brightness; it offers sharply etched detail, excellent viewing angles and solid HD upscaling. It also boasts support for both HDR standards: HDR10 and Dolby Vision. This means you'll be able to watch compatible content from Amazon, Netflix and UHD Blu-rays regardless of which format wins out in the future.	STUFF SAYS Packed full of tech with jaw-dropping performance, this is the TV your overdraft was made for £3000 ★★★★★
2	 Samsung UE55KS7000 This set sprinkles a little extra stardust on top of its 4K and HDR brilliance in the form of 'Quantum Dot' technology, which claims to offer over a billion colours to point your peepers at. The result is an impressively refined performance.	£1500 ★★★★★
3	 Samsung UE48J6300 A 48in screen seems to be the ideal size for most living rooms, and a prominent curve makes this Samsung eye-catching in every respect. The performance is stunning and the colours have the right balance of vividness and subtlety. This is a smart TV bargain.	£450 ★★★★★ BEST FOR VIEWING VALUE
4	 Sony 55XD9305 Sony's stunning newcomer ticks all the boxes for a thoroughly modern TV: beautiful looks, 4K, HDR and much, much more. Above all, this is as stonking a picture as you're going to get this side of three grand, and in a svelte frame as well.	£2000 ★★★★★ BEST FOR THE WOW FACTOR
5	 LG 55EG960V We knew that OLED and 4K together in one TV would be rather special. This 55in LG combines the unbelievable contrast of OLED with the super-sharp images of 4K to create a picture that's almost as real and enticing as looking out of the window.	£2000 ★★★★★
6	 Panasonic TX-50CS520 This no-nonsense TV is proof the Japanese giant still has its mojo. Panasonic has focused on performance here, and it shows. This is a stunning picture that will have you questioning the price tag. Everything is sharp and cleanly drawn – great value.	£450 ★★★★★
7	 John Lewis 55JL9100 Don't be confused – LG made a TV and John Lewis has slapped its logo all over it. This is an option for those who want a big 4K screen without paying big 4K prices. You will compromise on detailed video performance, but you'll still get LG's intuitive software.	£650 ★★★★☆
8	 Panasonic TX-65DX750 If you want a big 4K telly that won't decimate your savings, this 65in Panasonic is a tempting option. It does fall short of the supercharged levels of peak brightness and colour bit depth that you'll find higher up this list, though.	£2000 ★★★★☆
9	 Samsung UE40JU6400 This bargain 4K telly looks unassuming, and it doesn't do 3D or HDR, but the picture is very sharp indeed – all those pixels look lovely crammed onto a 40in screen. It's also good at upscaling, so your 1080p Blu-rays will look as crisp as a frozen Kettle Chip.	£400 ★★★★☆
10	 Philips 65PUS8901 A seriously expensive 4K beast with HDR compatibility, this Philips has the Ambilux twist – creating a more immersive experience with nine projectors that extend the screen image onto the wall behind. Distracting? You'll quickly fall head over heels for it.	£4000 ★★★★☆

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HOT BUY

1



Apple MacBook Pro 13in (2015)

Apple didn't change too many parts of the MacBook Pro for 2015. There's a fancy new trackpad and the latest generation of Intel CPUs, which deliver better stamina as well as a chunk more power. This is an incremental upgrade, but given how good the Pro already was, that's more than enough to keep it right at the top of the laptop honours list well into 2016. If you need power as well as stamina and portability, this is one of the best laptops money can buy.

STUFF SAYS

It hasn't radically changed, but the Pro's performance and trackpad are top of its class. If it ain't broke...

from £1000 ★★★★★

2



Dell XPS 13 (2015)

The original XPS 13 was already a great light weight laptop, but now Dell has given it a Windows 10 refresh. If the last one was the thinking person's ultrabook, this is that and a whole lot more. With improved battery life and performance, it's hard to beat.

from £935 ★★★★★

BEST FOR PRACTICAL PORTABILITY

3



Schenker XMG U726

The U726 has the guts to run the most demanding games at full HD or 4K resolution with all settings maxed out, and the screen and speakers to make them look and sound blinding. If you want a proper games machine to stash away easily, this is perfect.

from £1750 ★★★★★

4



Asus ZenBook UX305

Asus knows what it's doing. It knows that the Apple MacBook Air laptops are treading water and the ZenBook UX305 is pretty much everything the 2015 Air should have been, with its fetching aluminium design and as good a display as any £1000 laptop.

from £550 ★★★★★

5



Toshiba Chromebook 2

Toshiba has created the most desirable Chromebook to date with some well-judged upgrades. Smaller, lighter and great value, the screen's resolution now has pin-sharp HD and the Skullcandy speakers are distortion-free. It lasted eight hours on test.

