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Volume 9

android

Tips, Tricks, Apps & Hacks

The independent guide to mastering your Android device

Discover
Android
Marshmallow

Improve
performance

For the
latest
Android
devices

Download
essential apps



Welcome to

android

Tips, Tricks, Apps & Hacks

As one of the biggest names in the smartphone industry, Android powers millions of smartphones and tablets all over the world. Thanks to innovations from top manufacturers like Samsung, HTC and Sony, each year's new models are more powerful and more sophisticated. Android can enhance your life in countless ways, not just via the core apps but also the selection of 1 million apps available on Google Play. This new volume of Android Tips, Tricks, Apps & Hacks focuses on the best apps, brings virtual reality to your device and introduces the latest iteration of the Android OS: Android Marshmallow. The Tips section shows you how to utilise the core Android apps more effectively, eking out the most functionality from your device. The Tricks section explores the best third party apps in depth, explaining how you can use Android for blogging, keeping fit, and managing and securing your files. Then progress to the next level with our Hacks tutorials, including 101 hacks to upgrade your device. Finally, in the Apps section, we pick out the best apps on Google Play. Enjoy the book.



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Tips, Tricks, Apps & Hacks

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Your complete guide

Everything you need to know about the latest Android operating system from Android Pay to Google Now On Tap



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"There's over
1 million apps
Google Play"



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Your complete guide to Android 6.0 Marshmallow

Everything you need to know to master latest Android operating system

All year we have been speculating about what the final version of Android 6.0 might bring as Android attempts to repair the damage of the fragmented and bug-riddled Lollipop.

As we saw in the initial developer preview, Android Marshmallow will be a much more incremental upgrade than Android 5.0, ironing out bugs and improving the user experience along the way. The first preview brought back the Do Not Disturb mode, introduced personalised app

permissions, added the ability to delete apps from the homescreen and made checking memory usage much easier.

The latest developer preview has rolled out a few extra features, such as a new boot animation, stock fingerprint support and a landscape mode for your homescreen. These features can only be obtained by using a rooted handset at the moment, but the official consumer release is just around the corner for Nexus mobiles. We're strongly hoping that Google has learnt from the fiasco of the Lollipop

release and will work more effectively with carriers to push Marshmallow out to as many people as possible and as quickly as possible.

In the meantime, take a look around the final developer preview for Android Marshmallow and its many user-friendly updates that should smooth out a lot of issues. Some features, such as the fingerprint scanner, will obviously be affected by the kind of phone you have, but the majority of users should be able to enjoy all these features within the next few months.



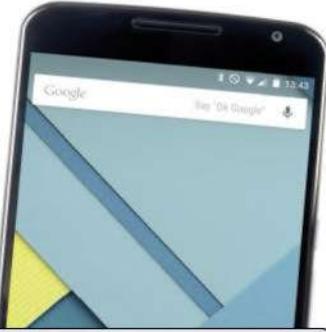
When will I get it?

Estimates for when each phone will receive the Android 6.0 Marshmallow update



Samsung

Samsung Galaxy S6, S6 Edge, S6 Edge +, Note 4 and Note 5
November 2015



Nexus

Nexus 5, Nexus 6, Nexus 9 and Nexus Player
November 2015



HTC

HTC One M8, M9 and M9+
December 2015/January 2016



Sony

Sony Xperia Z3, Z3 Compact and Z3+
December 2015/January 2016



LG

LG G3, G4 and G4 Pro
November 2015



Motorola

Moto X Play, Moto X Style and Moto G 2015
November 2015

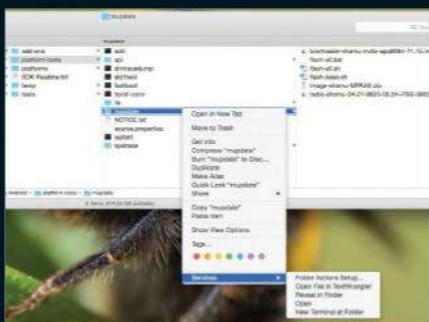
How to get Android Marshmallow

A quick guide to flashing the latest ROM



1 Download and boot

Download ADB tools and unpack it. Then restart your handset in bootloader mode by turning the device off and holding both the power and volume down buttons.



2 Connect it up

Plug your Nexus device into your computer, open a browser window and locate the downloaded and unpacked files. Then double click on the flash-all.bat file.

Send feedback about this device	
Model number	
Nexus 6	
Android version	
6.0	
Baseband version	
MDM9625_104662.22.05.24R	

3 Restart your device

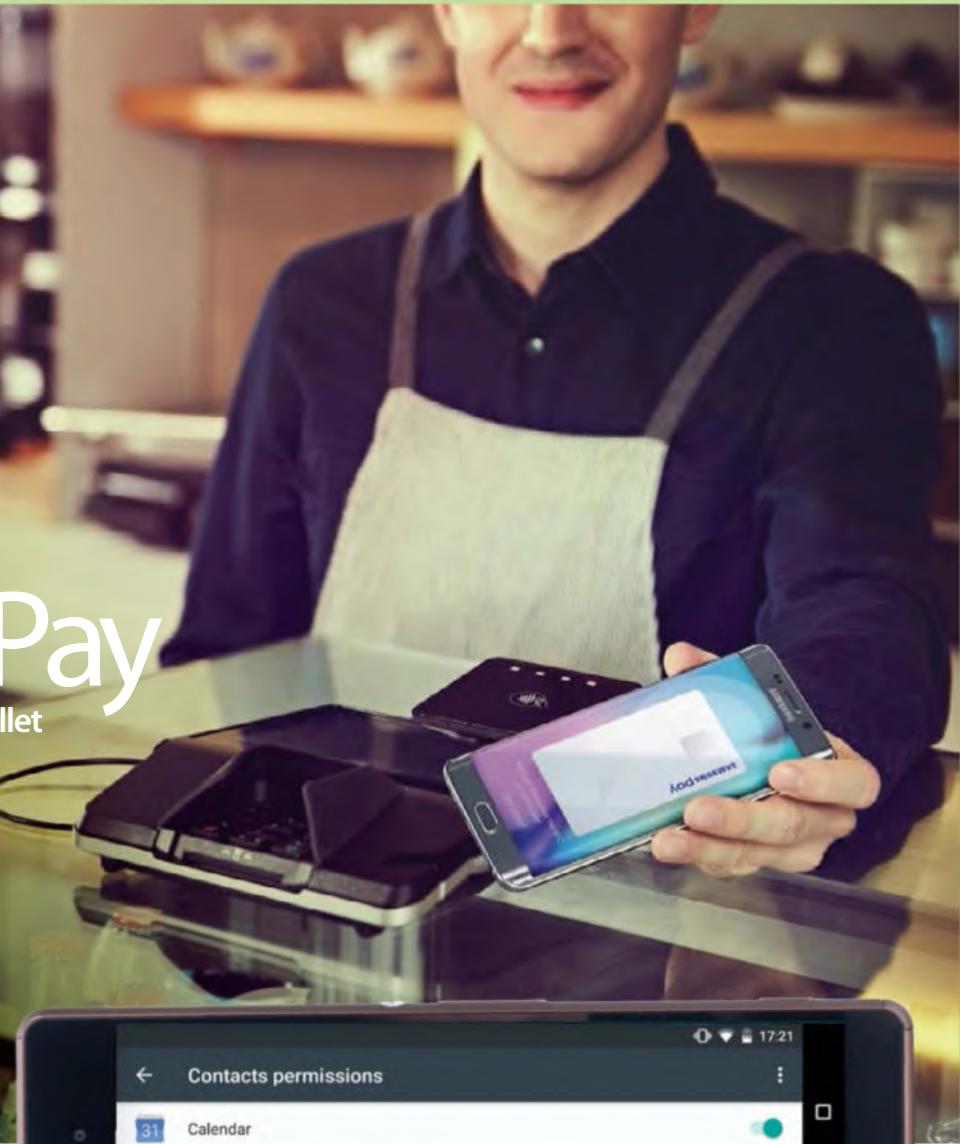
Once it has finished flashing onto your handset, restart your phone and you should now have Android Marshmallow.

Android Pay works just like Samsung Pay – swipe your phone as you would a contactless card

Android Pay

Let your phone replace your wallet

Android Pay is launching alongside Marshmallow, bringing Google up to date with Apple and Samsung in offering a mobile payment service. Users will download the Android Pay app and load it with their supported credit card. When paying for an item at one of over 700,000 merchant terminals, all you will have to do is swipe your phone as you would a contactless card and the app will create a payment token for the transaction, keeping your card details safe from prying eyes. It will be launching in the US soon, with a global roll-out expected in the coming months.



Personalised app permissions

Android Marshmallow now lets you stop intrusive app permissions

One of the most exciting things about Android Marshmallow has to be the launch of granular app permissions. Anyone downloading an app will now only have to grant permissions that are essential to the initial running of the app, such as your contacts list for a new dialer. Permissions to more personal areas of your phone will only be granted as and when you need them, such as access to your camera when uploading a photo to Twitter or Facebook. This is a huge step forward for safety and security as apps can no longer ask for blanket permission for any access they may need at some point in the future.



Set granular app permissions

1 Enter app permissions

Enter your Settings, scroll down to Apps and tap the cog in the top right-hand corner. This will open up your app settings from where you can edit your permissions. Hit App Permissions.

2 Alter app permissions

Tap on a menu, such as Contacts permissions. This will show you all the apps that have access or want access to that data. Tap the sliders to enable or block these apps access.

You ought to be able to use Android Pay with any phones that have NFC capabilities, which includes some phones running KitKat 4.4.

Defragmented fingerprinting

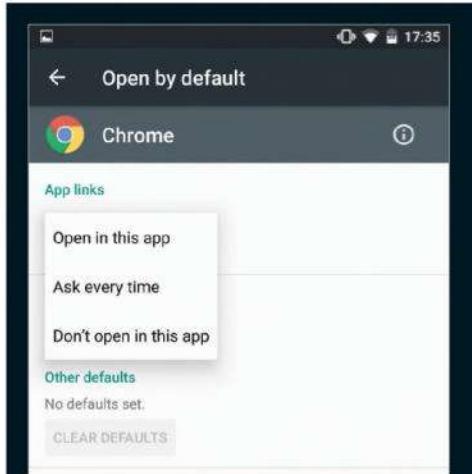
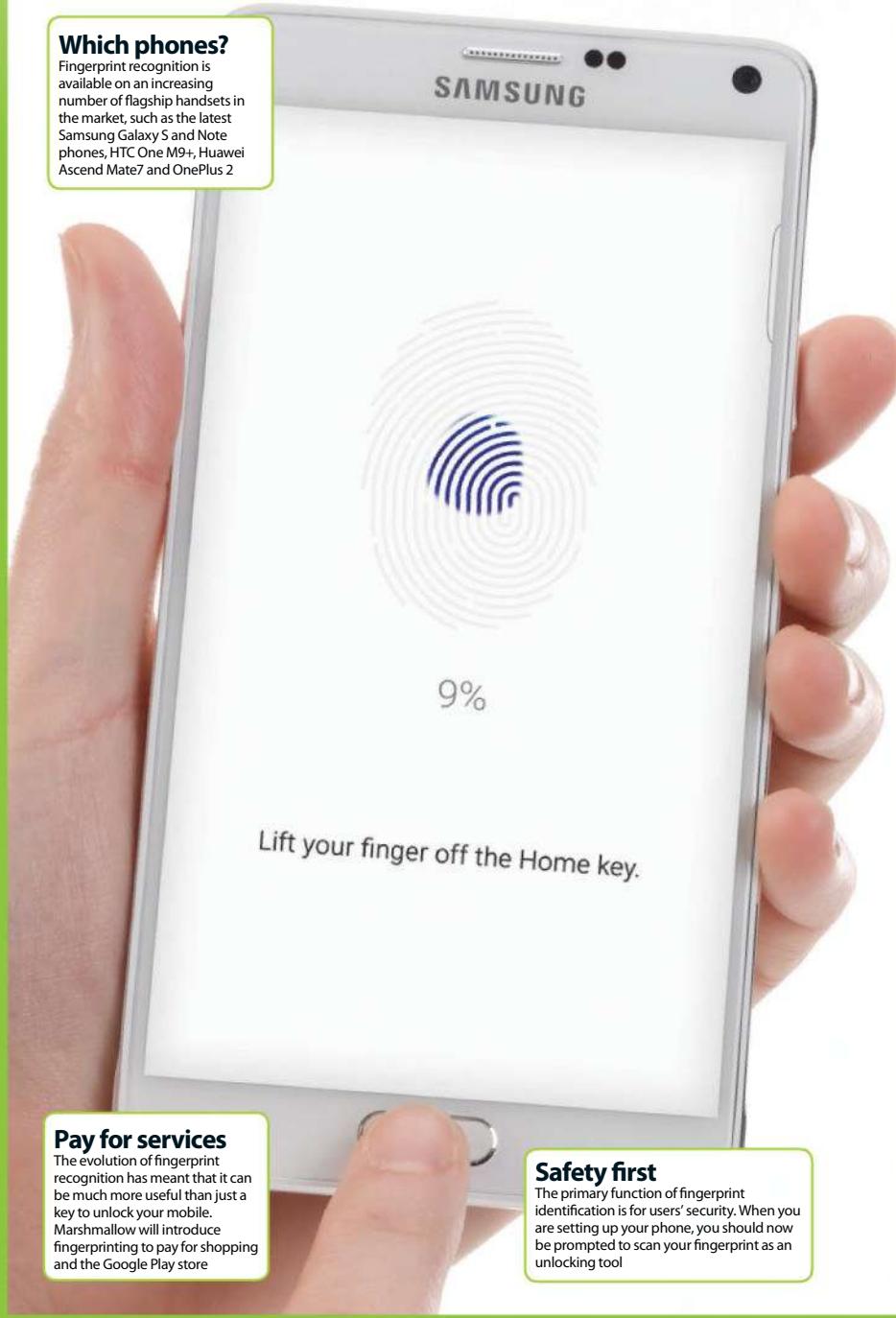
Fingerprint recognition has been a key part of a number of high to mid-range phones for a good couple of years now.

However, as with so many aspects of Android, it has been hugely fragmented across devices and has never been standardised. Marshmallow will be the first

Android version to make this step towards standardising fingerprint technology in all compatible devices. This will make it possible for Android app developers to make greater use of this secure identification feature. This should benefit the privacy of Android users around the world.

Which phones?

Fingerprint recognition is available on an increasing number of flagship handsets in the market, such as the latest Samsung Galaxy S and Note phones, HTC One M9+, Huawei Ascend Mate7 and OnePlus 2



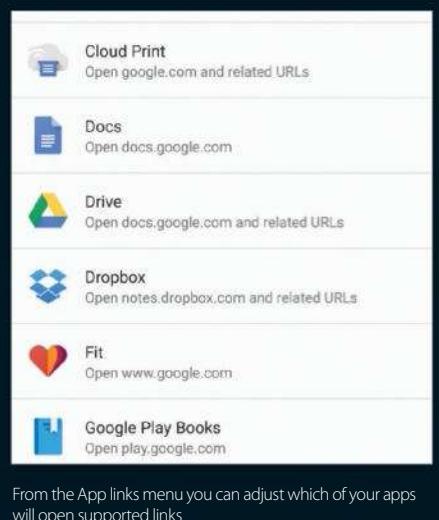
The dialogue box asking if you want to open a link in a particular app is a thing of the past with Marshmallow

Open app supported links

Personalise your app links

When Android M was announced, one of the minor upgrades that made a lot of people very happy was the fact that apps would now be able to open up links in supported apps without using the tedious dialogue box asking how you want it opened. In the latest preview, you can decide which apps will have the right to open automatically.

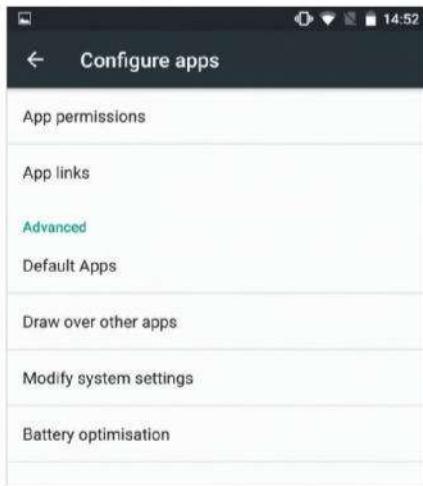
Jump into your apps menu, tap the cog, hit App links and from there you can see what will open automatically. You can remove or change automatically opened links here.



From the App links menu you can adjust which of your apps will open supported links

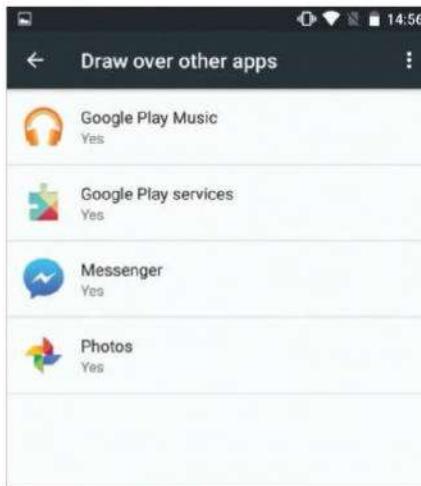
Disable floating windows

Stop Facebook Messenger popping up over the top of your gaming



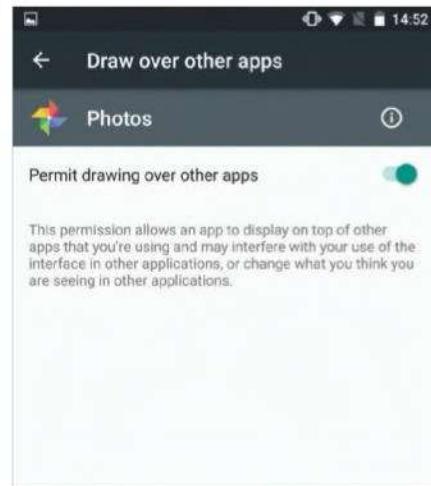
1 Enter settings

Enter your settings. After this, scroll down the list that appears until you find the Apps menu. Tap on that and then hit the 'Draw over other apps' option.



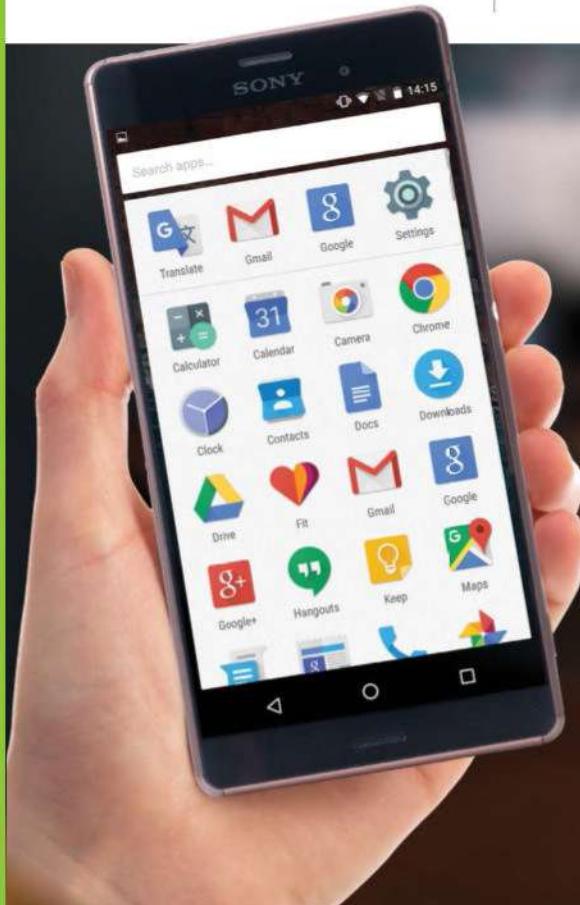
2 Draw over apps

This screen will show the apps that are currently enabled to pop up over other apps when in use, such as the Facebook Messenger bubble or Google Play Music.



3 Disable drawing

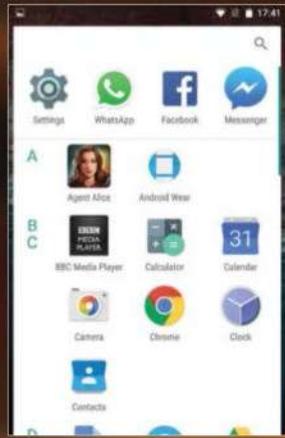
In the final screen, tap the slider 'Permit drawing over other apps' to off. Disabling it will prevent pop-ups from this app appearing above active apps.



Reformed app drawer

Android M drops the alphabetised list of apps

The initial developer preview of Android 6.0 literally revealed a new direction for the app drawer as the menu changed from the usual horizontal scrolling to **vertical scrolling**. It also included letters along the left-hand side of the screen, which was helpful as you could find your desired app a little faster, but it did make the screen look a bit patchy. The final preview has done away with this second change, returning the app drawer to the solid block of apps that we're used to. This results in a much cleaner, efficient look and ought to be here to stay, unless Google changes its mind again. The recently used apps at the top of the screen have made the cut too, which is a good idea.



The alphabetised app drawer has not made it to the final preview

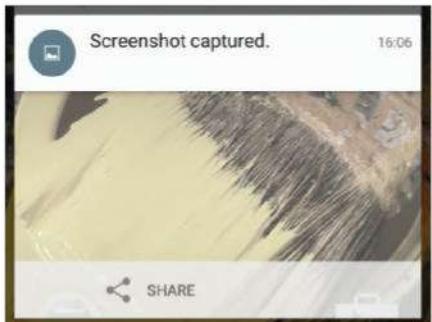
The last time stock Android had a vertically scrolling app drawer was back in the days of Honeycomb. Ice Cream Sandwich to Lollipop used a horizontal menu.

Easily delete screenshots

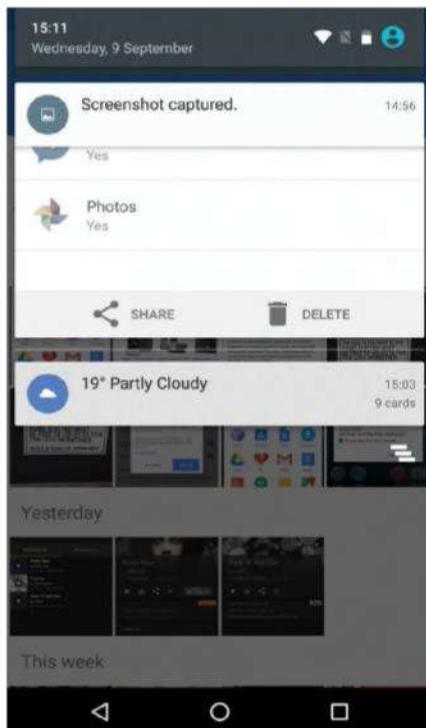
Deleting in preview mode returns

Android first added the ability to take screenshots in Ice Cream Sandwich, along with the ability to view, share and delete them in preview mode. However, in Lollipop the ability to delete screenshots in the preview mode was removed for some unknown reason. Instead, you had to open the image fully and then delete it from your device's gallery app.

This has now been rectified and put back in Marshmallow, so pulling down the notification bar after taking a screenshot reveals the familiar bin icon. This makes perfect sense and only goes to highlight the confusion and strange decisions that defined the Lollipop era.



When a screenshot is captured, preview mode will give you the option to instantly share it



Dragging down the notification bar will now reveal the share and bin icons

Activate System UI Tuner

How to customise your homescreen

The System UI Tuner is your new tool for editing the settings on your phone without having to worry about rooting your handset. If you've flashed Marshmallow onto your mobile, you'll have to activate the tuner.

1 Access settings

Pull down the Quick Settings menu all the way, so that it is fully open. Press and hold the settings cog for around five seconds before letting go.

2 Add System UI Tuner

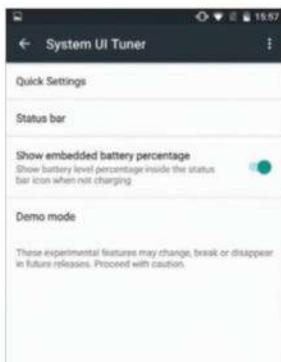
Once you've released it, you should see a text flash telling you that System UI Tuner has been added to your settings. If not, press and hold for a little longer.

3 Enter Tuner

Tap on the settings cog this time and scroll all the way down to the bottom of the menu. You should see System UI Tuner from where you can edit your Quick Settings.

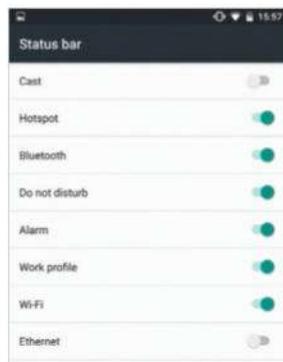
How to use System UI Tuner

Edit your quick settings using the new user interface tuner



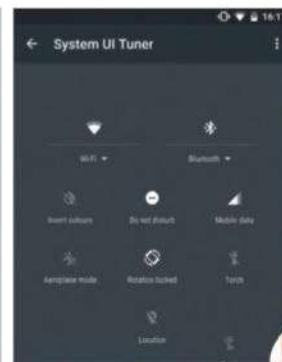
1 Show battery percentage

Head into your settings and scroll down to System UI Tuner. Push the slider labelled 'Show embedded battery percentage' from grey to green.



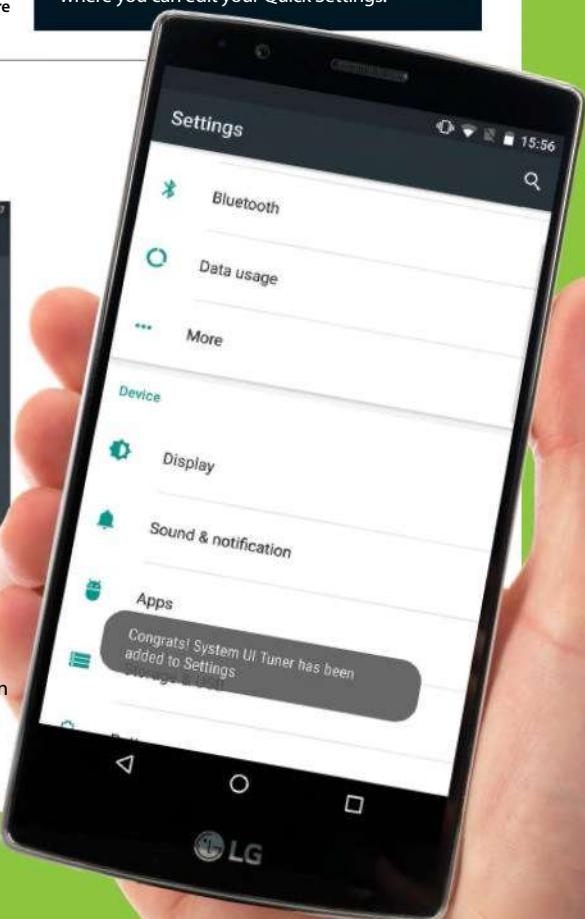
2 Alter your Status bar

Tap on the Status bar option in your System UI Tuner menu. From here you can remove all the options you don't want to appear in your status.



3 Alter Quick Settings

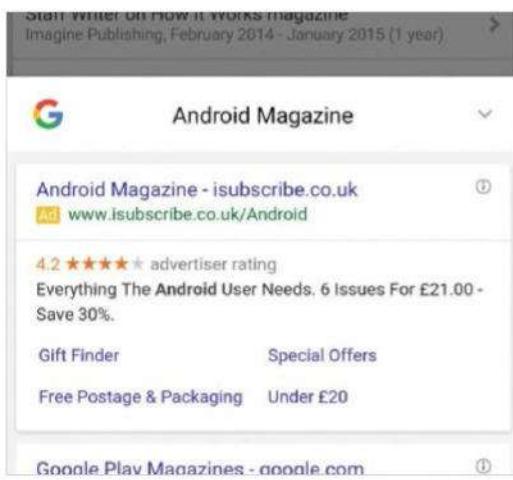
Tap on Quick Settings, tap and hold on an icon in your pull down menu. You should see a delete bin appear that you can drag icons into.



Now On Tap gets closer

The intuitive Google assistant takes another step forward

The next generation of Google Now was announced at Google I/O back in the summer of this year. It promised Android consumers an intelligent virtual helper that would understand the context of its surroundings and consequently become much more useful to its Android users. This preview hasn't quite brought us the full Google Now On Tap functionality, but it has inched slightly forward with new suggestion cards. Tapping and holding a word in any app will bring up a card at the base of the screen that performs a Google search for that word. Tapping and holding an actor's name, for example, brings up the top search results for that name without making you leave the app you're currently in. This isn't as instinctive as we are expecting to experience in the full version, but it certainly shows that Google is on the right track.



The suggestion card that appears will show you the top search results for particular words

Google Now On Tap promises...

Contextual search

Google Now on Tap will bring contextual searching to Android users. You can ask it a vague question such as 'Who is this?' when listening to music and it will (hopefully) give you the right answer.

Film times and reviews

For example, pressing and holding the name of a film will bring up a Google Now card that provides you with all the relevant information. This could be your local cinema times or film reviews.

Private information

A big concern, as always with Android, is users' privacy. However, Google has said that any information or data that is gained during a Now On Tap search will be instantly erased from the device.

How to remove Google Now on Tap

1 Enter Google Now

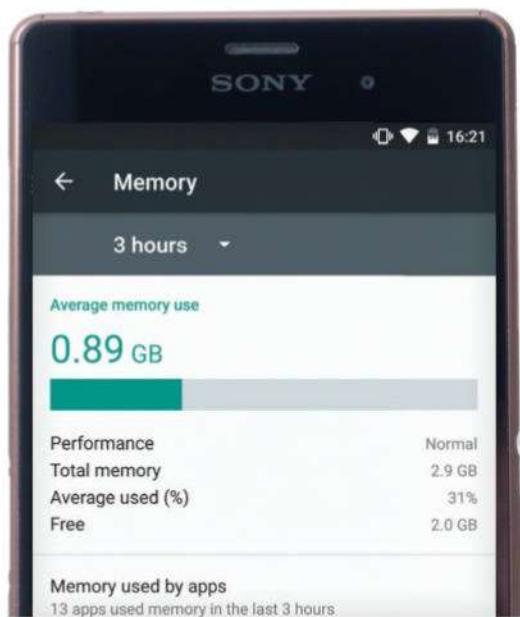
Swipe left from your homescreen or tap on the Google app to access Google Now. Hit the settings icon in the top left-hand corner to pull out the Settings menu.

2 Now settings

Once you are in the Settings menu, tap on the Settings cog icon. Next, hit the Voice menu option. Once in here, you will need to hit the Now on Tap slider.

3 Now off

Hitting that slider will stop you being able to see any additional information about something on your screen. Simply tapping that slider again will reactivate the option.



Check memory usage

See how much memory each app on your device is using

Android Marshmallow has redesigned the way you see how much memory your apps are using. Head into the Memory menu located in your settings and it will flash up a bar showing how much of your phone's memory is being used on average over a period of time. From here you can also see how much memory is being taken up by individual apps and then close them if necessary. This is a much quicker way of seeing your memory statistics than the thin individual bars that were used in Android Lollipop. The performance tracker is also a welcome addition.



The new Memory menu shows you how much memory is being used by each individual app on your device

Doze uses motion detection in order to send your device into a deep sleep

Results on two identical Nexus 5s (one on 5.1.1, the other on 6.0) showed a stunning 333 hour difference in standby battery life.

How Doze saves your battery

- 1 Inactivity recognition**
Doze uses motion detection to see when your phone is not in use (yet still on) and, as a result, wasting battery. By going into a deep sleep mode it can double your battery life.
- 2 Disable Wi-Fi access**
Doze disables Wi-Fi connectivity and prevents notifications coming through unless it's a high priority notification. This is to stop your phone constantly searching for internet signal.
- 3 Wake locks ignored**
Some apps have wake locks to stop or slow your phone from dimming the screen. Doze ignores them in order to put your phone to sleep as quickly as possible.

New boot animation

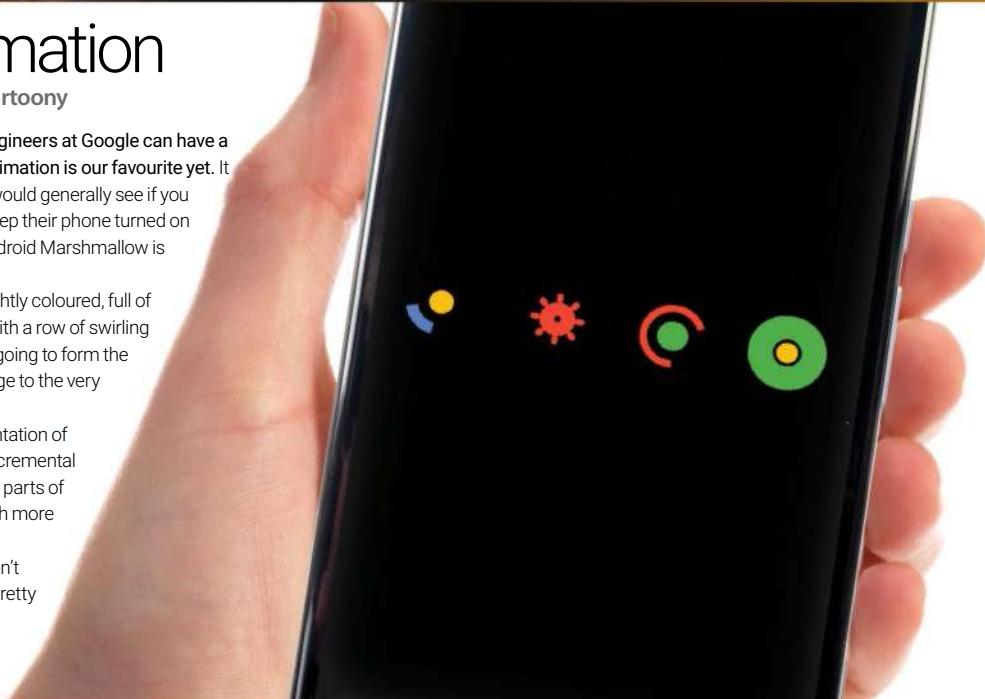
Google's new startup has gone all cartoony

The boot animation is something that the engineers at Google can have a little bit of fun with, and this version of the animation is our favourite yet. It isn't a major change and not something you would generally see if you are one of the millions of mobile users who keep their phone turned on constantly, but the new boot animation on Android Marshmallow is really good fun.

Like so many of Google's products, it is brightly coloured, full of energy, life and character. Your phone loads with a row of swirling circles, wheels and cogs that look like they're going to form the word Google, but at the last minute they change to the very familiar Android logo.

This new bootloader is the perfect representation of Android Marshmallow's mission of making incremental changes to Lollipop that will tidy up and polish parts of the new operating system to make them much more enjoyable for the consumer. It's probably not something you'll see on a daily basis and it won't change your life, but the new animations are pretty enjoyable to watch.

Android Marshmallow's new bootloader is full of colourful icons that morph into the Android logo



Removed features in the third preview

Will these features make the final cut?

Rotating homescreen

The ability to have a landscape homescreen was present in the second preview, but for some reason it has disappeared in this third preview.

Dark theme

A popular feature of the first Android M preview, Android users were disappointed when the dark app drawer theme went missing.

Google Translate

In the second preview you could tap a word and have it instantly translated, but that too was dropped for the final preview of M.



Cardboard 2.0

Discover how Google is unfolding the future of virtual reality and making it accessible to everyone

What a difference a year makes in the world of technology. Last year Google gave away its Cardboard virtual reality headset as a free gift to developers at the end of the I/O conference. This year, the product was firmly placed in centre stage during the conference keynote. One million Cardboard viewers have been shipped worldwide and over 500 compatible apps are available on the Play store. But Google is not stopping there. With a new-look Cardboard viewer and an ambitious vision to make sharing virtual reality experiences accessible to everyone, the tech giant is pushing the envelope of virtual reality.

VR for everyone

If you're not familiar with Cardboard, it's similar to

the Samsung Gear VR that was also launched last year. If that still doesn't mean anything to you, it's a headset where you insert your smartphone in the front to act as both the display and the computing power for your virtual reality experience. Stereoscopic lenses in the headset then convert compatible apps and games running on your phone into immersive 3D worlds.

The big difference between Samsung's Gear VR and Google's Cardboard headset though is the significant price difference between the two. The Gear VR costs £200 and is only compatible with Samsung's top-of-the-line phones, the Galaxy Note 4 and Galaxy S6. Cardboard, on the other hand, costs as little as £20 and works with any Android phone. So why is it so cheap? Well, as you may

have guessed from its name, Google's headset is made of cardboard.

"Our goal with Cardboard was to make virtual reality available to everyone," said Clay Bavor, Google's vice president of product management, speaking at this year's Google I/O conference on 28 May. "So we started with a piece of cardboard, some velcro, added some lenses and a rubber band. And amazingly enough, that was all you needed to turn your smartphone into a fully functional VR viewer."

Bavor then went on to announce an updated version of the original Cardboard. However, rather than upgrading it with complicated new features, the update made it even more simplistic: the flatpack you assemble the Cardboard viewer from

now only takes three steps instead of 12. Google has also got rid of the magnetic button that only worked with phones with built-in NFC and replaced it with a conductive one that will work with all devices.

If Cardboard sounds like it is disconcertingly low-tech, that's because it is. Android smartphones already have the processing power and display quality to match virtual reality's gold standard – the Oculus Rift. Oculus grabbed headlines as a Kickstarter project that was bought out by Facebook for \$2 billion last year. A finished headset isn't expected to appear until next year, but developer kits are already publicly available and sell for \$350 (£225). However, a teardown video by the California-based repair firm iFixit, revealed that the screen from the Oculus Rift Developer Kit 2 is taken straight from the Samsung Galaxy Note 3. It is perhaps no surprise then, that the Samsung Gear VR is also built using Oculus tech and runs Oculus apps. It's also the reason other phone manufacturers are trying to break into the world of virtual reality. Sony is set to combine the displays from its Xperia smartphones and gaming expertise from the PlayStation 3 with the Project Morpheus headset, while HTC is working with games publisher Valve on the HTC Vive.

However, there is one major mobile manufacturer that's yet to enter the Matrix: iOS. Looking to rectify this, Google has made the new Cardboard viewer larger, not only so that it works with 6-inch Android phablets, but the iPhone 6 as well. The Cardboard app is also now free to download on the iOS App Store. As Bavor put it, "So it works with any phone. It fits any phone. The button works with every phone. But the software, the Cardboard SDK, it needs to work with every phone, too."

An open-source ecosystem

If you're still not comfortable with the idea of a paper headset, you'll be glad to know that Google's Cardboard viewer is like the Nexus of Android phones; it represents Google's vision of how the product should be, but is far from the only Cardboard VR headset out there. As soon as Cardboard was announced, Google made the specifications for the headset totally open source. You can even download the Cardboard template for yourself and make your own, just visit google.com/cardboard.

This has led to an explosion of creative headsets that work with Cardboard's software, but are made from different materials. For example, the Knox Aluminium is made, you guessed it, from

How to use your headset

1. Construction

The Cardboard viewer arrives as a flatpack. While the original took 12 steps to assemble, it now only takes three. Remove the sleeve, unfold the flaps and you're done.



2. Launch the app

Download the free Cardboard companion app from the Play store or – for the first time – you can download it onto your Apple iPhone from the App Store.

3. Pair devices

Officially licensed viewers will include a QR code for you to scan with your camera to sync your headset's parameters with the Cardboard app. If your headset doesn't have this, just press skip.

3. Insert your phone

Once pairing is completed, insert your phone and close the lid on the back of the headset. Make sure the velcro is firmly stuck together, so your device doesn't fall out!

5. Explore

The official app includes demos to sample what the viewer can do, but download other Cardboard-compatible apps from the Play store to really make the most of it.

aluminium but also wood, so it resembles the Morris Minor of VR. A company named I Am Cardboard mostly make near stock variations of the Cardboard headset, but in a range of different colours. However, it has also developed the premium XG VR, which is made of plastic and includes a foam lining for a more comfortable fit. It even comes with a Bluetooth controller, but it does retail for \$279 (£179). Mattel is also getting in on the act, relaunching its classic kids toy, the View-Master, to work with Cardboard VR this autumn.

The three biggest manufacturers of Cardboard viewers are Knox Labs, I Am Cardboard and DODOcase. DODOcase is particularly interesting because up until the launch of the Cardboard, it

only produced iPhone and iPad cases. However, Craig Dalton, co-founder of DODOcase doesn't think it was that much of a sea-change for the company. "DODOcase is a tablet and phone accessory manufacturer. Smartphone VR viewers are essentially a phone accessory. We specialise in understanding how people use devices and creating products that complement that use."

Dalton also believes that Cardboard has a distinct advantage over the Oculus Rift. "Smartphone VR [Cardboard] is the gateway to the entire VR industry. Without it, the industry will remain pigeon holed in the gaming community for years and will fail to realise its full potential. The price, portability and social sharing aspects of



smartphone VR make it the perfect entree to VR,” he concludes.

However, Cardboard has had its growing pains. With so much variation on the original design, some viewers have had slightly different optics and dimensions, so they won’t work as well with apps. To combat this, Google launched the Works with Cardboard program in April. This enables manufacturers to input their key parameters – such as focal length and inter-lens distance – and receive

a QR code to place on their device. Users can then scan this code using the Google Cardboard app, and their VR experiences will be optimised for the viewer. Also, if you’re thinking of buying a Cardboard headset, look out for the Works with Cardboard badge to ensure that the product has been certified by Google.

DODOcase, Knox Labs and I Am Cardboard have all signed up. Dalton stresses the benefit of working with Google rather than alone. “Google

and DODOcase share a similar vision as to where the market can go,” he says. “Google’s support of the software development community is critical in increasing the number of VR applications and the quality of those applications. Our collaboration is a circle where top-quality viewers lead to more use of software and top-quality software will lead to more viewer sales.”

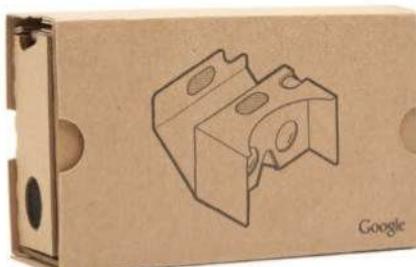
While manufacturers have been creating new viewers, app developers have been experimenting with different kinds of virtual reality experiences. There are now 500 Cardboard-compatible apps on the Play store, including tours of the solar system in *Titans of Space*, 3D live performances from Paul McCartney and Jack White, as well as games, such as ghost story *Sisters* by Otherworld Interactive and space shoot’em up *Vanguard V*.

Critics might argue that even Cardboard’s most sophisticated apps and games don’t offer more than a 30-minute experience. This is little more than a gaming demo and isn’t going to attract the sort of hardcore gamers that are used to playing *Skyrim* or *Destiny* on a games console. Currently, Oculus doesn’t offer games that are much more in-depth either, but it has recently invested \$10 million to help developers and is working with some of the world’s biggest gaming studios, including Square Enix, the creators of the phenomenally popular *Final Fantasy* series.

In contrast, Google hasn’t created a fund to support developers, but continues to make lots of tools available to developers for free, including

Enter the Matrix...

From exploring space to getting a front-row seat to a live show, here are the first apps to try on Cardboard



Titans of Space

Free

Explore the solar system with the *Titans of Space* app by DrashVR. The celestial bodies are all reproduced to scale at one millionth of their actual size, so you can explore them in your living room. Each planet includes a fact file, and a guided tour is available through an in-app purchase. While the graphics are not as impressive as those shown off in the new *Expedition* promos, *Titans of Space* will give you a feel of what to expect from the all-new VR experience.



Jack White: THIRD-D

Free

Enjoy an up-close performance with White Stripes frontman, Jack White, with this free download. From the perspective of being on stage with the rock star, you can watch him perform three tracks: ‘Freedom At 21’ and ‘Ball and Biscuit’ at The Bleacher Theater at Fenway Park in Boston, and ‘Dead Leaves and the Dirty Ground’ at Red Rocks Amphitheatre in Colorado. To ensure the sound is as immersive as the video, this app is also mixed using cinema-quality Dolby Atmos.



Go on a VR field trip with Expeditions



Low-cost, easy to use and with the power to transport you anywhere, Google believes Cardboard can be used in schools. The tech giant has launched a new kit called Expeditions, which will take classrooms on virtual tours of places they wouldn't otherwise be able to visit.

"There's something amazing about visiting a place, seeing it up close, and experiencing it with your own eyes. But, of course, the school bus, it can't go everywhere," explains Clay Bavor, Google's vice president of product management.

"It can't go to the moon, it can't go to another country and back in a day, it can't go to the bottom of the Pacific Ocean. But VR can help take you to all of those places."

Schools will be able to buy Expeditions kits, which contain Cardboard viewers and the phones needed to make them work for up to 30 students, plus a control tablet for the teacher. All of the headsets will be synchronised, so when the teacher chooses from a selection of ready-made virtual field trips, the whole class will jump

there together. For instance, a promotional video showed students exploring the wonders of the Great Wall of China together.

Google has already tested Expeditions in hundreds of classes around the world and is working with museums to develop new VR experiences. Google says it has partnered with organisations including The Planetary Society, the Chateau de Versailles, the Smithsonian and the American Museum of Natural History. Teachers can sign up for the new program now.



Orbulus

Free

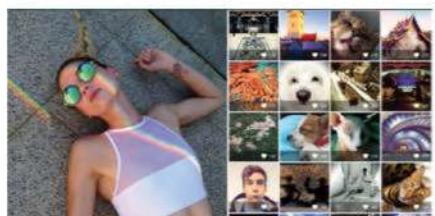
If you were a fan of Android 4.2 Jellybean's PhotoSphere camera mode, try Orbulus. PhotoSphere let you shoot 360-degree panoramas and upload them to Google Maps and Google+. Orbulus lets you view PhotoSpheres from around the world through your Cardboard headset, including incredible landscapes and venues. A particularly cool feature is that you start off in outer space, and select a planet-like PhotoSphere by simply holding your gaze on it.



Roller Coaster VR

Free

Roller Coaster VR offers all the fun of a theme park ride from the comfort of your armchair. Made by Fibrum, this app will have you leaning from side-to-side and gasping with excitement as you complete loop-da-loops and corkscrews. For added escapism, the ride is set in a tropical jungle and even goes underwater. There are lots of roller coaster simulators on the Play store, but this is the one we most enjoyed – though it's also the one that must us feel the most sick!



Seene

Free

Seene was giving Android users the chance to snap and share 3D photos long before Cardboard was a glimmer in Google's eyes. However, it also includes a View in Cardboard mode, so any image shared on the social network can now be viewed in your virtual reality headset. If you lack the funds (or the skills) to operate a Jump camera, this is a great alternative for sharing your own VR experiences as well as get an idea of what the Expedition program is like.

the new Google Design Lab app. This app includes user guidelines for creating VR experiences. The company also continues to hire internally, for instance, it bought up the company behind Tilt Brush, a 3D painting app.

Craig Dalton is very optimistic about the money to be made as a virtual reality app developer. "Today, developers have a green field opportunity. I'm encouraging our partners to 'go, go, go!'" he says. "There will be new multimillion dollar

"While manufacturers have been creating new viewers, app developers have been experimenting with virtual reality experiences"

development organisations created in VR, the only question I have is who they will be."

Robert Mao, the founder of mobile development company Pixomobile, cancelled his pre-order of the Oculus Rift Developer Kit 2 after trying Cardboard. "I actually don't think Cardboard is better than the Oculus Rift itself, but based on the reason why I want to buy a Oculus Rift DK – to test out prototype developments – Cardboard works better: it's much cheaper, it has decent quality. Most important, it will be much easier to develop a prototype and let many people test it, this is the killer part," Mao said. "It's much easier to find testers – you can even give away Cardboard along with your beta apps, there is no way to do it with Oculus," he added.

Virtual reality YouTube

However, being able to view virtual reality videos on Cardboard is so 2014. Google thinks it's time to share your own. You could already view panoramic PhotoSpheres that you'd captured with your stock Android camera in Cardboard, however, this was imperfect and sharing them was difficult. Google's new system, called Jump, has been designed with Cardboard in mind, to specifically capture and

create VR experiences, and then share them with the whole wide world.

"We want to put professional, previously impossible tools in the hands of any creator who's motivated," says Clay Bavor, "so that they can capture the world around them and then share it in a way that lets all of us jump to the top of that mountain, jump to any place or event on the planet and experience those sights and sounds as though we're actually there."

So how do you shoot VR videos? The answer is simple: with 16 cameras working together as one. Google has developed the Jump camera, an elaborate camera rig that can capture 3D worlds. The first array has been produced in partnership with GoPro, famous for its wearable action camcorders. But no on sale date or price has been announced, instead you can apply online and Google says it will provide rigs to 'select creators'.

In theory though, wannabe VR filmmakers could use any type of video camera and even make their own rigs. Bavor said they experimented with arrays made from 3D-printed plastic, machined metal and – of course – cardboard, while testing out the product. "What's critical is the actual geometry and we spent a lot of time optimising everything,"



Make your own VR videos

Multimedia designer Mike Rios proposed to his girlfriend Maggie using Cardboard. We asked him how he did and what he thinks of Google's new Jump camera...

Why did you propose using Cardboard?

A I'm equal parts designer and tech dork; and a huge fan of pick-up and play disruptive open technology like Android and Cardboard. I quickly realised Cardboard's incredible power to transport and alter the perception of anyone with a modern smartphone, some cardboard, and lenses after its debut at I/O last year. Around the time I was just starting to plan my proposal to Maggie. Up to that moment I knew I wanted to propose to Maggie with all of our family and friends in a big grand gesture. I also really wanted to surprise her while playing with her expectations to create an experience she would never forget that was also super creative, and Cardboard just seemed like the perfect way to write my love note to her.

You created your proposal using PhotoSpheres with no experience using

he says. "The size of the rig, the number and placement of the cameras, their field of view, relative overlap – every last detail," he adds. Just as it made the template for the original Cardboard open-source, Google will make this geometry available to everyone later this summer.

However, the next step of the Jump process relies on Google's own software. Called 'The Assembler', this program stitches the 16 raw videos into a seamless panorama with thousands of in-between viewpoints. These videos are very high resolution – the equivalent of five 4k TVs playing at once.

The final, and important step, is to then make your VR video available to everyone. Rather than build an app from scratch to showcase your VR experience or install an all-new player app, Google will be making Jump part of YouTube in the near future. You will then be able to search for VR experiences alongside ordinary videos on your phone, before donning your Cardboard headset. With Google's new Cardboard headset and Jump camera, it has never been easier to become a member of the virtual reality fold.



Cardboard. Would it be easier to use Google's new Jump camera?

A To be honest, I don't know a whole lot about Jump myself. As I understand it, in addition to needing 16 GoPros and a custom rig you need some serious server power to process any video you make with it, which sounds problematic for the average consumer. To me it sounds like they have some plans in the short term with some well known film makers, which makes business sense as it feels more commercial in nature now. Whatever the case I'm definitely interested to see where it goes from here, maybe it'll be there for the layman in a year or two.

Is the future of virtual reality in DIY experiences or is this a stop-grab for more advanced developments?

A I don't see why they both can't co-exist! I mean there will definitely be large Hollywood-style blockbusters and experiences in VR, but there will also always be room for tons of smaller DIY experiences. If anything, companies like Google have widened the field for everyone in everything (applications, videogames, film, and music). That's Google's real super power here, disruption, and I'm ready and waiting to jump into the spaces they open up with things like Cardboard!

What was it like to get a shout-out from Clay Bavor in this year's Google I/O keynote?

A We actually knew about the shout out at Google I/O well before it happened! [Google] emailed me a few weeks before the event and asked if they could use it in the keynote, and given all of the help they provided through sponsorship, it was the least I could do! It was super exciting.

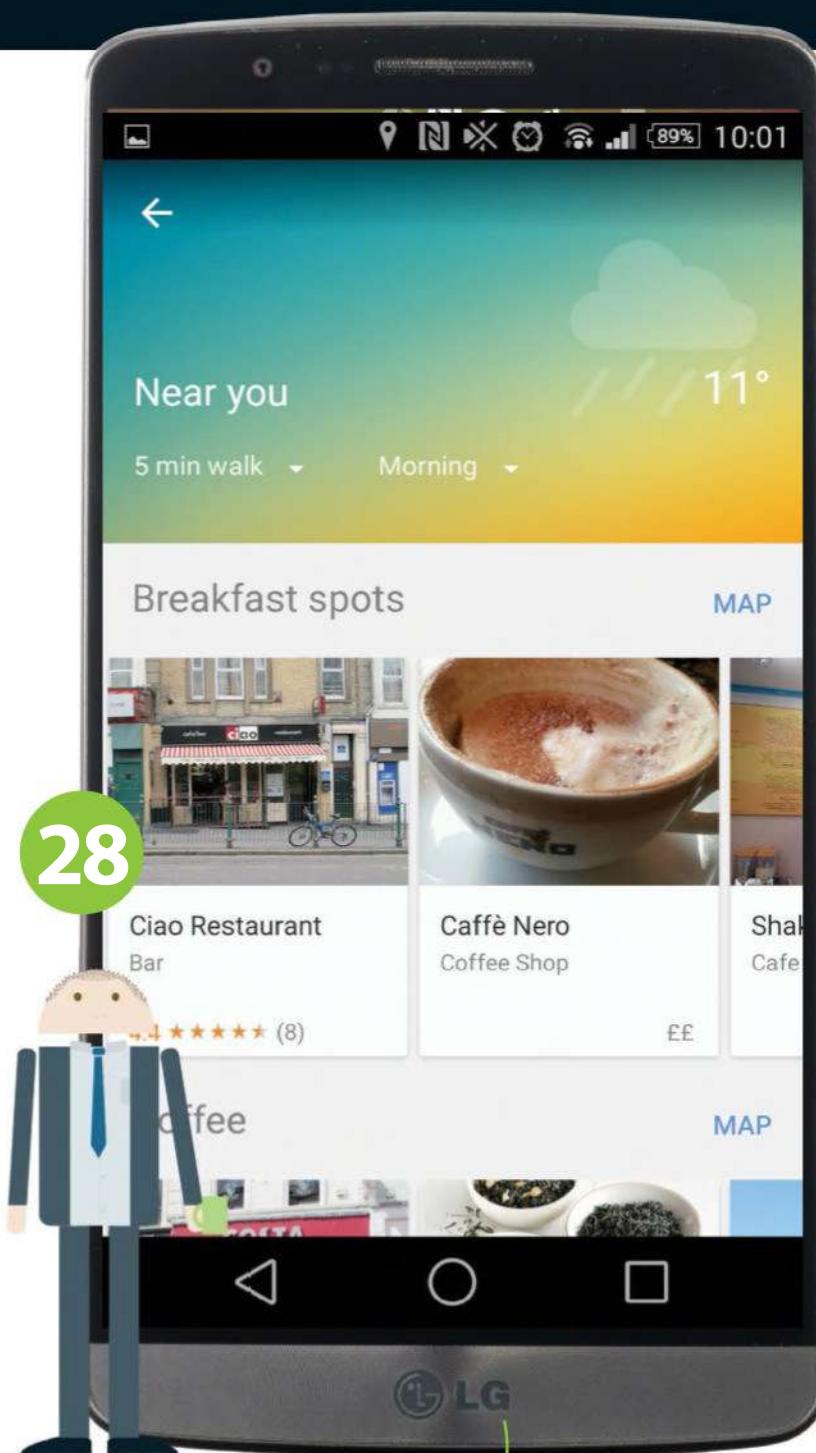


Watch Mike and Maggie's Cardboard engagement here
<https://goo.gl/bQN64m>

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"Google has listened to the Android community"



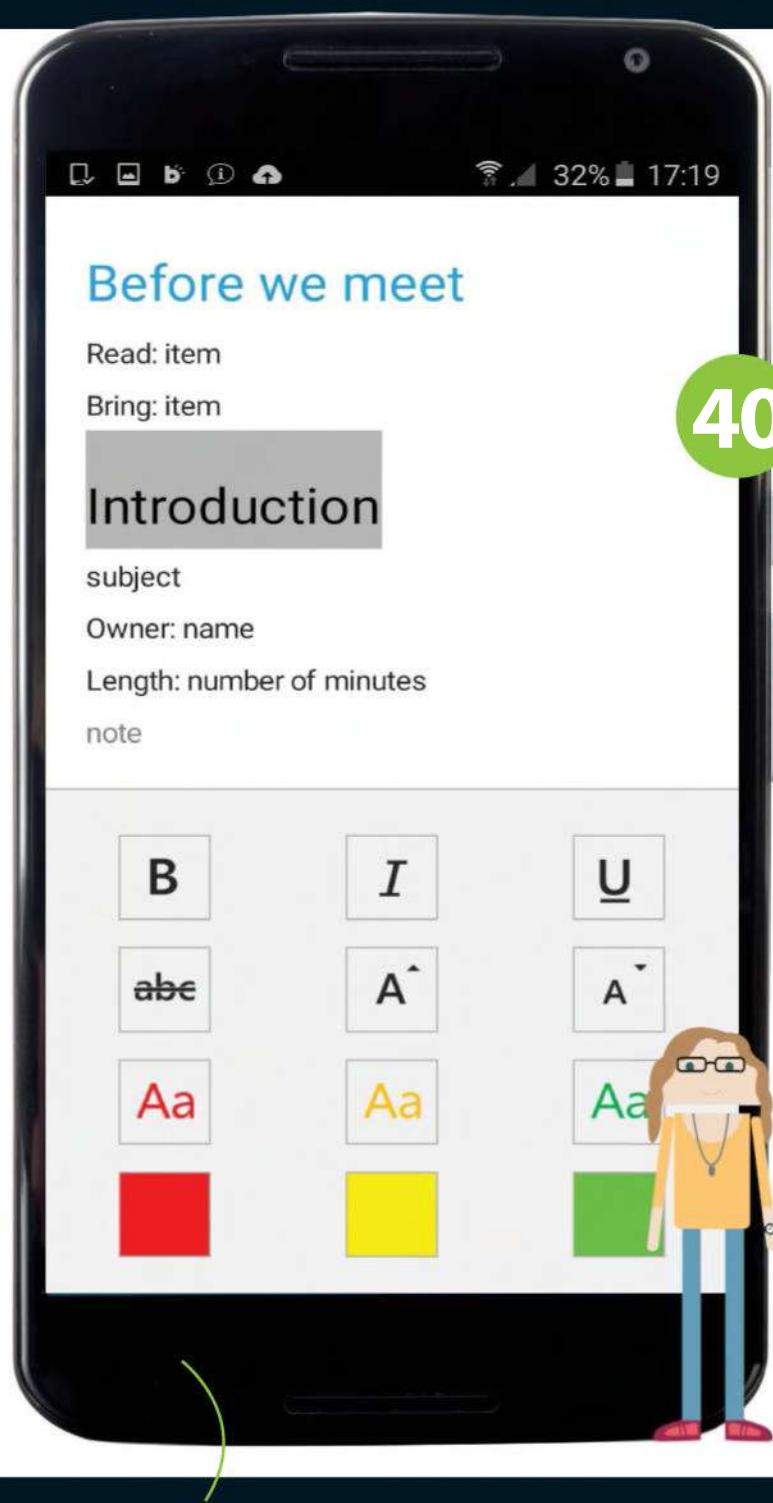
Navigate like
a pro

Take advantage of advanced browsing techniques in Chrome

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"There are interesting new features and old features are being re-introduced"



Work from your
Android device

Get the most out of Android 5.1

We will show you how to get to grips with the latest Android update

The launch of Android Lollipop has been a bit of a mess, with many Android phones yet to get the update. Indeed the latest polls suggest that more people are using ancient Android systems like Ice-Cream Sandwich and Gingerbread than Lollipop, which is still only on 12.4 percent of devices.

Despite this, a number of users have already been receiving Lollipop updates, with select devices upgrading to Lollipop 5.1, which has come with a raft of improvements. While most of these are purely aesthetic, Google has listened to the Android community giving users interesting new features and re-introducing features that were removed, such as silent mode.

If you're lucky enough to have received the update on your device, read onto find out how to make the most of it.

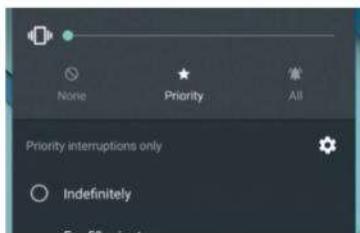
"Google has listened to the Android community"

Android 5.1 | New design features



On-body detection

It can be frustrating when your phone locks while you've got it in your hand, so Android 5.1 new security feature fixes this so your phone will stay unlocked while it senses you're holding it.



Better volume control

By pressing the volume button you will now bring up three different options to change the volume for all notifications, just priority notifications or to set your phone to ignore notifications altogether.

5 things to know about Android 5.1

1. It makes your phone faster

Ars Technica benchmarked two Androids, a Nexus 6 and a Nexus 5, running Lollipop 5.0 and then 5.1. They noticed a huge improvement in the Random Read and Write scores, so your updated phone should feel faster in general navigation. However, there wasn't much difference in the Sequential Read and Write benchmarks, so loading games will not be much quicker which is a shame.

2. Four cores switched on

In Android 5.1 all four cores in a quad-core phone are always on so should react faster when needed. This is great a change from Lollipop 5.0, when two of the cores would shut down when not in use, resulting in a much longer loading time.

3. Switch between sims

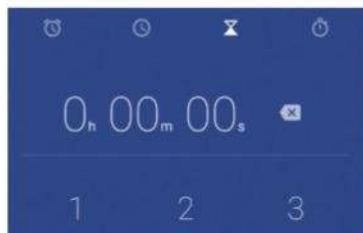
Android 5.1 will now support two separate sim cards. This means that if your phone is a dual-sim phone, you'll be able to switch between the two sims quickly and easily.

4. Getting the update

At the time of writing only Nexus devices had received the update, but updates should be here, or on the way, for all Samsung Galaxy devices, as well as preloaded on several phone models shipped after March 2015.

5. Fixed bugs

One of the most common frustrations for smartphone users is sudden app closure, but Google says the update should fix bugs that cause these closures.



Animated time icons

The various modes in Android's clock app now have animations. It's a fun little addition – the alarm clock, normal clock, stopwatch and timer all now have a wiggle or animation whenever activated.

Why am I not updated straight away?

When an update is announced, there is still a lot of work going on behind the scenes. There is a version for developers, but updates for users come via the carriers, who make sure it doesn't break your phone.

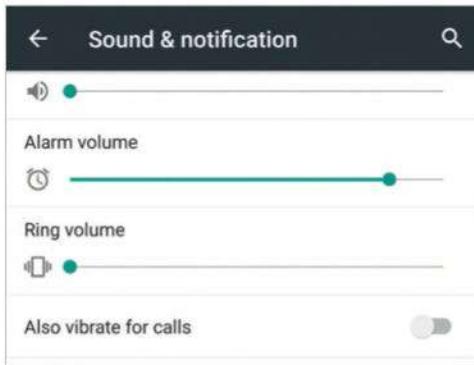
Avoid interruptions

Stop people interrupting you in your downtime

One of the great benefits of mobile technology is also one of its greatest curses. With your phone beside you all the time you are always contactable, and thus, constantly bothered by notifications. Many studies have shown the link

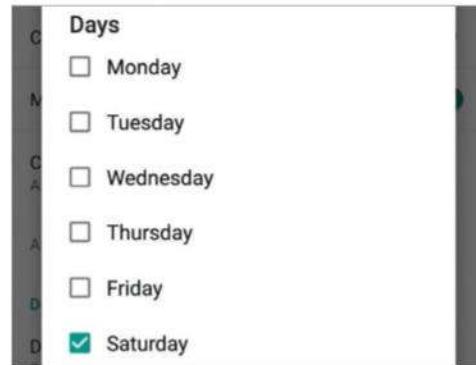
between increased levels of stress always having your smartphone on you. However, Android 5.1 has built on Lollipop 5.0's Interruptions and Downtime modes to give you more choice, so you can decide to let the world be for a change.

