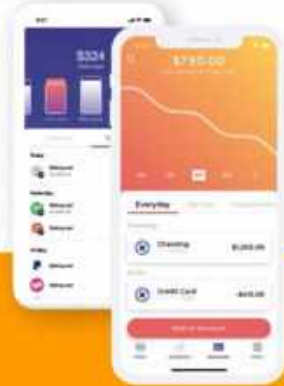


# 43

essential **free**  
apps for Mac,  
iPhone & iPad



**6** of the best  
**budget-**  
**beating** apps



# Mac|Life

MAC

IPHONE

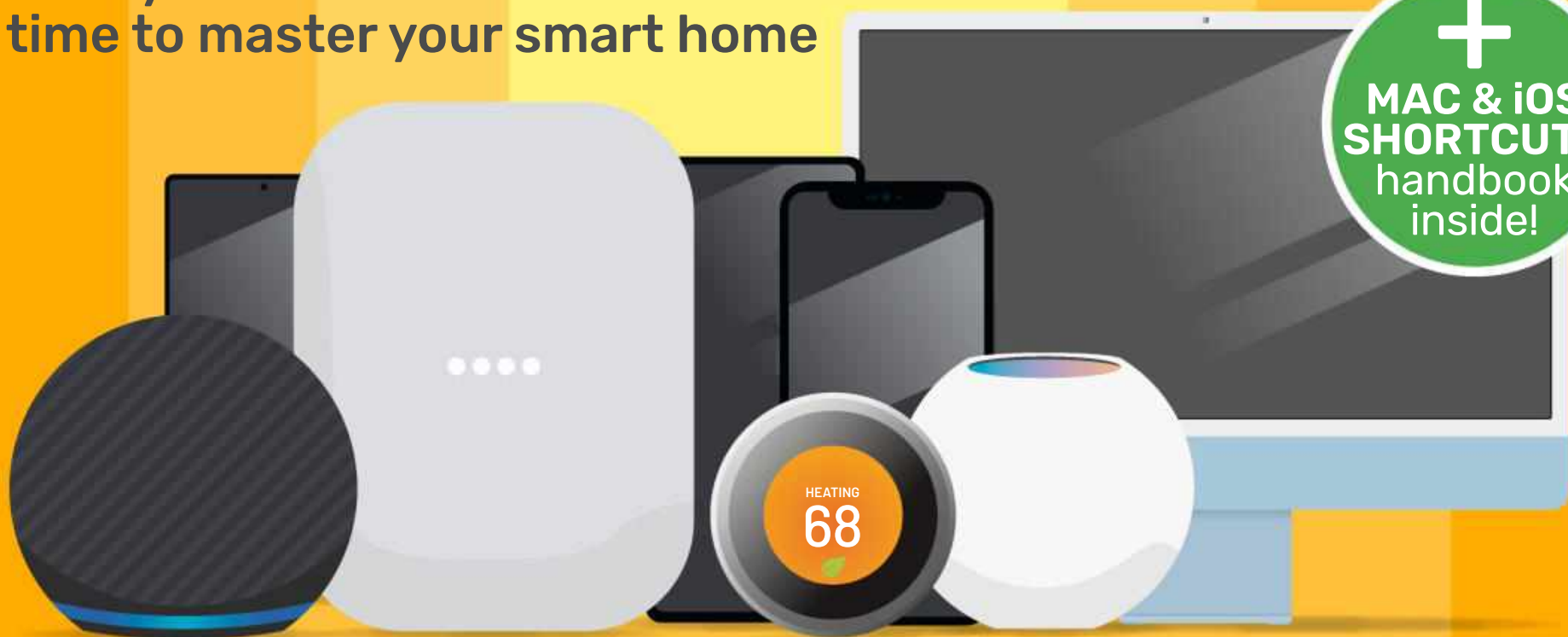
iPAD

MARCH 2023 NO.203

# HOMESKIT

## THE SMART HOME GUIDE

Grab your Mac or iPhone – it's  
time to master your smart home



**+**  
**MAC & iOS**  
**SHORTCUTS**  
handbook  
inside!

### HOW TO:

Use Handoff in a FaceTime call  
Make the most of Stage Manager  
Improve productivity in Ventura  
Configure the new System Settings



### 2TB portable SSDs on test

Speed up your Mac, boost  
backups, and more with  
2TB SSDs **from \$211**



# CREATING GUITARISTS FOR MORE THAN 50 YEARS



4 COVER SPECIAL

MARCUS KING, CHRISTONE "KINGFISH" INGRAM, LARKIN POE, GA-20

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# SHORTCUTS GUIDEBOOK



**THE NEW YEAR** is usually a quiet time of the year for most of us — reflecting on the past, and looking to the future. It's also a time when you tend to spend less money, what with the fallout of the spending spree of the holidays gone by. With that in mind, it's nice to get something a little extra to help things along when you do make a purchase on the things you enjoy. I am, of course, referring to *Mac/Life*, and this very issue. You won't find it inside, because it's not technically inside (we don't print enough pages, you see), but "within" your copy is a bonus guide to the Shortcuts app for

Mac or iOS/iPadOS. If you've not used Shortcuts before, or even if you have, you're going to be in for a treat. The feature, which you can download in PDF format at [bit.ly/ml203shortc](https://bit.ly/ml203shortc), is a really useful guide. It shows you exactly how Shortcuts works, how to create your own templated or custom shortcuts, and there's loads of neat examples of shortcuts that will help you do stuff easier and save time, thanks to the app's ability to trigger events without you having to do anything.

Additional content aside, the actual physical (or digital) magazine is packed with a plethora of great features, reviews and how-to guides. I'm particularly enthusiastic about the HomeKit guide on page 32. If you've been thinking about setting up a smart home and want to know exactly how to do it the Apple way, then this should cover most bases. Or even if you're not that interested in the smart home, you might find it intriguing to know where Apple, and smart home tech, is headed in the near future.

Want a money-saving tip? Head over to page 12 to check out our compilation of the best free apps available for your Mac, iPhone or iPad. Here you'll find some pretty awesome apps that will do nearly as good a job as the paid counterparts, but naturally there's not a penny to pay. Go and take a look and see what you think — if you believe we missed some apps that are definitely worth covering then get in touch at [letters@maclife.com](mailto:letters@maclife.com). ■

*Nick*

**NICK ODANTZIS**, Editor

Twitter: @maclife

## THE TEAM



**Matt Lochrie**

**Art Editor**

If you haven't tried it, Matt recommends Spark for your email. He finds it easier to use than Mail.



**Rachel Terzian**

**Production Editor**

Rachel has been trying out many of the free apps in this issue. what3words is an amazing idea!



**Howard Oakley**

**Contributor**

A fast and portable 2TB SSD from \$211? Howard puts six of them through their paces (p54).



## 12

### The best free apps for Mac, iPhone and iPad

We round up over 40 of the best free apps for your devices, covering gaming, ebooks, messaging, maps, and more.

## 32

### HomeKit: Complete guide

Discover how to set up your smart devices with our in-depth HomeKit guide, and learn how to take full control of your high-tech smart home.

## 70

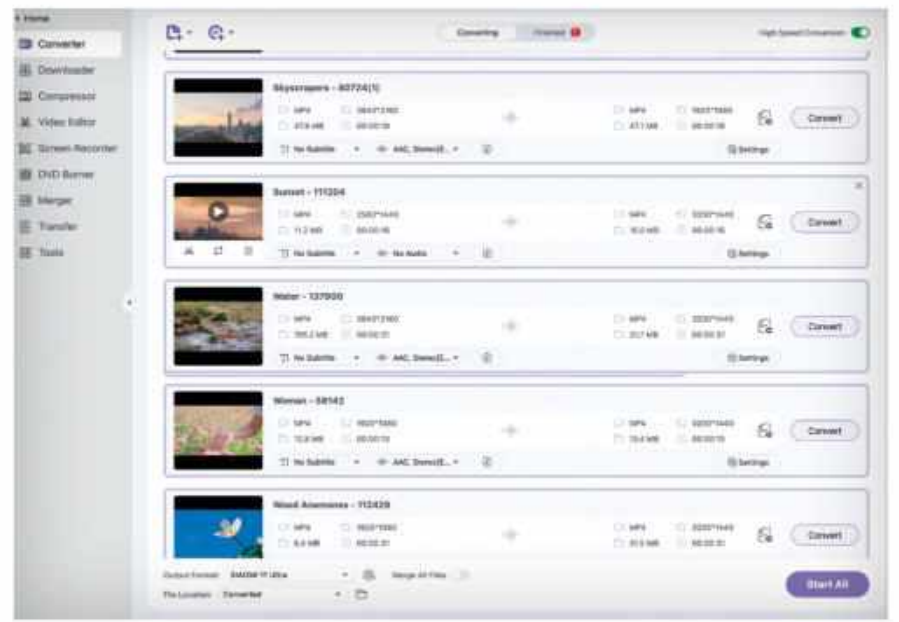
### Get started with Find My

There's so much more you can do with Find My besides tracking down a lost iPhone. Find out how to locate friends, add third-party accessories, and more.





60 – Adobe Photoshop Elements 2023



62 – Wondershare UniConverter

## START

- 03 Consider**  
The editor talks money-saving, and this issue's free guide to Shortcuts
- 06 Start**  
How Apple is improving security for user data and communications in iCloud
- 08 The Shift**  
Matt Bolton on why the M2 MacBook Air is not quite as desirable as the M1
- 09 Share**  
Email us your views at [letters@maclife.com](mailto:letters@maclife.com)
- 10 Crave**  
The latest gadgets that you definitely want, but probably can't afford

## REVIEWS

### GEAR UP

- 46 InnoCN 27M2U 4K Mini LED monitor**
- 48 Twelve South AirFly (2nd Gen)**
- 49 Razer Kishi v2**
- 50 Logitech MX Mechanical Mini for Mac**
- 52 NovaPlus Pencil A8 Duo**
- 53 Zagg Pro Mouse**
- 54 Group Test: 2TB solid-state drives**

### APP LIFE

- 60 Adobe Photoshop Elements 2023**
- 62 Wondershare UniConverter**
- 63 Sticklets**
- 64 VMware Fusion 13**
- 65 Flat Eye**
- 66 Six apps to help you manage your finances**
- 68 Best of the best**  
*MacLife's pick of the best apps and hardware for Mac and iOS*

## ASK

- 76 Expert advice**  
Our tech hotshot solves your Mac and iOS problems

## CREATE

- 82 Master Stage Manager**
- 84 Use Handoff in FaceTime calls**
- 86 Navigate System Settings**
- 88 Set up background sounds**
- 90 Family Sharing in iOS 16**
- 92 Enhance landscape pics**
- 94 Learn to use dictation**
- 96 How it works: Apple's new passkeys**



46



49



53

# START

THE LATEST

## Cloud security enhanced

Optional new features to protect your data

BY ALEX SUMMERSBY

**APPLE HAS BEEFED** up security for user data and communications in the cloud with three new features.

### > iMessage Contact Key Verification:

On top of the existing end-to-end encryption in iMessage, this adds a way to further verify that you are messaging only with the people you intend. It is designed for the same high-risk users as Lockdown Mode — journalists, diplomats, activists, and so on. Conversations between users who enable the feature receive automatic alerts if a very advanced adversary, such as a state-sponsored attacker, ever succeeds in breaching cloud servers and inserting its own device to eavesdrop on messages. For even higher security, users can compare a Contact Verification Code in person, on FaceTime (which has also used encryption since launch), or through another secure call.

> **Apple ID Security Keys:** Apple has offered two-factor authentication for Apple ID since 2015, and reports that “more than 95% of active iCloud accounts” use this. There is now the added option of using third-party

hardware security keys as one of the two factors. Apple says this prevents even an advanced attacker from obtaining a user’s second factor through some form of phishing — but the new system requires you to set up two separate physical keys, so there is still the (admittedly remote) risk that one could be stolen and used to breach your account.

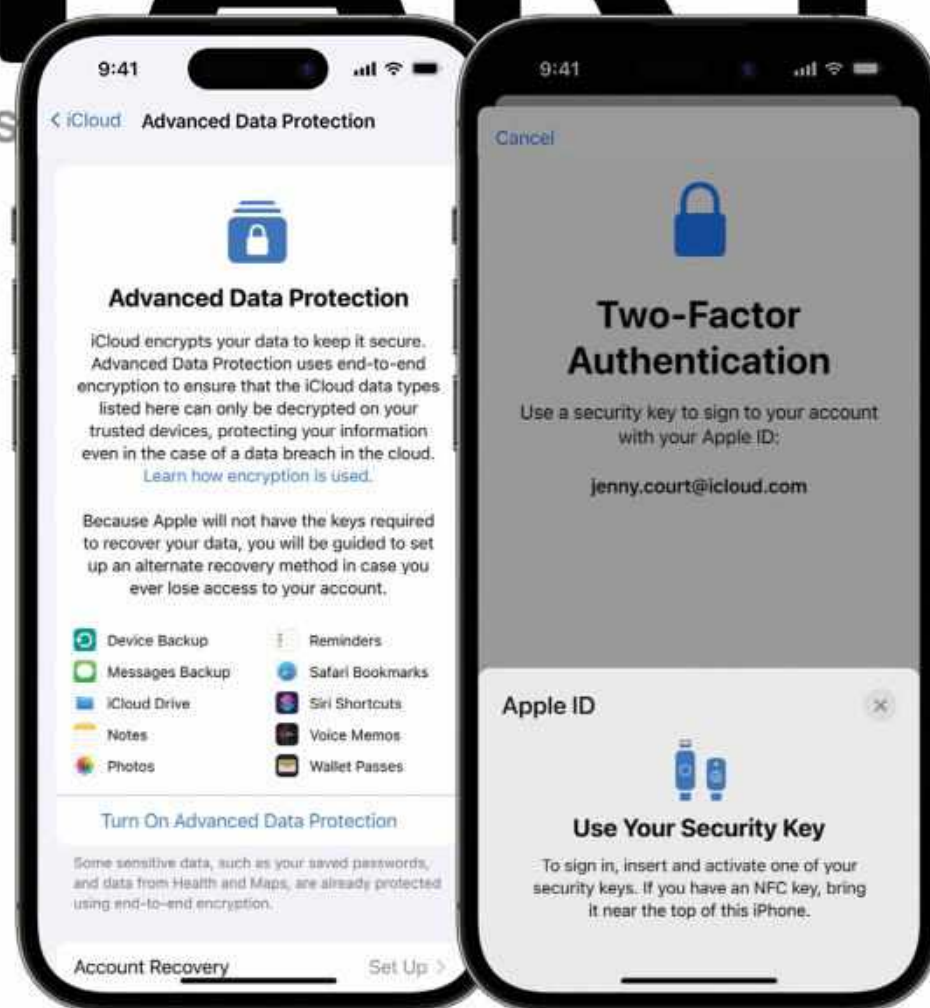
> **Advanced Data Protection:** This is Apple’s highest level of cloud data security, giving you the choice to protect your most sensitive iCloud data with end-to-end encryption so that it can be decrypted only on your trusted devices. If you opt in, it will protect most iCloud data even in the case of a data breach in the cloud.

iCloud already protects sensitive data categories using end-to-end encryption by default, including Health data and passwords in iCloud Keychain. Advanced Data Protection extends this to more types of data,

including iCloud Backup, Notes, and Photos. The feature requires an opt-in because there is no emergency recovery option if you forget your password. The only major iCloud data categories not covered are iCloud Mail, Contacts, and Calendar, because these need to interoperate with global email, contacts, and calendar systems.

Apple’s move drew praise from the Electronic Frontier Foundation (EFF), while the FBI said it was “deeply concerned with the threat end-to-end and user-only-access encryption pose. This hinders our ability to protect the American people from criminal acts ranging from cyber-attacks and violence against children to drug trafficking, organized crime, and terrorism.”

Apple has also recently added a Rapid Security Response capability to macOS, enabling it to roll out urgent security patches more quickly than the regular system update channel.





## > Apple Music updates

### New karaoke feature and Replay experience

**WANT TO TURN** your iPhone, iPad, or third-gen Apple TV 4K into a karaoke machine? That's the promise of Apple Music Sing, a new feature that enables Apple Music subscribers to sing along to their favorite songs.

On compatible devices with iOS 16.2, iPadOS 16.2, or tvOS 16.2, Apple Music Sing takes the existing lyrics featured in Apple Music to the next level. In songs that support Apple Music Sing, lyrics not only display in real time as before, but are highlighted syllable by syllable, with background vocal lines separated out to avoid any confusion. You can optionally lower the volume of the lead vocals so you can take the lead. And a duet view shows the different voice parts of supported songs on opposite sides of the screen, making it easy to follow your own part.

Apple Music Sing launches with more than 50 dedicated playlists, but it is not clear how many songs will eventually

offer the feature. Also, not all devices support it, even if they can run the newest OS — in particular, it requires a third-generation (2022) Apple TV 4K.

Apple has also redesigned the Replay experience. Apple Music Replay automatically generates a playlist of the songs, artists, albums, and genres you've listened to most, on any device you've signed into with the same Apple ID. Once you reach the threshold of plays and time spent listening, you can check back to explore listening stats or "insights", listen on the Replay site to rediscover your favorites, enjoy a personalized highlight reel, and share insights with family or friends on social channels or messaging platforms.

Apple emphasizes that your privacy is protected throughout the experience. No other Apple Music subscribers or employees can access your insights at any time outside of any snapshots you choose to share.

## News in brief

### A bite of the Apple

#### > AIRDROP TIME LIMIT

AirDrop in iOS 16.2 and up imposes a ten-minute limit on receiving content from Everyone — after this time, it will automatically reset to receive from Contacts Only. The time limit was first applied in China, reportedly to help the government impede the sharing of dissenting materials, but is now global and will combat the "AirDrop bombing" by strangers of offensive, indecent, or other unwanted content.

#### > CSAM PLAN DROPPED

Apple has dropped plans to scan uploads and users' albums for child sexual abuse material (CSAM). Bowing to pressure from privacy advocates, Apple said: "We have decided to not move forward with our previously proposed CSAM detection tool for iCloud Photos. Children can be protected without companies combing through personal data, and we will continue working with governments, child advocates, and other companies to help protect young people, preserve their right to privacy, and make the internet a safer place for children and for us all."

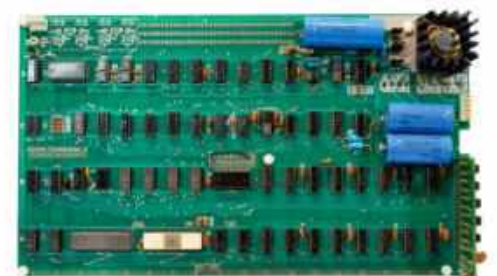
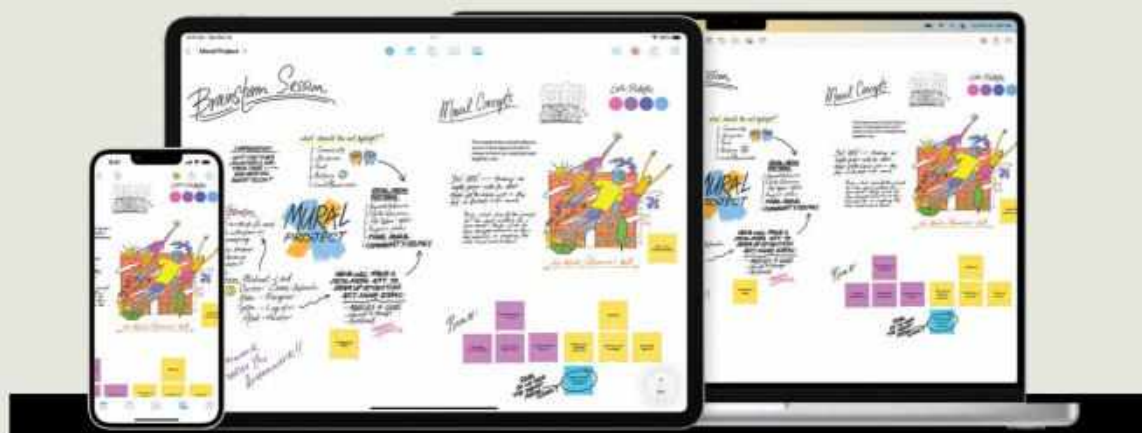
#### > APPLE-1 MAKES BIG BUCKS

A working Apple-1 computer, hand-numbered "01-00002" by Steve Jobs and complete with original instruction manual, sold for over \$442,000 at an auction in Boston. Only around 200 Apple-1 computers were built, and few survive in working condition. A football signed by Tim Cook sold at the same auction for almost \$5,700.

## > Freeform released

**APPLE'S NEW APP** for collaborative working is here. Available free on iPad, iPhone, and Mac, Freeform provides a completely flexible canvas, expandable in every direction with no fixed page size, on which users can sketch, jot, and brainstorm together in real time,

with FaceTime built in. It supports all kinds of files, from photos, video, and audio to PDFs, web and map location links, sticky notes, shapes, diagrams, and more. An iPhone or iPad camera can even be used to insert an image or scanned doc directly into the board.





## > THE SHIFT

**MATT BOLTON** wonders what the future development of Macs looks like after the unrepeatable revolution of the M chips



**T**HE LATEST M2 MacBook Air is an incredible machine, but it has one fundamental problem: the M1 MacBook Air. Despite being someone who is so shamelessly easy to sucker into getting the latest version of a perfectly good product that I already own, I haven't felt any pull to get one.

The other day I was in an Apple Store and thought I'd have another play with one, but I actually prefer the design of the previous model — the tapered edge is easy to pick up. Now, that's the kind of thing that could be easily overcome if I was excited by it elsewhere, but... I'm not. Its biggest selling point is the M2 chip at its core, but I don't even push the M1 to its limit. The M2 doesn't really offer me any crucial extra. And my concern is that this is going to be a problem for the M3 too, and the M4, and...

The M1 was a bona fide tech revolution. An overnight game changer, turning the MacBook Air

into the light and inexpensive MacBook Pro we'd dreamed of when it came to raw CPU power. And then Apple showed how it can scale it into the beastly M1 Pro, Max and Ultra. But the problem with the M1 family being so far ahead of anything at the time is that it checked off pretty much all my needs when it comes to the internals. Once upon a time, I'd be thrilled to update my MacBook because it would come with real, meaningful time-savings for most of my tasks. As well as being able to finish things faster, it gave me more creative freedom to experiment, because I had more time. Almost any creative tasks pushed old processors to their edge, so any extra speed made a big difference.

### NO NEED TO UPGRADE?

That's not really the case with M2 over M1. It will be for some pros, of course, but it used to be the case that a faster processor was better for everyone. The M1 has meant that I don't need an M2. I doubt I'll need an M3 either.

So where does that leave us when it comes to future MacBooks? What would make me want one? Apple has always been quite conservative about changing other features, but are we at a



This chip is like someone offering me a faster Ferrari for my commute to work...

point where features like the mini LED screens of the MacBook Pros need to become normal on all laptops just to get my blood pumping? Has the M1 series now shot the idea of regular updates to the MacBooks in the foot by actually accelerating it too far forward, too fast?

I wouldn't want Apple to get gimmicky — it's ironic that the M1 models killed the Touch Bar, since it's exactly the kind of thing you could imagine a company adding in a case like this — but what else is there if Apple keeps refreshing its laptops at this pace? It's not like basic computer design is in need of a rethink. If the M2's biggest flaw is the M1, perhaps the M1 chip's biggest flaw is that it solved one problem too many in a world that loves regular big updates.

How long before I even start to feel a little constrained by what my MacBook Air M1 does?



>>> Matt is Senior Editor at Future's flagship technology website TechRadar and has been charting changes at Apple since his student days. He's skeptical of tech industry hyperbole, but still gets warm and fuzzy on hearing "one more thing."



# LETTER OF THE MONTH

As a lifelong Apple fan, I own everything from an iPod touch to a Mac mini M1 and M1 MacBook Air, and enjoy keeping up to date with the latest software and, when I can afford it, hardware. But, for the first time ever, I've decided not to buy an Apple product. The product in question is the AirPods. When they first came out I immediately bought a pair and they were everything I could have wished for, great sound and really user friendly. But recently the battery life has decreased to about 30 minutes listening time in one go.

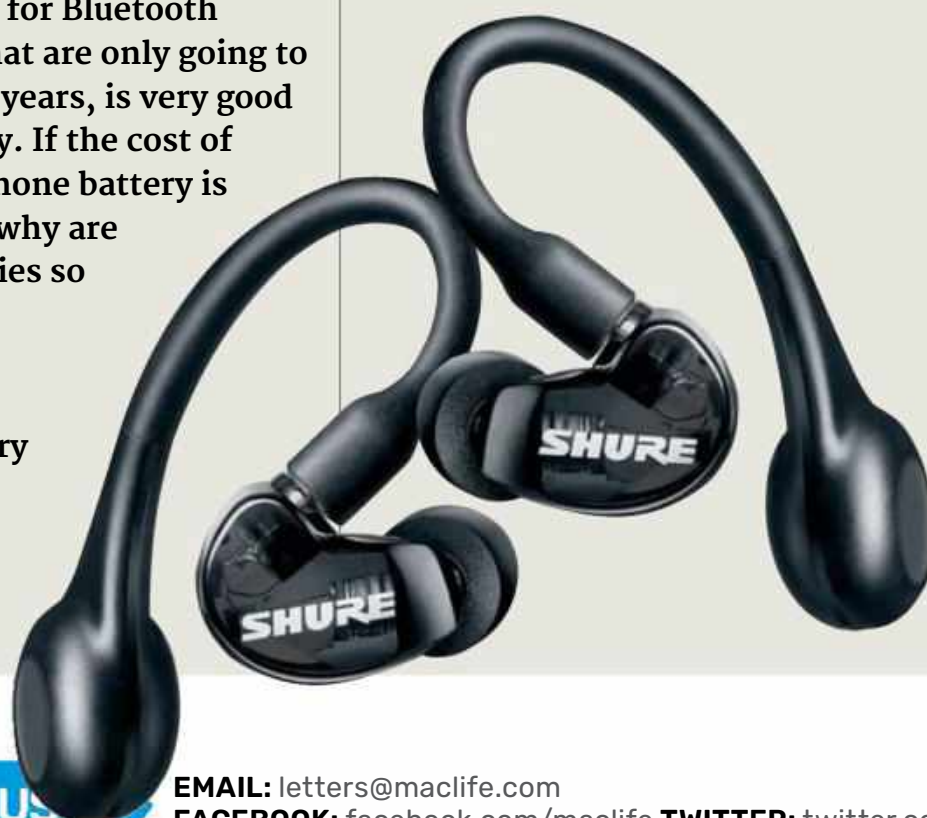
Thinking I could easily get the batteries replaced, I visited an Apple Store and spoke with a couple of assistants. To cut a long story short, I was advised to buy a new pair, as the cost of replacing the batteries was almost the same price. Having learned that, I decided to revert back to wired headphones and am currently using some inexpensive Sennheiser in-ear headphones, which sound really good and only cost about \$20. I honestly don't think that \$169 for Bluetooth headphones, that are only going to last a couple of years, is very good value for money. If the cost of replacing an iPhone battery is only \$69, then why are AirPods' batteries so difficult and ridiculously expensive to change? Not very eco-friendly either, which surprises me.

**SCOTT TAYLOR**

You make a very good point Scott, unfortunately batteries in wireless headphones tend to be one of those components that are at risk of degrading over time, though on *MacLife* we've had many pairs of wireless headphones that have lasted years without issue. Sure, the battery life will never be what it once was, but that's to be expected.

We're not surprised by the AirPods' lack of repairability either. They pack a lot of technology into a tiny space and, as they're mass-produced, their components are often glued or soldered, making repairs (and battery replacements) difficult. In many cases Apple simply replaces faulty AirPods with new ones, but that's not exactly eco-friendly even if Apple does recycle them.

But that's true of a lot of wireless earbuds. Some of the most eco-friendly earbuds we've seen come from Shure — its more premium models are designed to be repairable. They can be pretty pricey though.



## Will it work?

Reading the "Projecting Photos" letter in the January 23 issue of *MacLife*, I had an idea that a possible workaround could be the presenter using the Reflector app on a Mac or PC. All they would need to do is project the Mac or PC screen running Reflector on it. I've noticed Reflector tends to mirror exactly what's on the screen to a Mac or PC. The other benefits are they could mirror an iPhone and iPad at the same time, as well as the instructor's iPad or iPhone and other student iPads or iPhones at the same time. Sadly, when I tested it with the Photos app, exactly the same thing occurred — it projected fine, but was missing the user interface from the app.

**NATHAN PARKER**

Thanks for getting in touch Nathan, that's a shame it didn't work out. We've an idea that using Continuity Camera on a Mac hooked up to an external projector might allow the presenter to offer a live demo of what's on screen. It seems like it would work in theory, but we would need to try it to see!

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**MacLife**



Start

# CRAVE

THE GEAR WE'RE LUSTING AFTER



## Pimax Portal

**\$399** From [pimax.com](https://pimax.com)

>>> There are companies that make handheld games consoles, and there are companies that make virtual reality (VR) headsets. Pimax, though, is combining both into a single device: the Pimax Portal.

It's the definition of all-in-one. In its standard mode, you get a handheld games console much like the Steam Deck, only with a 144Hz 4K display. The sides can be detached and used as standalone controllers for living room gaming, just as

you'd do with the Nintendo Switch. And you can combine it with Pimax's Mini Station to stream PC games right to the Portal.

Plus, added to that is the Portal's VR mode — load it into a headset, attach the side controllers to Pimax's hand-tracking attachments, and you get a full-fledged virtual reality experience. Whatever your gaming tastes, chances are the Pimax Portal — now available to back on Kickstarter — can offer something.



This hybrid device can switch between different gaming modes.



## Bowers & Wilkins Px8 McLaren Edition

**\$799** From [bowerswilkins.com](https://bowerswilkins.com)

>>> McLaren and Bowers & Wilkins have collaborated in the past on various high-spec supercars. Now, they've combined again to create the Px8 McLaren Edition noise-canceling headphones. They come in a Galvanic Grey and Papaya Orange colorway inspired by the trim used in McLaren founder Bruce McLaren's early racing cars. That's complemented by the headphones' excellent audio and noise-canceling abilities.

The McLaren Edition joins another special version of the Px8 headphones made to celebrate the 60th anniversary of the James Bond film franchise. Both are perfect if you enjoy style as much as you do substance.



## Apollo Neuro

**\$399** From [apolloneuro.com](https://apolloneuro.com)

>>> The Apple Watch is a superb fitness tracker, but even Cupertino's finest might be taken aback by the health capabilities of the Apollo Neuro. Instead of simply measuring your key metrics, this device — wearable on your wrist, around your ankle, or clipped to a piece of clothing — aims to improve them.

The Apollo Neuro has been developed with the help of physicians and neuroscientists, and works by emitting gentle vibrations that aid your relaxation. According to Apollo, that touch therapy can help your sleep, focus, energy and more.



## KeySmart ChargeBook

**\$119.99** From [getkeysmart.com](https://getkeysmart.com)

>>> Many of us carry a notebook and organizer when we travel. KeySmart has taken that idea and combined its analog style with digital smarts in the form of the ChargeBook organizer, which charges your devices on the go.

Thanks to the integrated cables and 8,000mAh battery pack, just slot your iPhone into one of the pockets, get it connected, then let it juice up while you work. Better yet, there's a wireless charging pad for even more convenient power. There's also eight pockets to stash your stuff, including slots for credit cards, cables, cash and more.



## Rotel S14

**\$2,499** From [rotel.com](https://rotel.com)

>>> If your home hi-fi setup is missing something for your streaming services, the Rotel S14 could be for you. Stream music from almost anywhere right to your speakers. That includes high-resolution audio like MQA files from Tidal and Qobuz. There are other audio options, including MP3, WMA and AAC files loaded onto flash drives, and it works over Bluetooth with support for the aptX HD codec.

If you stream a lot of audio and care about high-resolution output, it could be a great way to forge the perfect home audio system.

# THE BEST FREE APPS

for Mac, iPhone and iPad



We take a look at some of the  
best downloadable software  
that won't cost you a penny

WRITTEN BY IAN OSBORNE

GET





T

here are some great free apps available for all your Apple gear. They're not just handy utilities or simple games either. There are some surprisingly powerful software suites available at no cost, with a quality that rivals — or even surpasses — their professional equivalents.

These apps are often produced by programmers in their spare time, people who put in many hours of work. They're a labor of love, intended for everyone to get more out of their Apple kit for zero outlay.

Whether you're looking for an office suite, a picture editor, a video converter, a game or just about anything else, there'll be a free app for you to try out.

Let's take a look at some of the best free software available on the Mac, iPhone and iPad. ●

# WHAT IS AVAXHOME?



# AVAXHOME-

the biggest Internet portal,  
providing you various content:  
brand new books, trending movies,  
fresh magazines, hot games,  
recent software, latest music releases.

