

**Which?**

# Smartphones made easy



# Welcome



These days almost everybody has a smartphone. For some of us, they've become the essential gadget that helps us keep in touch, snap photos, run a range of amazing apps and browse the web. For others, they're a source of mystery, confusion or even irritation. Maybe we bought one to keep up with the kids or the grandkids, or perhaps the dwindling numbers of more simple mobile phones on the market meant we had no other choice. Either way, we might use our phones to make calls, send texts and check our emails, but we're not getting the most from our devices.

Does that sound familiar? Well, it doesn't have to be that way. In this guide, we'll help you set up your new Apple or Android smartphone, master its basic features and download the most useful apps. We'll help you get to grips with the camera and explain how to transfer photos to your computer and make video calls. Discover how to store and protect your data, keep your phone secure and avoid getting hit by jaw-dropping charges. By the end, you'll not only know how to use your smartphone, but also feel confident enough to discover more of its uses. Follow all our step-by-step guidance and you'll be a smartphone expert in no time.

**Kate Bevan**  
Editor, Which? Computing

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# Setting up your Apple iPhone

Personalise your iPhone by customising the homescreen, changing settings and removing unwanted apps

## Getting started

### Turn it on

Hold the Power button on the top-right of your iPhone to turn it on and 'Hello' will appear in many languages. Just tap, hold, and swipe from right to left across the screen. Choose your language, then select your country. Your iPhone will now search for nearby wi-fi networks. Tap to select one and enter your wi-fi password if required. Your iPhone will then take you through steps that enable its **Touch ID** (fingerprint) or **Face ID** (facial recognition), and allow you to restore apps and data from an old iPhone. You'll also be asked to sign in with your Apple ID (the account you use to access Apple services) if you already have one, and choose whether or not to use Apple's personal assistant, **Siri**. Provide any information that is required and when you see the words **Get Started**, tap to begin using your new device.

### Your homescreen

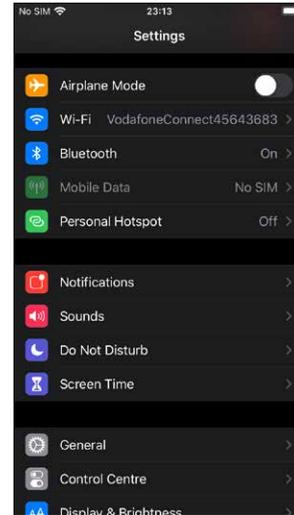
The homescreen is where you'll find your iPhone's main features and apps (see above). At the top you can see the current time, status icons for location sensing and Bluetooth



(if turned on), your battery level, the phone signal strength meter and the wi-fi signal strength meter.

Below those, you can see up to six rows of icons that launch your iPhone's core features and apps. Swipe left or right on the screen to switch from one page of your homescreen to the next, or tap an icon to launch the associated app or feature.

At the bottom, you'll see the dock. This is a bar with your four most important apps. By default, it will be set with **Calls**, the **Safari browser** and the **Messages** and **Music** apps, but you can personalise the dock if you prefer and add your own most frequently used apps.



### Moving and deleting apps

Your phone comes with some apps preinstalled. You can move app icons from page to page, delete apps or even change the apps in the dock. Just tap and hold your finger on an icon and wait until all the icons start wobbling. Tap and drag the icon to change its position on the page, or drag it to the left or right of the screen to move it to a different page. To delete it altogether, tap the **X** in the top-left corner of the icon to remove it (not all apps can be deleted).

To change the icons in the dock, drag one out then drag your preferred app into the vacant space.

“The General settings handle background settings such as storage, your Siri settings, how quickly your iPhone goes to sleep, the date and time on it and software updates”

### Master settings

Access the iPhone's settings and options menus via **Settings** (see left) – the grey gear-shaped icon on your homescreen.

### Airplane Mode

Tap **Airplane Mode** to switch off all your phone's wireless connections at once. Tap again to switch them on again.

### Wi-fi

This lists the wi-fi network that you're currently connected to. Tap it to disconnect or to connect to a different network. Tap a network you want to join and enter the security password when prompted.

### Bluetooth

Bluetooth is used to connect with in-car systems, wireless headphones, speakers and keyboards. If you're not using it, switch it off to save battery.

### Mobile Data

Use this option to control your mobile internet connection. You can turn it off to avoid using your monthly data allowance. You can also choose to allow or prevent individual apps from using data.

### Notifications

Use the **Notifications** option to control which apps can send

you pop-up notifications, and how these are displayed.

### General

The **General** settings handle background settings such as storage, your Siri settings, how quickly your iPhone goes to sleep, the date and time on it and software updates.

### Display & Brightness

Controls the brightness level of the screen and can also change the look of the text on your iPhone's homescreen.

### Advanced features

The homescreen also has three less obvious features.



Swipe all the way left for the Today screen (see below, left). This has a search bar, an 'Up Next' panel to remind you of upcoming events, app suggestions for easy access to apps you use frequently, plus the news, weather, maps and tips that Siri thinks you might find interesting or useful. Swipe down from the top of the screen for **Notifications**, where you'll find your latest emails, messages and other alerts. Swipe up from the bottom of the homescreen (on iPhones with a home button) or down and left from the top-right corner (on iPhones without) for the **Control Centre** (see below, right). This gives you quick playback controls for video and music plus a range of other shortcuts.



# Setting up your Android smartphone

With many manufacturers and a variety of software versions available, various Android smartphones can work in different ways. Fortunately, the basics are usually quite similar

## Getting started

### Turn it on

Press the **Power button** to switch on your phone and it will run its initialisation process. Android phones differ from manufacturer to manufacturer, and also in terms of which version of the Android software they run, but you'll usually have to choose your language, then your country and/or region and then select your wireless network, entering any password that's required.

Once that is done, you'll either need to log in to your Google account (your Gmail account, if you have one) or set up a new one – you will need one to use your Android phone properly. Answer any remaining questions your phone asks you and then you'll be good to go.