Downtime modes | Achieve peace and quiet



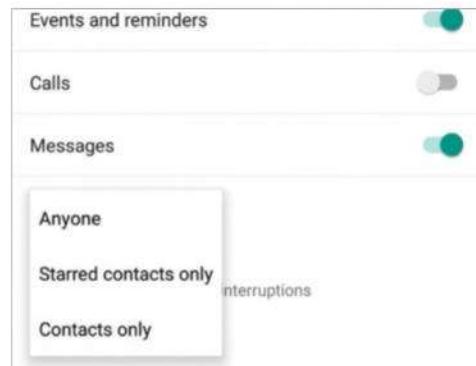
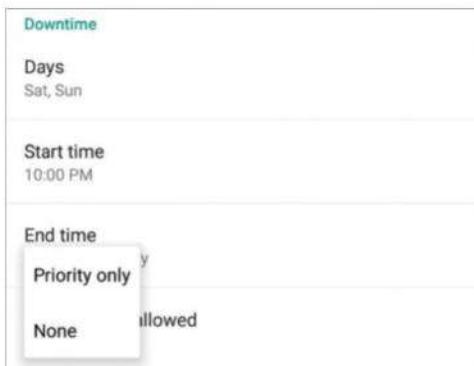
1: Enter your settings

Start off by pulling down the top menu and press the Settings icon. Scroll down to the Sound & Notification option and give it a tap. Around halfway down the next menu you should see a menu option for Interruptions.



2: Choose your downtime

Tap this and then enter the Interruptions screen. Scroll down until you see the Downtime menu. From here, you can select the specific days and times during which you want to avoid being disturbed by notifications.



3: Select your interruptions

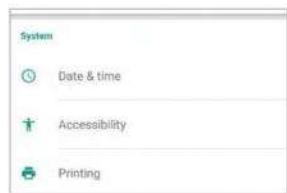
The previous version of Lollipop only let you select Priority Interruptions, such as alarms and messages from important contacts, but now it gives the None option, meaning your phone won't go off for anything - complete and utter silence. Especially handy for at night or during a theatre showing.

4: Set priorities

Priority interruptions let you decide what notifications go off during your downtime. Alarms are always a priority - you don't want to oversleep - but you can select messages or calls from particular contacts by turning one on and choosing a particular option.

Off-button to end calls

Android 5.1 now lets you use the power button to quickly end a call



Pull down the homescreen menu and click through to your Settings. At the bottom of your screen you will find the Accessibility menu option. Tap on this option to enter the menu.



Scroll down until you see the 'Power button ends all' button. You can press the slider to select this option to use the power button to end calls, something that wasn't available in Lollipop 5.0.



Test it out by making a call. Instead of pressing the End call button on your phone's screen, which often doesn't appear for a while, you can now end calls promptly with this new method.

Lock pinned screens to the homescreen

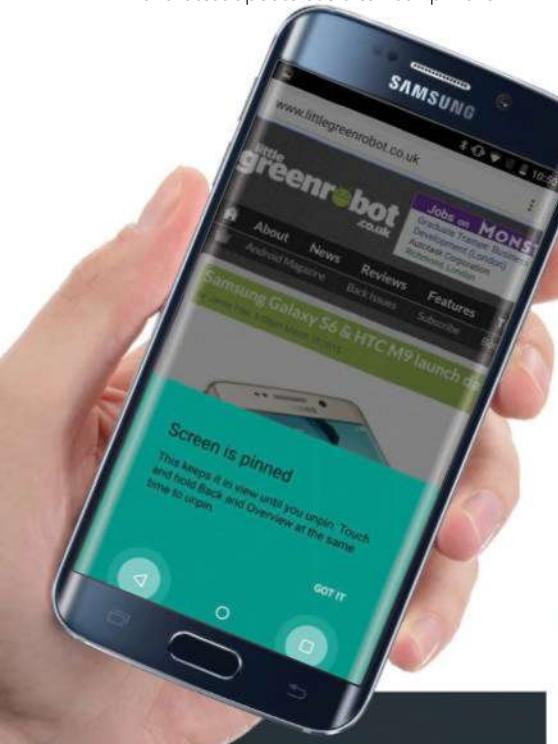
You can now lock pinned screens to your homescreen for easier access

Screen pinning was a brand new feature in Lollipop, enabling users to lock a particular app to the screen so they couldn't navigate away from a page with an accidental swipe. This has proven to be a very popular feature with users, and therefore Google has now pushed on with it and developed it further. In this latest update users can still pin the

app to the screen but you can also change the settings so you would require an unlock code, such as a specific pattern or password, to unpin it.

This is essentially an added safety device in case you leave your phone unattended with an app running and someone else grabs it. This person then can't get into the phone

without knowing the code, whereas before, two button presses would leave the device – and your sensitive information – wide open for them. In this short tutorial, we will explain to you just how to set up the extra lock screen for when you're in pinned mode, so you can feel safer if you need to leave your Android device unlocked.



You can further protect this device by requiring your pattern before it starts up. Until the device starts up, it can't receive calls, messages, or notifications, including alarms.

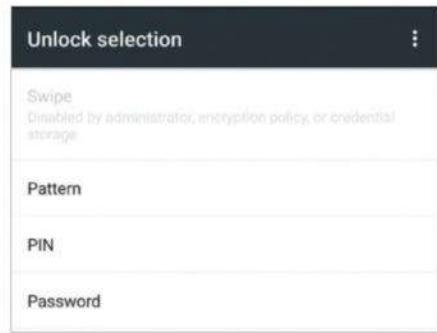
This helps protect data on lost or stolen devices.

Require pattern to start device

3: Choose your unlock code

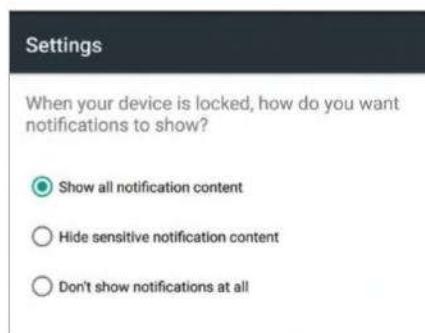
Decide which of the unlock options you want to use and select that option – swipe isn't an option because it provides no real security. You can choose to activate the lock before start up, preventing a thief from even turning the phone on.

Homescreen | Lock pinned screens



1: Enter security settings

Start by pulling down the top menu and then scroll down to Security. Tap that and scroll all the way down again until you see the Screen pinning option. This will be turned off to begin with, unless you've already activated it on Lollipop 5.0.

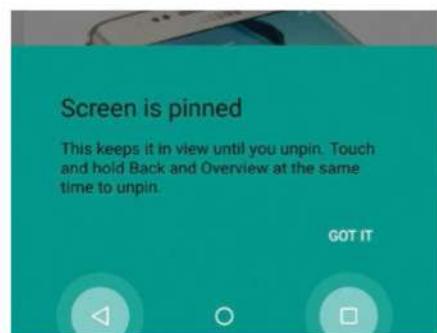


4: Choose security settings

Having set your unlock method you can then decide what notifications appear when the lock screen is in use. This ranges from all notifications to none at all. Choose your desired option and click done. This is all now set up.

2: Unlock pattern

Tap on Screen pinning and then tap the slider to turn screen pinning on. You will then see an option to ask for an unlock pattern before unpinning. Tap that slider to activate this setting. This will automatically bring up an option menu.



5: Pin screens

Press the Overview button to bring up the pages you have open and choose one to pin. If you try and exit the pinned screen by pressing Back and Overview, your unlock option will appear which you'll need to enter before proceeding.

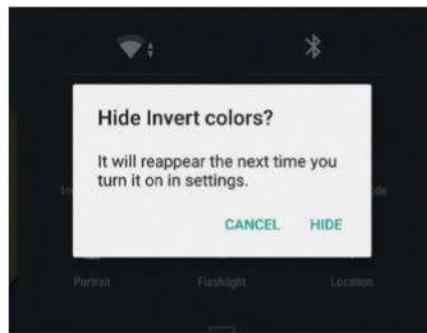
Customise quick settings

Find your way around your Android more easily with this new feature



1: View menu

This is one of the first changes you are likely to notice about Android 5.1. As you pull-down the homescreen drop down menu, you should notice that under the Wi-Fi and Bluetooth headings is now a small arrow that wasn't there before.



2: Quickly join networks

Tapping on this arrow brings up a list of Wi-Fi networks in your area or available Bluetooth devices in your vicinity. This is similar to the list you'd usually get but found after just one click in the home screen rather than after a hunt in the Settings.

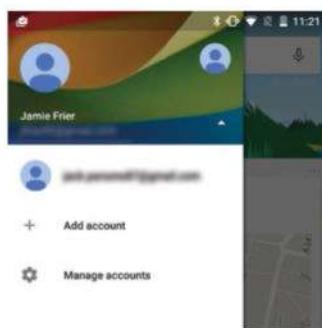


3: Customise quick settings

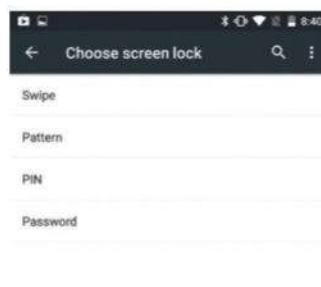
You can also edit certain things on the menu. Invert Colours and Wi-Fi hotspots, when activated via Accessibility and Wi-Fi respectively, appear on the Quick Settings drawer. Remove them by longpressing and selecting 'Hide'.

Make your Android thief-proof

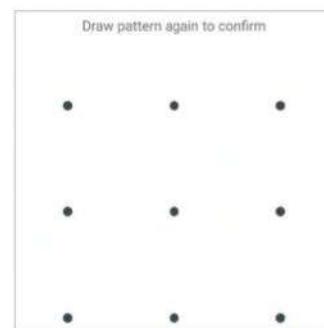
Set a passcode to make sure your phone is unusable if it has been stolen



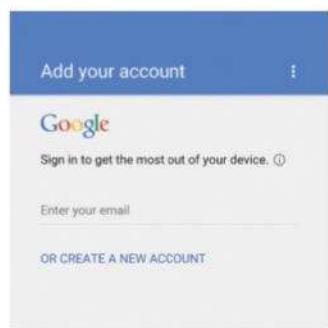
If your device is new, set it up with your Google account with the set-up instructions. If you are updating an existing Android, it's likely that you have already done this. This will then provide your automatic safety feature.



Pull down the homescreen menu and click the settings icon. Scroll down and press on the Security menu option. This will reveal a Screen Lock menu for you to tap. This will give you four options – Swipe, Password, Pattern and PIN.



Choose your preferred screen lock and set it, confirming that pattern or code. This will protect your device from thieves. However, Google has added a secondary security feature with Lollipop 5.1 to keep your data safe.



If your Android gets stolen, report it instantly and it will be locked down. Even if the thief does a factory reset, they can't access it as the new safety setting needs your Google account details to be entered before it'll give access.

Advanced navigation

Google Maps has long been the staple app for anyone needing directions on their Android device. While the latest update doesn't necessarily have a host of new features, it does refine many of most useful ones instead. Many of the tools to help you get from A to B have been made easier to use, while there's even more integration with other Google apps.

You'll find a practical guide to help you get started with saving your favourite maps for offline viewing when a mobile network isn't readily available, as well as using Maps as a great resource for finding recommendations on nearby places. There are also quick guides on setting primary locations with Maps, customising planned journeys to suit your needs and also sharing a location. To get you started, here our five top tips for getting the most out of Google Maps.

1. Use more gestures

As well as zooming in and out with two fingers, by moving two fingers upwards simultaneously, you can tilt the screen. Similarly, use two fingers in a circular motion to rotate the map.

2. Leave a review

After visiting one of the places on the map, make sure to leave a review for it. When you then search for the place using Google, your review will be listed under the reviews section.

3. Control with your voice

When using the navigation feature, don't forget it's possible to use your voice to control certain aspects. Instead of illegally typing out messages while driving, press the mic icon within the search bar and start speaking to get started.

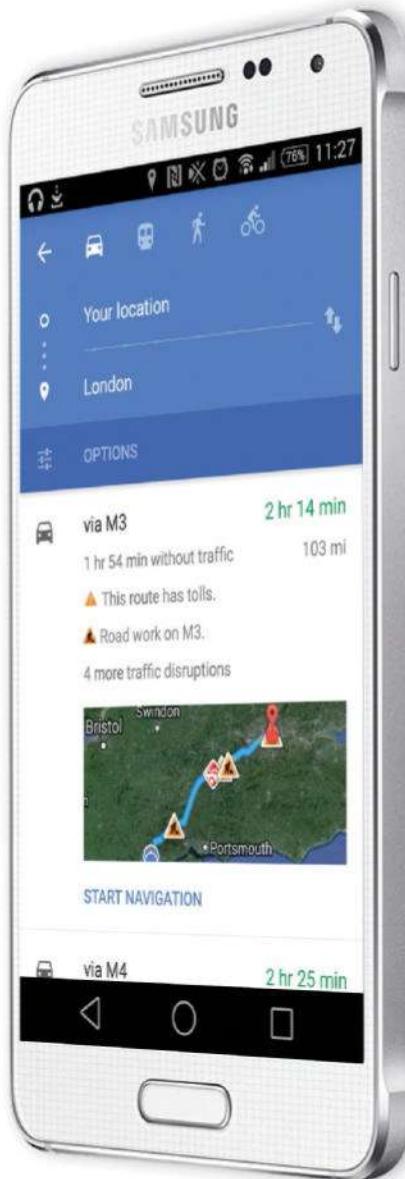
4. Changing routes

If you've hit bad traffic, look for the crossroads symbol on your screen to get an alternative path for you to follow. It could potentially be a more confusing journey, but you should avoid any major traffic build-ups.

5. Distance units

Whether you prefer kilometres or miles, Maps caters for both. The app uses miles by default, but by going to the Distance Units menu within settings, you can change this to kilometres.

Get more out of Google Maps with these top tips



Three alternatives to Maps



Waze Social GPS Simple navigation
What we love about Waze is that it makes it very easy to tailor a journey to your needs. There are also numerous options to help you change your route while driving if you hit a congested stretch of road.

If Google Maps isn't for you, try these out instead



CoPilot GPS Offline mapping
Although CoPilot can be expensive if you want to buy various map packs, it remains one of the most thorough offerings. Users can download whole countries for offline use – perfect if you're doing a spot of travelling.



MapFactor Completely free
MapFactor is a big deal in community-based mapping, where users can upload details of roads, buildings and other info to help people navigate. It's surprisingly detailed and a great alternative to similar apps.

Will use of Maps drain my battery?

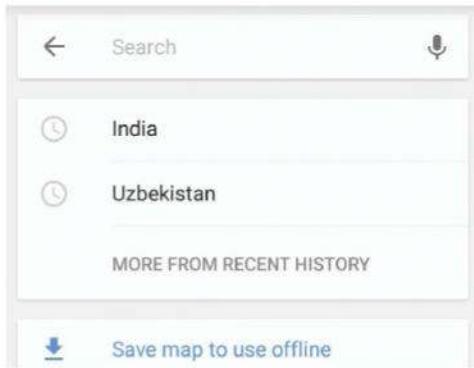
Unfortunately, yes. Maps is a battery-intensive app that, due to the power it needs, will deplete a battery quickly. It's best to use it sporadically and make sure the Location setting isn't constantly activated.

Save maps for offline use

Still find your way around even when you're in a signal dead zone

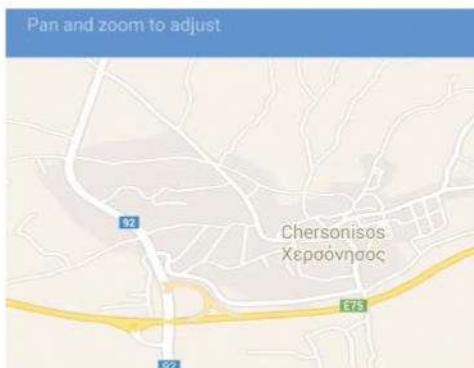
Although Google Maps does need a mobile network to fully navigate, users can plan ahead by downloading selected areas for when a secure network isn't available. This is especially useful when abroad to avoid costly roaming

Google Maps | Saving maps



1: Load and search

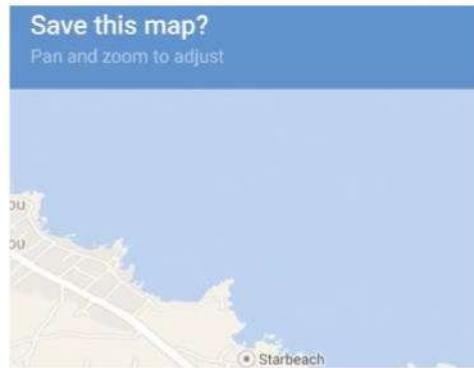
Use the search bar to find an area that you want to save for offline use. Then press on the search bar a second time and tap the X to discover the 'Save map to use offline' option under the results. Press it and then wait for your designated map to once again appear.



3: Resize map

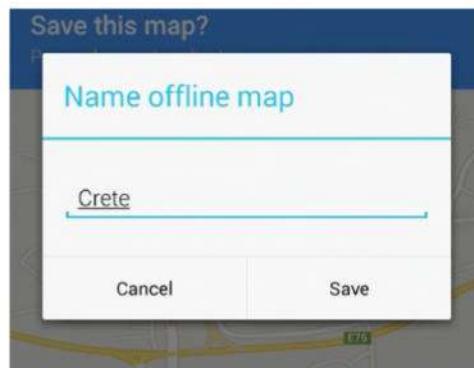
As well as moving the map around, pinch the screen to get a zoomed-in view of the map. This is ideal if you're looking to navigate around a town, or another built-up area. Similarly, drag your fingers apart to zoom out of the map and view a bird's-eye view of roads and local landmarks.

charges, and all it takes is a few minutes. Although a great feature to use, it's important to remember that every time you download an offline map, more of your internal storage will be taken up, so make sure to delete stored maps you've done with.



2: Save this map?

Instead of the normal Google Maps interface now appearing, you'll instead have a map with a distinctive blue border, with instructions asking you to save the map you've got selected. Move the map around in your display to find the section you want to save.



4: Add a name

Press the Save button and now add a suitable name to your selected map. Once finalised, the map will begin downloading on to your device. Depending on the size of the map you selected to download, this can take a few minutes to fully complete.

Edit addresses

Set primary locations to work within your Google Maps account



To start off, open the side menu from within the Google Maps app before scrolling to the bottom of the menu. Now go on and select the Settings option that's provided here.

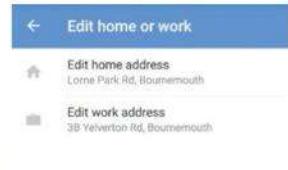


Edit home or work

Google location settings

Location accuracy tips

There are plenty of options for users to customise and tweak to their preferences here. For the purpose of this tutorial, select the 'Edit home or work' option located at the top of the screen.



You can now edit either your home or work address. Simply press on one of the options and use the provided search feature to add your default location. You'll now be able to navigate to "home" or "work".

Discover nearby attractions and weather

Explore recommended places in your local area

As well as being the best navigation app available for Android smartphones and tablets, Google Maps does well at providing users with guides, recommendations and general information about the area around them in a clean and well-designed interface. It's a feature that's been included in Maps for quite some time, but it's only been

very recently that the feature has become one of the premier things to check out within the app. With more links to Google Now, this discovery system is now surprisingly in-depth and can help you obtain the information you need for anything from restaurants to the opening times of a local park or shop you're looking to visit.

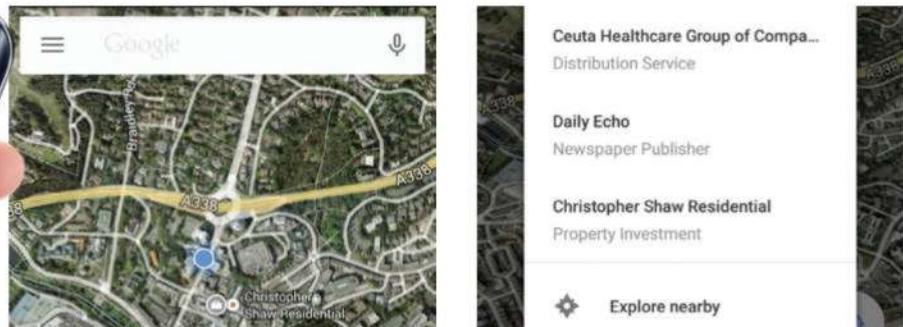
In this tutorial, we'll be looking at how users can initially set up the feature on their Galaxy device and where to find it from the start. Keep reading and we will also point out how you can completely personalise it to your exact needs and preferences, while also showing you the best ways to achieve even better integration with Google Now.



3: Explore your area

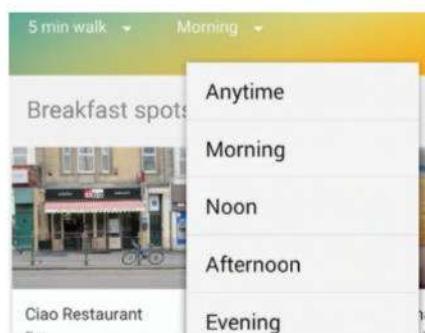
Depending on if the weather card is activated within Google Now, the first thing you should now see is a weather report for your local area. Scroll down the list and you will initially see recommendations for local businesses, such as coffee shops, pubs and restaurants.

Google Maps | Find recommended attractions



1: Track your location

To initiate the recommendation feature, you'll first need to find your current location. Tap the tracking icon at the bottom right of the screen so Maps can find your position. Once located, press the blue circle that marks your location within the centre of the Maps interface.



4: Filter results

Under the weather report, two drop-downs show a distance and time. You can change these depending on the time of day and distance you want to travel to alter your results. Once revised, you may find that more local attractions appear.

2: Where are you?

A menu screen will appear asking to specify your exact location from list of options – ignore this. Instead choose the Explore Nearby option, which will sit next to a compass point icon, located at the bottom of the menu, to begin discovering nearby attractions.

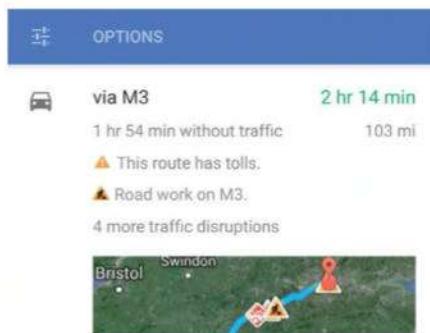


5: Get more information

Select any one of the results in the list to take a closer look at that establishment. On each listing you can find general information, such as opening times and contact numbers, as well as a rating based on reviews from other users, and exact directions to the location.

Set mode of transport

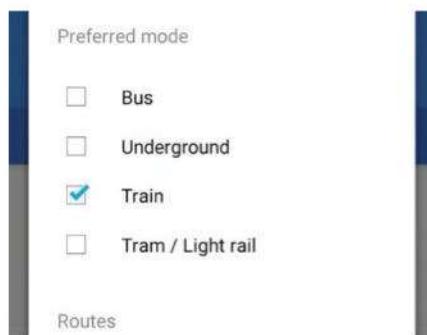
Get directions to walk, drive or ride the rails to your destination



1: Load up travel details

When you plan a journey in Maps, you'll be presented with a various modes of transport you can use to complete it. For long journeys, you'll obviously want to scroll to the train or car options, but walking and cycling options are ideal for short city visits.

When you're planning a journey within Google Maps, you will be presented with a good selection of ways you can get to your desired location. However, some of them tend to be fairly convoluted, and some could simply take a lot longer than you want to spend travelling. But by taking a closer look at how Maps produces your journey itinerary, it's entirely possible



2: Preferred mode

Press the Options button underneath your travel details to open up the Preferred mode screen. Here choose the preferred mode of transport that you require, and select the type of route (such as 'fewer transfers') you want to use to get to your destination.

to curate your very own journey planner and make the necessary changes to get a journey timetable that best suits your travel tastes and needs. Your preferences will then be set for every subsequent journey you plan within the Google Maps app. We will show you just how to find and use this screen within the following tutorial on this page.

	11:27 – 13:38	2 hr 11 min
	5a ➔ CrossCountry ➔	
	11:30 from Burlington Arcade (NE-bound)	
	5 min	
	11:26 – 13:38	2 hr 12 min
	6 ➔ CrossCountry ➔	
	11:30 from St Peters Church (Stand AA)	
	6 min	

3: Check results

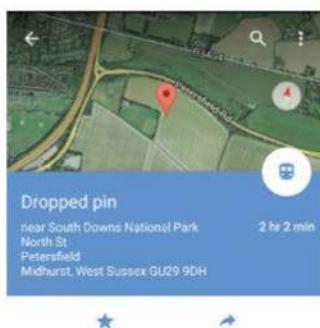
Go back to your travel planner and you should now see refined results for you to use based on your previous selections. By pressing on any one of these options, the new journey will open up within Maps so that you can take a closer look at the directions.

Save and share your location

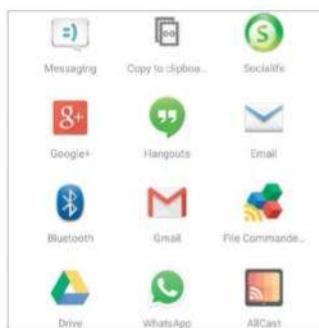
Drop a pin on the map to send that location to a friend



Navigate to a location that you want to send details about to a contact. Long-press on the map until a pin appears and is placed on the specified location. To get an exact location, zoom in on the map for more precise positioning.



With the pin in a desired location, tap on it and an overview screen will appear. This is the screen you'll be able to share with contacts. For the purpose of this tutorial, press on the Share option listed halfway down the page.



Depending on the apps you have on your device, there should be a whole host of different ways you can share the details of the location with a contact. Select your preferred method to start the sharing process.



One of the best things about this method is being able to send the Street View details of a location to someone. This means the recipient can get a direct link to the Street View, rather than having to search for it manually.

Next-gen web browsing

Take your internet browsing to the next level

Web browsing on your smartphone has certainly come a long way in the past couple of years. This is partly due to having access to powerful devices, but also down to the sheer quality of the browsers now available on the Google Play store. The likes of Chrome and Firefox have set the standard on what to now expect from mobile browsers. They offer a feature-packed experience for users that doesn't compromise on performance, and best of all they're completely free to use. Mobile browsers are capable of so much more than simply going from one webpage to another.

In this masterclass we'll be taking a look at some expert tricks that users can explore to take their mobile web browsing to the next level. We'll show you two key features in some of the newest browsers available for users in Javelin and Boat, as well as how to browse privately by anonymising your IP address. Also included is a quick guide on adding bookmarks to your homescreen and how you can achieve the elusive lag-free browsing that's surprisingly easier to set up than you may initially think. Here are five top tips to start using in your browsing.

1. Cut out animations

One way to speed up browsing is to go into the Developer Options and customise the animations you allow on your device. It'll cut a lot of the artwork that some websites include.

2. Stay in sync

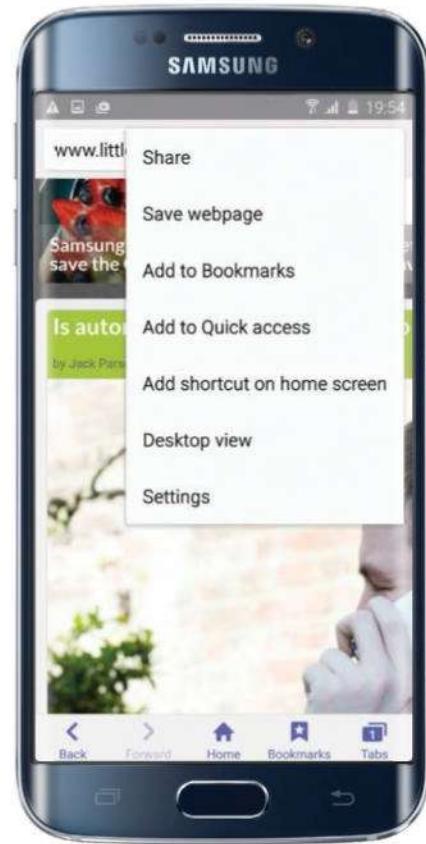
All the main browsers can be synced with their desktop counterpart so you can enjoy a seamless browsing experience. Chrome and Firefox both have this feature enabled.

3. Smart Zoom

The embedded images on a web page are highly interactive. Double-tap on them to enable the Smart Zoom feature, or long-press on them to open up different options.

4. Open desktop site

There are various browsers that will also boast a companion desktop site, but as an example we're using Chrome. Press on the Menu icon and then select the 'Request desktop site' option. This will reformat the page in order to mimic the desktop one.

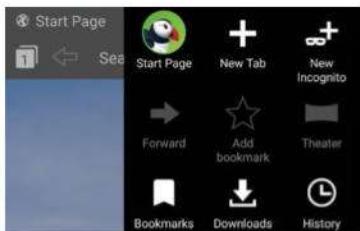


5. Night mode

One of the standout and most useful features in Dolphin Browser is the Night Mode. This enables users to lower the overall brightness on their screen, making it easier to read at night as well as make their battery last a little longer.

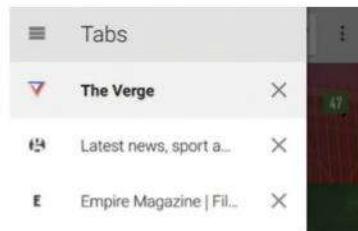
The best web browsers

Three browsers that are better than Google Chrome



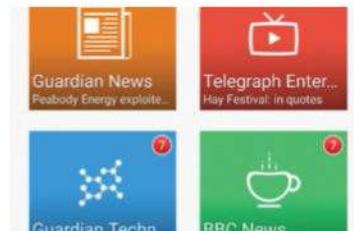
Puffin Browser

Puffin may look quite complicated, but it's surprisingly easy to use once you get used to it. There's a decent amount of choice for users to customise their browsing experience without having to be overloaded with different options.



Lightning Browser

As its name suggests, Lightning Browser is really, really quick. Moving between webpages is seamless and the tabbed browsing feature works incredibly well. It's a must-have app for new and seasoned Android users.



Maxthon Web Browser

After spending time with Maxthon, we like the NewsBites feature that collates the latest headlines from your favourite news blogs. It's a really great way of being able to keep tabs on multiple websites all at the same time.

How can I view Flash content?

Since Google pulled official support for Flash content, users need a third-party browser to access it. The best one currently on the market is the FlashFox Browser, which is completely free to download.

Achieve lag-free browsing

The perfect browsing experience through a hidden Chrome tweak

No matter the processing power of your device, it's common to experience lag while browsing.

You can try countless browsers to avoid the lag, but thanks to the Chrome Experiments page, there's a hidden trick you can also attempt to solve it.

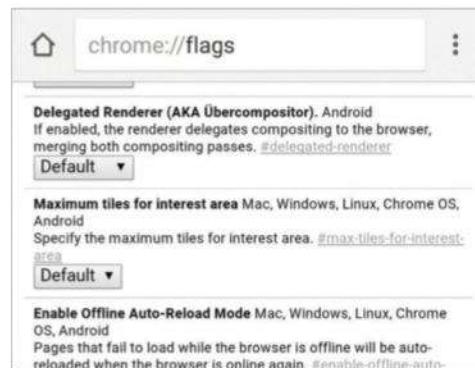
Google has a number of experimental features that can be tinkered to get a better Chrome experience. The one we use in this tutorial will designate more RAM to browsing the web, ultimately helping achieve a lag-free experience.

Google Chrome | Improve your browsing speed



1: Open URL bar

Open up the Chrome browser on your Galaxy device and type chrome://flags into the URL bar. This will take you to all of the experimental features that Google has been working on for Chrome. Please note that some of these can be detrimental to your device.



2: Increase RAM usage

After you've found the list, just scroll down it until you find the 'Maximum tiles for interest area' option. This is where you'll find the easiest way to designate more RAM to the Chrome browser and help eradicate any signs of lag while surfing the web on your device.



3: Choose 512

Now press on the Default drop-down menu and select the 512 option from the list provided. Now scroll to the bottom of the list and you'll see a Relaunch Now option. Tap this option, and you will restart the Chrome browser with the changes in full effect.

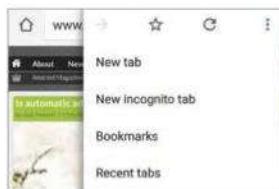


4: Take a look

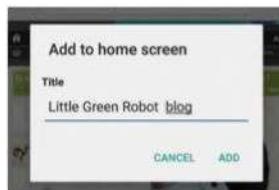
You should now find no noticeable lag when you browse the web on your device. If you're a bit worried about the risks, and you want to revert back to how the browser was previously, go back to the Experimental Features page and select the 'Reset all to default' option.

Save links to homescreen

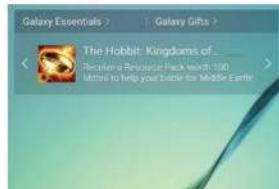
A quick and easy way to keep tabs on all of your favourite sites



Open your Chrome browser on your Android device and go to the website of choice before pressing the menu icon and then selecting the 'Add to home screen' option from the list provided.



A new menu will then appear and prompt you to add a title to the shortcut you want to create. Once this is complete, just press on the Add button and your brand new shortcut will be created.



After you're done, you'll see an icon will be added to your central home screen for you to resize and move to where you need it. Just press on it to be taken to the website's home page.

Explore Reading Mode in Javelin

Make reading large passages of text easier with Javelin's useful Reading Mode feature

One of the biggest issues people face when browsing the web is dealing with large passages of text. Many websites don't format themselves to work on mobile devices, so users are left with a large amount of text that's hard to read. One of the newest browsers on the market is Javelin, and its Reading Mode is a great solution to this.

Through the new Reading Mode feature in Javelin, users can turn web pages that include large amounts of text into a manageable book style. In terms of design, it looks very similar to the Kindle reading app and includes lots of the same customisation features as well, but perhaps not as in-depth as some may expect.

In this tutorial we'll be fully exploring the Reading Mode feature in Javelin Browser. We'll show you how to enable it from within the browser, as well as take you through some of the available formatting options to tweak it to your preferences. In addition to this, we'll reveal how you can share web links through it to various contacts.



merged, and YouTube became dominated by gamers more popular than the biggest music acts. What does it mean for the future of gaming and how is the industry adapting?

3: Change the backdrop

If you find that you're having trouble reading the text, or just want a change of style, then press on the sun icon to change the background to black and the text to white. This layout tends to make it generally easier to read text, but can clash with images.

Javelin | Use Reading Mode

1: Find and enable

Open up a webpage that has long passages of text, but which isn't correctly formatted for mobile use. Press the eye icon on the right side of the toolbar to enable the Reading Mode. It'll take a few seconds for the browser to work through formatting the text.

4: Interaction

In a similar way to the Kindle app, users of this feature can interact with the text in different ways. Highlight passages by double-tapping on them, or copy them to the clipboard with a long-press. Save embedded images by long-pressing on them as well.



How YouTube Is Changing Gaming Forever

After all the fights over copyright

2: Take a look

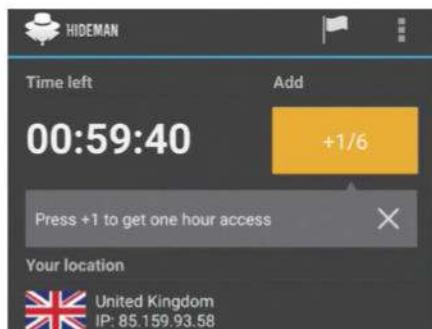
Scroll through the newly formatted page to make sure that all the text is correctly placed and all of the images are present. Although it differs from page to page, text tends to appear quite large, so use the A +/- toggles at the top of the app in order to make it smaller.

5: Share the link

After you've finished reading all of the text, press the share icon on the toolbar. This will reveal a whole host of different options available for you to send the web link of the page you're on, so choose whichever one happens to work best for you before sending.

Anonymise your IP address

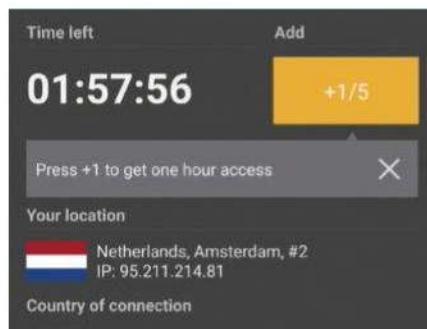
Browse the web in complete privacy by using Hideman VPN



1: Connect to remote IP

Start by opening up the Hideman VPN app and press on the Connect button at the bottom of the device. The app will now scan for your own IP address to determine your location as well as a remote IP for you to connect to.

No matter what browser or device you use to search the web, your data is never completely safe from being compromised. If you're worried about how your data is being sent, or simply that your device is being tracked, then you could look at anonymising your IP address. Through the Hideman VPN app, you can connect to a remote IP that the



2: Check connection

It can take a few minutes for the connection to be established, but once it's done you will see a notification appear alerting you of it. This notification will provide you with more details of where in the world your temporary IP is based.

app provides, which enables you to not only browse the internet safely, but also in complete privacy.

The app provides users with several hours of free private web browsing, with it costing just a small amount of money to get unlimited access – a small price to pay for anonymity on the internet. Here's how to get started.

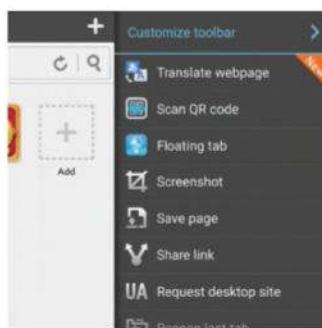


3: Auto-connect option

If you don't want to manually connect to a VPN before browsing the web, just go to the app's Settings menu and then enable the Auto-connect to VPN option. This little option will help save you a whole lot of time in the long run.

Create a browsing toolbar

Choose the features you want instant access to by creating a custom toolbar in Boat Browser



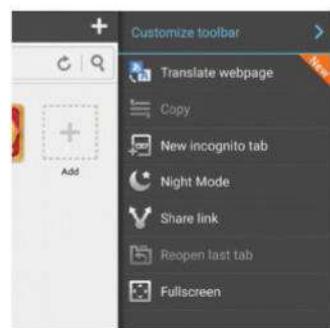
Open Boat Browser and select the arrow in the bottom-right of the app. This will open up a side menu titled Customize Toolbar. Here you can switch and change the icons you want to have access to on your side toolbar.



Most of the features already placed on the toolbar are fairly pointless when using Boat. If you want to focus in on making the browsing experience easier, then add things like the New and Close tab options.



You'll notice that some of the icons have a blue shine to them; this means that they link in with other apps on your device. Similarly as before, some of them are fairly pointless, but one or two could be worthwhile additions.



Once you've finished sorting out the layout, press the Back button on your device. A swipe to the right on your screen should now show your alternate toolbar in a list format, as well as options to make further edits to it.

Do more with your email

Upgrade your inbox with these top tips and essential apps

We live in a world where users can always be connected to their emails, no matter the device, or the location. There are new email clients appearing all the time, apps available for smartphones and with Gmail, you can now use certain features without online access, and it's easier to sync emails across devices.

The way we send emails is so fast and easy that the corresponding apps have had to improve to keep up, with relative success. We look at some of the best email apps available for Android users and show you some of the features that will improve how you use your email. Here are our top five to get started.

1. Manual sync

Annoyed at how many emails you're notified about? You can set up a manual sync option for your account, where you'll only see new emails when you go into the account directly.

2. Block spam

The likes of K-9 are fantastic choices when it

comes to managing spam and phishing emails. Using this app, you can block specific emails and services sending you problematic emails.

3. Increase security

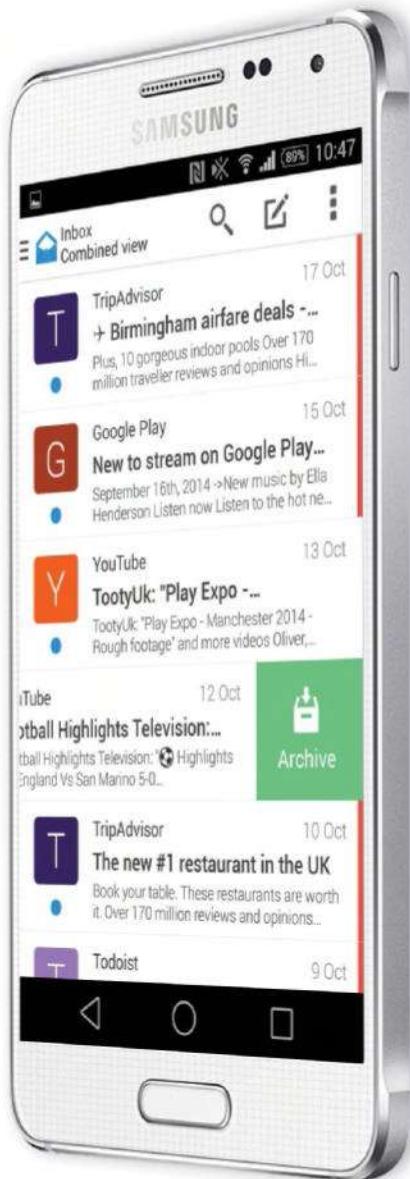
To provide some extra security for your email accounts, make sure to add some sort of password system to them to help stop people accessing them. We recommend the CloudMagic app, which has a great passcode system for its users to explore.

4. Better Outlook

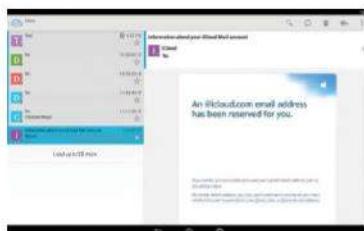
If you use an older email client, namely the Outlook 2003 system, you may have issues finding a decent Android app to access your account. It's a good idea to update your client.

5. Custom server

Not happy with the available clients? No problem. You can create your own email server from scratch and apply the settings to match your criteria, but the process is quite difficult.



Best alternative to Gmail | These email apps are the best on Google Play



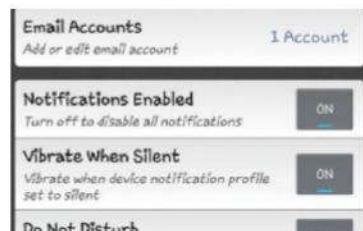
Support for iCloud

For those moving over from iOS to Android, use the Sync for iCloud Mail app to move your existing emails to a new Android email account. It's a quick process to complete and can save manually having to do it.



Account integration

If you're looking for an app that provides a great system for managing your accounts in one place, then CloudMagic is a superb choice. It caters for Yahoo, Exchange and Office 365 accounts among others.



Use with Android Wear

There aren't many choices for those wanting to get their emails on their Android Wear smartwatch, but the best so far is the WearMail app. It's easy to set up and great for getting a glance of your inbox on your wrist.

Why won't my account sync?

The most common reason why an account won't sync is a change in password or security details. Log on to the desktop version of your account and check if any details have been changed.

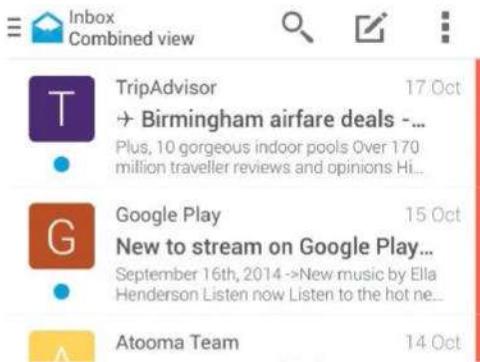
Merge accounts in one inbox

Collate Gmail, Outlook and Yahoo! accounts with Boxer

If you have one email address for your personal life and another for work, it be difficult juggling them both. With Boxer, bringing all your accounts into one place is possible. The app provides a platform where users are able to manage individual

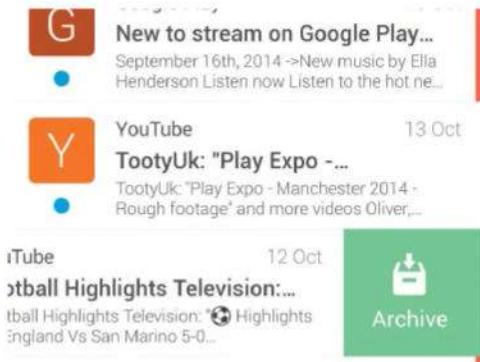
accounts from within one app, or instead merge them together into a collective inbox. This inbox can be customised to suit how you like to interact with emails. There's no limit to how many accounts you can merge, so follow this tutorial to get started.

Boxer | Merge email accounts



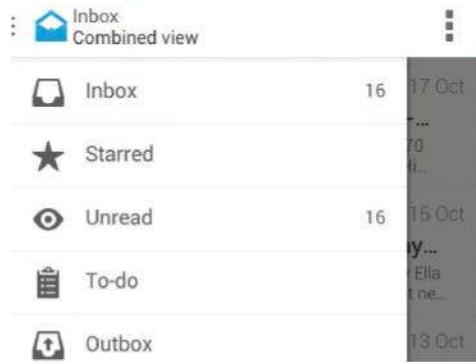
1: Add your accounts

After launching the Boxer app, you'll be prompted to add an existing email account. Once the syncing process has finished, you can then add any number of subsequent accounts by upgrading to the Boxer Premium app. Press on the Confirm button once you've added all accounts.



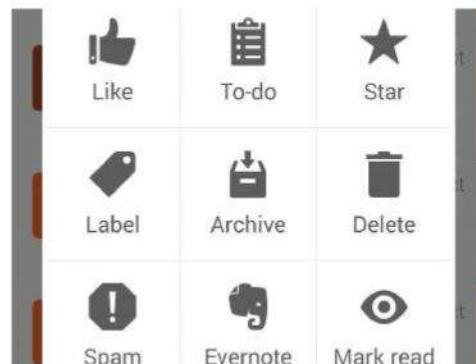
3: Use gesture controls

Boxer includes a couple of gestures that can be used to quickly move emails to different parts of your account. By swiping left you can archive the email and by swiping right you can move it to your recycle bin. Both of these folders are available through the app's side menu.



2: Move between accounts

Open the side menu of the Boxer app and you should instantly see the various accounts listed. By default, your inbox will be a feed of all your different accounts, but by pressing on one of the listings, only the emails associated with that account will now be shown.



4: Archive and other options

By long-pressing on any email in Boxer, you'll open up a new menu with several actions. Users can choose to move the email to a different folder or email account, which is really handy for keeping specific emails together. It's also possible to send email to the cloud through this menu.

Customise settings

Advanced users can change server details of accounts without fuss



Go to the individual account settings page in your chosen email client and then look for both the incoming and outgoing settings pages that will be listed within the menu before you.



For this step, go to the individual account settings page in your chosen email client and look for both the incoming and outgoing settings pages that you will see listed within this menu.



Now go ahead and edit the server name, as well as assigning an alternate port number if you have one. Choosing the correct type of security is also important for your account.

Master email attachments

Print, save and use email attachments effectively

One of the benefits of all email clients readily available to Android users is that they offer an easy way to send small attachable files between email accounts. Although most people send documents as email attachments, it's entirely possible to send short media clips, or even more complex files. The size limits that apply to

email attachments vary and purely depend on the email client you're using. Smaller ones tend to allow only for small files to be sent, while the likes of Gmail and Outlook cater for bigger files to be sent as attachments.

The ways in which users can now interact with any email attachments sent to them has vastly changed in the past year. As well as

being able to simply open them, many email clients now allow attachments to be saved directly to the cloud or, in the case of Gmail, enable compatible attachments to be directly printed from the email. In this tutorial, we will show you the best things that you can do with any email attachments sent to you on your Android device.



3: Open and install

By simply pressing on the attachment, the file will look to open or install itself onto your device. Depending on the file, a new menu will appear with installation instructions to follow. At this point, you can also perform a virus scan of the file to make sure it's clean.

Gmail | Add an attachment



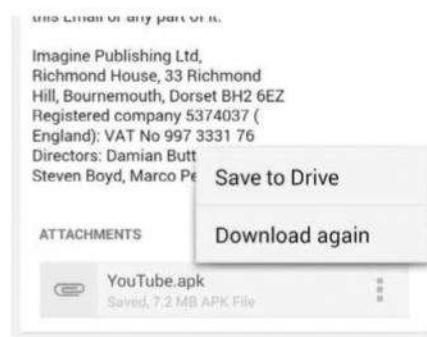
1: Allow unknown sources

To cater for email attachments, it's imperative you enable the Unknown Sources option from the Security menu. This lets users have access to install certain files and apps that are sent via email attachments, but make sure you only open files from reputable sources.



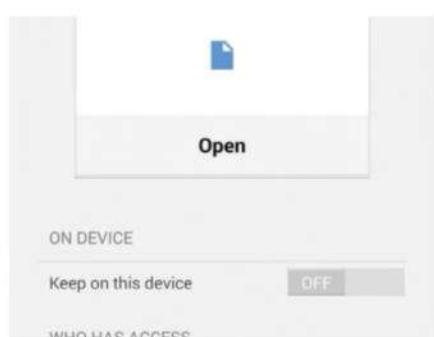
2: Finding attachments

Open up an email of your choice and scroll to the bottom to find the attachment. As well as listing the size of the attachment, you'll also find what kind of file it is. In the example shown, we've emailed across an APK file that can be installed onto the device.



4: Move to the cloud

Navigate back to the email and instead press on the menu icon (three dots) to the right side of the attachment. Here you'll find the option to save the file to Google Drive, or another cloud service depending on the email client you're using. Click on the option to continue.

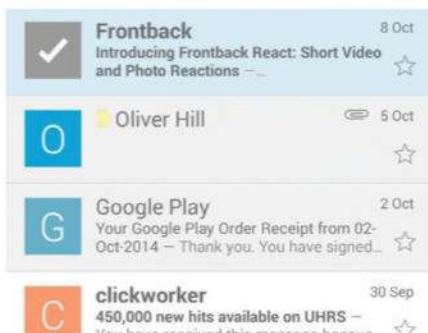


5: Managing in the cloud

Open up the corresponding cloud account and find the recently moved attachment. From the account, users can now download the file onto their device, read more about the origin of the attachment, or simply redistribute between various accounts.

How to label emails

Make a cluttered inbox more manageable with labels



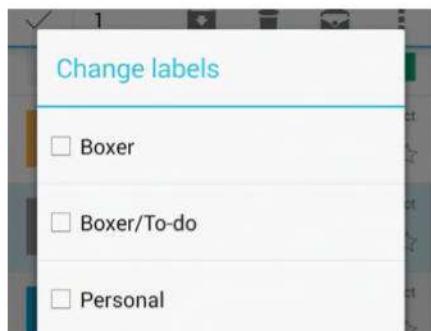
1: Select emails

Go through your Gmail inbox and long-press on the emails that you wish to group together into a newly created folder. With the emails selected, go to the menu icon and press on the Labels option provided near the bottom of the list.

One of the things that many of Android's biggest email clients don't have is a category system, with which users can quickly move different emails into specified folders. It is, however, a feature that Google has looked to implement using a label system within Gmail.

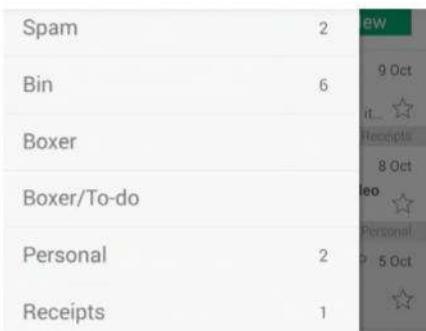
Through the app on any Android device, users are able to create a series of

labels for their emails, which can hold an unlimited number of emails within that are all related to a similar topic. When a new email arrives, it can then be quickly moved out of the main inbox into one of the user-created label folders. It's a quick and easy solution for maintaining a clean inbox. In this following tutorial, we'll show you just how to achieve it.



2: Create and choose

You'll find a plethora of pre-existing labels to choose from, but there's also the option to create a new one. After selecting or creating a new label, the highlighted emails will now move to the designated folder. It can take a few minutes to move them all.

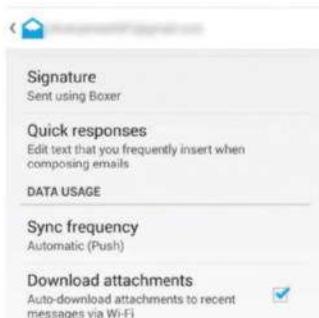


3: Open label folder

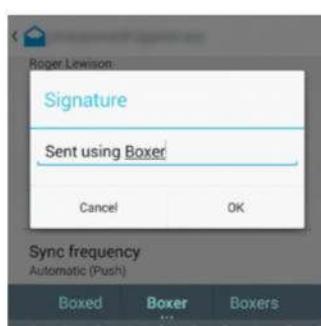
Go back to your email inbox and each email should now have a little label symbol on the bottom right of it. To access a label folder, go to Gmail's side menu and scroll down the list to the label section and select the appropriate label.

Create and customise signatures

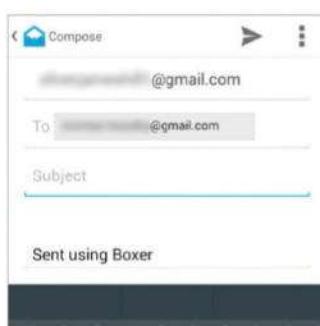
End your emails with a personalised email sign off



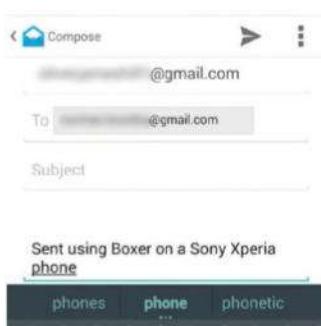
Go to the settings in your email app to find the signature option, usually at the top of the settings screen. An email signature will be added to the bottom of any email you send and can be a great way of personalising messages.



A signature can consist of anything, but most people simply put their name and details in it. Though there are no criteria for how long a signature can be, making it too long can be a real eyesore those receiving it.



Press OK when you've added your signature and start writing a new email. At the bottom you should now see your new signature. If not, go back to the account settings menu and make sure you saved the signature.



If you want to personalise a signature to a specific contact, you can edit the current signature while typing out an email to them. Once sent, the email signature reverts back to the original set up at the beginning.

Master the Office suite

Create, edit and share with the cloud using Microsoft Office

The Microsoft Office Mobile app has been a long time coming, but it's finally here and best of all, it's completely free. The app itself encapsulates all the Office programs into one app, without the need for extra downloads. You'll find both Word and Excel in their entirety, with a basic version of PowerPoint also included.

In this masterclass we explore the best features of the MS Office app. First we'll look at the options available to those wanting to create documents and spreadsheets in Word and Excel. Also included is a guide to PowerPoint and some of its features, while we also show you how to connect the app to other Microsoft programs. You'll also find a guide to Microsoft's OneDrive, which is also included within the app. To start, here are our top five Office tips.

1. Investigate templates

To give yourself a headstart with a document, check out the various premade templates.

2. Be patient

You may find the app can be fairly inconsistent

with connecting to its online servers, and you may find it occasionally logs you out of the app without you realising. Just be patient with it as it's a problem Microsoft is aware of.

3. Identify yourself

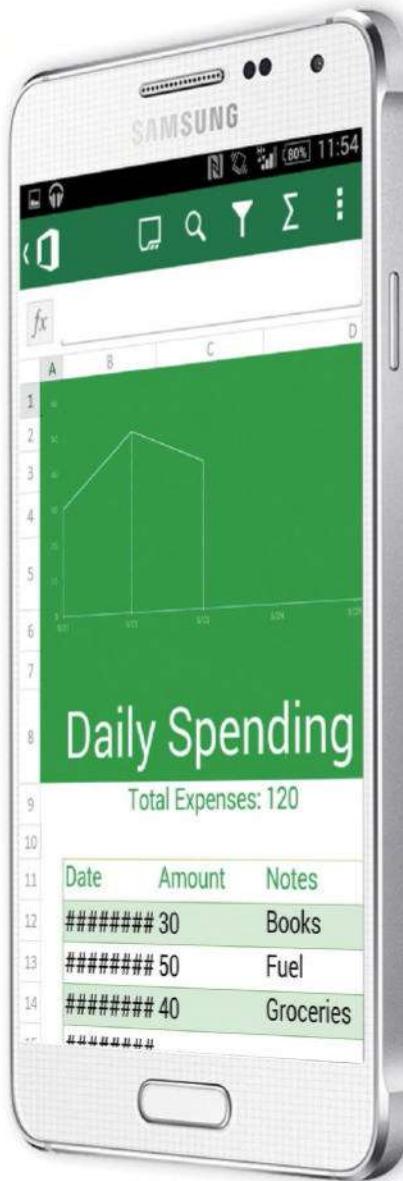
Before adding comments to documents that have been sent to you, make sure you add a name to your comments through the Settings menu. Otherwise your comments be shown as anonymous.

4. Add extra pages

If your spreadsheet is a little longer than you originally planned, why not add extra pages to it to split it up. With the sheet open, press on the file tab at the top to input details of a new page.

5. Share to the cloud

There's a big emphasis on sharing your documents in this application and by saving them to the cloud, it's easy for users to then open them up in any of the other Office suite apps to edit further.



Office alternatives If Microsoft's suite isn't for you, check these rival offerings

Quickoffice

Google's very own office suite is perfect for those who want advanced features. It comes with access to spreadsheets, documents and PowerPoint files, while also enabling users to save and open files from Google Drive.

Polaris Office

Where Polaris trumps its competitors is with the ease of creating documents from scratch. It transfers documents between both desktop and mobile version, too, so you can edit your documents no matter where you are.

Docs To Go

Among the plethora of creating and editing tools in Docs To Go are some sharing options users should check out. Docs To Go connects with a wide range of different cloud storage accounts to make managing files easy.

Why does text not format correctly when I import documents in Office?

The best solution is in the app's settings. Select the 'Keep original formatting' option which reverts it to the original layout.

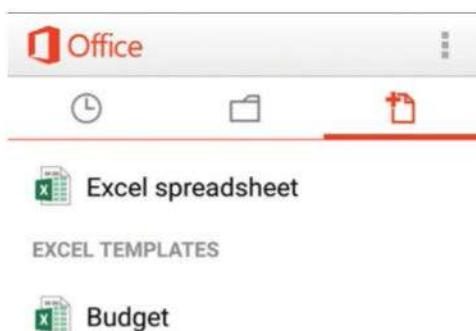
Create and format documents

Start from scratch and create your own Word document

Creating a Word document is usually the first thing users try in the MS Office app. The process is fairly easy and Microsoft has done a good job at making sure the feature includes a variety of formatting options to help make your documents

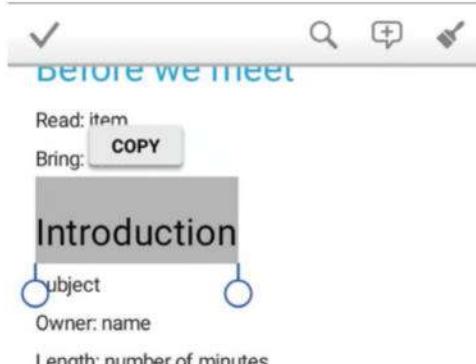
stand out, while also making it easy for beginners to put together simple documents. In this tutorial, we'll be exploring all the basic features of putting together a document, as well as taking a look at some of the formatting options available to users.

Microsoft Word | Create a Word document



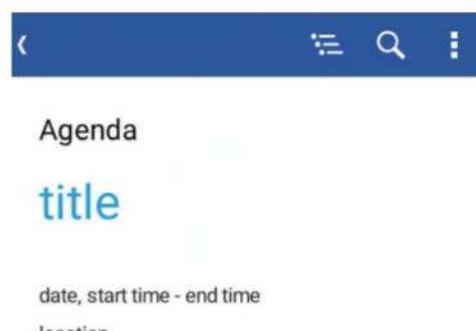
1: Choose blank document

Log in to the Microsoft Office app on your Android and press on the far right tab on your screen. Here you will be given the choice of a blank Word document or, if you scroll down the page, the choices of templates, including an Agenda, Outline and a Report.



3: Copy, paste, comment

By long pressing on any word in your Word document, users can copy it to their clipboard. After highlighting a word or sentence, you can also add a comment by selecting the bubble icon at the top of the app. Other users can then read them if they'd like.



2: Type it out

Enter the text that you want to save in the document, following the template provided if this is the option you have chosen. To make this easier you can use your Android device's built-in autocorrect feature to save you don't have to type out so many words.

Before we meet



4: Start formatting

After you're finished, you can take some time to work through the formatting options available to you in the app. Highlight a passage of text you want to format and select the brush icon. Here you can apply colours, change font size and explore even more options.

PowerPoint documents

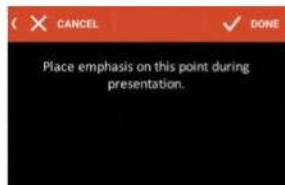
Despite not being able to edit, you can view and add notes to imports



Open up the presentation on your Android through the document screen. Once it loads, you can press on the tiled tab at the top of the app to view the presentation from start to finish.



By long pressing on a specific slide in your presentation, users can then go to the overview screen of the presentation. This is ideal if you want to view a particular slide in more detail.



You can tap below the slide to add notes to it. If you choose to then save the changes and export it to other contacts, these notes will then be shared for them to view.

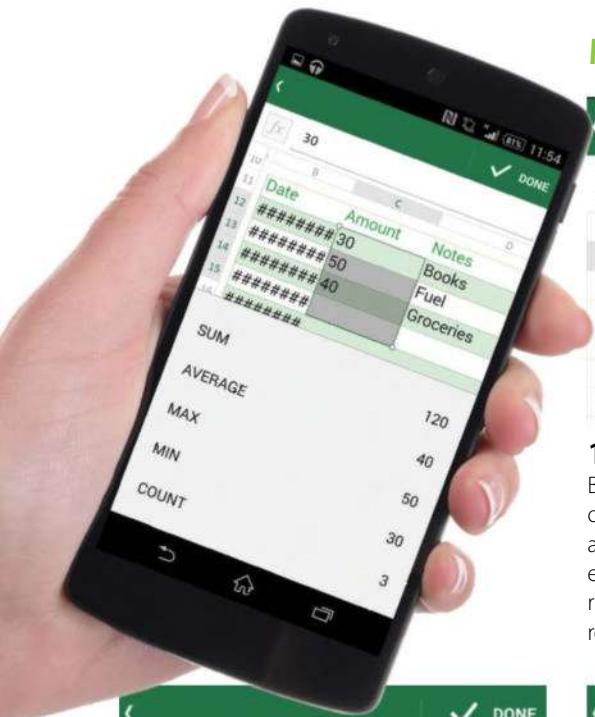
Put together a spreadsheet in Excel

Use equations, charts and more within the Excel feature of the MS Office app

Excel has been a staple of the Office brand for some time, but with the amount of features the desktop version contains, you could be forgiven for thinking that the mobile version may not be as comprehensive. Thankfully, Microsoft has incorporated many of its best features into the mobile version, while still making it easy

enough for new users to get to grips with and create simple spreadsheets. As well as still being a great solution for simple data entry, this version of Excel still contains all the complex formula and equation features that more advanced users will want to look at. Dig a little deeper and users will be able to find some great customisation features to help

personalise their created spreadsheets, and even leave comments on them for others to read when they access the spreadsheet themselves. In this tutorial we'll be guiding you through the basics of the Excel app for your Galaxy, while also exploring some of these more advanced features, including creating and formatting charts.



	A	B	C	D
2	Date	Amount	Notes	
3	31-5-11	20	Books	
4	31-5-11	50	Fuel	
5	4-6-11	100	Groceries	
6		170		

3: Input equations

Take your Excel usage further by using the equation feature. By highlighting a cell, you can select the FX button at the top of the sheet and input a formula into the space provided. Press enter for the result to be added to the cell.