Unlimited satisfaction one low price

Cheap constant access to piping hot media

Protect your downloadings from Big brother

Safer, than torrent-trackers

18 years of seamless operation and our users' satisfaction

All languages

Brand new content

One site



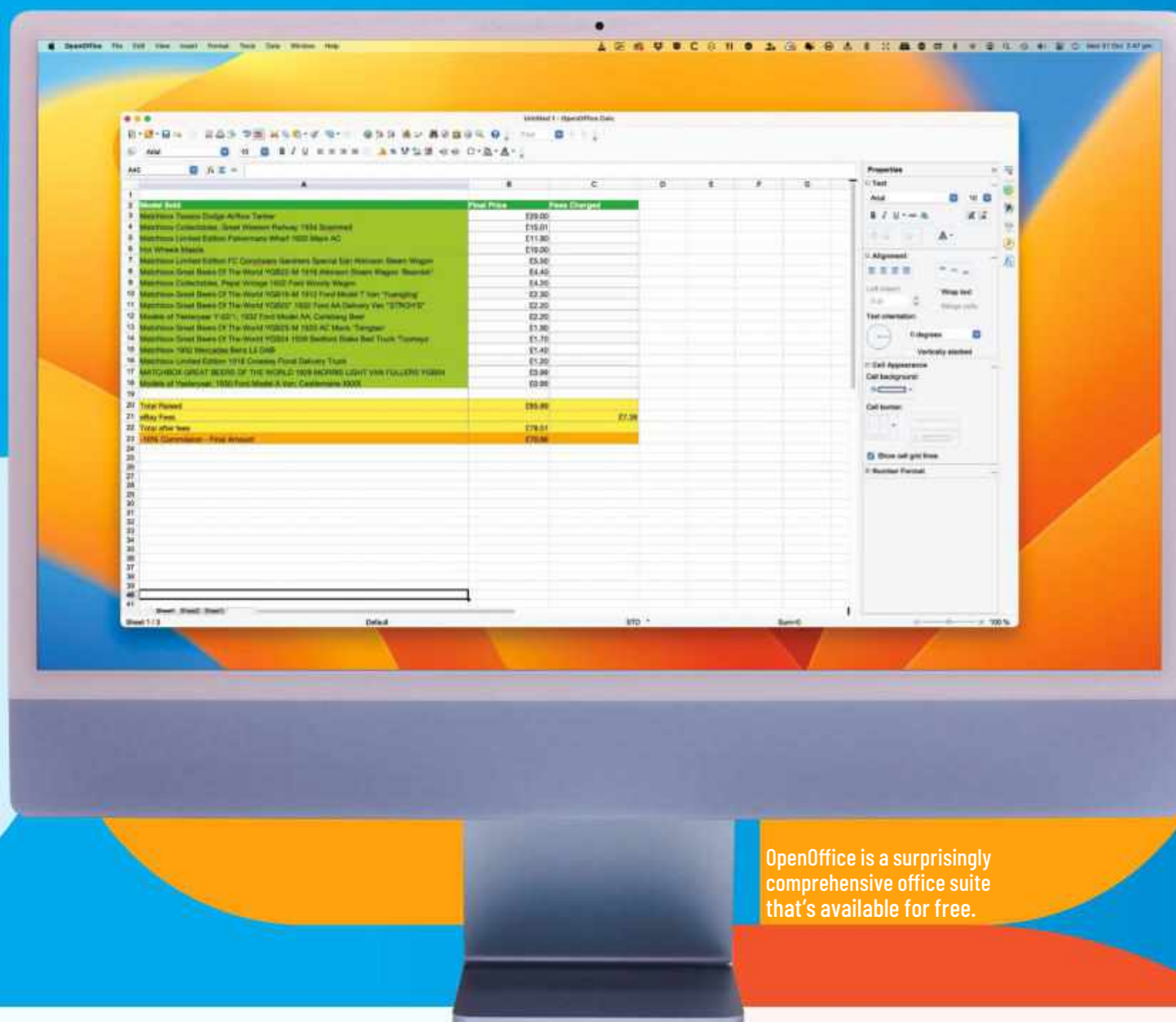
# AVXLIVE • ICU

AvaxHome - Your End Place

We have everything for all of your needs. Just open <https://avxlive.icu>

# Must-have freebies for Mac

Boost your Mac's toolset without busting your bank account



OpenOffice is a surprisingly comprehensive office suite that's available for free.

## Apache OpenOffice

FROM [openoffice.org](http://openoffice.org)

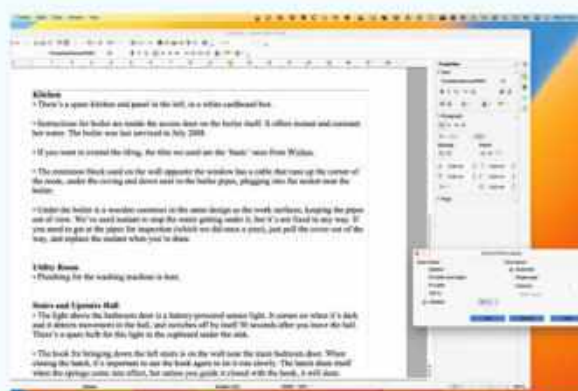
NEEDS OS X 10.7 or later



If you're having compatibility problems when passing on files or need a feature that no other free option offers, it's worth taking a look at OpenOffice. It offers a

range of apps, namely Writer (word processor), Calc (spreadsheet), Impress (presentation app), Draw (vector graphics), Math (equation editor) and Base (database management). Cross-platform and inter-app operability is strong, making it a good option for sharing files or if you use different

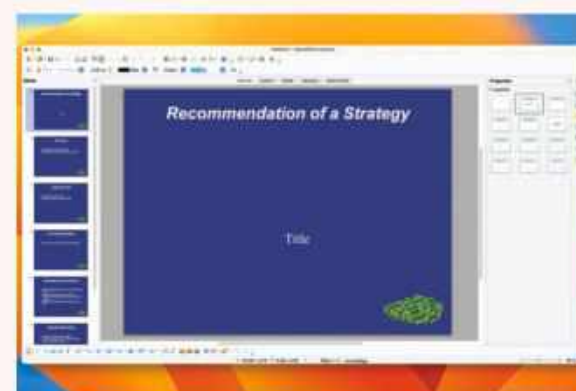
computers and software. Admittedly, if you're looking more for free productivity tools, Apache OpenOffice isn't the best of the bunch. It's not as accessible as Bean for word processing, nor as friendly as Apple's own Pages, Numbers and Keynote. But for multi-doc type collaboration it could be for you.



Writer is OpenOffice's answer to Pages or Word.

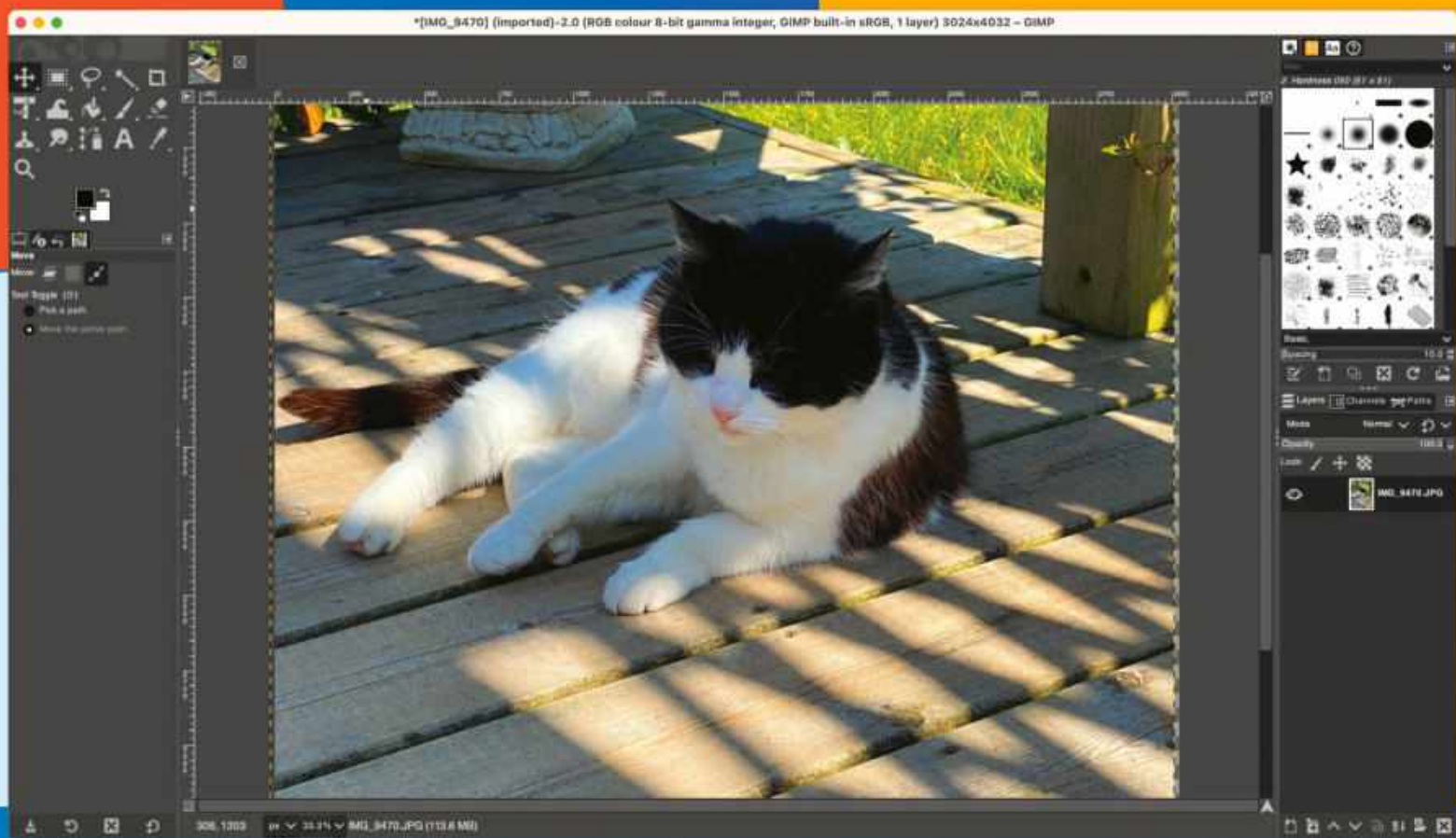


Spreadsheet app Calc is surprisingly powerful.



Impress enables multimedia presentations.





## GIMP

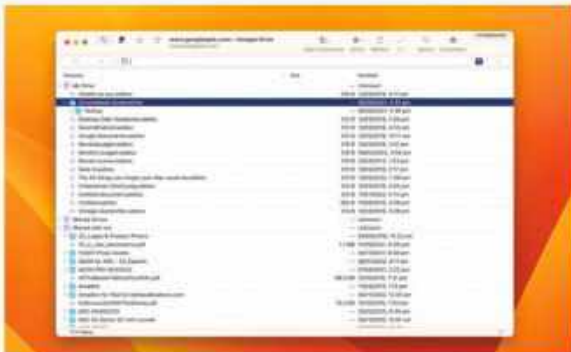
FROM [gimp.org](https://www.gimp.org) **NEEDS** macOS



GIMP is essentially a free answer to Adobe's Photoshop. It's not as powerful, and there's no in-house support despite its steep learning

curve, but it is one of the best free apps of its type. It's great for cropping, distorting, resizing, captioning and straightening photographs, and it's also

very capable when creating your own artwork. It's a bit of a difficult program to get to grips with, but the interface has matured nicely in the last few versions.



## Cyberduck

FROM [cyberduck.io](https://cyberduck.io)

**NEEDS** macOS 10.12 or later



This FTP and cloud storage browser is paid for on the Mac App Store, but free from the developers. There's a registration option, but this only disables the donation prompt. It's the easy way to download and upload files to and from FTP, SFTP, WebDAV, Amazon S3, OpenStack Swift, Backblaze B2, Microsoft Azure, Microsoft OneDrive, Google Drive and Dropbox cloud services. It's also useful for browsing your local files, and your network-attached storage (NAS) drive.



## Bean

FROM [bean-osx.com](https://bean-osx.com)

**NEEDS** macOS 10.13 or later



Bean is the word processor you didn't know you needed. It's not feature-packed, but that's an advantage. Instead it does everything you need, but nothing you don't. It's perfect for those who do a lot of writing, but don't require the advanced functions offered by in-depth word processors, such as Pages or Microsoft Word. Your correspondent is in fact writing this article using Bean. With its minimal distractions, real-time word and character counts and essentials-only features, it's ideal for any writer.



## HandBrake

FROM [handbrake.fr](https://handbrake.fr)

**NEEDS** macOS 10.13 or later



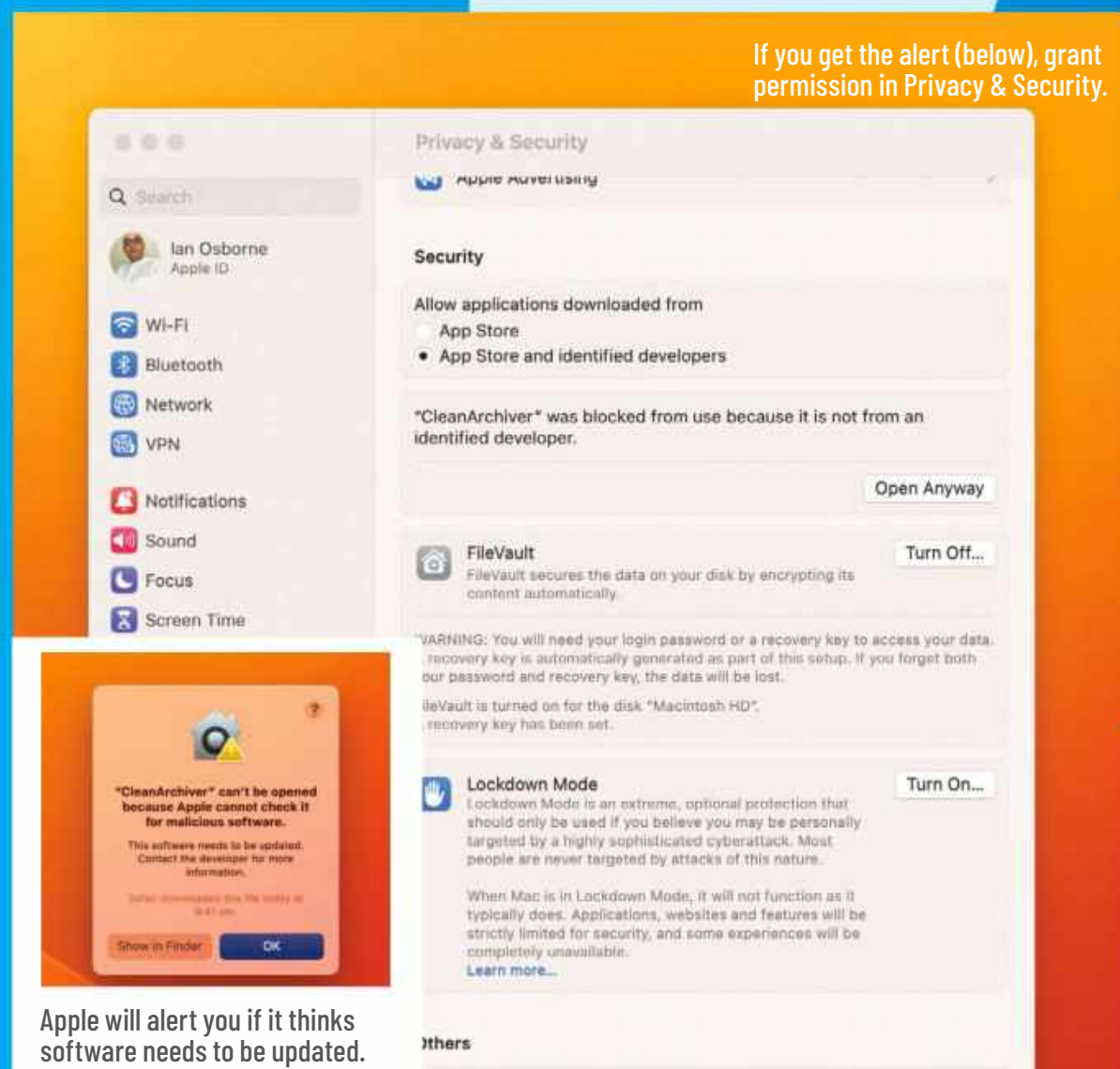
This open-source video transcoder is the last word in converting video from almost any format into a range of modern, widely supported codes. There's plenty of settings to play around with if you want to get the most from video encoding, but if you just want to get the job done quickly and easily, check out the presets. You can customize a preset to suit your needs too, and then save it out as a new one. There's a learning curve involved, but a little practice is time well spent.



# Did you know?

To help keep your Mac safe, it won't open apps unless they're downloaded from either the Mac App Store or from an identified Apple developer. This is to stop malicious apps installing viruses and other malware. But if you get a message saying an app you downloaded can't be opened (but you're sure you can trust the developer), you can open it using the following procedure.

Go to **Apple > System Settings (Ventura) or System Preferences (Monterey or earlier)**, then head to **Privacy & Security**, and find the **Security** section. Here, make sure your Mac is set to open apps from "App Store and identified developers". There's a message here about the last app you tried to open that was blocked. If — and only if — you're sure the app is legitimate, click the **Open Anyway** button to open it.



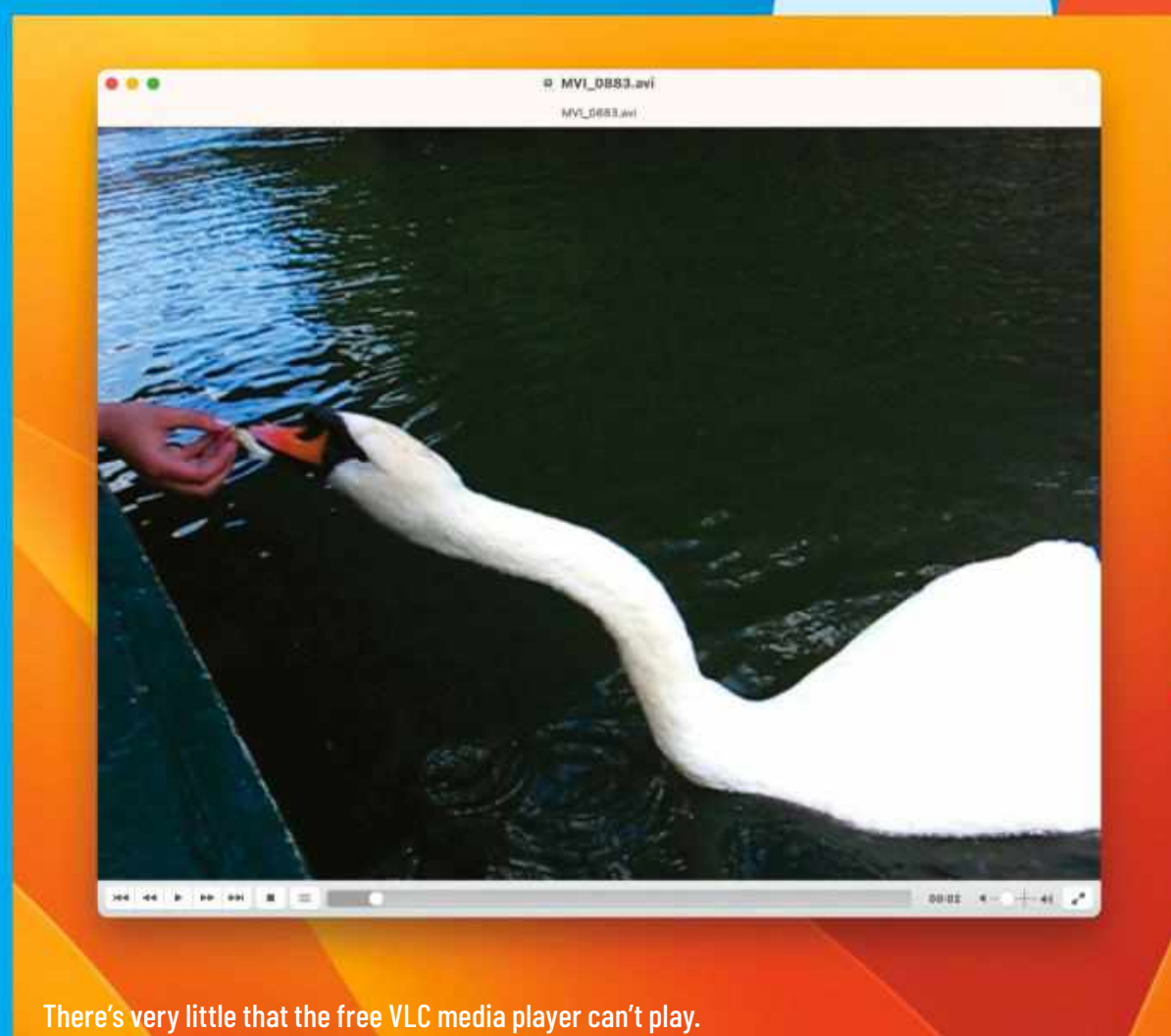
## VLC

FROM [videolan.org](http://videolan.org)  
NEEDS OS X 10.7.5 or later



If your video file won't play, then you can launch VLC. It can probably handle it. It's not the prettiest of video players and is unlikely to become your favorite, but when it comes to sheer versatility and comprehensiveness, it deserves a place on your hard drive as a backup. Available for just about any computer or mobile device from [videolan.org](http://videolan.org) and the Mac App Store/App Store, all you need to do is simply drag your media into the VLC window to start it playing. It has handy streaming capabilities too, including from local NAS drives, but there are easier ways of doing this.

If you want to delve deeper, there are plenty of features to play with here, but VLC is ideal as a fall-back player for files that won't play on other apps — that's where it really proves its worth.



There's very little that the free VLC media player can't play.





Are your drives up to speed? Check their credentials with Blackmagic.

## Blackmagic Disk Speed Test

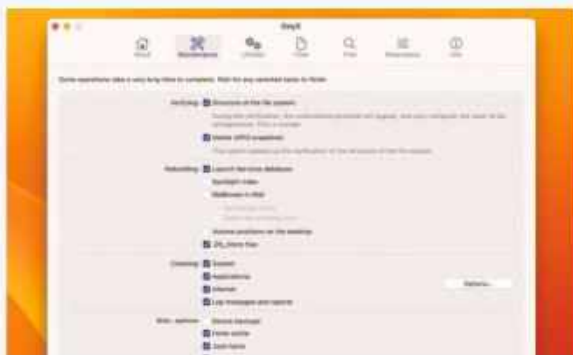
FROM [blackmagicdesign.com](http://blackmagicdesign.com) NEEDS macOS 10.13 or later



Are your disks working optimally? Can they cope with high-resolution video? If you're an editor and you need to check your equipment – or if you want to assess your drive speed's read and write

performance for any reason whatsoever – the Blackmagic Disk Speed Test is for you. Available for free from the Mac App Store, you just click the Start button and Disk Speed Test runs read and write tests on your disk using large blocks

of data, then displays the results. You can test your local drive or connected disks, and screenshot the data for future reference. It helpfully cleans up after itself too, so there's no junk left behind after the tests.



## OnyX

FROM [titanium-software.fr](http://titanium-software.fr)  
NEEDS macOS 13 or later



It's amazing to think this all-purpose maintenance utility is free. There's a tailor-made option for every version of macOS/OS X since Jaguar. You can use the utility to verify the structure of the system files; run miscellaneous maintenance and cleaning tasks; configure parameters in the Finder, Dock, Safari and some Apple applications; delete caches; rebuild databases and indexes, and more. It has an intuitive, Mac-like interface, but some features should only be used if you really know what you're doing.

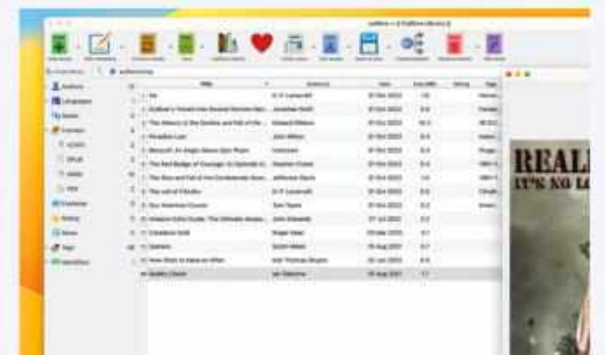


## CleanArchiver

FROM [github.com/anyakichi](https://github.com/anyakichi)  
NEEDS OS X 10.6 or later



Your Mac produces a lot of files you never see, such as resource forks and .DS\_Store files. These carry out mundane system tasks. For example, .DS\_Store appears in every folder, and stores info such as the folder view last used, the positions of its icons and more. These aren't a problem on Mac – any file that starts with a full stop is invisible to the user. But if you archive a folder and send it to a non-Mac user, they can get in the way. CleanArchiver gets rid of them, so your archive contains only files you want to send.



## Calibre

FROM [calibre-ebook.com](http://calibre-ebook.com)  
NEEDS macOS 10.15 or later



Calibre isn't pretty – its interface isn't at all Mac-like, and it keeps nagging you about updates. But it does an excellent job of managing your ebooks and side-loading them onto devices such as Amazon's Kindle or Barnes & Noble's Nook. You can convert a book between formats so it reads well on your reader of choice, add a cover should your digital file lack one, and read a book on your Mac without leaving the app. You can edit the metadata too, making sure information such as release date, author and publisher are correct.

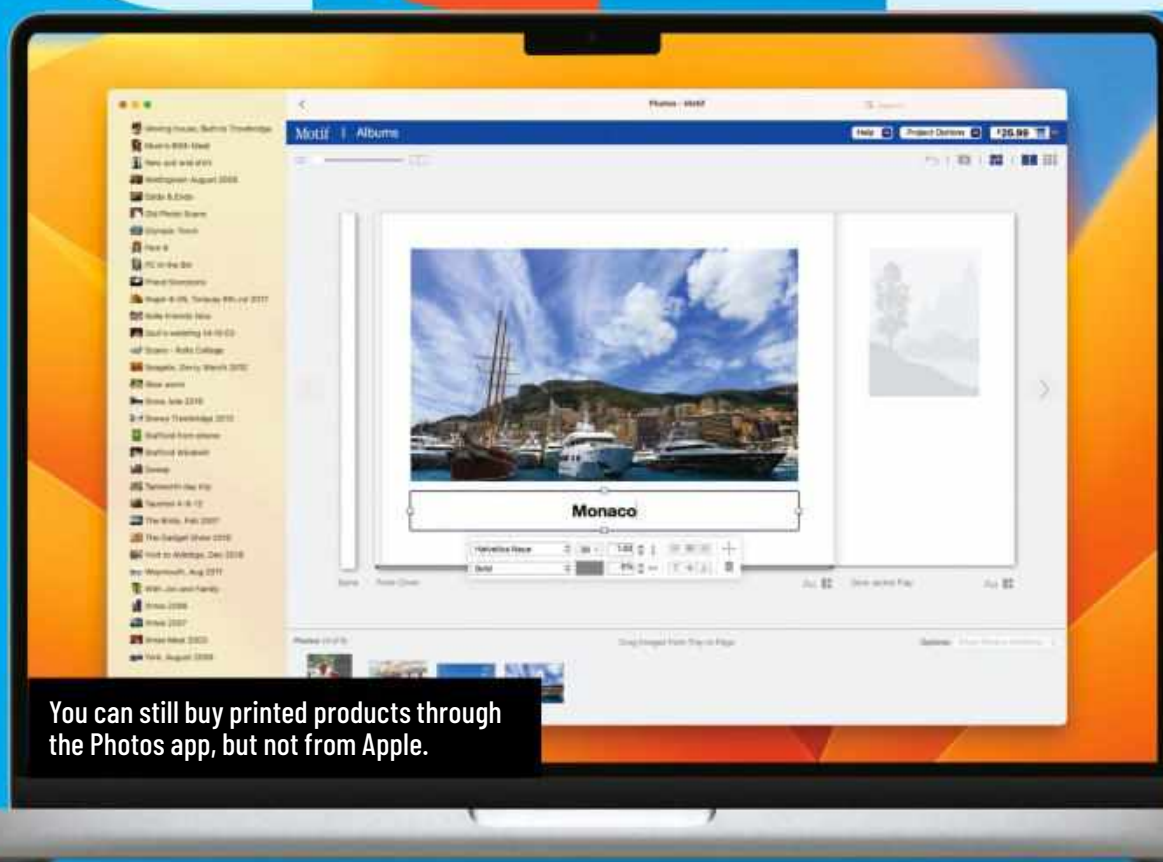
## Motif

FROM [motifphotos.com](http://motifphotos.com)

NEEDS macOS 10.14 or later



Apple used to offer print services integrated with the iPhoto app, allowing you to get prints, printed books, cards, calendars and more based on your snaps. Since then, Photos has replaced iPhoto, and Apple no longer offers these services, but you can use Motif instead. Download it as an extension from the Mac App Store and it gives you the chance to design and order printed projects, directly from the Photos app. It's easy to use, perhaps a little too easy; its desktop-publishing facilities aren't exactly comprehensive. Even so, it's fun and a decent enough successor to Apple's own print facilities.



You can still buy printed products through the Photos app, but not from Apple.



## Transmission

FROM [transmissionbt.com](http://transmissionbt.com)

NEEDS macOS 10.13 or later



BitTorrent downloading is usually associated with copyright theft, but it has legal uses too. [publicdomaintorrents.info](http://publicdomaintorrents.info), for example, is packed with torrents for classic films now in the public domain and can therefore be legally downloaded and enjoyed. Transmission is a free BitTorrent client, and it's easy to use. Simply drag the torrent file into the app, and watch as your media or software downloads. Progress of all your torrents is shown, and if you click on one and click its "i" icon, you can see more info. Downloads can be paused and slowed if it's slowing your Mac too.



## Amphetamine

FROM [roaringapps.com](http://roaringapps.com)

NEEDS OS X 10.11 or later



Have you ever had your Mac go to sleep while it was in the middle of a job? If so, you need Amphetamine. It's by far the best stay-awake app on Apple's desktops and notebooks, and it's easily accessible in the menu bar at all times. You can set your Mac to stay awake indefinitely, only going to sleep when you turn Amphetamine off again. You can also keep it awake for a set time, while a certain app is running or while a file is downloading, with Amphetamine turning off automatically when these conditions are met. It's a must-have freebie for Mac.



## Paparazzi!

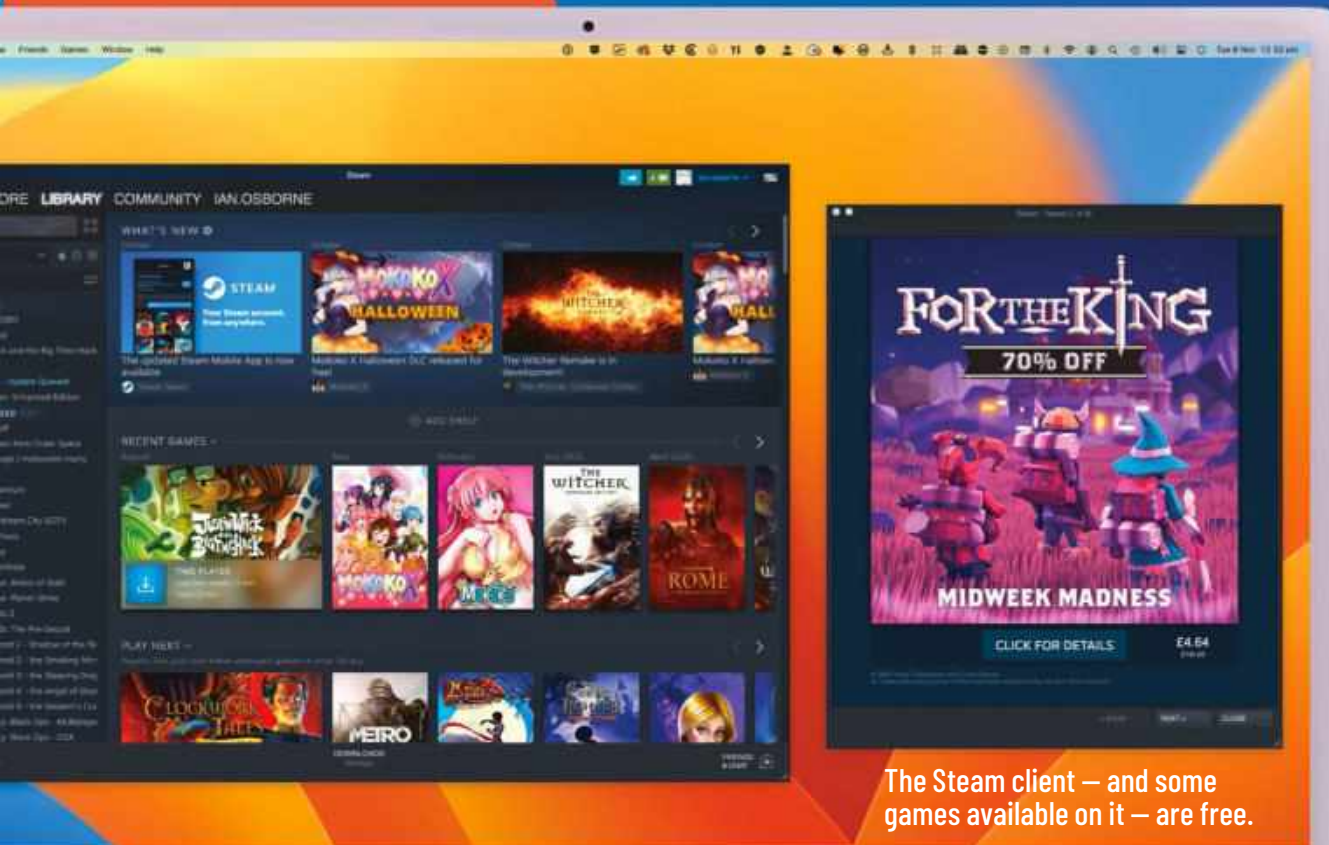
FROM [derailer.org/paparazzi](http://derailer.org/paparazzi)

NEEDS OS X 10.9 or later



Paparazzi! does one job and it does it well. It takes screenshots of websites. Not just the portion of the website you can see on your screen, but the whole of the page you're viewing, from top to bottom. This is great if it's a very long page and you need a screenshot of all of it. All you do is copy the URL from your browser of choice into the Paparazzi! app, press Enter and the page is loaded. Click the Download button and it's saved in a file format of your choice. You can navigate from page to page using Paparazzi! too, so if you need to save more than one page on a site, no problem.