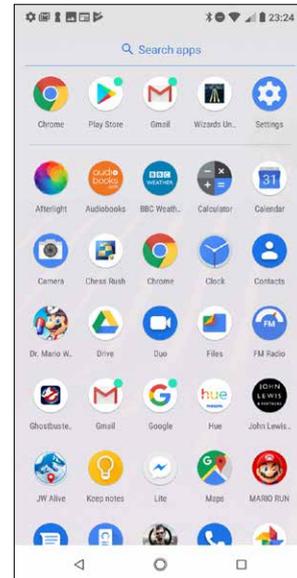
### Your homescreen

Phones from Sony or Samsung may look different, but most Android phones have one or more homescreens for your apps and core features, plus a row of icons to launch your phone's core features (above, left). Below them you'll see



three icons: **Back**, to go back a step; **Home**, to go back to the homescreen and **Recent Apps**, which allows you to switch between open apps and open browser windows.

Tap and hold the **Home button** and swipe upwards to open the **App Tray** (above, right): an alphabetical list of every app or feature installed on your phone. You can move an app to a homescreen page for easier access by tapping and holding it, then dragging it left, off the screen and onto

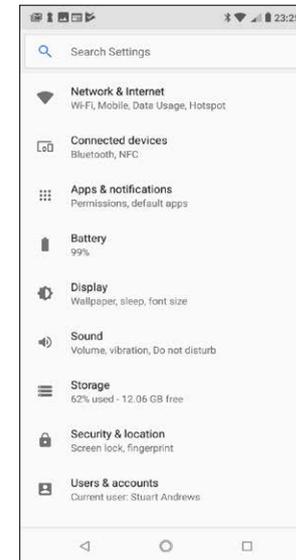


one of the grey boxes that appear. Each one of these represents a different page of your homescreen.

You can also remove an app from a page by tapping and holding it then selecting **Remove**, or dragging it to the **Remove** link at the top of the screen. Drag it to the left or right edge of the screen to move it to another page.

### Change your settings

Open the **App Tray** and tap the gear-shaped **Settings icon**



to find the different settings and options that control your Android phone (above). As with your homescreen, the line-up of Settings will differ depending on your phone, manufacturer and Android version, but you should see most of the following.

### Network & Internet

Tap **Wi-fi** to turn wi-fi on or off. If you want to connect your phone to a different network, just tap the network's SSID (or name) and enter the password. Tap **Data Usage** to see how much data your phone has been using and which apps have been using it, or you can tap **Hotspot and tethering** to use your smartphone as a mobile hotspot, to share your internet with a tablet or another device (just watch out you don't use

up your data allowance).

### Connected devices

Here you can pair a new Bluetooth device, like a speaker or set of headphones, and also set up connections to a Chromebook, a printer or a wireless display.

### Appearance

Change the background wallpaper on your Home and Lock screens, and add widgets and shortcuts.

### Apps & notifications

Control what apps can and can't do on your phone, configure notifications and uninstall apps.

### Battery

Check how long your battery charge should last and control the **Battery Saver** power-saving mode.

### Display

Set the brightness level and control any autobrightness level settings, night light settings and how long it takes before your phone goes to sleep when not being used. Here you can also change wallpapers and the size of fonts and icons on the Android homescreen.

### Sound

Set notification sounds and ring tones, and adjust the volume for alerts, alarms and music, game and video apps.

### Storage

Check how much free storage space your phone has left, and how your storage space is being used.

### Security and location

Control how you unlock your phone, set privacy settings and adjust important phone security settings.

### System

Change the date and time, set backup options for your phone and check for new software updates.

### Notifications

Drag down from the top of the screen to show notifications. These could include messages, missed calls, open apps or other activity. Tapping one opens the related app, or you can clear or block notifications to prevent them from appearing again in the future.

Above notifications is the **Quick Settings** panel. Drag down again from this view and you'll see more settings shortcuts such as wi-fi, power saving mode and Bluetooth. You can also access the full settings menu by tapping the cog.



# Installing apps

Your phone has some great features built in, but to get the most from it you'll need to visit the app store to download and install useful apps

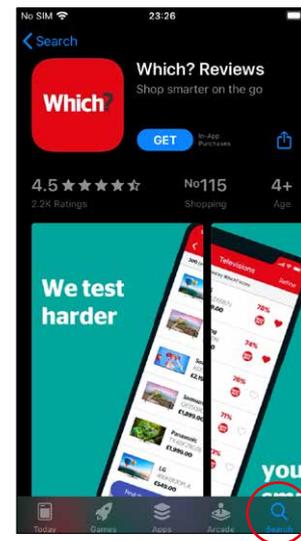
The word 'app' is short for application, although it usually means a simpler, cheaper type of application than the kind you might install on a PC. Apps are designed to be used with a touchscreen interface and usually handle a few tasks easily and effectively. There are millions of apps on both the iPhone's App Store and Android's Google Play Store, so the possibilities are almost endless. Install TomTom's app on your phone, for example, and it becomes a fully fledged satnav device. Download the Kindle app and your phone becomes

an eBook reader. There is an app for almost everything!