Microsoft Excel | Create your first spreadsheet

Table 1			
A	B	C	D
1			
2			
3			
4			
5			
6			

1: Start from scratch

Begin by selecting the blank spreadsheet option from the homescreen of the Excel app. Once the spreadsheet loads up, begin by entering the Settings page located in the top-right and customise how many columns and rows you need.

Table 1			
A	B	C	D
2 Date	Amount	Notes	
3 31-5-11	20	Books	
4 31-5-11	50	Fuel	
5 4-6-11	100	Groceries	
6 11-6-11	15	Groceries	

2: Finding attachments

Now start adding all the data in. Make sure to use your keyboard shortcuts to quickly get around the spreadsheet. If you need to add a new row in between some data, just long press on the numbers on the left side of the sheet to create a row.

Table 1			
A	B	C	D
2 Date	Amount	Notes	
3 31-5-11	20	Books	
4 31-5-11	50	Fuel	
5 4-6-11	100	Groceries	
6	170		

Table 1			
A	B	C	D
2 Date	Amount	Notes	
3 31-5-11	20	Books	
4 31-5-11	50	Fuel	
5 4-6-11	100	Groceries	
6	170		

4: Create a chart

With enough data entered, the next step is to create a chart and input it into your spreadsheet. Highlight a number of cells before long pressing on them and choosing the generate chart option. The chart will be entered at the top.

5: Explore additional options

Through the menu icon, you'll find many additional options to mess about with. At the top of the menu you'll see the Sort option, which enables users to filter through their data, and the Clear option that deletes multiple cells.

Connect with other accounts

Link the Microsoft Office app with your desktop Office account and others

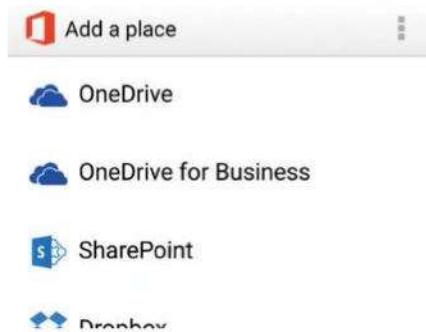


1: Correct tab

From the homescreen, select the folder tab in the centre of the app. Here you'll be able to see all the external programs you're connected to. To start with, you should find your OneDrive account listed, but select the Add a place option to continue.

There's plenty of options in the MS Office Mobile app that make it great for creating and editing your documents and spreadsheets, but on its own it can be fairly limited when importing and exporting them to other accounts when you need to distribute them. Luckily, through the app, users can link the MS Office App with a series of other

Microsoft programs to get a more fluid sharing system in place. As well as adding additional OneDrive accounts to the app, users can also choose to link the app to any Office 365 and SharePoint accounts they have. In this tutorial we'll be taking you through the basics of linking one of these programs to the MS Office app on your device.



2: Choose a program

The next screen shows you the four programs that you can choose to link with. Connect to OneDrive, OneDrive for Business and SharePoint with a Microsoft account, or connect to Dropbox if you have an account set up with alternative cloud store.



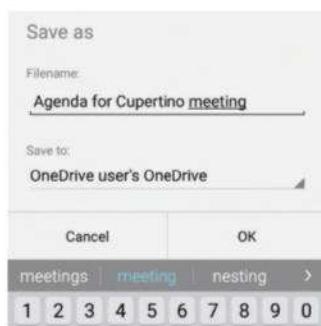
Allow
@gmail.com
Use a different account

3: Connect

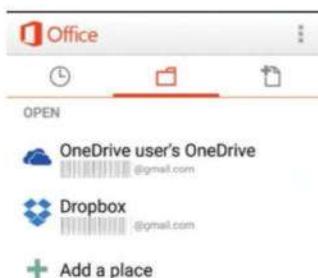
Each log-in process is slightly different depending on which program you choose to connect with. For instance, we already had Dropbox set up on our Samsung Galaxy, so it was as simple as granting permission to Microsoft Office Mobile.

Manage documents in OneDrive

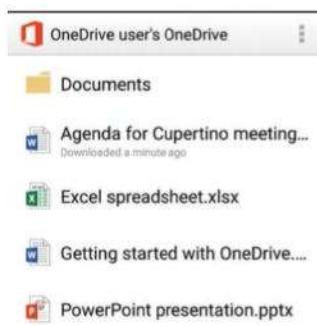
Save your phone's internal storage by taking your documents to the cloud with OneDrive



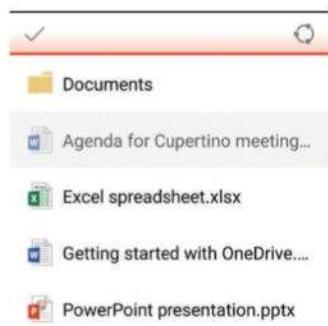
After creating a document, go to the Save As option to be taken to the screen above. By default, the app will save the document to your phone's internal storage, but by pressing the small arrow you can select the OneDrive option.



Go to the homescreen and to the folder tab in the middle. Here it'll list the OneDrive account associated with your Office app account. If it's your first time accessing your OneDrive account, it'll take a little while to load.



Your OneDrive account may look a bit empty, but by pressing on the Documents folder, you'll find a drop-down list of all the documents stored. It's also where you can access a document from your desktop Office account.



With the documents in front of you, users have several options. By long pressing on a document, you can delete it from your OneDrive account, relocate it to your device's storage, or share it through Bluetooth or the cloud.

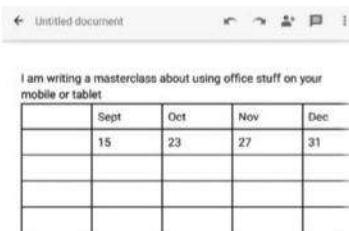
Work on the go

Essential apps to run your office anywhere

In today's connected world it's becoming easier to access the office, without actually being in the office. Smartphones are powerful enough to perform a range of tasks, such as putting together presentations and holding teleconferences – so the device in your hand could be your ticket to a job without the commute. There are a range of programs for writing documents, creating spreadsheets and producing presentations – Microsoft Office recently launched its free suite of Word, Excel and PowerPoint on the Google Play store. There are plenty more ways to provide yourself with an office on the go, however. In this masterclass we will show you how to record interviews or important phone calls using the Cogi app as well as demonstrate how to create PDFs with CamScanner. If you really need your office to be based at home, then we take you through document sharing. We'll also explain how to access your work computer from anywhere with Chrome Remote Desktop. We've also got a tutorial on how to set reminders based on your location, so you don't miss a meeting. Your smartphone or tablet could be the key that unlocks you from your desk and we will show you how to use it.

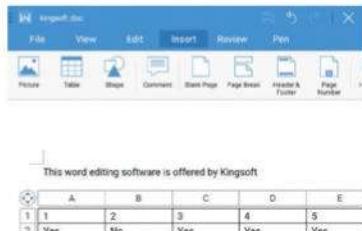
"Your Android could be the key that unlocks you from your desk and we'll show you how"

Portable word processors | Documents on the go



Microsoft Word

Microsoft Word is the first program you think of for writing text and reports. Well optimised for Android tablets with an easy access ribbon for editing. Office 365 subscription is needed for full use.



WPS Office Free

The word program in this suite is basic but easy to use. Its main benefit is the accessible share button and the fact that it can encrypt your sensitive document to keep it safe from potential hackers.

5 tips for keeping work files safe

1. Protect your work

The first rule of Work Club is... always back up. While your workplace will have safeguard after safeguard, a crashed phone might lose you all of your work. Ensure that you've backed up your documents to the cloud, Google Drive or your SD card.

2. Watch your data use

Keep on top of your data. Sending attachments over email, communicating via Skype and downloading documents all cut through your data allowance. Be sure to turn on your Wi-Fi or set up an alert system for when you are close to your allowance.

3. Steer clear of large files

Be aware of file sizes. PDFs, videos and picture-heavy documents can all be hefty sizes. Try and upload documents to shared drives or the cloud because emails usually have file limits and a big file could clog up both systems.

4. Don't overload

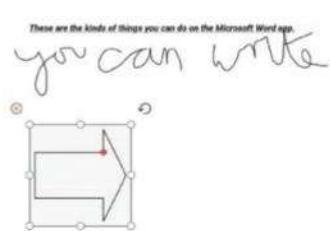
Don't take on too much. Although your device probably has a sizeable storage capacity, you could quickly use up your memory once you start working. When you've finished with something, save it somewhere else and delete it to keep your device working smoothly.

5. Take care

Be careful when sending sensitive documents via Wi-Fi, especially if it's a public connection like a café. Data can easily be stolen so if you have to use public Wi-Fi, use encryption software to keep your files secret from hackers.

Won't this cost a lot?

Most office programs are free to download, but you'd have to pay to unlock the full range of features. Some use a subscription system, others ask a one-time fee. If you want basic word documents and spreadsheets everything can be free.



Office Suite 8

This app has a great word program that you can use straight away and it provides easy access to lots of formatting tools. It also enables you to import PDFs into a document, which could prove useful.

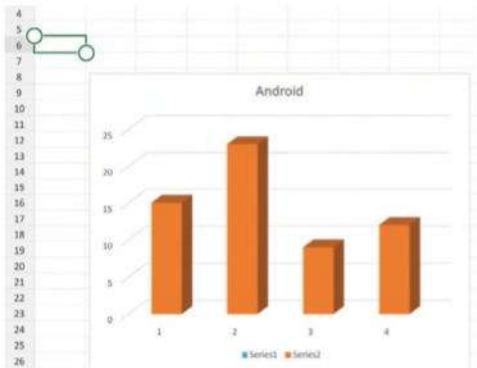
Share, edit Excel documents

Make sure the spreadsheet you're sending isn't read-only

Few things are as frustrating in the office as a **read-only document**. Needing to make a change but being unable to is very annoying, especially if the person on the other end isn't in. Therefore, it's useful to know how to send documents that can

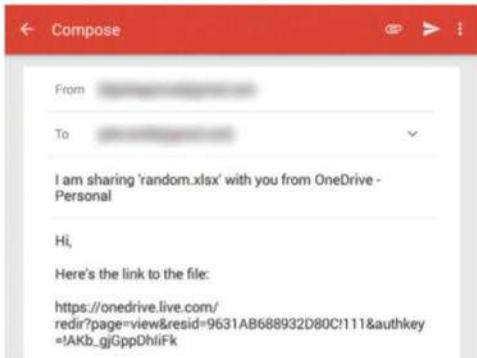
be edited. The Microsoft Excel for Android program can do this, meaning that you don't need to be in the office to get your spreadsheets seen, and you can also ensure that your work can't be tampered with by sending it read-only.

Microsoft Excel | Share editable Excel documents



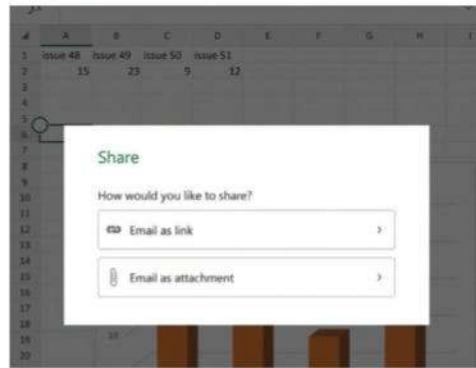
1: Create your spreadsheet

Load Excel, click new spreadsheet and create the document to send. Once finished, save it by pressing the disc in the top-right corner and name it to make it identifiable to the recipient. If you're sending an existing spreadsheet, just click on it in the home page.



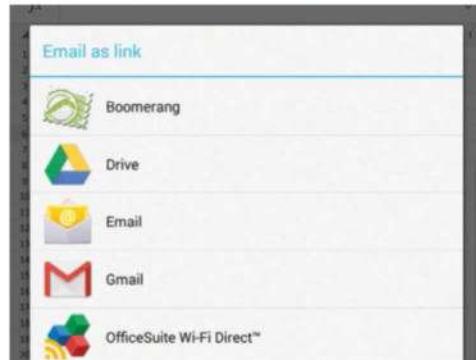
3: Choose your option

If you choose to send your spreadsheet across as a link, a second option will pop up asking if you want to send it as a view only file or as a copy that can be edited by the recipient. Select your chosen option. If you want to send it as an attachment, select that option instead.



2: Share the spreadsheet

In the top right-hand corner, click on the small person with a plus sign in front of them. The pop up box will give you the option to email the document as a link or spreadsheet. The link option will open the document up in their One Drive file while the attachment will open it in Excel.



4: Send the email

Either of the three options will bring up a range of delivery options. The simplest is usually Gmail, but One Drive will be the best one to sync up with the Microsoft Office program. If you are in close proximity, you could also send it straight to someone else's device via Bluetooth.

Set location reminders

Trigger your memory based on a place, rather than a time



To start off, open up Google and press the three horizontal lines in the top left-hand corner of your device's screen. This will open up the menu. Find Reminders in the list and tap it.



The program will automatically set a reminder for your Android device to go off at a particular time. Press the button next to the Where menu to open up the location option.



Tap the downward arrow on the right. This gives you the option of Home, Work or typing in a place yourself. Press the tick when you're done and then your reminder is set.

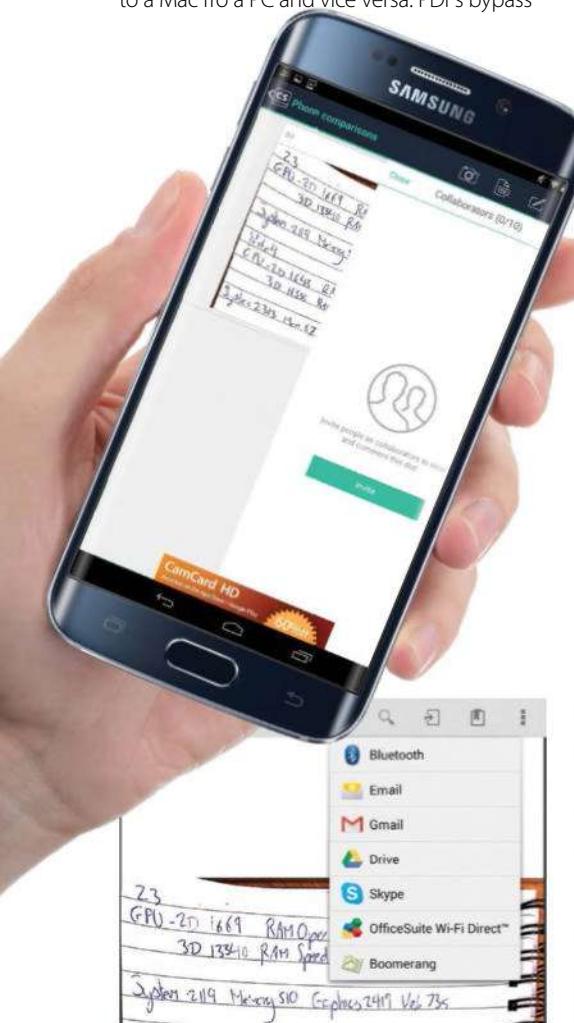
Save documents as PDFs in a snap

Make and receive PDFs with the CamScanner app

PDFs are important in a world where there are multiple programs for writing documents. Transferring documents from one device to another could incur readability problems if one device uses one Word program and another uses a non-compatible one. Everyone has tried to send a document to a Mac from a PC and vice versa. PDFs bypass

this problem by making documents readable on any device that has the free Adobe software installed. CamScanner is an excellent app that can take photos and transform them into PDFs as well as turning word documents into PDFs too, giving you the option to crop, rotate, resize and send your documents in a variety of ways.

By making your Android smartphone or tablet into a scanner, using its advanced camera, you can work from home and still keep your colleagues informed. We'll show you how to do all of the above, as well as sharing PDFs with your contacts and importing existing photos in your gallery to convert to PDF.



3: Share the document

Press the PDF icon and the top of the screen should show an option to share. This will enable you to send the document via a range of methods, including Gmail and One Drive. Selecting one of these options compresses the file down to a manageable size.

CamScanner | Save as PDF



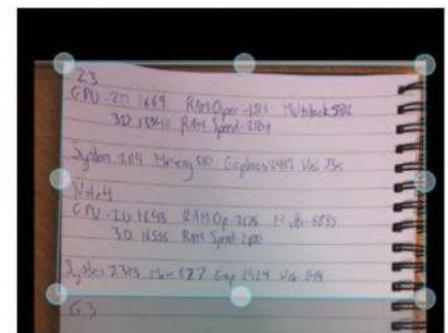
1: Get started

Download the CamScanner app from the Google Play store and add the InNote plugin as well so you can add notes to your documents. Press the three lines in the top left-hand corner, go to Settings and then sync the app with your One Drive account.



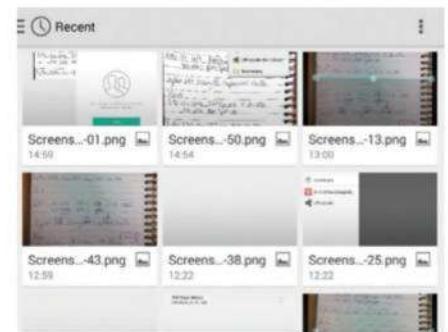
4: Add collaborators

Press the three dots in the top-right corner and choose Add Friends, which will bring up a side screen. Press Invite to enable others to view and comment on the document. The menu in the top-left shows you the documents that you have received.



2: Take a picture

Press the camera icon in the bottom-centre of the screen. After taking your photo, CamScanner will give you the option to crop your picture which you can do by sliding the circles up and down and rotating the image to your liking. Press the tick when done.



5: Import your pictures

You can easily select images and files to import. Press the three dots once again and choose 'Import from Gallery'. This will bring up all of your existing pictures and files. Select the file you want to view, convert and share from your list and it will then appear in the app.

Take meeting minutes

Forget shorthand! Record meetings in detail with Cogi - Notes & Voice Recorder

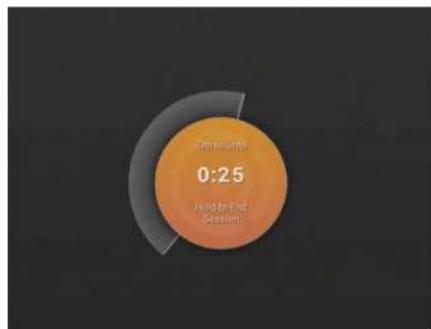


1: Set up a call

Download the Cogi app from the Google Play store. Open it so it's ready to start as soon as you start your phone conversation. Make your call and nip back to the Cogi home screen. The session is already being listened to but not recorded.

Dictaphones have long been the staple of anyone wanting to record audio.

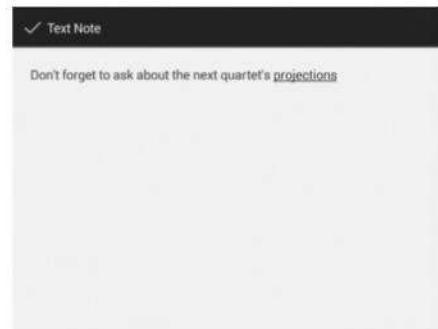
However, using one with a phone could get awkward and loss of sound could be a problem. Then phones started including voice recorders on their devices but they were fairly limited. There are now a range of apps that can record directly onto your phone and perform a number of extra



2: Start to record

As soon as you hear something worth recording, tap the button. It automatically rewinds 5 to 20 seconds to capture what caught your attention. Tapping again stops the recording but not the session, so tap once more to restart.

tasks to help you with recording and transcribing interviews. This would be of great benefit to people whose job includes interviewing or if you are simply receiving instructions from your boss that you don't have time to write down. This tutorial will show you how to record audio with Cogi, write notes during an interview and ensure that you never miss a crucial piece of info.



3: Extras

In the bottom-left is an icon that lets you take notes during the recording, the middle icon enables photos to be taken, while the bottom-right icon lets you tag people. After recording, add photos or notes and share via a range of options.

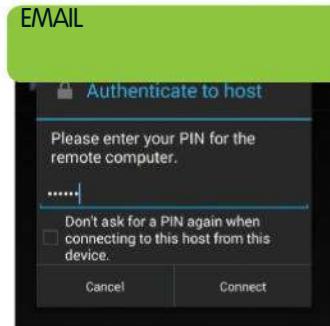
Remotely access your computer

Use Google Chrome Desktop to bring your work computer to you



To get started, launch Chrome, go to bit.ly/1JR2xpD and search for Remote Desktop. Accept all of the installation permissions and authorise the program to see remote desktop computers. Then choose My Computer.

Press Get Started and Enable Remote Connections. Set a PIN code so only you can access your computer remotely and you should now be set up. Download the Chrome Remote Desktop app from the Google Play store.



Launch the app and you should be able to see your computer appear on the first screen. Click on the computer and enter your PIN. You should now be able to see your desktop PC on your phone's screen provided the PC is switched on.



Now you're able to navigate around your desktop using your phone's touch screen. The menu in the top right-hand corner accesses Ctrl+Alt+Del as well as fullscreen mode. Fully close down the app to break the connection.

Replace your laptop

A set of apps, tweaks and work-arounds that let you replace your laptop with your phone

Smartphones and tablets mean that, essentially, we carry a powerful mini computer around with us all day. That can make returning to your desktop feel like a cumbersome, unintuitive experience. But fear not, because turning your Android device into a brilliant desktop replacement is within the reach of all Android users. It makes switching from pocket computing to sit-down computing that much smoother, and you'll be up and running in no time. In these short tutorials we'll show you how to turn your Android into the sort of machine you're going to be happy plugging in to a monitor to do some work at home. By installing a few apps, changing a few settings, and a bit of creative thinking, you'll soon have an Android-powered desktop experience that will have you chucking your current desktop in the bin. Well, maybe not, but you'll definitely be using it less. These tutorials are going to show you how to make that space much smaller. Here are five laptop-replacement tips:

1. USB mouse

If you don't want a Bluetooth mouse, or you

don't have one, you can buy a powered USB cable for a couple of quid that will let you plug USB peripherals into your Android device and use them straight away.

2. Connect to PC

A lot of Android devices have screen mirroring technology, meaning you can bring up your Android desktop on any PC that's connected to the same network, essentially turning your phone or tablet into your PC's operating system.

3. Bye bye digital keyboard

Remember when you're using an external keyboard you can get rid of the digital keyboard that pops up every time you go to a text box either by tapping back or hitting the button on the software keyboard that minimises it.

4. Android keyboard

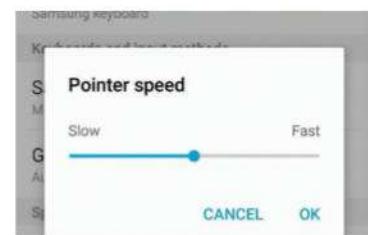
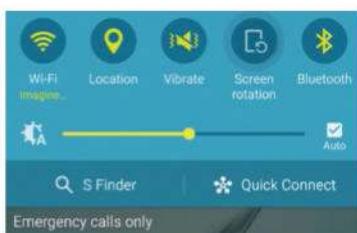
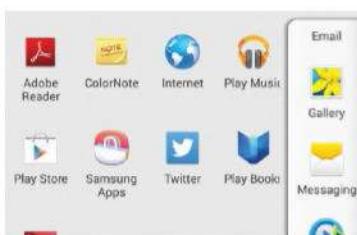
Don't forget you can also turn your Android device into a keyboard, mouse and general remote control for your PC. It's helpful if you want to get your phone more involved, but aren't ready to abandon your desktop just yet.



5. Sync internet connections

The remote connections in these tutorials need you to be on the same internet connection as the host computer. For a Windows-ified phone on the go, you'll need to root your device.

Some extra tips | Simple tricks to make sure you don't need your laptop



Customise multitasking

Tapping on the Edit button at the bottom of the windowed multitasking drawer, you can add different apps. It's worth checking out which ones you can use, and making sure the ones you need are within easy reach.

Lock your rotation

Pretty simple one this, but if you're going to be using your Android device as a laptop replacement on the go, it's best to lock the screen rotation into a landscape perspective, otherwise bumps or moves might flip it.

Are there Galaxy devices able to replace a laptop?

Your best bet in that department would be the Galaxy Pro tablet, although it's still limited. You can add a keyboard to make it easier to replace your normal laptop at home.

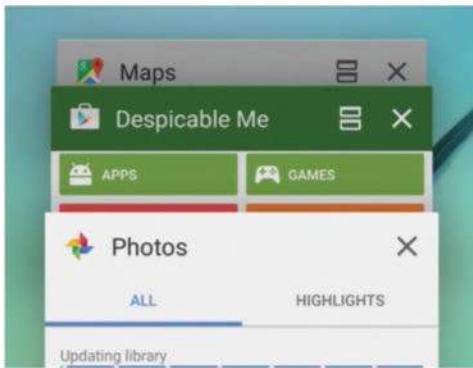
Use windowed multitasking

Get multiple apps running onscreen at the same time

One thing you want to get set up to replace your desktop is windowed multitasking. This lets you run a couple of apps at the same time on-screen, showing you more info and letting you switch effortlessly between them. Fortunately, this

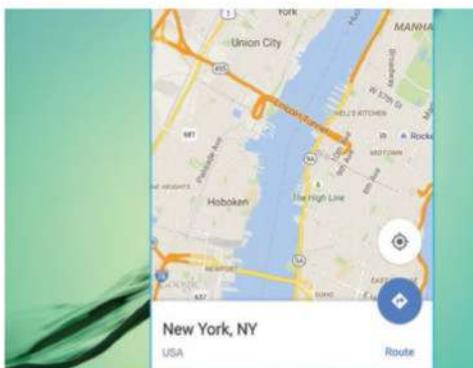
is something newer Android devices, such as the S6 and S Tab 10.5, have built-in. We show you how to set up windowed multitasking on the S6, but if you're using an older device you can download an app such as Multiscreen Multitasking THD.

Settings | Set up windowed multitasking on the S6



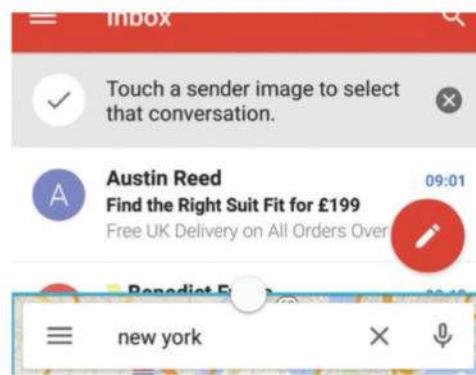
1: Open Recent Apps

To start off, you have to open the two apps that you want to use for this tutorial, then press the left-hand button to view all Recent Apps. On each open app, you will see an icon made of two squares on right-hand side. Tap this icon to begin split screen view.



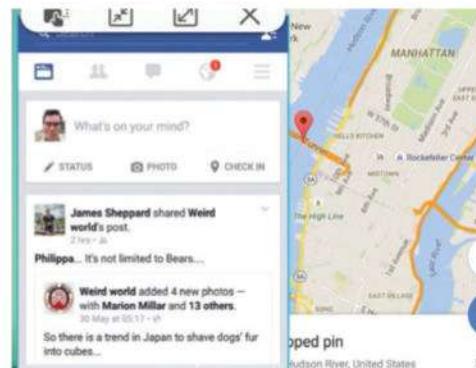
3: Enable multi window

As an alternative to split screen view, if you press and hold on any app listed in the Recent Apps menu, the app will appear in a separate window. This window will then sit on top of your home screen or any other app that you choose to open.



2: Adjust split screen

Select the second app you want to view in split screen and then both of the apps will fill the screen. By default, they get half each, but if you press and hold the white dot in the centre of the screen, you can adjust the amount of space each gets.

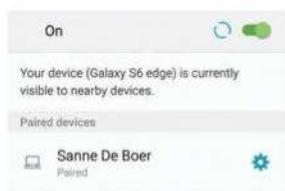


4: Adjust window size

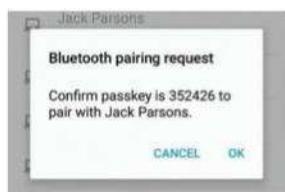
You can fill your screen with as many app windows as you like, however it can quickly become overcrowded. You can rearrange windows around by pressing and holding on the white dots or, if you tap them, you can adjust the windows size or close them for good.

Pair external devices

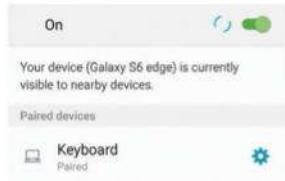
Quickly pair a Bluetooth mouse and keyboard with your Galaxy



Turn on Bluetooth on your Samsung Galaxy device. You can do this from the notifications bar or from the Network menu in settings. Make sure your device is set to visible.



If the Bluetooth is turned on on your chosen keyboard or mouse they should just show up here automatically. Tap on one of them to pair it up with your Samsung Galaxy phone or tablet.



On your first pairing you will need to input a code to ensure that you are in fact pairing safely, but that's it. Your keyboard and mouse should now work on your Galaxy device.

Get Windows running on your Android

Using Microsoft Remote Desktop you can remotely connect your Galaxy to your PC

If you're looking for a familiar computing experience delivered to a smaller package, then this is the best way to go. With this official Microsoft app, which is free to download from the Google Play store by the way, you can get your home Windows experience up and running on your Android phone or tablet.

It can be a little fiddly, especially if your PC isn't set up to work as a remote desktop, but there are some excellent tutorials on the MS website that walk you through getting your machine set up to essentially stream its desktop to your phone or tablet.

This is probably the toughest of the tutorials we're walking you through here, and

it can be frustrating trying to get your PC and your phone talking to each other properly.

Still, if you persevere you'll end up with a desktop experience on your Android that means the files and folders you manipulate will be replicated on your laptop the next time you go power it up, which isn't half bad at all really.

Microsoft Remote Desktop

Get Windows on your Galaxy



1: Install the app

You'll need to grab the app from the Google Play store and get it installed. It doesn't cost you a penny, but it's a good idea to make sure the version of Windows you're running is compatible before you do. The compatible versions of the OS are easily found via a link.



3: Get connected

You should be able to connect straight away and you'll see the complete Windows desktop on your Android screen. Remember you'll need to be running a compatible version of Windows. Versions that use Remote Assistance only won't work.



4: Get yourself going

Some things are a little different from the regular Windows experience, mainly because you're tapping rather than using a mouse, but everything you can do on your computer you can now do on your Android. Just make sure the computer stays powered while you work.

2: Insert your details

The computer you're connecting with needs to be on the same wireless network as your phone and you'll need the computer's name, and the username and password for the admin account. If you're unsure what your laptop is called, check in its settings.

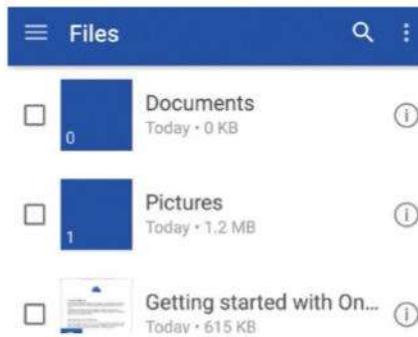


5: Disconnect when done

To pull the plug on the connection, all you need to do is open up the start menu and hit the Sign Out option. This will reset your Android back to a simple Android device, and leave any changes you made to your desktop as well. Pretty good for a free app we think.

Sync OneDrive to Google Docs

Connect your Google-powered office app to your Microsoft cloud storage for ease of sharing



1: Open a folder

Go to the OneDrive app and tap on the '+' sign in the top bar to create a new folder. Give it a name like 'Google Docs'; so you know that everything in there has come from your Android device. Now go on to open up Google Docs.

It's a good bet you've got a lot of different cloud storage accounts, some of which work better with different devices than others. Microsoft's SkyDrive, or OneDrive as it's called now, tends to gel better with Windows devices, so if you're looking to use your Android phone or tablet as a laptop replacement, and pick up that work on a PC, it's a good idea to share

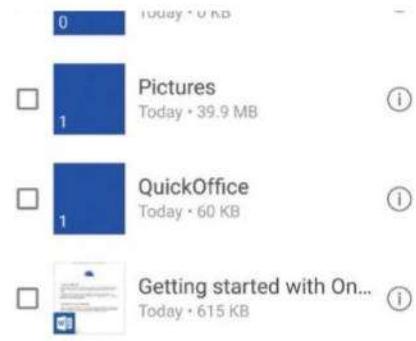


2: Create your content

Just create your content as you would normally in Google Docs. When you're ready, save it to your memory or to your Google Drive. When it's saved, tap on the three-pointed share button in the bar at the top of the screen.

it through OneDrive. Don't worry though, getting that set up is definitely the easiest of the tutorials here.

All you need for this tutorial is the OneDrive app and the Google Docs app on your Android phone or tablet. Once you've got those installed it's time to start sharing. Trust us, anyone is going to be able to get this up and running.



3: Share to the sky

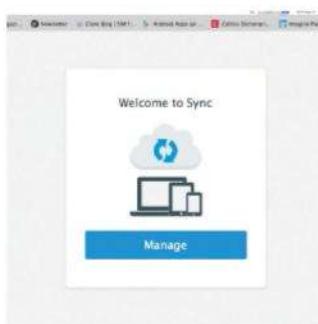
Scroll down the list of destinations and you should see OneDrive. Tap on it, then search through to find your Google Docs folder. Share the file there and you're done. Now your file will be accessible from your SkyDrive wherever you are.

Use Firefox desktop extensions

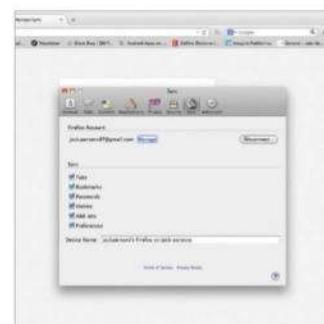
An easy way to get the same Firefox experience on your Android that you're used to on PC



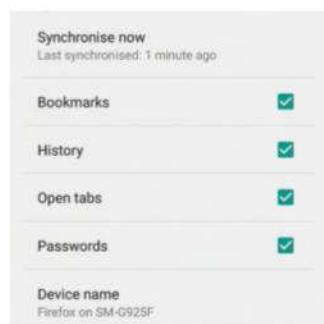
You're going to need to be in front of a PC with your Firefox settings stored on it. Pick up your Android and open the main menu. From there head down to Settings, and then tap on Sync to link the two devices together.



You should get a code. Head to the desktop version of Firefox, go to Tools and then Options. Click on the Sync option and you'll be shown a list of things you can sync, as well as a button that lets you pair a device.



Make sure everything you want to sync to your Android device is checked, then click pair a device and input the code from your phone or your tablet. The sync should start automatically if you've put the code in correctly.



The sync will run on both of the Firefox installations, so all of your add-ons should be available on phone and laptop. Bear in mind that not all add-ons have mobile equivalents, so you might not get a full quote on your phone.

Expert photo editing

The cameras on our smartphones are consistently getting better. We're seeing more megapixels than ever before and some companies are even including sensors typically found within DSLR cameras into them as well. To cater for this technology, developers have had to make apps that make best use of it. Where before users could only access a handful of tools, they now have access to a plethora of amazing tricks and features to help correct and fix their images. In this masterclass we're looking at some of the more advanced editing skills users can undertake solely using their Android device. We've downloaded five of the best photo-editing apps readily available for download on the Google Play store and put them through their paces to see what they can really do. So no matter if you're having issues with brightness and contrast issues, or need to remove a blurred part of your image, we've got it covered. Here's five great tips to get started.

1. Built-in Photos app

A great way to make simple changes to your photos, but it doesn't include many advanced

Perfect your pictures with these amazing photography apps

features worth checking out. If you're new to photo editing, then this is the best place to start.

2. Keep a copy of the photo on your device

Sometimes you will find a heavily edited photo will corrupt and therefore the copy will become a valuable asset.

3. Combine photo-editing apps

Certain apps are better than others at performing select editing features, but it's up to you to discover the combination that works.

4. Keep it simple

Be wary of performing too many edits on an individual photo as it can increase the file size considerably. This is especially important if you plan to export the edited photo to a different app or upload to a website.

5. Quality settings

When exporting and uploading photos, make sure that you're always using the highest quality settings. You want to minimise quality loss as much as possible and this is the best way.



The best camera apps



ProCapture 2

What we like about ProCapture 2 is just how simple it is to capture superb photos of landscapes. Slowly pan your smartphone with this app and you'll find a highly detailed landscape shot waiting for you after it has rendered.



A Better Camera

There's a multitude of shooting options available in A Better Camera. It works well for those who really want to delve deep into what their camera can really achieve. Definitely one for budding photographers.



Retrica

If you're a big Instagram user, chances are you like adding a cool retro look to your photos. Retrica adds the retro feel to any images taken through it automatically, all of which can then be instantly uploaded to Instagram.

Are there apps that can both take and edit photos?

There are numerous apps like this, but the one we like the most is PiLab. It has a great suite of editing tools for users to explore and use, and best of all, it's free to download.

Bring objects to foreground

Focus in on specific areas of an image and blur out other objects

It's pretty common to take photos that have objects you no longer want. Sometimes the removal tool won't do the job and instead you'll need a different solution. Blurring out certain aspects of an image and bringing one part into

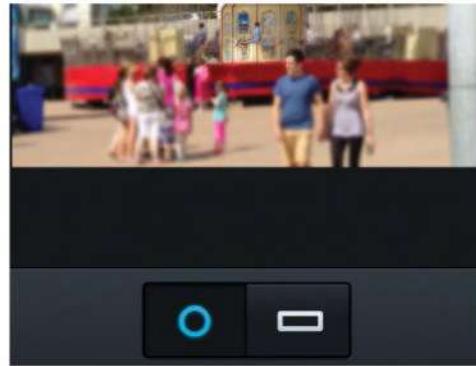
focus is a great way of not only making a striking image, but also to stop the eye being drawn where it's not wanted. In this tutorial we're using the Photo Editor by Aviary app, which has arguably the most detailed suite of tools and features for users to test.

Photo Editor | Blur out unwanted objects



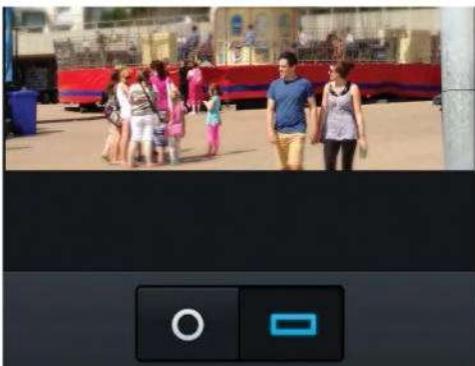
1: The right photo

Select a photo that's fairly busy, or simply has objects that you don't want to be made too visible. Use the toolbar at the bottom of the app to find the Focus icon near the end of the list. A new editing screen will now appear after a few seconds of loading.



2: Where to fade?

The standard circle fade is great for pinpointing an exact area you want to bring to the foreground of your chosen image. Use your finger to slide over the object in question. You can pinch on the screen to zoom in on a particular part of the image, if necessary.



3: Bar fade

If you're looking to bring a large amount of the picture to the foreground, then you can consider using the bar fade tool. This will provide you with a great way of fading in and out large portions of the image at once. Combine both fade types for the best results.



4: Improve colours

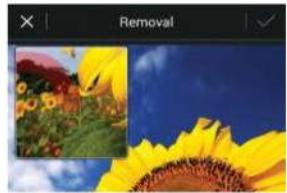
Once you've faded out parts of the image, you'll now want to enhance the colour of the object in the foreground. Go to the Warmth tab within Aviary and use the brush tool to go over the object in the foreground. You can make the image as vivid as you like.

Remove objects

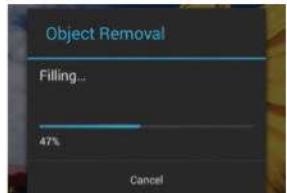
Use Photo Director to easily remove blurred/unwanted parts of an image



For the first step, select the Removal feature from the scrolling list of tools at the bottom of free download Photo Director. A quick guide explaining how to use the feature will now appear.



Use the red line to select the area in your chosen image that you want to remove. Pinch on the screen to zoom in on a section, or alternatively use the pop-up window for a detailed look.



To finish the image, press the Apply button once you're completely satisfied. The app will now get to work to remove your selected area and use other areas of the picture to fill it in.

Blend two or more images together

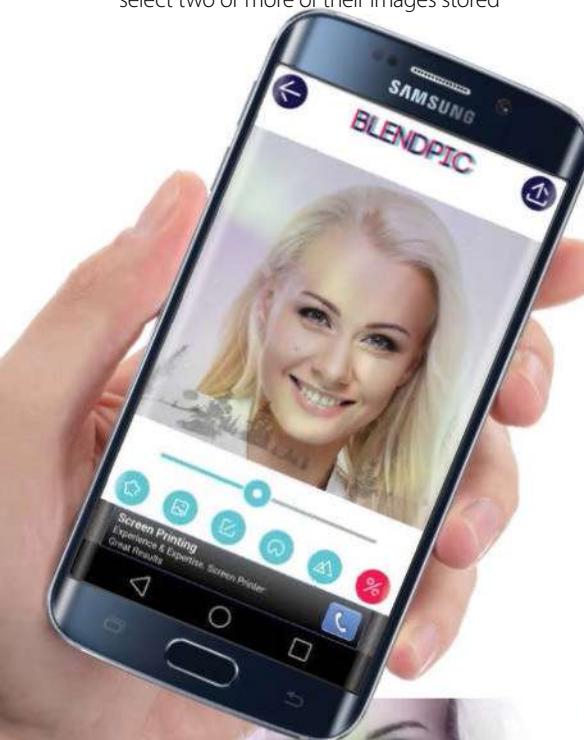
Combine images together to create a sleek composition with BlendPic

Creating a composition of images is no easy feat on your smartphone. Some apps make the process fairly difficult and even if you manage it, chances are it can still look rubbish. To help simplify the process, the BlendPic app is now on hand for free from Google Play.

It offers a great platform where users can select two or more of their images stored

on their phone and tablet and create a colourful composition from them. Once the composition of images has been created, users can then experiment with the array of different editing tools contained within the app; although not as vast as some apps, there's enough here to keep most budding photographers happy.

In this tutorial, we'll be guiding you through the process of selecting and blending your images together to create a beautiful, layered look. We'll also show you the tools you need to use to make sure that the quality of your images is as good as it can be. We'll make you a photo-blending expert in five straightforward steps.



3: Choose a preset texture

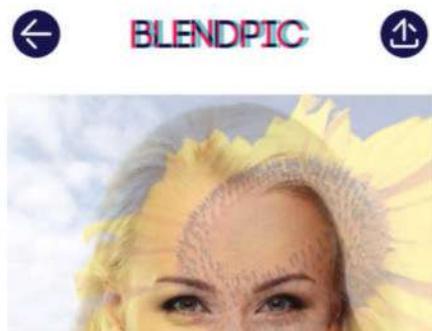
BlendPic also includes an array of textures you can apply to any images that you're struggling to blend. Press on the star icon at the bottom of the app and select one of the textures from it. In some cases these textures can help make one image easier to blend with another.

BlendPic | Combine two photos



1: Make initial selection

When deciding on which image you want to be the focal point of your composition, you'll want to select something with a fairly neutral background – like the example above. Busy backgrounds can often lead to images getting lost in the composition.



2: Secondary images

Press on the Gallery icon at the bottom of the application to select the next image you want to add. As you can see from the above screenshot, some images just simply won't blend well together, so really you'll need to experiment with which images work.



4: Make some changes

If you've managed to find a suitable composition, go to the percentage icon at the bottom to make some subtle changes. Here you can choose how transparent you want the background image to be, or simply make some alterations to the overall colour levels.



5: Fix and finish

Once you're finished with the composition, go to the fix option at the bottom of the app (within the palette icon). The app will now iron out any blemishes, or small problems it finds with the image. Once done, you can now save and export the image.

Fix low lighting in Pixlr Express

Shine a light on your dark and dingy party photos by using this free app



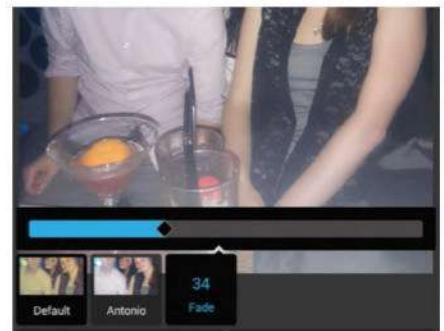
1: Sharpen image

Before changing the various levels on the picture, you'll first want to sharpen the image. It's best to go over the entire picture with the Sharpen tool as brightening the image without it can lead to some distortion on certain parts of the photo.



2: Work with contrast

Use the toolbar to find the Contrast tool listed under the Adjustment tab. This will be your main tool to use when brightening the image and removing the predominantly dark background. Adjust the slider until the image is at a suitable level.

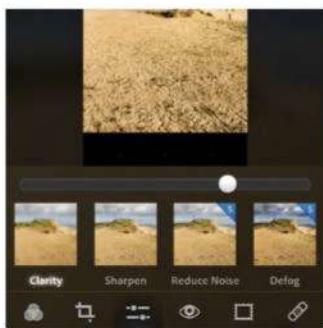


3: Managing fade function

You may find that some colours in your image could now be a little brash, so use the Fade tool also within the Adjustment panel to balance them out. It can be quite tricky to get it spot on, but the slider is easy to use and fairly responsive.

Crop without losing focus

Make sure your shots remain in focus when cropping with Photoshop Express



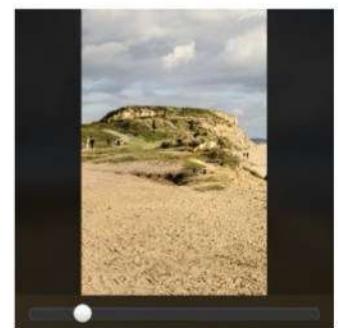
Load up an image in Photoshop Express and use the bar at the bottom to find the cropping icon. Select the regular rectangle crop option from the ones listed and select the section you want to crop off from the image.



Generally, cropping a small part of the image creates a zoomed effect. This for the most part can impact the quality of the image, so be careful with the size of the area you select. Press the Apply button when done.



You'll notice some blurred sections of your newly cropped image, so head to the Sharpen tool. Use this to add definition to the edges of prominent items within the image. In addition, you may also decide to use the Clarity tool as well.



Another tool that you should try for cropped images is Highlights. It can help background images look more detailed. To see the changes you've made against the original, select the rectangle box at the top of the app.

Reduce your data usage

Unless you have 'all you can eat' data, it pays to cut down

A monthly data allowance measured in megabytes or more once sounded like an impossibly large quota, but it's all too easy to use. 1GB, for example, works out at less than 34MB per day, yet loading an average webpage – not considered data intensive – uses more than a megabyte. What's more, with many contracts, once you exceed that allowance, using additional data doesn't come cheap.

Some ways of reducing your data use are obvious – cut down on downloading music or watching YouTube, for example. However, there are also plenty of less obvious methods. One of our tutorials will show you how to reduce the amount of data your Android uses in the background without your knowledge. Another lets you download YouTube and Google Music data once and for all via Wi-Fi, rather than per singular track or video. Another handy tutorial shows you how to compress data before it's transmitted to you across a network connection.

To start off, here are our top five tips for reducing your data usage:

1. Only on Wi-Fi

If possible, try to restrict large downloads such as movies, to when you're connected to Wi-Fi.

2. Turn off roaming

Using data when abroad is usually not included in your monthly allowance. It's a good idea to turn off data roaming and enable it only on those odd occasions when you really need it.

3. Go offline

Google Maps now has an offline feature which enables you to store maps on your phone. It's a big hole in your storage but you can navigate a downloaded map without using data.

4. Use Opera Mini

If you don't fancy using Onavo Extend (page 52) or don't have Android 4.0 and up, how about using Opera Mini as a browser as it automatically compresses data before transmitting it across to you? It's particularly good if your coverage is patchy in your area.



5. Be selective

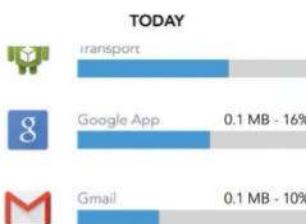
Consider removing apps that use a lot of data but you don't really need. For example, that app that shows the current weather by updating every few minutes might have been a novelty, but it's eating up your data allowance.

Monitor your data | The third-party app that keeps an eye on data usage



Install and set up the software

Install My Data Manager – Data Usage from Google Play. Start the app and, on the Mobile tab, tap where it says 'Tap to select plan'. Now enter details of your data plan before tapping on Save.



View your usage stats

Initially you'll be shown statistics on your daily usage, but more interesting statistics are available by scrolling left and right. You can see graphs of usage against time and see which apps are using up your allowance.

CUSTOM ALARMS

ALARM #1	50	MB	GB
DISABLE DATA WHEN TRIGGERED			
ALARM #2	off	MB	GB

Set an alarm to warn you

To sound an alarm when you've reached a threshold (eg 95% of your monthly allocation) tap the menu button, select Plans and Alarms. Set either one or both of the two alarms for your plan period, or a daily alarm.

The best way to reduce data usage?

Many of the ways of reducing data usage involves using apps less. However, with a bit of forward planning, you can restrict installing apps to when you've got Wi-Fi. As Games average over 40MB, this is a top priority.

Manage your sync settings

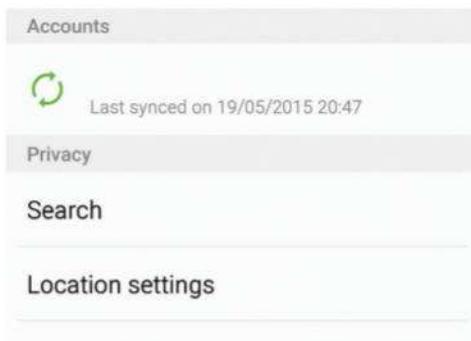
Sync when you want to, not when your phone decides to

Synchronisation ensures your Android devices remain in step with your online data. If you store photos in Picasa, for example, those photos will automatically download to your device. What's more, whenever you make a change online, that

change will be made on your Android. Syncing also applies to email, social media and more.

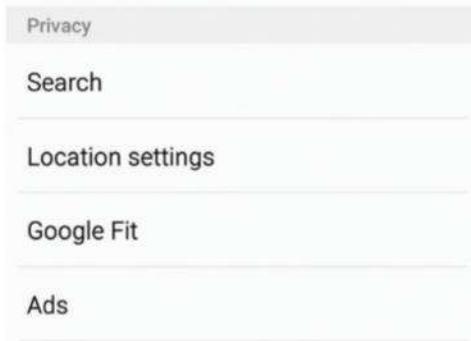
However, this feature uses data. To reduce this, you can turn off synchronisation entirely or choose apps to sync to. You could even sync manually.

Settings | Alter your synchronisation preferences



1: Is auto-sync on?

Auto-sync involves Android periodically checking if apps are synchronised and, if not, synchronising data. To check if this is turned on, select Accounts and sync settings from the Settings menu. If Auto-sync is unchecked there's nothing more to do (but do check step 4).



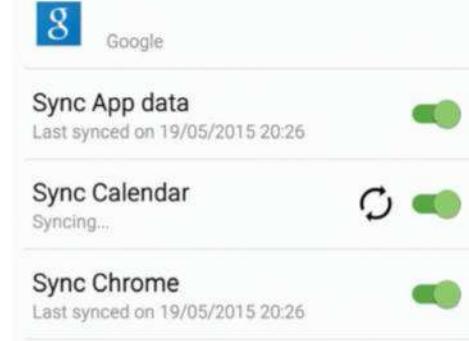
3: Turn auto-sync off

A more drastic, but very effective, solution for reducing data use is to prevent everything from synchronising automatically by turning off the global Auto-sync feature. Back at the Accounts and sync option in the Settings menu, make sure Auto-sync is unchecked.



2: Select apps

If you decide to keep auto-syncing you can still reduce data use. Tap on your account name under Manage accounts and various options will be listed in front of you. Uncheck any that you either don't really want to sync, or for which you're happy to sync manually.

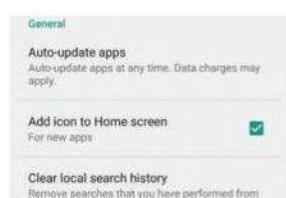


4: Sync apps manually

If you turn off Auto-sync globally, you can still sync manually. Tap on your account name under Manage accounts and each option will show a 'Touch to sync now' feature. Touch any of the options and the sync icon will appear. When finished, the sync time will update.

Switch off auto-updates

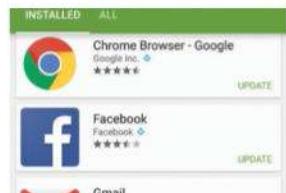
Auto-updating apps is handy, but you can save data by being selective



In Google Play, go to Settings. Your current update setting is shown under Auto-update apps. If it says 'Auto-update at any time' you can reduce your data use with these simple steps.



Tap on Auto-update apps and you'll be shown the three options available on screen. Although you could turn it off entirely, we suggest you select the 'Auto-update apps over Wi-Fi only' option.



If you're away from a Wi-Fi hotspot you can still update specific apps manually. Press the menu button on your phone and select My apps. Tap on the app and then tap on the Update button.

Compress data with Onavo Extend

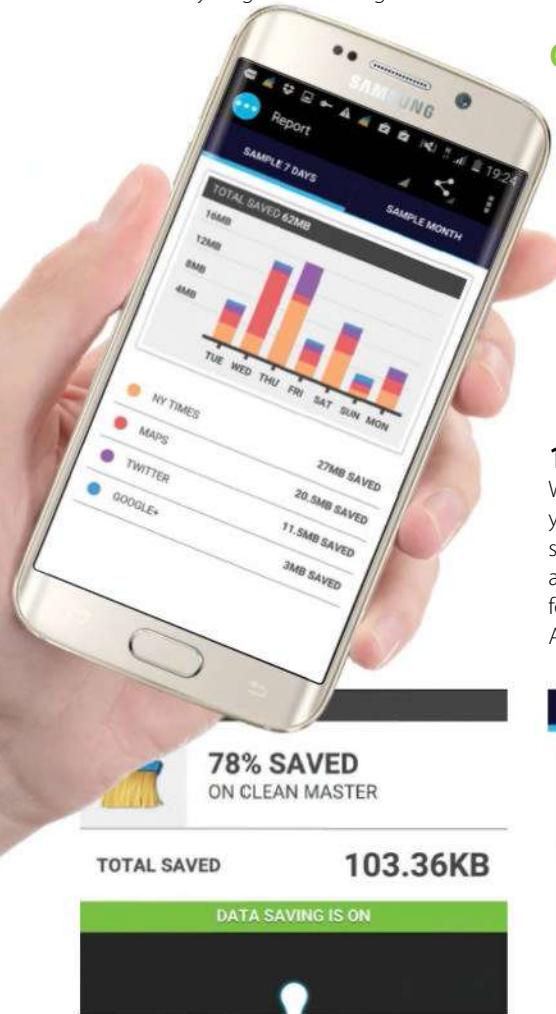
Use this third-party app to squeeze more out of your monthly allowance

Much of the data that is transmitted to our phones is inefficiently coded. This means that it can be compressed before it's sent and uncompressed when it's received. As a result, you'll use less data daily, although exactly how much you'll save is hard to say because it differs from one type of data to another, but there's usually a significant saving.

Some Android web browsers like Opera Mini have data compression built in. However, this only works when you're viewing webpages. Onavo Extend, on the other hand, works with webpages and with apps. It does this by creating something called a VPN (Virtual Private Network). Instead of connecting directly to a third-party site,

the app connects to the Onavo VPN, which provides a compressed version of the data, and then uncompresses it on receipt.

Onavo Extend works with Ice Cream Sandwich and later versions of Android only, so quite a few version and compatible. To use it on your device, install it from Google Play and read on to see how to use it.



3: Saving data usage

Now go about your day and use your phone as you normally would. However, after a few hours reopen Onavo Extend. The app will now show you how much you've saved both as a percentage and in terms of the actual amount of data in megabytes.

Onavo Extend | Compress incoming data

Turn on maximum savings

Savings ON



All set!

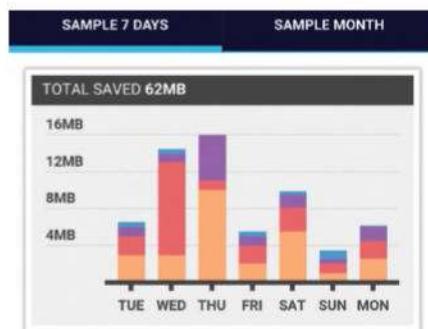
Soon you'll start to see savings here.

1: Initial setup

When you first load up the Onavo Extend app you'll have to go through the initial service setup. This is straightforward and involves you accepting the terms of service and agreeing for a VPN to be set up. You should also tell Android that you trust this app when it asks.

2: Up and running

All being well, you'll now be shown a screen that indicates that data saving has been turned on. You'll also see a key icon in your phone's notification area – this indicates that a VPN connection is active and will be there whenever Onavo Extend is working.



4: In more detail

To learn more about your Onavo data savings, select Reports from the main menu and, using the tabs, choose to view either a week or a month. Bar graphs will appear, indicating how much you've saved on a daily or weekly basis, for each of your apps.

Onavo Extend

ROAMING

Roaming detection
Auto-detect roaming ON

Roaming statistics
Show me savings stats while roaming ON

ADVANCED

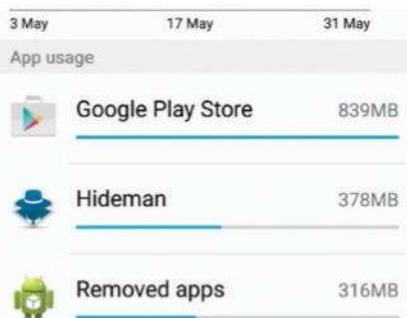
Image quality

5: Fine tuning

Initially, Onavo Extend will compress images using its medium setting. However, you can choose more compression, which will result in poorer quality pictures, or less compression and get improved quality. Change this and other options in the Settings menu.

Background apps

Keep a closer eye on your apps to prevent them from using background data



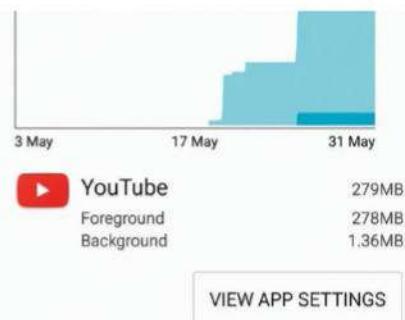
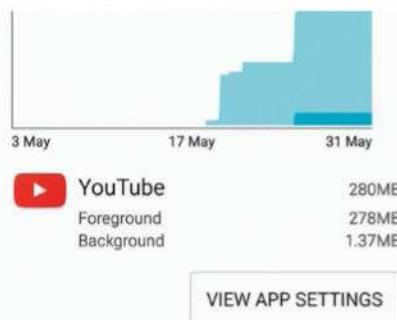
1: List all your apps

Select Wireless & networks and then Data usage from the Settings menu. At the top you'll see a graph of data usage over time – which is pretty useful in itself – but if you scroll down you will find all of your apps listed for you.

Increasingly, apps are using data in the background without your knowledge. This all adds up and, to make matters worse, it isn't always obvious which apps are the culprits. Some apps let you choose whether they're allowed to use data in the background, but not all by any means. Fortunately, though, the most recent versions of Android (Ice Cream Sandwich

and onwards) include some useful facilities that we delve into in a bit more detail here.

First, there's a means by which you can keep an eye on how much data your apps are consuming in the background. Second, armed with that information, you can tell Android to restrict data use of those apps that are eating into your precious monthly data allowance.



2: Reveal offending apps

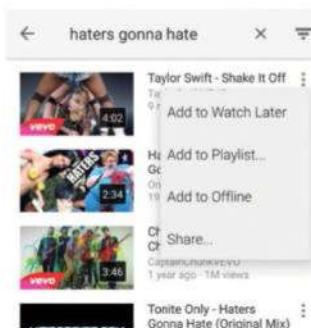
One at a time, tap on any apps that you suspect could be using lots of data. Data usage is shown as two figures. Foreground relates to when you're actually using the app, while Background is what it's using behind the scenes.

3: Restrict data use

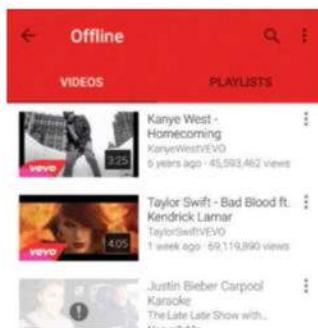
If you think an app's using too much data, tap on 'View App Settings'. From here, you can adjust settings and limit some apps data usage. However, not every app allows you to do this, in which case 'View App Settings' will be greyed out.

Save YouTube and Play Music offline

With a Google Play Music subscription, you can download YouTube clips or Music tracks



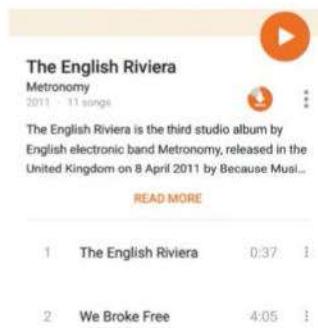
With a Google Play Music or YouTube Music Key subscription, you can save music to your Android and store them offline. In YouTube, log in, then search for a video. Tap the drop-down menu for a video, tap Add to Offline.



To access your downloaded videos, tap Settings and scroll to Offline. Tap this to view all of your saved videos and playlists. Please note, this feature only works with music videos, so any other video will display as 'Unavailable.'



When you listen to music in Play Music, you're streaming it from the cloud, which uses data, but you can download songs to listen to offline. Check you're logged-in and connected to Wi-Fi, then search for a track or album.



When viewing the track or album's profile, tap the grey icon with a down arrow on it beside the drop-down menu button. This icon will then turn orange as it downloads the tracks. Once completely orange, it's complete.

Protect your privacy

Keep your personal data safe with this privacy masterclass

Online privacy is an issue that is rarely far from the headlines. Whether it's Google tracking your every movement or malicious apps stealing your data, smartphone and tablet users are becoming increasingly vigilant to keep personal data hidden. It was reported last year that 97 per cent of malware is targeted at Android devices and, although that mostly came from third-party apps, that is a worrying statistic. In this masterclass we provide you with a range of ways to keep your habits hidden. We show you how to stop Google tracking your movements and how to wipe data from your Android should. We've also got an tutorial on keeping photos hidden from prying eyes and the best browsers and apps to ensure that your searches never see the light of day and alert you to any apps that might be swiping personal info. To start, here are five top security tips:

1. Stay with Play

Most malware comes via apps from non-regulated sites, so if you stick to the Play Store you'll probably be fine. Go to Settings>Security and make sure Unknown Sources in unticked.

2. Check your permissions

Many apps need info about your Android and your habits to run properly. However, some ask for permission to do more than they need, like record audio and send messages. If unreasonable requests are made, be suspicious.

3. Avoid public Wi-Fi

Hooking to a public Wi-Fi spot is an open invitation for people to steal your data. Using cheap equipment, hackers set up fake networks, redirect your device and see everything from your apps to passwords you're typing in.

4. Go private

Go to Settings>Private Mode and you can hide photos, videos, music, voice recordings and files from anyone who doesn't know your password.

5. Use password vaults

Apps like 1Password store all your passwords in one place, which sounds dangerous but they are well protected. If you forget your password to the app, they're all lost forever, which stops hackers from taking guesses at your code.



The best privacy apps | The best apps for staying safe on your mobile

dolphin zero

Leave No Trace

Automatically deletes upon exit:

- Browsing History
- Form Data
- Passwords

Dolphin Zero

Dolphin is a good browser to explore the web with on your Android device, but its party piece is that it instantly forgets every site you've visited and every password you've entered, not leaving a trace for hackers.



Clueful Privacy Advisor

Clueful analyses permissions requested by the apps on your device and then determines their risk factor. If an app asks to post statuses or listen to audio, Clueful flags it up, warning you before you agree to anything.