£200 ★★★★★

BEST FOR VALUE FOR MONEY

6



Apple MacBook (2016)

Prettiness in pink aside, this is much like last year's 12in MacBook. The 2016 version is skinny and fab to work on, with a lovely screen... but unless you'd lap up the extra hour's battery life, there's no real need to upgrade from last year's model.

from £1050 ★★★★★

7



Aorus X3 Plus v5

A great gaming laptop, minus the usual bulk. It can't quite match the Schenker XMG U726, but then it's more affordable and a lot easier to live with. It has a fantastic high-res screen, and all the power you'll need for future blockbusting games.

from £1750 ★★★★★

8



Asus X555L

Fancy high performance for a low, low price? Of course you do! This bargain beast manages to cram in a speedy Core i5 processor and up to 8GB of RAM. With a crisp keyboard and responsive trackpad, it's a challenge not to be impressed with this Asus.

from £410 ★★★★★☆

9



Apple MacBook Air 13in (2016)

Apple is scraping by with pretty much the same Air design as before. You get a new processor, new connectors and slightly improved battery life, but still no Retina screen. However, if a portable road warrior is what you're after, this is a great choice.

from £850 ★★★★★☆

10



Microsoft Surface Book

Microsoft's finally made a laptop, and shorn of its initial bugs, the Surface Book is a lustrous Windows machine with premium appeal. With an innovative hinged design, plenty of oomph and a tablet option, this sleek hybrid gets a lot right.

from £1300 ★★★★★☆

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GEEK ACCESSORIES

HOT BUY	1	 Raspberry Pi 3 B It just keeps getting tastier by the year – 50% faster, 100% more Wi-Fi, same price. No other circuit board computer touches what the Pi offers as a package: the amazing value hardware, the mountains of online support and the sheer wealth of projects you can try.	£30 ★★★★★	BEST FOR DIY PROJECTS
	2	 DJI Phantom 4 The Phantom 4 is not so much an upgrade as an evolutionary leap. The world of drones can be an intimidating one, but what DJI has done here is to create a quadcopter that anyone really can fly – and do it safely. Expect to see a lot more of these in the sky soon.	£1230 ★★★★★	BEST FOR RULING THE SKIES
	3	 Amazon Kindle Oasis If you're looking to get an e-reader to take on holiday, the Kindle Paperwhite will do just fine – it has a great screen and backlighting, and costs less than half the price of this one. But buying an Oasis is the decadent option, and it never hurts to show your class.	£270 ★★★★★	
	4	 DJI Osmo You can't fly a drone through a narrow hallway, but you can walk down one wielding an Osmo – and the footage will be silky smooth. This stabilised camera is in a category of its own, and to get similar functionality from a DSLR you'd end up spending far more.	£490 ★★★★★	
	5	 3Doodler 2.0 Tipping the usual notion of 3D printing on its head, the 3Doodler makes truly freeform 'prints' at a wallet-friendly price. It turns 3D printing from an inaccessible buzzword into a genius part-toy, part-tool pin-up that's a joy to use.	£100 ★★★★★	

GAMES CONSOLES

HOT BUY	1	 Sony PlayStation 4 The best and most popular games machine on the planet. The PS4 has whisper-quiet operation, a sleek form and bags of power, with full 1080p on all titles and not a whiff of lag. And if 500GB of storage is too little for you, a 1TB model is now available.	from £270 ★★★★★	
	2	 Microsoft Xbox One This is very different to the Xbox One of 2013. Most significantly, the unpopular Kinect feature is now out of the deal, allowing Microsoft to drop the price and releasing enough extra power for developers to make their games look and play better.	from £240 ★★★★★	
	3	 HTC Vive HTC Vive is our VR headset of choice because of one key feature: frickin' laser beams. This allows you to roam free instead of being confined to a chair. Combined with two motion controllers, it's a completely new way to experience games.	£690 ★★★★☆	BEST FOR FUTURE GAZING
	4	 Oculus Rift The wait is finally over, virtual reality has arrived, and Oculus got there first. The Rift is seriously impressive, a window into untold flights of escapism – you're going to want one. It really needs the Touch controllers, though.	£500 ★★★★☆	
	5	 Nintendo Wii U While it hasn't had the same impact as the original Wii, don't underestimate the U's fun factor. Nintendo's bottomless bag of superb game franchises rolls on with the excitement of <i>Mario Kart 8</i> , with its anti-gravity karts and submarine racing.	£240 ★★★★☆	