## Installing apps iPhone

Find the blue **App Store** icon on your homescreen. Tapping it will take you to Apple's app store, where you'll find a huge selection of games and apps. The main **Today** page features Apple's daily favourites, while tapping **Apps** at the bottom will take you to a wider selection. Keep scrolling down here and you'll see charts for the top apps plus links to the most popular categories. Tap on

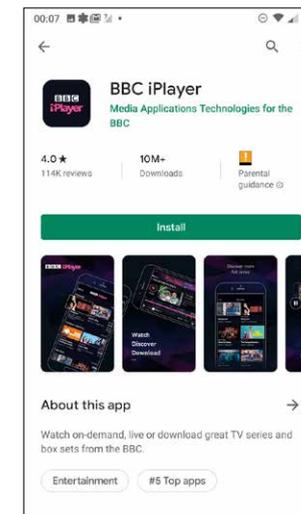
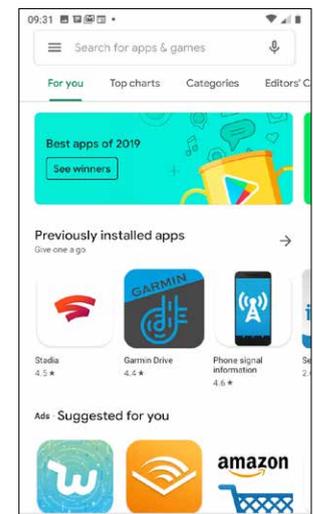
**Search** to find a specific app. When you find something interesting, tap on the icon to go to its page. You can scroll down to see a detailed description plus reviews from other users as well as recommendations for other, similar apps that might interest you. To install the app, tap **Get** or tap where it lists the price. You'll be asked to enter your Apple ID password or provide facial or fingerprint authentication. Then the app will install. Tap **Open** to launch it or go back to the homescreen and find the icon of your new app, tapping it to open.



## Android

Android has its own app store – the **Google Play Store**. You'll usually find the icon then launch it on the homescreen. If not, check the App Tray. Make sure **Apps** is selected at the bottom (not Games, Movies & TV or Books), then browse through the featured apps. You can also

use Top Charts, Categories, Editor's Choice, Family and other options at the top to look for something more specific, or use the searchbar. If you find what you're looking for, tap **Install** or the button marked with the price. You'll normally be asked for your Google account password before installation.



Enter it, or your fingerprint if you have one set up on your phone. Once the app has installed, tap **Open** to launch it, or tap the **Home** button, then the **App Tray** and find the new app and launch it from there.

## Websites or apps?

Using your phone's web browser to read a news website or check cinema times could save your phone from being packed out with unnecessary apps, but in many cases an app is quicker and makes it easier to access key features.

For example, you might find it easier to find and watch a rugby or football match on the BBC Sport app rather than the mobile website. You can find all the latest sports news, live action, scores and highlights in one place, as well as create push notifications. These are alerts that will automatically let you know when something of interest to you has happened, for example, when a goal has been scored.

**Find out more**  
For more tips on installing apps and how to remove unwanted apps, visit [computing.which.co.uk](http://computing.which.co.uk) and then click on **Tablets and smartphones**.

# Essential apps

With the right apps you can unlock the power of your smartphone, ensuring you get news, entertainment and the right information wherever you are and whatever you're up to

## Satnav apps

Fortunately there's no need to pay for satnav on a phone – one of the most effective packages, **Google Maps**, is free. It's available on Android and iPhone and may even come preinstalled. Google Maps offers detailed turn-by-turn instructions and traffic alerts whether walking, driving or cycling, along with public transport information. You can also read reviews, view photos and get other detailed information about shops and restaurants.

It's even possible to save maps of cities or selected

regions to your phone, so you can get directions and browse without an internet connection.

For those who want to use a more familiar system, **TomTom** has a brilliant (paid-for) app, while **Waze** is a good alternative that uses live traffic information from other Waze users.

## News apps

Just about every major British news source has its own iOS and Android apps, or you can install the **BBC News** app (below, left) to get updates straight from the BBC. Alternatively, **Flipboard** creates a sort of personalised digital magazine where you can read the latest news from your favourite sources on the subjects that most interest you. If you normally get your news online, try **Pocket**. This handy app allows you to store web pages to read later, even from a PC or tablet.

## Keeping in touch

One of the most popular (and free) ways to keep in touch with friends and family is **WhatsApp**. With WhatsApp you can quickly and securely

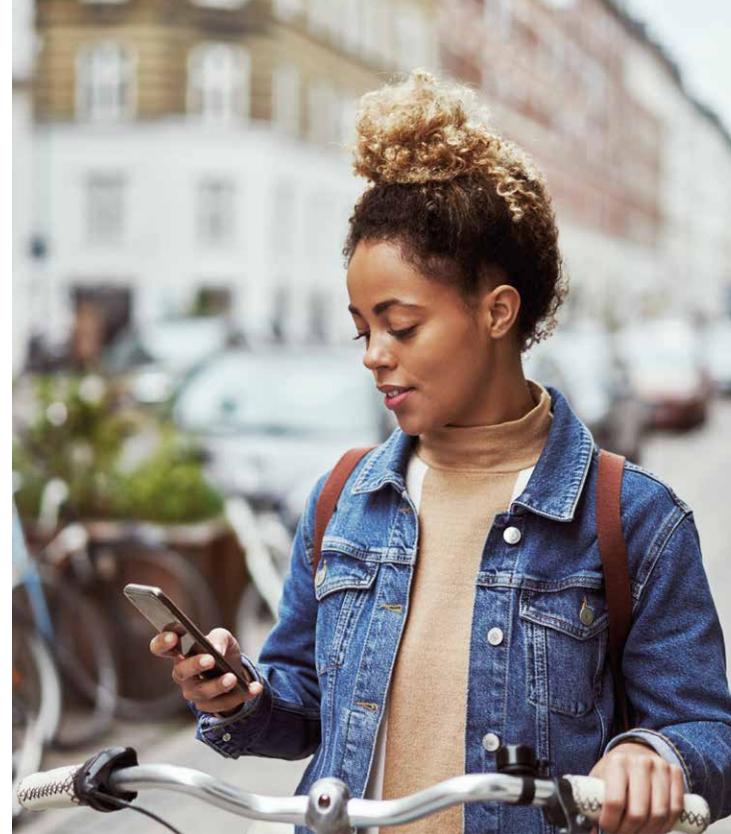
send text messages, photos, and videos to individuals or groups. You can also make video calls (see page 14) and send short voice messages. WhatsApp uses a wi-fi or data connection, so it won't cost you as long as you have enough data.

In terms of social networks, **Facebook** and **Twitter** are great ways to keep up with what your family and friends are doing, and to see what other people are saying about the things you care about.