ObscuraCam

A very useful little app, ObscuraCam can pixelate faces in photos so they can't be identified. Better still, it removes any GPS data that could be in your stored in your photos, keeping more information private.

Do I have spyware on my Galaxy?

If it starts behaving strangely, like randomly lighting up or shutting down, this may be spyware working in the background. The hidden app could drain your battery or data, so look out for that.

Stop instant sharing

Prevent Google from tracking and sharing all your information

Google Maps is a useful app, but by asking Google how to get to the train station, you're also allowing it to know where you are. Once you provide it with the initial permission to know your location, Google can track your whereabouts

all day long. That should only be a problem if someone hacks into your device to learn your movements, which they could then use to steal your identity. Preventing Google from logging your movements helps keep your activities private.

Google Maps | Stop Google from logging your movements



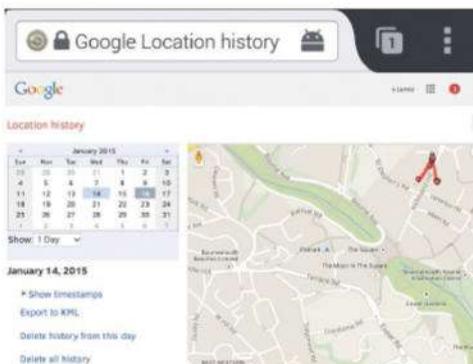
1: Switch off your Location History

Open up the Settings app on your Android phone or tablet and scroll down until you find the Location option in the list of options. Tap on it and find Google location settings. Once inside, you should be able to see the option to turn Location History off.



2: Location reporting

The other option inside the Google location settings is to turn off Location Reporting. This can be done by tapping Location Reporting and selecting Off for this device. However, this will prevent Google Maps and Google Now from working as well.



3: Delete your history

If you want Google to forget all the different places that you have visited at some point in the past, type maps.google.com/locationhistory into your browser. This will bring up all the records that Google has for your movements, which you can delete altogether or individually.



4: Stop Google+ sharing

To prevent location sharing from Google+, open the app, choose Settings, then select Location sharing and switch it off. However, your location will only be pinpointed if you have specified people in your circle you feel comfortable sharing it with before.

Great mobile lock screens

A secure lock screen provides privacy - here are the safest options



Activating Hidden Lock brings up a padlock icon randomly on screen. It then disappears, so someone can only unlock your phone by luckily tapping the right spot on your Android's screen.



Invisible Lock Pro isn't free but does provide good protection for your Android. Swipe up, down, left and right to unlock your phone. The number of combinations could fox an intruder.



Face unlock has been on Android devices since 2011. Go to Settings>Security>Screen Lock>Face Unlock. However, someone similar looking to you could unlock your phone.

Protect your photos from prying eyes

Hide the photos you don't want the family to see with Hide It Pro

Whether they're rude, personal or just embarrassing, most people will have photos stored on their phone that they don't want everyone to see. As recent leaks in celebrity nudes has shown, you can never be too safe with your private photos and info. The rise of camera phones has seen an increase in apps that help you to keep

certain snaps hidden from prying eyes via a range of useful tricks. Many of these apps have the ability to take a photo of someone who has incorrectly entered your password, showing you who is trying to access your hidden pictures (very useful with a vengeful ex). Many other apps disguise themselves as bland, uninteresting apps, such as calculators,

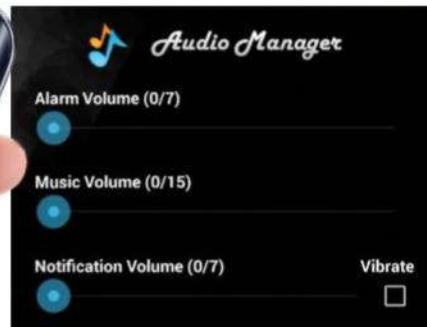
to throw snoopers off the scent. One of our favourite hidden photo apps is Hide It Pro. It uses an innovative method of keeping the app a secret by hiding it as an audio manager, but it can also store a range of files, from photos to notes. We've put together a few tips on how to get the most out of this excellent photo vault.



3: Hide multiple files

Using the same method you are also able to hide messages, videos, music, apps and notes. As you add a file to a hidden folder it is removed from your phone's main gallery or store, so you needn't worry about going back to delete them afterwards.

Hide it Pro | Keep your photos to yourself



1: Open the app

Hide It Pro is disguised on your phone as Audio Manager. Pressing the icon launches an app that can change the volume on your phone, but a long press on the app name brings up a password screen. Typing that password in will reveal the hidden files.



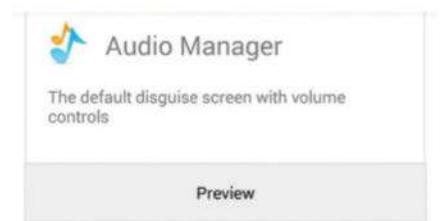
2: Pick your photos

Tap the Pictures icon to bring up your photo files. Highlight each one that you want to be hidden with a quick tap and choose Hide Selected Files. This will then cleverly transfer all of the selected photos to a new, hidden album placed within the app.



4: Unhide your photos

If the files you've hidden suddenly no longer need to be private, load a photo back up again, then press and hold the screen. Select the option Unhide, which will restore the photo to your phone back into the folder from which it was originally removed.

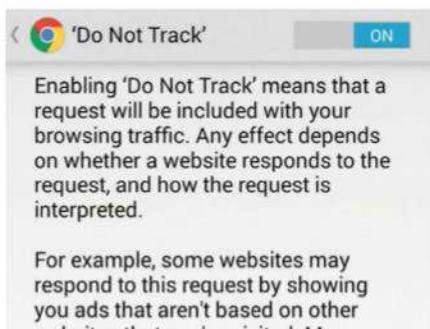


5: Choose your hiding place

Hide It Pro offers a range of options to keep your files under wraps. You can change the disguise screen to things like mundane currency converters or a daily joke app. You are also able to choose where on your phone to hide the vault so you don't forget.

Cover up your tracks

How to activate the Do Not Track agreement when browsing the web on your Android

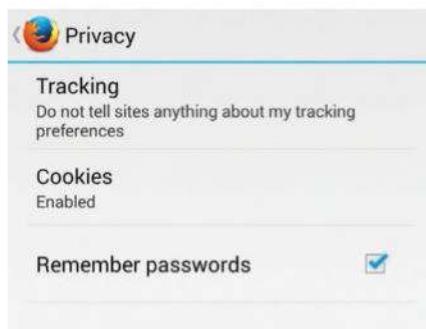


1: DNT for Chrome

Tap the trio of dots in the top, right-hand corner of your Chrome browser and select Settings. Scroll down to Privacy, select Do Not Track and then select On. When in Settings you can also decide whether to save passwords or not.

Do Not Track is a voluntary scheme in which websites promise not to track your online activity. It has hit a few problems, as many websites don't actually change their habits when you sign up and many of those who do, still collect data but simply limit the amount of personalised adverts that you can see when you are on them. However, websites such as Twitter

and Pinterest have fully signed up so they won't track your online behaviour once you have activated the Do Not Track option. The DuckDuckGo search engine also doesn't track any of your searches or store any of your personal information. Below is some useful tips on how to set up Do Not Track on some of the most popular browsers available on your mobile.



2: DNT for Firefox

Tap the top right-hand corner of the Firefox browser and go to Settings. After selecting the Privacy option, click on Tracking. You will be faced with three options and to avoid being tracked, select 'Tell websites I do not want to be tracked'.



3: DNT for Dolphin

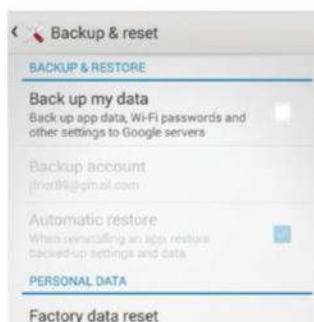
Dolphin hasn't got a specific setting for Do Not Track, but it has some very good privacy features. Click the dolphin at the bottom of the screen, select Settings>Privacy. Then you can clear all data from your session and disable location tracking.

Wipe your phone's data

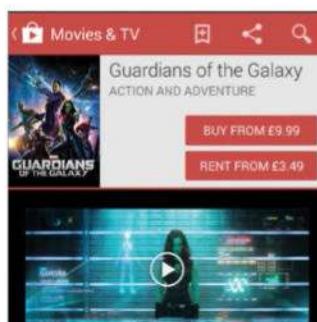
The most comprehensive way to erase everything from a Galaxy before you sell or scrap it



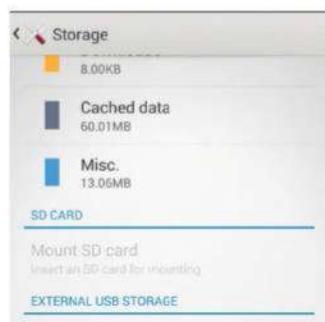
Even after a full wipe some data can still be accessed. Encrypt all your data by going to Settings>Security>Encrypt phone. You will then have to input a password to decrypt anything still left on the phone.



Perform a full system back up. You can then reset your phone by going to Settings>Backup & Reset>Factory Data Reset and selecting Reset Phone. This makes the phone instantly forget where your data is stored.



To further protect your data, reload the phone with non-personal content, like videos and music. Once your phone is full, repeat the second step. This will bury your real data beneath the useless stuff making it hard to find.



The SD card also needs to be dealt with. Back up all the data on it, then go to Settings>Storage and find Erase SD card at the bottom of the screen. Erase the data, add in some fake files again and re-erase it.

Spring clean your Android

Get rid of that annoying junk and take your device's performance to new levels

Android device's are powerful things, but on occasion you need to give them a bit of a **boost**. By spring cleaning your device you can considerably increase performance. The areas in which you may need to spring clean your device can seem odd, but by doing it a few times a year you'll notice a substantial improvement and increase longevity.

We've looked to identify the most common areas that require some attention. You'll find a tutorial helping you find hidden files and how to safely remove them. Any spring clean wouldn't be complete without a thorough virus and malware scan, so we've shown you how to best use Malwarebytes. There's also tutorials to boost your battery life and merge duplicate contacts. Here are our top spring-cleaning tips.

1. Open apps

On the bottom of your device is a double panel icon, which will show you all the apps that are

currently open. Simply swipe on the app to remove it from the list and close it permanently.

2. Google Music All Access

Great for streaming music, but downloading can use up a lot of storage. Make sure you use the de-pin option to make sure no songs are downloaded without your knowledge.

3. Manage your toggles

If you aren't using your Wi-Fi or Bluetooth, make sure they're disabled as they drain your battery. The same goes for making sure you're using a low screen brightness level.

4. Old SMS and MMS messages

One area of spring cleaning that's easy to do is to make sure you delete any old SMS and MMS messages that are clogging up your device. Use the Record SMS app if you're unsure on how to do this.



5. SD Maid

As well as spring cleaning your phone, why not make sure your SD card is also running at its best. The SD Maid (which we've also featured in this masterclass) has a great option to optimise external SD cards.

Spring clean without apps



Get more battery life

The battery management screen is great for optimising how your battery life is used. Certain phones will have pre-determined battery-saving modes available, if you don't want the hassle of creating your own.

Use Android's in-built spring cleaning options

	DOWNLOADED	RUNNING
	Android System Web View 120MB	
	ANT Radio Service 1.23MB	
	ANT+ Plugins Service 14.00MB	

Manage RAM usage

Through the Apps option within the Settings menu, you can take a look at the apps currently running on your Android device. By then selecting an app you can manually stop it with a simple tap if you feel it necessary.

Back up my data
Use your Samsung account to back up your Phone log, messages, and more.
Restore
Use your Samsung account to restore your backup data.
Google account
Backup account

Start over from scratch

For the ultimate spring clean, why not take advantage of your device's in-built factory reset option? Navigate over to the Backup & reset menu in the Settings application where you'll find this clever option listed.

Do I need a task killer?

Although they are useful tools to have, task killer apps can actually cause more issues than they fix. In some cases they can hinder certain app's performance and often tend to be a massive drain on your Galaxy device's battery life.

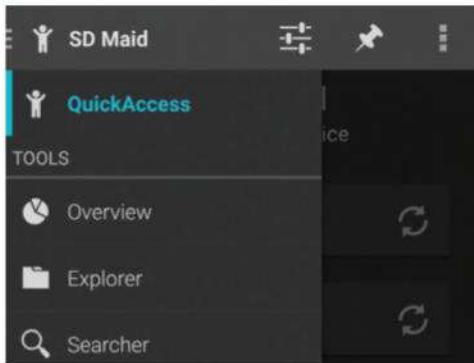
Safely remove system files

Remove files you never knew existed via SD Maid

Sometimes Android devices do things without you even knowing. One of these is the creation of directories and files without your consent – which take up vital storage. To the average user, many of these files will go unnoticed, but it's important to

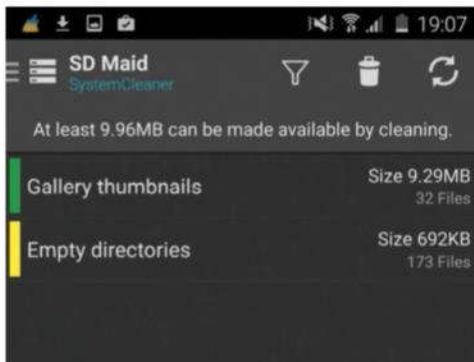
keep on top of them if you want to properly spring clean your device. In this tutorial, we'll show you how to use the SD Maid app to find these hidden files and remove them correctly so there's no detrimental effect on your device.

SD Maid | Remove hidden files



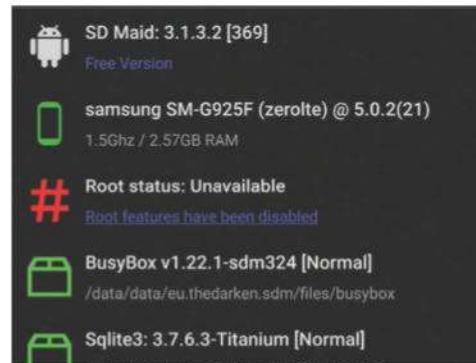
1: Explore the app

SD Maid is a fairly convoluted app, so you should make sure that you fully explore it before performing any functions. Open the side menu once done to see the various options on offer. Before selecting the System Cleaner, select the Overview option.



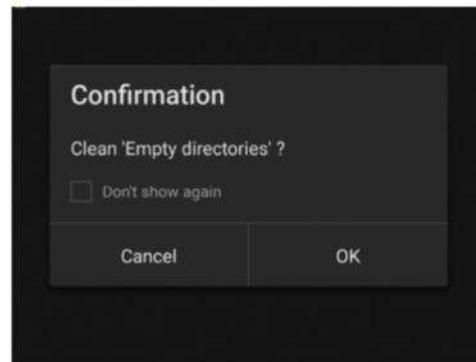
3: Find hidden files

Now select the System Cleaner option from the side menu. The app will now perform a full scan of your Android device for you and find hidden and system-created files that are safe for you to remove. Once completely finished, select the files you want to remove.



2: Current state of device

This screen in the app is fantastic at showing you the areas of your Android phone or tablet that could really do with a good spring clean. Although we're using SD Maid to remove hidden files, it's also perfect for removing unnecessary apps and cached files.



4: Safely delete files

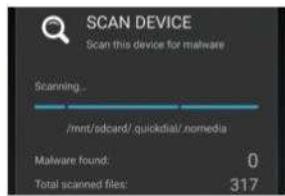
After removing all the files in question, you can see how much storage you've removed. Although it may not seem like a lot of storage, the more you use your device, the more of these files are created, so it's important to stay on top of it and repeat this process every now and then.

Find malicious software

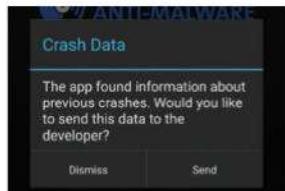
It's a good idea to check for malicious apps on your Android device



After you're done downloading and installing the Malwarebytes app, open it and select the Scan Now options listed on the main screen to start a full scan of your phone.



Depending on how much stuff you've got stored on your device, the scan can take a little while. This truly is a really thorough app, so if there are any malicious files, it'll find them.



Once completed, go on and check out the results. If anything is found, then choose to remove through the app. You should notice improvement in your Android device's functionality.

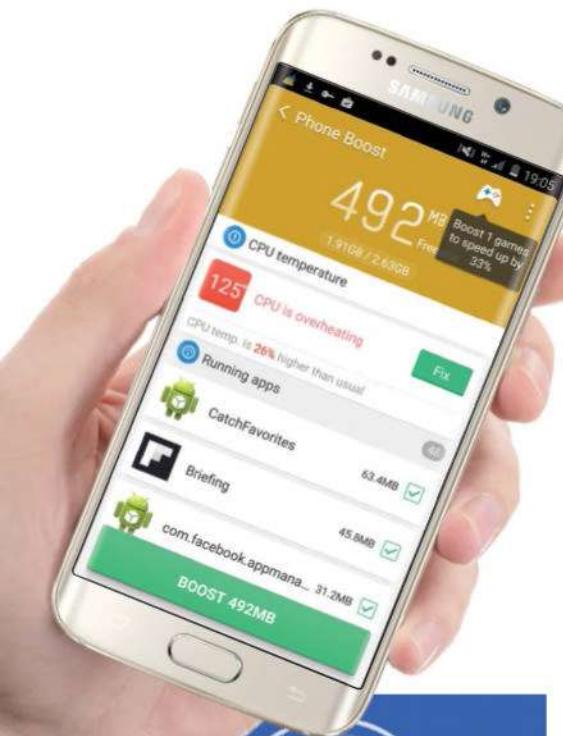
Optimise your device's RAM usage

Remove background apps and functions with Clean Master

One of the best things about owning a newer Android device like the Samsung S6 and S6 Edge is that they tend to have a vast amount of virtual memory, or RAM, for you to use. However, with newer devices has come a whole new plethora of more power-hungry apps that require a good amount

of your device's RAM to be used properly. If you've ever noticed any significant slow down on your device, chances are it's due to the amount of RAM your phone is using and it's an even bigger problem if you don't close background apps or functions that tend to constantly drain your device's RAM.

Although there are plenty of apps to help manage RAM usage, our favourite is Clean Master, which we cover in this tutorial. This app provides a full scan of your Android device and identifies the areas in which you can save some precious memory, helping you to make your device run faster.



3: How much was released?

Your phone now will fully close these apps, but it could take a while depending on how many apps you selected. Once completed, an evaluation screen will appear where you can see just how many megabytes of your RAM were saved.

Clean Master | Stop apps running in the background



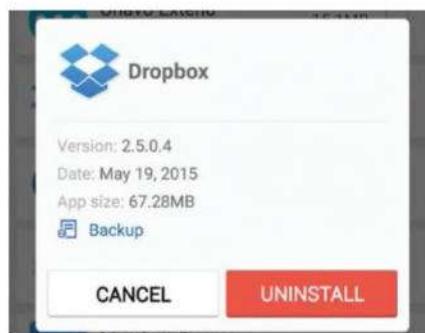
1: Check to see usage

When you first open up the Clean Master app, you'll instantly be able to see both how much storage you've left on your phone and your useable memory on the right. If your RAM is below 50 per cent, you'll want to free up some room.



2: Select apps

Select the Phone Boost option from the main screen. Now you can check out the apps that are currently using up your RAM usage and how much each one is taking up. Select each app you want to close and then press the Boost button.



4: Take a closer look

If you're interested in seeing an app in closer detail, before giving your RAM a memory boost, you can select the app in question and check it out. You can then see a quick overview of the app and the areas it requires your phone's RAM.



5: Boost your games

Another great function of Clean Master is to boost the RAM used in your games to help remove any lag on your Android device. While within the app, select the game controller at the top and then select the games you want to boost from the list.

Remove and merge contacts

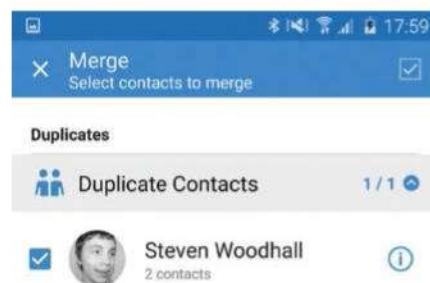
Use Simpler Merge Duplicates to easily remove repeated entries in your phone's contact list

Show possible merges



1: Smart searching

With the Simpler Merge Duplicate app installed, open it up and the app will instantly scan your address book to duplicate entries. Once the process is complete, the total number of a repeated contacts will be listed. Tap to continue.

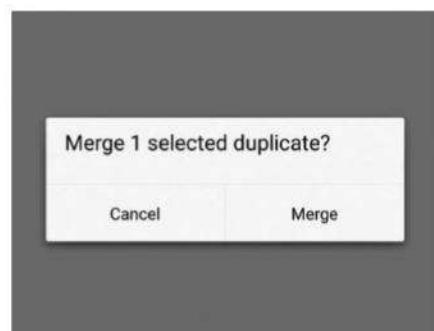


2: Merge selected contacts

A list of potential duplicates will now appear. Check the app hasn't mixed up any contacts by tapping the i button to view additional information. If contacts shouldn't be merged, deselect them by tapping the tick box next to their name.

use up a good portion of your phone's internal storage without you really knowing at all.

With the Simpler Merge Duplicates app, users can perform a scan of their phone's contact list and identify the contacts that need merging or simply deleting. Follow this tutorial to learn how to get the process done.



3: Complete process

Once you've finished double-checking contacts, tap the Merge button at the bottom of the screen, the process will then completed. Simpler Merge Duplicates will merge 15 contacts for free, additional contacts require an in-app purchase.

Boost your device's battery life

Get even more from your battery life by performing a few simple tasks in Battery Doctor



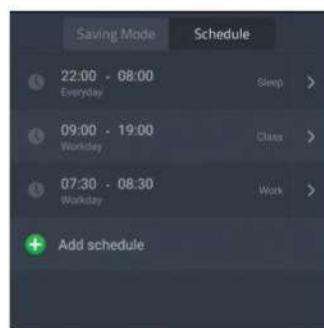
When you first open up the Battery Doctor app, it'll do a quick scan of the current status of your battery. This will give you a quick indicator at how much spring cleaning you'll need to do on your all-important battery.



The app takes you to the battery optimise screen where you can close running apps and alter toggles to improve battery life. At the top of the app you'll be able to see how many minutes and hours you could save.



Go back to the app's homepage and select the Your Mode option provided. This will list some of the most common battery drainers and how your phone deals with them. Toggle with various ones to optimise the battery.



There's also a great Schedule option to create various battery-saving modes at different parts of the day depending on your usage. It's a great idea for those wanting to save battery while they sleep, for example.

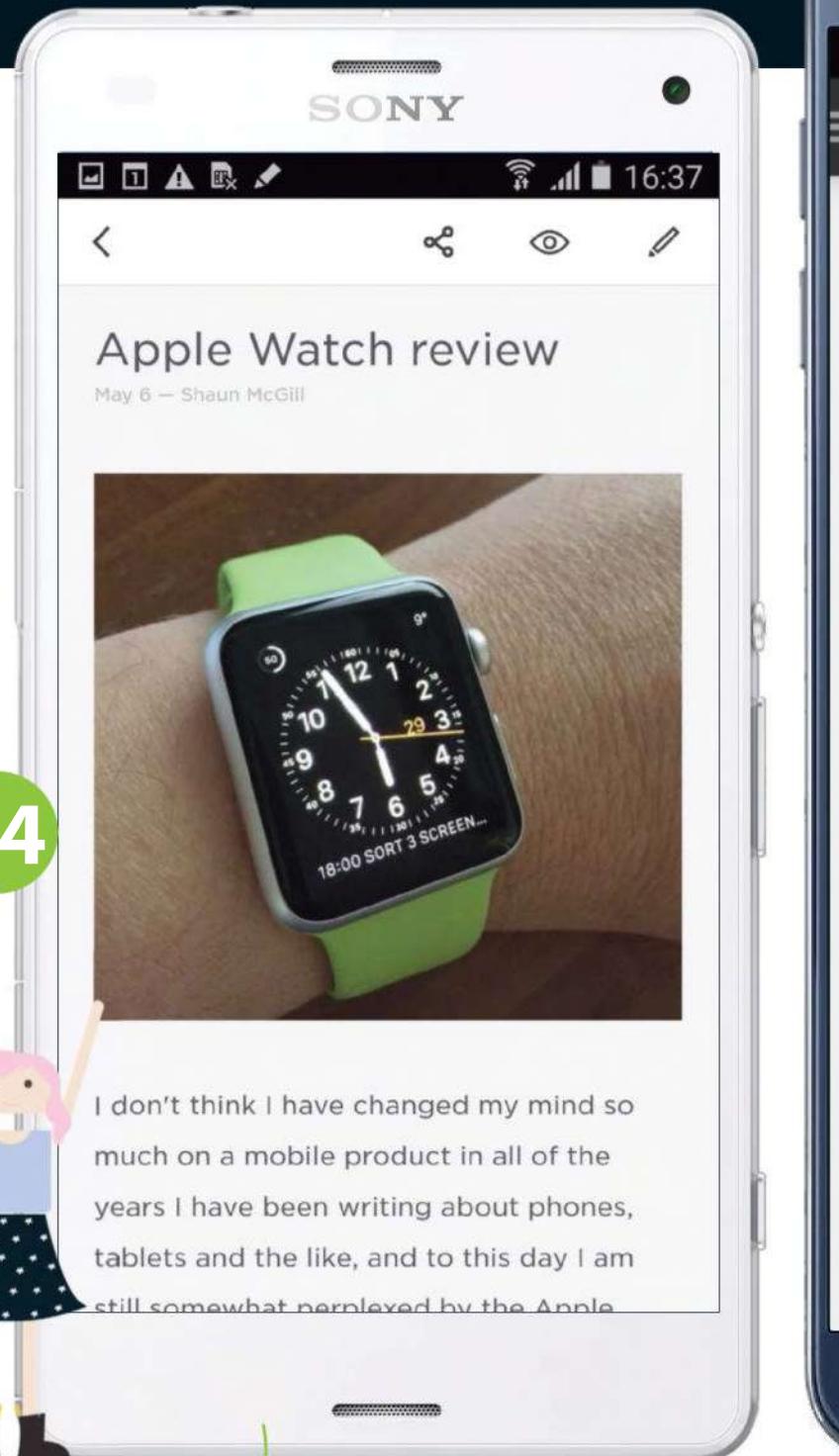
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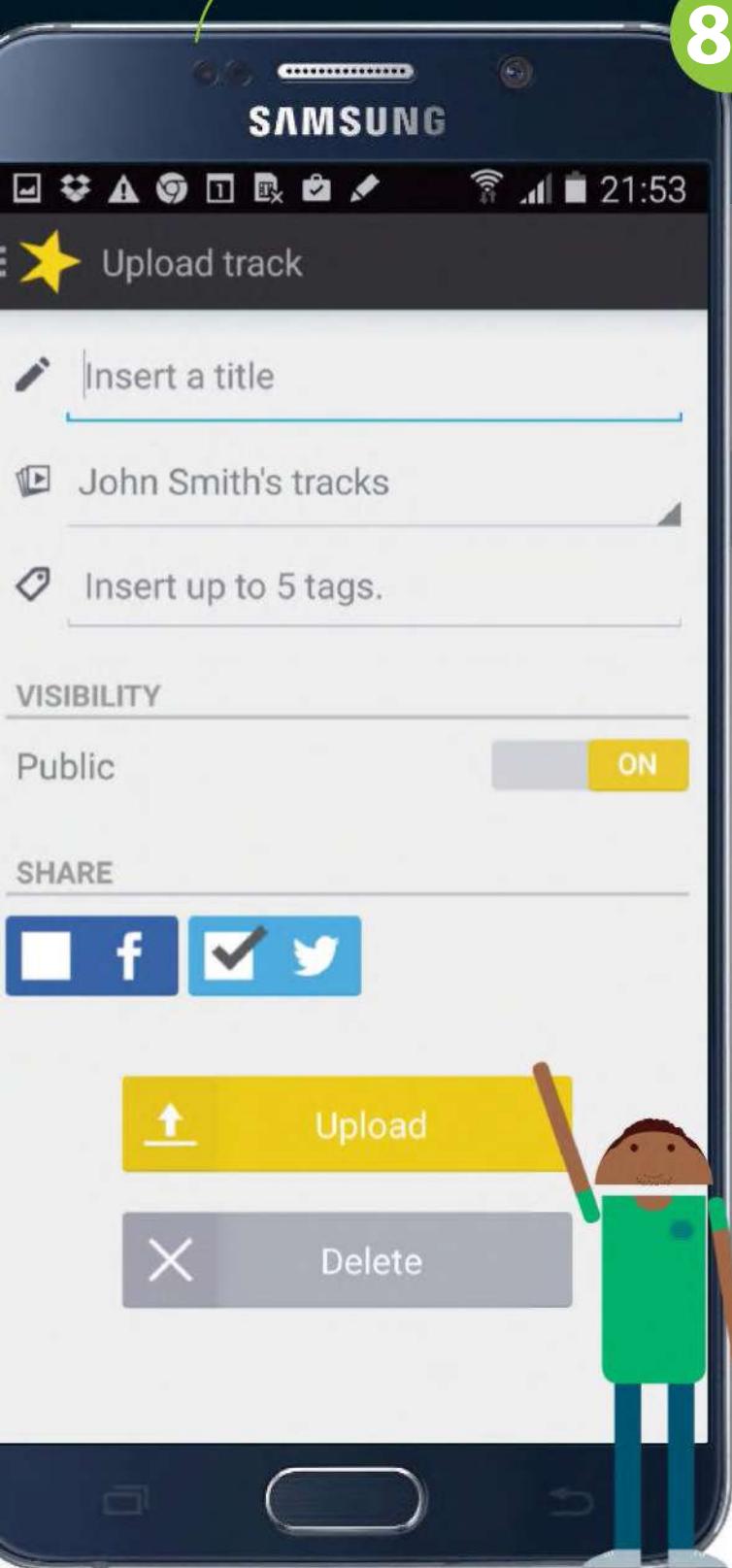


Post to your
blog from your
Android device



Record and upload
a podcast

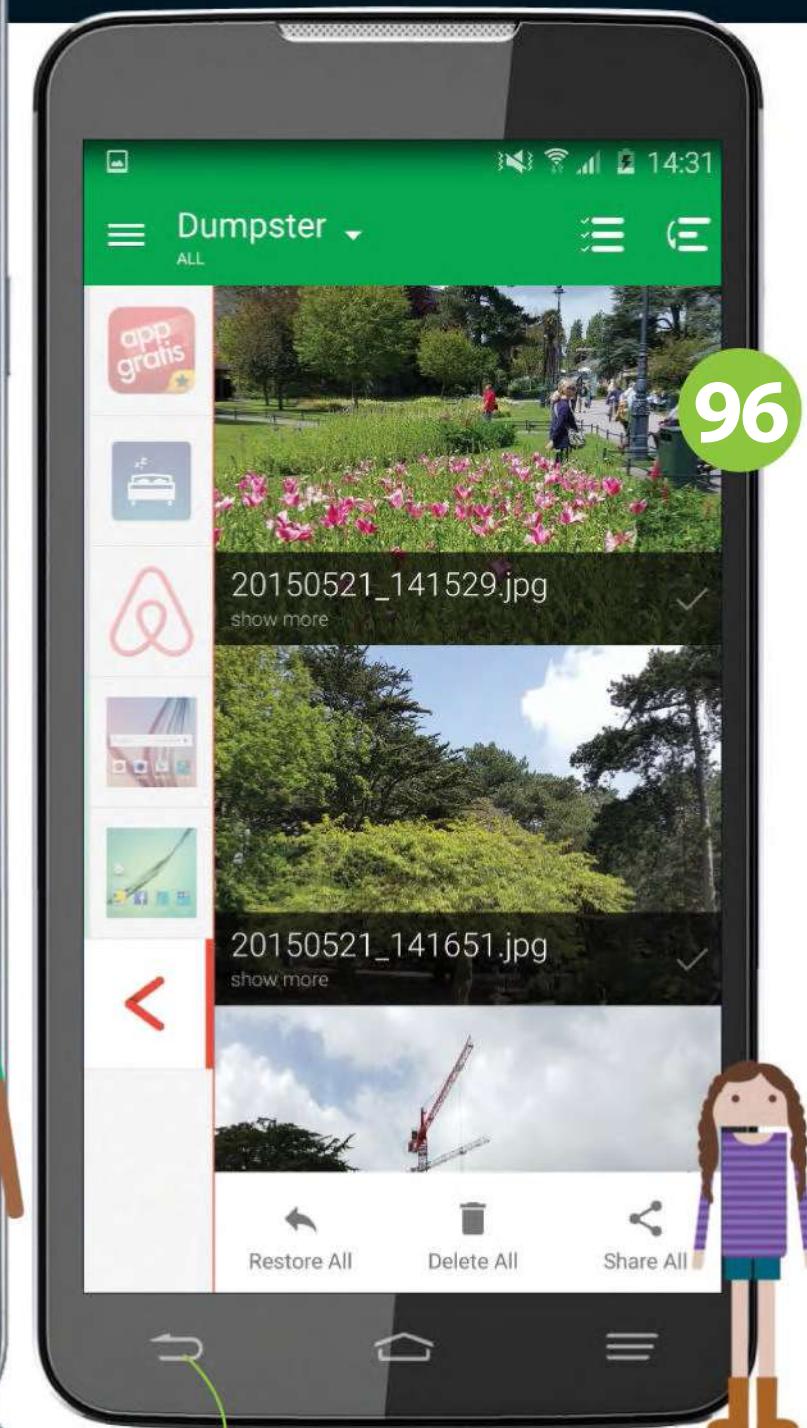
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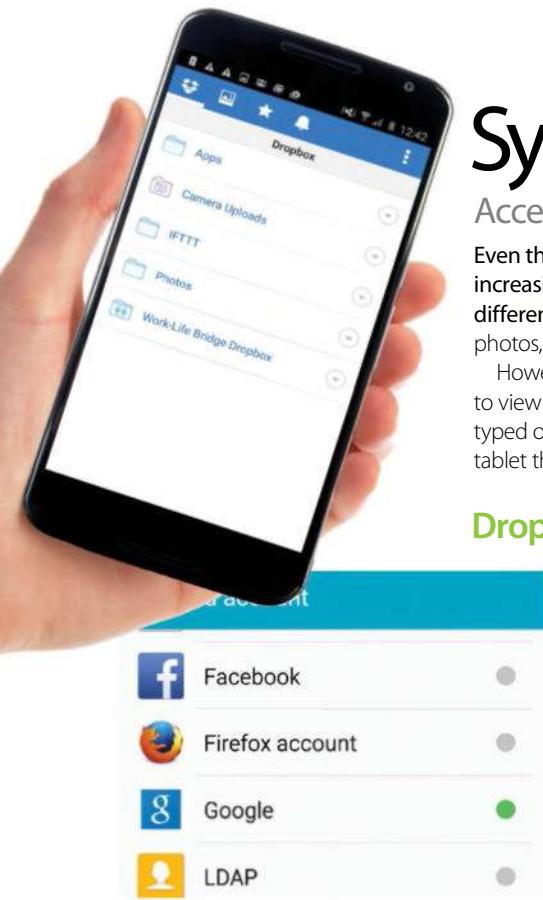


"Downloading pre-release software from developers is
not really that difficult"

Manage your deleted
files and folders

96





Sync files across devices

Access files instantly across your phone, tablet and PC

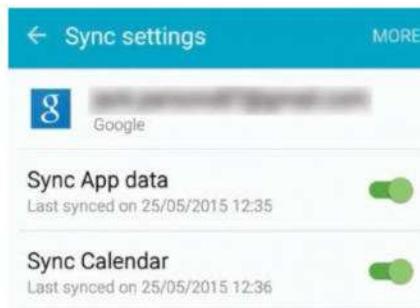
Even though tablets and smartphones are increasingly similar in size, they are used for quite different things. Phones are handier for taking photos, while a tablet is better for work purposes.

However, there will come a time when you need to view a document on your phone that had been typed on a tablet, or show a friend a photo on your tablet that you took with your phone. Therefore,

it's useful to sync your devices so you can switch between them with ease. Luckily, there are a number of ways to sync your devices.

This tutorial shows you how to sync your various accounts as well as taking you through Dropbox, the app that sends bulky files but also stores them so you can view them on any synced device. Dropbox is ideal for mobile devices and desktops.

Dropbox | Share files between devices

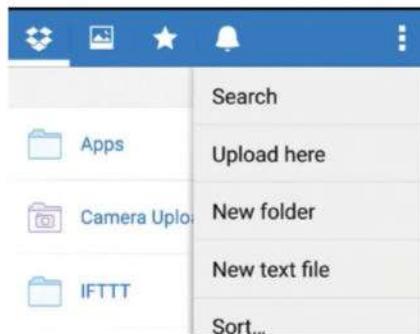
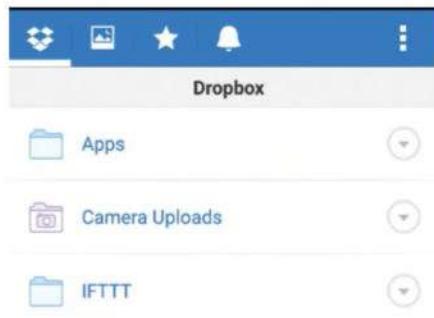


1: Add an account

If your Android phone or tablet runs Lollipop, swipe right for the Google Now page, press the hamburger menu and select Add Account. If your device is running on KitKat or earlier, go to Settings>Account>Add Account and enter your email and password.

2: Sync your accounts

You'll be presented with the option to sync all of your accounts, such as app data, documents and contacts. If there's anything you don't want to sync, you can just untick the box before pressing Next. Repeat with your other Android devices to sync them all.



4: Set it up

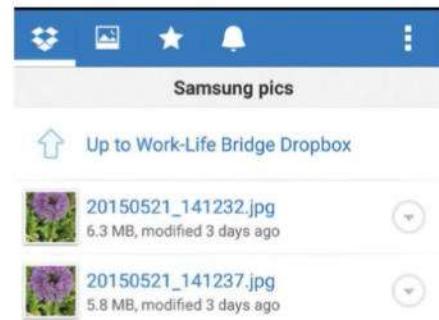
As is usual with normal account syncing, once you've logged into the same account on all your various devices, you should be able to see all the files on the account. Upload a file on one device and you'll see it on the other. It might need refreshing to load.

5: Create a folder

If you need to transfer a number of files, you should create a folder in Dropbox. You can do this by pressing the lower-left button on your Android device and click Create Folder. Give it a title and click Create. Press and hold your file and move it into the folder.

3: Install Dropbox

Now that all your email and phone accounts are synced, what do you do if you want to view files without sending them across manually? Go to the Google Play store and download Dropbox for all of your devices. You can download it for your PC as well.



6: View files

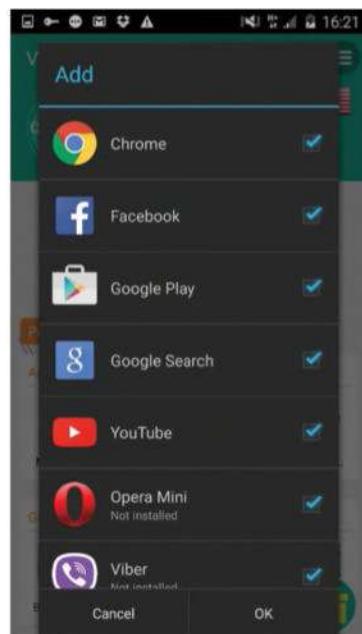
To view the files, just load up Dropbox on your other device and then click on the folder and the file that you want to view. As Dropbox gives you a rather generously large size limit, you can share anything from text files to whole movies quickly and easily!

Access regional content via VPN

VPN and proxy services are a bit of a grey area when it comes to their legality, but they're entirely safe and recommended to use in the correct manner. No matter what country you live in, chances are you'll have come across some blocked content you want access to. For example, numerous news services around the world block

access to certain videos from people who live outside that service's home country.

However, using a VPN service can help mask your IP address and make it possible to watch any content you like from all over the world. So you can enjoy any content, without restrictions! Here's how to get one up and running.

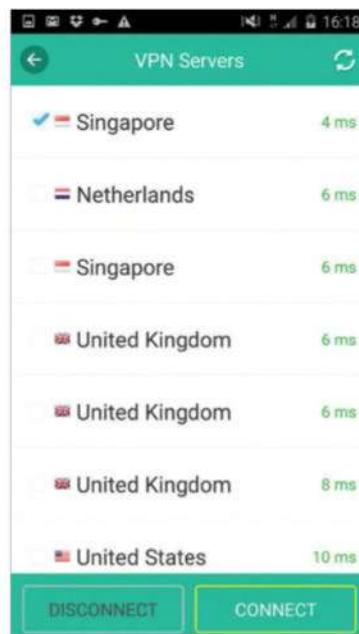


1. Download and install

Download the VPN Master app. When you first open up the app, you'll need to choose a country where you want your connection to be based. Although this doesn't make a whole lot of difference, you'll find the best connections are in countries close located to where you live.

2. Unblock apps

The next screen asks you to select the apps you want to unblock using the VPN service (Fig 1). To access all video content, make sure to select the Chrome or YouTube app. If the app you want to unblock isn't listed, use



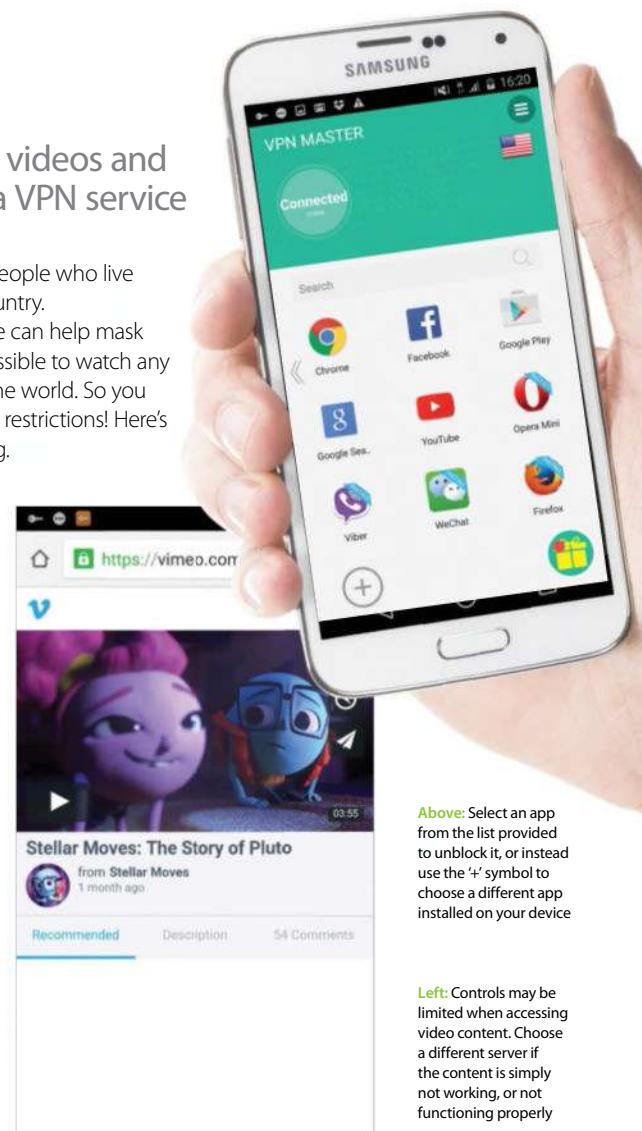
the '+' symbol to select one from a comprehensive list. Not every app is available to use alongside a VPN.

3. Start browsing

Use the app in question to search for what would previously be blocked content. For this example, we chose the Chrome app and pointed it to a website where content is usually blocked due to our location. Note that loading speeds can be slow at first.

4. Limited control

One of the drawbacks of using a VPN service is that you can be limited as to the control you have over some of



Above: Select an app from the list provided to unlock it, or instead use the '+' symbol to choose a different app installed on your device

Left: Controls may be limited when accessing video content. Choose a different server if the content is simply not working, or not functioning properly

the content (Fig 2). Certain videos may restrict users to the bare minimum of playback controls, or simply won't load very well on particular devices. It's a good idea to try out the different servers from the first step to figure out which one best works for you.

5. Stay within limits

Once you're finished with the content you want to enjoy, back out of the app you were using to access it and open the notification pane. Select the VPN Master listing to see an overview of how much data you used. VPN Master has a 1GB browsing limit before asking you to upgrade the app.

Can I unblock content in my own country?

Yes, on the very rare occasion that certain content is blocked within your own country, you can use a VPN service to gain access to it.

Get nearly any paid app for free

How do you keep up with the latest apps without breaking the bank?

The cheaper the app, the better right?

Unfortunately, this philosophy doesn't often apply to the latest apps and games, and if you like to be the first to play the latest games or enjoy the newest apps, there can be a heavy toll on your wallet.

So what's the answer? Well, the first place you should probably look is AppGratis, a service (with an associated newsletter) that presents a free version of a premium app or game every day, using information from Google Play and contact with app developers. While occasionally apps have heavy discounts, in most cases there is nothing to pay with the bonus of additional features not available in the standard release. The prospect of getting something useful for nothing should not be sniffed at, yet AppGratis is free!

Before you take a look at AppGratis, spend a few moments making a list of the premium apps you want. This will prove invaluable when it appears on AppGratis.

Get more info

The AppGratis window displays everything you need to know about the current offer, from the description and a screenshot, to its usual price and name of the developer. If additional features are included, these are also listed here

Install an app

Tapping the Download FREE button will take you to Google Play, where you can go through the usual procedure to install the app. Should you be unhappy with it, don't worry. Just uninstall it in the usual way and forget about it

Disable alerts

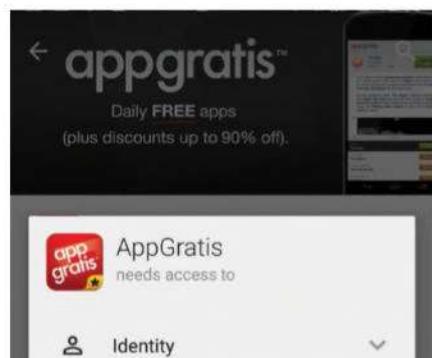
AppGratis by default has various alerts settings enabled. These can prove irritating, especially if you have subscribed to the daily emails, so use the Settings option to disable them. AppGratis still appears in the notification area daily

Explore offers

AppGratis shows you details of the offers from previous days. Usually these offers will have expired, but in some cases they may still be available. Either way, it serves as a useful reminder of the quality of apps that are on offer



AppGratis | Get free apps on your Android



1: Install AppGratis

For instant alerts that the best apps have gone free, you will first need to install AppGratis on your phone. Free to download from Google Play, all you need to do is search for the app by name, install the app and wait for the notifications to come through.



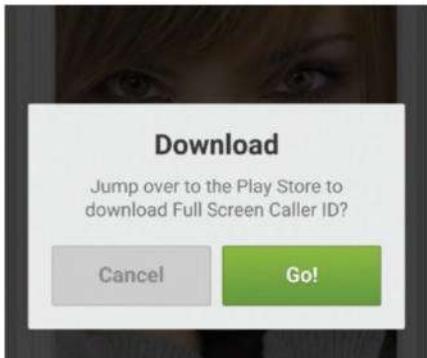
2: Review app deals

Not all apps will be of interest, so when you receive an alert from AppGratis, tap it to review the full details. This won't take more than a minute to do and is worth the time so that you can discard the alert and wait for the next one which may be more useful.



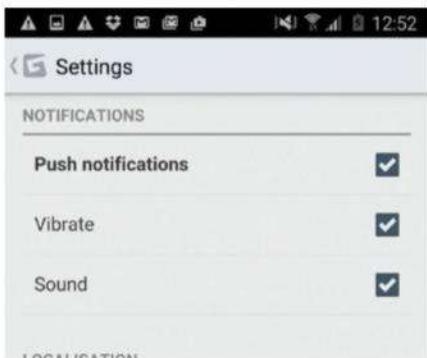
3: Get app details

When an app you've been waiting for appears, check the description to ensure it offers what you want. Often AppGratis deals are free versions of premium apps but with less functionality. Sometimes you get additional features, so check the offer.



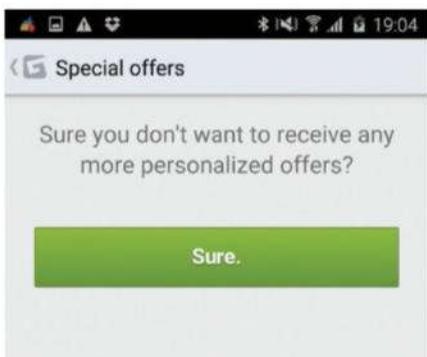
4: Install discounted apps

If you're ready to install the app, tap Download FREE, then confirm by tapping 'Go!'. Google Play will open, so confirm the details one last time and tap Install.



6: Set alert options

The Settings features options to toggle push notifications, vibrations and sound. You may find disabling these options a good idea. Tap the tickboxes to deselect the alert options.



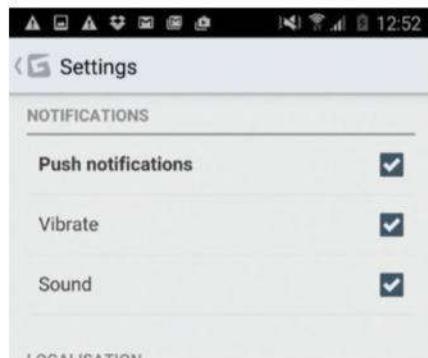
8: View more offers

As you download apps, it learns what sort of apps you're interested in and offer you similar content. If these become samey, go to Settings and untick Special Offers to stop this.



5: Discover other apps

Even after apps are no longer on offer, AppGratis will continue to list apps for a few days. This is still a great way to discover new apps. Just tap Deal Over instead of FREE to view.



7: Change Play Store

If AppGratis is sending you offers for apps that aren't available in your country's Play Store, check Settings, scroll down to Play Store, and tap to select your country.



9: Get the newsletter

If push notifications are too intrusive, AppGratis also offers a daily email round up of apps gone free. Go to appgratis.com and select offers about Android apps.

I've seen other apps like AppGratis, can I use those?



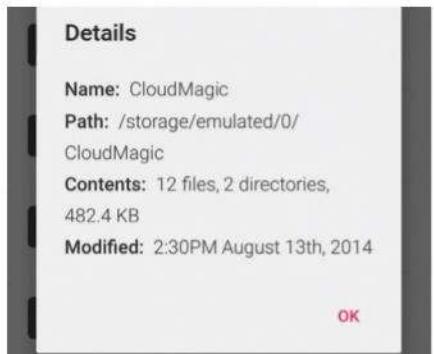
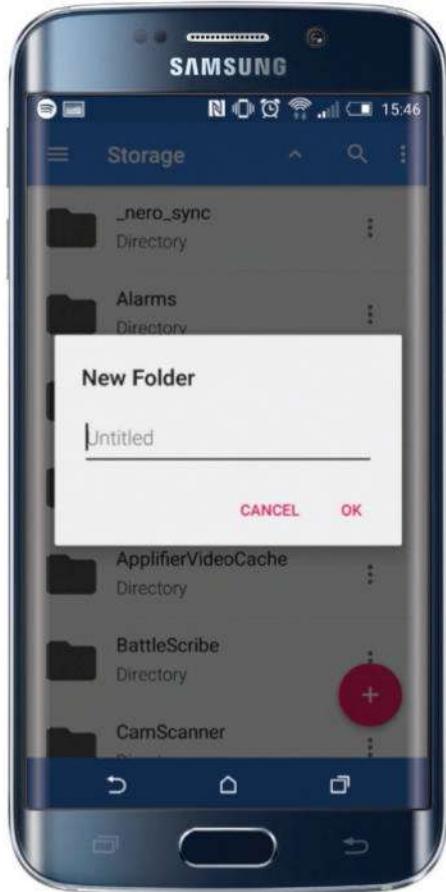
AppGratis' success has spawned a number of copycats. We've used AppGratis extensively for a couple of months now and spent time comparing it with some clones. The result of this seems to be that the clones are copying AppGratis' offers, with developers perhaps even using AppGratis updates to prompt their own apps to update with similar information. Obviously this is less than satisfactory, which is why we recommend you stick with AppGratis.

Couldn't I just pirate apps instead?

Put simply, no. While it may seem very tempting to avoid the usual system and get free apps the illegal way, it's not safe and could seriously endanger your device. Pirated apps present a significant malware threat and it is an offence to download copyrighted material. Apart from the usual legal and moral complications, pirated apps aren't regulated, and threaten your security. All in all, a bad idea.

Manage files without configuration

Use Cabinet Beta to easily manage files stored on your Android device



3: Find out more

You can find out the details of any file with a tap from this menu. The app will show you where the data is stored, how long it's been there and how much space it is taking up.

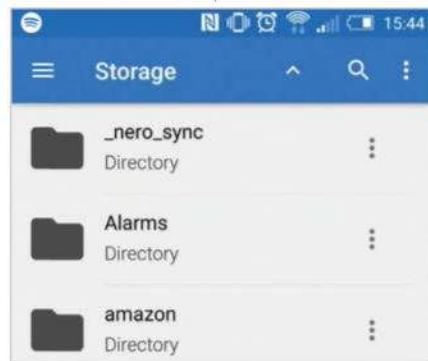
Sometimes setting up a file manager on your Android device can be a mammoth task, and by the time you've got it running you've forgotten why you installed it in the first place. And if that isn't a problem, then they're often ugly apps that wouldn't look out of place on a PC from years ago. Cabinet Beta solves those two problems in one fell swoop.

First of all, it's a really good looking app that will fit nicely on any device running Lollipop

and second of all, it's a doddle to get up and running. In fact, all you need to do is install it and it will do the rest.

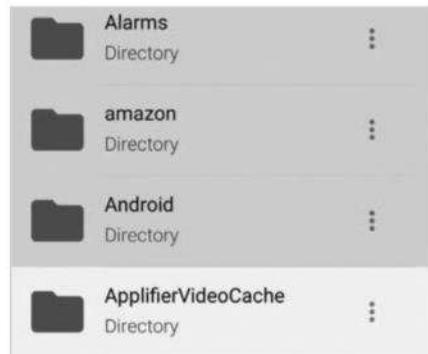
In this tutorial we'll show you what the different parts of the app do and talk you through some of the more interesting advanced functions. Head to the Google Play store, download the app and when it's installed, head down to Step 1 to get started with managing your files.

Cabinet Beta | Manage files



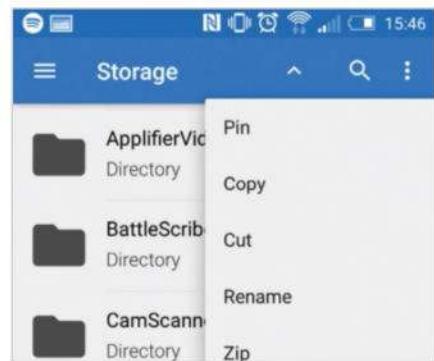
1: Access the main page

The app takes you through a tutorial to explain the user interface. When done, tap a button to take you to the main page. You'll see a list of all of the folders on your device.



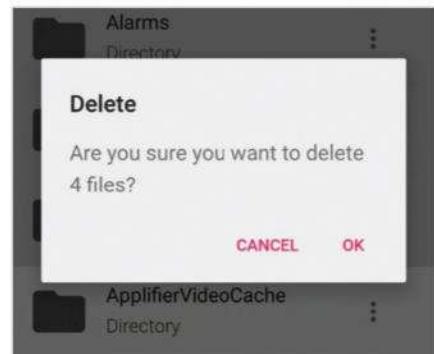
4: Select multiple files

To deal with more than one file, long-press on one. When the screen turns black you can tap other files or folders to add them. When picked, you've got a couple options.



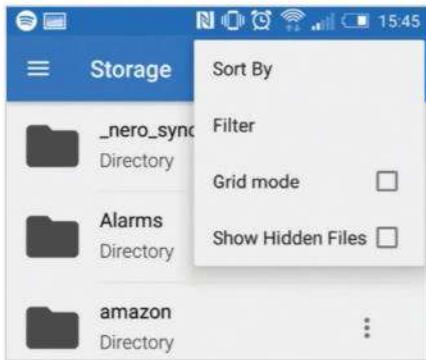
2: Use the menu button

Tap on the menu button to get more information and open up a list of options what to do with that file or folder. This is the easiest method for dealing with single items.



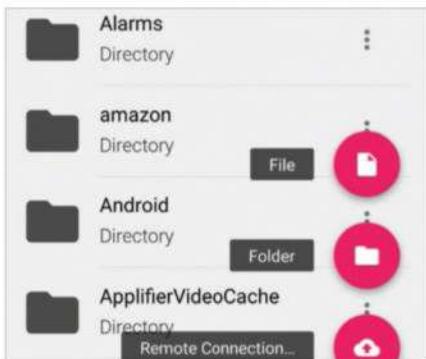
5: Manage selected files

Those options appear in the top right-hand corner. Tapping the bin deletes the files, tapping the overlapping icons copies them. The menu lets you cut, pin, ZIP and select all.



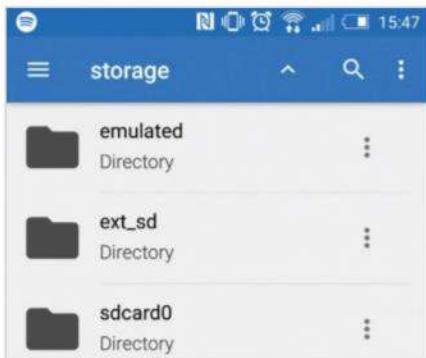
6: Rearrange them all

Tap the menu when you don't have files selected to choose how files and folders are displayed. Select whichever one works best for you and then just give it a quick tap to set it up.



7: Select the pink cross

A pink button in the bottom-right opens another menu, to create new files, folders and connections. Tapping an option lets you quickly pop something into your file system.

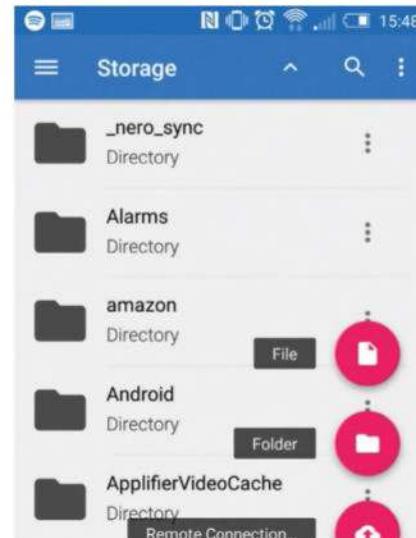


8: Take a step back

The arrow in the top bar lets you take a step back into parent folders. It's useful to get a better idea of how everything is stored and lets you quickly jump out of folders.

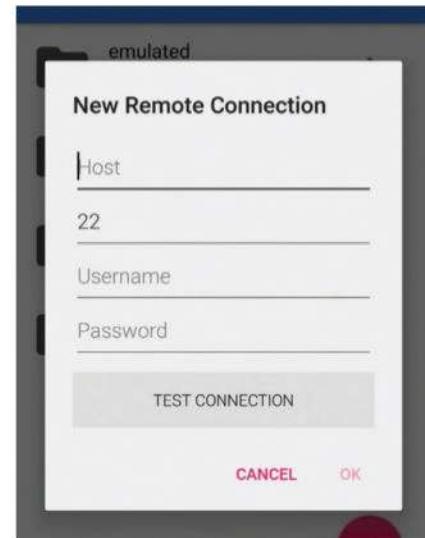
Connect your phone to a network

You can quickly connect your Android to an FTP network to collect files



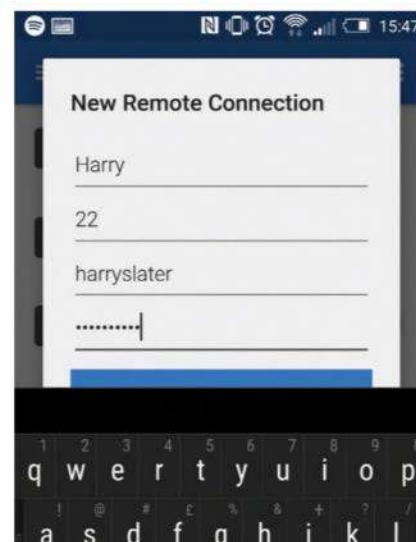
1: Tap the pink circle

Open the menu. The option Remote Connection is what you use to connect your phone to the server, so tap it. You'll need the details of the connection you're making.



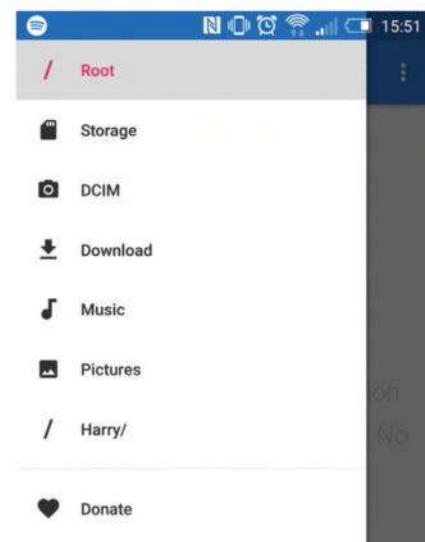
2: Add the details

You need to know the host of the SFTP server, your username and password. Enter them in the spaces and tap Test Connection to see if everything is working.



3: If it goes wrong

If things haven't gone right, you'll see an error message replace the button. Try re-inputting the values. If you're sure everything's right, it might be the server

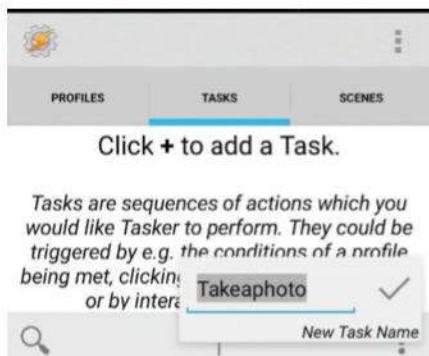
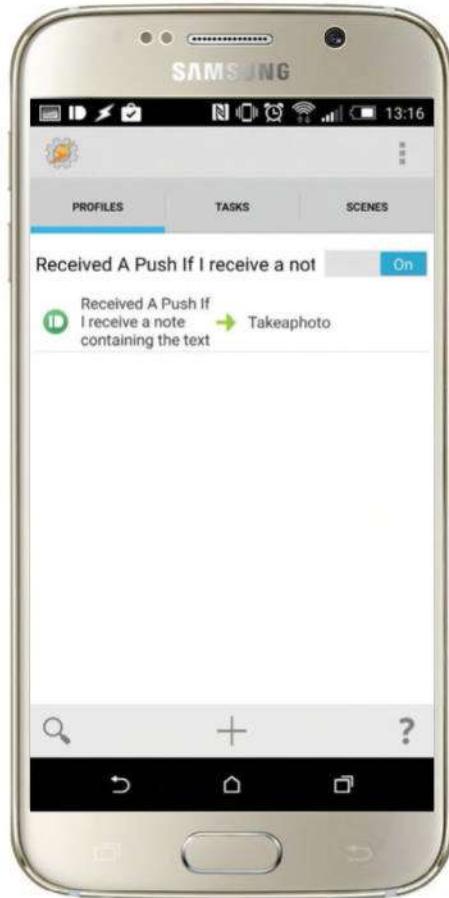


4: If it goes right

Your connection is accessible by tapping the menu in the top left. Look down through the list of file types and you should see it there. Tap it when you want to connect.

Take photos remotely on your camera

Use the Pushbullet and Tasker apps to trigger the camera on your Android



3: Set the snap

Name the task and tap the + button to add an action. Tap Media and Take Photo in the bottom-right. Set a filename and change the Naming Sequence to Series or Chronological.