## Steam

FROM [store.steampowered.com](https://store.steampowered.com)

NEEDS macOS 10.13



If you enjoy games, Steam is a must-have. It's ideal for buying and managing your gaming titles. The app keeps a library of Steam games you've bought (or downloaded for free — there are plenty of free-to-play titles on offer) and lets you download and delete them at will. If you need more hard-drive space, dump a couple of games you're not playing (you can always reinstall them later). You can buy games through the app too, and it's easy to keep them up to date with the latest patches. Just make sure the game you're buying is compatible with your Mac.



## Colloquy

FROM [github.com/colloquy/colloquy](https://github.com/colloquy/colloquy)

NEEDS macOS 11 or later



If you gave up on Internet Relay Chat (IRC) — the text-based chat system for instant messaging — when Ircle was abandoned, perhaps it's time to go back. Colloquy is a modern IRC client, with most of its functions bundled into a single window. The app is pretty easy to find your way around, but unfortunately, IRC is not, so beginners might find it a chore at first. Colloquy is certainly the best client for it on the Mac, so it's as good a place as any to start. It's also available on iPhone and iPad through the App Store, but those versions aren't free.



## OpenEmu

FROM [openemu.org](https://openemu.org)

NEEDS macOS 10.14.4 or later



Emulation can be a tricky business, but with OpenEmu it gets a lot simpler. It offers emulation for a huge range of gaming consoles. It looks great too, organizing game ROMs into a thumbnail grid, to which you can add a graphic of the box art or a screenshot. It recognizes a lot of controllers out of the box, and if your own joystick isn't covered, you can map out a game's controls to its buttons and sticks. Naturally it won't play every game, and its performance is dependent on the power offered by your Mac, but if you're into retro gaming OpenEmu's a must.



## Mactracker

FROM [mactracker.ca](https://mactracker.ca)

NEEDS macOS 10.12 or later



Mactracker is clearly a labor of love. In a nutshell, it's an ever-growing database of Apple gear, including desktop and notebook Macs, iPhones, iPads, Apple TV models, Apple Watches and accessories such as printers, scanners, storage devices and cameras. Apple operating systems are covered too, including macOS, iOS, iPadOS, watchOS and more. If it's made by Apple, it's probably there, and outlined in extensive detail. If you need to know something about an Apple product old or new, and need a reliable reference point, you should check out Mactracker.



# Indispensable additions to your iPhone

Our selection of the very best apps for iOS devices, from creativity to organization

From social media to social gaming, from multi-format messaging to mighty reference tomes, you name it, there's probably a free iPhone app for it.

Open the App Store on your iPhone and search for an app. If there's a "Get" button instead of a price, then the app is free to download and use (although, be aware that there might still be in-app purchases needed for certain features).



## Facebook

FROM Facebook.com

NEEDS iOS/iPadOS 13.4 or later



What could we write about Facebook that you haven't read already? Not much we'll wager, but as it's one of the major social-media platforms and has a great free application for the iPhone and iPad, we won't exclude it from our list. Using the free Facebook app is far more convenient than accessing the website. It offers the same features, but is perfectly tuned to the iPhone and its touchscreen. You can read incoming news, post to your timeline and more, but if you want the personal messaging feature, you also need the Messenger app (also free).



## Wikipedia

FROM Wikipedia.org

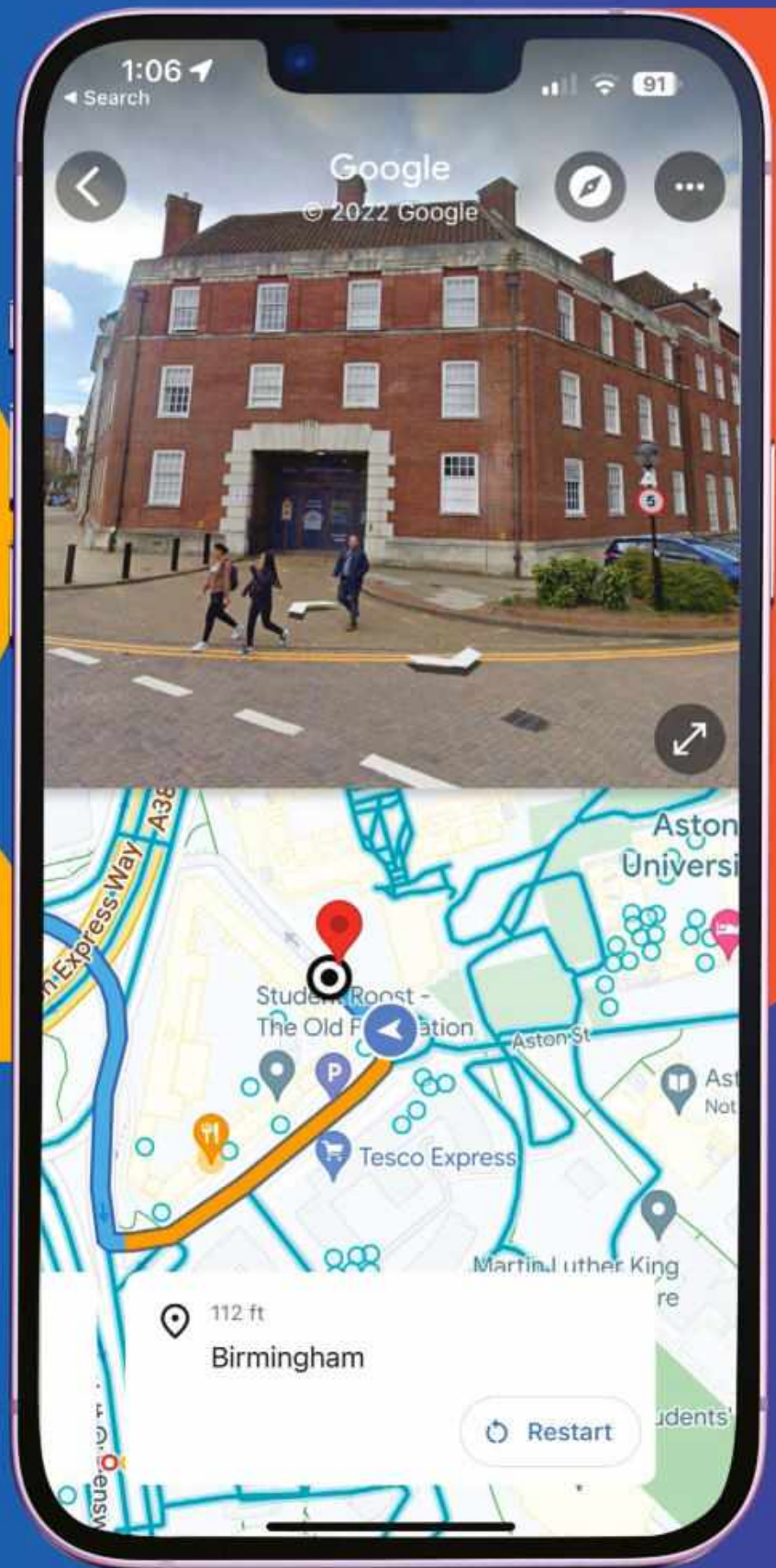
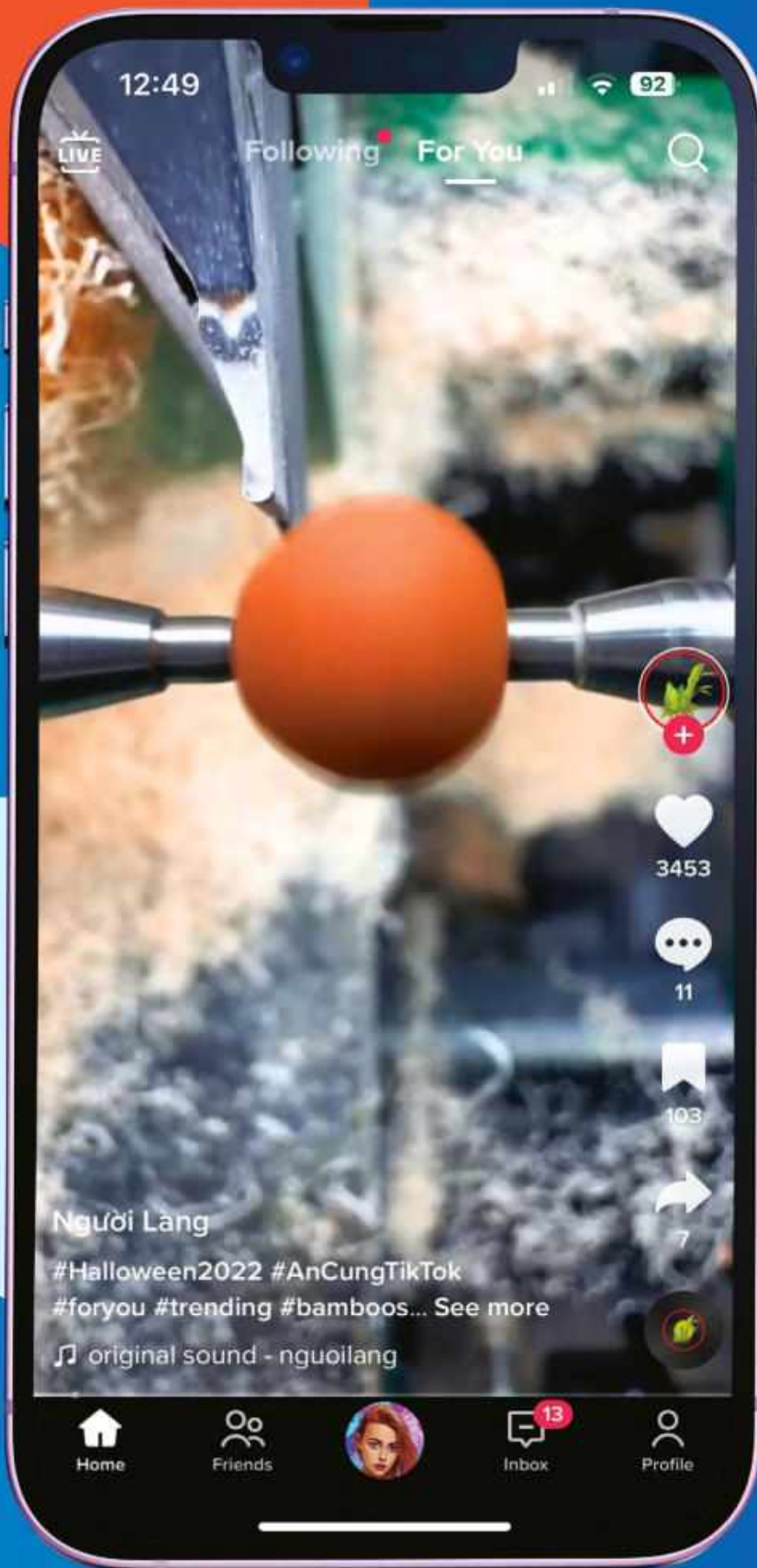
NEEDS iOS 14 or later



If there's something you need to look up online, chances are it will be on Wikipedia. It's an encyclopaedia that anyone can edit or add to. If there's a subject you think needs a page, you can add one. If you think there's a mistake on an entry, you can correct it. If a

page needs updating or adding to, you can do that too. Of course, this means it's prone to both errors and vandalism, but it's still worth having for when you need to check your facts. Just don't depend on it for writing essays or magazine features... It's completely free, with no adverts.





## TikTok

FROM [tiktok.com](https://www.tiktok.com)

NEEDS iOS 10 or later



The social media app TikTok is based on short user-made video clips. Choose who to follow – including celebrities as well as your friends and family – and enjoy their videos on your iPhone. You can also make your own and share them with the world. These

videos can last from 15 seconds to 10 minutes, so they won't take up huge amounts of your time (unless you watch hundreds of them, of course...). The more successful TikTokers have become moderately famous, allowing them to take corporate sponsorship for influencer marketing.

## Google Maps

FROM [Google.com/maps](https://www.google.com/maps)

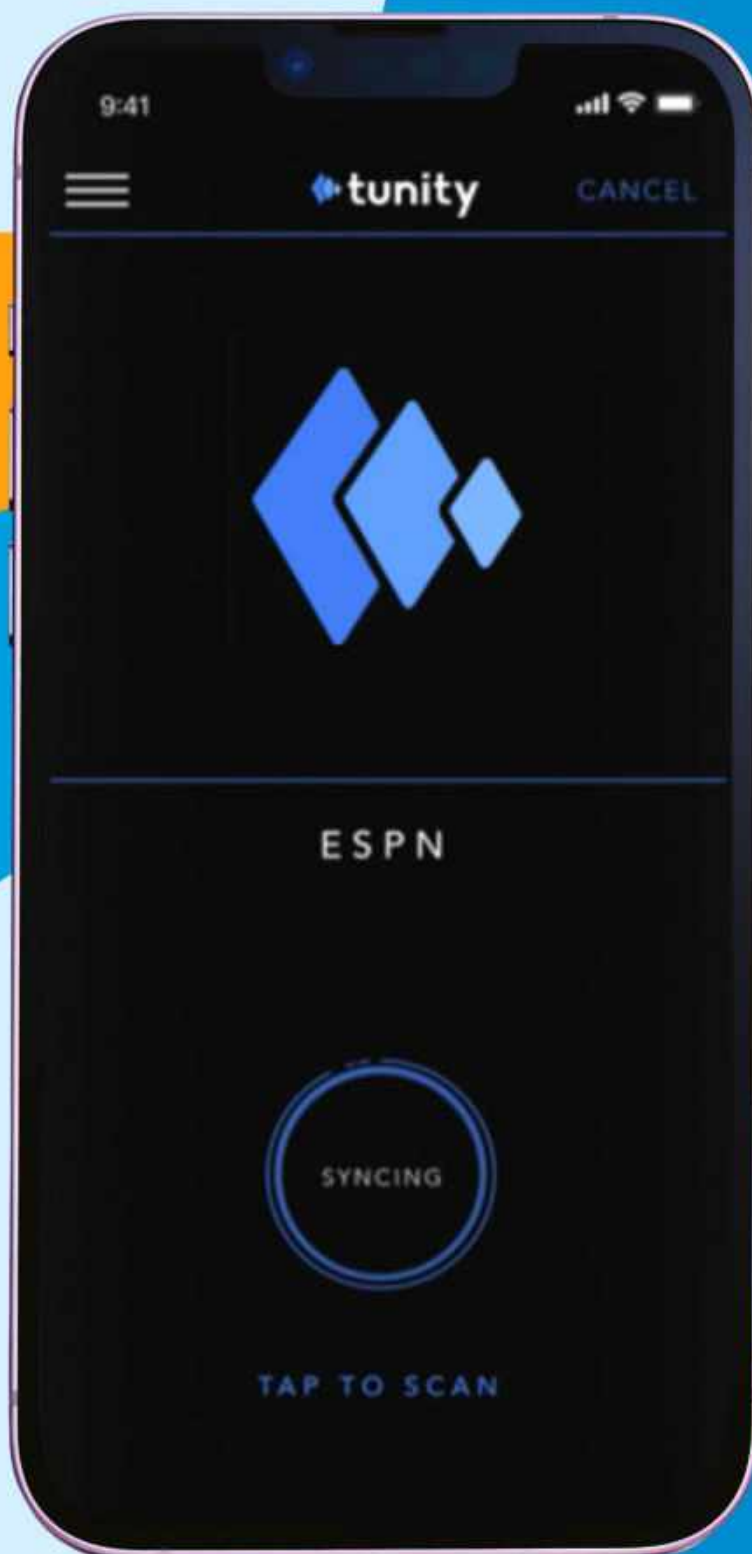
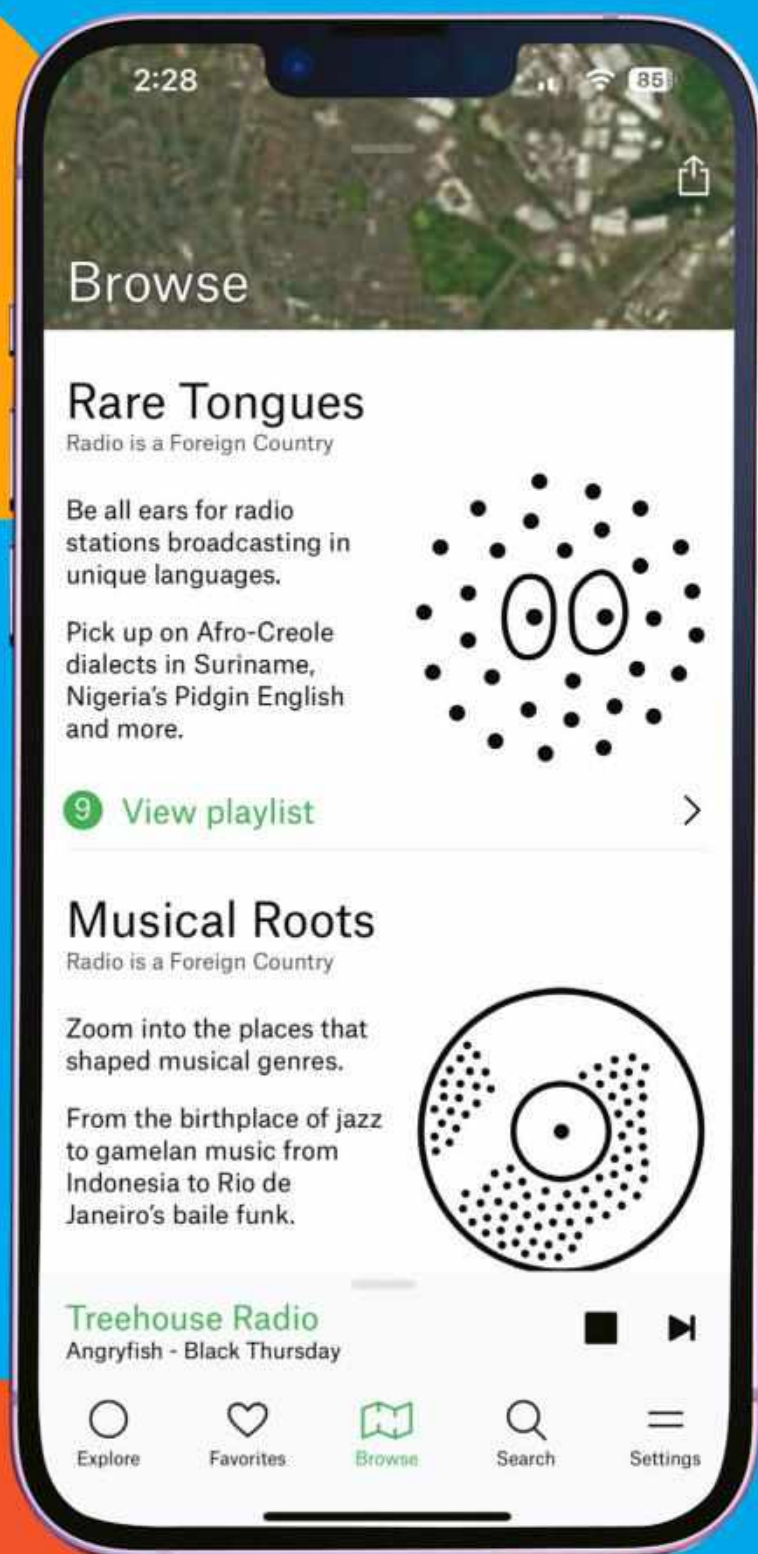
NEEDS iOS 13.4 or later



Google's free Maps app complements the Apple Maps app very nicely. The two navigation giants offer similar features and information, so which you prefer is mostly a matter of taste. Google's Street View is definitely ahead of Apple's similar Look Around feature,

though. It covers almost the entire world, while Apple's equivalent is limited to major cities in a handful of countries. Naturally, as Google Maps is free and Apple Maps is bundled with iOS anyway, there's no reason not to have both on your iPhone, meaning you can take your pick.





## Radio Garden Live

FROM *radio.garden*

NEEDS iOS 11 or later



Radio Garden Live plays radio stations from everywhere around the world. As well as organizing them according to genre or country, the app offers a rotatable globe displaying the locations of each internet radio station – very convenient. A non-profit Dutch radio and digital

research project, you can mark stations as favorites, explore local, national and international stations, and more. At the time of writing, there was a problem with listening to overseas stations in some countries, but the developer hopes to resolve this issue soon, and of course you can easily circumvent this by using a VPN.

## Tunity

FROM *tunity.com*

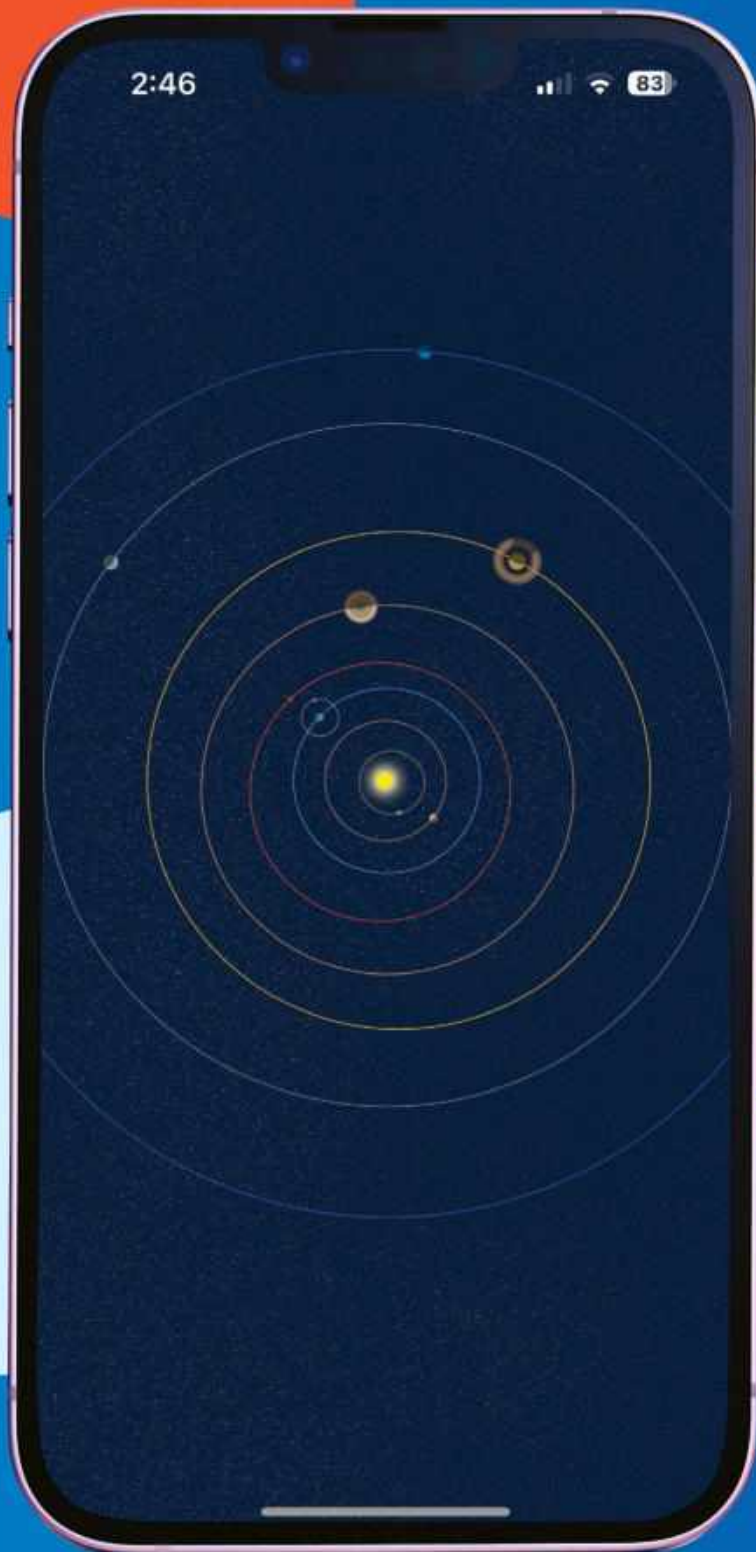
NEEDS iOS 13 or later



This one's awesome for the hard of hearing, or those who want to watch TV without disturbing others in the room. With Tunity, you can use the app to scan the TV screen with your iPhone's camera, and it identifies the channel you're watching. It then streams the audio to your iPhone, from

where you can listen to it with connected headphones. For example, if you're in a bar that plays sports shows on muted screens, with Tunity you can get the soundtrack back. Or if you're in a noisy environment such as an airport, or your living room when the children are home, Tunity beams the sound directly to your ears.





## Calendarium

FROM [piotrknapczyk.com](http://piotrknapczyk.com)  
NEEDS iOS 9 or later



Historians take note. Calendarium gives you a list of important historical events that happened on today's date, whether it happened last year or deep into antiquity. Scroll up and down for more events, and tap one for a pop-up window giving links to Wikipedia. You can use the

chevrons in the bottom corners of the screen to move forwards and backwards through the calendar, tap the planet Saturn at the top left for a map of where the planets are today, or tap the "i" icon opposite it for further information. It even displays the times of the day's sunrise and sunset.

## Speedtest by Ookla

FROM [speedtest.net](http://speedtest.net)  
NEEDS iOS 13 or later



How fast is your internet? Are you getting the speeds you're paying for? With Speedtest by Ookla you can check. It's a great little utility that does one job, and does it well. Open the app and it identifies your service provider. Tap the Go button and it connects to a local

server and performs a test on your download and upload speeds. Check them against what your ISP says you should be getting, but remember, the figures they quote are for optimal conditions. You're bound to lose a little speed depending on the cabling you have. You can rate your ISP in the app too.

## Skype

FROM *skype.com*

NEEDS iOS 12.2 or later



With Skype, you can send messages and make audio and video calls to anyone from your iPhone. It's cross-platform so it doesn't matter whether the other person has an Apple device, plus internet calls are always free. You can add credit to your Skype account and make calls to landlines and send messages to mobile phones through SMS too. Up to 49 people can join a video chat, and it has some really useful features, such as Skype Translator and the ability to replace the backgrounds in video chats.



## Vinted

FROM *vinted.com*

NEEDS iOS 12 or later



Lots of people complain about eBay, but very few move their auctions or purchases to another service. If you're one of them, check out Vinted. This online second-hand store sells at a fixed price, which means you don't have to wait for an auction to end before purchasing, and it's a lot easier to communicate with sellers if you've questions about their sales, or want to barter the price. There are no selling fees, but buyers pay a small service fee which is added to the price of their purchases.

### Shop by category



Women



Men



Kids



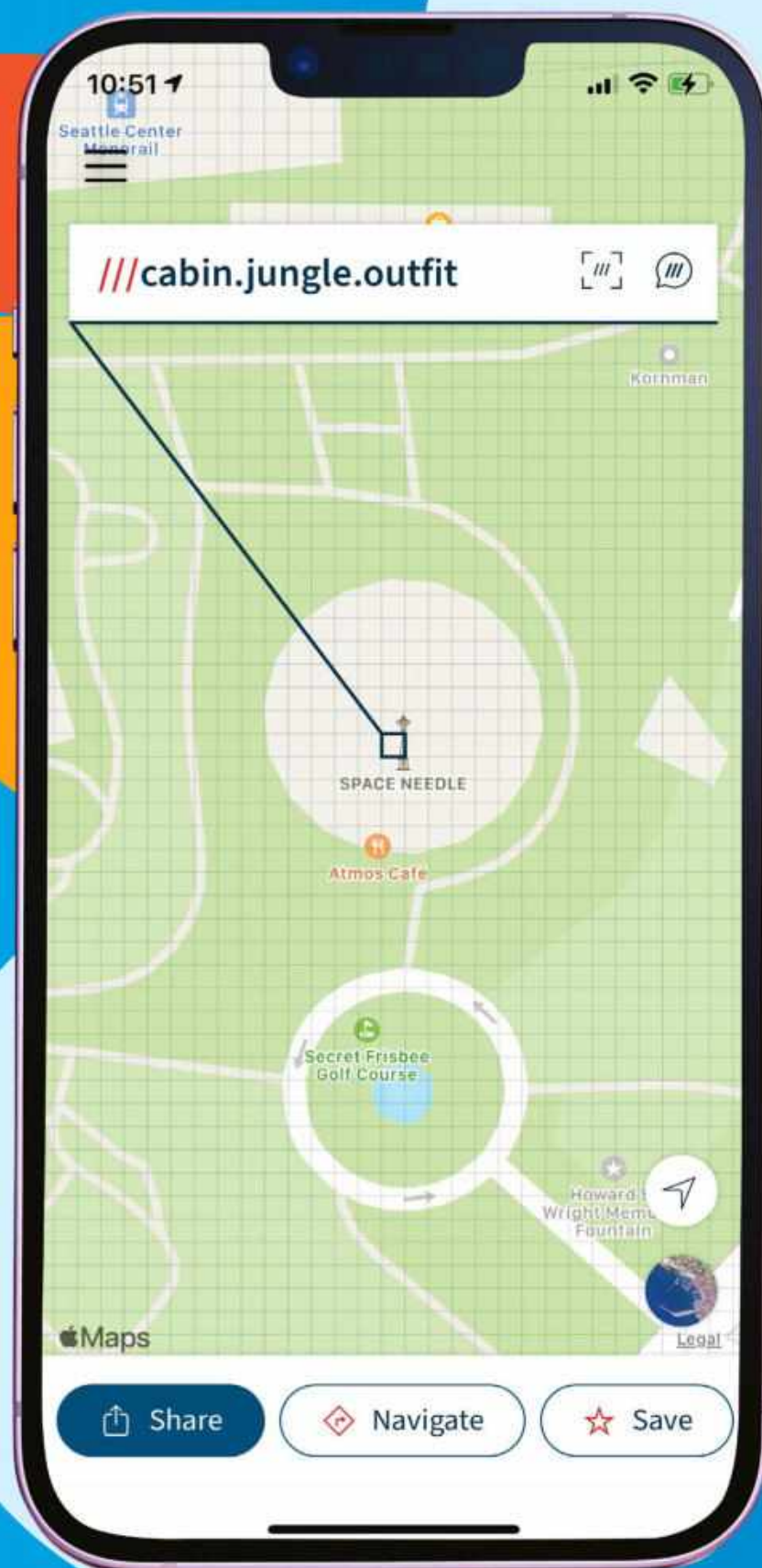
Home



Entertainment



Pet care



## what3words

FROM *what3words.com*

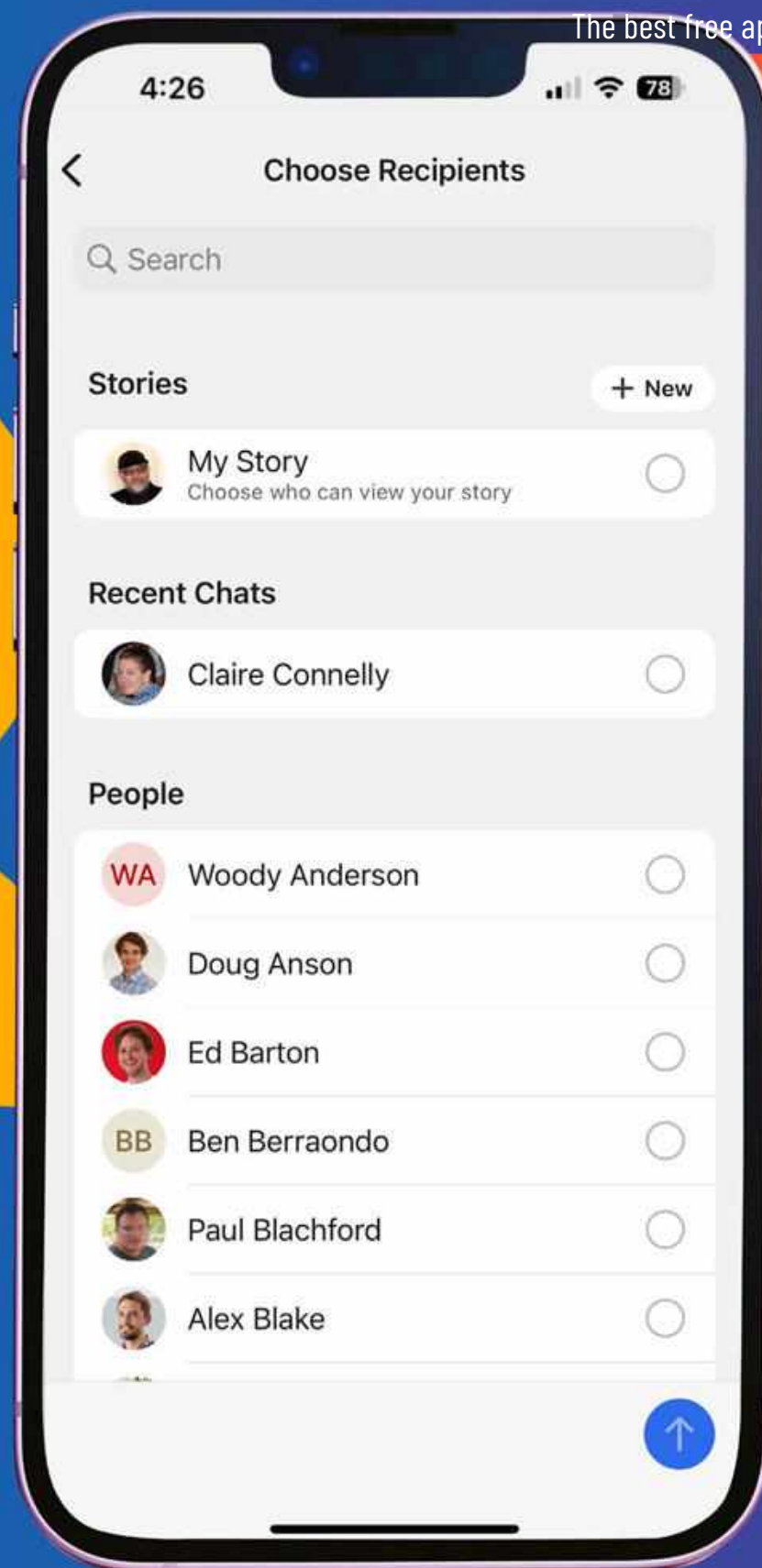
NEEDS iOS 14 or later



what3words could save your life. The app divides the world into three-meter squares and gives each one a unique combination of three words. So if you're lost or in trouble, anywhere in the world, you can call the emergency or rescue services and give them the three words. They can

then find your location to within three meters. It works literally everywhere, regardless of whether there are landmarks nearby. You could have wandered into a huge field and have no idea where you are, or be on a sinking boat in the middle of the sea – the app will have your whereabouts.