## Entertainment

All four of the big TV companies have their own catch-up TV apps, and while **BBC iPlayer** is the best known, **ITV Hub**, **All 4** and **My 5** are well worth installing, too. If you subscribe to **Netflix** or **Amazon Prime Video**, both services have brilliant apps (for both iOS and Android).

For music, **Spotify** is still the most popular choice, even if you can only play albums out of order in shuffle mode if you don't subscribe. The free version also includes adverts, and you can't download songs for offline listening unless you pay.



## Family and kids

There's no shortage of fun and educational apps to keep the kids entertained. Browse the Apple App store for 'kids games', or on Android's Google Play Store you can browse a catalogue of family titles by the child's age. For entertainment on the move or away from home, it's hard to beat the **YouTube Kids** and **BBC iPlayer Kids** apps, which allow you to download their favourite shows to watch offline when you're on the go.

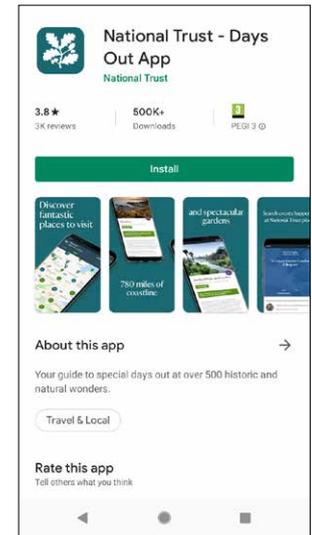
## Security

Both iOS and Android have features for tracking a lost

phone or tablet; you can use the **Find My iPhone** app to locate your Apple devices, or **Google Find My Device** to find an Android phone. Good security also starts with strong passwords, but it's a challenge to remember them if you log in to a lot of stores and online services. For more advice on keeping your smartphone secure, see p20-21.

## Lifestyle and travel

The **National Trust's Days Out** app (see above, right) is great for finding the nearest National Trust properties to you and keeping an eye on events around you. If you



fancy a walk, **Viewranger** gives you free satnav-style mapping along the nation's footpaths.

If you're staying in, **Allrecipes Dinner Spinner** is a fantastic compendium of recipes and meal ideas, complete with how-to videos as well as a super helpful search function.

## WHICH? APPS

If you're a Which? subscriber, the Which? Reviews app puts the whole range of our impartial reviews on your smartphone, making it an essential app when you're looking to buy your next TV, home appliance or gadget.

# Taking and sharing photos with your phone

Your smartphone isn't just a phone or even a pocket-sized computer – you can also use it to take photos that you can share with family and friends or on social media

## The Android camera app

Android phones either use the native Android app or they might use their own proprietary app. Mostly they

work in much the same way as that of the iPhone. The main view is your viewfinder. Tap anywhere in the picture to set your focus and

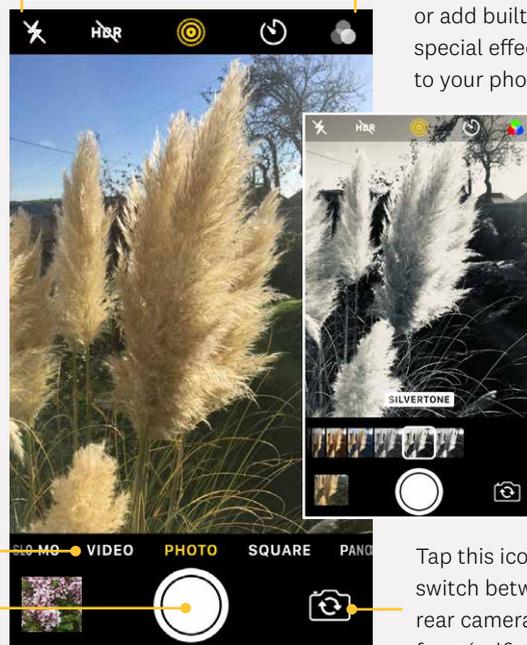
exposure then tap the **shutter release button** to take your shot. You can also swipe left and right to switch between different stills and

## The iPhone's camera app

The main view shows you the current view through the lens. Tap anywhere in the picture to set focus and exposure for that point.

Swipe left or right (or up and down) along this strip to change the type of photo, from time-lapse and HD video to normal photos, square photos and panoramas.

Tap the **shutter release button** to take a photo or to start capturing video.



Use these icons to engage the flash, turn on HDR mode (see tip box on p13), take animated 'Live' photos, set a timer or add built-in special effects to your photos.

Tap this icon to switch between the rear camera and the front 'selfie' camera.

video modes, or tap the **settings button** at the top to change the resolution (the number of pixels in the image) or adjust how the camera works.

You'll also see other buttons at the top of the screen to turn the flash and HDR modes on and off, set a timer or switch other photo-adjustment features, like a beauty-mode, on and off.

## Sharing photos

You can share photos using your favourite messaging apps or email, all from your smartphone's Photos app.

On an iPhone, open the **Photos app**, select your photo and tap the icon of a **box with an upwards-pointing arrow**. Now tap **Message** to send your photo as an MMS (text message), or **Mail** to send it as an email.

On an Android phone, launch the Photos app, tap

## TIP

You can also transfer photos automatically using a cloud storage service. Dropbox, Google Drive and OneDrive all have Android and iOS smartphone apps that will automatically back up photos from your phone so that you can then download them to your computer.



a photo, then tap the **Share icon** (bottom left). Now tap to select the messaging or email app you want to share with, or a contact you want to send the photo to.

You can also transfer photos from your phone to your computer. If you plug the USB cable provided with your phone into your smartphone at one end and your PC at the other, then Windows should ask you whether you want to import any photos or videos. Just click **Yes** and follow the prompts. On a Mac, photos will be transferred to your computer's Photos app when you connect your iPhone.

## TIP

**HDR, or High Dynamic Range**, enables your phone to take several shots with different exposure settings then merge them together so that you can see more detail in both light and dark areas of the scene.