There are plenty of apps on the Play store that let you turn your Android into a trigger for your DSLR camera, but if you're looking for something to trigger the camera on your Google-powered device, then the pickings are slim. But fret not, because in this tutorial we'll guide you through setting up a system that lets you take photos remotely.

You'll need a couple of Android devices running Android, or an Android device and

a PC running Windows, and you will need a couple of apps installed too. But if you don't mind a little bit of faff, then you can set up a clever remote control in less than an hour.

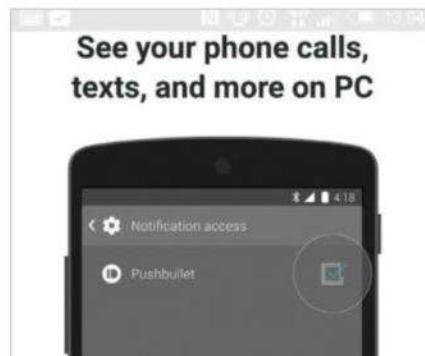
Here we'll guide you through getting everything set up, show you a few shortcuts that will save you some time in the long run, and give you a few quick tips to make sure that everything's running smoothly. When you're ready to go, head to the first step.

Tasker + Pushbullet | Trigger your camera



1: Get the apps

You need two apps and a few devices. Download Tasker and Pushbullet onto one device, and then install Pushbullet on the second. You can use a PC, too.



4: Check the bullet

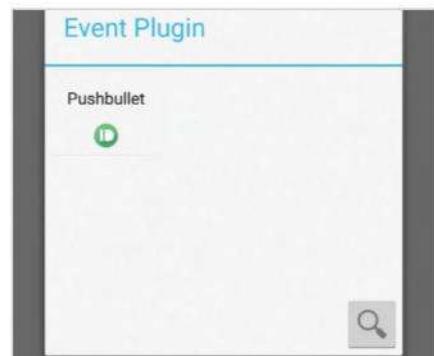
Next create a separate profile in Tasker that uses the photo task we just created. Make sure you've got Pushbullet set up and that you've given it access to everything it needs.

Click + to add a Profile.

Profiles link contexts (conditions) with the tasks that should run when the conditions are met.

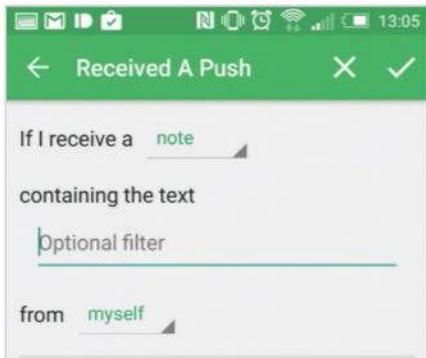
2: Go to Tasker

On the phone you want to take the photo, create a couple of tasks. One to capture the photo and one as a remote trigger. For the photos, go to the tasks panel and tap +.



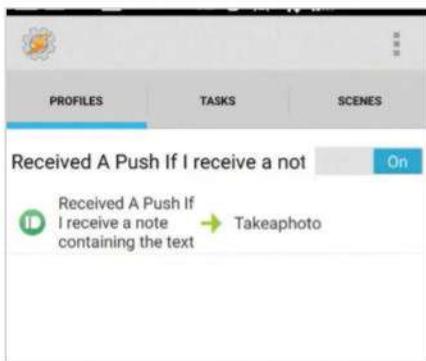
5: Make the profile

Go to the profile of Tasker and tap the + button to add a new one. Create an event. Tap plug-ins, then tap on Pushbullet. Now tap the pencil button to configure.



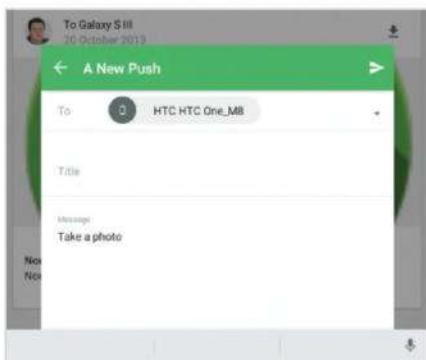
6: Choose the text

Now you need to pick some text to trigger your camera, like 'take a photo'. Also, set the push to dismiss once it's arrived too. Tap the tick to save the changes.



7: Attach the action

Attach the action we created at the start to the profile. When you've pushed back you'll get a drop-down list of tasks. Pick the one you made earlier. You're done with this device.

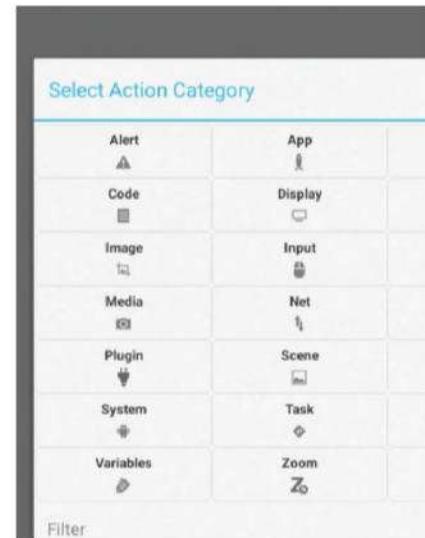
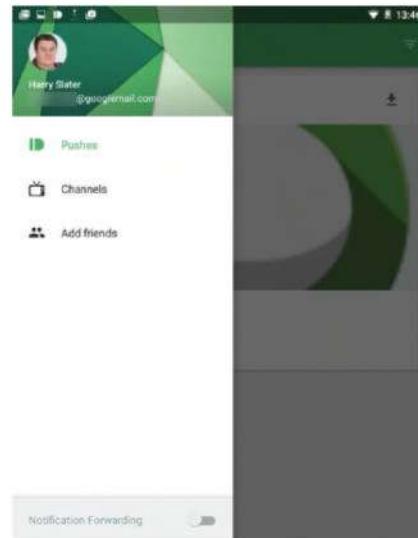


8: Get the other one

On your other Android device, use Pushbullet to send a note to the first one with the text you set as the trigger. You should have just used one device to tell another to take a snap!

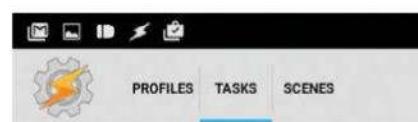
Set up a button with Tasker

Create a button on your second Android device so you don't have to send the same message over and over again



1: Download and install Tasker

Download Tasker on your second device. Once installed, head to Tasks and tap the + button. Tap Plugin, then Pushbullet to create a new task. Now tap on the pencil icon.



2: Configure the message

Configure the message your button is going to send. Select the device you want to send it to from the menu, and insert the text you selected in the earlier tutorial.



3: Save and back out

After saving, go out of Tasker. Add a widget on your home. When asked which task to set it to, select the one you created. You now have a one-touch remote photo button.

4: Set an icon

Set an icon to display the widget, and the name of the task will be displayed. Use something memorable. Avoid the Pushbullet icon as it's really easy to get confused.

Create your own Instagram filters

Bored with Brannan? Annoyed with Earlybird? Make your custom photo effects instead



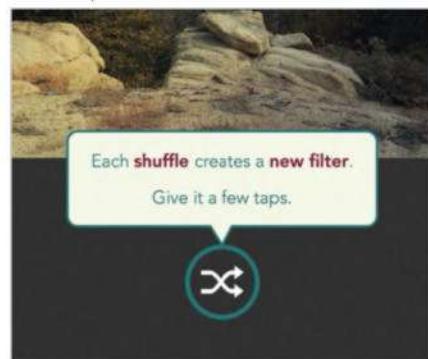
Creating a stunning photo is as much about composition and shape, as it is about getting the filter right. Since Instagram, smartphone's have been able to compete with DSLRs, adding filters in post-processing.

But if you use Instagram or any of its rivals, what you're getting from the filters is what someone else wants you to have. These curated filters are fine for beginners, but don't cover every eventuality.

The solution is to create your own filters on a photo-by-photo basis, something made possible with Shift, a free app that offers textures, blends and colours that can be combined to create stunning results, then saved and reused on other photos.

Shift also features a random shuffle and three touch points where the custom filter can be created, so you can let your creativity run free and get editing.

Shift | Create your own filter



1: Get to grips with Shift

Shift is free from Google Play, with adds. A 65p in-app purchase will remove these. Upon launch you'll see a demo of the shuffle feature. Learn a bit more at shiftbypixite.com.



3: Shuffle for filters

If you're looking for a striking look but don't have much time, use Shuffle with the two-arrowed button to move the pinch points around, applying a different filter each time.



4: Place your pinch points

To create a filter, position the pinch points. Drag individually, or move a group by tap-and-holding the outer points. Pinch the points to resize, affecting depth and concentration.



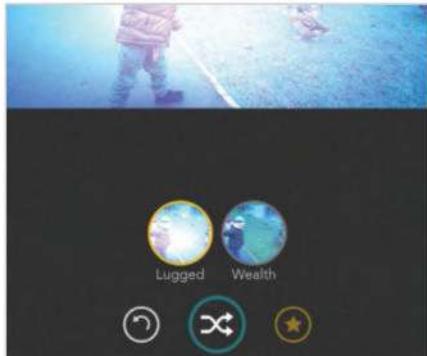
2: Begin editing photos

Before you create a custom filter with Shift you'll need a photo. Tap Choose photo and select Take photo, or Choose photo to browse your gallery for a suitable image to start with.



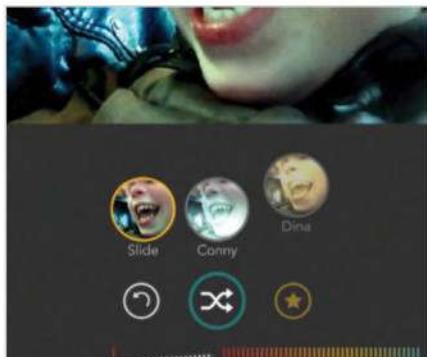
5: Creating your filter

Filters are created by adjusting the sliders at the bottom. Adjust the strength on the left, apply colours on the right. Combined, you can create remarkable effects.



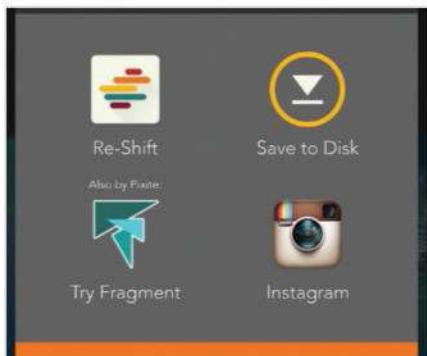
6: Save your custom filter

Tap the star button to save the filter. A name will be given to the filter, along with a small preview. As filters are created they're added to the bottom where they can be viewed.



7: Delete and rearrange

The undo button discards changes you made, but you can discard a filter completely by swiping it upwards. If you use a filter regularly, you can rearrange the list. Tap, hold and drag.

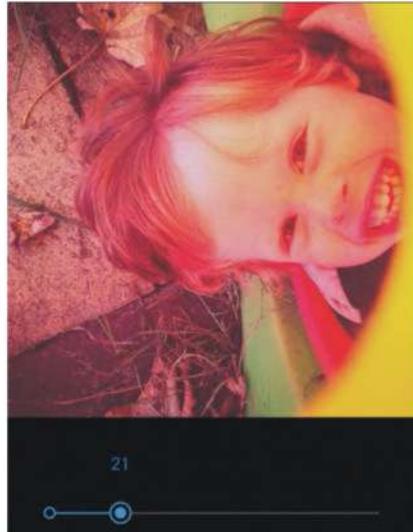


8: Share to Instagram

Tap Share to send the image to Instagram, here you can perform the usual crops and edits and then share. You can set a filter, which is probably overkill, so just use Normal.

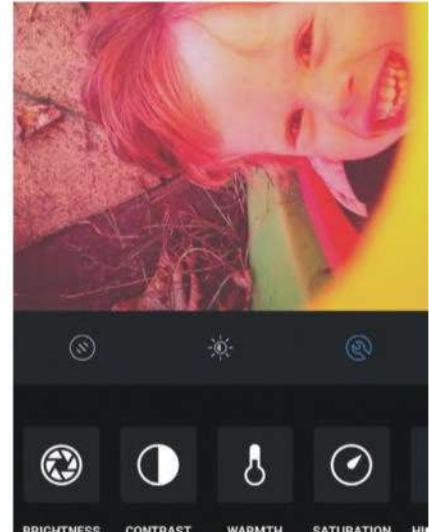
Post-processing in Instagram

Despite the various filters in Instagram, modest edits to images are possible using Lux mode and other features



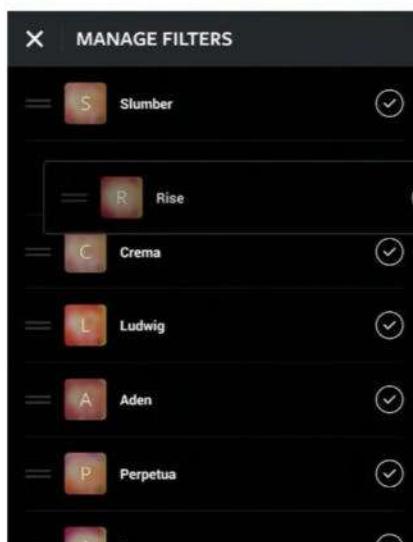
1: Edit images with Lux

After opening an image in Instagram, select Lux – the middle button below the preview. Drag the slider to adjust the setting and when satisfied, tap the tick.



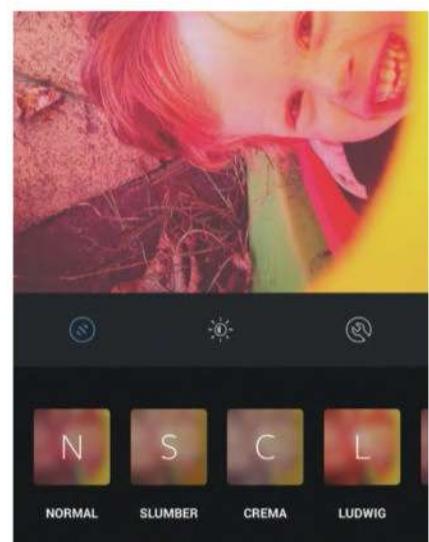
2: More filter edits

Instagram offers a tools menu, with Brightness, Contrast, Warmth, Saturation, Highlights, Shadows and Sharpen, and advanced options like Tilt Shift and Vignette.



3: Manage filters

You'll use some filters more than others. To save time scrolling, open the Manage Filters screen at the end of the filters list to drag filters into your preferred order.

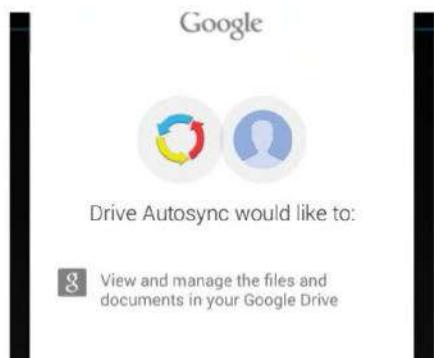


4: When to mix filters

As mentioned, creating a new filter in Shift and importing the image into Instagram is unwise as the results can be disappointing. Successful filter mixing is possible.

Sync your photos to Google Drive

Use Yonomi to connect all of your smart devices with the same app



3: Allow it to manage files

You'll be asked for permission for the app to view and manage files and documents in your Google Drive account. As long as you're happy, select OK to continue.

The concept of synchronising our mobile devices is familiar; most of us routinely sync content like emails and address books. This way, all of this valuable information is automatically copied to cloud-based storage. Then, should catastrophe strike and that device is lost or stolen, the content isn't lost. Furthermore, if you have several devices – perhaps a smartphone, a tablet and a laptop – that data can be accessed from any of them.

Android extends synchronisation to also permit photos to be uploaded to the cloud, shortly after you've taken them, for safe keeping. By default, those photos are synced to Google+, which isn't necessarily what you would expect or prefer. Several third party apps allow your photos to be uploaded to alternative online storage. Here we look at Autosync for Google Drive which, provides synchronisation with your Drive account.

Yonomi | Sync photos across devices

1 Select Local Folder
Any folder in device storage or SD card you want to sync with Google Drive

2 Select Google Drive Folder
The folder in Google Drive you want to sync the local folder with

3 Choose Sync Method
How do you want to sync? Two-way? Upload only? Download only?

Please grant Drive Autosync access to Google Drive

Connect to Google Drive

Connect to Google Drive using bedfordmd50@googlemail.com

[Click here to select another account.](#)

1: Getting started

Install Autosync for Google Drive and start it up. The app tells you the three steps needed to start, which we'll explain here. Select 'Let's Do It' to get started.

Select Local Folder
Select a local folder to be synced with Google Drive

- /storage/emulated/0
- ...go up...
- Alarms
- Android
- DCIM

2: Grant access to Drive

You'll be asked to allow the app to access Drive using the account indicated. If you prefer a different account, follow the link. Then select 'Connect to Google Drive'.

Select Google Drive Folder
Select a Google Drive folder to sync with /storage/emulated/0/DCIM/Camera

- My Drive
- Backup
- Documents
- Movies
- Photos

4: Select a local folder

You'll be asked which folder you want to sync with Google Drive. Though you can sync any folder, to sync your photos as you take them in KitKat, select DCIM and Camera.

5: Select a Drive folder

Decide which of the folders in your Drive you want to sync with the folder you specified. All the folders are listed so just choose your preferred folder and then pick Select.



6: Create new Drive folder

To create a new Drive folder to sync with your device, select New Folder. Enter a name, tap OK. You'll be asked to select a folder, but your new folder will now be listed, so choose it.



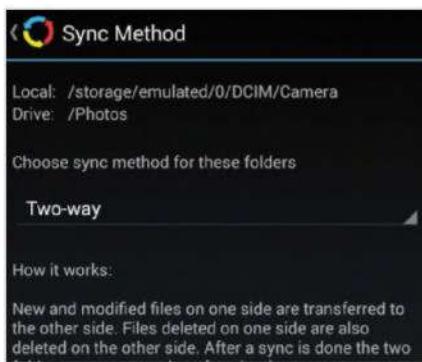
8: Alternative methods

For other methods available, touch Two-way and a menu will list them. For details, select one for a full description of how it works. When you've made your choice, select Next.



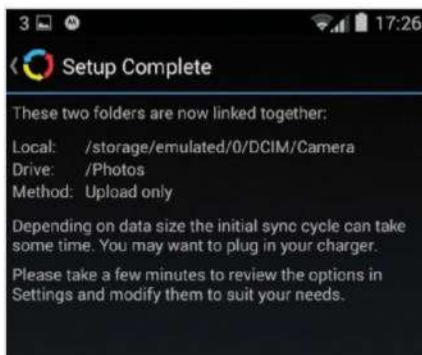
11: See your photos online

You may want to double-check your photos really uploaded by going to drive.google.com in a browser or with the Drive app. You'll see your photos safely stored in the cloud.



7: Choose a sync method

Select the sync method. There are seven methods available, each is fully described. The workings of the default method, Two-way, are already explained on-screen.



9: Setup is complete

When the setup is complete, your chosen options are summarised. If you're not happy, exit and restart the app to choose different options. Otherwise, just select Done.

Instant upload started	2014-11-20 17:52:35
Sync finished	2014-11-20 17:39:15
Autosync started	2014-11-20 17:39:14
Sync finished	2014-11-20 17:29:11
Upload	2014-11-20 17:29:11
/storage/emulated/0/DCIM/Camera/IMG_20141105_121827130.jpg (979 KB)	
Upload	2014-11-20 17:29:07
/storage/emulated/0/DCIM/Camera/IMG_20141105_114719519_HDR.jpg (1.0 MB)	
Upload	2014-11-20 17:29:02
/storage/emulated/0/DCIM/Camera/IMG_20141105_114652444.jpg (1.0 MB)	

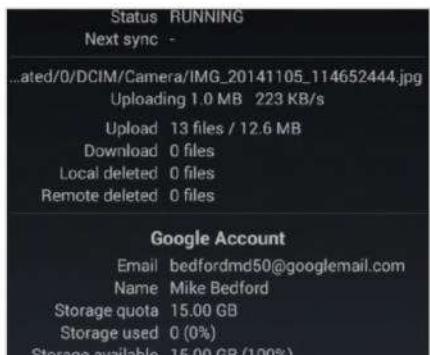
12: View sync history

Back in Autosync for Google Drive, to see what's been uploaded or downloaded, touch the menu icon and select Sync History to see when each sync started and finished.



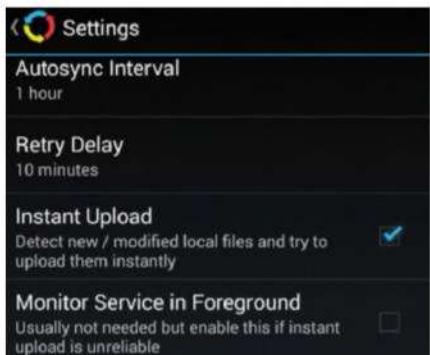
Will this affect my data allowance? Could it cost money?

The app might check every hour, but very little data will be used unless you've taken a new photo. Each new photo will then cost you a few megabytes, depending on your camera's resolution and, admittedly, this can add up. If it's a problem, keep the default setting of only syncing over Wi-Fi.



10: Syncing in progress

Syncing will now start, if you have a Wi-Fi connection, and you can follow progress on the status screen. The first sync may take a few minutes, but later syncs will be quicker.



13: Fine-tune the options

Autosync for Google Drive offers lots of other options. Go to the Settings and you'll see plenty of scope for fine-tuning operations. Alter the settings to meet your needs.

Save YouTube videos offline

Get to grips with YouTube's latest music subscription service, Music Key

YouTube Music Key isn't the catchiest name, but with Play Music, Google owns one of the most comprehensive subscription services.

Although some users won't appreciate having to pay out for another service, if you purchase either a Music Key or Play Music licence, you get the other one completely free. Apart from having access to millions of music videos, Music Key adds some of the most requested features that have been previously missing - including both background and offline listening.

Background listening makes it easy to do other things on your phone while listening to YouTube. The offline option is where users can download their favourite tracks and listen on the go. Both of these features alone are worth forking out for. In this tutorial we will guide you through YouTube Master Key, from setting it up to making the most of the service's brilliant suite of features. To begin, buy YouTube Music Key.

Offline support

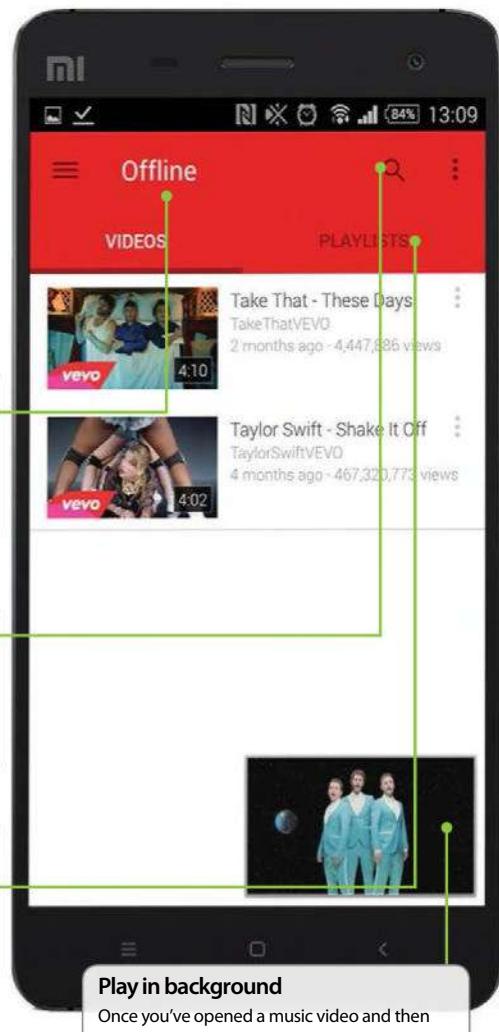
Every time you download a new song for offline use, it will automatically be added to the Offline menu. If you want to remove a track from your offline list, then press the Option key next to the video and select the remove option.

Search

If you're anything like us, you'll be using the Offline feature frequently. To make it easier to find a song you've added to the Offline menu, use the search icon at the top of the app to find what you need.

Download playlists

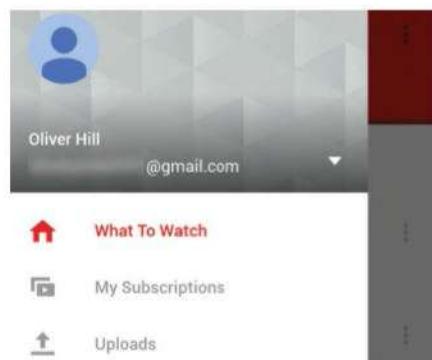
If you've created your own series of YouTube playlists, Music Key also enables you to take them offline. Within the Offline section of Music Key, press on the Playlists option to see which videos you can choose to download.



Play in background

Once you've opened a music video and then backed out of it, a small thumbnail of it will appear in the bottom right of your screen. The music will still play and even if you leave the app entirely, you'll find the video in your Notifications menu.

YouTube Music Key | Enjoy offline listening



1: Update and log in

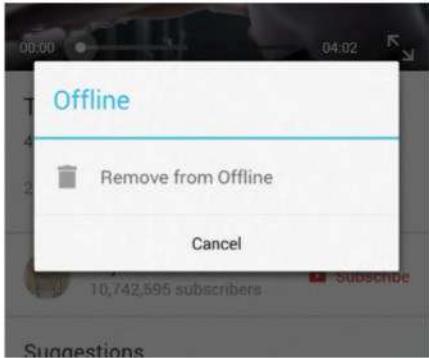
Download the latest version of the YouTube app and proceed to log in to your YouTube account. If you've correctly purchased Music Key, you should now see the Offline option enabled within the side menu. Head to the app's home screen once completed.

2: Switch to Music

By default, you'll be shown the subscriptions screen and an overview of some videos to catch up on. Instead of this menu, select the Music tab near the top of the app. When you use this option for the first time, you may find it takes a few seconds to finish loading.

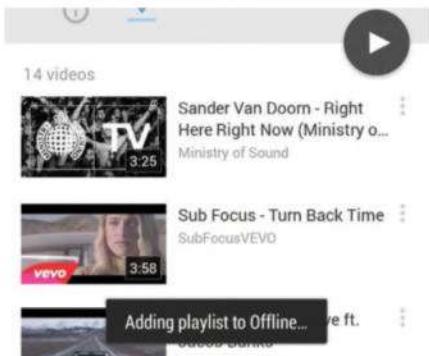
3: Load a video

Open any music video of your choice and you'll find a couple of new things to look at. First, you will see the ad-free logo to notify you that no ads are included with this video. Then, to the right is a download icon so you can add the video to your offline playlist.



4: Add to Offline

Press the Download icon to add the video to your offline playlist. If you want to back out of the download, press the icon again and select the 'Remove from Offline' option.



6: Create offline playlists

After you've downloaded songs, go to the Music tab and find Playlists. Select a playlist and choose Download. Adding playlists to your offline menu takes longer than single tracks.



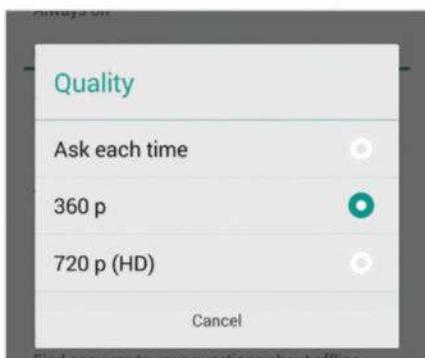
8: Link to Play Music

As you get a free Play Music account with Music Key, it's worth using it. When listening to an artist in Play Music, scroll to the bottom of their page, and load up the music video in Music Key.



5: Monitor progress

Open your notifications menu to monitor several key areas. See all of the items added to your Offline menu, and the Music Key video that's currently being played.



7: Adjust quality

If the video quality isn't cutting it, head to the Music tab and open the settings. Select Quality and choose the 720p option. Your videos will now be played in HD.



9: Correct accounts

If none of the above options appeared for you, make sure you're signed into the correct account. If you've purchased a subscription on the wrong account, it's easy to switch.

How many songs can I add to the Offline menu?



In essence, as many as your device's storage can hold. But it's important to remember that clogging up your phone with too many media files will cause some significant slowdown in other areas. Try to be as selective as possible with the videos you do decide to download.

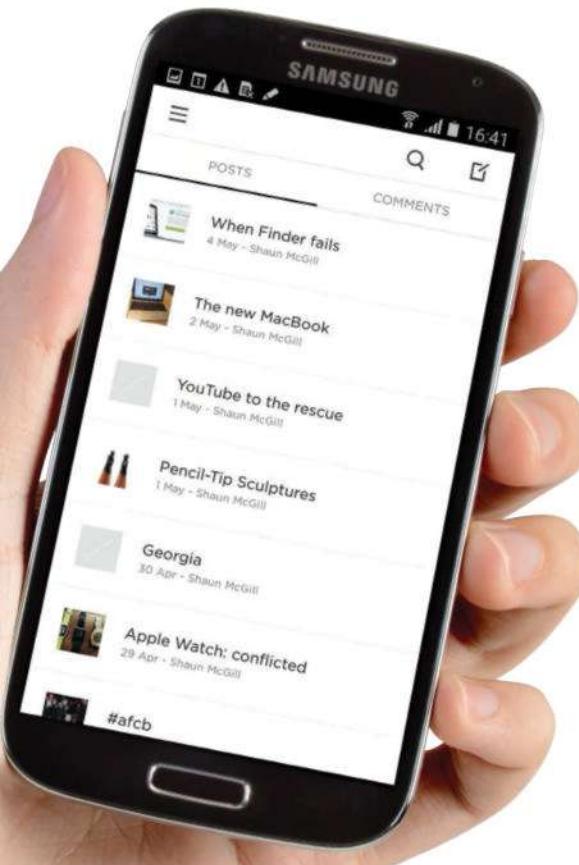
Can I download non-music videos?



Yes, it's possible to download any video using Music Key's Offline function. Simply follow the same steps as before to take any video you want with you on the go.

Boost social presence and set up a blog

A blog is essential for tying your social activities together



Blogs are seen by some as outdated, but they could not be more wrong. Consider what social networks do and how they work, and you will soon see that they are merely conduits for people to communicate on. A blog is yours alone and can be used in any way you like. From the design to the text to the way you bring all of your social elements together, it is a cost-effective way to build

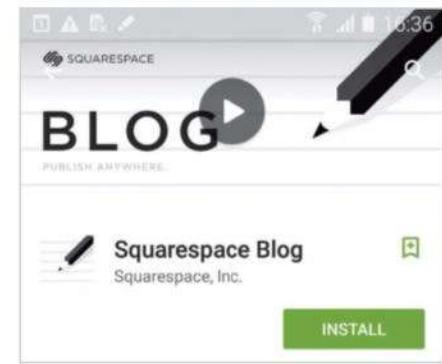
a presence and to truly show what you are capable of. Whether you create podcasts, produce fine art or anything else, a blog can be anything you want it to be and it is exceptionally easy to link to Twitter and Facebook accounts and to even host podcasts and images that you have produced. Many free web hosting options are available for just a small monthly or yearly cost.

Blogging | Build an online presence



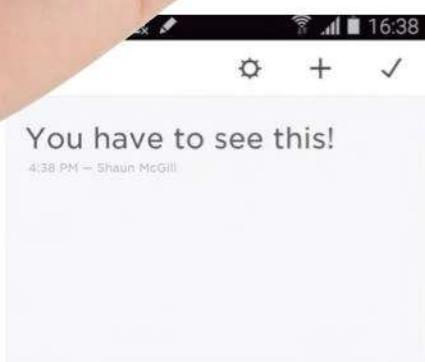
1: Choose a provider

Research your blog host. Check online reviews and carefully consider your limitations. If you know you will struggle to design a site, look for hosts offering templates.



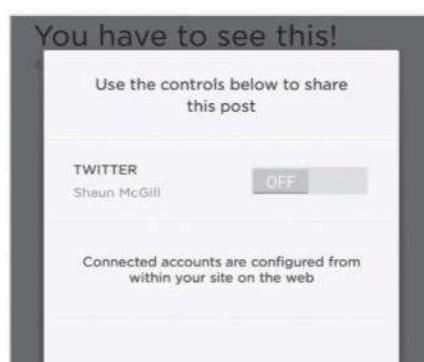
2: Choose a provider

Choose a host who offers an Android app capable of letting you create blog posts that look the same as when created on a desktop. You will want to add images and videos.



3: Write posts anywhere

You can now create blog content whenever the mood strikes or when an interesting event occurs. Your device will let you dictate text and capture photos and videos.



4: Make your posts social

The option to automatically add a social link to your latest blog post will either be available within the blogging software or through a freely available add-on.



5: Quality in every post

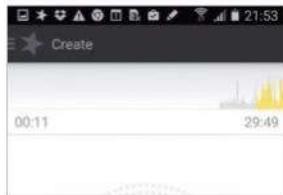
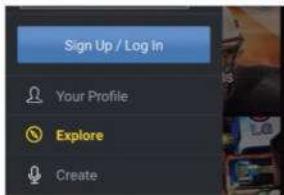
Take time over every single blog post you publish. To gain readers who become loyal and follow you on social networks, you will need to always produce quality content.

Create a quick podcast

Record and publish a new podcast on the go in minutes

It used to be that you would require an expensive microphone and some sophisticated recording software on a desktop computer to make a podcast. Although it is still beneficial to invest in specialised equipment if you are serious about podcasting, it is becoming much more popular for amateur podcasts to be made

with just one participant and a phone. We will show you how to create a new podcast with the help of a free app called Spreaker – Radio & Podcast and also how to link your creations with your current social networking presence. Feel free to practice before you publish your first episode because experience makes a huge difference here and confidence is key.



1: Download the app

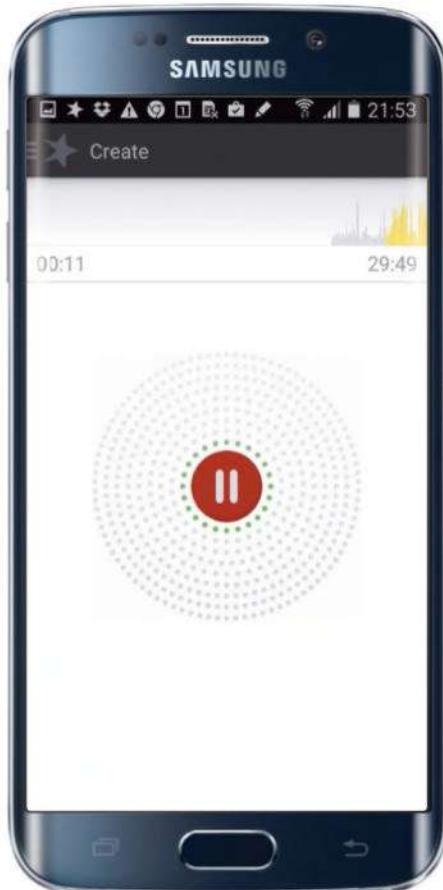
Download the Spreaker – Radio & Podcast app from Google Play and sign up to the service. Ideally, you will want to use your Twitter or Facebook account to connect so that you can share your podcast episodes with a tap.

2: Time to record

Tap the menu icon and Create to see a simple recording screen. Tap Record and create your audio podcast. Try using headphones with a built-in microphone for the best results and to block out background noise.

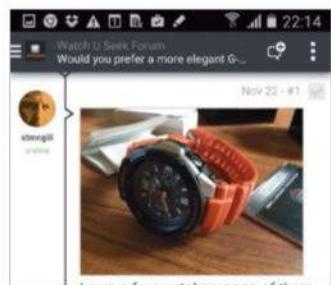
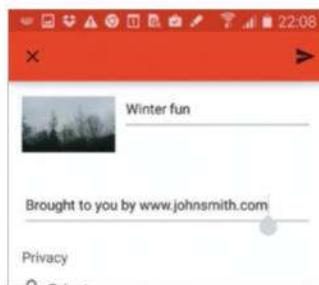
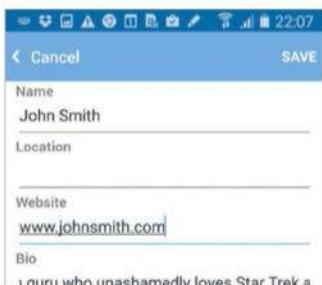
3: Attract new listeners

In the same way you should promote a YouTube video, make sure you enter an interesting title and that the tags embody the content of the show. Tick each social network option to add links to your social accounts.



Bring it all together

Your social networks should drive traffic between themselves to increase your audience



1: Share your blog

Add the URL of your blog to every social networking account so that people will know where to find you. Try to use your blog as the hub by which people can find everything else you publish, from videos and photos to blog posts.

2: Stamp your URL

Don't be afraid to add web addresses in YouTube and other places as well. This is perfectly normal practice and is one of the best ways to help increase your overall traffic to every service you use with very little effort.

3: Share details

You should be open online if you wish to gain a following. Add social networking links to your blog and as many details about yourself as you are comfortable with. You may even want to publish your email address, but beware of spam.

4: Provide link-backs

Include links to blogs, YouTube channels and Twitter or Facebook accounts in signatures on forums and elsewhere. See every interaction online as an opportunity to promote yourself, but don't overdo it or be forceful.



Monitor your device's memory

Check your storage space and SD card activity with StorageTrac

What have you got stored on your phone?

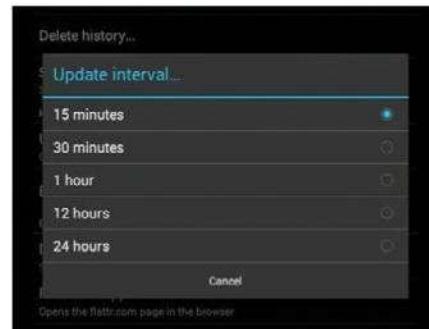
Chances are you have all of your photos, possibly a few videos, as well as all of your apps and games.

For most of us, unless we manually check the capacity from time to time, storage tends to run out of space with little or no warning. Especially on budget device with only a 16GB or less memory, it can end up being filled up pretty quickly, with

no native Android audit. With StorageTrac, you can keep tabs on this information. The app records file creation, modification and deletion on the storage card and collects data to present in a chart.

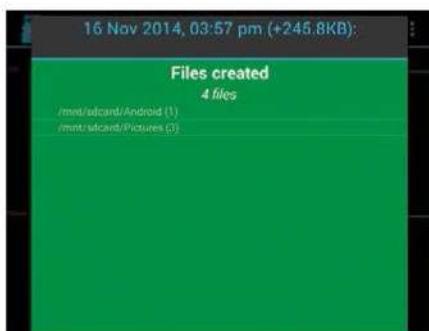
The result is an app that can show you how often your storage is accessed. This can prove useful for seeing how much storage is being used, and how long an external microSD card might last.

StorageTrac | Keep tabs on your memory



1: Enable tracking

StorageTrac will need permission from you to track your SD card storage status. Open the app, tap Menu > Settings and then Enable Tracking. Once enabled, you'll need to be using the app for a few days – a few hours at least – to get the best results from it.

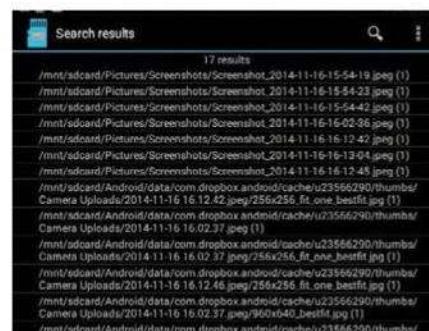


4: View file activity

To find out just what is being recorded, and when, you can tap the chart to view info about whatever period you are interested in. The first screen lists all files that have been created at that point. You can scroll right to see any relevant deleted or modified files.

2: Set the update interval

Based on what info you want to collect over a specific period of time, you should also set an Update Interval. This can be anything from 15 minutes to 24 hours. By knowing what the interval is, shown on the chart, collected data will make more sense.



5: Search for specific files

The StorageTrac app features a handy search tool to track the activity of particular file types. For instance, to check how many JPEG images have been saved to your device, tap Search and enter 'jpeg' in the box. The results show where the files can be found.

3: View storage tracking

The main screen features the plotted chart based on the amount of data you add and remove from your internal storage. StorageTrac works with your device's SD card, too. Use the Day/Week/Month/Year menu in the top left to change the view.



6: Delete old data

To reduce StorageTrac's load on your device's memory, you should consider using the 'Delete history...' option in the Settings menu. Four options – Now!, Week, Month and Year – can be selected; tap OK to confirm. Once cleared, tracking logs cannot be restored.

Track down your stolen device

Use the Android Device Manager to pinpoint your lost device

If you've spent hundreds of pounds on a new or second-hand Android device, it's a horrible feeling to discover that it's been either stolen or lost. Although you should still report the loss at your local police station, there are steps you can take to at least remotely control and wipe your device. Android 5.0 has these features baked in, but if your device can't update to Lollipop, the Android Device Manager app is just as good. It can instantly track down the location of your lost device, whereupon you can perform a series of actions to retrieve it, or wipe your personal data and render it useless if it has been stolen. Follow the steps outlined below to correctly set up the Android Device Manager.

"Instantly track down the location of your lost Android device"

Get more from ADM | **Discover additional features**

Switch accounts

If you're wondering why your device isn't being listed on the map, make sure that you're using the correct Gmail account. Use the drop-down menu at the top of the app to switch between different Gmail accounts

Pinpoint accuracy

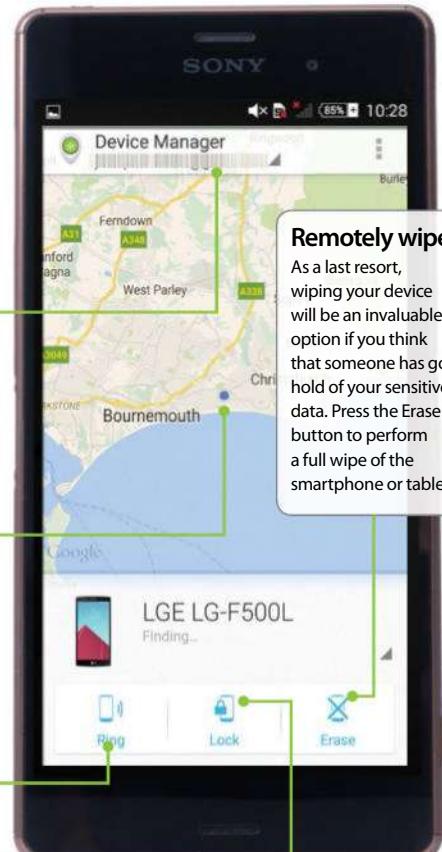
The Maps section of ADM will show you the exact location of your device. Although it refreshes every few minutes, you can simply back out and go back into the app to see an updated version of the location

Ring away

If the map indicates that your device is close by, the first option you'll want to go to is the Ring one. This will cause the device to ring for five minutes non-stop so that you can simply listen out for it in your local area and hopefully find it

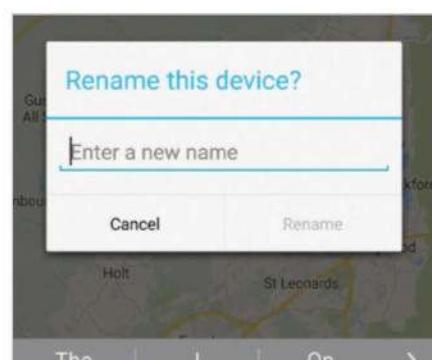
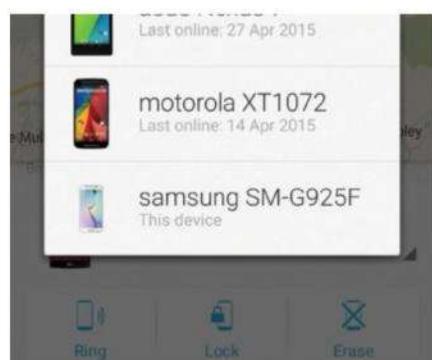
Remotely wipe

As a last resort, wiping your device will be an invaluable option if you think that someone has got hold of your sensitive data. Press the Erase button to perform a full wipe of the smartphone or tablet



Go to lock

Locking your device can be vital if you believe someone has managed to get their hands on it. Locking it will require you to set up a new password or PIN, which the thief will need to know to have access to your files



1: Switch devices

You might have more than one Android device. The Android Device Manager app is linked in with your Gmail account, so it's possible to link any additional devices you may own to it. Use the arrow next to the device name to switch between devices.

2: Lock to recover

When you set a new password for your device, you should always make sure to add a separate recovery message. This could provide details for someone to contact you if they find the phone. Obviously, don't add any sensitive data in case that person is a thief.

3: Set a new name

If you're in the situation where you've got multiple devices of the same model, say if you have black and a white Galaxy Tab, make sure to add unique names to them to differentiate between them. This makes it a lot easier to track down a certain device in the future.

Create your own private picture vault

Ensure your photos and videos remain private

Do you have photos on your phone or tablet that you don't want others to see? KeepSafe Vault promises to keep them safe from prying eyes, in case anyone should borrow, steal or find your device. When you move videos or photos into KeepSafe, they disappear from your device's Gallery, so the only way to access them is in KeepSafe.

There are several ways of making your KeepSafe content more secure. You can add a password to each KeepSafe album. You can also disguise KeepSafe as an app that scans your system and reports any problems. This means that even if someone is snooping around your device, they won't immediately suspect KeepSafe contains private photos and videos. Similarly, you can create a decoy version of KeepSafe.

KeepSafe doesn't require root access and is free to download from Google Play. However, buying a subscription unlocks some extra features that could be handy.

KeepSafe | Create a safe picture vault



1: Create your PIN

When you first launch KeepSafe, you're asked to create a PIN. Enter a four-digit code, tap OK and then re-enter it. If you forget your PIN, you can recover your account via email, so enter your address and tap Enable. KeepSafe will then send a verification email.

Add a new album

To create a new album, tap the '+' icon. Give your album a name and then tap OK. To change where this album appears on the main KeepSafe screen, long-press on it and then drag it to your preferred position in the list

Album settings

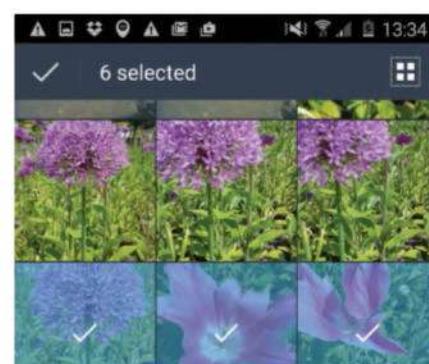
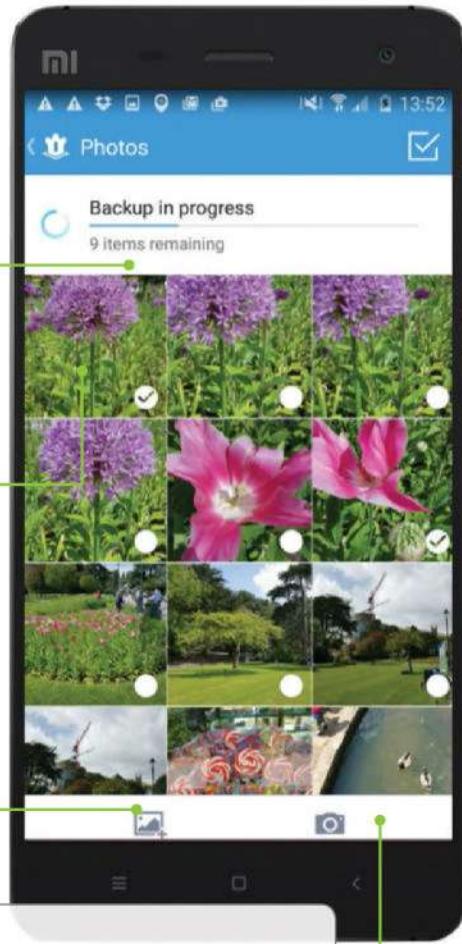
For every album besides the 'Main Folder,' you can change the name and cover photo, delete the album completely, or add an extra protection by applying a password. To access these, tap the three-dots menu icon next to each album

Put photos in vault

To move photos out of Gallery and into KeepSafe, tap the Import Photos icon towards the bottom of the screen. Then, tap all the images you want to move and select Hide. KeepSafe will then move all of these images into its default 'Main Folder'

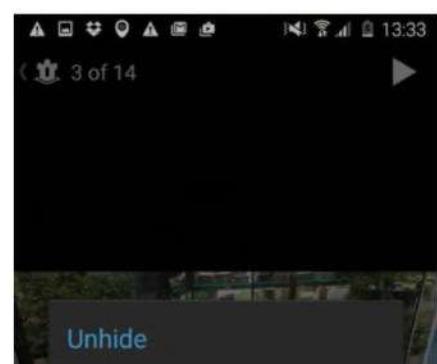
Take new shots

You can take photos from inside KeepSafe, so they're immediately stored inside. Tap the Camera icon and use the on-screen controls for the flash and zoom as required. Once finished, return to the main screen by tapping Done



2: Hide your photos

Enter the code from your verification email into KeepSafe and tap Submit. KeepSafe already contains a default album, but you can create more by tapping '+'. To add photos to an album, open it and tap the Import Photos icon. Select your photos and tap Hide.



3: Un-hide your photos

In order to move photos out of KeepSafe so they reappear in your device's Gallery, find the photo in question and give it a tap so it appears fullscreen. Then, tap the Unhide icon and confirm that you want to move this image out of KeepSafe, by tapping OK.



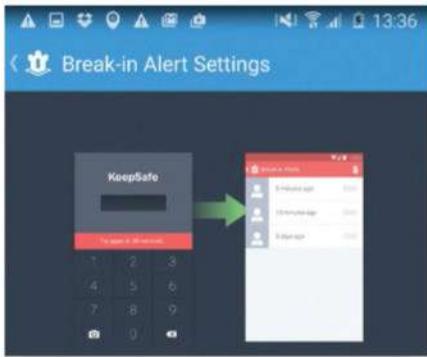
4: Share photos securely

Use KeepSafe to share photos so that a recipient can view them for 20 seconds. Make sure the photo is stored in KeepSafe, then tap the photo. Tap Share and choose a channel.



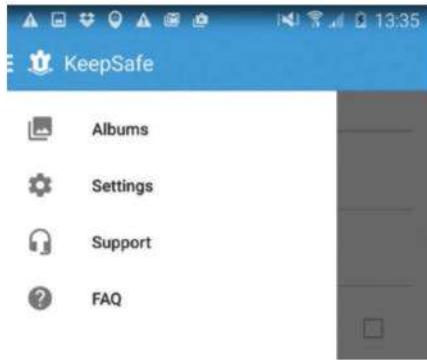
6: Auto-lock KeepSafe

To quickly lock KeepSafe, enable Face-down Lock so the app locks when you flip your device upside down. The Settings contain Pro features you can access via a free 14-day trial.



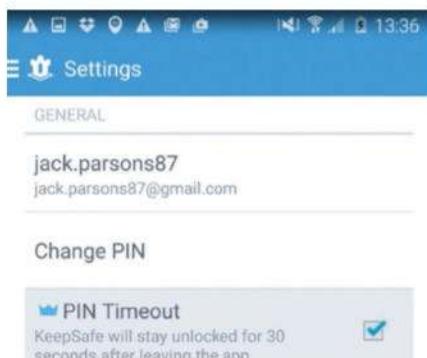
8: Break-in Alerts

Break-in Alerts is also a Pro feature. When enabled, KeepSafe automatically takes a photo during an invalid PIN. After three failed attempts, the PIN pad is disabled for a bit.



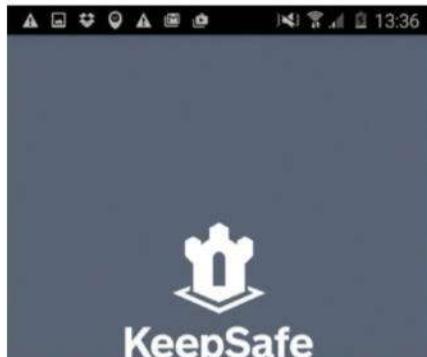
5: Settings menu

On KeepSafe's main screen, tap the icon at the top left, then Settings for admin tasks such as changing the email address, and your PIN. You can access extra KeepSafe options.



7: PIN Timeout

One Pro feature is PIN Timeout. KeepSafe is unlocked for 30 seconds, perfect if you're fed up of re-entering your PIN when device goes to sleep or you accidentally exit the app.



9: KeepSafe in disguise

To disguise KeepSafe, enable Secret Door. Now, launching KeepSafe will display that the system scan is complete. For the real app, long-press on the KeepSafe logo.

What happens to my photos and videos if I uninstall KeepSafe?

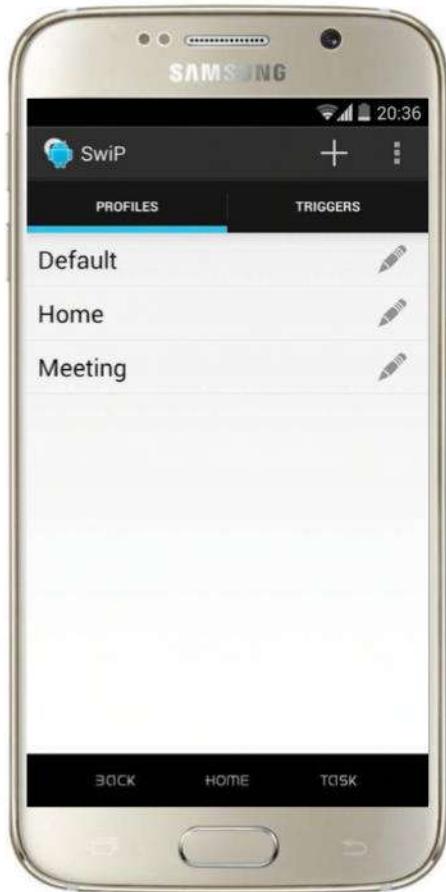
The contents of your KeepSafe account are associated with the email address you used to sign up. If you uninstall KeepSafe from your device, you can always recover your content at a later date if you wish by reinstalling the app and logging in with your original email address. In this way, it works in a similar way as cloud storage.

How do I stop KeepSafe from copying hidden photos/videos to Private Cloud?

Private Cloud is the key to syncing KeepSafe content across all your devices. Backing up your content to Private Cloud also means that if your Android smartphone or tablet breaks, you won't lose all the photos and videos in your KeepSafe account. However, if you don't want to back up your content to Private Cloud, you can disable this sync by opening KeepSafe's Settings and deselecting Enable Private Cloud.

Automate your Android phone with SwiP

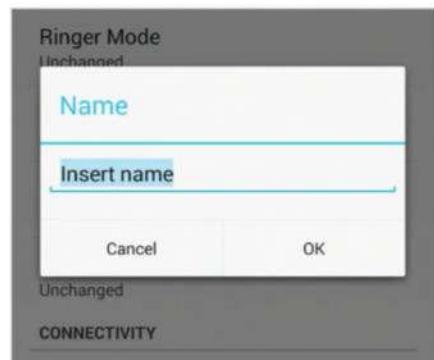
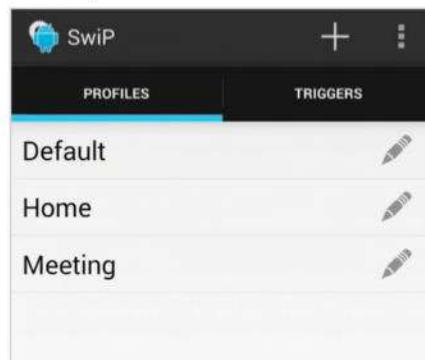
Create trigger-based profiles for popular Android tasks, with this open source automation app



Do you find yourself performing the same tasks, over and over again on your phone?
It may be time try a task automation app. You can use these apps to create profiles of your most commonly used settings, for example a Home profile where your device automatically connects to your home Wi-Fi. Profiles are triggered automatically when certain conditions are met, for example when your device's GPS detects that you're at home.

SwiP is a new release that provides an open source alternative to other aops on Google Play. This means the app's source code is publicly available, so anyone can help develop it. You can download SwiP for free from the Play store, which also contains a link to the app's source code. SwiP doesn't require root, although you can access additional functionality on a rooted device. SwiP currently doesn't work on tablets.

SwiP | Automate your Android



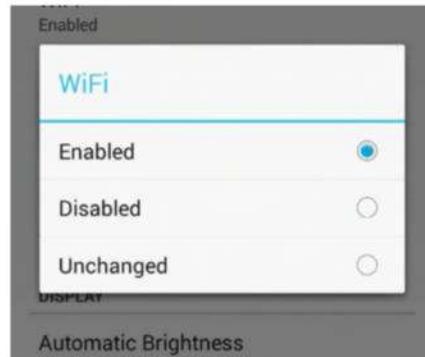
1: Time to interact

Take a closer look at the three example profiles by tapping their pencil icons. The next screen contains all the options to enable, disable or tweak in this profile.



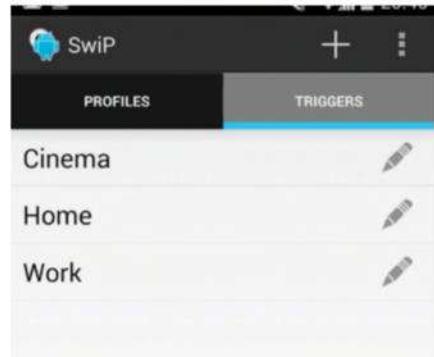
3: Play some media

Every option is set to 'Unchanged', so applying the profile won't affect this item's current state. Work through it, tapping and changing all the options you want to update.



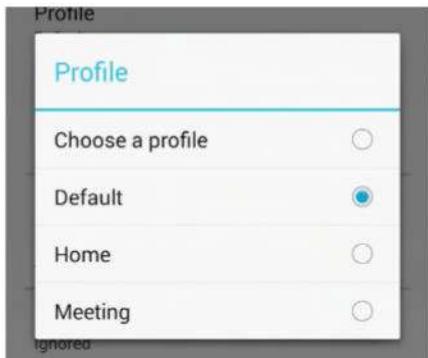
4: Enhance your web browsing

This menu is split into sections: Sounds, Display, Connectivity, etc. In Connectivity, for instance, you can specify whether mobile data, Wi-Fi and Bluetooth are enabled.



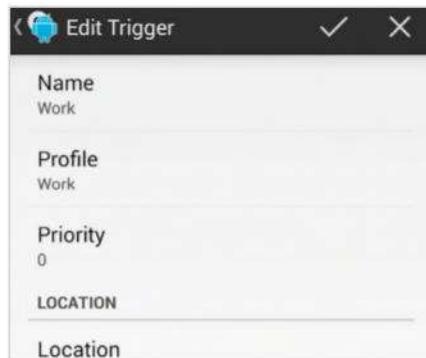
5: Tweak the settings

Save your profile by tapping the tick. You can manually activate this profile, or create triggers. A trigger activates its assigned profile in certain conditions. Tap Triggers in the toolbar.



6: A useful icon

Give your trigger a name and tap every option in the menu you want to edit. You must assign every trigger to a profile, so tap Profile to choose one.



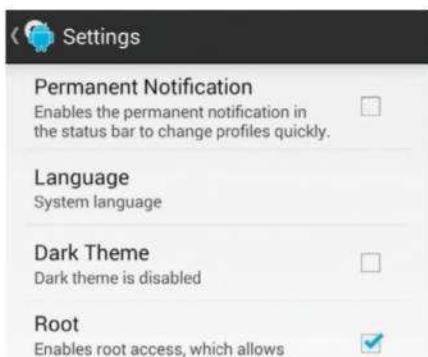
7: Set up your server

For your triggers that activate Home and Work profiles based on the time/day, you need to edit Start Time, End Time and Weekday options.

What are some quality alternatives to SwiP?

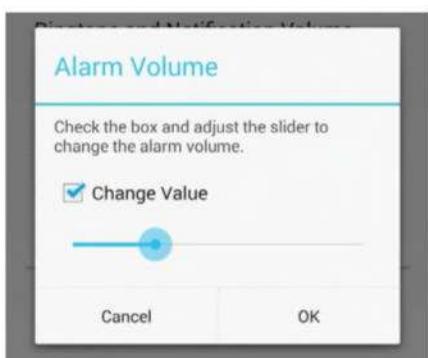
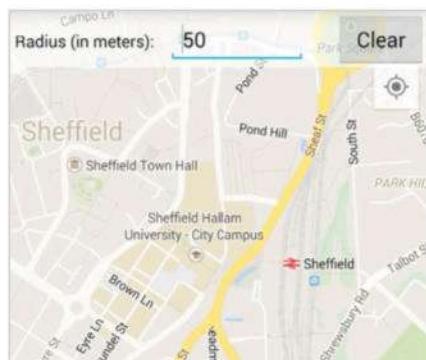
If you feel that SwiP isn't for you or find the user interface too confusing, Trigger is a beginner-friendly automation app that's a brilliant alternative to the more complicated SwiP. It guides you every single step of the way towards automating your Android device, and comes with some useful examples you can build for yourself. However, you will need to purchase Trigger Pro to access most of its features.

Alternatively, if you are looking for location-based automation for your Android device, the oddly named Llama app is worth checking out. This app uses phone masts to find out where you are, and can change your ringer, ringtone and vibrations setting depending on where you are and/or the time of day. You can download both apps for free from Google Play.



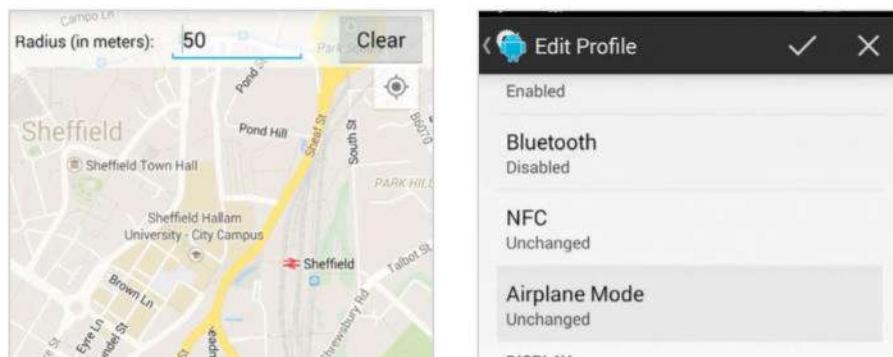
8: Connected at last

Before you can use Location in your triggers, you need to give SwiP root access and install it as a system app. Tap the menu, tap Settings, then Root and 'Install as a system-app'.



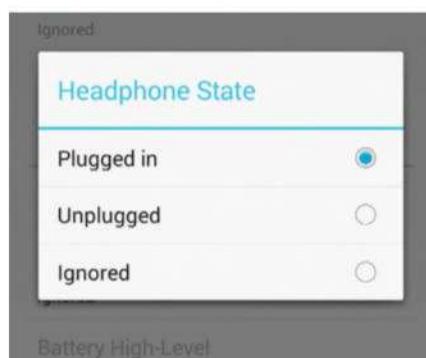
11: Play some media

Forgot to turn your alarm off at the weekend? Create a profile that turns Alarm Volume to 0, then link it to a trigger for the weekend. Or automatically turn the volume up on Monday.