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WEARABLES

HOT BUY	1	 Apple Watch Apple's Watch is by no means the first smartwatch, but it is the most desirable. It's more luxurious (and yes, more expensive) than its rivals, its software is better thought out, and there are loads of interesting new apps.	from £260 ★★★★★	BEST FOR TECH YOU WANT TO WEAR
	2	 Jawbone UP3 With its latest band, Jawbone has delivered meaningful fitness data in a stylish package. The splashproof UP3 is unobtrusive, lasts over five days and does well not to overwhelm you with stats; instead it provides useful information at relevant times.	from £70 ★★★★★	
	3	 Pebble Time Steel It's very similar to the Pebble Time, but the extra Gorilla Glass 3 on the front makes it a bit less damage-prone and the bonus battery life means it'll last for a solid week of proper use. These tweaks ensure that the Time Steel is the best Pebble you can buy.	from £170 ★★★★☆	BEST FOR BATTERY LIFE
	4	 Fitbit Blaze A sports-first fitness watch with a subtle dash of smarts, the Blaze is a joy to use – with a brilliant battery to boot. Sure, off-device GPS isn't ideal, but accurate heart-rate tracking, multi-sports modes and a lovely interface make it a great workout buddy.	from £150 ★★★★☆	
	5	 LG G Watch Urbane While the original G Watch R didn't exactly set our hearts aflutter, the handsome Urbane is currently the best Android Wear smart watch we've tried. It boasts a slick, superior screen that'll last you nearly two whole days on a single charge.	£175 ★★★★☆	

SMARTHOME

HOT BUY	1	 Nest Learning Thermostat (3rd gen) The latest Nest adds the ability to control your hot water (if you have a separate tank), as well as a slightly nicer dial with a bigger screen that, helpfully, shows you a clock when you walk past. It's not the most dramatic update, but it didn't need to be.	£250 (with installation) ★★★★★	
	2	 Netatmo Welcome Netatmo's smartcam now has added face recognition capability, which works reliably well once it knows a face, and all the usual motion and noise detection is controllable. We also like the way individual profiles can be adjusted. Slick and hugely informative.	£160 ★★★★★	BEST FOR HOME SECURITY
	3	 Hive Active Heating 2 Simple enough for anyone to use and powerful enough to be useful, Hive is now far smarter, with features such as geolocation and holiday mode to help you save cash. For a family-friendly introduction to the connected home, this will take some beating.	from £250 ★★★★★	
NEW	4	 Honeywell Evohome Set schedules to control the precise temperature of each individual room of your family home, using either the tablet-like central controller or the free Total Connect Comfort app. It's a big old investment, but you'll soon pity anyone living without it.	from £205 + £55/radiator + installation ★★★★★	
	5	 Samsung SmartThings While this is some of the best, simplest smarthome kit we've used, the starter pack isn't quite as well thought out as we were hoping. It's really just a demonstrator kit for people who want to try this sort of tech without doing any rewiring.	from £200 ★★★★☆	

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SLRs

<div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold; color: white; background-color: red; padding: 2px;">HOT BUY</div>	1	 <p>Fujifilm X-T10 For rich landscapes, detailed macro shots, stunningly sharp portraits and everyday photos, the X-T10 beats most other choices at any price. It also handles beautifully and can be paired with some of the most consistently superb lenses you'll ever find.</p>	<p>£450 (body only)</p> <p>★★★★★</p>	BEST FOR ALL-ROUND VALUE
	2	 <p>Sony A7R II Yes, it's expensive, but the A7R II combines impeccable build quality with a class-leading full-frame sensor, 5-axis image stabilisation, huge ISO range, super-fast autofocus, an excellent viewfinder and 4K video recording. Simply the finest Sony camera ever made.</p>	<p>£2600 (body only)</p> <p>★★★★★</p>	
	3	 <p>Canon EOS 5DS A fantastic piece of kit that any pixel-peeping SLR fan will get heaps of enjoyment out of. The astounding 50MP sensor puts an incredible amount of pictorial detail at your fingertips, and the 5DS is very much pitched as Canon's ultimate stills camera.</p>	<p>£2700 (body only)</p> <p>★★★★★</p>	
	4	 <p>Olympus OM-D E-M5 Mark II The second coming of the E-M5 smashes it on both design and performance fronts. Images are gorgeous, and using the camera is a customiser's dream. It's small and portable enough for travelling, but also chunky enough to feel satisfying in the hand.</p>	<p>£675 (body only)</p> <p>★★★★★</p>	
	5	<div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold; color: white; background-color: blue; padding: 2px;">NEW</div>  <p>Nikon D5 The D5 replaces 2012's D4 as Nikon's flagship DSLR for photographic professionals. While it looks pretty similar to its predecessor, its insides are packed with innovation – including 4K video recording, albeit for only three minutes at a time.</p>	<p>£5200 (body only)</p> <p>★★★★★</p>	