## Tried and tested

We've put more than 130 phones through rigorous tests – checking everything from camera quality to battery life. Find out more at [which.co.uk/smartphoneadvice](http://which.co.uk/smartphoneadvice).

# Making video calls

Smartphones aren't just for making phone calls – with front-facing cameras you can be face-to-face with friends and family, even when you're far apart

WhatsApp is one of the most popular messaging apps around today, and also allows you to make voice and video calls. Best of all, WhatsApp uses a wi-fi or data connection to make calls and send messages, so provided you are connected to wi-fi or have enough data left in your monthly bundle, it's effectively free. WhatsApp also uses secure encryption, making it very safe. In fact the only drawback is that other people must have WhatsApp installed in order for you to contact them, but it's so popular and so useful, this shouldn't be a problem.

## 1 Download and install WhatsApp from your smartphone's app store

Launch the app and accept the permission and notification requests that appear. You then need to enter your mobile number and a verification code that will be sent to you.

## 2 Create a profile

Add your name and a photo of yourself – this is optional, but it helps other people to recognise you.

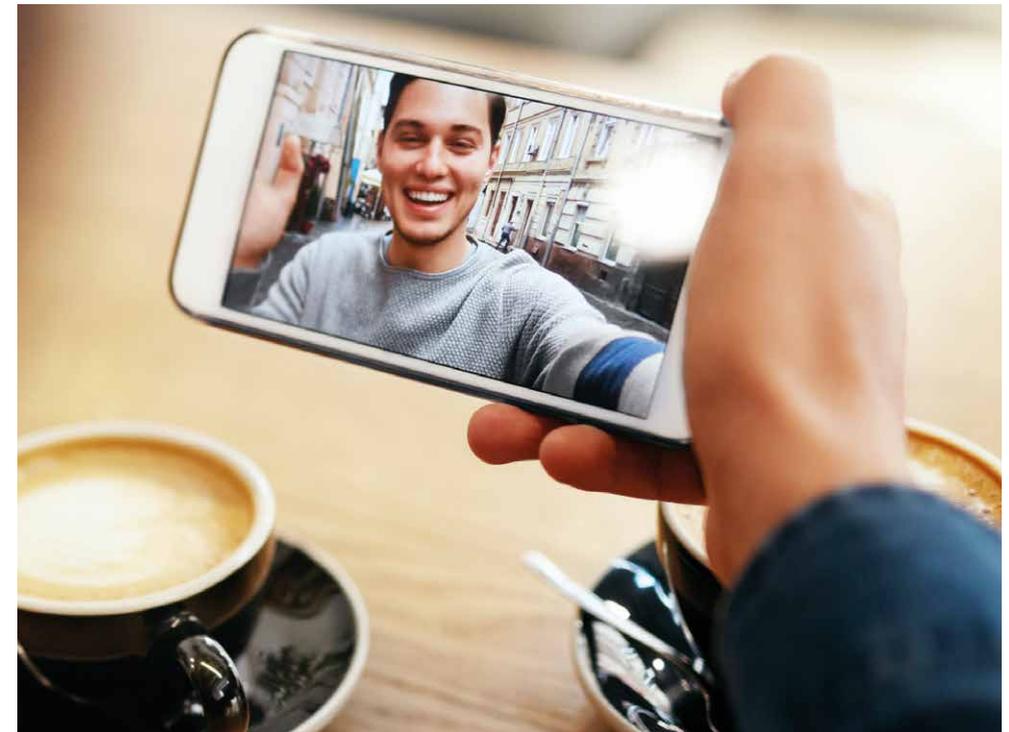
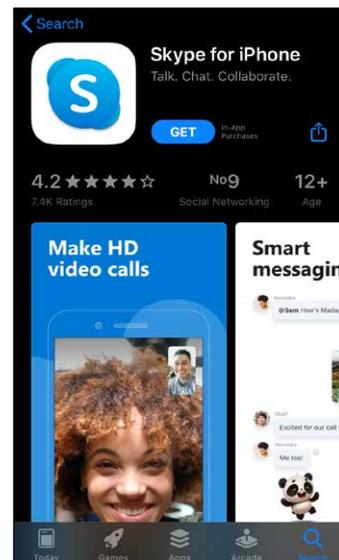
## 3 Chat with your contacts

You can message anyone in the contacts list on your phone who has WhatsApp installed by tapping **Chats** at the top of the screen then clicking the green button at the bottom. Select a contact to start chatting with them, or tap the **New contact** button to add a new contact.

## 4 Call a contact

To call a contact, tap on **Calls** at the top of the screen, then the green button. Now just tap the **phone icon** or the **video icon** next to their name to give them a voice or video call.

Many people also use WhatsApp to have group chats, communicating with several



people at once. You could set up a group for your immediate family, for example, or for a club. Tap **Chats**, then the green button, then **New group** and add who you'd like to include.

## What about Skype?

Skype is another popular video and voice calling app, and a viable alternative to WhatsApp if you prefer to use this instead. One advantage of Skype over WhatsApp is that it's easier to call other phones and non-Skype users simply by dialling a number – no contact needs to be set up. However, this does cost money in the form of Skype credits, though you may still find it cheaper than calling from your phone.

## Using FaceTime

Apple's iOS has its own built-in voice and video calling feature, **FaceTime**. Just tap the green

**FaceTime icon** to launch the app, then tap **+** in the top-right corner to call one of your contacts. Tap the smaller **Phone icon** to start a FaceTime phone call or the **video camera icon** to start a video call.

FaceTime calls are free over a wi-fi connection and only use your data allowance or pay-as-you-go data credit if you're on a mobile connection, so it's a cheap way to call your other iPhone-owning friends.

## Using Google Hangouts

Google has its own equivalent of FaceTime, **Hangouts**, though you may need to install it. Once you do, click on the icon in your App tray to launch it. Tap the green **plus button** in the bottom-right corner, then select **New video call** or **New conversation**. Now select one of your contacts to start the call or a text chat.