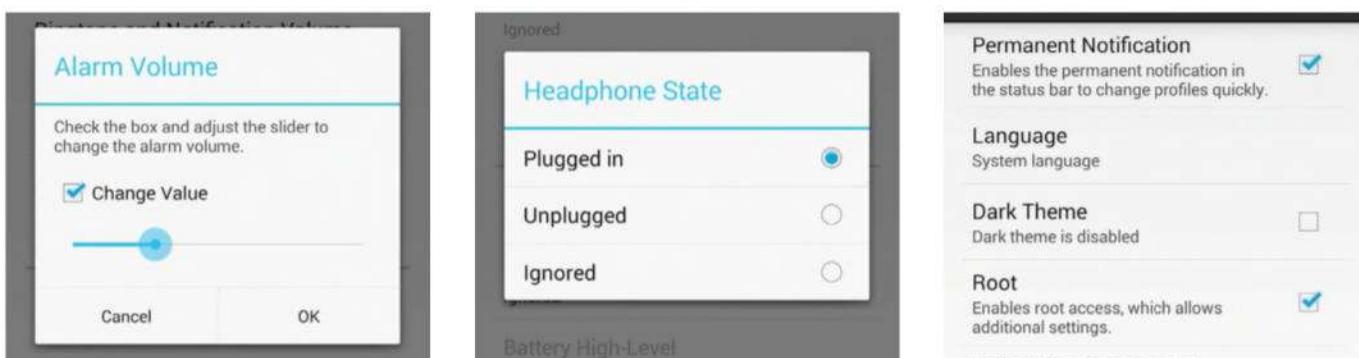
9: Time to interact

For a location-based trigger, tap Location, find the location you want and long-press it for a marker. Specify your location's radius with the Radius field. Save this by tapping the tick icon.



12: Enhance your web browsing

You may want to use SwiP to change the media volume when you plug headphones in. Create a profile with the correct Media Volume, create a trigger and tap Headphones'



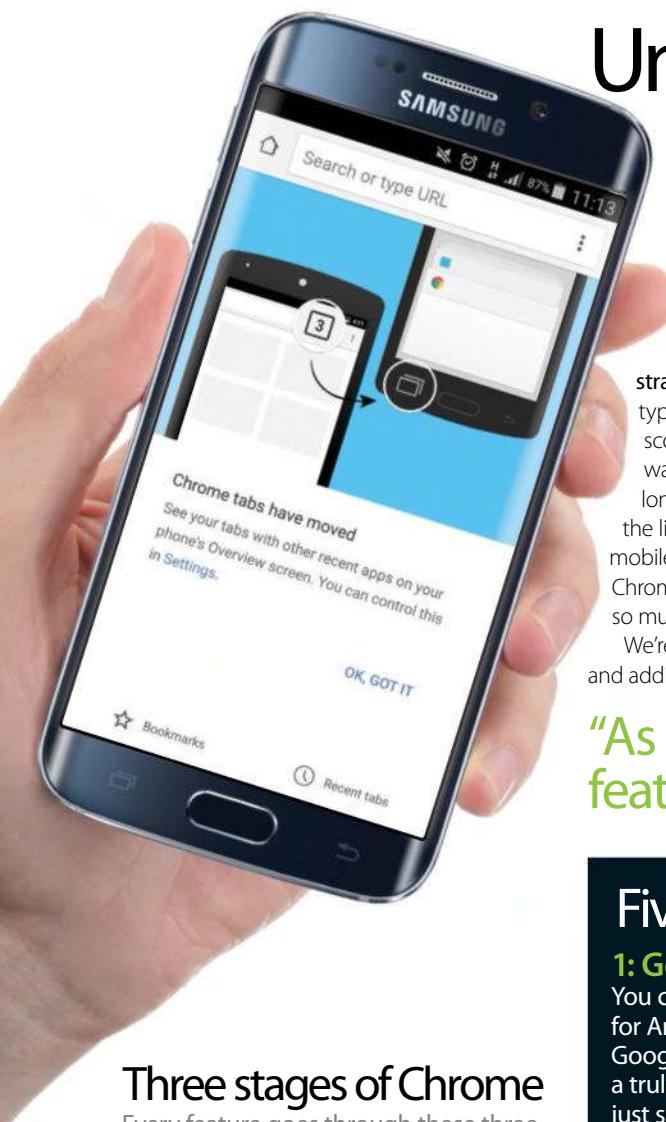
10: Manage your apps

Once you've granted root access, you can start enabling/disabling Airplane Mode and temporarily bypassing your device's lockscreen, but only do so when it's safe.



13: Tweak the settings

If you have profiles you switch between manually, you can add a permanent SwiP notification to your panel to take you to your list. Add it in SwiP's Settings.



Three stages of Chrome

Every feature goes through these three steps before becoming part of the official Chrome app



Google Chrome Canary

This is the most experimental stage of Google Chrome. The team throws updates onto this platform in their most raw form so problems can be found straight away. It is buggy though.



Google Chrome Dev

This is the newly released level. Major issues will have already been dealt with, but there are plenty of bugs to discover and you can still access features before they're available.



Google Chrome Beta

This is the final stage before updates are released onto the main Google Chrome app. Everything has been thoroughly tested and most bugs found, so this is the safest for early access.

Unlock Chrome's hidden features

Try out bleeding edge browser features before they officially launch with Chrome Dev

For the majority of users, the Chrome browser is straightforward to use. Open the app, type in a web address or key phrase, scour the search results, read what you wanted to read and that's that. For a long time, this has been pretty much the limit of what you can do with the mobile app, but many desktop users and Chromebook owners know Chrome can do so much more.

We're not talking about saving bookmarks and adding extensions, but accessing

experimental features through developer channels before they are added to the official app. However, Google has now launched Chrome Dev on the Play store so Android users can also test out secret features before they go mainstream.

This masterclass will show you how to get set up with Chrome Dev, how to trial experimental features, and some of the most useful ones to try to enhance your browser. As the name suggests, many of these features are still in development and so are prone to bugs. Before you begin, check out our safety tips.

"As the name suggests, many of these features are still in development"

Five ways to explore Chrome Dev safely

1: Get the app

You can download the Chrome Dev for Android app alongside the normal Google Chrome app. So if you want a truly smooth browsing experience, just switch to normal Chrome and you should be fine.

2: Expand your options

Google Chrome Dev has been available to Linux, Windows and Mac users for a while now, so you can test Chrome features on other platforms if you have them.

3: Find the latest news

If you go to www.googlechromereleases.blogspot.co.uk, you can find the latest updates that have been made to the channel, as well as what the update has altered. This will usually be bug fixes

or security updates, but explore the pages to see everything on offer.

4: Back up your device

There is an associated risk with using the Google Chrome Dev channel. As with all experimental technology there's a danger that something in the code will make your device lose data, so be sure to back up all of your information on your PC or cloud account before trying anything new.

5: Older versions

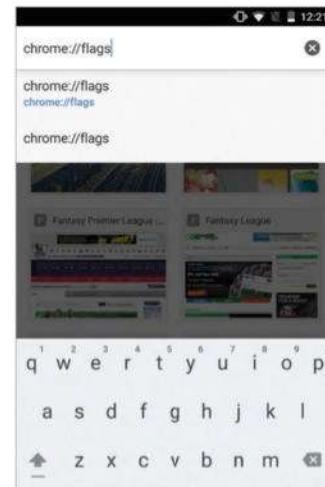
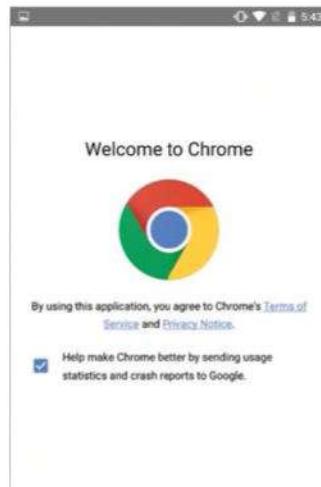
Be aware that not all updates are available for your device. If you're running an older version of Android or your phone doesn't have certain features, then you may notice a discrepancy between the online list of updates and the list that you see on your phone.

Get Chrome Dev for Android devices

Download the app and get experimenting

Although downloading pre-release software might seem to be the domain of experts, it's not really that difficult. However, you have to

know what you're doing once you're inside, so here's how to download Chrome for Android Dev and find your way into the options.



1: Download Chrome Dev

Open the Google Play store and type in Chrome Dev. You should see the app with the Chrome logo with the word Dev across it. Click on it and select Install. This can work alongside your existing Chrome app.

2: Open the app

Open up the app and you should see near enough the same Google Chrome homescreen as you're used to. However, when there are updates to the app available, you will see a dialog box appear explaining the change.

3: Access new features

Tap on the web address bar and type in 'chrome://flags'. This will open up the entire list of experiments that can be enabled. Click Enable on your chosen experiment, relaunch Chrome and the experiment will activate.

4: Find other experiments

To discover the entire list of experiments, go online and type in sites.google.com then look on the left-hand side and select 'Flags and Plugins'. This will bring up a full list of experiments and explanations of what they do.

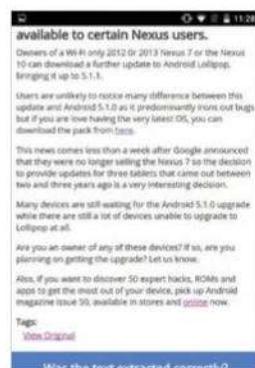
Navigate new changes

Even before you access chrome://flags, Chrome Dev already does a few things differently



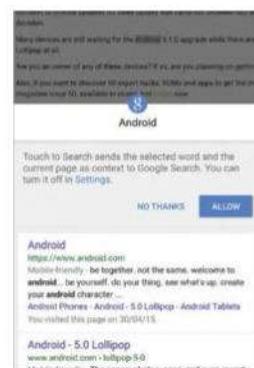
1: Moving tabs

Your tabs have moved. Rather than tapping the number in the top-right corner to change tabs, you'll now have to press and hold the bottom-right home button.



2: Ad-free reading

Tap the Reader View option as it appears at the bottom of the screen and this will bring up a stripped down version of the webpage, removing ads.



3: Streamline searching

In 'Touch to Search', press and hold on a word and Chrome will instantly bring up a Google search for that word, helping you with definitions or an actor's name.

View custom maps for your bookings

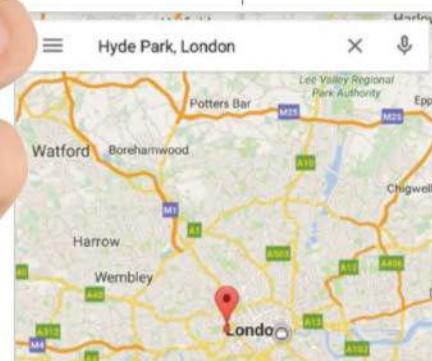
Find your way to your restaurant booking with new Maps feature



If you have booked a table at a restaurant or tickets to a show through Gmail, Google Maps will now guide you to your event with a personalised route map.

This functionality isn't new to Android, as it's already available inside the Google Now app, but it certainly makes sense seeing it appear in Google Maps since that's where it's likely that these queries will be made most of the time.

Google Maps | Get directions to your events



1: Update Google Maps

For these new features to take effect, you will need to be running at least Google Maps version 9.8. Go into the Google Play store, search Google Maps and then click Update.

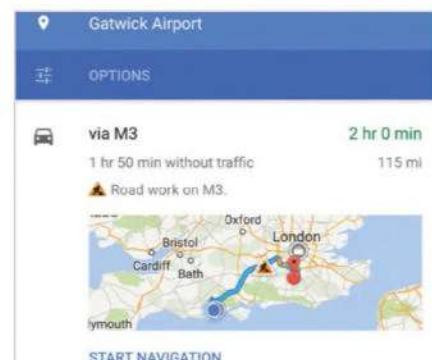
Events that integrate with this new Maps feature are quite wide-ranging, but can also be filtered by flights, hotels, reservations, and more. For this to work, you have to let Google access your personal data to have that information readily available inside Google Maps if triggered by any of these keywords.

This tutorial will show you how to set up the Google Now functionality in Maps, access your custom maps and filter them by type.

2: Check Google Now

Click the menu icon. This will open up your Google Now screen.

If you share your device with anyone else then make sure the active account is yours only.



3: My events

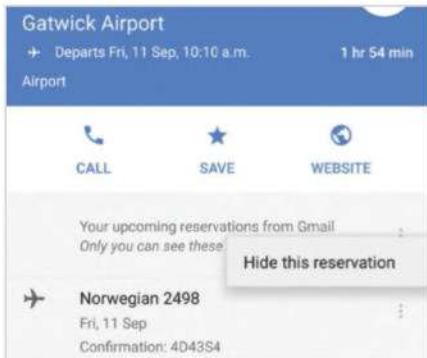
Tap the search bar and type or say aloud 'my events,' and Maps will then provide information cards and maps for all of the events booked through your Gmail account.

4: Plot your route

You can now press just one button to get the directions to your destination. Tap the car icon in the bottom corner and it will generate the route for you, without typing in an address.

5: Narrow the search

If you are overwhelmed by the number of results and want to find a specific item quickly, instead of 'my events,' you can type or say 'my reservations,' 'my hotels' or 'my flights.'



6: Hide your reservation

If you have planned a surprise meal or trip for someone who may be able to access your device, swipe up and then tap the menu icon. Here you can remove that card from your list.



7: Not everything works

If you don't have any planned events or have typed in some non-supported phrases, Maps will instead direct you to nearby companies that have a similar name to your entry.

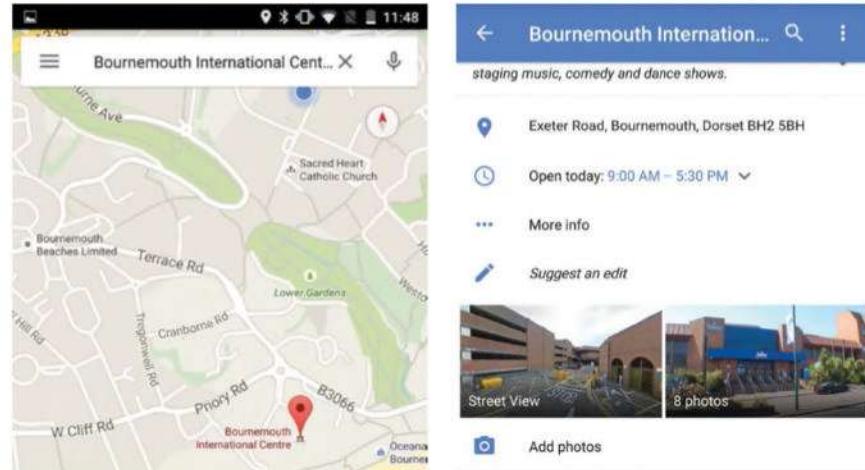


8: Extra update

If you are a real early adopter, you can already download the APK for the next update, Maps 9.9. This is a very minor update that swaps the black top bar with a translucent one.

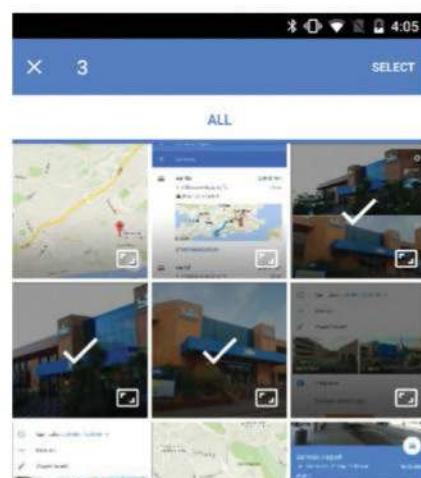
Add your photos to Google Maps

Improve the Google Maps experience by uploading your holiday snaps for other users to see



1: Tap the pink circle

If you want to share photos of your current location, tap the compass icon in the bottom-right. Alternatively, to upload photos of somewhere else – for instance, the hotel you recently stayed at – type the exact name or address into the top bar.

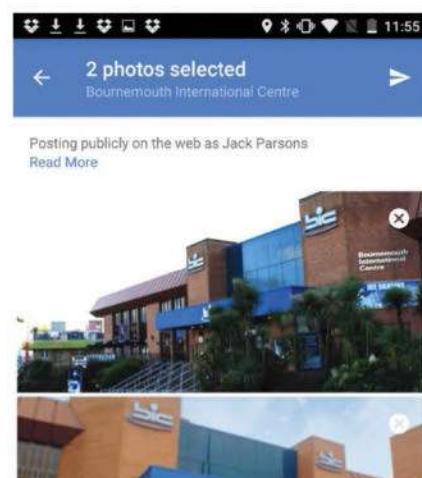


3: Select images

If you want to take photos of your current location and share them to Maps, tap 'Take a photo' to launch the camera app. If want to upload existing photos tap 'Choose from Gallery.' You will be able to share individual pictures or upload an entire album.

2: Add photos

Once Maps has navigated to the right place, swipe upwards from the bottom of the screen to view an info card. You can view other users photos, or just tap 'Add photos' to upload your own. However, this option is only available for public places.



4: Upload your pictures

Once you've selected the photos you want to add, click 'Select' in the top-right. This will take you to the final screen where you click the arrow in the top-right corner to upload the pictures. Don't forget, these are now free for anyone who clicks on that location to see.

Restore deleted files and photos

Add a recycle bin to your device before permanently removing files

We've all been in the situation where a simple misplaced finger can accidentally delete an important file or photo that we actually really need – it's annoying but it does happen. Unfortunately for Android users, there's no simple workaround for restoring your deleted files and instead you'll need to venture on to the Google Play Store to find a suitable third-party solution to help fix the problem. Luckily, there are many available.

We recommend the Dumpster app, which acts as a gatekeeper for all your deleted files before they permanently vanish from your device. It works in the same vein as a desktop PC's recycle bin feature, where the user can restore the files they need or choose to permanently remove them for good. In this tutorial, we'll guide you through the process of correctly configuring the Dumpster app to safely store and manage your deleted files, photos and other types of documents.

Dumpster | Keep deleted files safe



1: What to save?

When you first open up the Dumpster app, you'll need to select the types of files you want it to save. Go through the list and toggle each one off and on until you've made all your choices. Once done, press on the Next button to continue.

Put in order

If you're handling multiple files at the same time, use the sorting system at the top right of the app. Here you can choose to put your files in order of their size, date created and other options

Where are they?

Near the bottom of the screen you'll be able to see the current location of your deleted files. If you want to take a closer look at the file or photo before you permanently remove it, go to the designated folder

Choose to restore

If you've made a mistake and want to restore the files to their folders, press on the Restore All button. If you want to only restore a specific file, uncheck the box next to the file's name

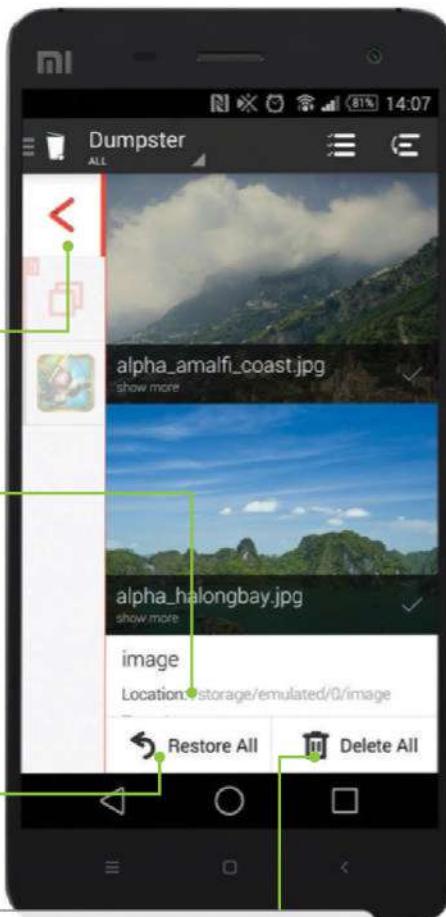
Permanently delete

To remove the selected photos completely from your device, press on the Delete All button. A small notification will then appear to let you know when they've been completely removed



2: Your deleted files

You will now be taken to the overview screen where you can see all of the previously deleted files and apps that have been saved within Dumpster. Files will be grouped into specific folders, with the size of each folder shown on the right-hand side of the screen.



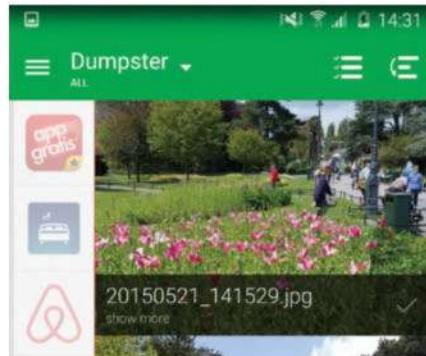
3: Sort through files

If you've got a long list of files and folders stored in Dumpster, use the drop-down menu to filter between the types of files. This is a great solution if you want to find a specific file. Select the type of file you want to focus on, so that you can find the one(s) you want.



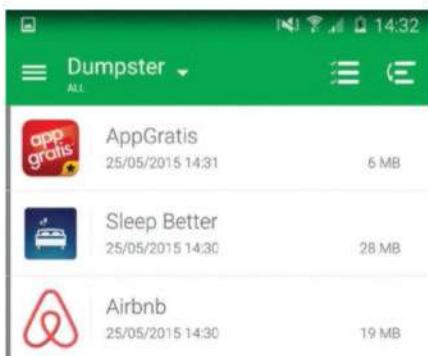
4: Filter even further

You can use the category system at the top right of the screen to sort your files by date, size, type or name. Once you've located the file, press on it to take a closer look.



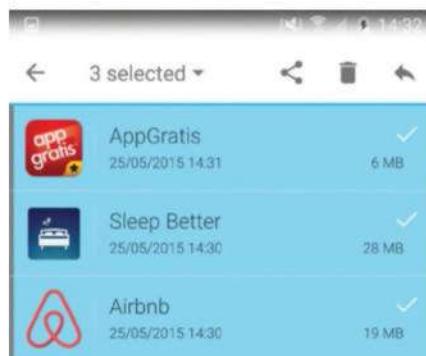
5: Get an overview

You now have a variety of options. At the bottom you will find restore and delete options – just above you'll find details of the image or file. Press on the Restore All option.



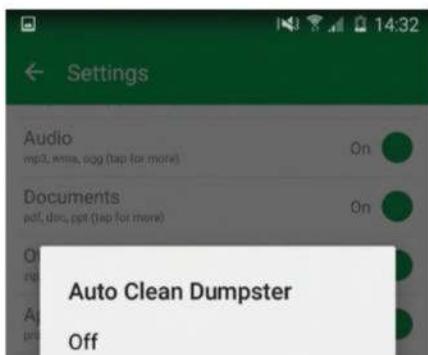
6: Restoring items

Depending on the number of files, it may take a few minutes to finish restoring. Once complete, you will find a notification at the bottom. Tap Undo to cancel the process.



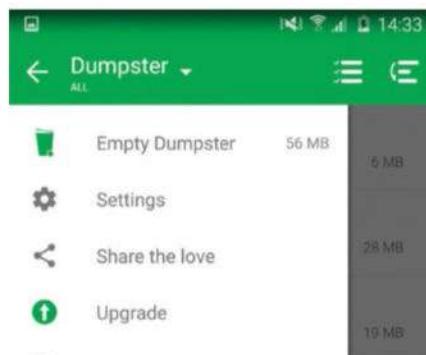
7: Choose to delete

If you decide to delete files, the process is a lot quicker than restoring them. A notification appears at the bottom when completed. Once deleted, the files will be gone for good.



8: Add a schedule

To keep Dumpster running at its optimal level, go to the settings and select Auto Clean Dumpster. You can select how often Dumpster should clear itself.



9: Clear it yourself

At the top of the side menu is Remove All Items. Here you can permanently delete everything stored in the app, great for removing large quantities of files in one go.

Is it possible to remove system apps?



System apps can take up vital storage on your Android device. If you're a rooted user, you have a plethora of different options available to you when it comes to removing system apps. It's best not to remove any system apps that are very important, however, as it can impact on some of your Android smartphone or tablets' core functions.

Can I back up my apps?



If you're planning on wiping your Android phone or tablet, then backing up your apps (as well as your other stored files, such as photos and videos) is a very good idea. Use the App Backup & Restore app to get your apps backed up to a specified cloud account. That way, the apps you paid for aren't lost, and neither is your progress in certain mobile games, for instance.

Double your battery power

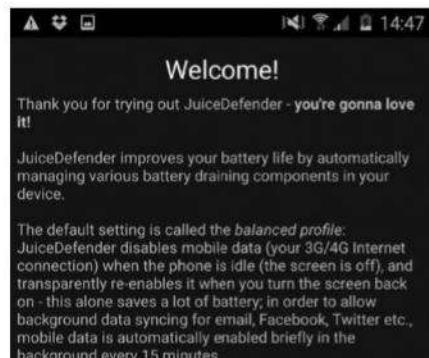
Automatically turn off Android functions to improve your battery

The processors in our phones and tablets have never been more efficient, allowing us to do so much more than ever before with the limited energy stored in the **battery**. Even so, when we're cut off from a mains supply, most of us find ourselves willing the battery to last that little bit longer so we can catch up on our emails, carry on a conversation on WhatsApp, or maybe just to play a game a little longer.

Of course, some functions consume more power than others and we know that switching off the GPS, Wi-Fi or Bluetooth when we're not using them – as well as dimming the screen – will improve battery life. The snag is that turning features on and off is a hassle and it's all too easy to forget.

Here we look at how to use an app that does all this for us, allowing us to select different profiles depending on our circumstances and the amount of charge remaining. If you follow this guide, a flat battery should be much less common.

JuiceDefender | Improve your battery



1: Start JuiceDefender

Install JuiceDefender from the Play Store and start it up. The opening screen explains how it works and how to interpret the estimate of how much you've improved your battery life. Take a look at this information before selecting 'Got it!' to get started saving power.

Enable and disable

JuiceDefender is as simple as touching the 'enabled' button. However, if it starts to get in the way, you can either select a different profile, customise it or, as a last resort, temporarily disable it, which is just as simple

Balanced option

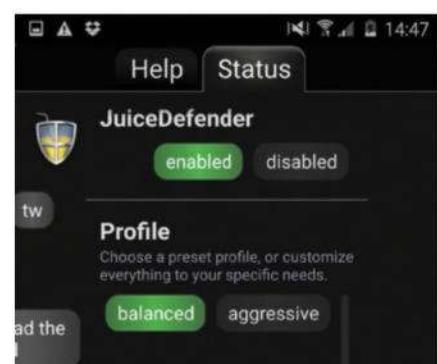
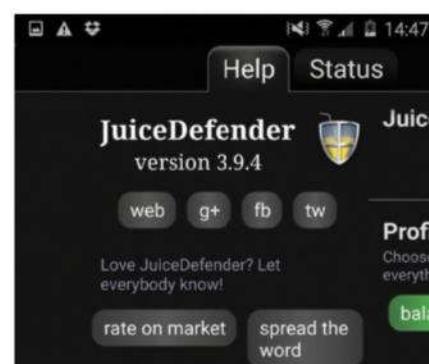
When you enable JuiceDefender, the balanced profile is selected. This doesn't stretch your battery life as much as other profiles but it's the least intrusive. It turns off connectivity when the screen is off, re-enabling it periodically

Other profiles

To improve battery life more, several profiles are available – although extreme is only unlocked if you upgrade, as are some of the options in customized and advanced. However they will still give a very significant boost to your battery life

Advanced options

Three buttons appear when the advanced profile is selected and allow you to fine-tune how JuiceDefender works to reduce power. For example, select 'Battery 15%' so JuiceDefender will turn things off if the battery gets this low

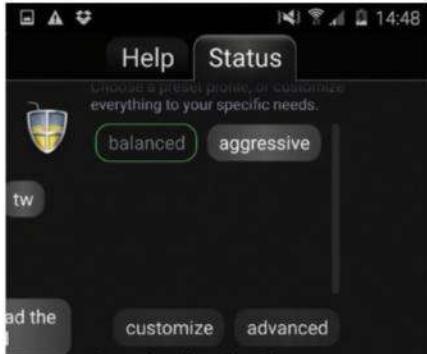


2: Remember there's Help

JuiceDefender starts in the Status tab. But, for now, select the Help tab. Unlike many apps, JuiceDefender has a comprehensive manual that you can access online from this tab. You might not need it just yet but remember, it's available by touching 'user guide & tutorials'.

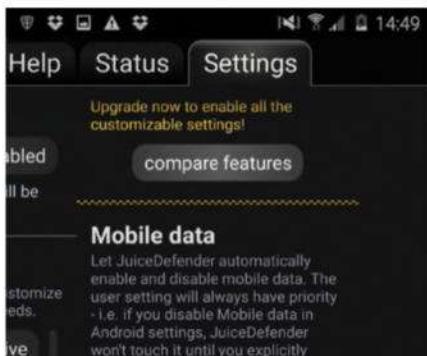
3: Enable JuiceDefender

Select the Status tab again and you'll notice that JuiceDefender is initially disabled. To enable it, tap 'enabled'. Even without selecting any more options, you'll already be saving power. JuiceDefender's icon appears in the notification panel to show it's enabled.



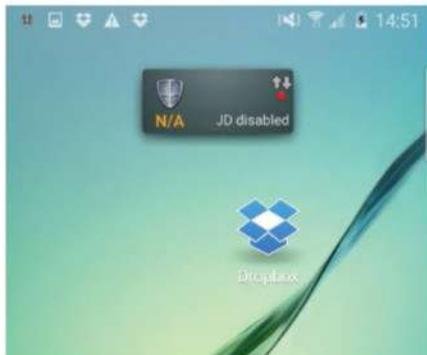
4: Select aggressive profile

Initially, JuiceDefender uses its 'balanced' profile. There are four profiles to choose from; to see what they do, touch it to read a description. Touch 'aggressive' and 'confirm'.



6: Customise your profile

The balanced and aggressive profiles are simple, but customize is versatile. In the Status tab, select 'customize' for a Settings tab to fine-tune it, but some features are restricted.



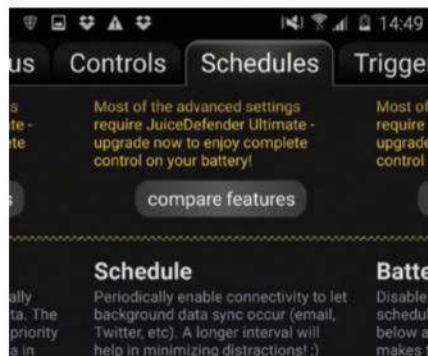
8: Use the widget

For JuiceDefender's status, select a widget, which shows whether it's enabled, and which power-saving features are on. After four hours, it shows how much battery has improved.



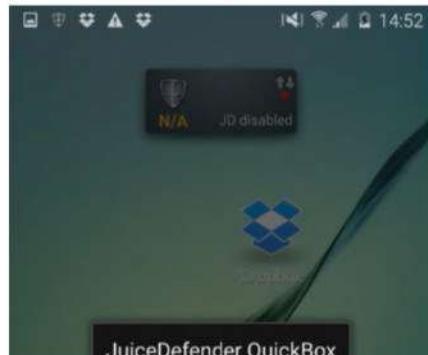
5: Specify battery threshold

A feature of aggressive is specifying connectivity will be turned off at a certain battery level. In 'Battery threshold' opt to enter this battery saving mode at 5% or 15%.



7: Select advanced profile

The advanced profile in the Status tab allows more control. Select it to customise Controls, Schedules and Triggers tabs. Again, many of the features are only available if you upgrade.



9: Use the QuickBox

Touch a widget to start up the QuickBox, if it's enabled, for easy access to common controls. You can enable or disable JuiceDefender, open the app or turn features on or off.

Can Juice-Defender kill apps to save even more power?

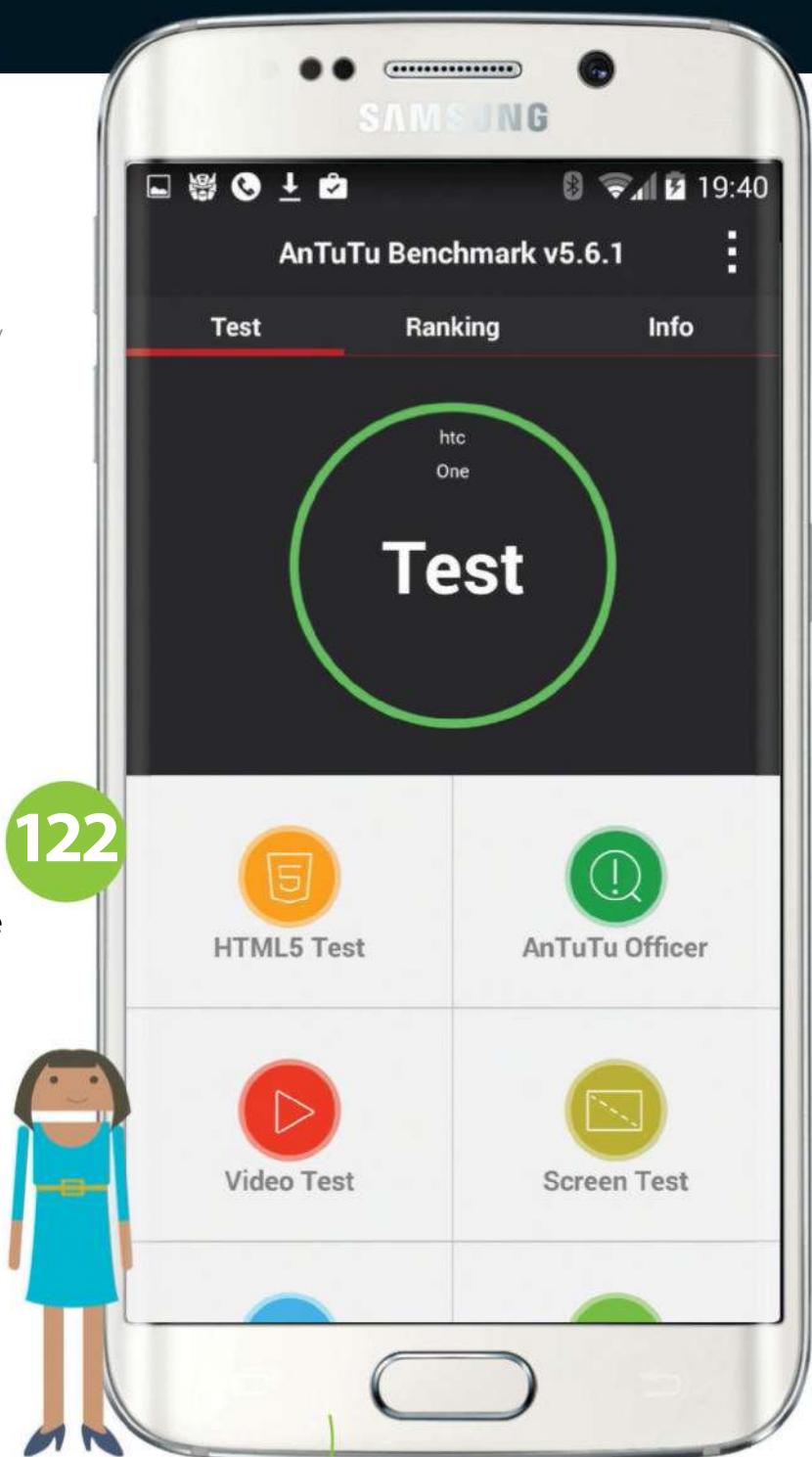
No, the developers think it's a bad idea to stop apps running because their aim is to improve battery without unduly affecting the use of your device. Many experts also tell us that Android is pretty good at efficiently managing background tasks, to maximise battery life, without an additional app.

If I'm using Juice-Defender, do Android's manual controls for Wi-Fi, Bluetooth, and Location still work?

Yes, JuiceDefender doesn't lock these manual controls. If you've chosen a profile that has connectivity turned off, you can turn it back on if you need to. However, if you do decide to change these settings, JuiceDefender won't change them back – say, after a delay – so you'll have to do that yourself.

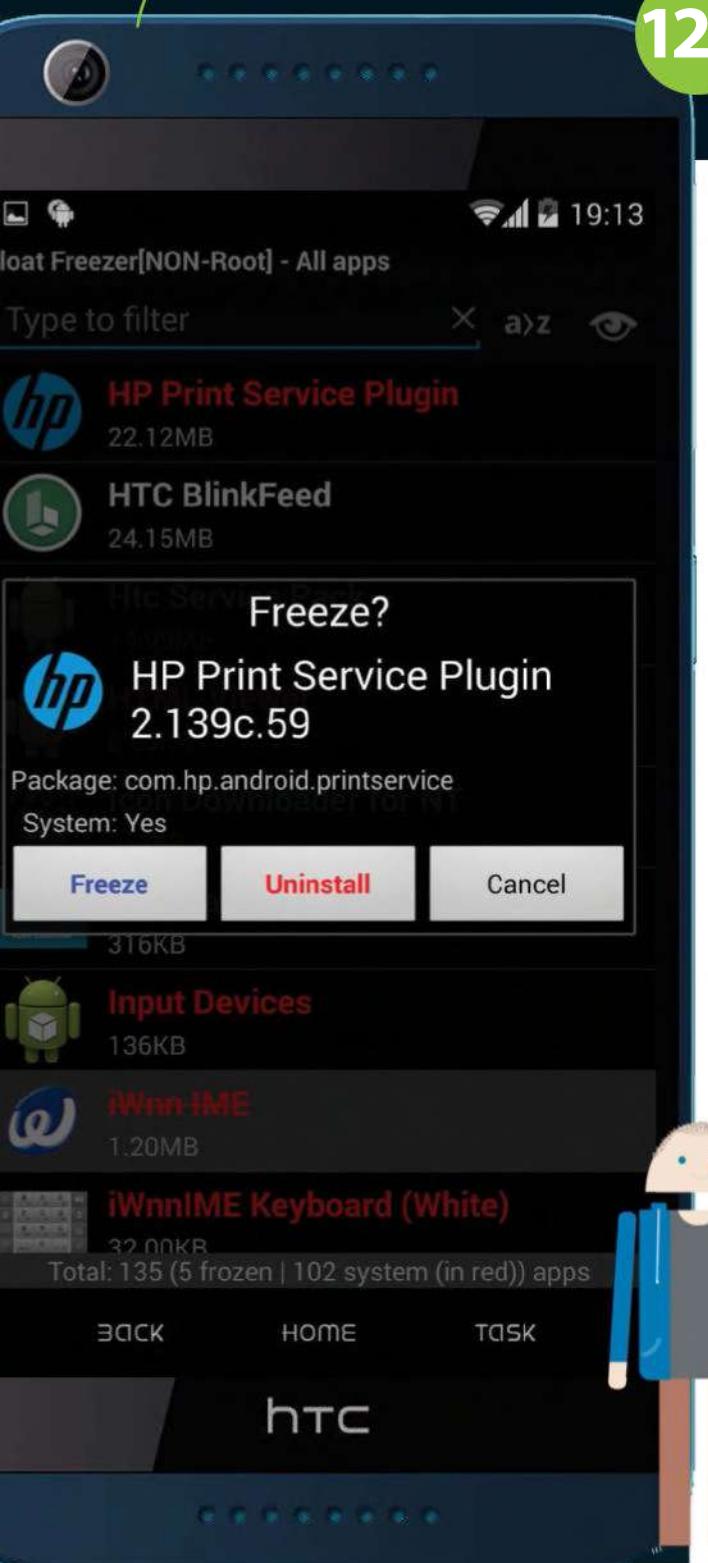
Hacks

- 102 101 hacks to upgrade your Android**
Revamp an old device
- 110 Restrict permissions**
Decide what info apps can access
- 111 Mix and match icon packs**
Choose what icons you want to display
- 112 Easily root to Lollipop**
Root to Lollipop without a kernel
- 114 Break your device out of a bootloop**
Root a device that's refusing to boot
- 116 Modify your battery icon**
Create custom battery icons
- 118 Manage app startup**
Control which apps start running
- 120 Repair Wi-Fi and GPS signals**
Boost or repair weak connections
- 122 Boost your gaming performance**
Overcome sluggish gaming speeds
- 124 Customise your lockscreen**
Explore lockscreen replacement apps
- 126 Run apps in tablet mode on a phone**
Get a better viewing experience
- 128 Freeze bloatware**
Uninstall manufacturer bloatware
- 129 Backup partitions**
Save your device's memory
- 130 Enable Wi-Fi for the G Watch R**
Add Wi-Fi support to this smartwatch
- 132 Customise Ultra Stamina mode**
Tailor this battery boosting mode
- 134 Get Dolby-quality sound**
Boost your device's audio quality

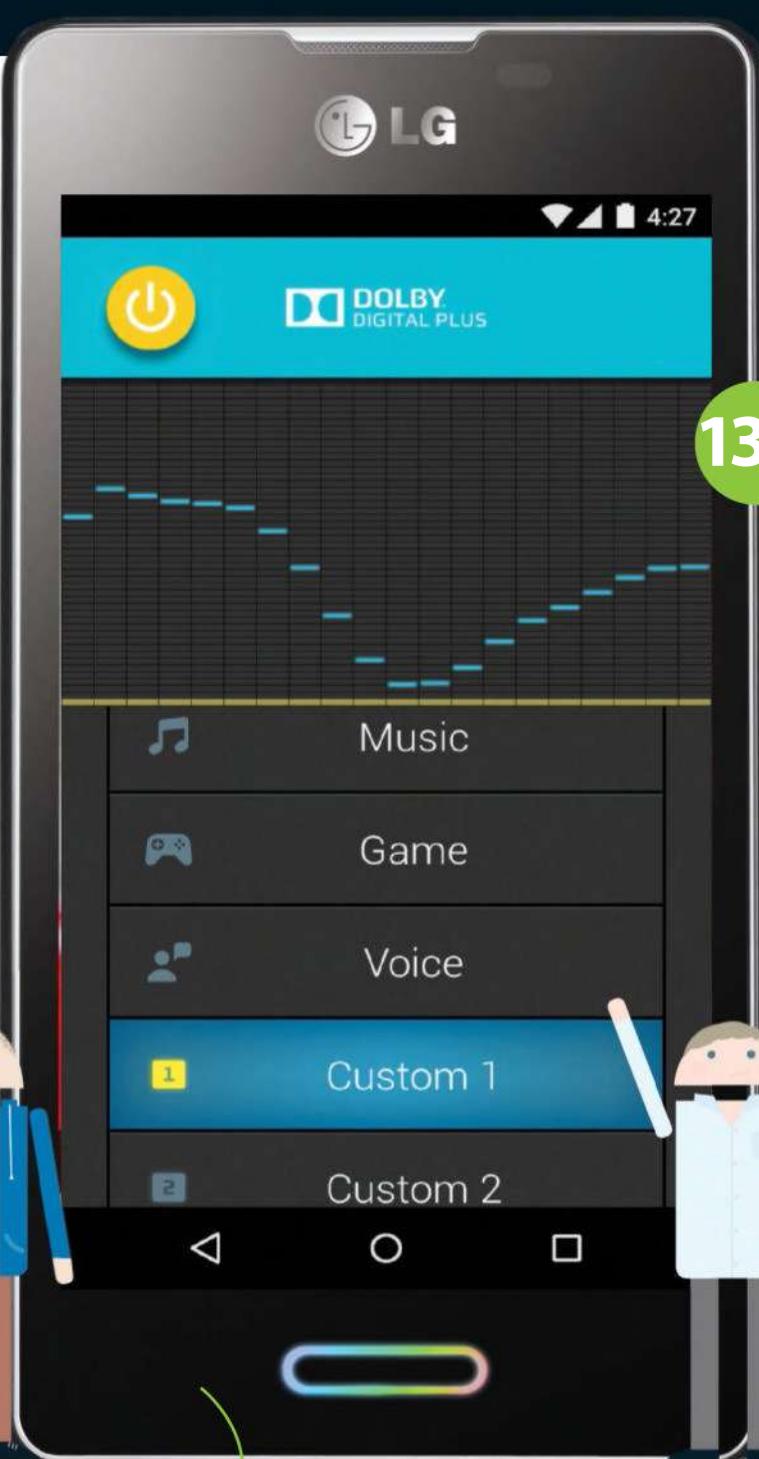


Rid your Android device
of bloatware

128



"You don't need the latest phone or tablet to get a great Android experience"



Get fantastic audio
quality on your device

101 HACKS TO UPGRADE YOUR ANDROID

Revamp your old device with a new look and features

We've got some good news – you don't need the very latest Android smartphone or tablet to get a great Android experience! With some time and effort, you can upgrade any Android device so that it runs smoother, consumes less power from the battery, looks nicer, and is generally far more enjoyable to use. Whether you have a phone that's starting to show its age, a newer device that isn't quite living up to expectations, or you simply want to get the most out of your smartphone, then there

are plenty of apps, hacks and tricks that can improve your Android experience.

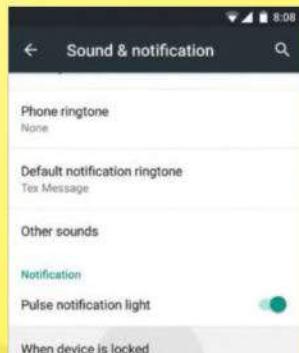
In this guide, we've highlighted 101 ways to improve your device. This will include customising the user interface, from making drastic design overhauls using launchers and custom ROMs, to smaller tweaks such as changing the icons of individual apps and the shade of your status bar. You'll also learn how to get a performance boost by tweaking the kernel, removing bloatware, and taking advantage of multitasking apps. During

the course of writing this feature, after carrying out all these tweaks on a Nexus 5, we found that they added an extra eight hours onto our device's battery life and the device's performance was 70 per cent faster.

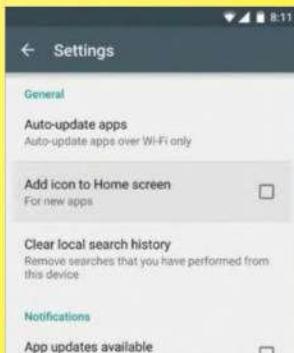
This guide covers an essential mix of hacks, apps and built-in features buried in the Settings. While there is plenty here for power users that have rooted their Android, unless stated otherwise, you'll find everything mentioned over the next eight pages on Google Play.

Customise your app icons

Expand your creativity by choosing from thousands of alternative app icons with the Glim Lite UI icon pack



07 Hide notifications
Android displays information about your notifications on the lock screen. If you don't want this, open the Settings menu, select Sound & Notification, then tap 'When your device is locked,' followed by 'Don't show notifications at all.'



08 Don't add to home screen
When you install an app, Play adds a shortcut to the home screen by default. To prevent Play from creating these shortcuts, open the Play app and tap the menu icon. Select Settings and then deselect 'Add icon to Home screen.'



09 Try Android M
If you own a Nexus 5, 6 or 9 and you're feeling adventurous, you can flash an early release of Android M to your device (<http://goo.gl/Yok2Xv>). However, this is only a developer preview release so make sure you read Google's disclaimer carefully!

New-look launchers

Overhaul your homescreen with these unique layouts



10 Hexy Launcher Free

Hexy displays your apps as hexagonal tiles, arranged in a grid on your home screen. Hexy organises your apps automatically, with the most frequently used ones appearing in the centre, but if you can't spot the one you're after you can filter the apps in your grid using Hexy's useful search bar.



11 Launcher 10 Beta Free

This unique launcher adds integrated live weather effects, so when the forecast says snow, expect to see snow falling on your home screen and settling on your app icons. This launcher also adds a sidebar containing recent and favourite apps, plus other useful shortcuts such as toggling Wi-Fi functionality on and off.



12 Action Launcher 3 Free + IAPs

This launcher gives you an additional way of accessing apps. Swipe from the left of your home screen to see a complete A-Z of all apps installed on your device. If you upgrade to the Plus version, Action Launcher also automatically extracts colours from your wallpaper and then uses them as a basis to customise your layout.



13 Yahoo Aviate Launcher Free

Aviate is a contextually-aware, 'personal assistant' launcher that gathers your favourite apps together and arranges them based on different activities, such as Social, Productivity and Photography. If you tell Aviate your home and work location, it will also offer you different apps that are based on your current location.



14 Buzz Launcher Free

If you're a fan of theming your device, then you may want to take a look at Buzz Launcher, which gives you easy access to a user-created library of thousands of themes. To see what's available before you install the app, view details online at homepackbuzz.com.

15 Increase battery life with Kernel Toolkit

Purchase Pro Unlocker

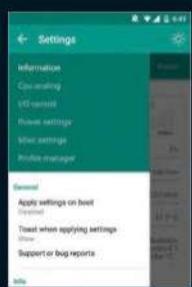
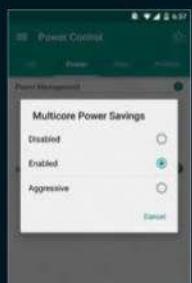
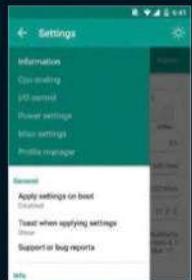
Install Kernel Toolkit. Launch the app, open the side menu, then tap Unlock Pro Features. Follow the instructions and purchase Kernel Toolkit Pro Unlocker (£2.18).

Group tasks into least threads

Launch the app, swipe to the Power tab. Tap Multicore Power Savings and set to Enabled or Aggressive. You're less likely to have issues with Enabled.

Confused? Request help!

Depending on your kernel, you'll see different options. If you're confused about any of these settings, you can get more information by tapping the '?' towards the top of the menu.



Tweak with Xposed and modules

Welcome to the Xposed Installer! Please choose what you want to do:

Framework

Here you can manage the Xposed framework, which is required for any modules to work.

Modules

The framework itself doesn't add any functionality. You need modules for that. In this section you can

16 Don't have Xposed?

To grab Xposed for Android 5.0 Lollipop, follow this link to download it from the XDA Forums: <http://goo.gl/B3GLjo>. Once installed, add modules by launching the Xposed Installer, tapping Download, and searching for the module in question.

17 Swipe up to sleep

On some Android devices the Power button isn't always in the most convenient location. The SwipeUpToSleep Xposed module enables you to turn your screen off just by swiping up from the home button.

18 Make your device boot faster

Certain apps may take it upon themselves to start running automatically when your device boots, which can really eat into your performance. Control exactly which apps start running on system startup, with the BootManager module.

19 Get control over apps

Android M's new permissions model will give users more control over what information apps can access. Until then, use AppOpsXposed to restrict permissions on a per-app basis, which also restricts the information these app(s) can access.

20 Feed apps fake data

Similar to AppOpsXposed, XPrivacy is a module for the privacy-conscious, which has a few more options. Use this module to restrict the data categories each application can access while feeding your apps fake data.

21 Password-protect your individual apps

Add an extra layer of security to your Android device by protecting individual apps with a password, PIN or pattern. With the ProtectedApps module, you can lock down both third-party and system apps.

22 Get more detailed

Do your lock screen widgets fail to deliver enough information at a glance? When you install the aptly-named Maximize Lockscreen Widgets module, all your widgets appear expanded by default, so you can see more details.

XHangouts

UI Tweaks

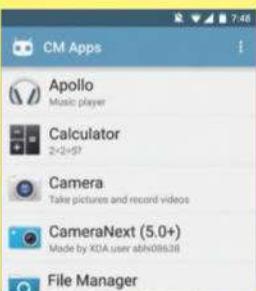
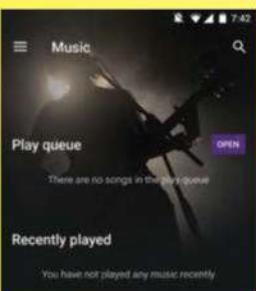
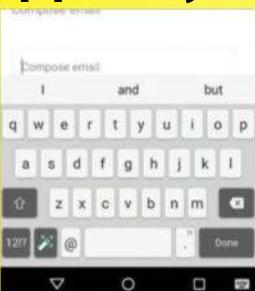
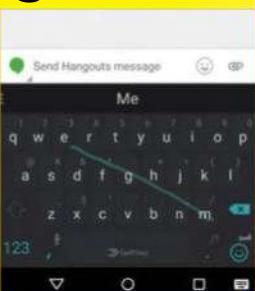
Enter key behavior
Emoji selector (default)

Attach anytime
Long press the emoji button to add an attachment

23 Customise Google Hangouts

The XHangouts module enables you to personalise the stock Hangouts app by changing its colour and hiding all the buttons that you don't use. It also gives you more control over the format and quality of your MMS images.

Tired of Google's stock apps? Try these alternatives



24 Calendar widgets

Are you bored of the stock Google Calendar widget? Grab Calendar Widget: Month and get access to over 70 new calendar widgets, which handily sync automatically with your Google Calendar account.

25 Replace keyboard

SwiftKey Keyboard+ Emoji is a popular replacement keyboard. It adapts to your writing style, supports both tapping and swipe-to-write, and is fully customisable with over 70 designs and themes.

26 Get Xperia keyboard

Lollipop and KitKat users can enjoy the Sony Xperia Z3 keyboard, even on non-Z3 devices. In order to get hold of this keyboard port, head over to: <http://goo.gl/tNGDg8>.

27 Ported Xperia apps

If you want to get more of that Sony Z3 experience, Lollipop users can grab a selection of ported Xperia apps from XDA Developers (<http://goo.gl/Z4hRua>) and then flash them to their device.

28 CyanogenMod without root

Download CM Apps, and you'll have access to the apps, wallpapers and the launcher that usually come pre-installed when you flash the popular CyanogenMod custom ROM.

Boost performance by streamlining your device



29 Identify similar images

Do you take multiple photos at once, just to make sure that you get a perfect one? The Clean Master app frees up space by identifying similar and blurry photos, and then flagging them for deletion.

30 Delete stock apps

All Android devices come with stock and manufacturer apps pre-installed. You can remove this bloatware and free up some space on your device, by enlisting the help of an un installer app such as App Master.



31 One-tap boost

Booster for Android is a free app that promises to boost your device's system and release memory, with its one-tap boost feature. This app also displays how much memory you can gain by deleting specific apps.

32 Limit activity

Processes running in the background can have an impact on your performance. Assistant for Android kills these unnecessary processes, while also offering a host of other useful performance-boosting features.

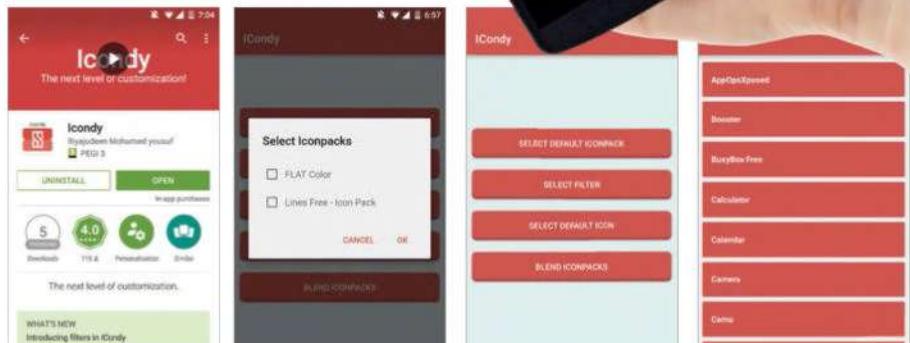
33 Move apps to SD card

DS Super App2SD Lite lets you move any app from internal storage to your device's SD card (even if those apps are marked as 'internal only'), freeing up precious internal memory in the process.

34 Use icons from multiple packs

Changing icons is one of the easiest and most immediate ways of customising your device.

There are lots of icon packs out there, but you know that you're going to like some icons from one pack and other icons from a different pack. Luckily, that's not a problem with Icondy...



Download Icondy

Like some icons from one pack, and other icons from another? Combine them all into a single pack by downloading Icondy from Google Play.

Select your packs

Launch Icondy. Tap '4' and give your pack a name, then tap on OK. Now tap on Select Iconpacks and select the packs you want to use. Tap OK.

Blend your packs

Tap on Select Default Iconpack and select one of the packs you want to use. Tap on Blend Iconpack. You'll see a list of all installed apps.

Apply blended pack

Tap each app and select which icon you want to use. When you're happy with your selection, apply your blended pack simply with a swift tap on the checkmark.

35 Material Design theme

Not all apps have adopted Google's new Material Design principles. The Melior UI theme brings Material Design to more apps, and seeks to improve the look of apps that haven't implemented the Material Design principles in the best way. This theme requires a ROM with the CM12 Theme Engine.

36 A colourful CM12 theme

If your current ROM includes the CM12 Theme Engine, you may also want to check out Uranium UI, a theme for those who prefer the vibrant and colourful look! If you're a fan of the free theme, you can always upgrade to Uranium UI Full by parting with £0.61.

37 Replace the stock Android lock screen

The AcDisplay app provides a minimalist alternative to the stock lock screen. This lock screen also has an Active mode where it uses your Android device's sensors to automatically wake up your device when you need it.

38 Test with Screen Shift

Test your apps across a variety of screen resolutions, densities and overscan settings, to see which combination works the best for your device. You can download Screen Shift from XDA Developers - <http://goo.gl/5uw48z>.

39 Material power menu

Override the stock power menu using this Xposed module. This mod includes additional options, including rebooting directly into recovery. Access this advanced menu by opening the normal power menu, then pressing Power Off. You'll find this module on Google Play.



40 Get a "colorPrimaryDark"

According to Google's Material Design, the status bar should change to reflect the current app's "colorPrimaryDark" attribute. This isn't the case with all apps and can result in a black status bar. The Lolistat Xposed module fixes this, changing the bar to a dark version of the app's main colour.

41 Dual boot your Android

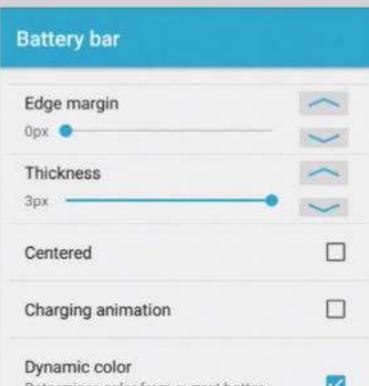
Struggling to choose just one ROM? Or maybe you want a quick way to test a few potential ROMs? MultiROM Manager lets you install multiple ROMs on a single Android device, and then switch between them whenever your device boots. You can find this root-only app on the Google Play store.

42 Customise vanilla Android with Xposed



Install GravityBox module

If you want to tweak your device but don't want to flash a custom ROM, then it's worth checking out the GravityBox module. Download it via the Xposed Installer app.



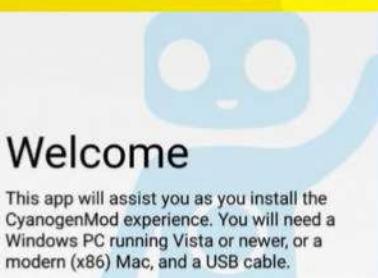
Make some cosmetic tweaks

Launch GravityBox and you'll see all the different customisation options. You can make cosmetic changes, such as changing the colour of the status bar and adding an onscreen 'battery bar.'



Get extra features

Other changes give you additional functionality. One feature worth exploring is Pie Controls. This adds a pie-style side menu to the Chrome app, which you open with a swipe gesture.



43 CyanogenMod custom ROM

This is one of the most popular and well-known custom ROMs. You can install CyanogenMod by downloading the flashible files from cyanogenmod.org or just give the new CyanogenMod Installer a go!

44 Stock Android, only with some tweaks

The Paranoid Android ROM looks similar to stock Android, with the addition of some subtle enhancements and optimisations. One to try if you're not after a radical design overhaul! Learn more at <http://paranoidandroid.co>.

45 Fully customisable ROM

If you're after a custom ROM that gives you the ability to tweak every aspect of your device, then it's worth checking out BlissPop. This ROM is based on CM12.1 and can be accessed by heading over to <http://goo.gl/BVDh8T>.

46 Android Open Kang Project

The AOKP ROM is built from the Android source code published by Google. If you want a no-frills, vanilla Android experience then this is the ROM for you. Learn more at <http://aokp.co/>.

Keep your device secure

47 Monitorapps

See every connection your apps make to the internet, including whether they're transmitting or receiving any data, with Network Log.

48 Get a firewall

AFWall+ lets you create different firewall rules on a per-app basis, so you can have total control over which apps access your networks.

49 Antivirus

360 Security protects against malware, vulnerabilities, adware and Trojans, and also scans installed apps and APK files in real time.

50 Get protection

NowSecure monitors your device's system, apps, configuration and network for security vulnerabilities and notifies you of potential threats.

51 Secure Wi-Fi

Free VPN: Hotspot Shield VPN secures your Wi-Fi with HTTPS – encryption that's commonly used to keep online payments secure.

52 Safe password

LastPass makes it easier to have a unique password for every account, by providing a secure place to store passwords.

53 Block calls

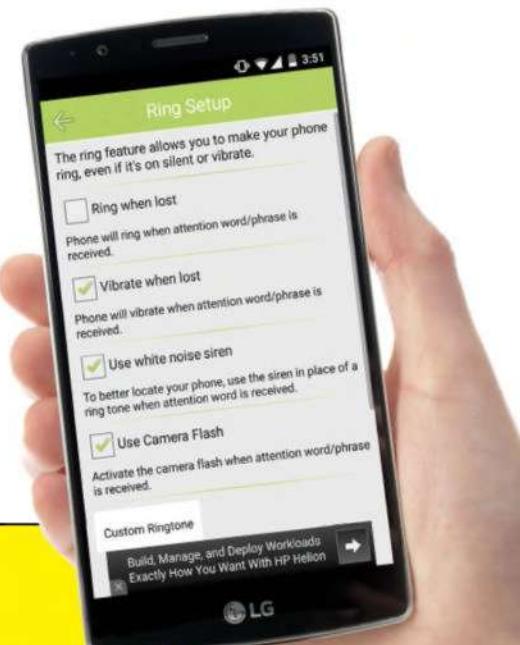
The Mr. Number app lets you block calls and texts, in addition to automatically intercepting calls from unknown or private numbers.

54 Lock down pics and videos

Secure Gallery helps keep your private photos and videos private, by securing them with a password or PIN.

55 Where's My Droid?

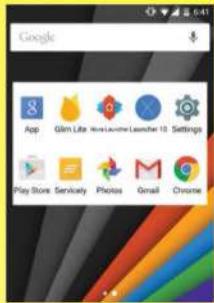
This app helps you find a lost or stolen device, by remotely accessing its GPS location and making your device ring.



8 time-saving shortcuts

56 Most recently used apps

Instead of cluttering your home screen with app shortcuts, add them all to a single widget by downloading MRU from Google Play. This nifty widget gives you easy access to all of your most recently used apps.



57 Clear All Recents button

Close all running apps and open windows across your stock Lollipop device with a single tap, by installing the Clear All Recents mod. You'll find the file and instructions by popping along to here: <http://goo.gl/83rwB5>.

58 Boot directly into recovery

If you regularly boot into your device's recovery, you can speed up this process with Quick Boot. Open up this app, and boot directly into recovery or bootloader simply by hitting that option in the menu.

59 Use gesture control

AllInOne Gestures is an app that lets you control your device through simple gestures. For example, you may want to open Recent Apps by left-swiping, or launch an app by tapping the screen.

60 Add an undo button

Do you ever wish Android had an undo button? Inputting+ is an app that provides undo, redo, and find & replace shortcuts in a small floating bubble that appears whenever it is that you're inputting text.

61 Google Handwriting Input

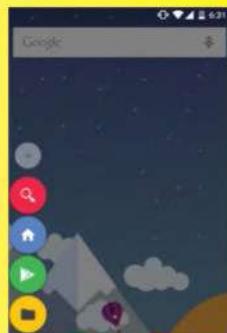
Write directly into your device with this app that supports printed and cursive writing, with or without a stylus, and can recognise hundreds of handwritten emojis. Works with Android 4.0.3 and higher.

62 Scroll Me Up module

When you're reading a long page of text, scrolling back to the top can be time-consuming. This Xposed module lets you jump straight to the top or bottom of the screen with just a tap.

63 Use a floating launcher

Wherever you are, you can summon the Rovers 'floating' launcher and get instant access to all of your favourite apps, folders, actions, and shortcuts. To open Rovers, simply tap its floating 'trigger' point.



Take better photos with apps and hacks



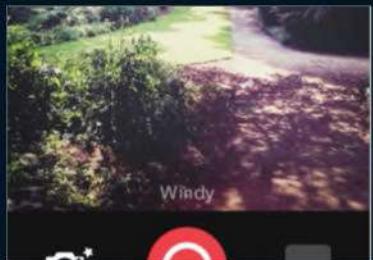
Tap to take a photo of what you see

66 Tell a story

Use photos to fun effect with the aptly-named Frontback app. This app lets you take a photo with the front camera, another with the back camera, and then share them both as a single image.