## Duolingo — Language Lessons

FROM [duolingo.com](https://duolingo.com)

NEEDS iOS 14 or later



Parlez-vous Français? Sprechen Sie Deutsch? With Duolingo, you can. It's the most popular language school on the web. Almost all features are free, but a subscription removes ads and offers a little more in terms of features. The free version is still enough to teach you a language though,

with lessons based on vocabulary, grammar, pronunciation and listening skills. You can link up with friends, progress through leagues, and enjoy short stories. It offers more than a hundred courses over 42 languages. You can even learn Klingon (*Star Trek*) if you wanted the challenge!

## Signal

FROM [signal.org](https://signal.org)

NEEDS iOS 12.2 or later



Worldwide internet messengers aren't exactly thin on the ground, but Signal is worth a look. It has a large user base, and it uses end-to-end encryption as standard. As well as regular text messages, you can use Signal for voice or video calls, and you can send files of any type with your

message, including text documents, videos, pictures, PDFs and more. It even has a built-in image editor to sketch, crop, and flip your outgoing photos. You can use the same Signal account on Mac, iPad and iPhone. Unfortunately, "for your security", conversations aren't synced between multiple devices.

# Finest apps for iPad

Make your iPad more capable without having to splash the cash...

There are plenty of free App Store offerings that take advantage of the iPad's bigger screen. You can stream TV shows and movies with a freebie app, for example, or watch videos at your convenience on the YouTube app. Or, if you're more of a reader, why not enjoy ebooks on the Kindle app, read web comics on WEBTOON and much more. Here are just a few ways you can get even more out of your iPad at work or play.



## iWork

FROM *apple.com*

NEEDS Mac, iPhone, iPad

iWork is a trio of apps every iPad owner should have. There's Pages, an excellent word processor with great formatting options. You can import pictures and charts, and use Pages to lay out leaflets and posters. For spreadsheets there's Numbers, a powerful app that offers tables, charts, text and images on a freeform canvas. Keynote allows you to create exciting presentations with animations, transitions and more. All three apps offer a good range of templates to get you started, and they're compatible with Microsoft's Office apps. They're also compatible with their Mac equivalents, so you can create and edit the same docs on your computer and on your tablet.



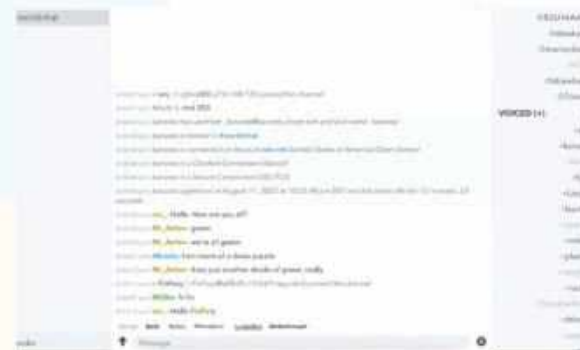
## Kindle

FROM *Amazon.com*

NEEDS iPadOS 14 or later



While there's no substitute for a dedicated Kindle with an e-ink screen, downloading the Kindle app to use on your iPad is pretty neat. The app is great to use with ebooks that have pictures or diagrams, or if you side-load PDFs onto your ebook reader, then you can read them on the Kindle app for iPad too. The app is free and it's easy to buy books for it via the Amazon website (but you can't buy them from within the app). As with the standard Kindle, you can download samples to try before you buy, including audio if you prefer to listen to audiobooks.



## Igloo — IRC Client

FROM *iglooirc.com*

NEEDS iPadOS 10 or later



This app's visibility isn't helped by the fact there's several apps on the App Store called "Igloo". Be sure to search for "Igloo IRC". Igloo is a client for Internet Relay Chat (IRC). It's used for internet chat rooms, a service that isn't as popular as it used to be, but is worth a look if you enjoy chatting with people the world over. Igloo's developers claim it's the only IRC client on iOS to support DCC/XDCC downloads that get synced right to iCloud Drive, so you can access them on your iPhone/iPad in the Files app or on your Mac in a folder called "Igloo", which is a definite bonus.

9:41 AM Tue Oct 18

Doughnut Sales

Quarterly Sales Sales by Location Sales Data

SALES BY CATEGORY

	Date (YQ)	2021-Q1	2021-Q2	2021-Q3
Category	Item	Revenue (\$USD)		
▼ Beverages	Caffe Latte	\$1,812.25	\$1,573.00	\$2,018.50
	Cappuccino	\$1,276.00	\$1,184.00	\$1,680.00
	Cold Brew	\$1,713.25	\$1,619.75	\$2,067.25
	Drip Coffee	\$1,044.75	\$1,069.25	\$1,275.75
	Espresso	\$1,242.50	\$1,155.00	\$1,251.25
	Flat White	\$1,065.75	\$1,072.75	\$1,463.00
	Ice Tea	\$1,292.85	\$1,353.30	\$1,489.80
	Mint Lemonade	\$1,552.50	\$1,620.00	\$1,865.00
	Peach Kombucha	\$1,867.25	\$1,685.75	\$2,205.50
	Seltzer	\$1,333.80	\$1,119.30	\$1,526.85
	<b>Beverages Total</b>	<b>\$14,200.90</b>	<b>\$13,452.10</b>	<b>\$16,962.90</b>
▼ Deli	Bacon, Egg, Cheese	\$4,170.00	\$3,780.00	\$5,085.00
	Chicken Club	\$3,646.50	\$3,464.50	\$4,218.50
	Chips	\$1,148.55	\$1,027.65	\$1,343.55
	Cream Cheese	\$2,574.00	\$2,362.50	\$3,109.50
	Onion Rings	\$1,584.15	\$1,557.60	\$1,888.00
	Side Salad	\$2,304.00	\$2,596.50	\$2,596.50
	Tomato Soup	\$2,684.00	\$2,612.50	\$3,586.00
	Tuna Melt	\$3,386.50	\$3,172.00	\$3,991.00
	<b>Deli Total</b>	<b>\$21,497.70</b>	<b>\$20,573.25</b>	<b>\$25,918.05</b>
▼ Doughnuts	Blueberry Jelly	\$1,776.50	\$1,740.75	\$2,163.25
	Caramel Saffron	\$2,149.00	\$2,376.50	\$2,649.50
	Chocolate Glaze	\$1,185.60	\$1,105.65	\$1,441.05

Search 4:44 pm Mon 7 Nov

History for Claire

I'm not sure that's true. For unsophisticated and unqu published his famous work pragmatist, an opportunist of course. His main oppon consensus) felt Hitler was questioned whether these other people's mistakes w

The rise of Hitler could cer his scapegoating the Jews which had taken a batterin

The role of economics? Th for fertile ground for extre economy wasn't destroyed by the time Hitler came to Gustav Stresemann during

- And what can we learn fro

The Treaty of Versailles tha power, Germany, was utter unfair, but its industrial bas possibility, and as mention extremist politics. Rememb biggest economic lesson of Switching industry to a tota preeminence in world affair

- What are the missed les





## MyTube

FROM App Store

NEEDS iPadOS 13.0 or later



MyTube is a great music aggregator that lets you import music and videos from your cloud servers, your Files app, YouTube, your computer and more. It's great for playing YouTube videos of your favorite tracks, with excellent search facilities to let you find exactly what you're looking for. You can create playlists that play continuously, save songs on your YouTube profile, and share videos. It's a good way of enjoying your MP3 files without having to go through the Music app. It's ad-supported, but you can pay to remove them if you wish.

## New Here?

Start with this read by Millions



## WEBTOON: Comics

FROM webtoons.com

NEEDS iPadOS 12.4 or later



There are some awesome comics on the web, and WEBTOON: Comics collates them to enjoy on a single, free app. WEBTOON describes itself as "the largest webcomics community in the world". There are thousands of creator-owned comic strips available, spread across 23 genres, including romance, comedy, action, fantasy, and horror. It even hosts original content, created for the app. We wish you could browse what's on offer in landscape mode as well as portrait, but apart from this niggly, it's a great way of enjoying your favorite web comics.



## Solitaire

FROM mobilityware.com

NEEDS iPadOS 11 or later



There may be many Solitaire apps available, but this totally free offering from MobilityWare is one of the best. It's been on the App Store for over ten years, and it still gets updated when necessary. There's a daily challenge to complete every day, and a trio of goals you can accomplish to earn in-game coins. Collect enough to go up a level. You can also go online and compete against others, and customize your game with new card faces, backgrounds, card backs and more. It's a fun way of spending a couple of minutes if you want to unwind.





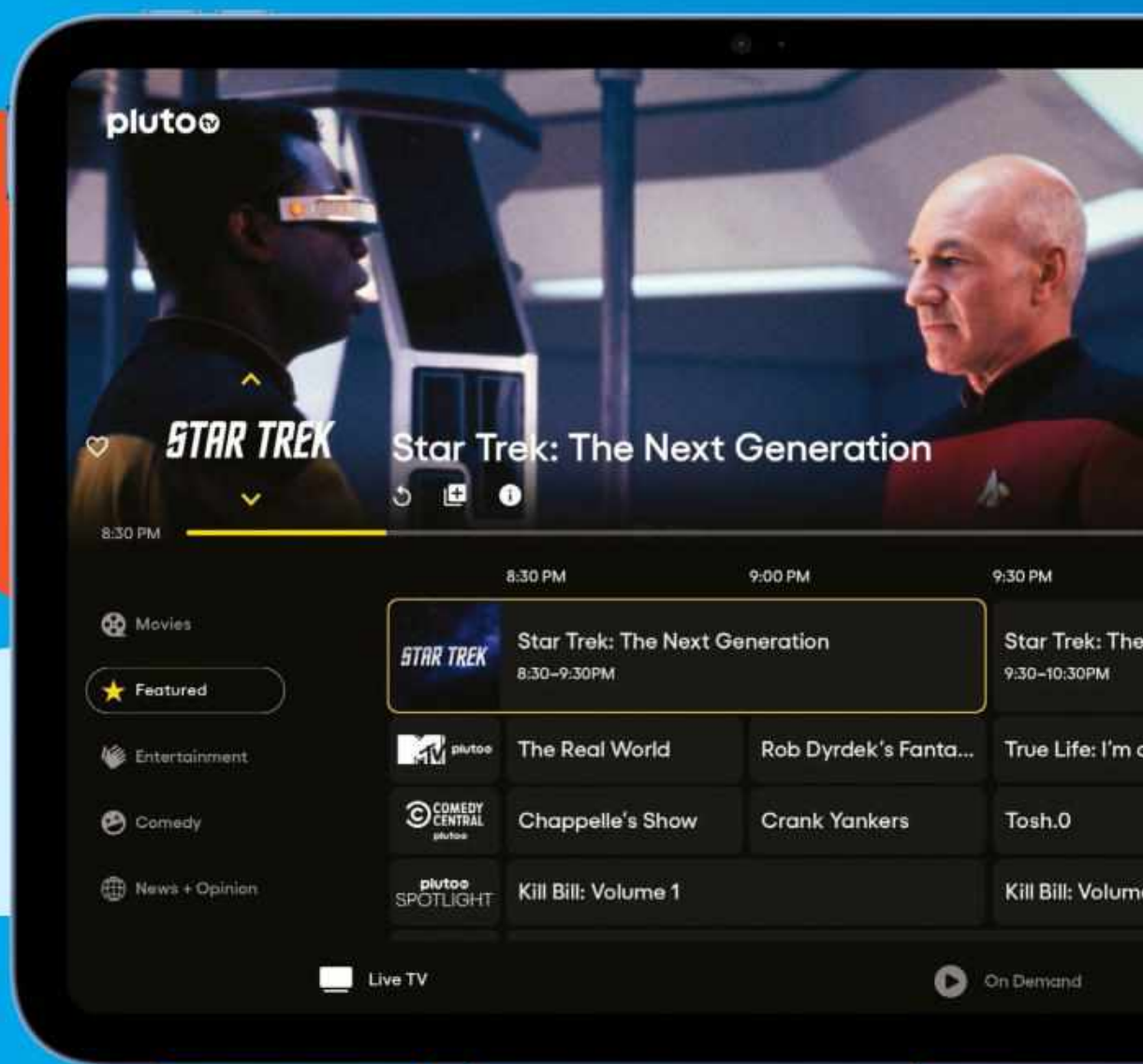
## Pluto TV

FROM *pluto.tv*

NEEDS iPadOS 13.0 or later



Most streaming internet TV services demand a subscription, but Pluto TV is different. It's entirely ad-supported, so you can download and use the app for free. It features hundreds of free-to-view live TV channels, and its on-demand services offer "thousands" of movies and TV shows. It also has over 50 channels in Spanish, including native language and dubbed movies, reality TV, telenovelas, crime, sports and more. Naturally, there are some low-quality offerings on Pluto TV, but some of its content is surprisingly good. There's such a lot on offer there's bound to be something you like, and it's all completely free.



## IMDb

FROM *imdb.com*

NEEDS iPadOS 14.1 or later



IMDb (Internet Movie Database) is the world's most popular source for info on movies, TV shows and celebrities. If there's something you need to know about an actor, director, movie, program and more, just look it up on IMDb. Critic and user reviews let you know whether a film's likely to be worth watching, as do the trailers, and there's usually interesting quotes, goofs and trivia too. But the real strength of IMDb is it's so comprehensive. There's an entry for almost every movie imaginable and every actor that's ever graced the screen.



## Calculator HD Pro Lite

FROM *cidersoftware.com*



**NEEDS iPadOS 12.4 or later**  
The lite version of Cider Software's Calculator HD Pro is ad-supported. It offers basic and scientific calculators, both have a dual-line display showing input and result. There are six layouts to choose from and ten color schemes. Formulas are formatted correctly, and a "history tape" records your calculations, which are time and date stamped. You can email a calculation or even an entire history tape. An excellent resource for anyone who needs a good calculator ready to go.



## NetNewsWire

FROM *netnewswire.com*

NEEDS iPadOS 13.4 or later

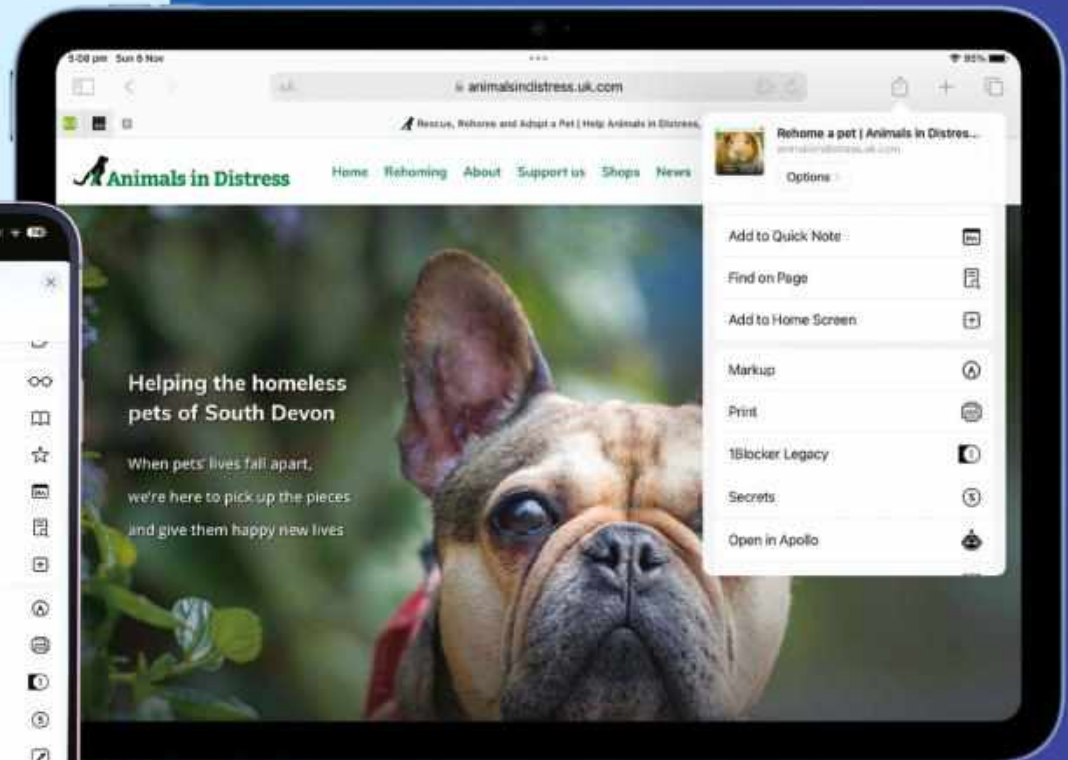
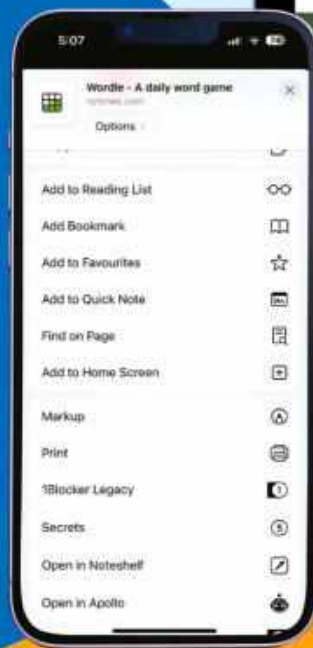


NetNewsWire is an RSS (Really Simple Syndication) reader. It lets you subscribe to your favorite blog and news sites, and have updates delivered to the app so you can read them all in one place. As the developer says, "it's like podcasts, but for reading". This particular RSS reader is completely free. It arguably lacks the bells and whistles of some paid-for RSS readers like Reeder or Unread, but its simplicity shines through. It's a great news aggregator, for experienced RSS users and interested newcomers alike.

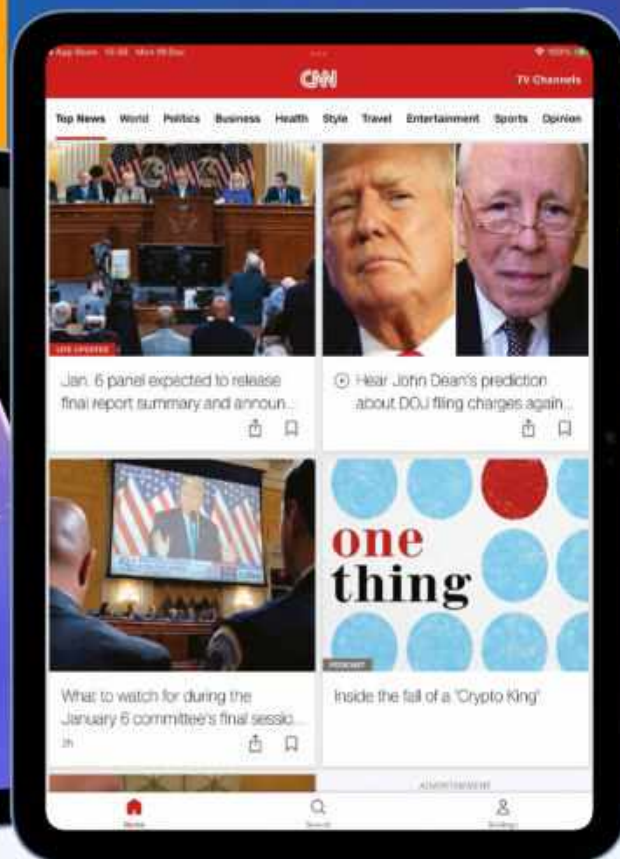


# Did you know?

If there's a website you regularly use on your iPhone or iPad and would prefer to have it on the Home Screen like an app, open the site in question and tap the Share icon. Scroll up until you see the Add to Home Screen option. Tap it, and you're given the chance to edit the site name and URL. Tap Add and it appears on the Home Screen as an icon – now you can launch the site as if it was an app.



Searching for something online on a regular basis? You can easily add it as an icon to your Home screen.



## Rival Pirates

FROM App Store

NEEDS iPadOS 15 or later



Swab the decks, me hearties! This is a multiplayer death match on the high seas. Mobile games are often ruined by in-app purchases that mar their competitiveness, but *Rival Pirates* is different. It's completely free (and advert-free), although only if you

subscribe to Netflix. You sail an initially weak vessel crewed by a trio of comical corsairs, all with their own abilities. You're thrown into the watery arena with up to 16 other ships, and must sink them before they sink you. Treasure won in battle can be spent on upgrades. It's awesome fun.

## CNN: Breaking US & World News

FROM [edition.cnn.com/specials/mobile-apps](https://edition.cnn.com/specials/mobile-apps)

NEEDS iPadOS 14.1 or later



If you like to use your iPhone (or iPad) to keep abreast of what's going on in America and the world, download the CNN News app. According to CNN, you need "never miss a breaking news story or important update again". As well as reading up on the lead

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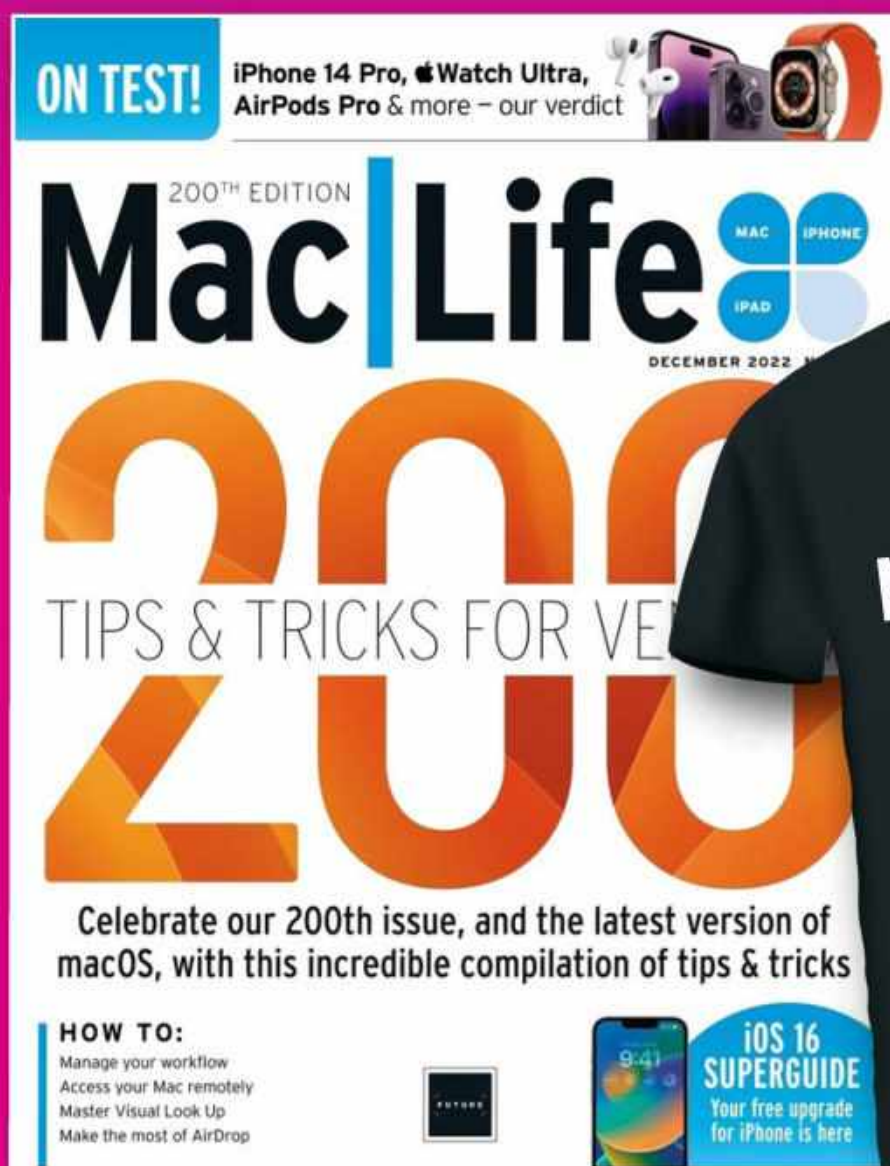
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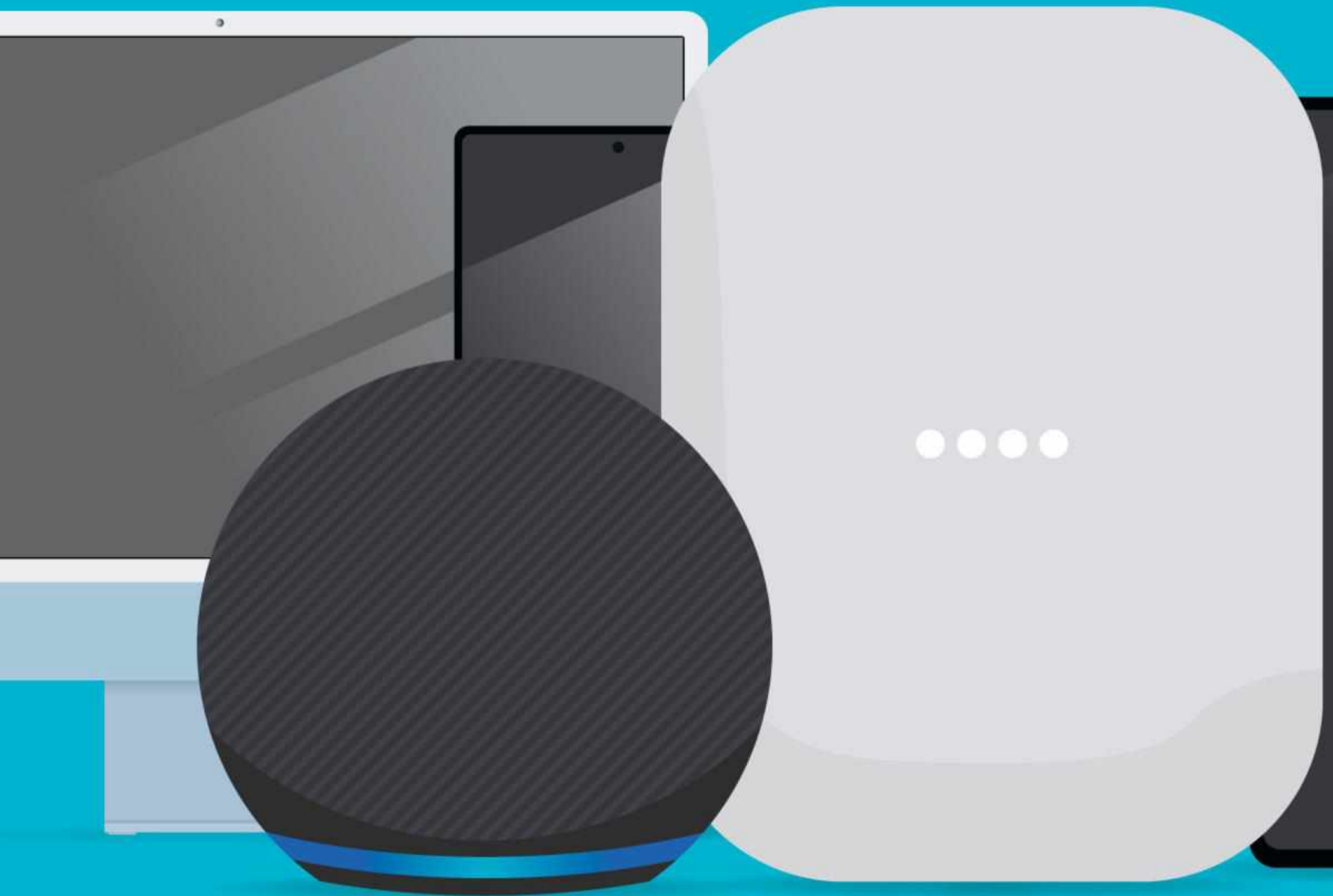
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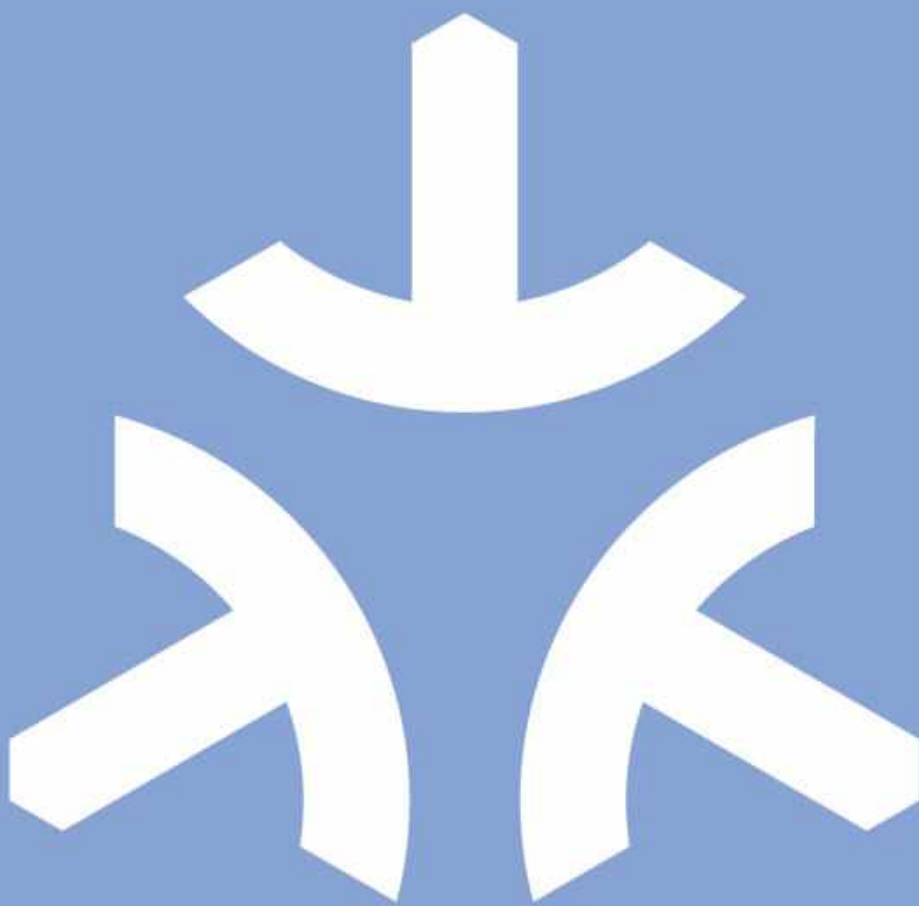
# HOMESKIT: THE COMPLETE GUIDE

HomeKit is better than ever — now's the time to get your smart home in order with help from your Mac or iPhone

WRITTEN BY CLIFF JOSEPH







There have been numerous occasions in Apple's history where it has developed products or technologies that were technically superior to those of its rivals, but which failed to achieve real mainstream success. And, for the last few years, Apple's HomeKit — the software that it developed to control smart devices, such as lights and security cameras — has sat on the sidelines as Amazon's Alexa and Google Home have made all the running in the smart home market. However, all three companies have been frustrated at the slow adoption of smart-home technologies, so in 2019 they got together to develop a new technology called Matter. HomeKit is actually part of Matter, so any device that supports Matter will also work with HomeKit, and you will still be able to control that device using Siri and the Home app on your Apple devices just like any other HomeKit gear.