# Storing and syncing files in the cloud

Use cloud storage services to share files and photos between your smartphone and PC

Syncing with the cloud means being able to access all the files on your computers and other devices – including documents, photos and music – no matter where you are. Upload files from, say, your iPhone, and they'll be transferred across to your Mac and your iPad, too.

It is important to note that syncing is not the same as backing up. Syncing means that each device matches and that they all mirror each other. For example, if you delete a photo on your smartphone, it may also be deleted from the cloud.

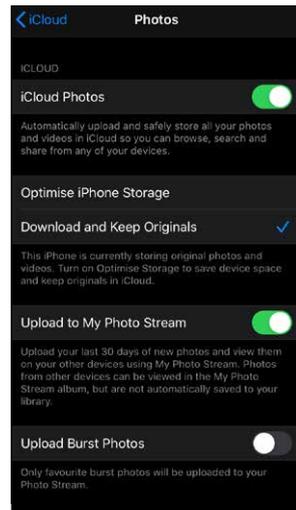
## Syncing your iPhone with iCloud Drive

iCloud Drive will store files from your iPhone, iPad or Mac computer and make them available on any other device. Apple provides 5GB of storage space for free. You can also use it to sync documents, email and events on your calendar. To use it on a Mac, go to the Apple menu then click **System Preferences** > **iCloud** and either register an account or sign in. Once you've activated

iCloud on your Mac you'll need to activate it on your iPhone. Go to **Settings** then tap on **your name**, then tap **iCloud**. You can turn on or off any apps or services that sync over iCloud Drive. If an app such as Apple's Pages word processor supports iCloud Drive, any files you make or save on it will sync over iCloud Drive.

## Syncing photos

iCloud has two different ways to sync and share your photos. The first, Photo Stream, shares the latest photos from your iOS devices and Mac across other devices using the same Apple ID. Enable Photo Stream and any photo you take on your iPhone will automatically appear in the photo library on your Mac – it syncs the previous 30 days' worth of photos, or up to 1,000 shots. To enable it, go to **Settings**, tap your **name**, then tap **iCloud**, then tap **Photos**. Toggle **Upload to my Photo Stream** to 'on'. You can then find your Photo Streams in your Mac's Photos app under the Shared tab.



The other option, iCloud Photos, stores the full versions of every photo you take on your iPhone, then syncs them with your Mac. It's great for serious photographers, but you will need to pay for additional iCloud storage if you don't want to run out of space.

## Syncing music

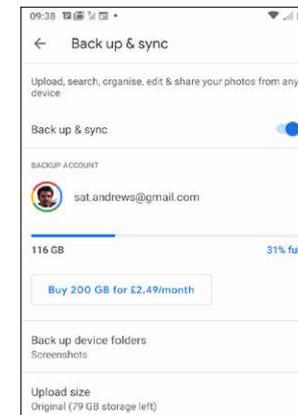
Apple's iTunes Match feature syncs your entire music library across all your iOS and Mac devices, so that you get all your music on any device for £21.99 per year. Open iTunes on your Mac and



click **iTunes Store** > **iTunes Match** (under Quick links), then **Subscribe**. Follow the instructions and upload your music, then wake up your iPhone and go to **Settings** > **Music**. Now tap the switch next to **Sync Library** to turn it on. Any content added through Apple Music or iTunes Match will now be available from your iPhone.

## Syncing with Google Drive

Android users can use Google Drive to back up their phones and transfer files from their phone to their PC, provided both are signed into the same Gmail account. Meanwhile, any photos you take can be synced automatically using Google's **Photos** app. Launch **Photos**, then click the **menu button** on the left-hand side of the search bar. Tap on **Settings**, then **Back up & sync**, then tap the blue switch to turn on **Back up & sync**.



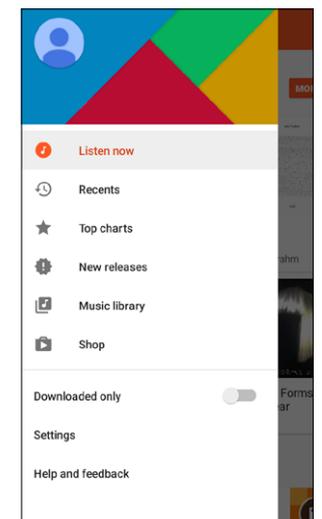
You can also tap **Upload size** to switch between keeping the original image file and a compressed high-quality version, which Google lets you store for free. You can now access your photos by signing in at **photos.google.com** and browsing through your pictures and albums.

Any music you upload from your PC to Google Play Music can be streamed (played over your internet connection) or downloaded

to your phone's Google Play Music app. To do this, download Google's Music Manager app on your PC. Click the file to install it and follow the setup instructions, selecting the music library you use.

Once uploaded, your tracks will appear in the Play Music app on your phone or tablet. You may need to tap the **menu button** and **My Library**, then tap the **Download only** slider to switch it off.

Just about any other file can be synced using Google Drive – and many apps will sync directly with the service. You can also upload files manually from your smartphone through the Google Drive app itself. Launch the app, then press the blue **+** symbol in the bottom-right corner and tap **Upload**.



# Conserving your data

Whether you're on a contract or PAYG, mobile data usage can be a big deal. We'll help you avoid burning through your monthly allowance and sending costs sky high when you're out and about

Many of the activities on your smartphone use internet data, which doesn't always come cheap. When you're at home using a wi-fi connection to your network's router, you're using your home broadband data allowance to access these services, which may be unlimited. When you're out and about, however, you'll be relying on either your pay-as-you-go (PAYG) credit or your contract's monthly data allowance. Using your phone this way means there's a danger that you might run out of data or use up your credit too quickly, particularly if your provider charges high amounts for data usage, unless you have specific bundles, add-ons or deals.

Streaming video files or downloading music will get you through a lot of data very quickly, but browsing the web, checking email or uploading photos to the cloud can also prove expensive if you do it all the time. If you use a lot of data, a large (4GB or more monthly usage) or unlimited contract might be the answer, though simply taking precautions to use less could be the cheaper option.