67 Time-lapse photography

Create fun time-lapse effects using the ChronoSnap app. Simply tell the app how many photos you want it to take, and over what period of time, and then set it running.



68 Experiment with live filters

Love filters? Preview how your photo will look with a certain filter applied, before you actually take the photo, using the Camu app's 'live filters.' This app comes with easy-to-use clarity controls.

69 ShootRAW

If you're serious about your mobile photography, then Camera FV-5 gives you access to DSLR-like manual controls, including the ability to shoot in RAW format and set an exposure time of up to 30 seconds.

70 Autocorrect images

Not a fan of manually editing photos, but still want professional-looking images? The Perfectly Clear camera app features intelligent image correction that performs 18 different corrections automatically, with a single tap.

DiskDigger

Please select a partition from the list below. If no partitions show up, tap the Refresh button and accept any superuser requests.

- /system, 1 GiB
- /data, 12.78 GiB This is probably your device's internal memory.
- /cache, 700 MiB
- /persist, 16 MiB

64 Un-delete your photos and images

Have you ever deleted a treasured photo by accident? The DiskDigger app gives rooted users a way to recover those lost photos and images. Install this app from Google Play, launch it, and you'll see a list of all the different areas where you can scan for lost files.

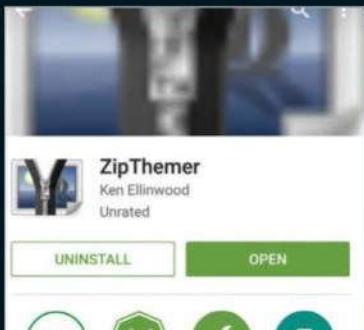
AppHunt

- 1. Flynx - Read the web... Open links without leaving the app: with ad remover and... 178 6 comments Jul 7
- 2. Flud (Ad free) A light weight, well designed torrent client 81 2 comments Jul 8
- 3. Textra SMS A highly customisable SMS app! 89

65 Discover new apps

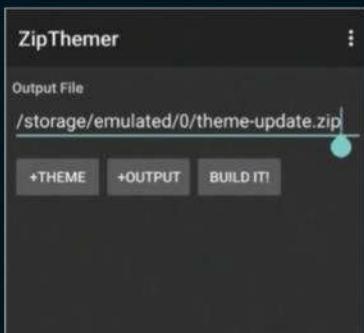
If you're always on the lookout for new apps and want to keep ahead of the curve, then you may want to install AppHunt. This app provides a curated list of apps that updates in real time. On the main page, you'll find the apps that have received the most votes from AppHunt users, over the past week.

71 Customise your device's softkeys



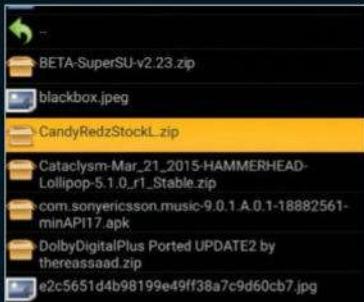
Choose your new graphics

If you're not a fan of stock softkeys, you can replace them with a range of different graphics. Download ZipThemer, and then ensure you have a custom ROM handy.



Upload your softkey graphics

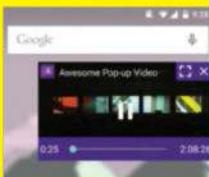
Choose some new softkey graphics you like from <http://goo.gl/ri06v> and then download them to your device. Launch ZipThemer and then tap on '+Theme'.



Build your ROM

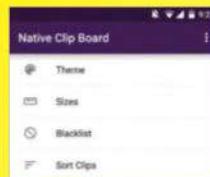
Navigate to the new graphics you just downloaded and tap to select. Tap on Build It. After a few moments, you'll have a flashable ROM that contains your custom softkeys.

Become a power user



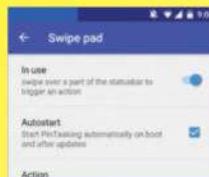
72 Pop-up videos

There's no need to pause your movie just because you need to reply to an email. Watch videos in a separate floating window, with the Awesome Pop-up Video Xposed module.



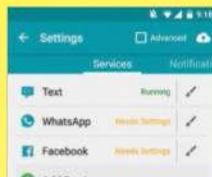
73 Powerful clipboard

Copy multiple pieces of text at once, using the Native Clip Board Xposed module. When it's time to paste, open Native Clip Board and choose from all your currently-copied text.



74 PinTasking

This app enables you to pin tasks, documents and apps so that you can access them quickly from any screen. To enable PinTasking, launch it, select Swipe Pad and then tap In Use.



75 Disa

Manage all your online and SMS conversations from one location. Install Disa, open its Settings and start adding services by tapping Add Service and choosing from the supported apps.

Optimise a device's battery life

76 GO Battery Saver

The GO Battery Saver app provides modes that you can switch between to extend your battery life in different ways. You can also create custom modes and significantly extend your remaining charge by tapping on the main Optimize button.



77 Auto-hibernate apps

Prevent apps from misbehaving in the background; Greenify lets you hibernate apps across your device, using a Hibernate Now home screen shortcut. It also has an App Analyzer feature that flags up potential misbehaving apps.

78 Prevent battery drain

Wakelocks drain your battery by preventing your device from going into a deep sleep. The Amplify Xposed module enables you to limit how often your device can wake up, and how long it stays awake for.

79 Instant deep sleep mode

Send your device into deep sleep mode as soon as you turn the screen off. The Deep Sleep Battery Saver app has with five pre-defined profiles that should cover most of your battery-saving needs.

80 Control your network

The Smart Network Xposed module saves battery by changing your device's network state when your screen is off, including disabling Wi-Fi or Bluetooth, and switching your network mode to 2G.

81 Consider underclocking

CPU Tuner lets you tweak your device's power consumption, including saving power by lowering your device's clock speed. When used incorrectly, this app can cause some problems, so make sure you know what you're doing!

82 Adjust brightness

Use BrightTime to automatically adjust your screen's brightness based on the time of day. This saves battery by ensuring your screen is never brighter than it needs to be. You can grab BrightTime from <http://goo.gl/iAOF1y>.

83 Preserve battery

Battery Doctor provides stats about how long your battery will last if you perform different tasks, identifies battery-hogging apps, and lets you create profiles.

84 See remaining battery

Do you feel the stock battery icon doesn't give a clear indication of how much battery you have left? Add a percentage to your battery icon, by installing the Battery Percent Enabler app.

85 Get a shutdown countdown

Your device is down to 1%, but how much time do you have before it actually shuts down? The Battery Shutdown Manager Xposed module displays a countdown to your device completely running out of battery.

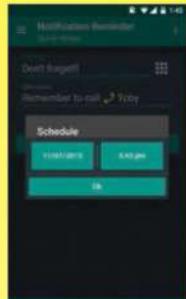
86 Analyse your battery use

Is your battery disappearing faster than you'd like? BetterBatteryStats zeros in on misbehaving apps and analyses how your device uses battery.

Get more out of notifications

87 Store notes as notifications

Jot down quick notes that you can then schedule to appear as notifications at designated times, using the Notification Reminder app. If you like, you can also create notes and then store them as permanent notifications.



88 Disable heads-up

Lollipop introduced 'heads-up' notifications, but if you find these distracting, you can disable them using the HeadsOff app. You can either disable all heads-up notifications, or disable them for selected apps only.

89 Restore tickertext

Similar to HeadsOff, Ticklr disables heads-up notifications and replaces them with the old-style 'ticker' notifications. When this app is enabled, you'll see notification text in both the status bar and on your lock screen.

90 Notifications at a glance

Tired of hitting the power button every time you want to check notifications? Glimpse Notifications automatically turns your screen on whenever you receive a notification.

91 Get notification reminders

Do you ever see a notification, think 'I'll deal with that in a minute,' and then completely forget about responding to it? Repeating Notifications ensures you don't forget, by repeating the notification after a set period of time.

92 Notification shortcuts

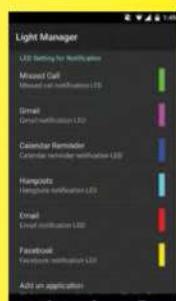
Notification Toggle lets you add shortcuts to your status bar, in the form of permanent notifications. You can use these notifications to perform lots of different actions, including toggling your Wi-Fi on and off.

93 News via notifications

Use notifications to access the latest news. Tell the Top News app what news you're interested in, and it'll display all relevant breaking news as floating, bubble-style notifications.

94 Assign colour to notifications

Notification lights inform you about a new notification – but what kind of notification is it? With Light Manager you can vary the colour and frequency of this light, depending on the kind of notification received.



Monitor every part of your Android device



97 Info about your system

Get a useful overview of your device by using the Castro app in order to discover more about your CPU, kernel, battery, and memory. This is a good starter app for learning more about your device.

98 More detailed stats

The AIDA64 app provides a deeper insight into your device's hardware and software. Features include real-time GPU clock measurement and sensor polling, alongside information about your OS.

99 Monitor RAM and CPU

Keep an eye on your CPU and RAM usage by adding CPU and RAM indicators to your device's status bar. The TinyCore – CPU RAM Monitor app also provides general stats about your device's CPU, GPU, RAM & battery.

100 Monitor data usage

Ever been shocked by the size of your phone bill? Data Status makes it easy to keep an eye on your cellular data usage by adding an automatically-updating icon directly to your device's status bar.

ACTIVE - Speed



101 Overall performance

The Root Booster app provides an overview of how your device is currently performing in terms of speed, battery and stability. After reviewing, you can apply different profiles that optimise these 3 areas.



95 Manual camera control

Manual Camera gives direct control over your device's camera hardware, including the lens, white balance, shutter speed and flash. You can purchase Manual Camera from Google Play (£2.09 / \$2.99) and can run a free compatibility test before purchasing, to ensure it's suitable for your device.



96 Try an iPhone camera

Get the popular iOS app Camera Awesome for Android. Camera Awesome has all the features you'd expect from a camera app, plus the ability to ensure group shots remain focused by tracking multiple faces at a time. It also has over 100 editing effects including an insta-edit Awesomize button.

Restrict permissions with XPrivacy

Decide what personal info and hardware apps can access

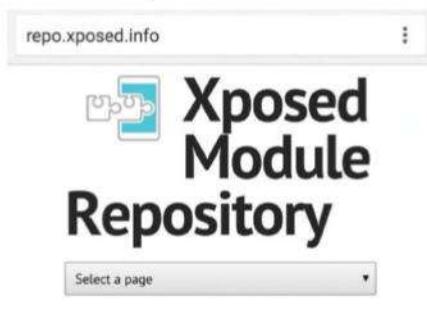
It was announced that Android M will give users granular control over app permissions. However, if you've got a rooted device you can already do this with XPrivacy. This lets you to select apps and deny them

access to various information on your phone. As well as this, it will also let you fool your phone to protect your privacy. You can manually input a location, new number and a host of other details so an app believes

you're elsewhere or sends the wrong phone number to apps to keep your real details safe. Read on to find out how to install XPrivacy, block apps from mining your data and change settings to keep your identity secret.

"XPrivacy will let you fool your phone to protect your privacy"

XPrivacy | Keep your details private



XPrivacy

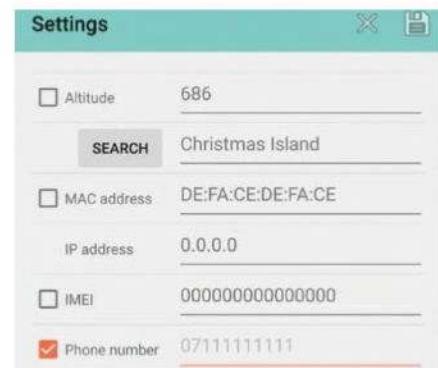
1: Install XPrivacy

Ensure your phone is rooted and you have the Xposed Framework installed. Then either go to the Xposed Module Repository (<http://goo.gl/KK8yMB>) or search for [Root] XPrivacy Installer in the Play store and download.



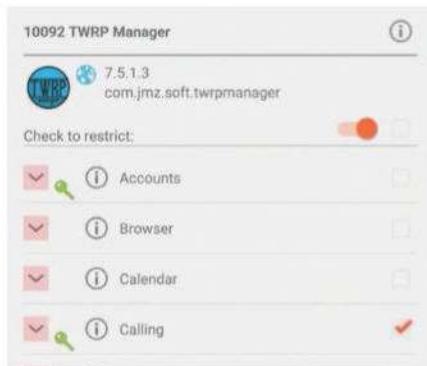
2: See your apps list

Reboot your device. Head into the Xposed Installer app and tick the box next to XPrivacy. Reboot your phone again and this will cause XPrivacy to activate. If this is the case, open up XPrivacy and you will see your full list of apps.



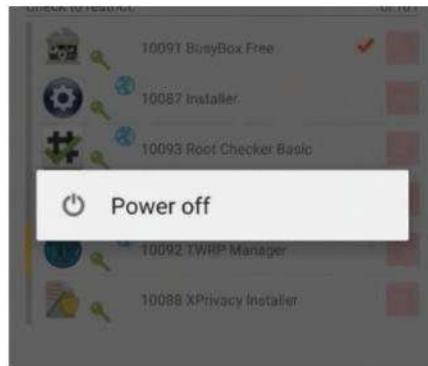
3: Fool your phone

Tap the menu and hit Settings. This is where you can trick your phone into giving out fake details. Change your location, phone number or any of the other options. When apps read this information it will take details from here.



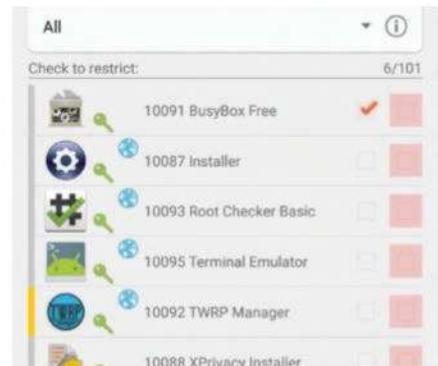
4: Deny specific permissions

Tap on a particular app and a screen will appear showing all the permissions you have granted it. By pressing the tick next to it, the app will believe the data in your new Settings list, such as your pretend location.



5: Restart your handset

Once you have selected the permissions you want to remove from the account, restart your phone. When it turns back on, the app should now be reading the fake data. Remember some apps require genuine data to work.



6: Block all permissions

If you want to perform a blanket deny on all permissions for an app, hit the tick box next to the app name and it will automatically tick everything off for you. This is a particularly useful procedure for games.

Mix & match icon packs in Lucid Launcher

Use Icondy and Lucid Launcher to choose what icons you want to display

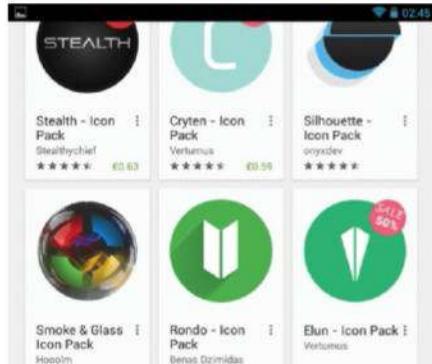
While icon packs are a great way to customise the look of your Android, they don't always offer what you're looking for. In this tutorial we're going to show you how to use Icondy to mix together icon packs, giving you better control over the look and feel of your homescreen. It's a pretty simple process, although at the moment the app

only supports Lucid Launcher, which means if you're using a different third-party launcher app you're going to be out of luck. So to get started you'll need to download Lucid Launcher, then you'll need to grab Icondy from Google Play. There is a free version to play around with, so you'll probably want to get that first to make sure everything works

okay with your device. You can then buy the premium version as an in-app purchase if you decide it's worth it

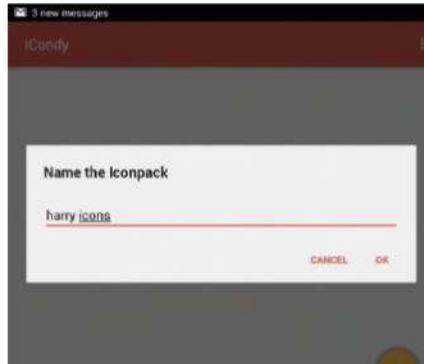
“Control the look of your homescreen”

Icondy + Lucid Launcher | Customise the look of your device



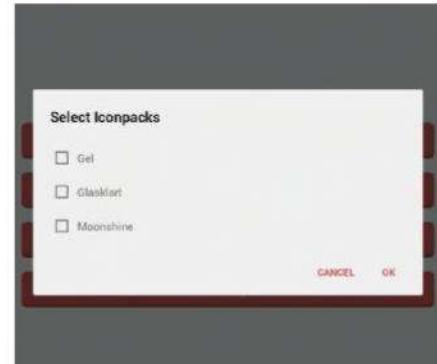
1: Get some icon packs

First you'll need to have some icon packs. If you don't have any, head to Google Play. You'll be given loads of results. Find a couple that you like and download. When they've finished installing head to Icondy.



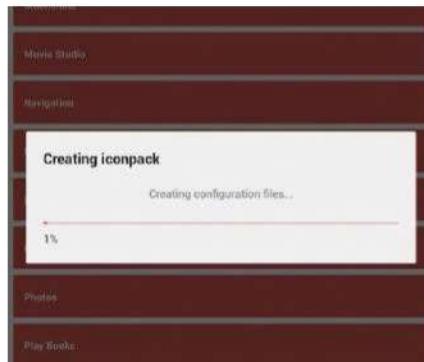
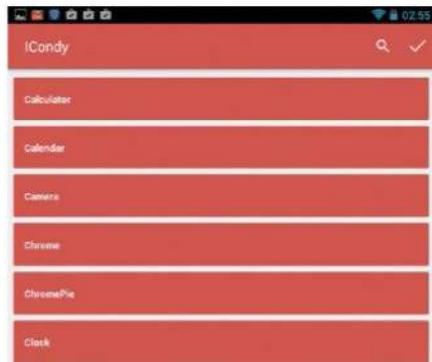
2: Create your own pack

Now it's time to create your own icon pack. Tap on the orange plus sign in the bottom right. This will ask you to name your new icon pack. Decide on something sensible, then tap OK to be taken to the next screen.



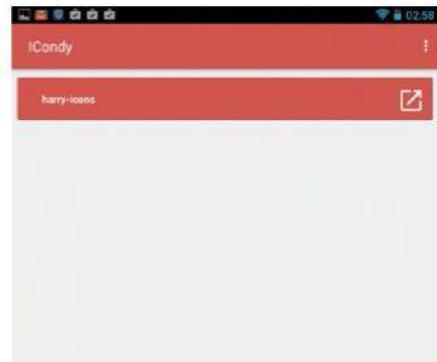
3: Combine the packs

This screen offers a number of different options. First you have to select which icon packs you can use. With the free version of Icondy you can only use two packs, but if you upgrade you'll be able to combine more.



4: Follow the instructions

Next select which of your icon packs you want to be the default, and choose a default icon. Then it's time to blend your icon packs. Tap the button at the bottom for a list of all the icons that are currently on your device.



5: Save the pack

When you've finished choosing which icons you want to use, it's time to create your icon pack. To do this tap the tick in the top-right corner. Depending on how many switches you've made, it might take a while.

6: Apply the pack

Lastly, head back to the main page of the app. You'll see your newly created icon pack displayed at the top of the page. Tap on the arrow-like icon next to the name of your pack, and then tap on Lucid Launcher to apply it.

Easily root to Lollipop with no kernel

Use the latest beta of SuperSU to root Android without a modified kernel



It can be a bit troublesome when a new version of the Android OS hits if you've got a rooted device. Developers take time to get to grips with the new software and it takes a while for different models of Android phone and tablet too. For some time now, upgrading to a rooted version of Lollipop has meant using a modified kernel to work around some restrictions in the new OS. A new beta build of SuperSU stops all that though. It's a more invasive procedure and as it's still in beta, there is a danger that it could brick your device. It also apparently has the highest risk of bootloops of any build of SuperSU so far, so make sure you back everything up and know what you're doing before you even try it. The process is not too time consuming but if you want to help out with the beta testing of the app, it's a good idea to re-root your device to stock Lollipop, to avoid any clashes between the modified kernels you've been using up until now and the new version which uses Zygote service to bypass the need for them. Again, please bear in mind that this tutorial could brick your device, so make sure you backed up before you start.

"It's troublesome when a new Android OS hits when you have a rooted device"



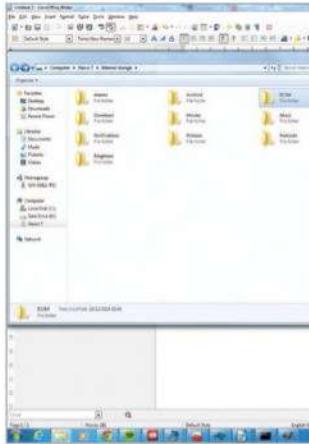
1: Flash to stock

To get started, you will need to flash your device back to stock. This can be a time-consuming job, but there are a number of ways to do it effectively. If you are using a Nexus device then your best bet is the Nexus Toolkit, which you can download for free at this link: www.wugfresh.com/nrt/



6: Compile the ROM

Navigate to the main folder of Little Kitchen and then run the main.cmd file. A dos prompt screen will then appear on the screen and compile the source ROM minus the selected apps from the previous step. The new ROM will be saved in the ROM folder of Little Kitchen.



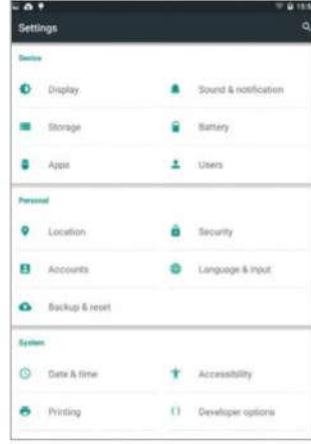
2: Flash the file

When your device is running stock Android you need to download the SuperSU beta from this link: tinyurl.com/pmatxpb. Download the zip file to your PC, then connect your device to the PC with the USB cable. You also need to make sure your device is unlocked.



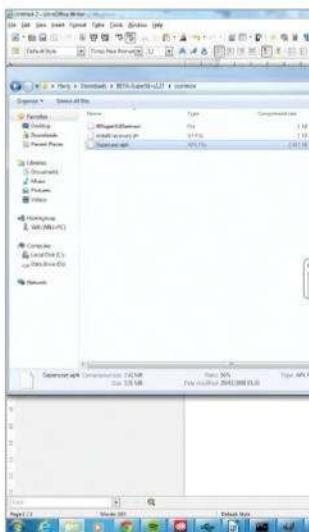
3: Drag and drop

Now drag the zip file into the root of the storage on your device. You will need to have a bootloader program installed on your device to perform the next step, so head to the Play Store if you haven't already and install TWRP. It's free and pretty easy to install and use.



4: Check USB debugging

If you were not able to drag and drop the file, it's probably because you're not running USB debugging. This is an option in the hidden Developer options menu. If you're unsure how to unlock that, then it's probably best that you stop this tutorial right now!



7: Use the APK

If this doesn't work, grab the APK of the app directly from the common folder in the zip download and install it straight onto your device. Make sure that you have got your device set up so it's able to install apps that aren't downloaded from the Play Store.

8: Check it worked

Head over to the Apps options in the Settings menu and check which version of SuperSU you have got installed. If everything worked, it should be marked 2.27. If not, then it is possible that your root installed its own version of the program onto your device.

9: Flash it again

If that's indeed the case, there is another alternative option! You need to find an other root method and flash the right zip into it using TWRP or an alternative. You can do this from the TWRP app itself, using the zip file downloaded earlier.



10: Don't give up

If things haven't worked, don't despair. The beta is still ongoing and there's a good chance that the Play Store version of SuperSU will be updated with the new functionality. You will just have to keep using the modified kernel version of Lollipop for now.

Break your device out of a bootloop

Learn how to root an Android device that's refusing to boot



If your rooted device is refusing to boot properly, the solution is usually to restore a backup or **flash a new ROM**. But what if your unrooted device is refusing to boot?

Unrooted smartphones and tablets are less susceptible to booting issues, but unfortunately they can still occur. Maybe you were attempting to root your device and something went wrong, or you previously achieved root, but have since soft-bricked your device. Now, to make matters worse your device has spontaneously unrooted itself too.

Whatever the reason, if your device is stuck in a bootloop, or it's only getting as far as the bootloader or recovery mode, then your Android device is only soft-bricked and should still be salvageable. One way to recover your device is to root it. Once your device is rooted, you can take advantage of the many ways of recovering a rooted device.

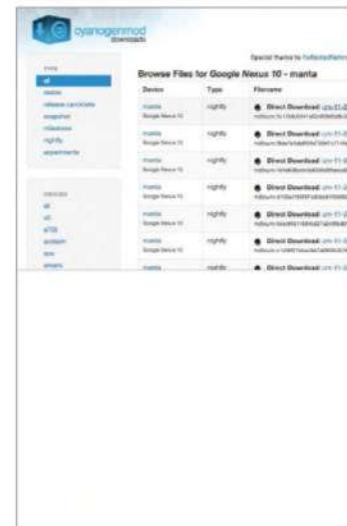
This tutorial will show you some of the potential ways to recover a soft-bricked, unrooted Samsung Galaxy smartphone or tablet by rooting it and then attempting some root-only fixes. Although this tutorial is geared towards users who haven't achieved root, some of the later steps should also be useful if you've managed to soft-brick a rooted device beforehand.

“Once your device is rooted, you can take advantage of the many ways of recovering a rooted device”



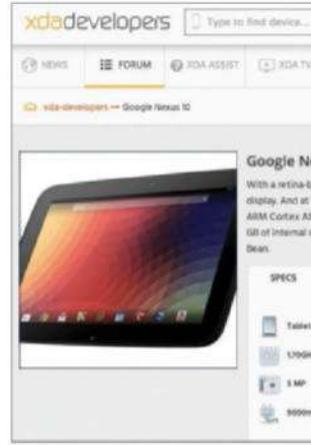
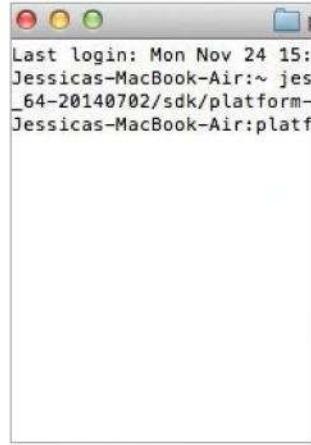
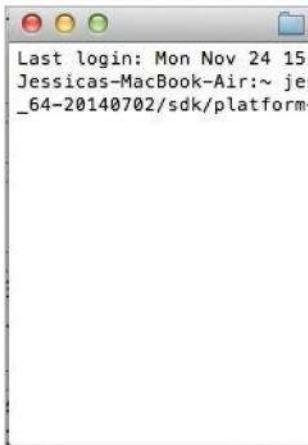
1: Download the SDK

One way of rooting a device that's stuck in a bootloop is by pushing Android Debug Bridge (ADB) commands from your PC to your Android. Boot up your computer and download the Android SDK from <https://developer.android.com/sdk/index.html?hl=i>. Open your new ADT folder.



6: Flash custom ROM

Once you've achieved root, there are several tricks that you can do that can break your device out of a bootloop. One potential solution is to flash a custom ROM. To start this process off, just find a suitable ROM online and download it to your PC, then move it across to your device.



2: Launch your terminal

Open the platform-tools folder, and find ADB. Open your Mac's terminal or Windows command line, and point it towards ADB, using the cd command, followed by ADB's file path. Your command should look like: cd /Users/jessica/Downloads/adb-bundle/sdk/platform-tools.

3: Time your commands

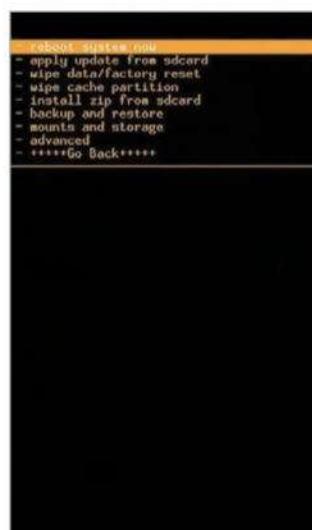
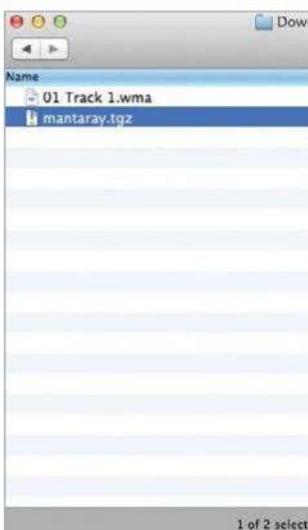
Attach your device to your computer using the USB cable. The trickiest part is working out when to issue commands. This is different for each device, but aim to push ADB commands after the manufacturer logo appears, but before the device starts another boot cycle.

4: Unlock and root

You'll mostly use ADB and fastboot commands to boot into your device's bootloader (adb reboot bootloader), unlock the bootloader (fastboot oem unlock) and install a custom recovery by getting ClockworkMod running 'fastboot flash recovery filename.img'.

5: Find right instructions

The golden rule of rooting an Android device is to only use instructions written for your particular device. The best place for device-specific rooting tutorials, is the XDA Developers forum, where you'll find designated boards for a wide range of different devices.



7: Flash stock ROM

Use ADB commands to boot into your custom recovery, and flash the custom ROM. Reboot and see whether your device is booting properly. If custom ROMs don't do the trick, it may be worth tracking down the stock ROM to flash this.

8: Reboot from recovery

If you've successfully flashed a ROM but your device now boots straight into recovery, don't panic. Some ROMs launch into recovery the first time you boot them. In recovery, navigate to 'reboot system now' and see if your ROM loads normally.

9: Wipe your device

If you've flashed a ROM and your device is still in a bootloop, you may need to wipe it. Launch your device into recovery mode, select Advanced and Wipe Dalvik Cache. Then select Go Back and Wipe Cache Partition, then Wipe Data/Factory Reset.

10: Factory reset

If you've been unable to achieve root, then you could recover from a bootloop by using the stock Android recovery to factory reset. Boot into the stock recovery, select 'Wipe data/factory reset' and confirm that you want to factory reset.

Modify any Android device's battery icon

Learn how to create custom battery icons for your Android smartphone or tablet

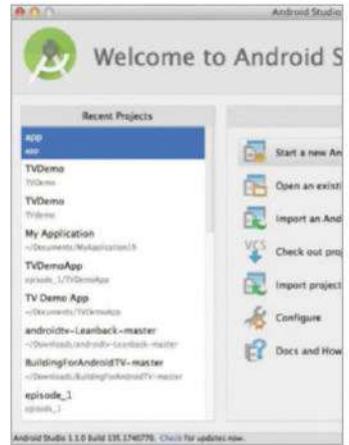


If you've rooted your device, there's pretty much no limit to what you can do or make. We show you how to delve into the individual image files that make up your device's ROM, so that you can create your own battery icons on your Android device. You can either edit the existing battery images, or replace them with entirely new graphics instead.

To customise your battery icon, you'll use 'adb' (Android Debug Bridge) commands to pull the SystemUI.apk file from your Galaxy device and onto your computer. You'll then use a program called Apktool, to decompile the SystemUI.apk into a series of editable files so you can make changes to the battery images. Once you've finished editing, Apktool will then help you to recompile the files back into a single SystemUI.apk file, and then use SignApk to 'sign' the modified SystemUI.apk so it can successfully run on your device. Finally, you'll use another adb command to push the modified SystemUI.apk file back to your device.

Apktool is available for Windows, Linux and Mac. This tutorial has been written specifically for Apple Mac, but the steps used here are just as applicable to Windows and Linux computers too, although the actual adb, Apktool and SignApk commands will differ slightly between the different operating systems.

Since you will be using adb commands, you will need to have Android Studio set up on your Mac for this tutorial to be effective. You can easily download and install it from developer.android.com/sdk/index.html.



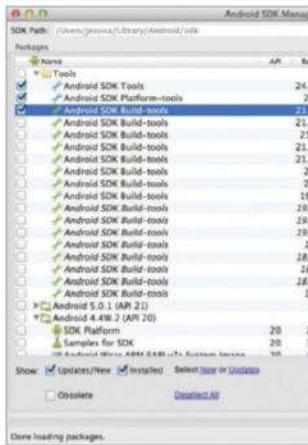
1: Create a project

Download additional packages for Android Studio. Launch Android Studio and create a new project, which makes it easier to download the necessary packages, so follow the onscreen instructions and accept all the project defaults. Select Tools>Android SDK Manager from Android Studio's toolbar.



6: Move SystemUI.apk

Move the SystemUI.apk file to your apktools folder. Change directory so the Terminal is pointing at the apktools folder (`cd /Users/username/apktools`). Check Apktool is working by entering the Terminal command: `./apktool`. If it's working you'll see info about Apktool.



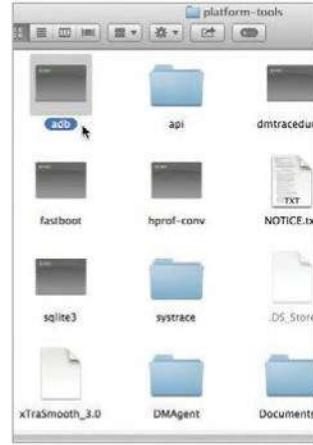
2: Install extra packages

SDK Manager opens with some packages already selected. Leave these packages selected, but also make sure you have the latest versions of SDK Tools, Platform-Tools and Build-Tools selected. Install the packages by following the instructions and close Android Studio.



3: Create Apktools folder

Go to code.google.com/p/android-apktool/downloads/list, download Apktool and a relevant helper script. Unzip both and create a 'apktools' folder in your home directory. Move files into 'apktools', then go to your 'platform-tools' folder (use Finder to search for 'platform-tools').



4: Change directory – 'cd'

'Platform-tools' contains an 'adb' file. Open a Terminal window, type a 'cd' command into the Terminal window and press 'Enter' to change directory. Your command should look like this
cd:/Users/username/Downloads/android/sdk/platform-tools. Attach your devices via USB.



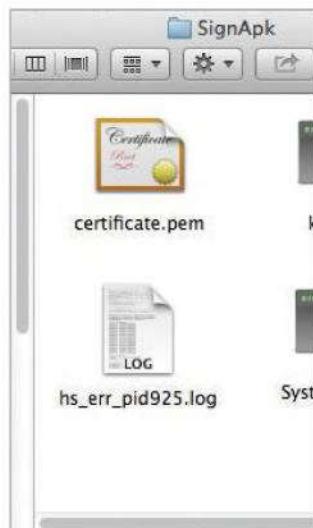
5: Do an ./adb pull

Check your computer recognises your device by entering ./adb devices into the Terminal. Use ./adb pull to move your device's SystemUI.apk file onto your computer. SystemUI.apk's location varies, but your Terminal command should look like ./adb pull /system/app/SystemUI.apk.



7: Decompile SystemUI

Decompile your SystemUI.apk file by running this Terminal command: ./apktool d SystemUI.apk. A new SystemUI.apk folder will appear – open it and navigate to its 'res' folder. Depending on the ROM, you'll see different 'drawable' folders.



8: Edit battery images

You can replace the existing battery images with your image files, or alter the existing files. Just keep the filenames, images sizes and image resolutions the same. Once done, recompile the SystemUI apk using the Terminal command: ./apktool b SystemUI.

9: Sign your APK

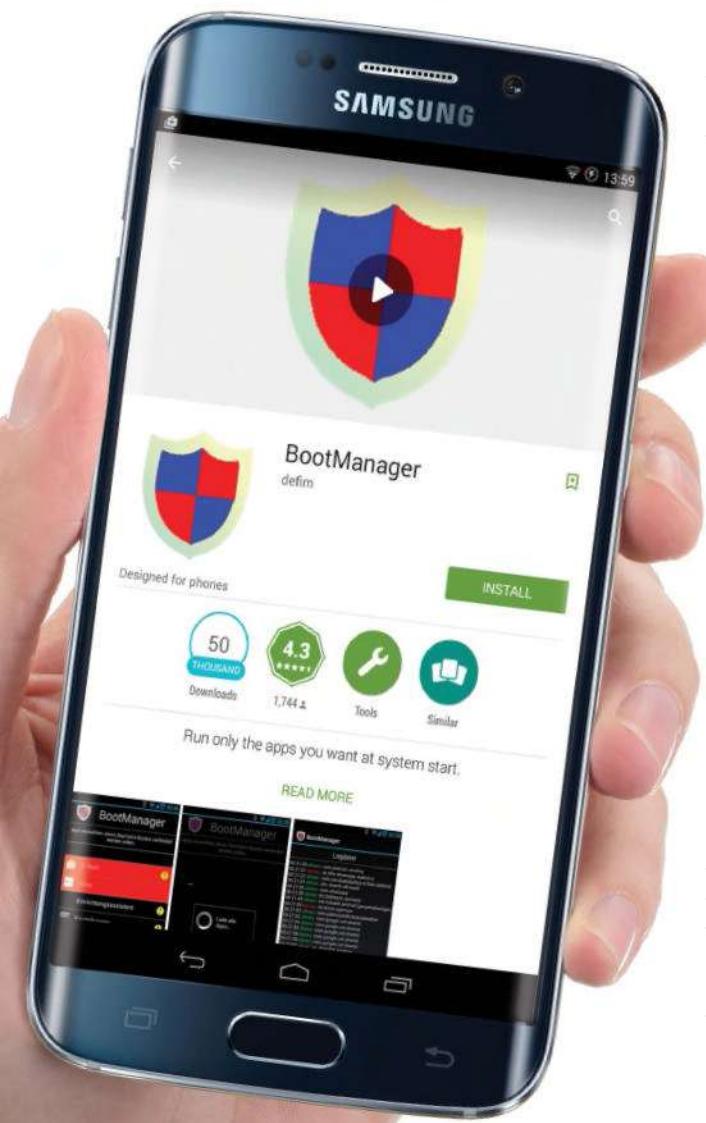
Sign your .apk by downloading SignApk from bit.ly/1xeEWtn. Unzip and move your SystemUI.apk into the SignApk folder. Change directory so the Terminal points at the SignAPK folder. Run: java -jar signapk.jar certificate.pem key.pk8 SystemUI.apk SystemUI.apk.

10: Use ./adb push

Push your apk to the device. Change directory so the Terminal points at your platform-tools folder, use ./adb push to push System.apk to the location you pulled it from. Your command should read: ./adb push /Users/username/Downloads/SystemUI.apk /system/app.

Manage app start up on device boot

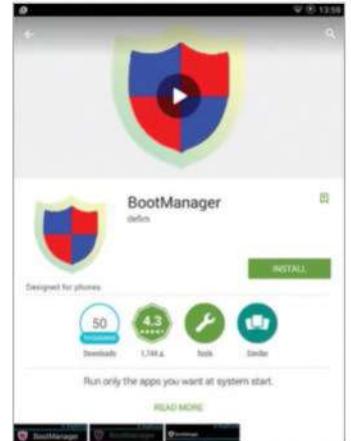
Control which apps load when you boot up your phone or tablet



Getting to grips with a rooted device can be a lot of fun. But once you've played around with all the cosmetic changes, thanks to the freedom that modded ROMs offer, it's time to have a look at how your newfound access can actually speed up your phone or tablet. A great first step is to supercharge your boot-up time, forcing apps you don't use that often to stay asleep when you hit the power button.

That's exactly what BootManager does. In a few taps you can blacklist certain apps so they're not hogging system memory and slowing down your boot-up time. You'll be surprised how many programs are starting when your device first turns on. It's a pretty simple task, but you'll need a few things to get going. You'll need a rooted device, but you'll also have to have Xposed framework installed. This handy little tool lets you add modules that change certain behaviours on your phone or tablet. Once it's installed, and updated to the latest version, you'll need to head on over to the Google Play store to grab the module you need to complete this tutorial. When you're ready, to the first step to see how many apps are slowing down your start-up process and how simple it is to make sure they never do it again.

"In a few taps you can blacklist certain apps so they don't hog system memory"



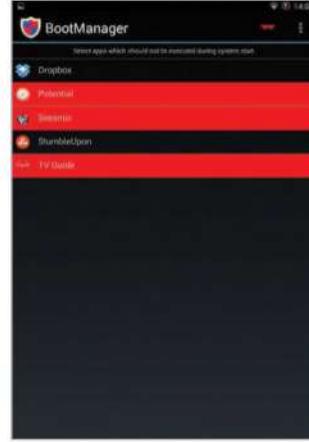
1: Get the app

First up you need to get the app from the Play store. You'll need to download the free version first. We will talk more about the paid version a little later on in the tutorial, which provides a little something different. When it's installed, head on over to the Xposed framework app to get started.



6: Change the look

Head to the Settings menu by tapping the three lines in the top-right of the screen. You'll find a few options that you'll be able to play around with. At the top of the screen you'll see options to change the app icon or make it disappear to free up some screen space.



2: Install the module

You should see the BootManager app in the list of modules you've got downloaded. Tap the check box next to it to start the installation process, and then go on and reboot your device to finish it off. The reboot might take a couple of minutes, so be patient whilst it finishes.

3: Hit the app

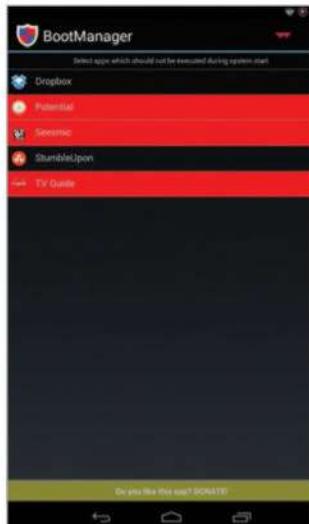
Once your device has completely finished rebooting, you will need to head to the BootManager app itself. It shouldn't be too difficult to find. Start it up and you will be shown a check log of recent updates that the app has received. Tap okay to get rid of the log.

4: Check the list

You will see a list of the apps you've got installed that start up when your device boots. It probably won't be a very long list, but it's likely that some of them really don't need to be using up those resources and slowing down your boot time on all of your devices.

5: Kill some apps

To stop an app from starting up when your phone or tablet boots up, all you have to do is tap on it to stop it from starting. This will then turn it red. If you want to change the settings to apply, then just tap it again and it'll be enabled so that it starts on boot again.



7: Kill them all

For a quicker solution than picking out apps from a list to prevent them from booting, tick the box marked Enable Fastboot. This stops all user apps from starting at boot. Useful if you've got loads of apps starting when they don't really have to.

8: Free or paid

In the main menu, you should see a button at the bottom of the screen asking you to donate. Donating is recommended because it opens up a lot more options and lets you toggle system apps as well as ones that you've installed yourself.

9: Buy the app

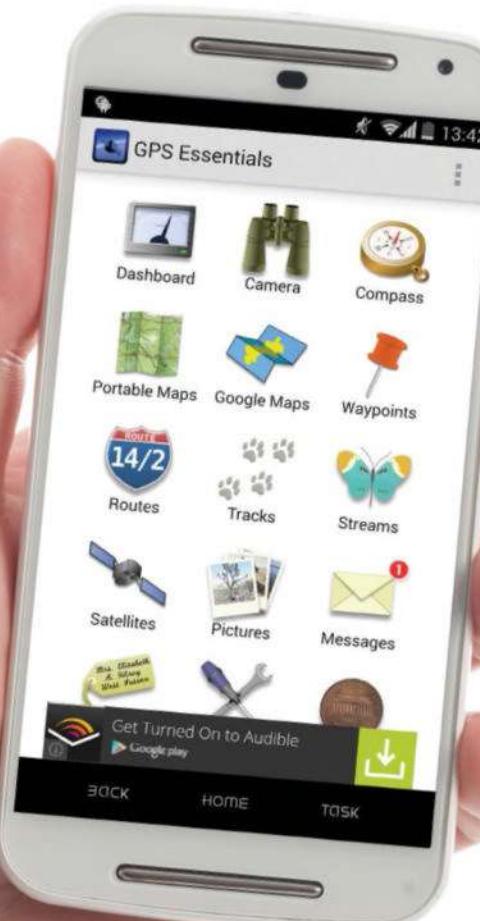
Tap the link to be taken to the Play store, where you'll need to buy another app that acts as a license. When it's installed, head back to the BootManager app and refresh the list from the menu button. It'll take a couple of seconds to load.

10: The big list

Now you can see what loads when you boot up your device. Ones marked with a yellow exclamation mark are system processes, so be careful about stopping them from starting. Googling will tell you what you need and what you don't need.

Repair Wi-Fi and GPS Signals

Struggling to get online or get directions? Find out how to boost or repair those weak connections



Whether you're searching for directions on Google Maps or checking-in to a place on Facebook, you probably won't notice how much you use GPS until your device struggles to find your location.

Although problems with your device's hardware or software can cause permanent GPS issues, the problem will usually be something that automatically resolves itself in time, for example when you move into an area that has better GPS coverage. However, this is little consolation when you're lost and you need some directions straight away.

It's a similar story with your device's Wi-Fi. Sometimes, you'll know that an open network is in range, but for some reason your Android either isn't detecting it or it's detected the network but is refusing to connect to it. Again, most of the time this is a temporary blip and your device's Wi-Fi will spontaneously start working again. But, what about when you urgently need internet access, for example when you're expecting an important email, or during a business Skype call?

The good news is that you don't need to sit around and wait for Wi-Fi and GPS issues to resolve themselves. There are a lot of tricks you can try, that can force your device to actually find your current location and connect to Wi-Fi.

"You don't need to sit around and wait for Wi-Fi and GPS issues to resolve themselves"



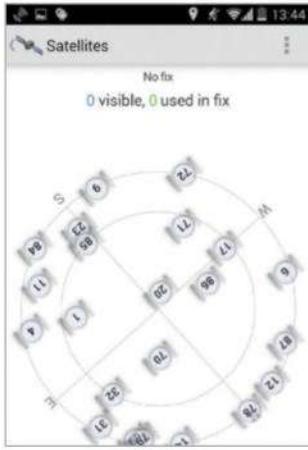
1: Diagnose your problem

If you're battling GPS issues, you should be checking whether the fault really lies with your device, or whether you're just currently out of range of any satellites. GPS Essentials can check how many satellites are within range. Download it from the Play store (bit.ly/1Ji6QHl), and launch the app.



6: Clear DPS data

Open up the toolbar. Tap the wrench icon and select 'Manage A-GPS state', then tap Reset. Repeat this process, but this time select Download instead. The app will then start downloading GPS data from the internet, and should pinpoint your position in minutes.



2: Search for satellites

Tap Satellites and GPS Essentials will display all the satellites currently in range. If there are only a few satellites, or no satellites at all, then this is most likely the cause of your issues. The lack of satellites problem should resolve itself as soon as you leave your current location.



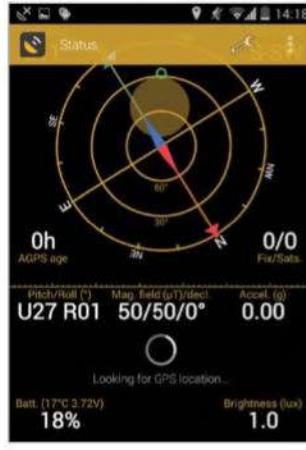
3: Calibrate the compass

If it isn't satellite coverage, the device's compass may be improperly calibrated. Select the app's Compass, tap the menu and select Calibrate. Ensure your device is on a flat surface. Then slowly rotate your device in three circle movements around the axis, pointing upwards.



4: Rotate your device

Slowly rotate the device three full circles around the axis pointing away from you. Then, rotate three full cycles around the axis pointing right. Return to the main Compass screen – it should now be properly calibrated. If it isn't, repeat the rotation process to get it to work.



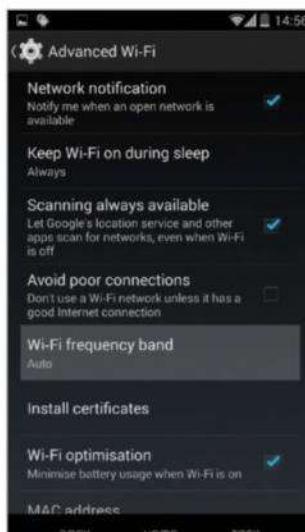
5: GPS Status & Toolbox

It's possible for your device to get stuck on certain satellites, even if they're not within range. If you suspect this has happened, resolve the problem by clearing your device's GPS data, using the GPS Status & Toolbox app. Download it from the Play store and launch it to solve this.



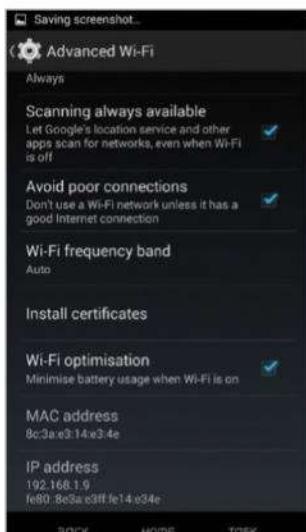
7: Reset Wi-Fi network

If you have problems with your Wi-Fi, try rebooting your router. Try resetting your connection by navigating to the Wi-Fi menu, tapping the network you're having problems with and selecting Forget. Then try reconnecting to this network.



8: Check Wi-Fi frequency band settings

If you have a dual-band router, the problem could be that your device is only using the 2.4GHz band. Open Settings, select Wi-Fi and tap the menu icon. Select Advanced and check your 'Wi-Fi frequency band' settings.



9: Avoid bad connections

It could also be that only weak networks are available, and your device is set up to ignore poor connections. If that might be the issue, then open Settings>Wi-Fi>Advanced. Now you should check whether you have 'Avoid poor connections' selected.



10: Date and time

If there are discrepancies between the date and time settings on your device and router, this can cause connectivity issues. In Settings, ensure that both 'Automatic date & time' and then 'Automatic time zone' are selected.

Boost your gaming performance

Overcome sluggish gaming speeds and choppy sound effects with these scripts and mods

Whether you're using a high-end Samsung Galaxy tablet or one of the budget models in the extensive range of Android phones, Android gaming can prove frustrating when gameplay is disrupted by poor hardware performance.

In theory, a device with a fast CPU and GPU should play games without any issues, but this is rare unless you have taken steps to ensure that gaming is prioritised. Closing all other apps or restarting your device and only running the game when you reboot, is not exactly easy without third party tools to help.

If a game is listed as being compatible with your Android device, it isn't an unrealistic expectation for it to run in a playable manner.

Fortunately, these tools exist in the shape of scripts and mods that can be downloaded from XDA-Developers.com and installed on a rooted device to improve your overall gaming performance – and your gaming experience of course.

Installing these scripts and mods requires the assistance of a supporting app, so we recommend you start with the Hyper Cola Package Installer (you could also try XForce

Gaming and Project Fluid), which can be found by running a search on the XDA-Developers.com forum. Installing scripts individually and testing them with a resource-hungry game before proceeding is definitely the best option.

One word of warning: these scripts come with no warranty, so there is the risk that your phone or tablet could be bricked. Always backup!



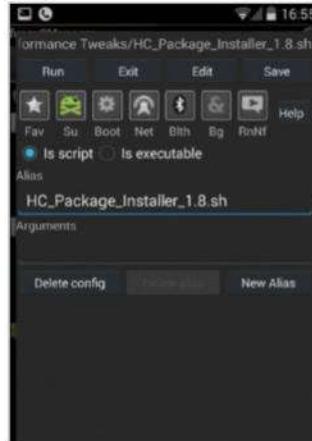
1: Download the script

First off, head to XDA-Developers.com and then search for the Hyper Cola Package Installer. Find the download link for the most recent version, which will have the suffix .SH.PDF. Right-click the link and select the 'Save link as...' option. Then you can simply save and copy it to your phone.



6: Download and flash

At XDA-Developers.com, search for Blend Boosted and download the ZIP file, transferring it to your Galaxy device if you downloaded on your PC. The BlendBoosted™.zip file will need to be flashed in your recovery, so restart, boot into Recovery (TWRP or CWM) and flash.



2: Install additional tools

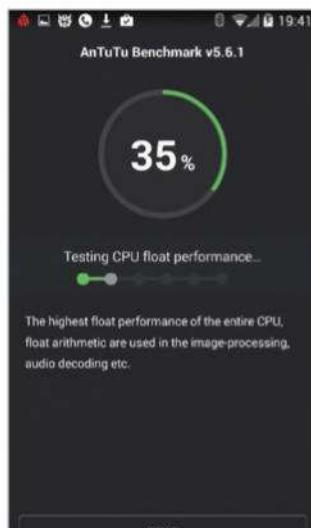
To install this script you will need to install a few tools. First is SManager for managing script executables on Android, which is available from the Google Play store. While you're there, install the Terminal Emulator for Android that's required to enter the launch command.

3: Install the script

Open SManager and browse for the script which you have renamed from .SH.PDF to .SH. Select the SU option in the top-left of the screen (to run the script as root) and Run. If done correctly, you'll see various confirmations being displayed as the script makes its changes.

4: Execute the package

The final step for Hyper Cola Package Installer is to run it. Run Terminal Emulator for Android and enter: su -c hyper. Launch your preferred game and you will notice better performance. The command must be entered each time you reboot for the script to work correctly.



7: Extensive tweaks

Rather than running a script to tighten issues, consider a more comprehensive approach. This is made possible with XForce Gaming, but installation requires additional tools like Haveged Installer, found in XDA's XForce Gaming thread and SManager.

8: Install XForce Gaming

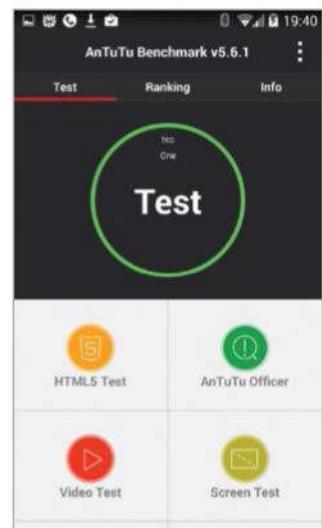
Restart and flash Haveged Installer in recovery. Restart, download the newest version of the script, open in SManager, move it to /system/xbin. Set permission to 777 and ownership as root. In Terminal Emulator, enter su xforce to install tweaks.

9: Benchmark performance

Check how your device's gaming performance has been increased with these tweaks to get an idea of what works and what doesn't. Benchmarking is the answer, with AnTuTu Benchmark being the best app on Google Play.

5: Boost your graphics

Graphics management in Android isn't ideal, with most ROMs putting app and homescreen graphics onto the CPU, leaving the GPU for gaming. Blend Boosted is a great app that gives the GPU more to do and has audio and video tweaks for performance enhancements.

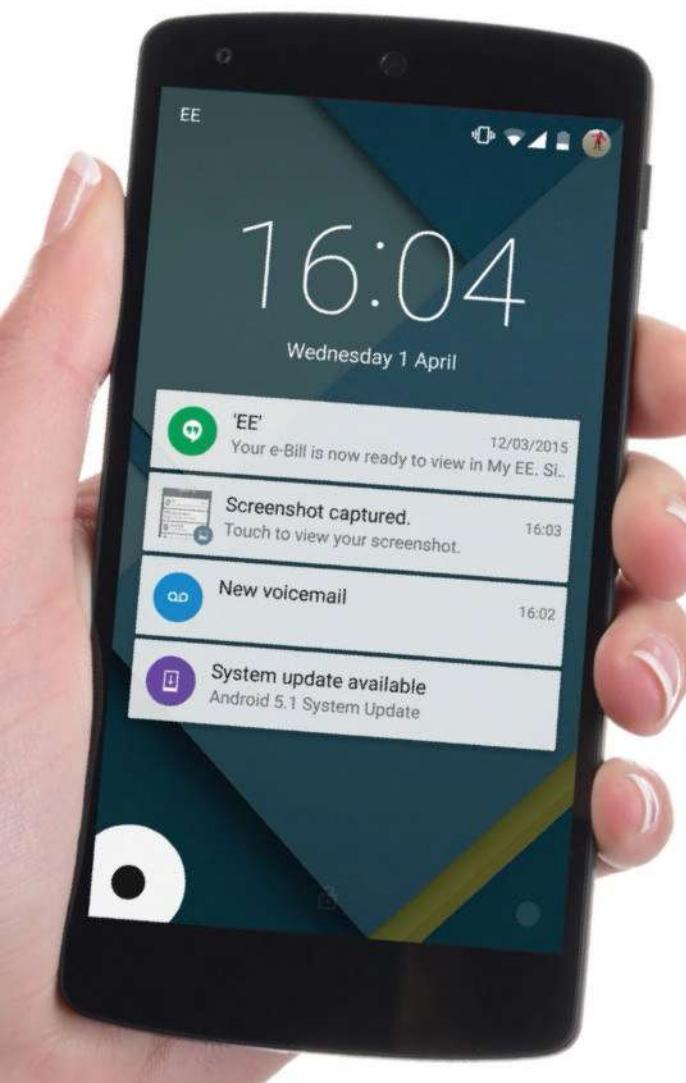


10: AnTuTu Benchmark

Don't be dazzled by the options in AnTuTu Benchmark. Tap the Test button on the main screen to get benchmarks for speed and graphics, before and after running the tweaks and scripts. Of course, the real test is how gaming performance improves!

Customise your Lollipop lockscreen

Change your lockscreen's left and right swipe shortcuts, and explore lockscreen replacement apps



"Install the Xposed framework"

Android's lockscreen has changed a lot over the years. For the new Lollipop lockscreen, Google has got rid of the widgets and replaced them with notifications and two new shortcuts that launch the Camera and Phone apps.

On the surface, there may not seem much scope for customisation of your device's lockscreen, but you can edit these two lockscreen shortcuts so that they launch apps of your choosing. To do this, you'll need to install the Xposed framework and then you should use the framework to download the 'Custom Stock Lollipop Lockscreen' Xposed module.

The catch is that Xposed for Lollipop is currently only available as an alpha, so it isn't as stable as previous releases, and there's a higher chance of encountering bootloops and other issues. This means that you must create a full system backup of your device before attempting this hack.

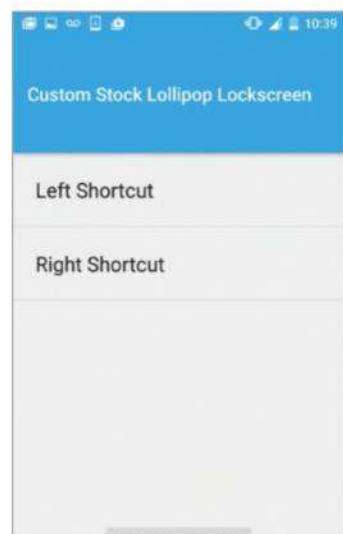
You'll need a rooted device running the latest Lollipop, plus a file explorer app such as ES File Explorer. This hack works the best on stock Android and other Android Open Source Project ROMs, although you may have some success with other custom ROMs.

If you want something more dramatic than a few custom shortcuts, you can always download a lockscreen replacement app. You'll find lots on Google Play – many are free and compatible with rooted and non-rooted devices. After showing you how to customise lockscreen shortcuts, we'll look at an example of a lockscreen replacement app.



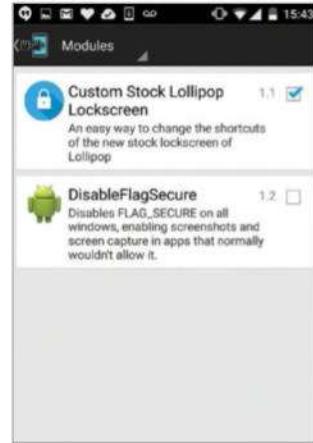
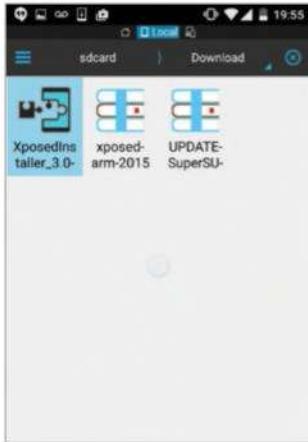
1: Download Xposed Framework

On your Android device, go to [bit.ly/1DLOWer](#) and download the latest version of xposed-arm zip and the installer. Boot into your device's custom recovery. Select Install zip, go to your xposed-arm download and confirm you want to install this. Reboot your device.



6: Create your shortcuts

These options refer to the swipe gestures that you can perform on the lockscreen. Tap either of these options and you'll see a list of all the apps installed on your device. You can then choose a new app that will launch whenever you swipe left or right on your lockscreen.

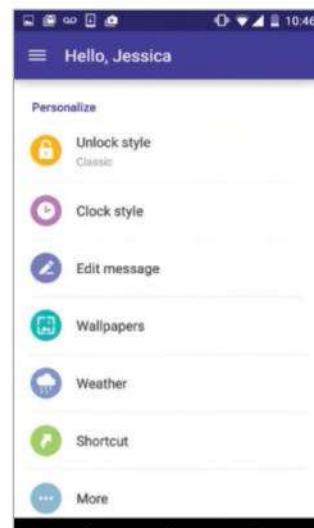
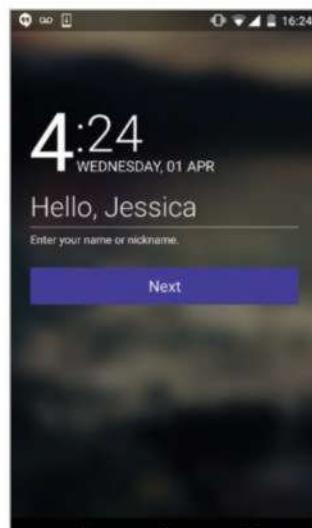
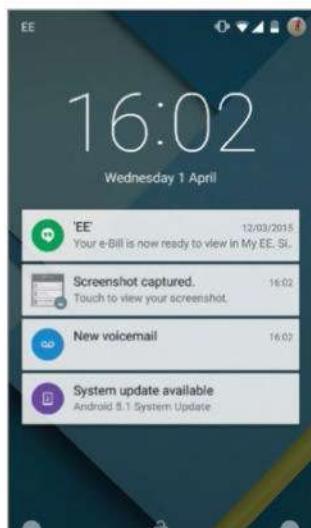


2: Install Xposed launcher

Use ES File Explorer to go where you downloaded the Xposed installer file. Tap it and confirm you want to install it. Open your app drawer and launch your new Xposed Installer app. Tap Download, search for 'Custom Stock Lollipop Lockscreen'.

3: Get Lollipop module

Tap the 'Custom Stock Lollipop Lockscreen' module. Read the information, then swipe right to the Versions section, tap Download and then tap Install. Once installed, open your notification drawer and you'll see an 'Xposed module is not activated' notification.



7: Test your shortcuts

Once you've created your shortcuts, go to the lockscreen to give them a test. You'll notice that the icons in each corner of the lockscreen are the same, even though they now link to different apps. Reboot and the icons will become white dots.

8: Something different

For something different, you could try a lockscreen replacement such as Hi Locker. This app combines the Lollipop lockscreen with features from earlier versions of Android. Download it from the Play store, then launch it.

9: Test your lockscreen

Tap 'Turn on "Notification access"' and select Hi Locker. Read the disclaimer and tap OK. To see the app in action, go to your lockscreen. To dismiss a notification, swipe it to the left. To launch the app relating to a notification, swipe to the right.

10: Customise Hi Locker

Hi Locker has options for customisation, so relaunch the app and scroll to the Personalize section. Here, you can make changes such as choosing a new clock style or wallpaper, and editing the message on your lockscreen ('Hi Name' is default).