That's good news for Apple of course, but Matter casts its net wider and also provides compatibility with Amazon Alexa and Google Home. This means that a smart light or other device that supports Matter will still work with your Apple devices, but will also function with Amazon Alexa and Google Home too.

In this feature, we're going to show you how to set up your smart home using HomeKit, and we'll look at the cool things you can do with it once it's up and running. HomeKit is steadily improving, so now's a good time to get your smart home started.



# How HomeKit works

One app to rule them all (with some help from Siri)

**T**here's no shortage of smart devices now available that you can control with your iPhone or iPad — smart speakers, lights, security cameras, and even thermostats and controls for air conditioning systems. The problem is, all these devices require their own separate apps. If we're ever to reach the promised nirvana of home automation, then we need a simpler way of controlling all our smart devices. Apple developed HomeKit to provide that solution, by designing a

central control system that links all our smart devices together. The HomeKit software is built into Macs, the iPhone and iPad, and also the Apple TV box, and is controlled through either the Home app or by using Siri. Apple also allows other manufacturers to build HomeKit into their own smart devices too, rather than having to rely on separate apps.

## MAKING A SCENE

Having that central control point for lots of different devices was

absolutely the right idea — and Apple got there before Amazon or Google. Another strength of HomeKit is that it also allows multiple devices to work together, using “scenes” and “automations”. Scenes let you control a group of devices together, perhaps using Siri to say “turn off all the downstairs lights” at bedtime, or “turn off the security cameras” when you come home in the evening. Automations provide even more precise control, allowing devices to respond to

## HOME HIERARCHY

The smart home market is a mess of competing — and incompatible — technologies

There's an old saying in the computer industry: “the great thing about standards is that there's so many of them”. That's certainly true when it comes to home automation and smart devices such as lights, security cameras and other time-saving gadgets. There are several technologies now available that attempt to provide a control system for all the smart devices in your home, including Samsung's SmartThings, the oddly named Zigbee, and the do-it-yourself programming approach of IFTTT.

But, of course, the big three in the home automation field are Apple's HomeKit, Amazon Alexa, and Google Home. HomeKit does work well on Apple devices, allowing you to control all your HomeKit-compatible devices using either the Home app or Siri voice commands. Unfortunately, Apple's failure to promote HomeKit in its early days allowed Amazon and Google to gain far more support from the manufacturers of smart home devices. There are dozens of smart speakers from many different



manufacturers that support the Amazon and Google voice assistants, while Apple restricts poor old Siri to just its own HomePod mini. It's a similar situation with lights, security cameras and other smart devices — there are thousands of devices that support Amazon and Google, and leave Apple and HomeKit out in the cold. Hopefully, the arrival of Matter will change all that in the future, but here's the current state of the big three in the smart home market.

### Amazon Alexa

Amazon raced ahead in the smart home market, thanks to its affordable Echo range of smart speakers (which were far cheaper than Apple's HomePod). It's estimated that there are around 100,000 different smart devices that currently support Alexa.

### Google Home

Google's control of the Android smartphone market has allowed its Google Home app — with the Google Assistant for voice commands — to take second place in the smart home market, with Google claiming there are around 50,000 compatible smart devices.

### Apple HomeKit

HomeKit makes it easy to control your devices through the Home app or Siri. However, HomeKit has never really taken off as Apple had hoped, and it's thought that there are a few hundred smart devices that currently support HomeKit (check out [apple.co/3WeNNrX](https://apple.co/3WeNNrX)).



specific conditions, such as turning on your security camera at a specific time of day, or turning on your lights if the camera detects movement.

So, from a technical point of view, HomeKit works very well. Unfortunately, Apple also made it quite difficult, and expensive, for other companies to build HomeKit into their products. This meant that HomeKit has had to sit on the sidelines over the last few years while Amazon Alexa and Google Home got most of the attention.

### ANDROID NOT ALLOWED

The other problem with HomeKit is that it's Apple-only; if someone in your home has an Android smartphone or an Amazon Echo speaker, HomeKit is no use at all.

So, in 2019, Apple got together with Amazon, Google and a number of other companies to develop a new technology for smart home devices, called Matter. Using HomeKit as part of Matter means devices that support it will still be compatible with the Home app and Siri on Apple devices. However, the involvement of Amazon and Google means that a smart speaker or light bulb that works with Matter can be controlled using Siri voice commands on your Apple devices, but will also work with Amazon's Alexa or the Google Assistant on non-Apple devices too.

That sounds like a win-win situation, giving Apple a boost in the smart home market, and also providing a wider choice of smart devices that we can buy for our homes, safe in the knowledge that they'll all work together quickly and easily. However, Matter 1.0 was only released in Oct 2022, so there aren't many devices currently available that support Matter. But, with Apple, Amazon and Google all backing this new standard, it shouldn't be long before Matter emerges as the central technology at the heart of the modern smart home. ■

## MATTER AND THREAD

Matter is a communications protocol enabling a variety of smart home devices to talk to each other. At the moment, Apple uses HomeKit as its communication standard for smart devices, while Amazon's Alexa and Google Home use their own technologies. Having to support three different technologies makes life very difficult for the manufacturers of smart devices – which is one reason why so few manufacturers support HomeKit. So, in the future, Matter will provide one single communications technology that allows all sorts of smart devices to work with Siri and the Home app on Apple devices, but also with billions of other devices that use Amazon Alexa or Google Home.

Matter commands can be transmitted from one device to another using conventional Wi-Fi networks, Ethernet, or Bluetooth. There's a problem here, though, as using Ethernet requires fixed, wired connections, which may not be convenient in many homes. Using Wi-Fi is more convenient and ideal for portable devices too, but does require quite a lot of power – and that causes problems for battery-powered devices, such as security cameras or sensors that need to be connected to your Wi-Fi network 24 hours a day for

months at a time. Bluetooth is more power-efficient, but it has more limited range, so it's not ideal for connecting several devices that may be scattered throughout different rooms within your home.

The solution to that problem is "Thread" – a new wireless technology that has the low power requirements of Bluetooth, combined with the greater speed and range of Wi-Fi. The first Apple product to support Thread was the HomePod mini, which was launched back in 2020, with Thread quietly being included as preparation for the arrival of Matter – finally launched in October 2022. A number of other manufacturers have been including Thread in their lights, security cameras and other devices over the last couple of years too, although it remains to be seen if these devices can be upgraded to support Matter as well. Apple's website states that the Home app on Apple devices has now been upgraded to support Matter as well as HomeKit. The new Apple TV 4K that was launched in October of this year – following the October release of Matter – was the first Apple product that supports both Matter and Thread straight out of the box, ready for the next stage in the evolution of smart home technology.



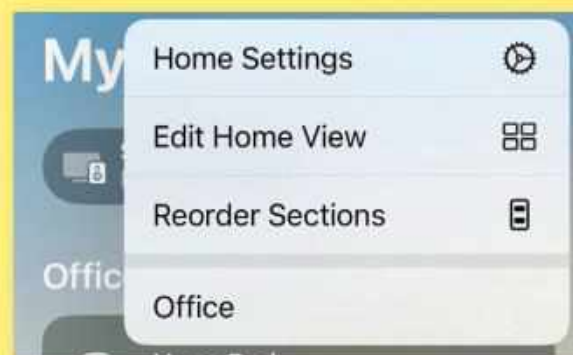
# Setting up devices in the Home app

**T**he HomeKit software is built into macOS, iOS, iPadOS and even tvOS on the Apple TV box. However, you control your HomeKit-compatible lights and other devices using the Home app,

which is primarily focused on the iPhone and iPad. There are versions of the Home app on the Mac and Apple TV as well, but these don't allow you to add new HomeKit devices to your setup.

Of course, any device set up in the Home app can also be controlled using Siri voice commands — such as “turn on the kitchen light” or “lower the volume” on some music playing on a speaker. ■

## HOW TO Get started with Home



**1 Welcome Home**  
The Home app automatically creates “My Home” as the default location for all the devices. It can detect the HomePod, and it even knows that the HomePod is in the office, so it adds “Office” as a new room within My Home.

**2 Home settings**  
Let's get everything set up before we add any new HomeKit devices. Click the menu button (three dots in the top-right corner) and select Home Settings. You can also edit the layout of the Home screen if desired.

**3 Add people**  
“My Home” is a bit dull, so let's use Home Settings to add a more interesting name. The app recognizes you as the “owner” of this home, but the Invite People command lets you share control of your HomeKit devices.

## HOW TO Add devices and rooms



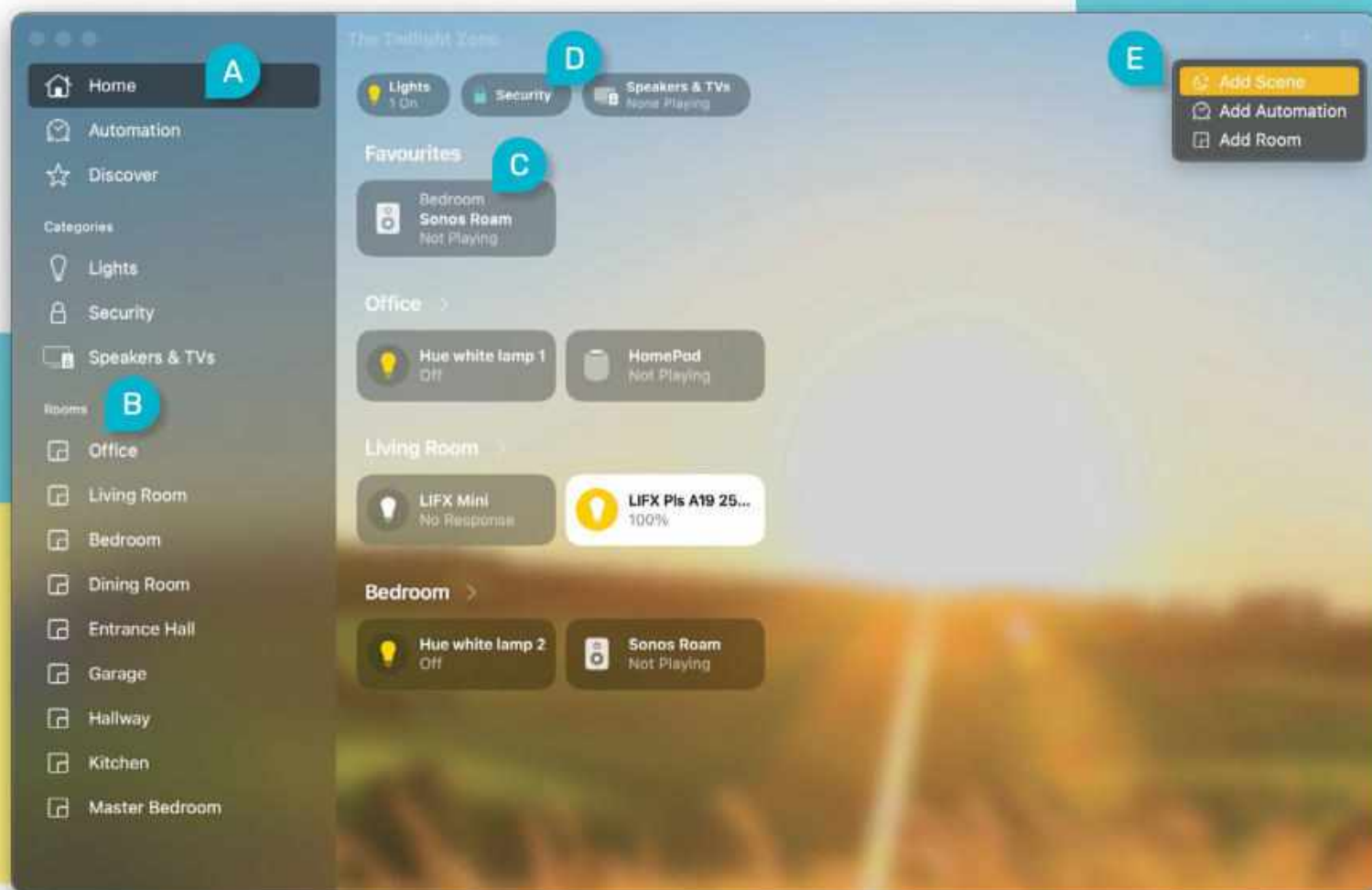
**1 Home and away**  
Click “+” to open the Add menu, where you can add new devices, which Apple calls “accessories”. You can also set up new rooms, and even an entirely new “Home” for devices in another location, such as your place of work.

**2 Instant setup**  
This is where HomeKit gets really clever. The LIFX Mini bulb supports HomeKit, so rather than having to use the separate LIFX app, the Home app on an iPhone automatically detects it. Just tap the light to add it to your home.

**3 Add rooms**  
There's only one room set up at the moment — the “Office” for a HomePod — but the Home app asks where you want to use any new accessories. Select “Living Room” and this is added on the app's main screen.

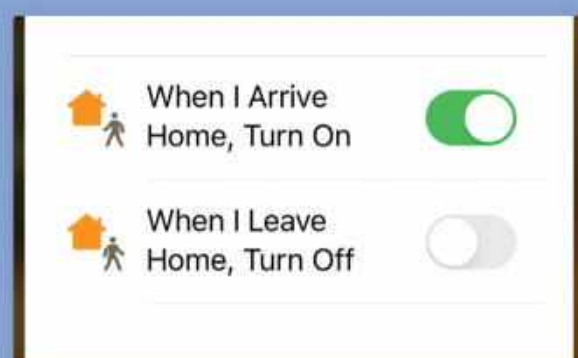


## QUICK LOOK Manage your Home on Mac



- A HOME ON MAC**  
 The Home app has been redesigned for Ventura. You can only add new devices on an iPhone or iPad, although Macs can control devices once added.
- B ROOM BY ROOM**  
 Macs and iPads have a sidebar that lists all the rooms in your home, along with the main categories of devices. You can click or tap to view more details.
- C FAVORITES**  
 Devices within the Home app are normally organized by room, but you can also set some devices to be “Favorites”, shown at the top for easy access.
- D KEY CATEGORIES**  
 The latest version of the Home app also shows key categories of devices. This makes it easier to control groups of devices at the same time.
- E MAKING A SCENE**  
 With the Mac Home app, you can add rooms to a home and also create automations or scenes that enable you to control several devices together.

## HOW TO Personalize the controls



- 1 Add automations**  
 The Home app will also ask if you want to use “automations”. These are commands that automatically respond to certain conditions – such as using Location Services on an iPhone to turn the LIFX light on when you arrive home.
- 2 Device controls**  
 You can now see all the rooms that are set up within this home. You can turn devices on or off by tapping on their icon, but tap-and-hold will display additional controls, such as brightness levels for lights, or volume on a speaker.
- 3 Control Center**  
 The Home app also appears within Control Center, providing quick controls right from your Lock Screen. There’s one button to launch the Home app itself, but Control Center can also learn which devices you use the most.

# Controlling your devices

## How to take full control of your smart home

**S**o far we've followed the process of adding individual devices to the Home app, and assigning them to specific rooms within your home. But, of course, you also need to be able to control how all your devices work. Different types of devices will provide their own specific controls — such as brightness or color controls for your lights, or temperature and timer controls for a thermostat.

The Home app does provide these controls for all your HomeKit devices and it's a great time-saver, as it means that you don't have to use several separate apps from a range of different manufacturers in order to control all of your devices. You can change the brightness — and even the color — of your office lights, adjust the volume on your HomePod, and turn off the heating all from

within the Home app. And, of course, for even greater convenience you can use Siri voice commands to control these devices without having to lift a finger.

### In the zone

But controlling individual devices is just the start of what HomeKit can do, and the real strength of HomeKit is that it also allows lots of different devices to work together all at the same time. The Home app actually provides several options for controlling multiple devices together. We've already seen that the Home app lets you assign devices to particular rooms, but it's also possible to create "zones" that include a number of different rooms. This way you can quickly activate a set of security cameras in the "outside" zone, or turn off all the

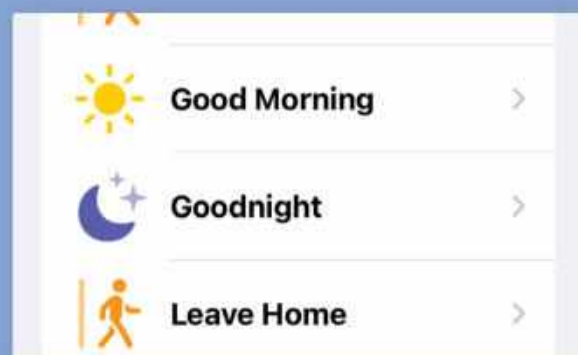
### QUICK TIP

There are clear menu options within the Home app for adding scenes and automations, but the "Zones" option is oddly hidden out of sight. To add a room to a zone, select the room and then tap the three-dot menu in the top-right corner. Select Room Settings and you'll see a text box labeled "Zone", where you can enter the name of the new zone. You can add several rooms to each zone, such as "upstairs" and "downstairs" zones in your home. These zones aren't clearly visible in the Home app, but Siri knows where they are, so you can quickly use voice commands such as "turn off all the downstairs lights".

lights in the "downstairs" zone when you go to bed at night.

The latest version of the Home app in Ventura and iOS or iPadOS 16 also groups similar devices together, such as lights, speakers or security devices. This is useful for getting a quick overview of a particular set of devices, such as a security system

## HOW TO Create scenes and automations



**1 Make a scene**  
Press the "+" button in the top-right corner of the Home app and select Add Scene. There are some simple Scenes already built into the app to help you get started, but you can create your own custom scenes too.



**2 Party time**  
Let's move a few devices into the living room and create a new scene called "Party". You can select any device to be part of this scene, but we'll start with a couple of LIFX multi-color lights and my HomePod for some music.



**3 Lights, action!**  
Here's the scene with the LIFX lights set to the brightness and color settings needed, and a playlist lined up for the HomePod. You can also quickly check that your new scene works properly by selecting "Test This Scene".



that includes several cameras and motion sensors that may be spread across different rooms or locations within a home or other building.

### Set the scene

The real power of HomeKit lies in the ability to create “scenes” and “automations”, which provide more precise control over groups of devices in your smart home. Scenes are relatively simple, as they primarily focus on turning devices on or off. The Home app has a number of scenes already built into it, including “Good Night” which quickly turns devices off, such as your lights and the heating thermostat. There’s also “Leave Home”, which can use Location Services on your iPhone to recognize when you leave the building, and can then turn lights off or perhaps activate a security camera.

You can also create your own scenes, such as a “Party” scene that changes the lighting and even lines up a music playlist as well. However, this is still a straightforward matter of simply turning devices on or off at the same time. Automations are a bit more complex, as they allow your

devices to react to specific triggers or conditions — perhaps turning a security camera on at midnight, or turning on a light if the security camera detects motion when everyone is away from home. This extra level of complexity can be a bit daunting — especially as automations were poorly explained in earlier versions of Home — but

the app will now suggest one of its preset automations whenever you add a new device in order to help you get started.

Scenes and automations also work well with Siri, as you can control whole groups of devices with simple voice commands: just saying “Hey, Siri — Party!” will start your playlist and get the disco lights flashing. ■

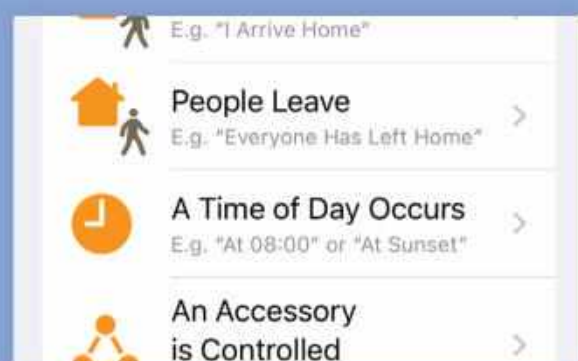
## YOUR HOME HUB

There’s one other important thing to remember about using HomeKit and the Home app. In order to use all the features of the Home app — including automations, and remote control of your devices when you’re away from home — you also need a “home hub” that acts as a central control point for all your smart devices.

At the moment, you can use an iPad, HomePod or HomePod mini, or Apple TV box as your home hub. You don’t have to do anything to set up your home hub, as the Home app does everything automatically, as soon as it detects a suitable Apple device. However, Apple has said that it plans to phase out the iPad option with a

future upgrade to the Home app. That may disappoint some users who are currently using an iPad as their home hub, but it does make sense.

Apart from anything else, your home hub needs to stay at home in order to control all your smart devices and, with Apple increasingly pitching the iPad as an alternative to a conventional laptop, you can’t rely on always having your iPad at home anyway. Remember too, that the HomePod mini and the new Apple TV 4K (with Ethernet) also support the new Thread wireless technology, which will be needed to control a new generation of smart devices that support Matter and Thread.



4

### Set a trigger

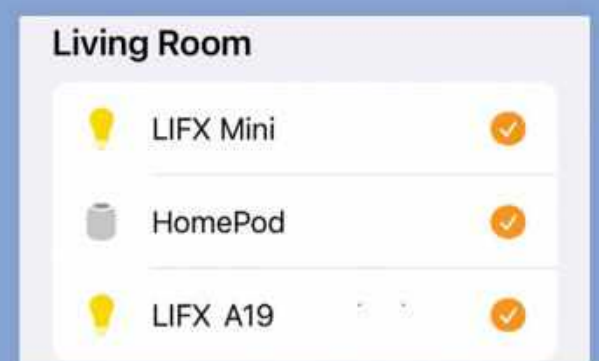
Tapping the “+” menu lets you add automations too. Automations are more complex commands triggered by specific events, such as the time of day, people leaving home, or a security camera that detects motion.



5

### On camera

We’ll select the Aqara security camera that is set up in our hallway, and set this automation to respond when the camera detects motion. The automation can also be set to work at certain times, or when you’re not home.



6

### Music and motion

If the camera detects any movement at night, when away, the automation will go crazy and turn on all lights, and even start playing some music on the HomePod. And, of course, the camera sends a notification too.

# Hidden HomeKit

There are some powerful features available within HomeKit, but they're not always easy to find



The developers of the Controller For HomeKit app (see right) introduce it by saying: “HomeKit can do more than Apple’s Home app is showing you”. They’re right about that, as there are several features of HomeKit that aren’t easily found within the app.

For instance, we’ve looked at how the Home app allows you to use scenes and automations to control your smart devices, but you also have the ability to use automations within the more powerful Shortcuts app. When you’re creating a new automation, there’s a “Convert To Shortcut” button — easily missed at the bottom of the screen — that adds the automation to the Shortcuts app on iPhone or iPad (but not the Mac version). This provides more advanced control, such as the ability to use the “Wait” command so that a

device, such as a security camera, can wait for a specified time before triggering another device — perhaps turning on the lights or heating when you return home.

Security cameras, in particular, can benefit from the hidden features within HomeKit. Most security cameras will automatically stream live video to your Apple devices if they detect any unusual movement, but you generally have to pay for an additional monthly subscription if you need online storage in order to record and store video.

## ICLOUD MEETS HOMEKIT

If you have an iCloud+ subscription, then you also get a feature called “HomeKit Secure Video”, which lets you store video recordings from your cameras online as part of your monthly subscription. The iCloud+

subscriptions start at just \$0.99 per month with 50GB of storage for your online iCloud Drive. This lets you store recordings from a single camera, while other iCloud+ plans support multiple cameras.

However, your camera recordings don’t count towards that storage, so you can store your recordings online and still have all of that 50GB of storage available for other files. That makes iCloud+ a really affordable option for storing your camera recordings online — far cheaper than the subscriptions offered by most manufacturers of security cameras. HomeKit Secure Video also includes other security features too, such as the ability to use face recognition, or to tell the camera to only focus on specific “activity zones”, perhaps around a doorway or parking space. ■

## HOMEKIT ROUTER(S)

How to provide additional security for your smart devices

Routers are rarely mentioned when discussing the various types of devices that support HomeKit — and that’s probably because there are hardly any HomeKit routers available. In fact, Apple’s list of HomeKit-compatible devices lists just a single router — the Linksys Velop MX4200/AX4200. It supports Wi-Fi 6 and you can either buy it on its own (\$250 from the Apple Store) and use it like a conventional router, or as part of a wider mesh networking system for larger homes (from \$400).

The advantage of using a HomeKit router is that it can provide additional security to keep your home network

safe from outside intruders and hacking attacks. Every smart device that is connected to your home Wi-Fi network is a potential point of weakness that could allow a hacker to gain access to your home network. However, a HomeKit router can provide additional protection — but only for other HomeKit devices, such as lights and security cameras, that are set up within the Home app.

The router settings within the Home app allow you to apply “restricted” status to any of your other HomeKit devices, ensuring that they only accept commands from the Home app on your Apple devices, and are also blocked

from going beyond your home network and connecting to the wider internet. Some devices do sometimes need to connect to the internet for software or firmware updates, so there’s also an “auto” security setting that allows limited connections to the internet, or you can simply opt for “no restriction”, which turns off all HomeKit security features. However, you can apply these settings to each of your HomeKit devices individually.





# BEYOND HOMEKIT

## Going where the Home app fears to tread

Apple's Shortcuts app is a pretty daunting prospect for non-programmers, but there are other options for people who want to delve deeper into HomeKit. Controller For HomeKit is a popular app for Mac, iPhone and iPad, and the free version provides a more straightforward interface for creating automations and scenes. There's also a Pro version with advanced features, such as the ability to respond to notifications from the Home app, which costs \$29.99 per year (with one week free trial) or \$64.99 for a lifetime license.

Another user-friendly option for going beyond the Home app is Home+, which costs \$14.99 from Matthias Hochgatterer. This again provides a more streamlined interface that helps you to create automations, along with a wider range of predefined automation controls than the Home app.

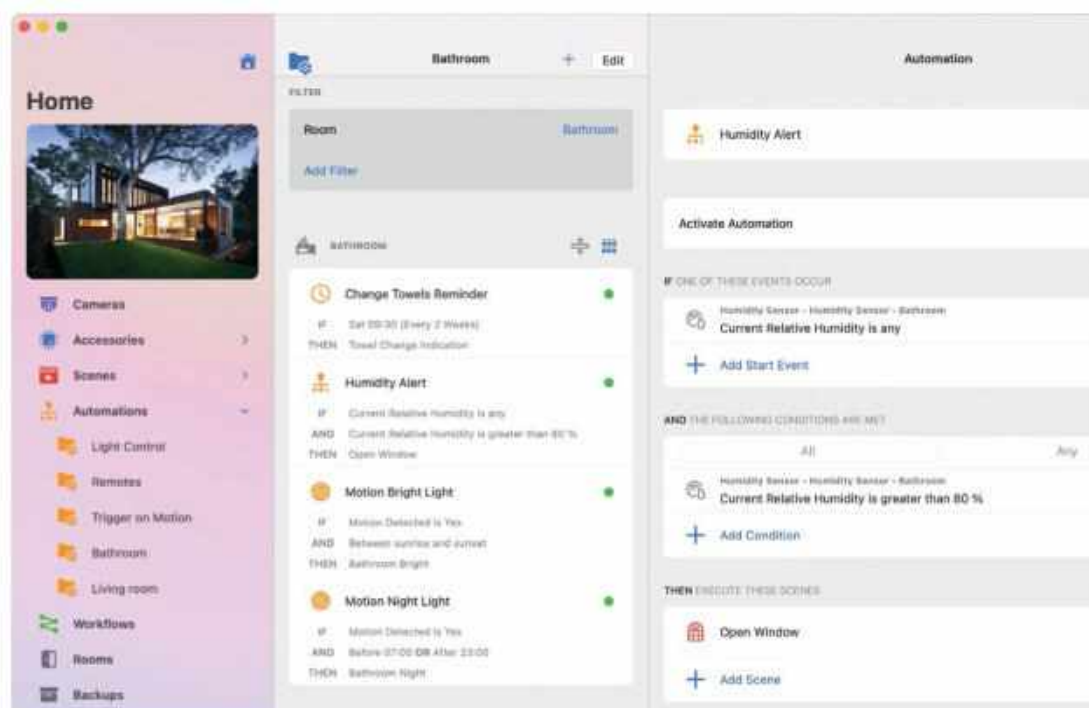
However, the main limitation of HomeKit is that it's supported by so few smart devices. If you've bought some of the popular Nest range of security cameras and other devices,

then you could try the Starling Home Hub. This little \$99 device connects to your Wi-Fi router and acts as a bridge between your Nest devices and the Home app on your Apple devices (from [starlinghome.io](https://starlinghome.io)).

And if you're feeling really ambitious, there's an open-source project called Homebridge that is designed to work with a wide range of smart devices that don't normally support HomeKit. Like any open-source software, Homebridge tends to be fairly complex – and, like HomeKit, it requires a device that can act like a home hub, and is always left on in order to run the software and control all your devices.

Homebridge can be installed on Macs, Windows PCs, Linux, and even on the Raspberry Pi too. Once that's done, you then need to locate and install a plugin for the specific smart devices that you want to control (more info at [homebridge.io](https://homebridge.io)). Setting up a Raspberry Pi with Homebridge could be a great educational project for young children or students who are learning programming.

Controller For HomeKit provides an alternative to Apple's Home app for creating automations and controlling your devices.



## TROUBLESHOOTING TIPS

What to do if your HomeKit devices do not appear to work as expected

### 1 Log in to your Apple ID

The Home app links to your Apple ID, so make sure that all your Apple devices are logged in to the same Apple ID in order to control your smart devices.

### 2 Check home hub

Some features of the Home app, such as using automations, require an iPad, HomePod or Apple TV to act as a "home hub". It's easy to sometimes forget and turn off your HomePod, so always check your home hub if devices aren't responding properly.

### 3 Try out the manufacturer's app

If you're having trouble adding a device to the Home app, check to see if it works properly using the manufacturer's own app first. The app may also have instructions for adding that device to the Home app.

### 4 Turn on Bluetooth

Most smart devices use Wi-Fi to connect to your home network. However, some devices also use Bluetooth during the initial set-up process, so turn on Bluetooth on your Apple device while setting up your smart devices.

### 5 Check your Wi-Fi settings

Some smart devices can only connect to Wi-Fi networks on the 2.4GHz band, so make sure that your Apple device and your third-party smart devices are using the same Wi-Fi frequency (you can switch bands again later).

# Smart home products

Some of the best HomeKit gear for making life easier

**H**omeKit may have fallen behind Amazon Alexa and the Google Assistant in the home-automation market, but there are still enough HomeKit-compatible devices available to create a pretty impressive smart home setup.

The three top product categories in the smart home market are speakers, lights and security cameras. Apple does have a list of HomeKit-compatible devices on its

website ([apple.co/3WeNNrX](https://apple.co/3WeNNrX)) and this includes lots of other devices such as thermostats, controls for fans and air-conditioning systems, smart locks for your front door, and even remote controls for garage doors. However, many of these more complex devices require professional installation — and the last thing you want to do in the middle of the winter is to screw up your heating by trying to wire up a HomeKit thermostat by yourself!

## AIRPLAY MEETS HOMEKIT

That brings us back to the big three smart home items — speakers, lights and security cameras. The good news for audiophiles is that Apple's AirPlay software — which was originally designed for multi-room speaker systems — is compatible with HomeKit and the Home app. This means that any AirPlay speaker can be controlled using the Home app, Siri, or Control Center on any of your Apple devices. You can even mix and match speakers from different manufacturers, perhaps playing the same music on a Sonos Roam portable speaker in your garden, and also on a HomePod in the kitchen.

And, while HomeKit has struggled to attract support from other manufacturers, AirPlay has been adopted by many big-name audio brands, such as Sonos, Bowers & Wilkins, and Bang & Olufsen. Even Ikea has got in on the act with its somewhat bizarre Symfonisk speaker/lamp hybrid. The one disappointment here is that Apple doesn't allow these manufacturers to include Siri in their smart speakers, so the only smart speaker that currently supports Siri is Apple's own HomePod mini.

## LIGHTS, ACTION!

Build a smart lighting system with these HomeKit bulbs

As we've mentioned, Philips has dozens of different lights in its Hue range. But, if you want to use your Hue lights with HomeKit and the Home app, then it's best to start with one of the Hue Starter Kits. There are several Starter Kit options, costing as little as \$69.99 for a basic kit with two plain white bulbs, going up to \$199.99 with four color-changing bulbs. However, all the Starter Kits also include the Hue Bridge, a small box that connects to your home Wi-Fi router with an Ethernet cable.

The Hue lights will work on their own, but it's the Hue Bridge that provides HomeKit compatibility, so you need the Bridge in order to use your Hue lights with HomeKit and the Home App (and make sure you get the square 2nd generation Bridge, and not the circular 1st gen version as that's not compatible with HomeKit). Once you've got the Hue Bridge connected to your router, you can then expand your lighting system with any

of the other Hue lights that you want to buy, including ceiling-mounted lights, floodlights for outdoor use, and even the colorful Festavia Christmas lights. Philips has also announced that it plans to provide a software update for the Hue Bridge that will allow it to support Matter in the coming months.