## How is data usage calculated?

Data usage is the footprint of all your internet activity and includes what you send as well as what you receive. Even viewing a web page will involve downloading some data (text, images, interactive elements and videos) and uploading other data (for the icons you press or any text you type in). Again, data used over a wi-fi connection doesn't have an impact on your PAYG credit or monthly allowance, which makes it the most efficient way to use the internet.

You can also connect to wi-fi hotspots around the country. Be wary, however, as these are not always secure. Avoid automatically connecting to wi-fi hotspots – not only can this endanger your privacy, but this setting also allows your device to connect to any network without your permission. When you type a web address into your browser, preface it with 'https' instead of the usual 'http'. This makes your data encrypted, but not all websites will support encryption.



## Data use, in numbers

Estimates of data usage vary, but some guideline figures are:



**0.35 MB**

Loading the [guardian.co.uk](http://guardian.co.uk) homepage



**5 MB**

Downloading one 10Mp photo



**80 MB**

One MP3 music album



**350 MB**

Streaming iPlayer for one hour



**4 GB**

Downloading a two-hour HD movie

## CUT DOWN ON YOUR DATA COSTS

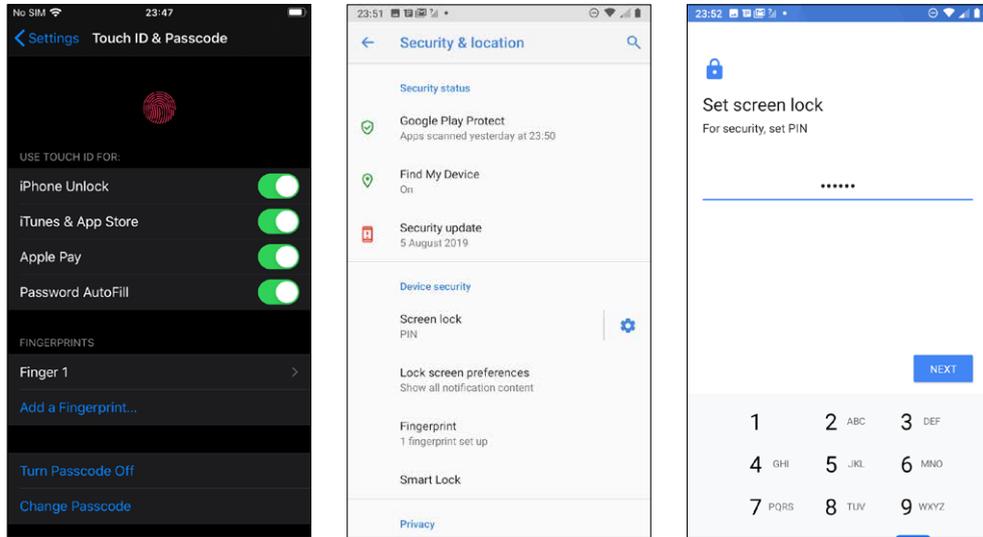
- Monitor how much data you're using. If you go to **Settings > Mobile Data** on iOS or **Settings > Network & Internet > Data usage** on Android you can see how much data you've used over a certain period. On Android, you can even see how much data different apps are using.
- Instead of streaming music or video when you're out and about, download tracks or programmes while you're on wi-fi so you can enjoy them later without burning through your allowance.
- Control which apps can use mobile data. Go to **Settings > Mobile Data** on iOS and you can switch access to your mobile connection on or off, app by app. You can also set specific apps, such as many cloud-storage or photo-sync apps, to only upload or download files or photos when your phone is connected to the internet through wi-fi.
- Data roaming charges while abroad can be incredibly pricey. If you're leaving the UK it may be worth turning off your data roaming. In iOS, go to **Settings > Mobile Data > Mobile Data Options**. In Android, go to **Settings > Network & Internet > Mobile network** and flick the Data roaming switch to 'off'.
- If you find you keep using a lot of data, look for upgrades or bolt-ons that give you more. It's usually less expensive than paying per MB or exceeding your monthly allowance.

## Find out more

For tips and tricks for conserving your smartphone data, go to [which.co.uk/smartphone-data](http://which.co.uk/smartphone-data).

# Phone security

Your phone can carry a lot of valuable or sensitive data – it's a good idea to know the risks and how you can protect yourself against them



While we're used to running antivirus software on our PCs, smartphones are more of a grey area when it comes to security. Smartphones aren't nearly as susceptible to most internet-based threats, but they can still fall prey to malware. If you want to avoid trouble, it makes sense to take some precautions and install a mobile security app.

## The risks

**Dodgy software downloads** – both Apple and Google vet their own app stores to ensure that apps containing viruses can't spread to your device from the official store. There is no easy way to install iOS apps otherwise, and while you can find alternative ways and stores on Android, the risks mean it's not really worthwhile.

**Virus attacks** – malware can still spread through networks, direct PC connections,

websites or emails, but both Apple and Google release regular updates to patch the most serious weaknesses. Keep your device updated to ensure it's protected. Android users might want to install a dedicated security app too, especially if the phone is older and out of support.

**Phishing scams** – phishing scams imitate a trusted brand or website in a bid to get you to hand over your personal or financial details. They can work just as well on a smartphone as they can on a computer. Good security apps will warn you of these threats, but don't click on links

“A phone lost on a train or stolen from a bag can be a gold mine for cybercriminals”

in unsolicited emails unless you're sure they're from the company they claim to be from.

**Lost devices** – a phone lost on a train or stolen from a bag can be a gold mine for cybercriminals, due to the personal information you may have stored on it. At the very least, you should protect your phone with a passcode.

## Be smart with your phone

To avoid falling foul of the risks, take a few sensible precautions.

### 1 Never leave your phone unattended

Keep it safely out of sight when not in use.