Run apps in tablet mode on your phone

Get a better viewing experience by tweaking how different apps display on your screen



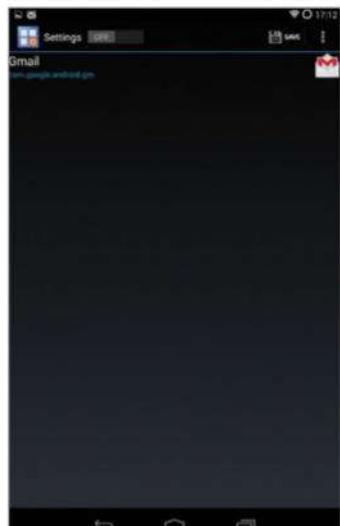
One thing that a lot of people count against Android is the almost limitless number of screen sizes that support the OS. It's a by-product of the open source nature of Google's operating system and means some apps look better on your tablet than they do on your phone. However, if you've got a rooted device and you're not averse to a little bit of tinkering, you can fool apps into thinking that they're running on a tablet rather than a phone. It takes a bit of faffing around to actually get it to work, but -if you're willing to persevere, you can set any app you'd like to run in its native tablet version on your phone. You'll need a rooted device and you will need to download and install the Xposed Framework Installer too. Other than that, you'll just need ten or so minutes to get things up and running, as there are a few reboots and other tweaks that you need to perform to set up the required module. Essentially, you're playing around with the inner workings of the apps on your phone to tell them to run at a different DPI, conning them into revealing all the info they show on a tablet on your smaller screened device. It's not too tricky and once you've figured it out, you'll be able to alter your apps in just a few taps.

"You're playing with the inner workings of apps"



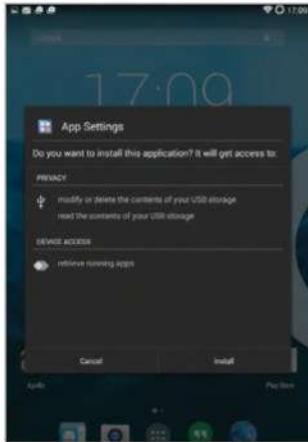
1: Get the right module

Download the right Xposed Framework Module to get things started. On your phone, head to this url: tinyurl.com/nqtq187 and then scroll to the bottom of the page to start downloading the APK file. It will work quickly and shouldn't take more than a minute to fully download to your phone.



6: Work with Gmail first

A really good place to start experimenting is with Gmail, as it has a native tablet version and a native phone version. Tap on it in the list and you will be taken to this screen. Now you need to tap on the button next to the Word Settings that is currently marked as Off.



2: Install the module

Once the module downloads, tap on it in your notifications drawer and press Install to add it to your phone. After a few seconds you're given the option to open it up. Don't do that yet, as you need to add the module to the Xposed Framework app before continuing.

3: Open Xposed

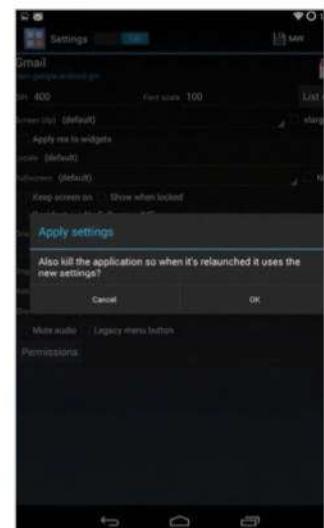
Instead, head to your apps list and open up the Xposed Framework app. Once you are inside, tap on the Modules option. You should see the App Settings module in the list that will appear on the next screen. Tap the check box next to the module to begin installing it.

4: Reboot your phone

Next, you'll need to hard reboot your phone to make sure the module and Xposed are talking to each other properly. Again, this shouldn't take more than a few seconds. When it's done, head back to your apps drawer and this time open up the newly installed App Settings app.

5: Load the list of apps

When you first open the app, you'll see a long list of all the apps that you have installed on your Galaxy. It might take a few seconds to populate, depending on how many apps you have – the more you have the longer it will take – so be patient and let it run its course completely.



7: Explore the list

When you tap the button, a new list of options will appear. These are the things you can now play about with thanks to the App Settings module. The one that we are interested in is the one that's marked DPI. Set it higher to ensure the changes work.

8: Check the numbers

You'll need to change the resolution of the app. A good bet is usually to set the DPI at around 160 and the resolution at 600 x 1024. This should force the app to display in tablet mode, but it depends on your screen and the resolution it runs at.

9: Keep playing

Once you have moved all of the numbers around to how you want them, tap on Save, located top-right. This will save the alterations you've made and give you the option to kill the app if it's running, in order to make the changes become permanent.

10: Kill the changes

If you want to set the app back to its default appearance, all you have to do is head back into the App Settings and toggle the Settings switch back to off. Remember though, that not all apps have both phone and tablet versions.

Freeze unwanted apps and bloatware

Freeze and uninstall manufacturer bloatware using Bloat Freezer

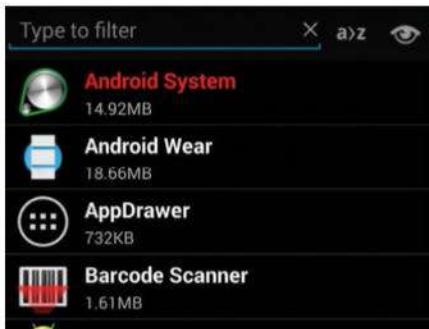
The Galaxy range of devices come with some of the most advanced software available on the market: Android. However, this means that all Galaxy devices come with pre-installed apps and software with their Android version. You may find some of this manufacturer bloatware useful, but chances are at least some of it will be unwanted.

You can't remove bloatware – named for how they fill up your phone and soak up your storage – in the same way you uninstall regular apps that you chose to download onto your device. But if you've chosen to root your device, you can use Bloat Freezer to uninstall manufacturer bloatware, and reclaim your Android's precious internal storage.

As tempting as it may be to remove all unwanted apps and bloatware, this could cause your device to stop working correctly – you may also stop receiving 'OTA' updates.

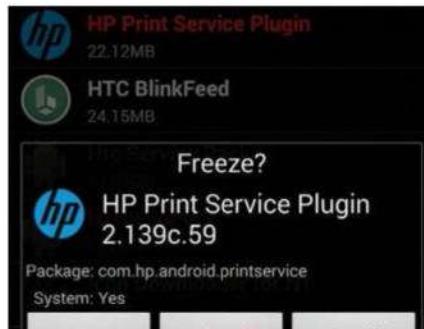
Fortunately, Bloat Freezer doesn't just uninstall bloatware, it can temporarily freeze it too. If your device starts acting strangely, you can restore the bloatware by 'defrosting' it.

Bloat Freezer | Rid your Android of bloatware



1: Purchase Bloat Freezer

Download Bloat Freezer from the Google Play store (£0.86). Launch the app and grant it super user permissions. You'll immediately see a list of all the apps and software installed on your device. Frozen apps have a line through them, while system apps are displayed in red.



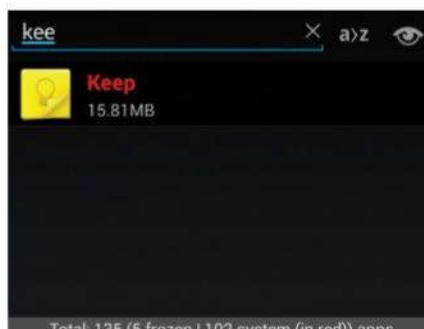
2: Freeze unwanted bloatware

Scroll through the list. When you see an item you want to freeze, simply tap on it and then select Freeze. It's a good idea to only freeze one item at a time. Then if your Android device does start misbehaving you'll know exactly which item you need to defrost.



3: Uninstall system apps

To uninstall a system app, you can find it in Bloat Freezer's list, tap it and select Uninstall. If you remove system software and then want to reinstall it later, you can flash a ROM that includes this software or you can search for the necessary APK files online.



4: Apply some filters

Bloat Freezer has filters to pinpoint specific apps and software. Tap the eye icon and then choose a filter. You can also toggle between viewing your device's contents in alphabetical order or viewing your most frequently accessed apps first, by tapping the A>Z icon.

5: Direct search

If you're looking for a particular app, you can search for it directly by tapping 'Type to filter' and then typing its name. As you type, Bloat Freezer filters your content automatically, so the item you're looking for will usually appear before you've finished typing.

6: Do your research

The golden rule of a rooted device is to never alter anything you don't understand. If you're unsure what a particular app does, then either leave it alone or do some research. You can usually get some helpful answers by entering the item's name into Google.

Easily backup individual partitions

Save yourself time and memory on your device, by creating backups of specific files

When you're modifying your Android device, you should always create backups, particularly before performing larger customisations such as flashing a new ROM. Although it's sometimes necessary to perform a complete backup, if you're making smaller changes to your device then a full backup isn't always necessary.

Partitions Backup & Restore is a free app that allows you to create backups of specific partitions on your Android tablet or phone, such as the files that boot your phone, your device's operating system, or your user data. This app detects all the partitions on your device and enables you to make a backup of each partition individually.

Partitions Backup & Restore requires a rooted device, so it will take a little bit of preparation. If you want to use this app to restore a partition, you'll also need to have a file explorer app installed on your Android device, such as the ES File Explorer, which is also available as a free download from the Play store.

Partitions Backup & Restore



1: Get Partitions Backup & Restore

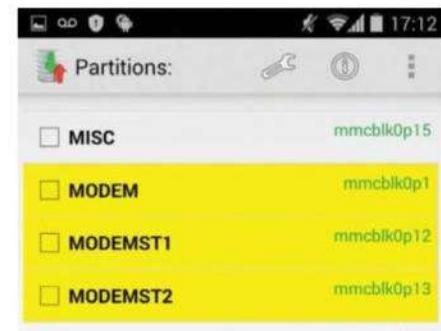
To get started with this tutorial, you need to install Partitions Backup & Restore from the Play store. Once the app has downloaded, launch it and grant Superuser permissions. Choose where your backups will be stored and in what format, so tap the wrench icon.

Create selective backups



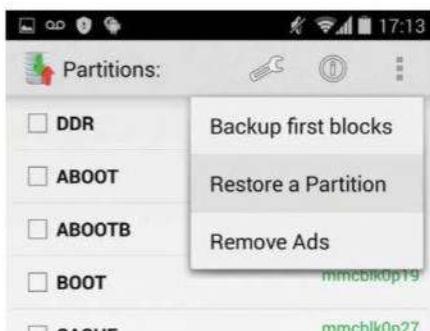
2: Choose format and location

Next, you will have to choose if you want backups stored on the external or internal SD card, and then pick your preferred format. Raw is the usual format but Compressed backup saves space. On a Samsung device, TAR archive has backups you can restore via Odin.



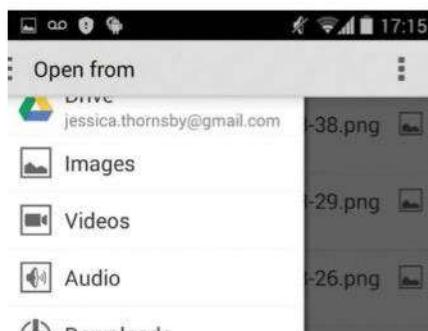
3: Make your backups

On the main menu tap all the partitions you want to backup. Tap the blue circle and select Backup. Once the backup is complete, you'll see a message that the files have been saved to a new 'PartitionsBackups' folder. For extra security, copy these files to your computer.



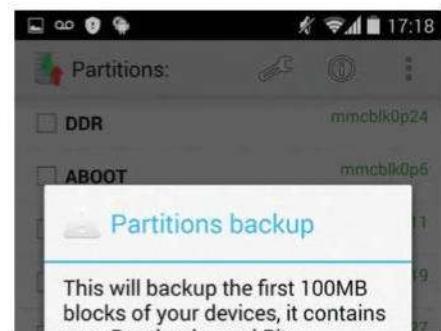
4: Restore a Partition

You can also use the app to restore a partition, as long as the file is a Raw partition image with the .img extension. To restore a partition, tap the three-dotted icon in the app's top-right corner and select 'Restore a partition.' Read the warning and then tap OK.



5: Navigate to PartitionsBackups

Head over to the side-menu, then go ahead and select your file explorer app and go to the 'PartitionsBackups' folder. Tap the file you want to restore. It's useful to backup the first 100MB of your device's internal memory to help you recover a hard-bricked device.



6: Backup first blocks

Tap the three-dotted icon and select 'Backup first blocks.' If you get a hard-brick, copy the backup file to an external SD card, insert it into your device, copy the bootloader across, boot into download mode and then download the PIT, PDA, CSC and PHONE files.

Enable Wi-Fi for the G Watch R

Use this custom hack to add Wi-Fi support to the smartwatch the big Android Wear update forgot

The launch of Android 5.1 heralded considerable changes to Android Wear, providing a far more noticeable upgrade than the same update on phones or tablets. Aside from a refreshed user interface, one of the headline features is the ability to connect to a Wi-Fi network, which enables the device to stay connected even when the paired phone is out of range.

LG has initially rolled out this feature only on the new Watch Urbane, a glitzier variant of the G Watch R. Luckily, the two devices have virtually identical internal components; enterprising modders at XDA-Developers have extracted the important

files from the Urbane and made them available for the G Watch R.

As with other Android devices, the G Watch R ships with a locked bootloader to prevent modification, which needs to be unlocked so that a custom recovery such as TWRP can be flashed – opening the door to further modification. As with all software hacks, enabling Wi-Fi can be a risky move and it's therefore important to take a backup of the stock software early in the process.

Part of the process involves flashing a custom kernel, which also lets you enable an additional core on the watch processor for improved performance.



“Enabling Wi-Fi can be risky – it’s important to backup the stock software”



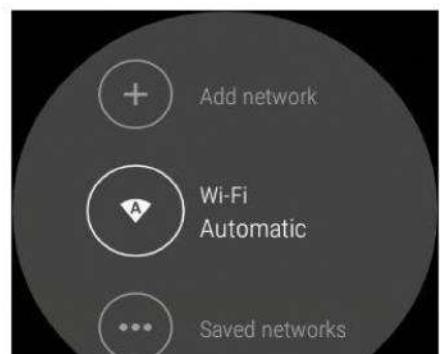
1: Update to LDZ22D

Using the G Watch R Wi-Fi modification does require that your watch is running version LDZ22D of Android 5.1. You can manually flash the correct OTA update ZIP.



5: Backup system

Backup your device in case something goes wrong or you want to return to stock later. The process changes the kernel (contained in the boot image) and the system partition.



9: Configure Wi-Fi settings

After rebooting, you should have an option within the Wi-Fi Settings page labelled Wi-Fi Automatic. In the Android Wear app you will see a section called Cloud Sync.

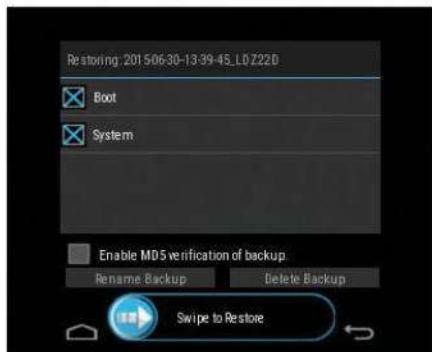


2: Unlock the bootloader

To unlock the bootloader, tap the build number in the About page five times. Use 'adb reboot bootloader' followed by 'fastboot oem unlock'. The device will be wiped.

6: Copy off images

It's easy to do a factory reset at some point without realising this will also wipe your backups. Use ADB to pull them to your PC with the command 'adb pull /sdcard/TWRP'.



10: Restore your backup

If you want to restore your device back to stock, use your backup images. Although this will revert the boot and system partitions, it won't install the stock recovery.



3: Install TWRP

The custom recovery image for the G Watch R is available from [twrp.me](#). Use the device option and search using the codename 'lenok'. Download the image.



7: IntersectRaven kernel

You need a custom kernel. Two versions are available from bit.ly/irgwr; the first enables one kernel on the Snapdragon 400 CPU, the second runs in dual core mode.



11: Revert to factory status

Download individual partition images from bit.ly/imggwr. Use 'adb reboot bootloader' and 'fastboot flash partition filename' commands to flash the three images in turn.



4: Fastboot flash recovery

After the image is downloaded, use 'adb reboot recovery' then 'fastboot flash recovery filename.img' to install. The recovery can be accessed using 'adb reboot recovery'.



8: Flash the ZIP

After you've installed the kernel, install the modification ZIP itself. Download from [bit.ly/wifigwr](#). Transfer using the 'adb push filename.zip /sdcard' command.



12: Relock the bootloader

To complete the process of reverting to factory status, after checking the device boots up correctly you can also use 'fastboot oem lock' to relock the bootloader.

Customise Ultra Stamina mode

Tailor your Sony Xperia's battery-boosting mode to your needs



One of the best features of the Sony Xperia range of devices is the excellent battery life. Where other manufacturers often struggle, Sony seems to have it figured out – its phones and tablets not only have batteries that are often bigger than the competitors, but Sony has also done a great job at making its software particularly efficient.

As well as the built-in Stamina features, which allow the device to intelligently manage its activity when the screen is turned off – something that really makes a big difference in Android – Xperia devices also include Ultra Stamina mode.

Ultra Stamina mode is ideal for when your battery is running low and you know it's going to be a while before you can get to a charger. It limits the activity on your device to a few core features such as phone, messaging and a few offline apps, while also disabling both your mobile data and the device's Wi-Fi connectivity. This is great if you are in a tight spot, but what if you want the extended battery life in addition to more functionality than phoning and texting? This is where the hack from XDA Forum developer androidexpert35 comes in – it takes the core of Ultra Stamina mode and adds a number of useful features that can be used without draining your device's battery life.

“Great if you are in a tight spot”



1: Use a deodexed ROM

Normally ROMs are odexed, which means that there is what amounts to an integrity check on the core files and if those (framework) files are modified, the device won't be able to boot. For that reason you will need to flash a deodexed stock or a custom ROM – found at the XDA forums.



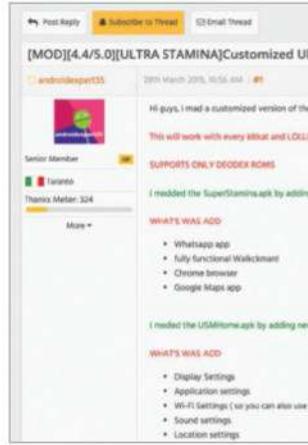
6: Use Stamina launcher

The altered SuperStamina.apk file in the modification provides an updated launcher, which adds a link to the WhatsApp application, Walkman app, Chrome Brower and Google Maps apps – all changes that greatly improve the experience in Ultra Stamina mode.



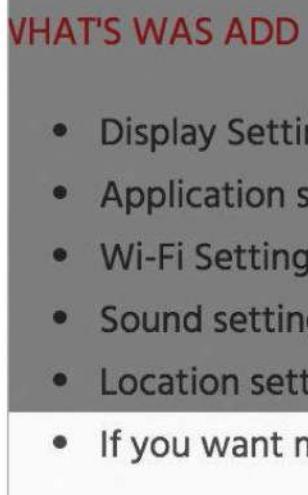
2: Check if ROM is addicted

Check whether your current ROM is odexed by looking in the /system/app directory using a file explorer. If you only see the APK in app directories, your ROM is not odexed. If you see .dex or .oat files, your ROM is odexed and you need to flash another.



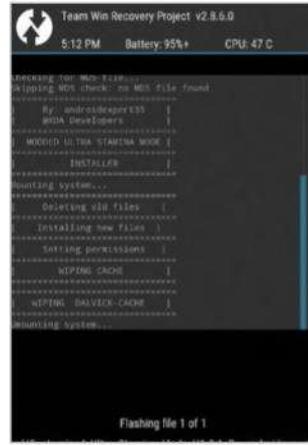
3: Download the mod

After you have flashed a custom recovery and a deodexed ROM, you can download the modification from goo.gl/J0IkN1. Note that there are two different links depending on if you're using a KitKat or Lollipop ROM on your device – it's important to use the right variant.



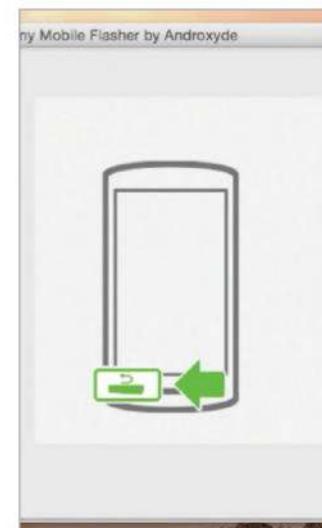
7: Customise the new settings

The modified USMHome.apk file lets you access settings features that couldn't be changed before. This includes access to display, application, Wi-Fi, sound and location settings – this gives you granular control.



4: Flash using TWRP

After downloading, you need to place the zip on an SD card or push the file to your device using ADB. You can then reboot to recovery using 'adb reboot recovery' or an app like Quick Boot from the Play store. Use the menus to navigate to install the ZIP – after backing up!



8: Request new features

The Ultra Stamina mode modification has been created by androidexpert35, who still frequents the XDA forums. He invites users to suggest new features and when people have done so, he has added them. If you have an idea, go and share it.

9: Restore stock settings

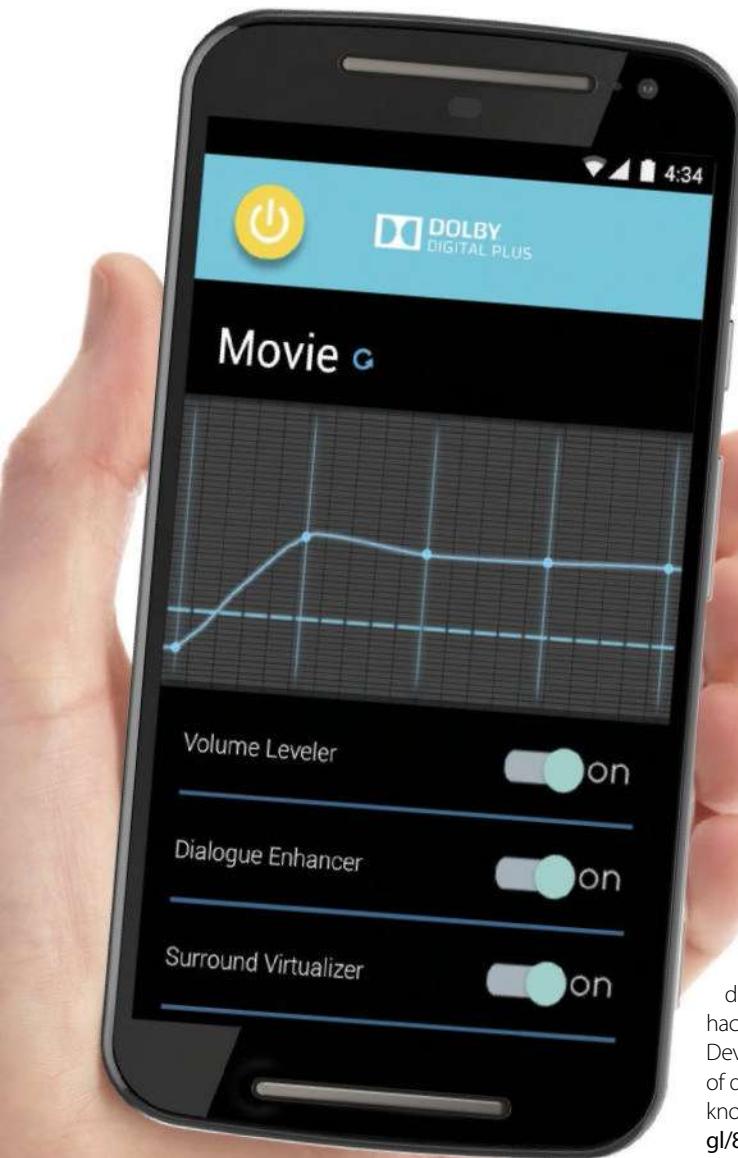
When you downloaded the modification ZIP installer, you also downloaded a restore tool called USM_Restorer.zip. This will revert the files that have been changed, restoring stock functionality. This is flashed in the same way as the installer.

10: Reflashing your ROM

If you want to return your device to a stock state, including the recovery image, you should use the Flashtool to flash the stock FTF file. The correct FTF can be downloaded using the XperiFirm tool, downloaded directly from Sony's servers.

Get Dolby-quality sound on your device

Boost your Android smartphone or tablet's audio quality with this Dolby Digital Plus mod



If you regularly use your device to listen to music or watch movies, then you may have noticed the sound quality on smartphones and tablets isn't always the best.

One way of improving your audio is to install Dolby Digital Plus. This is a software pack that includes various sound profiles, which all boost your device's audio quality in different ways.

The Voice profile detects and improves dialogue, which is handy if you're listening to an audiobook. You can also create your own profiles.

Thanks to a recent mod, Dolby Digital Plus is now compatible with more Android devices than before. In fact, this mod should be compatible with any deodexed Lollipop ROM.

If you're unfamiliar with deodexed and odexed ROMs, stock and manufacturer ROMs are generally odexed, whereas custom ROMs tend to be deodexed. Before attempting this hack, it's worth checking the XDA Developer thread as it includes a list of devices that Dolby Digital Plus is known to be compatible with (goo.gl/82ASo9).

This hack does require a rooted device with a custom recovery installed. Depending on your device, you may also need to flash a particular ROM. Again, the XDA Developer thread has all the details.



1: Check available space

To install Dolby Digital Plus successfully on your device, you need at least 25MB of free space. To check how much space you have available, open your device's Settings and select Storage. If you have less than 25MB, you'll need to make some room before moving onto the next step.



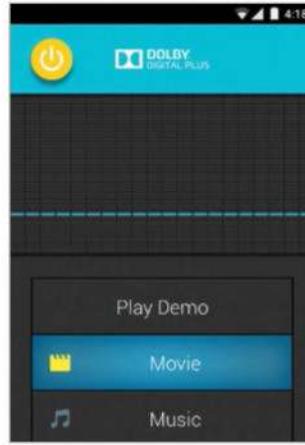
6: Download SELinux

If you find that Dolby is still force closing, the problem could be that SELinux is set to Enforcing mode on your device. To switch SELinux to permissive mode, download the SELinuxModeChanger.apk from goo.gl/CSywwe. It's best to use a file explorer to navigate to this APK.



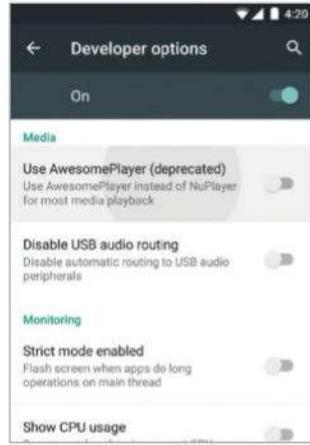
2: Flash Dolby Digital Plus

Download the Dolby Digital Plus ZIP from goo.gl/VemEkv. Place this file somewhere accessible on your device, then boot into your custom recovery. Flash the Dolby ZIP, then wipe the cache partition. Open the Advanced menu and select Wipe Dalvik Cache. Reboot.



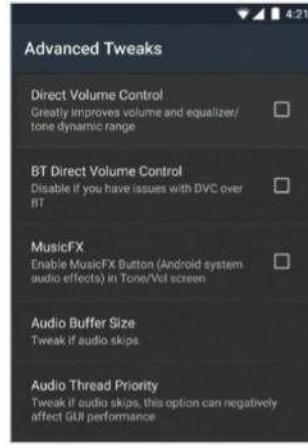
3: Try switching profiles

Open your app drawer and launch the Dolby app. You'll see a selection of default profiles that you can switch between. Try selecting a new profile. At this point, the app may crash. If it does, there are a number of things you can do to try and get it working, so don't worry.



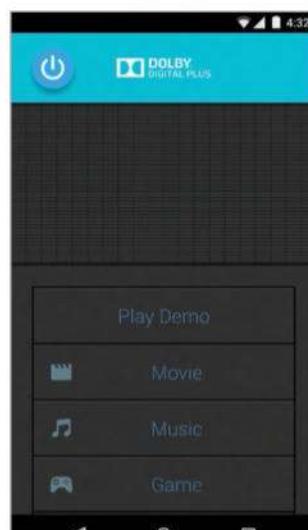
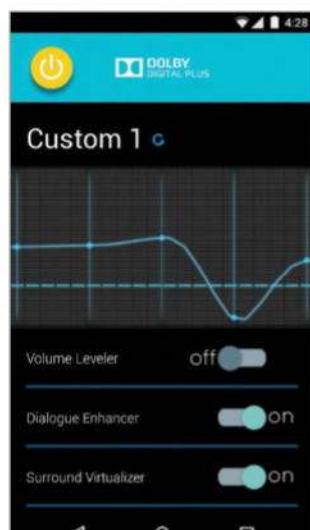
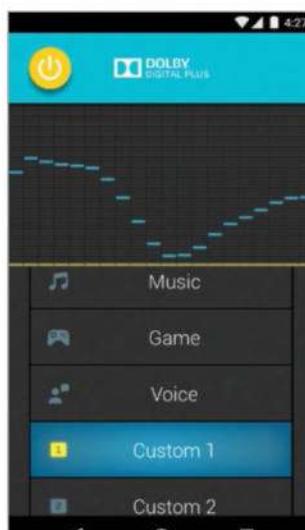
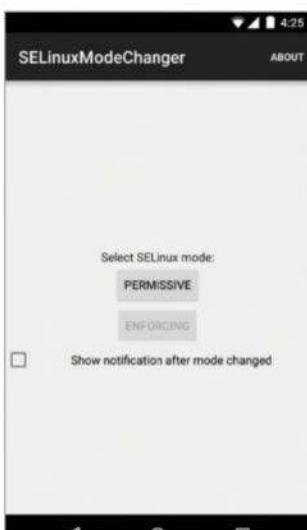
4: Disable AwesomePlayer

Go to Settings and open Developer Options. If you don't see this, go to About Phone and tap Build Number until you see a message 'You are now a developer.' In Developer Options, find Use AwesomePlayer and set the slider Off.



5: Nexus 5 users

If you're using a Nexus 5, disable direct volume control using the Poweramp app. Head over to Google Play and download Poweramp. Launch Poweramp, tap the menu icon, select Settings>Audio>Advanced Tweaks. Then Disable Direct Volume Control.



7: Make the switch

When prompted, tap Install. Open your app drawer and launch the SELinuxModeChanger app. Tap the Permissive button. Relaunch the Dolby Digital Plus app and try switching profiles – it should no longer force close.

8: Edit Dolby profiles

Edit the default profiles by double-tapping them. Or, create your own by double-tapping Custom 1 or Custom 2. Whether you're editing a default profile or creating a new one, you get access to the same three sliders, which you can toggle on or off.

9: Levelers and enhancers

Volume Leveler monitors the audio and makes adjustments to keep the volume at a consistent level across different content. Dialogue Enhancer applies processing to improve the intelligibility of the speech.

10: Disable Dolby Digital

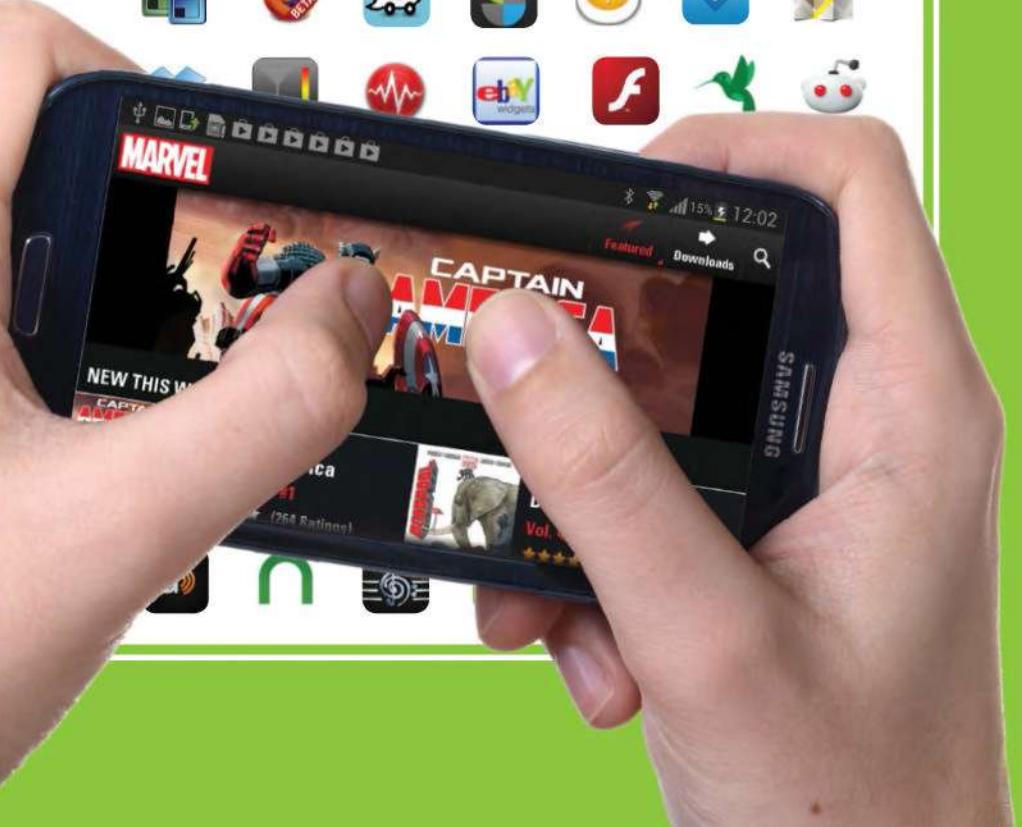
The final switch, Sound Visualizer, brings a surround sound effect to your device. Once you're happy with your profiles, return to the main Dolby screen. If you ever want to stop using the Dolby app, you can do so here, by tapping the power button.



Essential Apps



With over 1 million available apps, the Google Play store has emerged as a serious contender to Apple's App Store. With many popular favourites now available, developers are looking to Android to expand their consumer base, and its open source nature means it's easy for people to get their apps onto the store. But as always there are apps at either end of the quality scale. In this feature we will show you some of the best.



5 essential apps

Modern Combat 5: Blackout

Price £4.99/\$4.99 Developer Gameloft



A spin on the Modern Warfare franchise, Modern Combat 5: Blackout is easily one of the best shooters for Android devices. The graphics are a feast, with textures and rich animation to rival the consoles. Nice touches include slo-mo pans when enemies are downed in style and subtle camera distortion when the player is hurt. The levels are varied and the multiplayer action is sweat-inducing.

Temple Run 2

Price Free Developer Imangi Studios



Temple Run 2 sees you returning to the jungle as you navigate cliffs, mines and zip lines as you try and outrun the monster chasing you. In essence, the game has the same charm that made the original a joy to play. It's as fast paced as ever and the need to be quick with your swipes and motions is still vitally important. Ensure you share your high scores with your friends.

Candy Crush Saga

Price Free Developer King.com



Chances are that you've already heard of this insanely addictive puzzle game. You have a limited amount of moves to solve each puzzle screen and kudos is earned (through bragging on Facebook) through your level advancement. And if you run out of lives then you can get a potential instant fix by begging your social network chums to grant you an extra one.

The Walking Dead: Season Two

Price Free Developer Telltale Games



If you haven't played a Walking Dead episode yet then you're robbing yourself of some tense and enjoyable point-and-click adventure action that packs plenty of proper old school jump moments. This series continues on from where Season One left off and comprises of five episodes, more of which can be purchased in-app.

Goat Simulator

Price £2.99/\$4.99 Developer Coffee Stain Studios



Already hugely popular on Steam, this app mixes the point-accumulating dynamics of a Tony Hawk skateboarding game with the excessive levels of destruction that only a goat can generate on its sandbox surrounds. The action is anarchic, the aim ultimately pointless, but what fantastic fun you'll have.



Games

With the power of modern Android devices in your pocket, it's now possible to play the latest games at any time and in any place.

Some true blockbusters await you in the Google Play Store, with action packed shooters, edge-of-your-seat racers and addictive platformers available.

Of course, controlling these games with accuracy is the key. Until you've played a game using touch-controls it's hard to imagine how intuitive and easy it is. Puzzle and strategy games are easier to handle than

Kiss goodbye to your life with Candy Crush...



Return to the jungle for more perilous high-jinx with Temple Run 2



The Walking Dead: Season Two picks up where the first left off with survivor Clementine...



When faced with a battle for survival, you'll be shocked at what a young girl is capable of

ever before and it's possible to rearrange the on-screen buttons to accommodate the size of your device. With in-built accelerometers it's also possible to control games simply by tilting your device.

Here we've rounded up what we think are the best five games currently available for Android devices. Some can be completed in mere minutes, making them perfect for commutes or long queues, whereas others are focused, lengthy titles that are great for filling long afternoons.



There's always room in your life for a shot of 'shooty-bang-bang'. Modern Combat 5 supplies the bullets...



The insane, yet utterly compelling Goat Simulator – who's a baaaaaaaad boy then?

Books and Reference

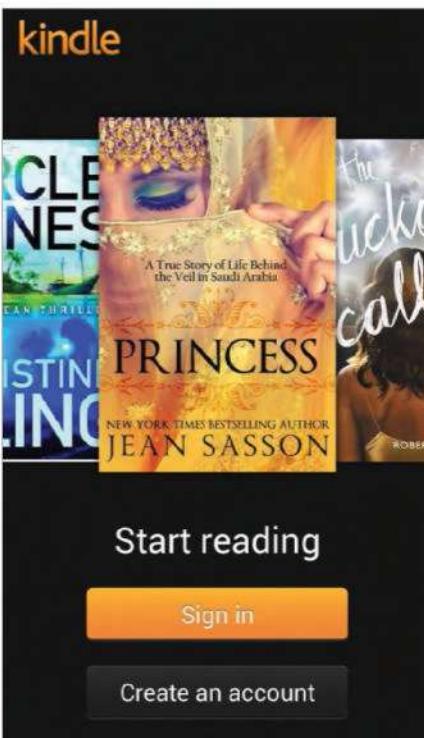
The internet has always been known as the greatest encyclopaedia the world has ever seen, with a tremendous amount of accumulated knowledge being added on a global level each and every day. And with more app development, more of this information is being made available to mobile users in packaged forms that enable easy and controlled access. Many thousands of books are gradually being transferred to data to be accessed via small devices such as smartphones or specialist eReaders, while reference material is now being sorted into more manageable formats and under specialised headers and websites. Apps play a critical part in the new way information is being disseminated. You will no longer have to sift through data in a raw and unappealing format as, through the app's interface, the information can be presented in an intuitive manner. Extra touches such as attractive font design enable you to digest it more thoroughly and more enjoyably.



Explore the universe with Sky Map



Use the Nook app to find some of your most loved novels and other works of fiction



Read the latest bestsellers with Kindle

5 essential apps

Kindle

Price Free **Developer** Amazon Mobile



This app allows you to read Kindle books via your phone. Many classics are included for free as are sample pages of new titles. You have access to over 900,000 books, including popular new releases and over 100 newspapers and magazines. Amazon Whispersync can also sync your last page, bookmarks and notes across compatible devices so that you can pick up on another device from where you left off on your smartphone.

Audible for Android

Price Free **Developer** Audible, Inc



If you aren't a massive fan of reading on your Android device then you can still enjoy books being read to you through the Audible app. Experiencing books this way is perfect for when you're working out in the gym or using your device for other things. There are over 150,000 titles to choose from and the app comes with a wide range of features to help you enjoy a wealth of great literature hands-free.

Sky Map

Price Free **Developer** Sky Map Devs



Through this wondrous app you can hold your device up to the night sky and learn all about the various planets, constellations, moons and more. The interface is simple and uncluttered and operates in real-time, so wherever you point your device is what you'll see. You can also filter the display to only display what you want it to and pinch to zoom in. Perfect if you have a genuine interest in astrology.

Urban Dictionary

Price Free **Developer** Urban Dictionary



If you struggle to fathom what young people are uttering then this insightful free app should provide some enlightenment. Like Wikipedia, it can be contributed to by anyone and it's a quick and easy way to get au fait with the latest street slang and, in the event of multiple definitions, you can vote on your favourite.

Nook

Price Free **Developer** Barnes & Noble



The Nook library is vast to say the least, and through the app you'll have access to over 2 million books and magazines in a single app. The selection is phenomenal, and Barnes & Noble has done a good job in getting a wider variety of publishers on board with the app. More content is added daily so keep checking back on a regular basis.

Business

With the right apps installed on your Android device, it's possible to have your own portable office in your pocket.

There's a wealth of incredible programs awaiting you in the Play Store, many free and packed with features. You can open and edit Word files, Excel documents and PowerPoint presentations, create and view PDF files, access any documents stored in the cloud and more – all via the touch screen on your smartphone. No longer do you need to be tied to a desktop computer or

office. Using this clever software, the amount of unnecessary paperwork you're likely to generate is also cut down significantly.

But what if you need to access the office computer while you're outside or travelling? You'll be pleased to hear there are apps that will enable you to remotely access any Mac or PC as well – we've covered all the bases.

But don't just take our word for it. Read on to discover what we think are the five top apps for business users and give them a go yourself for a streamlined workflow.



Quickly access your recent documents from the main menu



Access your entire desktop from your smartphone with Splashtop



Wireless printing is made extremely easy in PrintHand

5 essential apps

Documents To Go

Price Free/£9.25/\$14.99 **Developer** DataViz, Inc.



This is the perfect app if you want to view and edit Word, Excel and PowerPoint files on the go. It's a full office suite for Android that enables you to edit Office files, Google Docs and PDFs too. The interface isn't exactly attractive, but it squeezes in all the tools for writing and formatting on a small screen. Not entirely bug free, if you're unsure try the free version, although you'll not be able to edit files.

Enhanced Email

Price £6.61/\$10.75 **Developer** Quantum Apps



As far as email aggregators go, Enhanced Email is up there with the best of them. Import all your various email clients in to one place and manage them through this single app. It's highly customisable and your inbox can be tinkered with to make it even easier to use. Where Enhanced Email really shines is that it caters for many older email clients that you don't get with similar apps.

Splashtop 2 Remote Desktop

Price Free/£3.23/\$5.25 **Developer** Splashtop



This clever app enables you to control any desktop computer (whether Mac or PC) from your Android device. It works surprisingly well, showing your computer's desktop on the screen. Setting up is easy, simply download the Streamer app from splashtop.com/remote. It will automatically see your Mac or PC if it's on the same network. You can pan and zoom, open files and even play games.

PrintHand

Price Free **Developer** PrintHand



Wireless printing has been made a whole lot easier with the PrintHand app. Simply connect your phone or tablet to your nearest printer over Wi-Fi, and print your stored documents there and then. You can even access your cloud account and print them from there, or simply schedule them to print at a certain date or particular time.

Genius Scan

Price Free **Developer** The Grizzly Labs



This is a very useful app to have on hand when you need to scan documents on the go. You essentially use your Android device's camera to line-up and photograph the document and it will be transformed into a high-res PDF or JPEG that you can effortlessly share from within the app.

5 essential apps

Skype

Price Free **Developer** Skype



Skype enables anyone to chat to another user for free, make video calls, send instant messages and call landlines or mobile phones. Why has it become the number one video-calling service? Probably because of its availability on nearly every platform on the planet. The Skype app for Android enables you to take advantage of most Skype features, including video calls. However, since it uses up a lot of data, you may notice that video quality is not as sharp as it is over a computer on Wi-Fi.

Dolphin Browser

Price Free **Developer** Dolphin Browser



Dolphin revolutionises the web browsing app by packing in features that make internet surfing even easier and more intuitive. For example, you are provided with your own customisable home screen from which you can leapfrog to your intended sites. You can adorn it with web apps to keep everything that matters to you in one place.

WhatsApp Messenger

Price Free **Developer** WhatsApp Inc.



WhatsApp Messenger is a great replacement for sending SMS and MMS to friends and family providing they also have the app on their device, and with WhatsApp's growing popularity, that's likely. It uses your EDGE/3G or Wi-Fi connection to send messages and files to your contacts, is free for the first year and is priced at \$0.99 (about £0.79) a year after. With the ability to chat in groups, send files, share your location, contacts and more, this is a great way to stay in touch with the world.

Talkray

Price Free **Developer** TiKL Inc.



Talkray offers a comprehensive and thorough messaging service allowing you to talk to your contacts wherever and whenever you feel like it. As well as text messaging, you can also send video and audio files to your contact. We especially liked being able to send a voice recording to them. Talkray is already up there with the best of the competition.

Facebook Messenger

Price Free **Developer** Facebook



Many people were irked that this app was thrust upon them as the in-app messaging in Facebook was phased out, but it does allow you to contact anyone in your contacts database quickly, easily and without paying a penny. For that alone we can just about excuse it.

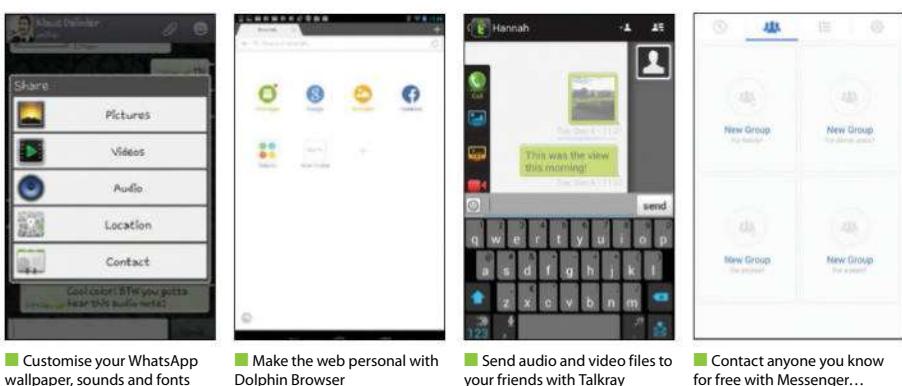


Communication

It doesn't seem so long ago that we could only talk over long distance via the wizardry of landline calls. For the last 15 years, however, mobile phones have revolutionised how we communicate and only recently have apps added even more features to our handheld devices. We can now video call, send instant messages, files and more – all for free. Thanks to Google's C2DM (push) technology we can also run apps constantly in the background

without losing battery life, removing any need to send SMS and MMS messages.

With so many features available for free that can enrich a user's life, there's honestly no reason not to buy a smartphone device. Want to send free messages and make video calls for free? You can only do that on a smartphone using apps. We've rounded up our five essential apps so that you can discover how to communicate inexpensively like never before.



Education

As mobile devices become more integrated in classrooms, educators and students are looking for new ways to apply them to the learning process because these devices can add new dimension to the subjects. Applications on all of these devices can help automate current classroom (or out-of-the-



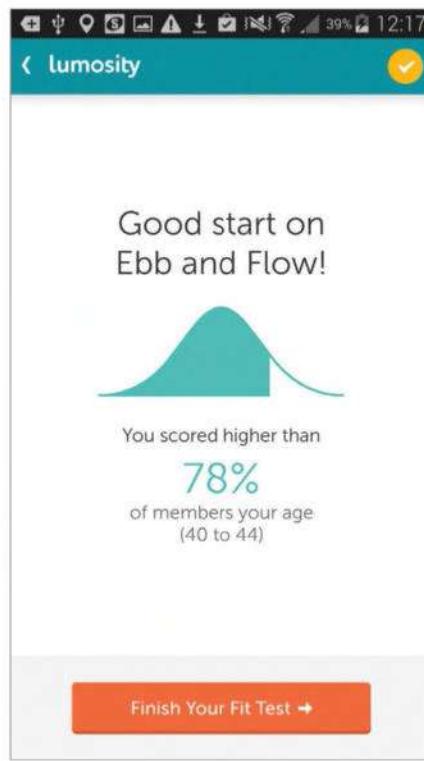
Learn the difference between a soprano and vibrato in Perfect Ear Pro



Amuse youngsters by letting them loose on Kids Paint Free...

classroom) processes and present new ways to learn that have previously been unexplored. As we know, it is sometimes the way that a person learns new information itself that affects how well they are able to retain it. Technology has made it possible for children and adults alike to learn from almost anywhere. Whether students need help defining a word, locating the lumbar spine or practising French vocabulary, there's definitely an app. Because of the imaginative methods employed by today's developers, the innovative methods on offer provide fresh impetus to even the most bland subjects.

"Children and adults alike can learn from almost anywhere"



The Lumosity app is designed to provide some intensive training for your brain

5 essential apps

Edmodo

Price Free Developer Edmodo, Inc



This app takes learning beyond the classroom by providing a free and safe place for teachers and students to connect and collaborate at any time. If you are a teacher then this is a great way to provide extra assistance for your students and allow them to contact you with questions and problems, whereas for students it allows you to get extra help with taxing assignments and any issues you may be having with your studies. A worthwhile service for sure.

Kids Paint Free

Price Free Developer Virtual GS



Kids love to paint, and parents have to indulge them, but how would you rather do it – let them loose with real paints or hand over your Android device? This app is perfect for letting kids unleash the power of their imagination, doodling and dabbing colour on the screen and then shaking the device to clear the digital canvas and start over. A great app that will prove popular with children of all ages.

SPB English Cards

Price £2.95/\$4.80 Developer SPB Software



An app that takes the old-fashioned method of utilising a flash card sequence to teach English and gives it an Android twist by adding photos, native speakers' dubbing, learning progress visualisation, smart adaptive algorithm and detailed statistics. Featuring over 1,000 words and over 65 different categories, the program negates the need to first learn the word in your mother tongue. Instead, the image does the talking, you just learn English.

Lumosity

Price Free Developer Lumos Labs, Inc



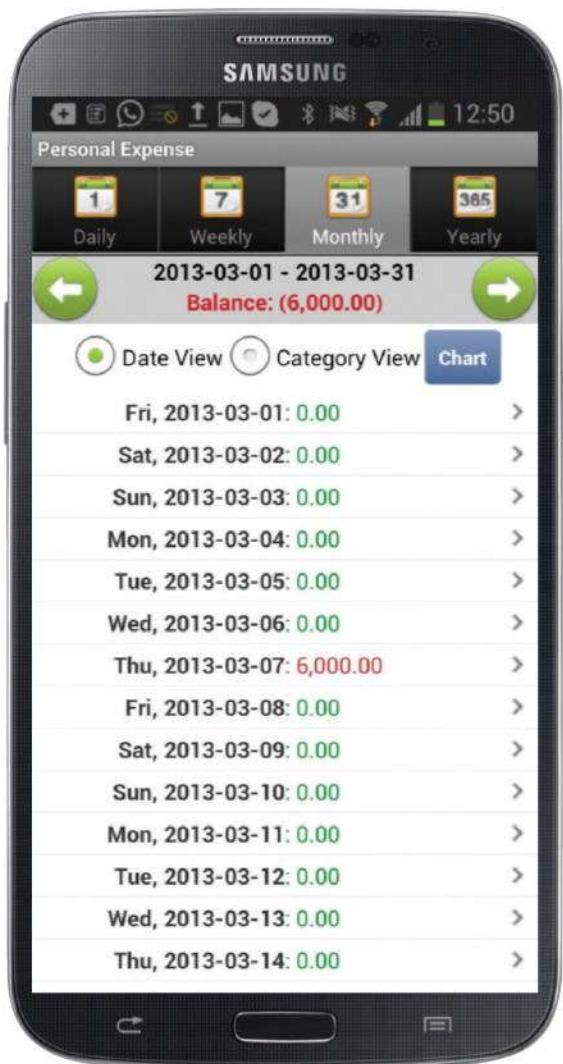
If you feel as though your brain needs a jump start then this app provides a range of mini games to test various aspects of your mind and give the grey matter a thorough work out. All of your daily results are recorded and you can compare your mental prowess with friends over the various social networks.

Perfect Ear Pro

Price £0.99/\$1.60 Developer EDuckApps



Perfect Ear Pro is an ideal app for a music enthusiast who's looking to improve their accuracy in recognising musical sounds. The app covers a variety of scales and chords, and helps perfect your ability to hear when a note is out of tune. It's hard to get started with it, but your musical recognition will improve tenfold over time.



You can import and export activities with Expense Manager

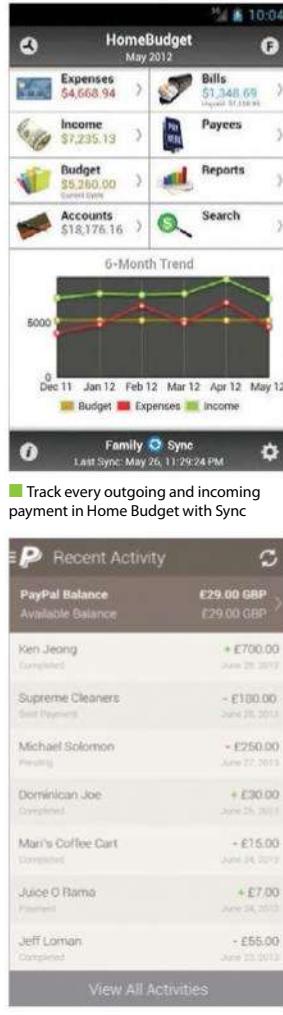
Finance

Managing your money shouldn't get in the way of living your life. That's why personal finance apps are such a natural fit for your Android device. They let you track your stocks, convert currencies, calculate how much you owe and track expenses – all on the go. The more full-featured among the available programs even let you manage multiple bank accounts with the ability to transfer money between them, plus you'll always have your device with you.

The best options are those that take advantage of the Android's finger-

friendly interface or features such as location-awareness. For example, GPS or Wi-Fi can be helpful in finding the way to the nearest ATM.

Most of these apps are free or available for a nominal charge, so there's little to lose by trying them. Keeping track of your money can easily become a daunting and time-consuming task, but we have some apps here that will make life that much easier – they can help you set budget goals, while others will help you convert currency (handy to monitor your spending on holiday) and track your outgoings.



Keep track of your transactions and pay for goods with PayPal

5 essential apps

Expense Manager

Price Free Developer Bishinews



If you have a job that involves the handling of expenses, it can become a bit of a headache. This app is designed to help as well as manage your income too. Initially, it can be set up to track your expenses and incomes by week, month or year, or by categories if you prefer. You can set up multiple accounts to separate different types of payments, there is the option to schedule payments and recurring payments and, if you need to, flag payment alerts.

Home Budget Manager

Price £1.59/\$2.50 Developer SIRI



There's a certain irony in the fact that the leading free finance apps are all bank-related and the leading paid-for finance apps are largely the ones designed to save you money. This household expense tracker and budgeting app stands out thanks to a bright and vibrant interface and it is incredibly easy to use. Like other apps of this type, you will need to invest some time entering your figures, but once done this makes it simple to stay on top of things.

Money Dashboard

Price Free Developer Money Dashboard



This app provides a simple and secure way to manage your money on the move. Take control of your finances by automatically tracking your spending across all of your current, credit and saving accounts all from one app. Through the app you can see exactly how much you're spending on a daily, weekly and monthly basis and you can tag all of your outgoings so that you can instantly see what you have spent, where and on what.

Home Budget with Sync

Price £3.92/\$6.40 Developer Anishu, Inc



Use the integrated expense tracker to keep account of all your incoming and outgoing payments in Home Budget with Sync. As well as seeing your monthly balance, you can create charts to outline where you've been overspending and when your bills are due.

PayPal

Price Free Developer PayPal Mobile



PayPal is the safest way to pay for goods and manage your money online and this app makes it easy to check your balance and send and receive money. What's more, as more and more stores are now accepting PayPal as a legitimate payment for goods, you can use your mobile device as a digital wallet.

Health & Fitness



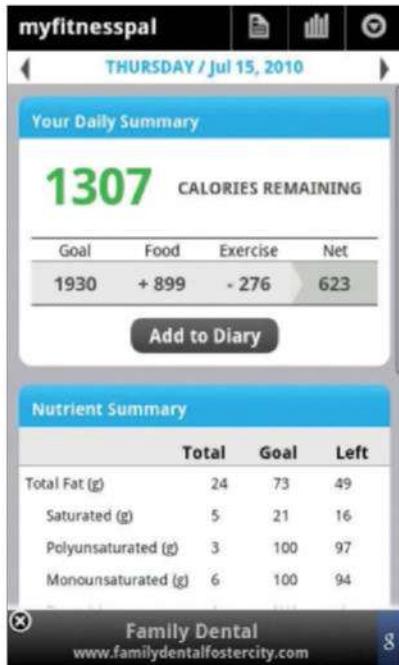
Android devices are packed with clever technologies that can aid in exercise and improve your health. The GPS can be used to track your route and distance in real-time, the accelerometer can monitor footsteps, the web connection can compare food nutrition and the incorporated camera flash can even monitor your heart beat.

"Improve your health with apps"

Making the most of these features to improve your health is easy thanks to the myriad apps available on the Play Store. Nearly all are free, so there's no excuse not to download an app, put on your sports shoes and get active.

We've scoured the Store and rounded up the five essential apps that can improve your health and fitness. You'll find reviews of a distance tracker, fitness monitor, calorie counter and gym mentor here. With these apps and a little determination, you could be a whole new person in next to no time.

■ 3D videos show you the correct workout technique



■ Quickly check how many calories you've consumed



■ Guess what the Heart Rate Monitor app does?

5 essential apps

Endomondo Sports Tracker

Price Free **Developer** Endomondo.com



Anyone who exercises outdoors or over long distances will really appreciate this app. It tracks your progress in real-time via GPS, then creates a post-activity report. Simply tap Start on the Workout page and the app will track your progress, giving you audio feedback for every km or mile. You can compete and compare workouts with friends, upload results to Facebook and track your workouts over time via the website.

Calorie Counter – MyFitnessPal

Price Free **Developer** MyFitnessPal, Inc.



With this app you can keep a daily diary of your food intake and the amount of calories you've consumed. With over 75,000 food items stored in its database, finding the correct entry is a breeze. The app also calculates how many calories you've burned during exercise. As a result, it's easy and surprisingly fun to work out the best techniques for losing weight.

Zombies, Run!

Price £2.99/\$4.99 **Developer** Six to Start



If you are in need of a little motivation to get you running then how about a pack of salivating zombies? This ultra-immersive running game and audio adventure beams all of the horror to your headphones and makes you feel as though you are actually running for your life! It also provides atmospheric goals and has you running for a purpose, such as collecting fictitious supplies.

VirtuaGym Fitness Home & Gym

Price Free **Developer** Virtuagym



This is a fantastic app for learning new work-out routines and discovering tips for maximising results. It includes dozens of exercises that can be completed in your own home or the gym, with 3D graphics that demonstrate how to complete them. This is the perfect app for those looking to improve their fitness.

Heart Rate Monitor

Price Free **Developer** Mobile Essentials



This app measures your heart rate by you placing your index finger over the lens of your Android device's camera. It seems accurate enough although the developer missed a trick by neglecting to include any information on the relative state of your heart rate – you just measure it and left to draw your own conclusions.

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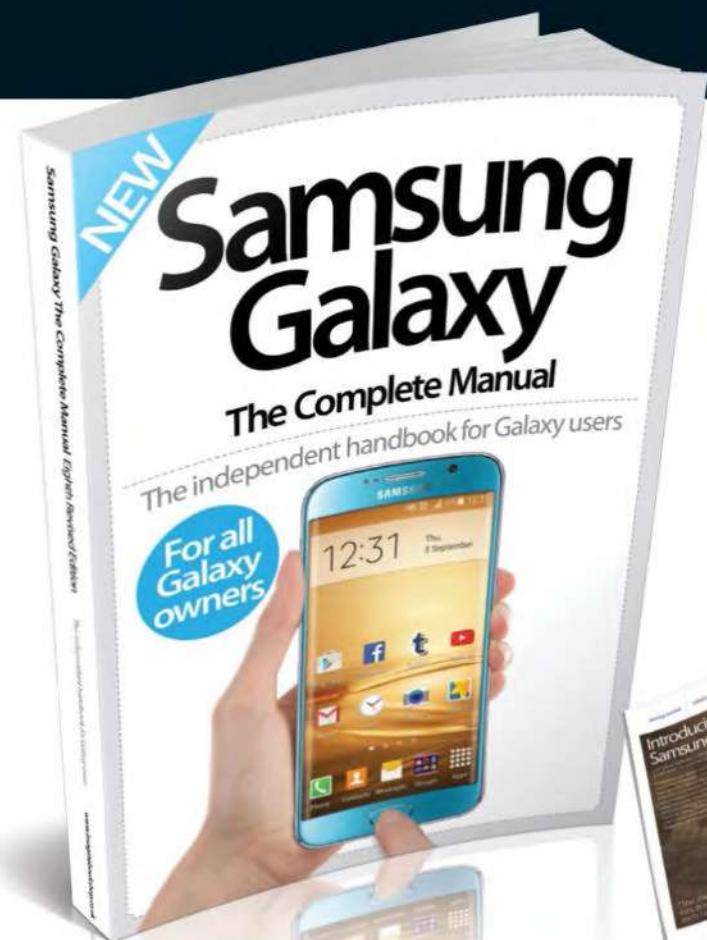
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From the makers of **Android**
magazine



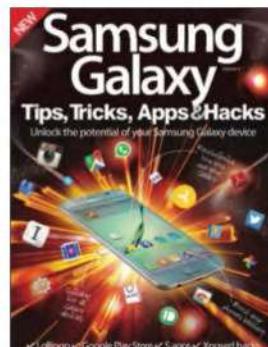
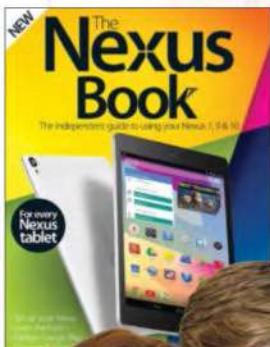
Samsung Galaxy

The Complete Manual

No matter what Galaxy device you have, this book will help you get the most from your phone or tablet. Packed with easy-to-follow guides to all the essential features, functions and apps, this is the perfect book to help you master your Galaxy.



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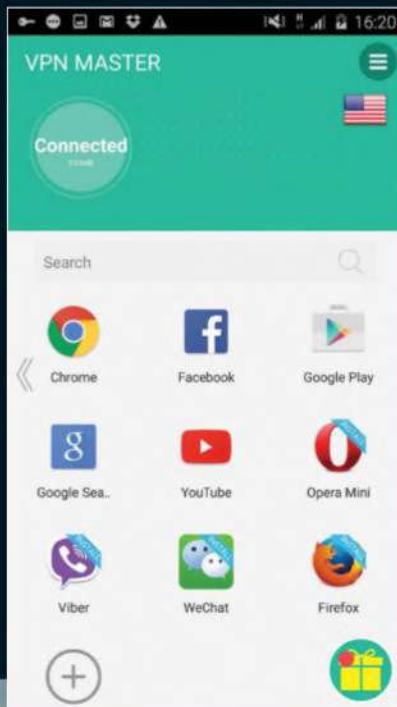
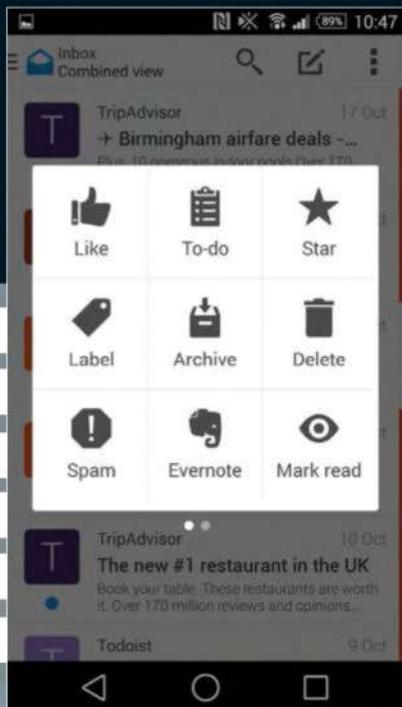
android

Tips, Tricks, Apps & Hacks



Next-gen browsing

The independent guide to
mastering your Android device



Tips

Discover essential guides to performance, privacy, web browsing and much more



Tricks

Unleash the full potential of your Android device and apps with these top tricks



Hacks

Upgrade and tweak your way to a more powerful and functional Android device