COMPACT CAMERAS

<div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold; color: white; background-color: red; padding: 2px;">HOT BUY</div>	1	 <p>Sony DSC-RX100 IV Yes, it's pricey for a compact, but the high frame rate, fast burst mode and 4K video recording aren't to be sniffed at. The RX100 IV is a premium point-and-shoot that offers all the versatility, flexibility and all-round performance you could ever need.</p>	<p>£760</p> <p>★★★★★</p>	BEST FOR POCKETABLE POWER
	2	 <p>Panasonic Lumix LX100 This is one of the most capable premium compacts on the market – and the LX100's 4K capabilities give it a crucial edge over its rivals. HD video capture and superb stills performance make the Panasonic a star performer when it comes to the basics too.</p>	<p>£450</p> <p>★★★★★</p>	
	3	 <p>Nikon Coolpix S7000 If small and light is the way you need to go, you can jam the affordable S7000 in your jeans and you won't even notice it's there. Yet it still packs a 20x optical zoom and back-illuminated 16MP sensor, as well as 4-axis stabilisation and Wi-Fi.</p>	<p>£130</p> <p>★★★★★</p>	
<div style="writing-mode: vertical-rl; transform: rotate(180deg); font-weight: bold; color: white; background-color: blue; padding: 2px;">NEW</div>	4	 <p>Sony RX10 III The RX10 II was a fantastic camera, and the III edition does nothing but improve on it. It's one of the best all-rounders we've seen, and if you're looking for a high-performance camera without the hassle of interchangeable lenses, this should be the one.</p>	<p>£1250</p> <p>★★★★★</p>	
	5	 <p>Panasonic Lumix FZ1000 The FZ1000 is incredibly versatile – a fixed-lens camera capable of shooting fantastic stills and video in almost any situation. Yes, it's almost the same as the Leica V-Lux, but at about £300 cheaper it deserves an extra star. A brilliant bridge camera.</p>	<p>£550</p> <p>★★★★★</p>	