### 2 Set a passcode and/or fingerprint

Go to **Settings > Touch ID & Passcode**

on your iPhone (p20, left) or **Settings > Security & location** on Android (p20, middle). Here you can set up a facial or fingerprint recognition for speedy unlocking, depending on your phone, but it's sensible to also have a PIN or passcode (p20, right). You can also use Apple's **Find my iPhone** or Google's **Find My Device** to lock and even wipe your smartphone remotely if it's stolen.

### 3 Make a note of the serial number

Jot down your phone's IMEI number – on an iPhone, go to **Settings > General > About**. For an Android device go to **Settings > System > About Phone > Status** and tap **IMEI information**. If your phone is stolen, this number can help your service provider block it.

### 4 Report a lost or stolen phone

Inform your provider as soon as possible. They can block your phone so that it won't work in the UK, even if the Sim card is changed.

### 5 Don't open suspicious emails

If you receive an email with an odd subject line or strange text, don't open it properly in the Mail app and never click on any links.

### 6 Only buy and download apps from the official app store

Free and cut-price app stores are often used by pirates to distribute malware concealed in the installation files.

“Free and cut-price app stores are often used by pirates to distribute malware concealed in the installation files”

## Security software

While security threats on mobile phones aren't as common as on PCs, a mobile security package will help to offer peace of mind. Free packages cover the basics, though you can pay for more features if you find them useful.

### McAfee Mobile Security: Antivirus, Wi-Fi VPN & Anti-Theft (Android)

This is a useful free app that offers solid protection against viruses and other internet nasties. You can pay for a more enhanced version, but the free alternative still has plenty to offer, including PIN protection for specific apps, anti-theft tools to track your phone if it goes missing, plus it's simple to set up and easy to understand. Upgrading to the premium package gets you access to telephone support and cloud backup, which many people may not need.

### Trend Micro Mobile Security – £2.15/month (iOS and Android)

This security app is simple but powerful, with an anti-phishing tool that warns you off scam websites while browsing, as well as anti-theft tools. It's free to install but the premium features require a regular subscription.

## Find out more

For tips on choosing a mobile security app and which features to look out for, visit [which.co.uk/securityapps](http://which.co.uk/securityapps).

# Jargon buster

**4G** Fourth generation mobile networks, providing faster data connectivity than the old 3G networks.

**5G** The fastest mobile internet data standard, providing even faster connectivity than 4G and many broadband connections, though not as widely available yet.

**Android** Google's mobile operating system, designed primarily for touchscreen devices. Google develops Android, but allows other manufacturers to use it for free, so you can find Android on smartphones from Sony, Samsung, Motorola, LG and HTC, among others.

**App** A streamlined software application that adds extra functions to your smartphone. Most apps are downloaded directly from an online app store.

**Bluetooth** A type of wireless technology used by smartphones to communicate with other Bluetooth-enabled devices, including cameras, other computers, speakers, headphones and keyboards.

**Cloud services and storage** An online service or storage service that hosts the data for its users on an internet-connected server and has features to sync that data

across one or more devices.

**ESN (Electronic Serial Number)** A unique identification number embedded on a microchip in smartphones.

**GB (Gigabyte)** A measurement of data. Commonly used by mobile phone operators as a way to measure data usage.

**Google Assistant** Android's voice-activated personal assistant. Like Apple's Siri, Google Now can bring you answers to spoken questions, but it's also more proactive, trying to give you information based on what it knows about your activities that day.

**GPS (Global Positioning System)** GPS is the technology that allows your smartphone's location to be tracked by a satellite.

**GSM (Global System for Mobile Communications)** The mobile phone network technology standard used in the UK over which nearly all voice calls and texts are transmitted.

**HD (High Definition)** A format that allows visual content such as video to be displayed at a high resolution, providing a sharper, more detailed picture.

**HDR (High Dynamic Range)** A screen or camera technology that allows you

to capture or display a wider range of colours and brightness levels, including darker shadows and brighter highlights. Most phone cameras and some phone screens now support HDR.

**IMEI (International Mobile Equipment Identity)** A 15-digit code that's unique to a mobile phone and can be used to identify it.

**iOS** Apple's mobile operating system, used on the iPhone, iPad and iPod Touch, but not used on iMacs or MacBooks.

**Malware** A catch-all term for malicious software, including viruses.

**Megapixel (MP)** Digital and phone camera resolution is often measured in megapixels – the more megapixels, the better the resolution.

**Micro-SD** A small memory card used in some tablets, smartphones and digital cameras. There are newer, higher-capacity versions called micro-SDHC and micro-SDXC.

**MMS (Multimedia Message Service)** An extended version of SMS text messaging that lets users send multimedia content such as pictures and videos between mobile phones.

**MP3** The most common file format for digital music.

**Notification** A pop-up



message on your smartphone that lets you know you've received a text message or email, or to remind you about an event on your calendar or warn you that a software update is required.

**Operating system (OS)** The basic software that makes a smartphone work.

**PAYG (Pay-as-you-go)** A type of mobile phone contract that doesn't require monthly fees. You simply top up the phone with credit as and when you need it.

**Phishing** A type of internet fraud where criminals impersonate a company or website in the hope that you'll give them personal information or login details that they can then exploit for financial gain.

**Sim card** A small card used in a phone or tablet to store data and to connect to a mobile network.

**Siri** Apple's voice-activated personal assistant. You can ask Siri spoken questions and it will sift through the information on your phone and on the web to find answers for you.

**SMS (Short Message Service)** Commonly known as text messaging; allows you to send short text messages between mobile phones.

**Social networks** Services that enable you to share news and photos or talk with friends and family.

**Streaming** Playing music or video continuously from the internet, without having to download a file to your

smartphone – for example, watching a video on YouTube, Netflix or BBC iPlayer or listening to music on Spotify.

**Sync (short for synchronise)** The process of harmonising data between two or more devices and/or cloud-based storage services, so that the same information is accessible from all of them.

**Wi-fi** The wireless communications technology used for networking in homes and businesses, allowing computers and devices to connect to each other and the internet without any wires. All smartphones support wi-fi.

**Wi-fi hotspot** A location where you can wirelessly connect to the internet using your smartphone.