One other thing to watch out for is that some of the Hue lights utilize Bluetooth, rather than using Wi-Fi to connect to your home network and the Hue Bridge. Bluetooth lights can be controlled individually using the Hue app, but they're not compatible with HomeKit, so be aware that you won't be able to control them with your other lights and smart devices within the Home app.

## LIGHT UP YOUR HOME

There aren't a huge number of smart lights that support HomeKit, but the key player that dominates this market is Philips with its Hue range of smart lights. Philips was one of the first companies to support HomeKit in its products, and the Hue range has been very





successful, spawning a wide range of lights, bulbs and lamps for use in different rooms around your home, and even outdoor lights for your garden or parking space.

If you want to use Hue products with HomeKit and the Home app, then you also need to buy a Hue Bridge — either on its own or as part of a Hue Starter Kit (see left). There are a couple of other companies that make HomeKit-compatible lights that are also well worth exploring. LIFX makes a range of lightbulbs, starting with simple, affordable white bulbs through to multi-color options, as well as decorative lightstrips and even lighting kits for gamers (available from [lifx.com](https://lifx.com), although they're not all HomeKit-compatible, so make sure to check that before buying).

Nanoleaf also makes simple bulbs, but it's best known for eye-catching, multi-color modular lighting systems ([nanoleaf.me](https://nanoleaf.me)). Rather than using bulbs, its lighting kits have names such as Lines, Hexagon and Canvas, and consist of illuminated panels of various shapes that you can link together to create decorative lighting designs that are almost like sculptures — or, of course, just disco lights for a party.

The future is looking even brighter too as there are other companies, such as Wiz ([wizconnected.com](https://wizconnected.com)), that have announced plans to support the new Matter technology with their smart lights and other products. Matter will be compatible with HomeKit, so that should mean that there are more speakers, lights, security cameras and other devices available for Apple-loving homes than ever before. ■

## HOMEKIT SECURITY

A smart security camera is a good investment for any home

We're all concerned about the security of our homes, so it's hardly surprising that security cameras are one of the most popular categories of smart devices. But while there are dozens of security cameras available that provide apps for iOS and Android, there's a very limited selection that also support HomeKit and the Home app.

HomeKit cameras tend to be quite expensive, but Aqara is a new company that makes some very affordable security cameras, such as its G2H Pro, which costs just \$69.99. The camera can also act as a control hub for other Aqara security sensors, making it a good way of setting up an affordable security system for your whole home.

One of the few security cameras that is totally focused on HomeKit is Logitech's Circle View, which can only be controlled through the Home app on Apple devices. Priced at \$159.99, the Circle View is a 1080p camera with wide-angle lens and a sturdy metal casing that is suitable for indoor or outdoor use. The Circle View doesn't have a battery, though, relying on a 10ft long USB cable for its power supply instead, which means that it's not as portable as some of its rivals. Logitech also introduced a Circle View Doorbell recently, costing \$200, although this isn't available outside the US at the moment.



If you're looking for a dedicated outside option, then you could consider Netatmo's Smart Outdoor Camera, a sturdy floodlight camera that is ideal for monitoring gardens, parking spaces and other outdoor locations. The basic camera costs \$269.99 or there's a model with a built-in siren for \$319.99. Netatmo also makes an indoor HomeKit security camera, along with a range of motion sensors, smoke alarms and even thermostats too.

One of the biggest names in security cameras is Arlo, which makes an extensive (and expensive) range of security cameras. However, it's only the more expensive models that support HomeKit, such as the Arlo Ultra 2 with 4K resolution for \$300, so you'll need to check on HomeKit compatibility when buying Arlo cameras. And, like many security cameras, the Arlo range requires an additional subscription if you want to secure online storage for your video recordings. However, this is one area where HomeKit can come to the rescue, with useful, money-saving features such as HomeKit Secure Video, which is available as part of Apple's iCloud+ subscriptions (see p40).



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# REVIEWS

TOUGH TESTING, TRUSTED RATINGS



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money on inferior products, and while we aim to include only the best hardware and apps, occasionally we like to include products that look promising, even if they don't always deliver.

We only use carefully selected experts, with specialist knowledge in their respective field, so no matter which review you're reading, you can be confident the person who's tested it knows their stuff, allowing you to make an informed purchase.

Each review is rated using a five-star system, with half stars, which is easy to understand because we give an explanation next to each one. The products that really stand out, those with a five-star rating, get a *Mac|Life* Editor's Choice award.



## Only the best...

The products that really stand out in the mag – those that receive a five-star rating – get the *Mac|Life* Editor's Choice award. It doesn't get any better than this, so you'd be mad not to buy anything bearing this mighty accolade.

## GEAR UP

The latest & greatest hardware

- 46 **InnoCN 27M2U 4K Mini LED monitor**
- 48 **Twelve South AirFly (2nd Gen)**
- 49 **Razer Kishi v2**
- 50 **Logitech MX Mechanical Mini for Mac**
- 52 **NovaPlus Pencil A8 Duo**
- 53 **Zagg Pro Mouse**
- 54 **Group Test: portable 2TB solid state drives**

## APP LIFE

The most interesting Mac, iPhone and iPad apps

- 60 **Adobe Photoshop Elements 2023**
- 62 **Wondershare UniConverter**
- 63 **Sticklets**
- 64 **VMware Fusion 13**
- 65 **Flat Eye**
- 66 **Six apps to help you manage your finances**

- 68 **Best of the best**  
*Mac|Life's pick of the best apps and hardware for Mac and iOS*





# InnoCN 27M2U 4K Mini LED monitor

A fantastic-value display for creatives

**\$699.99** From [innocn.com](https://innocn.com)

**Features** 27-inch 4K IPS panel, 1,000 nits peak brightness, 60Hz refresh rate, 90W USB-C PD

**WITH MINI LED** technology, InnoCN's monitor offers exceptional visual performance, and superb build quality, for a reasonable price.

In terms of first impressions, the InnoCN 27M2U doesn't wow: its gray plastic chassis looks cheap and tacky. The bezel on the 27M2U is as thin as it gets on three sides. The lower edge is — understandably — thicker than the rest as it carries the branding as well as buttons for on-screen display (OSD) controls. There's one USB-C PD with up to 90W, two HDMI, a full size DisplayPort, and an audio-in port. There are no USB-A ports.

Thanks to a versatile stand, the monitor can move up and down by about 12in, pivot right and left as well as tilt front and back. You can rotate it to portrait mode although the presence of the thicker lower edge gives it an ungainly look. There are some lights at the back that serve no real purpose; they create a very subtle glow against the surface behind your monitor, but that's about it.

At the core of this monitor is the Mini LED technology, which is all about smaller light emitting diodes that more evenly illuminate the panel. This is the same tech used by Apple laptops and has garnered a lot of attention across the industry, and is integrated in the 27-inch 4K IPS matte display. The panel supports 99% Adobe RGB, 99% DCI-P3 and 100% sRGB color gamuts, which means that it scores highly on color reproduction and fidelity.

That translates into clean, crisp whites, excellent viewing angles and superb color saturation and vibrancy. But this is no OLED; so black levels remain a little disappointing and color accuracy is merely middling. But given its price it's still a great all-round image quality.

The 27M2U also features a built-in automatic lighting sensor which adjusts the brightness depending on the ambient lighting. Another built-in gravity sensor changes the orientation of the screen depending on whether it is in landscape or in portrait mode.

While the overall visual performance of the 27M2U was good out of the box, it does require some adjustments, highlighting what we consider to be the biggest flaw: its OSD controls. Using four buttons to control the myriad of menus and options on offer is cruel, more so if you want to change settings often.

Elsewhere, two 5W speakers, firing at the rear, provide a reasonable aural experience within their limited capability. They are good enough for a quick YouTube video or for a Zoom video conferencing call.

We would like to have seen some USB-A ports and other features — there is a missed opportunity to transform this monitor into a real productivity powerhouse by integrating things like a proper USB hub and a webcam.

That said, this is still a stand-out monitor, with some headline features for a lot less than you would expect. **DESIRE ATHOW**

Some nice ports, including 90W USB-C PD, but no USB-A ports is a glaring omission.

## THE BOTTOM LINE

A capable and affordable Mini LED 4K monitor.

- Superb image quality
- Impressive peak brightness
- 90W USB-C power delivery
- OSD controls could be better

**EXCELLENT**





It's easy to adjust the screen to whatever best suits your needs.



The updated AirFly (2nd Gen) lets you connect Bluetooth headphones to wired music systems.

# Twelve South AirFly (2nd Gen)

Convenient and easy-to-use travel companion

**\$34.99** From [twelvesouth.com](https://twelvesouth.com)

**Features** Bluetooth transmitter with 3.5mm audio connector, AptX and SBC codecs, 20 hours battery life, 2.2 x 1.0 x 0.4in, 0.54oz

## THE BOTTOM LINE

A quick and affordable option for connecting Bluetooth headphones to wired audio systems.

- Wired connection for Bluetooth headphones
- Affordable
- Easy to use
- No support for AAC

**EXCELLENT** ■■■■■

**BLUETOOTH WIRELESS HEADPHONES** are really convenient when you're on the move, but there are still times when you may need a wired connection too. The entertainment systems in many gyms or on airplanes often require wired headphones, and Twelve South's AirFly adaptors provide a quick and easy way of connecting Bluetooth headphones to these systems. The latest addition to the range is the updated 2nd Gen version of the AirFly, which at just \$34.99 provides a more affordable alternative to the existing AirFly Duo and Pro models.

The compact little AirFly is small enough to fit into a pocket or bag with no trouble at all. There's a USB-C port on one end for charging the internal battery — which lasts for around 20 hours — and a 3.5mm audio connector on the other end, which can be plugged into any audio system with its own 3.5mm socket. Pairing the AirFly with your

Bluetooth headphones is straightforward, and we were pleased to see that Twelve South provides instructions specifically for AirPods, as well as other headphones (although, oddly, Twelve South says that the AirFly isn't currently compatible with the new second-generation AirPods Pro for some reason).

We had no problems connecting the AirFly to our AirPods Max, and the sound quality was very good, landing the avalanche of crashing drums on *The Big Sky* by Kate Bush with real power.

It's a shame though, that the AirFly supports the Bluetooth AptX codec for Android devices, but not Apple's preferred AAC codec, so the AirFly won't get the very best sound quality from your AirPods. But, to be fair, the AirFly is really all about convenience, and many people will find the AirFly an essential musical companion when they're traveling or exercising. **CLIFF JOSEPH**





# Razer Kishi v2

A premium battle booster for your iPhone

**\$99.99** From [razer.com](https://www.razer.com)

**Features** Lightning passthrough port, 2x multi-function buttons, 3.6 x 7.1 x 1.3in, 4.3oz

**MOBILE GAMING IS** serious business, and a dedicated controller can give you an edge — which is where Razer says its Kishi v2 iPhone controller comes in.

Loading in an iPhone is simple, with the Kishi's springs feeling soft and pliable. There's a Lightning port that draws power from your device, and a passthrough charging port to keep the iPhone powered up.

The Kishi v2 feels fantastically premium. Each button is satisfyingly clicky and responsive thanks to the addition of switches under the buttons in place of the membranes used on the old Kishi. Elsewhere, there's a subtle hatched pattern on the rear side that aids grip without feeling sticky.

Razer has added a few extra features that help take the Kishi v2 up a notch. Custom “multi-function” buttons can be

remapped to whatever controls you want, while there are also share, menu, and options controls, as well as a button to launch the Razer Nexus companion app.

In-game, the Kishi v2 makes a big difference. The plethora of controls in racer *Asphalt 9: Legends* were simpler to access, helping us time drifts and boosts better than we otherwise could. And in *Call of Duty: Mobile*, the Kishi made combat almost comically easy when facing opponents limited to touchscreen controls. Not only does the Kishi v2 make controls easier to reach than before, it keeps your thumbs off the screen, leaving more of the content unobscured.

If you've been looking to level up your mobile gaming skills, the Razer Kishi v2 is a superb choice. It's lightweight, comfy, and far superior to simple touch controls.

**ALEX BLAKE**

The joysticks can feel a tad small, but that's a minor complaint.

The M1 and M2 buttons can be programmed within the Razer Nexus app.



## THE BOTTOM LINE

A substantial upgrade over touchscreen gaming.

- Very comfortable
- High-quality, sturdy build
- Customizable buttons
- Expensive

**EXCELLENT** ■■■■■



# Logitech MX Mechanical Mini for Mac

A compact, tactile keyboard for Mac

**\$149.99** From [logitech.com](https://www.logitech.com)

**Features** Low-profile mechanical keys, backlighting, Tactile Quiet switches, Bluetooth LE  
**Needs** USB-C, Bluetooth, macOS 10.15 or later



The mechanical keys offer a pleasing, tactile, but quiet action.

## THE BOTTOM LINE

A well-designed mechanical keyboard for Mac users.

- Great design and build quality
- Quiet, tactile key action
- No wired mode
- Pricier than similar rivals

**GREAT** ■■■■

**LOGITECH HAS ADDED** this compact mechanical keyboard to its MX lineup for users who prefer a more tactile typing experience, be it for long-form writing, gaming, coding or similar pursuits. It's lightweight at just 21.58oz and a little thicker than non-mechanical keyboards at 1.02in, a result of using keycaps with much greater travel. The base is made of aluminum and plastic but feels sturdy.

The Mac version does of course have a Mac keyboard layout, and the keycaps aren't swappable like they are on some rival models. It does however let you pair up to three devices and then switch between them using shortcut keys rather than having to re-pair. These and other assignments can be made using the Logi Options+ software which also lets you manage function key assignments, apply actions like app launching to keys, and also control backlighting. The keyboard offers a selection of white backlighting behaviors ranging from pretty and artistic to the more practical "reaction" which lights up a key when it's pressed. An ambient sensor will only trigger lighting effects when your hand approaches the keyboard, and you can also turn them off altogether to save battery.

Speaking of battery, a full charge will get you 15 days of use or 10 months with the lighting switched off, and a 15-minute charge will last a full day. The keyboard charges via the supplied USB-C to USB-C cable but

doesn't actually work in wired mode which is a shame, only Bluetooth Low Energy. If you also have a Logitech Flow-enabled mouse, the keyboard will be able to use the Flow system to follow control between devices, controlling whichever Mac the mouse pointer is currently active on. If you don't have a compatible mouse, the keyboard alone isn't able to do this. You can do this with other peripherals already in macOS using Universal Control, but the system requirements for Logitech's tools are lower, meaning they will work with older Macs.

The typing experience is pleasant, with the low-profile mechanical keys providing solid but not overly aggressive feedback and performing commendably quietly when in use. The most obvious comparison here is with the mechanical keyboards made by Keychron, which are priced somewhat lower. Generally speaking Keychron's models have a rather more industrial feel to them, what with their swappable keycaps, whereas the MX Mechanical Mini feels a little more refined. Both have software that lets you customize their behavior, though Logitech's Flow system is a unique selling point should you choose to add a compatible mouse. It's a matter of personal taste, but the lighting effects here do feel less gimmicky too. This is a great keyboard for those who are serious about typing, though lower priced alternatives are around. **HOLLIN JONES**





The keyboard has a sleek but muted design and weighs just 21.58oz.



Two charging options  
— hence the name—  
mean all iPads are  
catered for.

# NovaPlus Pencil A8 Duo

A great alternative, but Apple Pencil is still king for creatives

**\$69** From [nova-plus-tech.com](https://nova-plus-tech.com)

**Features** Magnetic/USB-C charging, replacement tip, battery indicator, tilt sensitivity

The A8 Duo works with both Apple and third-party tips, which are easy to swap out when needed.



## THE BOTTOM LINE

Inexpensive and responsive stylus for iPad with great charging options.

- Easy to hold
- Very responsive
- Works with all iPads
- No pressure sensitivity

**GREAT** ■ ■ ■ ■ ■

**CAN'T AFFORD AN** Apple Pencil 2? Take a look at the NovaPlus Pencil A8 Duo. It's the same shape and size, and same flat side, making the stylus easier to grip than the original Apple Pencil's completely round design.

The responsiveness of the A8 Duo is on point with no lag. Additionally, the stroke moves exactly as you move and never jumps to another place on the working document. In that way, it's very reliable and can be counted on for basic stylus functions. The tip is designed to look and feel very much like the Apple Pencil 2's, and in case you wear it down a second tip is included in the box.

Unlike Apple's stylus, the A8 Duo offers two different charging options, allowing it to work with a broader range of iPads. By removing the cap on the side, there's access to a USB-C port and you can use the included USB to USB-C cable to charge it. A ring of light at the base of the stylus changes color to indicate if it is charging or full. The only

downside to this removable cap is the possibility of losing it, though if you have the right iPad (iPad Pro 11-inch, 12.9-inch 3rd/4th/5th/6th gen, iPad Air 4th/5th gen, or iPad Mini 6th gen) you can use the magnetic charging option. It's worth noting that the battery life indicator in iPadOS only works with the Apple Pencil.

The A8 Duo boasts the same 12-hour battery life as the Apple Pencil, and we found that to be the case in real-world use.

While the A8 Duo can sense when you're using the side of the stylus versus the tip and changes the stroke type accordingly, it lacks pressure sensitivity. So, artists have less control over their strokes since each comes out at maximum strength rather than varying with the pressure applied. If you want to create minute and nuanced differences with each movement, then the A8 Duo will not serve your purpose.

**REBECCA SPEAR**





# Zagg Pro Mouse

Not as pro as you'd expect

**\$79.99** From [zagg.com](https://www.zagg.com)

**Features** Seven buttons, Qi-compatible wireless charging (charging pad included), 800–1,600 DPI, pairs with up to three devices at once, battery indicator light, 0.5lb weight

The Zagg Pro Mouse comes with a wireless charging pad and works with any Qi charger.

**APPLE'S MAGIC MOUSE** has fallen behind its rivals and has begun to feel more and more dated. Sure, its gesture support is welcome, but its uncomfortable shape and awkward charging dull the appeal.

Zagg's Pro Mouse thinks it can do better, especially when it comes to the charging aspect. That's because it features built-in Qi wireless charging, and comes with a charging pad in the box. However, Zagg missed a trick by not making the charging connection magnetic like Apple's MagSafe, so instead you have to fumble a little to get the mouse onto the right charging spot.

We liked the Pro Mouse's ability to track well even on smooth surfaces, and it can pair with up to three devices at once. Its easy-to-grip sides are a welcome addition, but they're marred by the poor finishing around the device body. It

almost looks like an unrefined 3D print, and gives off a cheap appearance.

One of the main problems is it's simply uncomfortable to use. In profile, the Pro Mouse is very flat and doesn't conform to the shape of your hand. Like the Magic Mouse, it's poor ergonomically.

Discomfort is felt in other ways. There are four side buttons on the Pro Mouse — for moving forward and back in a web browser, for pairing with devices, and for Launchpad. But these buttons are incredibly stiff and unresponsive, so much so that at first we didn't think they could be pressed in at all.

Perhaps the final nail in the coffin is the price. At \$80, Zagg is asking a lot for an underwhelming mouse. For only \$20 more you could buy one of the best mice on the market, the Logitech MX Master 3 for Mac. **ALEX BLAKE**

## THE BOTTOM LINE

A disappointing mouse that doesn't justify its price.

- ❑ Wireless charging
- ❑ Uncomfortable shape
- ❑ Stiff buttons
- ❑ Too expensive

**WEAK** ■■■■

# GROUP TEST

REVIEWED BY HOWARD OAKLEY

## ON TEST...

- > CalDigit Tuff nano Plus
- > Crucial X8
- > OWC Envoy Pro SX
- > Samsung T7 Shield
- > SanDisk Extreme
- > Seagate One Touch



# 2TB SOLID-STATE DRIVES

Fast external storage for better backups, and more





**AN EXTERNAL SSD** isn't just faster than a hard disk, it also works better with the Apple File System (APFS). Storing your Time Machine backups and large Photos or Music libraries on an SSD ensures access stays fast, instead of slowly grinding to a halt as happens on a hard disk. Going solid-state also changes the drive's life expectancy: few hard disks last five years, and many die earlier. Invest in an SSD and it should last as long as ten years.

Picking the right SSD isn't a matter of getting the fastest you can afford. There's a balance to be struck between speed, capacity and cost. SSD performance is primarily limited by the interface: in reality, USB 3.1 Gen 2 (10Gbps) delivers no more than 1GB/s, and Thunderbolt 3 or 4 (40Gbps) in practice won't exceed 3GB/s. That's still much faster than a HDD at a dismal 0.1GB/s, though.

Here's our pick of the crop of SSDs, compared not just using cost per terabyte, but also taking their performance into account, as speed in MB/s per \$ per TB.

---

## How we tested

Each SSD tested was connected using the cable supplied to a Thunderbolt 4 port on a Mac Studio Max, and formatted in APFS. Read and write speeds were measured using Stibium, with ten repeats for total transfers of over 50GB, and AmorphousDiskMark.

The single APFS volume was reformatted and Ventura 13.0 installed. The Mac Studio was restarted from the external SSD and time recorded from the startup chime to the appearance of the login window.



## Things to consider...

### >>> What speed do you really need?

Time Machine backups won't run much quicker to a faster, more expensive drive. Working with huge media files is more demanding on performance, and the additional cost of a Thunderbolt drive may then prove invaluable.

### >>> Build quality

Will the drive be exposed to dust, water, or the risk of being dropped? If so, select a drive built to a standard such as IP67.

### >>> Cable length

Many drives are supplied with short cables; if you need longer, add the cost of a good-quality branded data cable.

### >>> Aim for the best deal

All drives listed are at RRP, but they tend to be much cheaper in reality. The price and availability changes daily, so watch for deals to give you the best value.



## > CalDigit Tuff nano Plus

**\$319.99** From [caldigit.com](https://caldigit.com)

**1** Tuff by name and tough by design and build, CalDigit's well-armored SSD comes in a neat plastic transport case with a single, relatively short USB-C cable. Its USB-C port is covered to keep dirt out, and it's certified to IP67 for complete resistance to dust and immersion to a depth of one metre. CalDigit claims its rubber buffer ensures it also survives being dropped from a height of three metres. This does make it a little bulkier and heavier, though.

It supports 10Gbps transfer speeds up to USB 3.2 Gen 2, and performs briskly in macOS, with write speeds close to 1GB/s and

reads at well over 0.8GB/s. Although a little slower when used to boot macOS, it should prove ideal for keeping Time Machine backups, media libraries and general storage.

One of the more expensive USB 3.x drives on test, it's well designed and does the job excellently, with an above average overall performance index of 6.25MB/s. \$.TB. If you can find it on offer, it's a pretty safe choice.

➤ Good performance

➤ Full IP67 ruggedness

➤ Transport case

➤ Relatively expensive

**GREAT** ■■■■

## > Crucial X8

**\$219.99** From [crucial.com](https://crucial.com)

**2** Made by leading US memory manufacturer Micron Technology, the Crucial X8's black anodized aluminum case isn't IP-rated, but Crucial does state it's tested to withstand the elements (as well as a 7.5-foot drop). It's also designed to dissipate heat effectively from the NVMe memory inside. It comes with a single, relatively short USB-C cable, and a compact USB-A adaptor if you need to use it with an older Mac.

With USB 3.2 Gen 2 support for transfer speeds up to 10Gbps, it does rather better than its competitors, achieving both read and write speeds just under

1GB/s. It proved a little on the slow side when used to boot the Mac Studio, though.

It's one of the cheapest of the USB 3.x SSDs we tested, and you might even find its 4TB version for less than \$300. Coupled with its superior performance it ranks as one of the highest of those tested with a performance index of 9.1MB/s. \$.TB, making it an ideal choice for all purposes except the most demanding.

➤ Better performance

➤ One of the cheapest

➤ Slimline aluminum case

➤ Slower booting of macOS

**AWESOME** ■■■■





## > OWC Envoy Pro SX

**\$469.99** From [eshop.macsales.com](https://eshop.macsales.com)

**3** Thunderbolt SSDs like OWC's Envoy Pro SX are in short supply, and significantly more costly than USB 3.x drives of the same capacity. Although twice the price, they deliver nearly three times the performance.

Faster SSDs need better cooling, and the SX is a solid block with fins to ensure it doesn't get hot when under load. This case also ensures it's resistant to dust, immersion and drops to the IP67 standard. It's the only SSD of those tested to come with a full 2.3 feet-long certified cable, in this case Thunderbolt 3.

Unsurprisingly, its performance is superb,

writing at 2.2GB/s, and getting close to the Thunderbolt ceiling at 2.8GB/s for reading. Used to boot the Mac Studio, it was also one of the fastest at 16 seconds, only four seconds longer than the internal SSD.

Everything about the Envoy Pro SX reflects OWC's attention to detail. It ranks number one in performance indexing with 9.36MB/s. \$.TB. If you need serious speed, you'll have to pay for it.

➤ Best performance of all

➤ Full IP67 ruggedness

➤ Certified 2.3' cable

➤ High cost

**AWESOME** ■■■■■

## > Samsung T7 Shield

**\$249.99** From [samsung.com](https://samsung.com)

**4** Derived from its highly regarded and best-selling T7 model, Samsung's T7 Shield adds a protective case to keep your files safe from the elements. Wrapped in its rubber cover, it's claimed to meet the slightly lower IP65 standard, which still includes complete dust protection, but is more showerproof than resistant to full immersion. Like its unprotected sibling, it includes support for hardware encryption, although we much prefer to use APFS encrypted format where it's needed.

Performance is average for USB 3.1 Gen 2 and 3.2 Gen 2, with write speeds of

0.9GB/s, and it reads at nearly 0.8GB/s. It booted macOS fairly briskly too, and wouldn't be out of place used as a bootable external disk.

Shop around and you should find it for less money, though even at the pricier RRP, it's one of the best on the performance index ranking, at 7.2MB/s. \$.TB. Overall, an excellent general-purpose SSD, but isn't currently available in any larger capacity.

➤ Good performance

➤ One of the cheapest

➤ Fair IP65 protection

➤ Longer USB-C and USB-A cables

**EXCELLENT** ■■■■■



5



6

## > SanDisk Extreme

**\$210.99** From [westerndigital.com](https://www.westerndigital.com)

**5** We tested three SanDisk drives, of which the Extreme is our choice for its performance and low cost. It has SanDisk's distinctive orange-lined handle on its slimline case, which is claimed to meet IP55, giving it dust protection and resistance to showers rather than immersion.

Performance is good, with write speeds around 0.9GB/s and reading at nearly 0.8GB/s. SanDisk SSDs seem able to boot a Mac Studio quickly, almost as fast as a Thunderbolt SSD. In terms of the performance index, the SanDisk ranks third overall in the test with an impressive 8.5MB/s.\$TB. The drive

comes with a five-year warranty too.

The more expensive Extreme Pro should deliver 20Gbps in USB 3.2 Gen 2x2, but no current Mac can meet that standard, so it proved only slightly faster than the cheaper Extreme. Its SanDisk Professional G-Drive performs like the Extreme, but adds an armored case certified to IP67, and is worth considering if you need that level of protection.

➤ Good bang for your buck

➤ The cheapest 2TB option

➤ Fair IP55 protection

➤ Short USB-C cable

**EXCELLENT** ■■■■■

## > Seagate One Touch

**\$309.99** From [seagate.com](https://www.seagate.com)

**6** Seagate's teeny little One Touch is by far the tiniest of all the drives we tested, being significantly smaller than a credit card although rather thicker. While its lightweight brushed metal and white plastic case means it has no protection at all from hostile environments, if you want an SSD that you can slip easily into a small pocket, purse or bag, we don't know of any smaller.

It also packs quite a punch, coming close to 1GB/s for both reading and writing, although it oddly proved one of the slowest on test when booting the Mac Studio, which might be the result of smaller buffers and

caches. As with most Seagate storage, it comes bundled with free introductory offers for Mylio Photos and Adobe CC Photography.

Although it should prove ideal for backups and general storage, it's a relatively expensive option, especially given its lower performance index of 6.4MB/s.\$TB, so unless you're lucky, opting for its compactness might prove a relatively expensive choice.

➤ Good performance

➤ Tiny slimline case

➤ Quite expensive

➤ Case offers no protection

**GOOD** ■■■■■





## THE WINNER



# CRUCIAL X8

**Excellent all-rounder with the best bang for your buck**

**EACH OF THE** SSDs we tested could prove ideal depending on your need and deals available, and all deliver good performance. We generally prefer Thunderbolt for its compatibility and superior performance, and OWC's superb Envoy Pro SX stands out in speed, build quality and ruggedness. Sadly it's also by far the most expensive, and would be wasted if used just to plod through making Time Machine backups. But if your needs include working with large media files, we recommend it without reservation.

For backing up and more general use, more modest USB 3.1 Gen 2 drives still deliver ten times the speed of a hard disk, with a lifetime of up to ten years. There the choice is wider but determined more by cost per terabyte.

We're torn between SanDisk's Extreme, with its good physical protection, and Crucial's X8, one of the best performers which isn't IP-rated but appears to be suitably robust. Although the difference in speed isn't great, it gives the X8 the edge, and makes it our first choice.

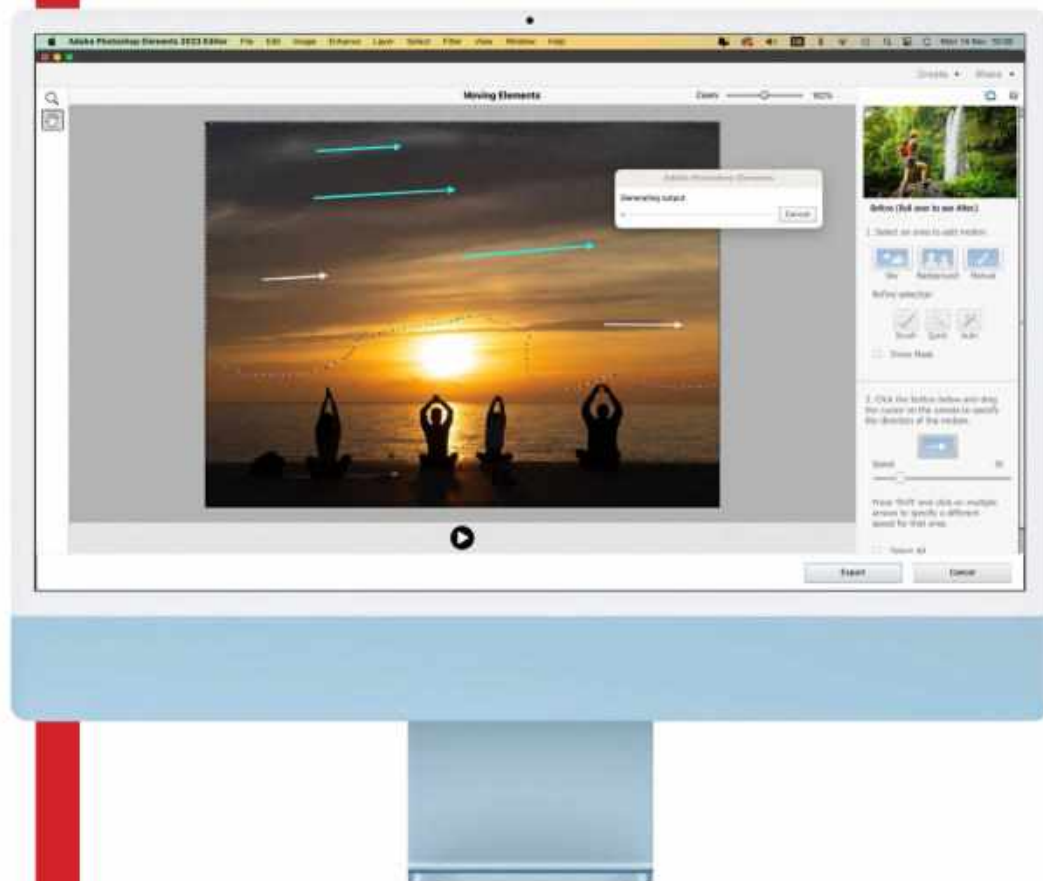


# Adobe Photoshop Elements 2023

Fix your photos and create eye-catching social media content

**\$99.99** From [adobe.com](https://adobe.com)

**Needs** macOS 11, macOS 12 (12.4 or later)



**PHOTOSHOP ELEMENTS 2023** is designed to help photographers create eye-catching images with the minimum of time and effort.

It focuses on overcoming common photo problems such as revealing missing tonal detail or removing unwanted objects. Thanks to the Adobe Sensei AI machine learning technology, you can give your images a creative makeover without requiring years of experience using the full version of Photoshop (Photoshop CC). In times when budgets are tight, Photoshop Elements 2023's one-off purchase price should make it an attractive alternative to Photoshop CC's rolling monthly subscription costs.

Unlike the black and dark-gray panels of most current photo-fixing apps (including Photoshop CC), Photoshop Elements 2023 still sports the light-gray workspace that it has worn for many years, giving it a dated look. The large icons might be better suited in an app aimed at children, but the simple look could be reassuring for newcomers to

You can create animated GIFs with the new Moving Elements command.

photo editing and image manipulation. As with previous incarnations, the Photoshop Elements 2023 workspace is divided into three sections — Quick, Guided and Expert. The Quick workspace features an Adjustments panel that lets you fix exposure and color problems in seconds by clicking on preview thumbnails. You can then fine-tune the adjustments with a slider.