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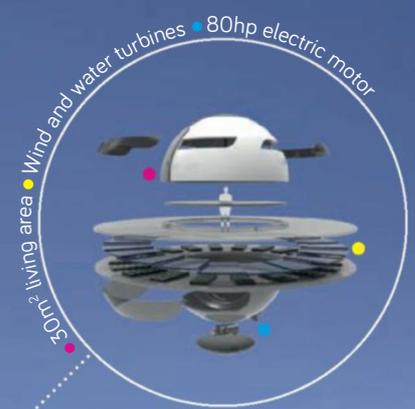
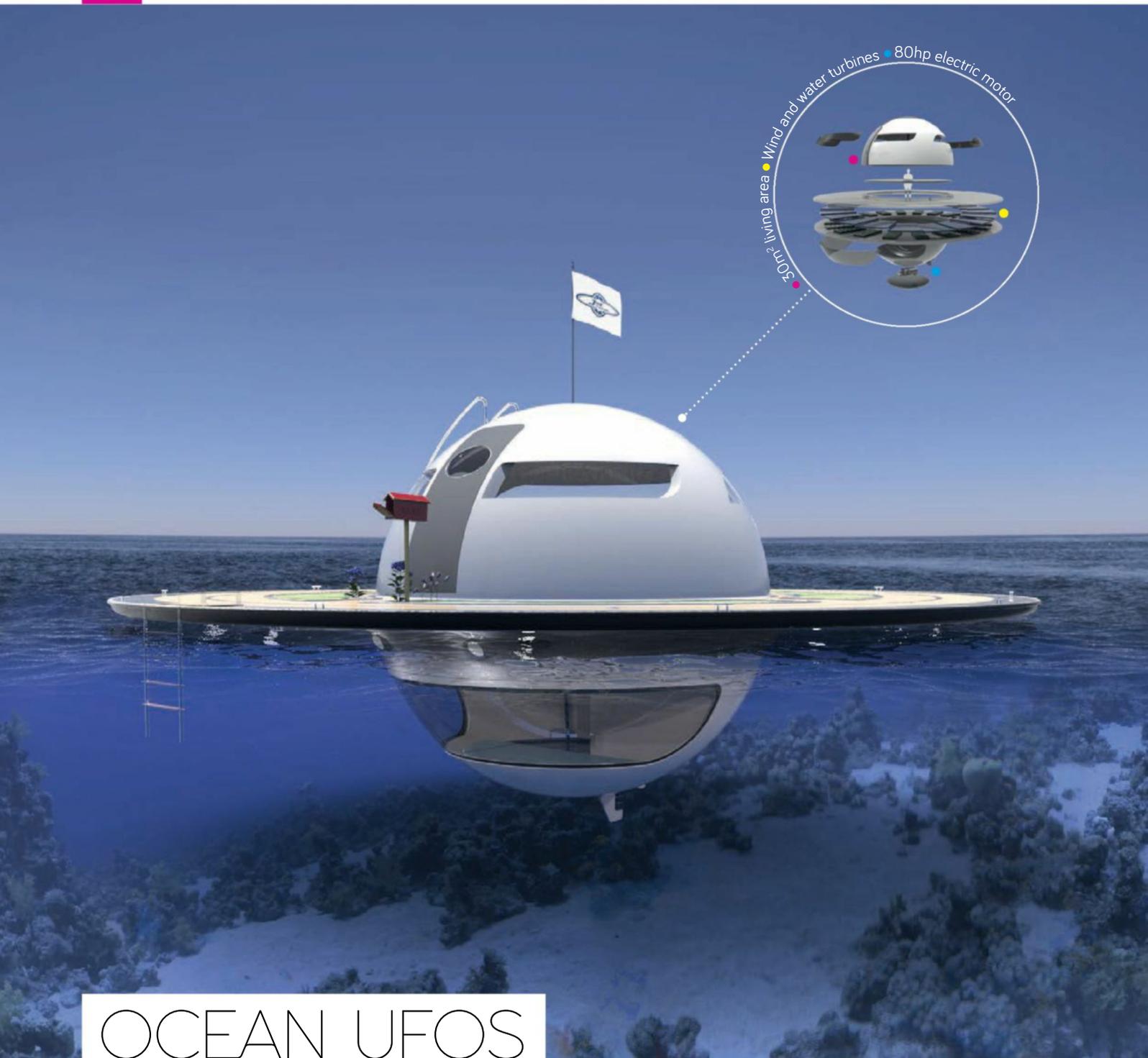
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OCEAN UFOS

X anthglarb's crashed his spaceship again. Typical... There's no denying that this thing looks exactly like a flying saucer stranded at sea. The very shape of it screams UFO, which is why creator Jet Capsule decided to call it the Unidentified Floating Object. We can, however, assure you that this Saturn-like structure is strictly limited to the safe(ish) salty waters of planet Earth, and any resemblance to a giant R2-D2 going for swim while wearing an outsize collar is just a byproduct of your overstimulated imagination.

So... what is it? It's a house, silly. Well, think of it as a kind of futuristic houseboat, designed with freedom and autonomy in mind. Featuring a two-storey interior complete with windowed underwater level for viewing all the wonders of the deep in safety, each UFO capsule is completely self-sustainable thanks to built-in solar panels, as well as generators powered by wind and water. It's got an engine too, so you can leave your ASBO neighbours behind if things get a little too rowdy. This also makes it ideal for zombie apocalypses and robot uprisings.

But why? It's an overcrowded world, and the UFO is one possible solution for escaping the crowds. Apart from that, though, there's something to be said for waking up to a glorious display of tropical fish gliding past your bedroom, before eating pancakes surrounded by the glittering emerald beauty of the ocean. Granted, you might not fancy this in a storm, but the 'elastic anchor' system is claimed to keep the craft stable and, most importantly, afloat. Anyway, it's only a prototype and yet to hit Kickstarter at time of writing, so you've time to find your sea legs.

[Words Esat Dedozade]

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