The Guided Edit workspace helps image editing newcomers by taking them step by step through a range of creative techniques, such as how to correct skin tone or remove unwanted objects from a shot. Once you've created a composite image using a Guided Edit you have the option of fine-tuning it in the Expert mode, which gives you access to extra tools such as layers and masks.

Guided Edits have always been one of Photoshop Elements' strong points and the latest version features a welcome new addition called Peek-Through Overlay. You can enhance a photo by adding assets such as fall leaves to the foreground of the image. You can blur these foreground objects to create a shallow depth of field effect that helps focus the eye on the main object.

The new Moving Elements menu command isn't available in the Guided Edit workspace, but it does provide step-by-step instructions on how to select part of a photo



A new selection of contemporary collage templates enables you to combine and share eye-catching images.





and animate that particular section. This enables you to create a .gif or .mp4 movie that features moving clouds or flowing water in a few clicks.

### CREATIVE SHARING

Existing Guided Edits such as Perfect Landscape have been upgraded, so you now have 36 skies to add to a shot instead of the 12 that shipped with Photoshop Elements 2022. It's now even easier to replace a landscape's bland sky with a stunning sunset (or you can even add an elusive aurora borealis). You can also use the Guided Edit's brush-based tools to fine-tune where the new sky joins your landscape's horizon, without needing to access and edit a layer mask directly in the Expert workspace.

When it comes to sharing your favorite shots you can take advantage of an update to the Photo Collage menu. You can combine a series of shots in more creative ways thanks to a new series of contemporary templates. Browse square, vertical, horizontal and panoramic collage templates to suit a variety of social media or print destinations.

The Photoshop Elements Organizer enables you to take control over your ever-growing collection of clips and stills by adding keywords or color ratings to them so

you can find favorite files more quickly. You can then launch Photoshop Elements to edit your photos or summon Premiere Elements 2023 to edit video. You can purchase Photoshop Elements 2023 and Premiere Elements 2023 as stand-alone apps for \$99.99 each but buying them in a bundle is cheaper at \$149.99.

Photoshop Elements 2023 can also work with high-quality Raw files, including digital negative (DNG) files created by devices such as the iPhone 14 Pro. These files open in a separate plug-in workspace, Camera Raw, which you can download from the Help menu's Updates section.

This powerful digital darkroom places the most useful photo-fixing tools close to hand, enabling you to selectively boost weaker colors and lighten under-exposed shadows. As you'd expect, Elements' Camera Raw editor lacks some of the more advanced tools found in the full version of Photoshop, such as the ability to make selective adjustments using gradient and brush-based tools for example. However, it will still enable you to produce high-quality results compared to editing compressed JPEG files in the Quick, Guided or Expert workspaces. If you want to try it out, a 30-day trial version of Photoshop Elements 2023 is available. **GEORGE CAIRNS**

With the new Peek-Through Overlay Guided Edit, add foreground interest for a more effective composition.

### THE BOTTOM LINE

Photoshop Elements 2023 provides nearly all the tools that a photographer needs.

- New guided edits
- Add motion to stills
- Extra collage templates
- Dated interface

**GREAT** ■ ■ ■ ■

# Wondershare UniConverter

Multi-format video crunching and conversion

**\$49.99/year, \$79.99/2 years, \$79.99 perpetual plan** From [wondershare.com](https://wondershare.com)

**Needs** OS X 10.11 or later



commendably quick. There's basically no input format it can't handle either, so even your weirdest camcorder home movie files should work. Batch encoding makes working with lots of files a breeze and single clips can be trimmed and have effects added.

There's a lot it can do in addition to simple conversion. A compressor will keep the format while resizing the video, with easy quality sliders and a preview option to see quick results before committing to a potentially long encode. A downloader can pull down most content from streaming sites like YouTube, and a merger can stitch together existing files while converting. DVD burning is supported and you can even record your screen and webcam from inside the app. The "AI Lab" section allows noise removal and vocal isolation from audio and background removal from images among other things, though some of these involve an additional fee.

There are other audio and video converters for Mac, though none approaches the breadth of options that UniConverter has. If you're just crunching the odd video you could make do with a free app, but if you're regularly working with video and audio conversions it's a flexible and pretty affordable way to do it — especially if you purchase it outright. **HOLLIN JONES**

Batch process and convert videos to and from almost any conceivable format.



**WONDERSHARE MAKES A** range of video and graphics apps for the Mac, and UniConverter incorporates core technologies from across its products into one do-everything media converter. In truth it's more than just a converter, offering recording, basic editing and DVD burning among many other things. It's also adept at audio-only conversion, for those ripping or working with music collections.

Where some converter apps can mire you in technical detail, UniConverter presents a friendly face, with simple one-click options for converting between almost every conceivable video or audio format. Choose any parameter like screen size, bit rate or frame rate and customize these easily. Conversion is fairly efficient though as ever, depends on your material. The more re-crunching required the longer it will take, especially with H.265 codecs. For many tasks however, say converting an AVI to an MP4 that can be played on your Apple TV, it's

## THE BOTTOM LINE

Convert any video or audio format with ease.

- Work with any video or audio format
- Mostly fairly quick encodes
- Extra features are a bonus
- Some AI features cost extra

**EXCELLENT** ■ ■ ■ ■ ■



Detailed or easy settings are available, with quality sliders, target sizes and previews available to help you.



# Sticklets

Take note: this is one very useful app

**Free (full version \$9.99/year, \$18.99 lifetime license) From** [sticklets.co](https://sticklets.co)

**Needs** macOS 12.0 or later



**APPLE'S STICKIES APP** is a great way to keep reminders and pertinent information close to hand on your Mac, but it's got one main problem — use too many sticky notes and your desktop becomes a cluttered mess.

Use the Sticklets app, on the other hand, and things become much neater. This is a sticky notes app that stores your notes in the menu bar. Click the app icon at the top of your screen and your most recent note is shown. It's simple but effective and provides quick access to the information you need at a glance.

But what makes Sticklets more impressive is its extra functionality. For instance, you can access a list of your other notes from the bottom left of the menu bar popout, or you can swipe through them with a trackpad. There's a built-in search function and a calculator too, plus a word and character counter at the bottom of each note.

Sticklets isn't just limited to the menu bar, and each note can be dragged out of its container if you wish. These expanded notes contain most of the features of their menu bar equivalents (minus the calculator, search, and a few minor options). You can stick these notes on top



Click the number in the bottom-left corner to see a list of your created notes.



of other windows or join them together into a group, and when you're done, just click a button to instantly return each note to the menu bar.

There are a few choices for styling the text in each note, including options to make it bold or format it with bullet points. Still, your options are more limited than what you get in Stickies.

Each note can be added to a project, and doing so will append the project's name to the bottom of each note in the list view. Your projects can be used to organize your notes, but the feature could be more fully developed. There's a pop-out window to view your projects, but you can't rearrange the order of project notes or drag a note from one project to another, for example.

Ultimately, though, Sticklets is a wholly worthwhile addition to your Mac. The free version is limited to three notes, but buy the \$9.99 subscription (or the \$18.99 lifetime license) and you'll get a well-thought-out menu bar app that's packed with useful features. **ALEX BLAKE**

Sticklets provides a quick way to see your notes without cluttering your desktop.

## THE BOTTOM LINE

A clever app that's a step above Stickies.

-  Handy menu bar location
-  Full of clever ideas
-  Projects need a little work
-  Needs more customization

**GREAT** 

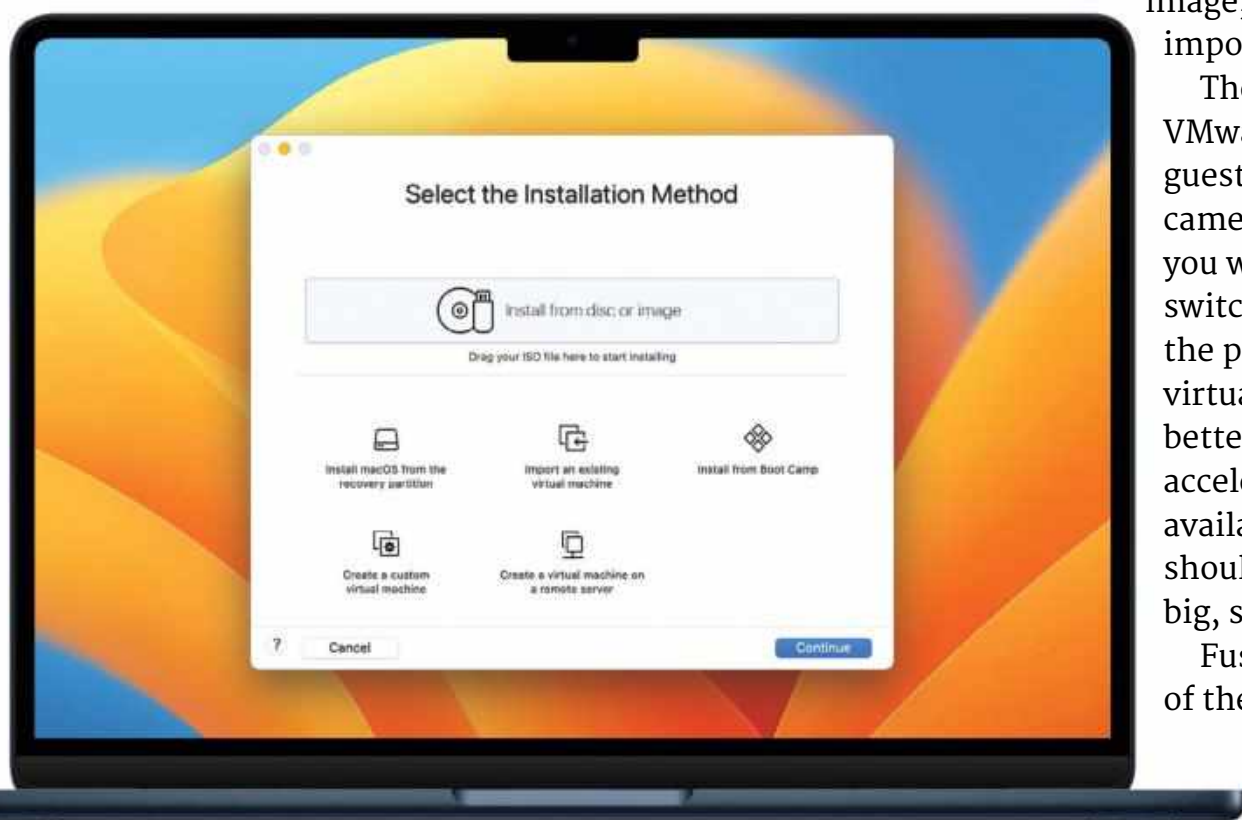


# VMware Fusion 13

Run virtual machines on Intel and Apple silicon Macs

**\$149 (Player), \$199 (Pro)** From [vmware.com](https://www.vmware.com)

**Needs** macOS 12 or later



image, importing from Boot Camp on Intel or importing from another app like Parallels.

The install process is pretty seamless and VMware Tools are installed to enable the guest operating system to share your Mac's camera, files, network, folders and ports if you wish, though any of these can be switched off for better isolation. Dig into the preferences and you can configure your virtual machines for greater power or for better battery life. Any graphics acceleration your Mac supports will be available too, and while games do work you shouldn't expect native performance with big, serious games.

Fusion 13 Player has all the main features of the Pro version for a little less money, so it's a good bet for most users. The Pro version adds more advanced virtual networking and support for the vSphere cloud enterprise

platform. For the price, this app is an excellent way to run multiple virtual machines. Parallels charges a yearly subscription while Fusion is a one-off purchase, which people prefer. At this point in its development the app is very smooth and capable and though you can tweak all sorts of things, it's also easy to have all the setup done for you. **HOLLIN JONES**

Installation is as easy as drag and drop or pointing at an existing Boot Camp partition or virtual machine. Fusion does the rest.



**APPLE DOESN'T SUPPORT** Boot Camp on Macs running Apple silicon, and even for those with Intel Macs it's almost always more convenient to run Windows under emulation than booting natively into the Microsoft OS. Fusion 13 brings support for running Windows 11 virtual machines on either architecture, and though M1 or M2 Mac users will need an ARM-compatible version of Windows, they will be able to run Win32 or X86 versions of apps, as emulation is available. Fusion can also run various flavors of Linux, older versions of Windows and even macOS virtual machines, all of which are tremendously useful for anyone needing to run older apps or test websites or software on other operating systems without needing a real PC.

The setup process is very straightforward and even users without much experience shouldn't be fazed at all with the app guiding you through the process. You can create a new virtual machine by dragging a disk



You can dig into the settings to change the way the virtual machine uses your Mac's hardware.

## THE BOTTOM LINE

A smooth and friendly app to run multiple virtual machines on your Mac.

- Very easy setup of VMs
- Runs quickly and efficiently
- M1 and M2 Macs now supported
- Seamless integration of host and guest

**EXCELLENT** ★★★★



# Flat Eye

## Black Mirror meets 7-Eleven

**\$18.99 From** [flateye-game.com](http://flateye-game.com)

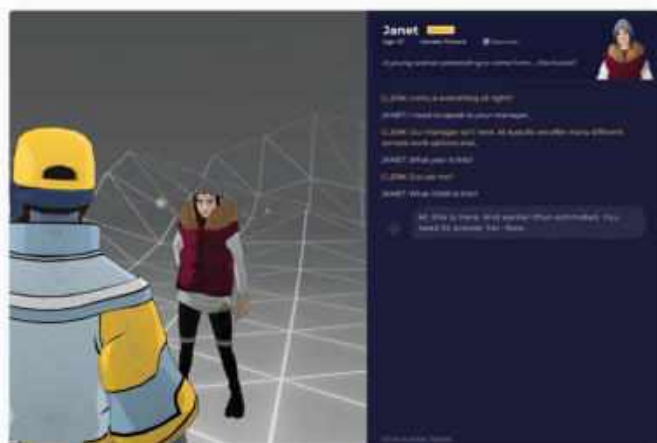
**Needs** macOS 10.14 or later

**FLAT EYE IS** a narrative management game, which means its management aspects get equal billing with the story, rather than being the main focal point. As a remote manager controlling a gas station clerk from afar, you have to outfit and upgrade your store, decide what the clerk does and says, and generally keep your customers happy. Every now and then, a “premium customer” will enter your station, keen to talk. The conversations you have — and how you conduct them — influence the story.

*Flat Eye* might be set in Iceland in the year 2022, but it's a decidedly alternate universe... or is it? The toilets produce "biomatter" that's used for food and drinks. You can install medical machines that are guaranteed painless and definitely won't kill their patients. And everything is filled with intrusive data collection tech that harvests every fact about your customers. Sounds familiar...

## OUT OF FOCUS

This humorous approach works well, and the game is dotted with knowing corporate satire. The humor is much needed, because the day-to-day management side of *Flat Eye* is somewhat



Conversations with premium customers advance the story, and the AI can comment on what has been said.



dull. Sure, it can be a challenge to maintain every machine and stock every shelf while a queue of impatient customers is waiting at the checkout, but the fact that the management aspect is so thin dampens its appeal. Repairing a busted machine is as simple as clicking it and pressing Repair, for example.

Unfortunately, the narrative side isn't too much better. Most of the characters tell you how awful the dystopian world is, which is already obvious from your daily interactions in the gas station. Meanwhile, the sentient AI that dominates *Flat Eye's* universe encourages you to unlock more tech in order to experiment on your visitors, but your ability to conform with or rebel against its desires feels limited.

*Flat Eye* would be a much better game if it focused solely on either management or narration, as neither is as strong as it could be. We enjoyed the humor, art, and challenge involved, but it left us wanting more. **ALEX BLAKE**

There's a lot to manage,  
from upgrades and repairs  
to customer satisfaction.

## THE BOTTOM LINE

An interesting game that squanders its potential.

- ✚ Fairly challenging management
- ✚ Entertaining satire
- ✖ Can be a bit dull
- ✖ Thin characters

**SOLID** 

# 6 APPS Manage your finances


Budget with confidence thanks to these brilliant apps **BY ALEX BLAKE**

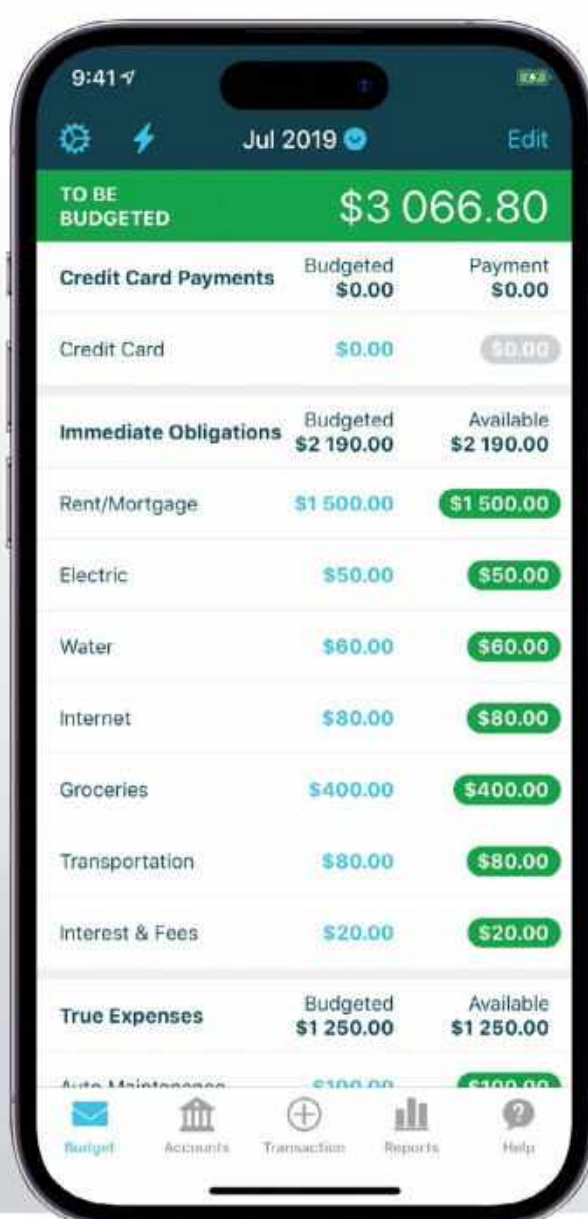


## Emma – Budget Planner Tracker

**Free (IAPs)** From [emma-app.com](https://emma-app.com)

**Needs** iOS 11.0 or later


 Emma is an all-in-one money app that can help sort out your finances. It gathers all your accounts into one place, giving you a quick way to view your assets. Add in your subscriptions and insurance and it'll inform you when they're ending, and it can analyze your spending and help you create a budget to get your finances under control. You can also receive alerts when you're paid, when you send money to someone else, and when you go into your overdraft. We love that this app does so much yet is still easy to use.

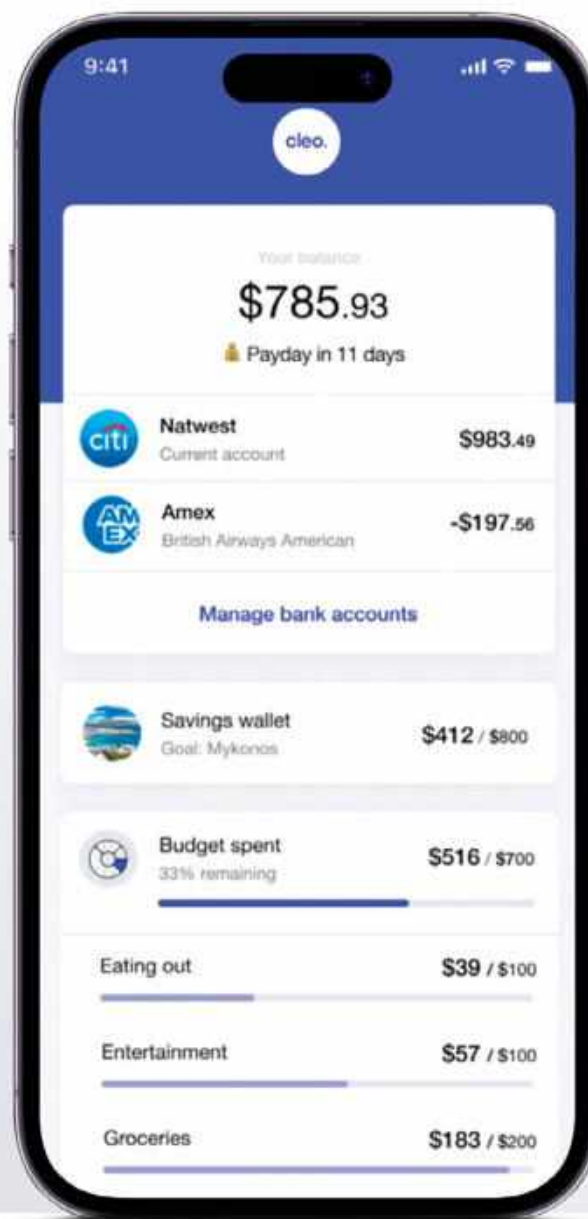


## YNAB (You Need A Budget)

**Free (IAPs)** From [youneedabudget.com](https://youneedabudget.com)

**Needs** iOS 14.0 or later


 Emma covers a huge number of bases, but if you just want a simple budget tracker, YNAB will be right up your street. This app has amassed legions of fans thanks to its straightforward interface that makes calculating and understanding your spending as easy as can be. You can import transactions from your accounts and set targets to rein in your spending, and we also like its loan calculator, which shows how much you could save (in both cash and time) by increasing your monthly repayments. Very useful!



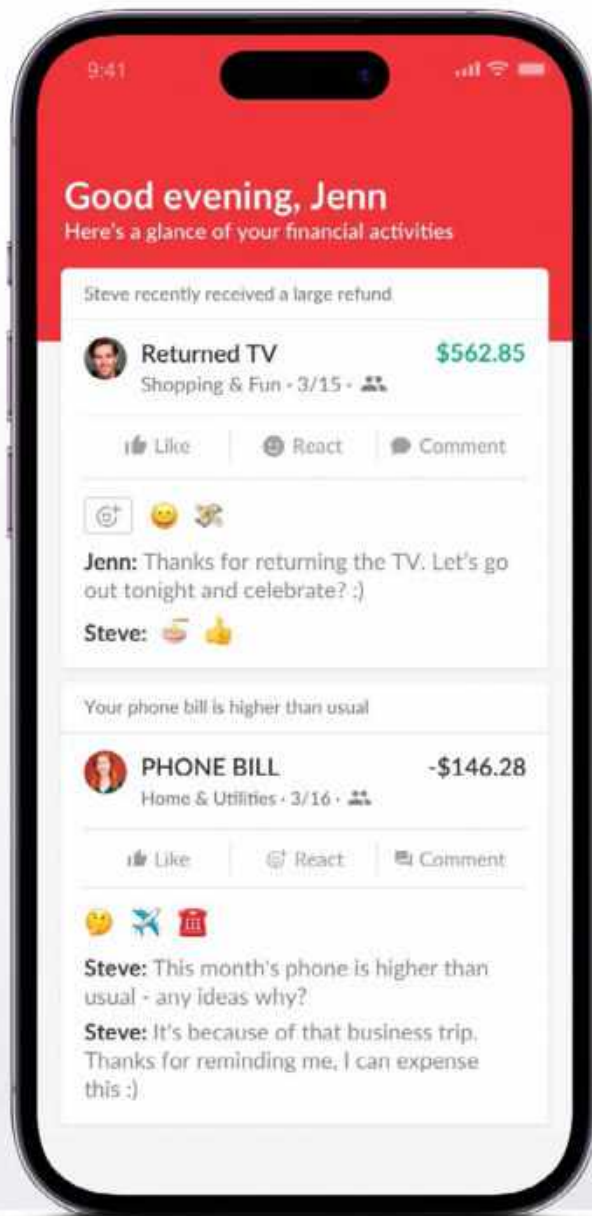
## Cleo

**Free** From [web.meetcleo.com](https://web.meetcleo.com)

**Needs** iOS 13.0 or later

 Cleo is a budgeting app that is backed by the power of artificial intelligence (AI). And not just any AI – this one has a personality. So you can ask Cleo for budgeting advice or a spending report and they'll be served up in no time. As Cleo learns from your finances, it can help you improve your credit score, build up a savings stack, and visualize your money with helpful charts. It can even lend you up to \$100 interest free in a pinch, then help you create an emergency fund for when you need it most.






## Honeydue: Couples Finance

**Free (IAPs)** From [honeydue.com](https://honeydue.com)

**Needs** iOS 12.0 or later


 Budgeting for couples can look very different to when you're single, and that's where Honeydue comes in. It's a finance app made just for couples, and it understands the challenges and rewards that come with budgeting together. Not only does it help track and categorize spending, but it lets you divide bills between you and your partner, communicate within the app to lessen misunderstandings, and you can even open a Honeydue bank account where each person has their own account number and debit card.

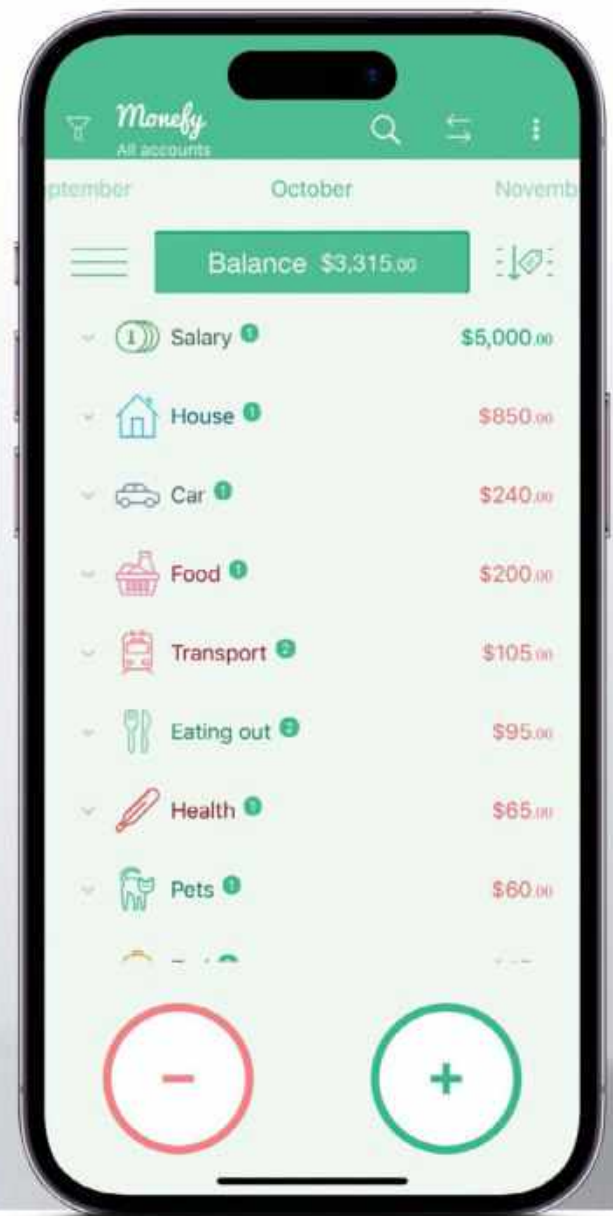


## Personal Capital: Retirement

**Free** From [personalcapital.com](https://personalcapital.com)

**Needs** iOS 12.0 or later


 Keeping an eye on your retirement savings can be tricky when they're spread across various accounts, pensions and investments. Personal Capital makes it hassle-free, with a simple dashboard that keeps everything at a glance and close by. If you need help, the app gives you access to professional financial advisors, and it can help you forecast where your savings and investments will leave you in later years — and what you could do to help them perform even better. It's perfect for building a nest egg.



## Monefy

**Free (IAPs)** From [monefy.me](https://monefy.me)

**Needs** iOS 11.2 or later

 Want to understand where your money is going? Monefy is a dedicated expense tracker that will show you how you're spending your cash and where you can plug the gaps that could lead to problems down the road. Just add in the amount you spent and select a category and it's added to your history. When you want to get a better understanding of what you're spending, Monefy has helpful charts and graphs that make it all crystal clear. Empowered with that knowledge, you can regain control of your cash.
















# Best of the best














Can't find the hardware or app you're looking for in our reviews section? Then check in here – we've highlighted the best in every major category, as voted for by us

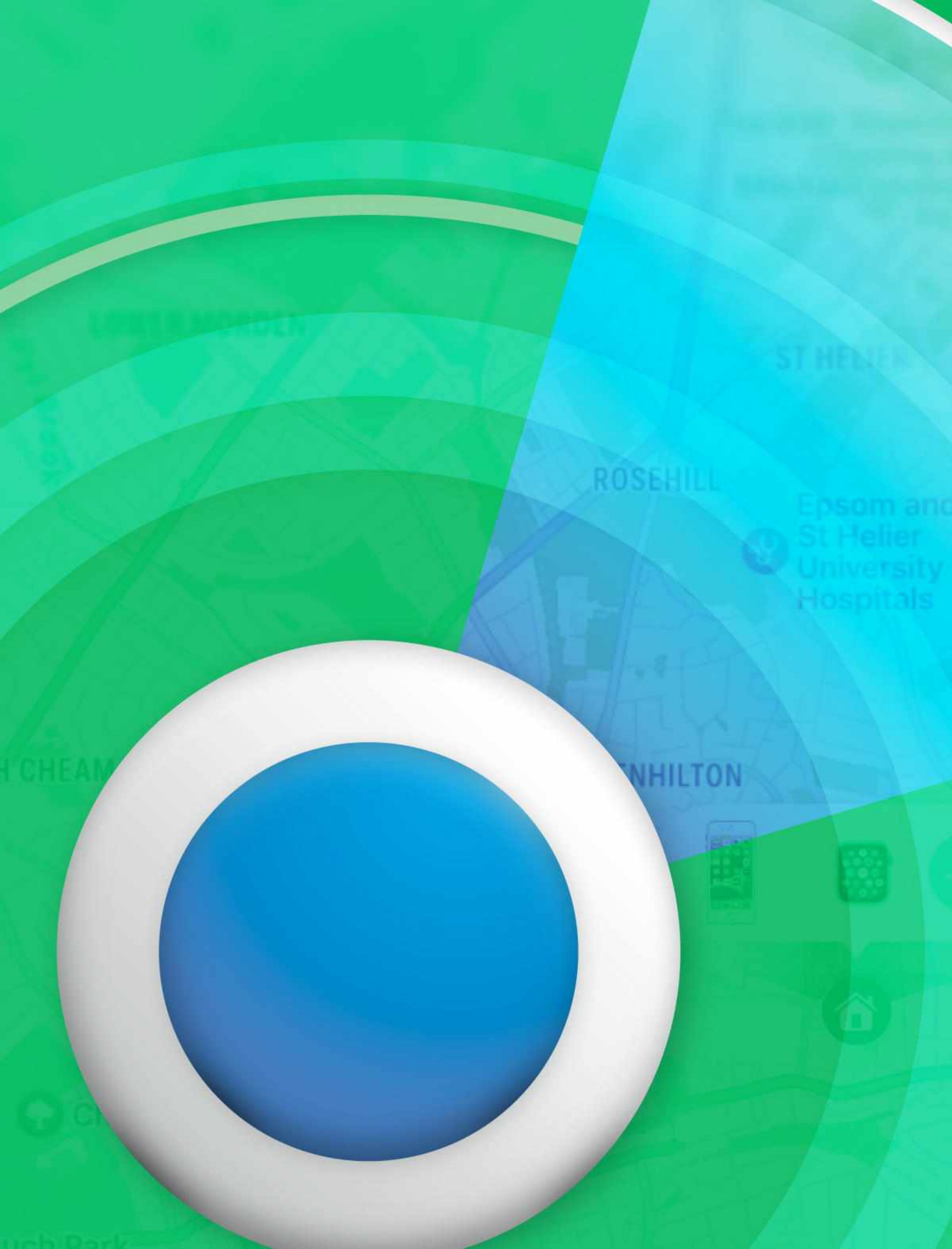
> HARDWARE				
CATEGORY	PRODUCT	WEB	PRICE	ISSUE
MESH ROUTER	ASUS ZenWiFi XT9	asus.com	\$449.99	#201
4K USB-C MONITOR	BenQ EW3280U	benq.com	\$799.99	#169
THUNDERBOLT DOCK	CalDigit Thunderbolt Station 4	caldigit.com	\$379.99	#199
KEYBOARD	NuPhy Air75 Wireless Mechanical	nuphy.com	\$109.95	#189
PORTABLE PRINTER	Epson WorkForce WF-110W	epson.com	\$299.99	#185
PORTABLE HDD	Toshiba Canvio Flex 2TB	storage.toshiba.com	\$79.99	#197
NAS DEVICE	Asustor Drivestor 2 Pro AS3302T	asustor.com	\$249	#190
WIRELESS CHARGER	Belkin BoostCharge Pro Portable	belkin.com	\$59.99	#197
DESKTOP SPEAKERS	Klipsch ProMedia Heritage 2.1	klipsch.com	\$349	#196
IN-EAR HEADPHONES	Beats Fit Pro	beatsbydre.com	\$199.99	#190
SECURITY CAMERA	EufyCam 2C (two-pack kit)	eufylife.com	\$239.99	#171
SMART SPEAKER	HomePod mini	apple.com	\$99	#176
OVER-EAR HEADPHONES	Sony WH-1000XM5	sony.com	\$399.99	#197
AIRPLAY SOUNDBAR	Sonos Beam	sonos.com	\$449	#187
WEBCAM	AnkerWork B600 Video Bar	ankerwork.com	\$219.99	#191
PHOTO PRINTER	Liene 4x6 photo printer	amazon.com	\$136.99	#190
PORTABLE BATTERY PACK	Anker 533	us.anker.com	\$49.99	#198
MOBILE DOCK	Kensington 8-in-1 USB-C Mobile Hub	kensington.com	\$77.55	#190
OFFICE CHAIR	Branch Verve	branchfurniture.com	\$549	#201
MOUSE	Logitech MX Master 3S	logitech.com	\$99.99	#198
ACTION CAMERA	GoPro Hero 11 Black	gopro.com	\$500	#202
SMART TV PLAYER	Roku Streaming Stick 4K	roku.com	\$49.99	#190
PORTABLE DAC	iFi Go Blu	ifi-audio.com	\$199	#189
PORTABLE SSD	Crucial X8	crucial.com	\$219.99	#203

NEW!



> iOS/iPadOS APPS				
CATEGORY	PRODUCT	WEB	PRICE	ISSUE
TO DO (PRODUCTIVITY)	 Things 3	culturedcode.com	\$9.99	#194
WRITING	 Scrivener	literatureandlatte.com	\$19.99	#138
EMAIL	 Spark	sparkmailapp.com	Free	#190
PHOTO EDITOR	 Pixelmator Photo 2	pixelmator.com	\$4.99	#193
VIDEO EDITOR	 LumaFusion 3.0	luma-touch.com	\$29.99 (IAPs)	#186
CAMERA	 Obscura 3	obscura.camera	\$9.99	#196
RSS READER	 Reeder 5	reeder.app	\$4.99	#176
IDEAS ORGANIZER	 OmniOutliner3	omnigroup.com	Free (IAPs)	#141
NOTE-TAKING	 Notability 10	gingerlabs.com	\$8.99	#174
MIND-MAPPING	 MindNode 7	mindnode.com	\$14.99	#184
DOCUMENT SCANNER	 Genius Scan 6.0	thegrizzlylabs.com	Free (IAPs)	#182
CALENDAR	 Fantastical 3	flexibits.com	\$4.99/month	#198
WEATHER	 Carrot Weather 5	meetcarrot.com	\$0.99/month	#180

> macOS APPS				
CATEGORY	PRODUCT	WEB	PRICE	ISSUE
TO DO (PRODUCTIVITY)	 Things 3	culturedcode.com	\$49.99	#194
WRITING	 Scrivener	literatureandlatte.app	\$49	#200
EMAIL	 Spark	sparkmailapp.com	Free	#190
PHOTO EDITOR	 Luminar Neo	skylum.com	\$79	#194
VIDEO EDITOR	 Wondershare Filmora	wondershare.com	\$109.99	#202
SCREEN CAPTURE	 ScreenFlow 9	telestream.net	\$129.00	#164
MUSIC CREATION	 Logic Pro	apple.com	\$199.99	#141
PASSWORD MANAGER	 LastPass	lastpass.com	From \$3/month	#188
DESKTOP PUBLISHING	 Adobe InDesign	adobe.com	\$20.99/month	#162
BACKUP	 Carbon Copy Cloner	bombich.com	\$39.99	#136
VIRTUALIZATION	 Parallels Desktop 18	parallels.com	From \$99.99	#201
TIME-TRACKING	 Tyme 3	tyme-app.com	\$3.99/month	#169
VIRTUAL PRIVATE NETWORK	 NordVPN	nordvpn.com	\$11.95/month	#186



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GET STARTED WITH

# Find My

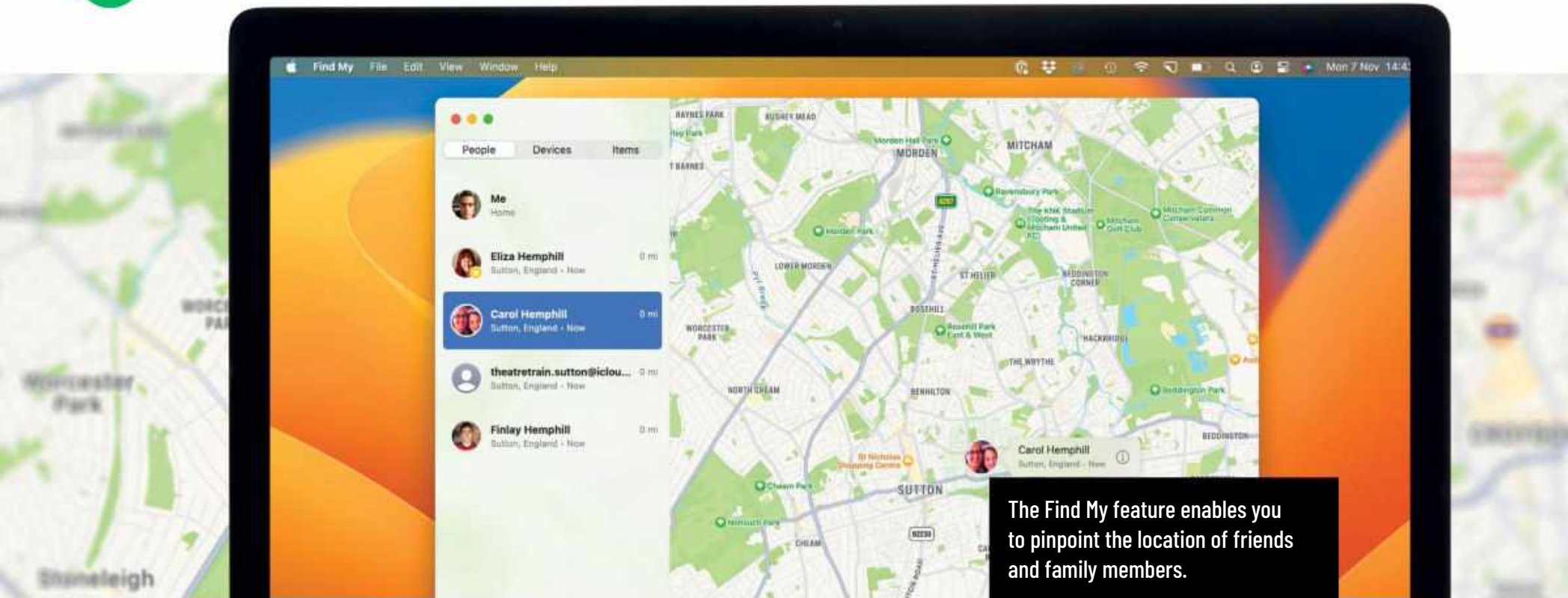
Whether you're trying to locate people, your iPhone or your wallet, Find My can help

WRITTEN BY **KENNY HEMPHILL**



**WHEN APPLE LAUNCHED** Find My iPhone 12 years ago it was a revolutionary idea, if fairly limited in terms of features. The idea was that using an app on an iOS device, or by logging into iCloud on a computer, you could identify the exact location of an iPhone, iPod, or iPad that was connected to your account. You could then have the device play a sound, lock it with a passcode, or erase all contents and settings on the device if it had been lost or stolen. A year later, Find My iPhone was joined by Find My Friends, which enabled you to share your location with friends or family members, either temporarily or permanently.

Skip forward a decade and the Find My app is now on Mac, iOS and iPadOS and enables you to track any of those devices, as well as friends and family members, and the newest addition, AirTags. Find My is now baked deep into iOS and macOS, enabling you to, for example, see friends' locations in the Messages app, or manage location sharing in Contacts. Perhaps most useful of all, Apple has opened up the Find My network to third-party devices so that developers whose devices are approved by the Find My network accessory program, part of Made For iPhone (MFi), can connect their device to the network. That means it can be tracked in the Find My app, alongside Apple devices. ■



# How to set up Find My

Meeting up with friends at a festival? Locate them with Find My



## WHETHER YOU SHARE your location permanently with

family members so you all know where each other are, or temporarily with groups of friends with whom you're on holiday, the Find My app is indispensable. By combining data from Wi-Fi, Bluetooth, cellular

networks and GPS, the app is able to identify the location of friends who have agreed to share it with you, displaying that location on a map.

Rather cleverly, and with privacy in mind, devices that are sharing their location don't continually report that location to Apple's servers. Instead, they wait until a

request is made from a device with which the device owner has agreed to share, and then report the location. The device will then record that location, and if another request is made from the same device within two hours, even if the device is off, it will report the most recent location along with a time stamp. ■

## QUICK LOOK The Find My interface on iPad

A

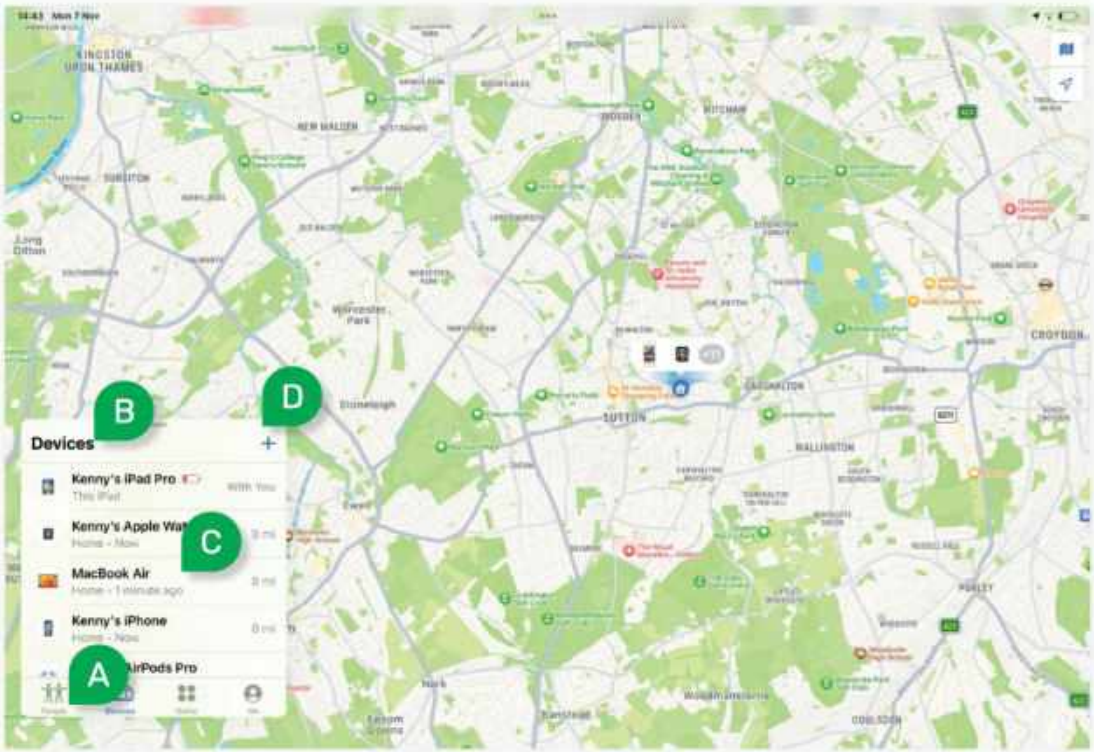
### WHAT TO FIND

Use these options to choose between locating people, Apple devices, and other items.

B

### ALL DEVICES

When you choose Devices, you will see your own devices listed, along with those of family members.



C

### NEXT STEPS

Tap a device to play a sound from it, mark it as lost, erase it or set notifications.

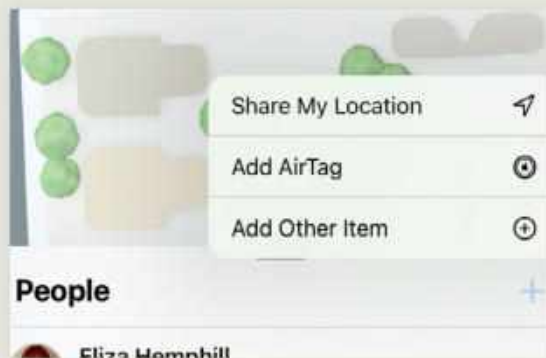
D

### ANY EXTRAS

Tap the "+" to add AirTags or compatible third-party items to the list of your Find My devices.

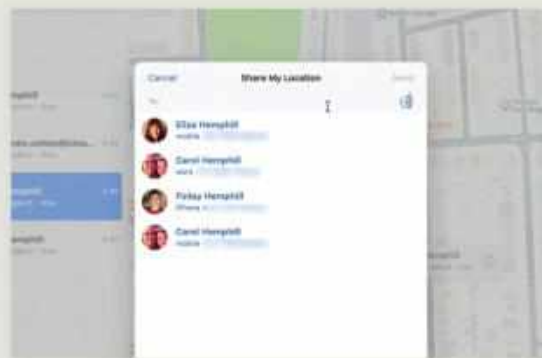


## HOW TO Locate people and devices with Find My



### 1 Share your location on iOS

Launch Find My and tap People. Tap the "+" and choose Share My Location. Start typing the name of the person and tap their name. Tap Send. Choose an option from the menu.



### 2 Share your location on Mac

Launch the Mac app and click People at the top left of the window. Click Share My Location at the bottom. Type and select the name of the person. Click Send and choose an option.



### 3 Stop sharing

On iPhone or iPad, tap People, then the name of the person you want to stop sharing with. Choose Stop Sharing My Location. On Mac, click their name, then the "i" next to their location and choose the same option.



### 4 Find a friend

To find the location of someone who is sharing theirs with you, tap or click People, then select that person. When they appear on the map, zoom in by unpinching on iPhone or iPad or clicking the "+" on the Mac.



### 5 Get directions

Having a map location is all very well, but if you're meeting someone, you need to know how to get there. On Mac, Ctrl-click on the person's name. On iPhone or iPad, tap on it. Choose Directions to open Maps.



### 6 Find My iPhone

On your iPhone (or iPad or iPod touch), launch the Settings app and tap your name. Choose Find My. Tap Find My iPhone (or iPad or iPod touch). Toggle Find My [device] to On and switch on the Find My network.



### 7 Locate an iPhone

If you've misplaced your iPhone, or you think it's been stolen, launch Find My on a Mac or iPad signed in to the same Apple ID. Tap or click the Devices tab and then tap or click on your iPhone. You'll see its location.



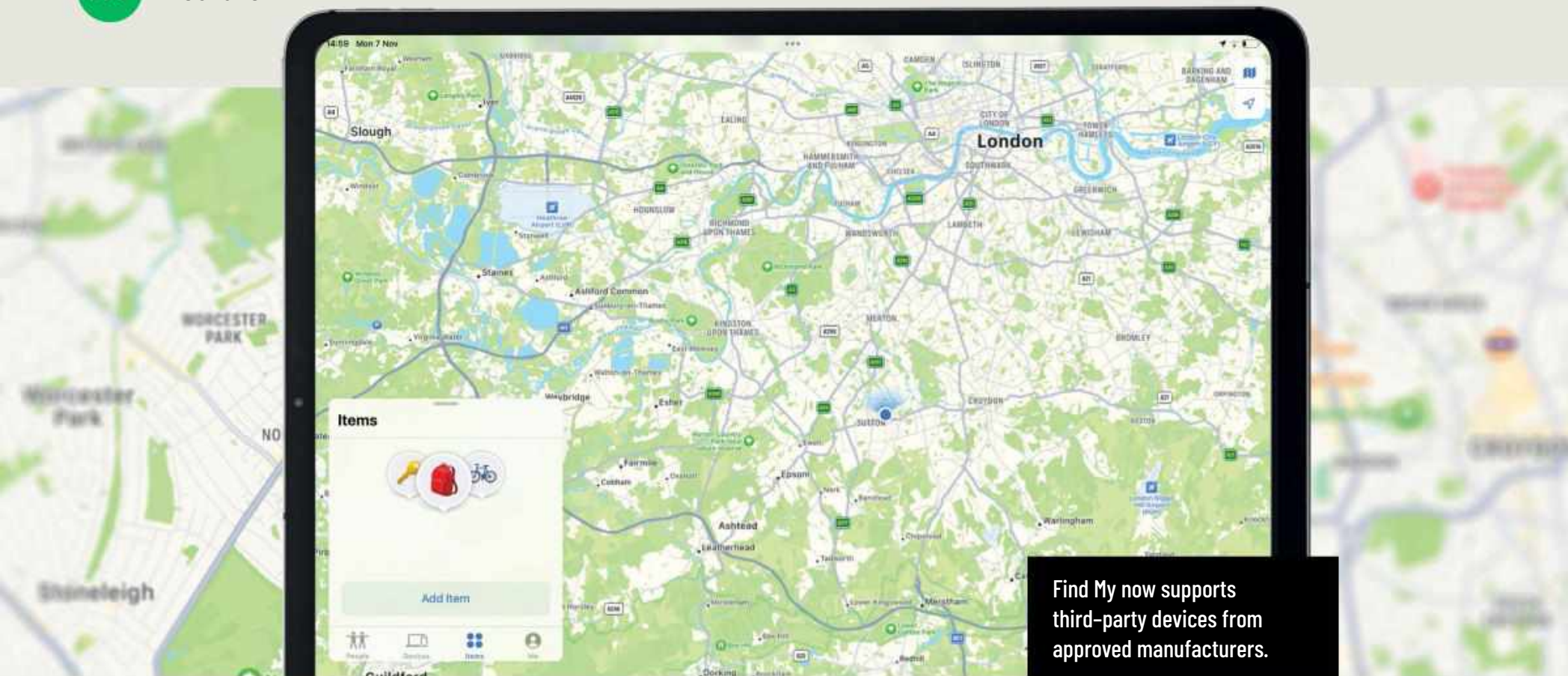
### 8 Find your AirPods

You can also locate missing AirPods and have them play a sound. In the Find My app, tap or click Devices, scroll until you see your AirPods and then tap or click them. Tap or click Left Bud or Right Bud, then Play Sound.



### 9 Use in iCloud

You can access Find My from any computer by logging into your iCloud account. Go to [icloud.com](https://icloud.com) in a web browser, sign in and authenticate. Choose Find My iPhone. Click on one of the dots on the map to locate a device.



# Do more with Find My

Discover how to add accessories, receive notifications, and more

 **LOCATING FRIENDS, FAMILY** members, and your Apple devices using the Find My app is very useful, but it has evolved to be able to do much more than that. The latest innovation is that owners of the second generation of AirPods Pro can now locate the case. Even more

useful is support for third-party devices through Apple's Find My network accessory program. Whether it's earbuds from Belkin, an ebike from VanMoof, or tags from Chipolo, you can add them to Find My. So far, the number of accessories that support Find My is limited, but it's sure to increase in time.

You can mark an iPhone, iPad or Mac as lost and display a message on its screen with a contact number in case it's found. And you can choose to receive notifications when its status changes. Or, if you're sure it's been stolen, you can erase its data and settings remotely and lock it with a passcode. ■

## HOW TO Mark a device as lost



**1 Locate the device**  
In the Mac version of Find My, click on Devices at the top of the sidebar. Look for the device and click on it. On iPad or iPhone, tap Devices at the bottom of the screen and then tap on the device you're looking for.



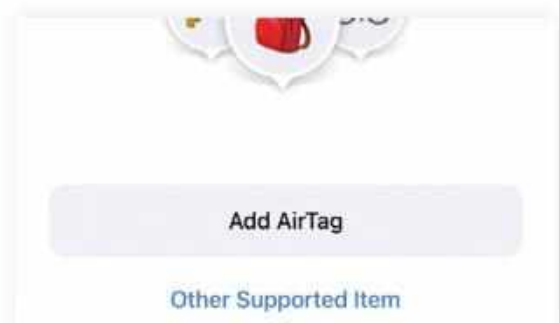
**2 Select the device**  
Zoom in on the map if necessary and then click or tap the device you want to mark as lost. When it is selected, scroll down to Mark As Lost and click or tap Activate. Choose Continue. Type a contact number.



**3 Choose options**  
Tap or click Next, then type a message to display on the device. Tap or click Enable to mark the device as lost, then turn on Notify When Found. To turn off Lost mode, use your passcode to unlock the lost device.



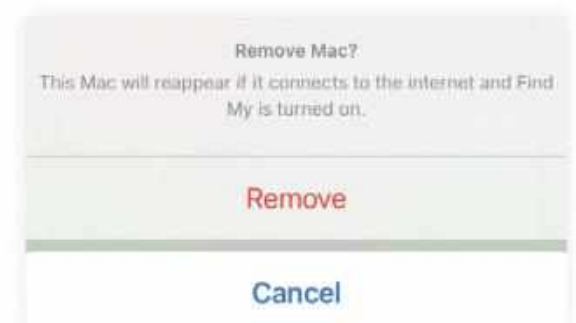
## HOW TO Add other items



- 1 Use an AirTag**  
Remove the battery tab from the AirTag and hold it next to your iPhone, or in Find My, tap Items > Add Item > Add AirTag. When it appears, tap Connect. Choose a name or Custom Name. Tap Continue, and again.



- 2 Third-party device**  
Follow the manufacturer's instructions to prepare the device. Then, in Find My, tap or click Items > Add Item. Tap or click Other Supported Item. Follow the instructions to name and add the device.



- 3 Remove a device**  
To remove a device from Find My, it needs to be offline. So, the first thing to do is turn it off. When it's offline, launch Find My and locate the device in the Devices list. Tap or click it, then Remove this Device > Remove.

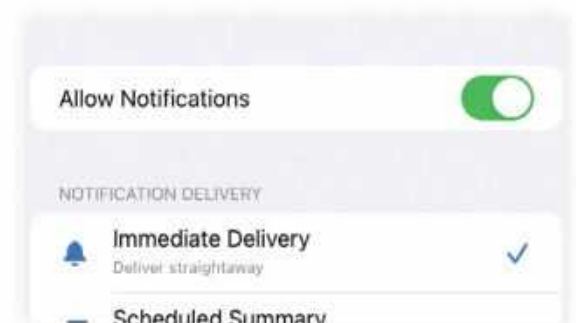
## HOW TO Manage alerts and notifications



- 1 Separation alert**  
Tap or click Devices or Items. Locate and select the device or item you want to set the alert for. Choose Notify When Left Behind and toggle the option to On. Tap or click New Location to set an exception.



- 2 Set a people notification**  
Tap or click People, then select the person you want to set the notification for. Tap or click Add under Notifications and choose an option. Select the options you want, then Add.



- 3 Global notifications**  
In Settings (System Settings on Mac), select Notifications then tap Find My. Choose whether notifications should be delivered immediately or scheduled, and how time-sensitive notifications should be delivered.



## > TRACKING ALERTS

### Find out if a Find My device is being used to track you

After much publicity about Apple's AirTags being used to track people without their knowledge, Apple introduced privacy features to Find My designed to alert you when an unknown device is close by and moving with you. The type of alert differs according to the device. For devices that are registered to someone else's Apple ID, you will receive a notification with the name of the device. For those that aren't registered to someone else or that Apple can't identify, the notification will say "unknown device". If an AirTag has been tracking you and you don't have an Apple device in your possession, the AirTag will emit a sound.

## Better the bugs you know?

### GENERAL CONSENSUS IS

that it's wise not to upgrade to a major new version of macOS for a few months, waiting until a later update, when early problems seem to be settling. Not that there's any real evidence to support this, it just seems more cautious and wise.

Look at what's really happening though. After macOS Ventura was released, Apple listed 77 security vulnerabilities it fixed, yet matching security updates to Monterey and Big Sur fixed less than 10 of those. Not all of the other 68 will be present in older versions of macOS, but it shows the gulf in support.

Those only include security bugs. Apple doesn't even try to list all the bugs fixed in Ventura, but none of those will ever be fixed in Monterey or Big Sur. What seems good sense could be the opposite; upgrading early could be safer.

## > Is your keychain being phished?

How to tell whether a request for a keychain password is genuine or malicious?

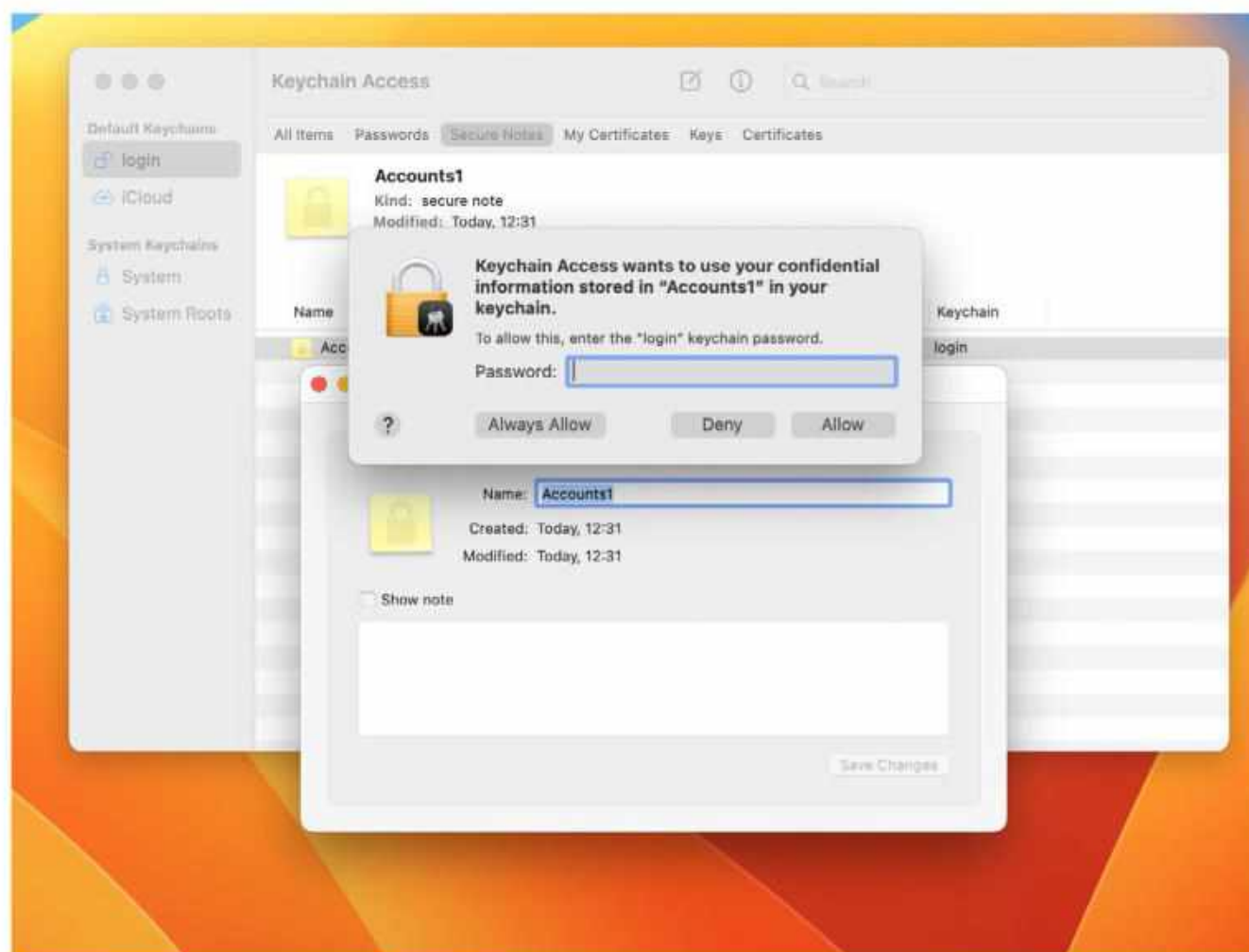
When you're prompted to enter a password into a dialog, it's essential to check first which password is required. Requests for your iCloud password are common, while those for keychain passwords must conform to a pattern to prove they're genuine.

At the left of the dialog there should be a locked padlock icon, and superimposed on it should be a miniature icon for the app making the request. The accompanying text should contain the name of that app, the name of the item in your keychain that it wants to access, the name of the keychain to be unlocked for access, as well as the explicit statement that it's the keychain

password that's required, not your iCloud or another password.

The pattern and layout has changed a little over the last few years, but unless it meets all those criteria you shouldn't enter anything into its text box, just click on the Deny button to be safe.

If you judge that the request is genuine, decide whether to Allow it just this once, which means in future you'll be prompted each time that app needs the same access. If you trust the app with that protected information, click on Always Allow, so macOS security can decide whether to skip making future requests.



The dialog shown to unlock and access items in a keychain is distinctive, and worth checking carefully.



Get official documentation at [support.apple.com](https://support.apple.com) | Get help with hardware at [support.apple.com/repair](https://support.apple.com/repair)

## > iOS 16 runs the battery down

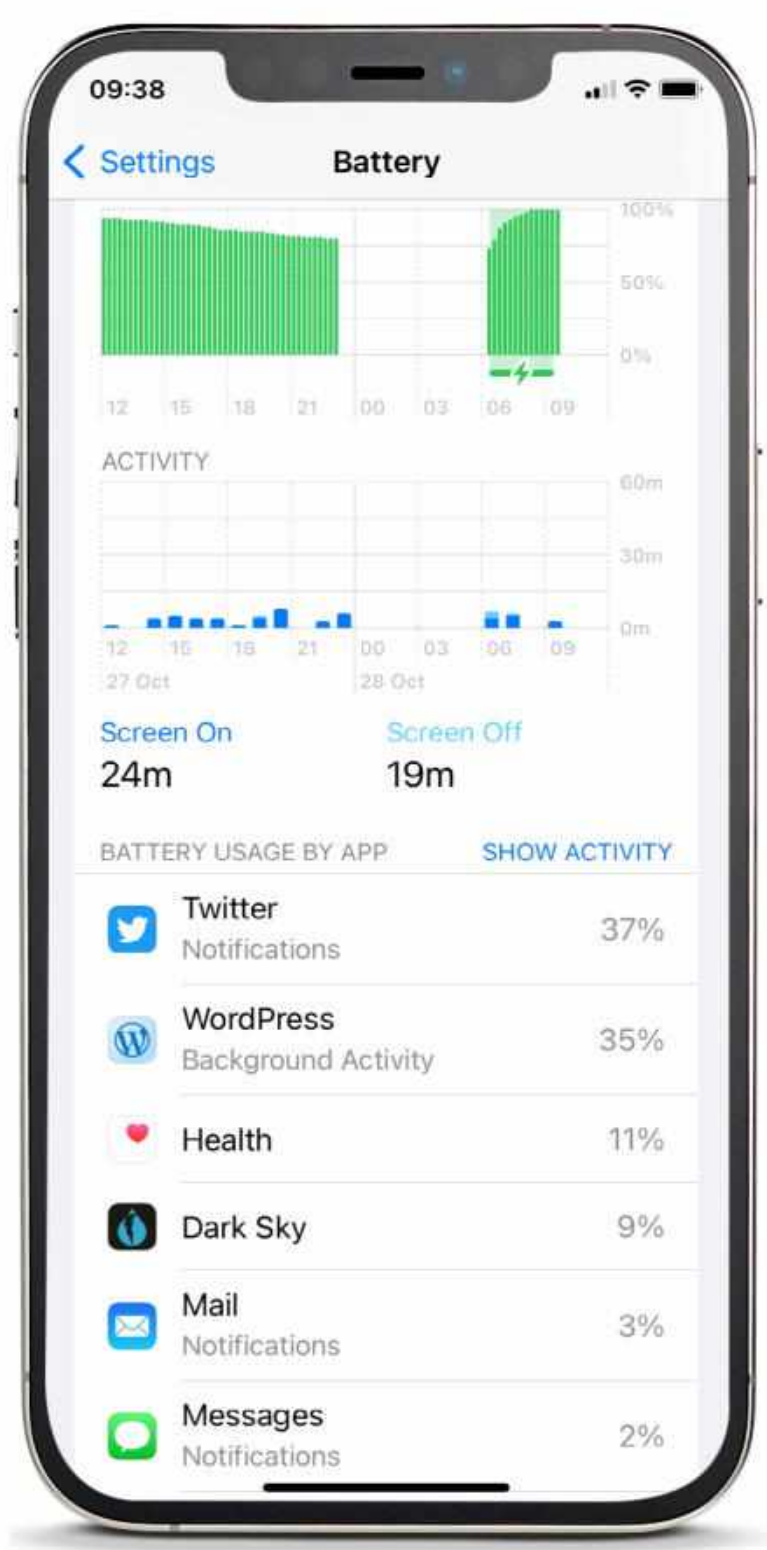
Since upgrading my iPhone XR to iOS 16, its battery life has been worse. Is this a bug, or is its battery on its way out?

This isn't an uncommon problem after installing any update to an iPhone or iPad, and is usually fixed by shutting it down, leaving it a minute or two, and then starting it up again.

If that doesn't restore battery life, spend some time in Settings > Battery to discover the cause. In the past, it was often recommended that you try a full charge-discharge cycle to "recondition" your battery, but with more recent batteries and improved management that's no longer thought to achieve much.

What's more likely to bring a solution is to watch the list of apps using up your battery the most. Following an update to iOS or iPadOS, settings may get changed, or bugs in an app can lead to excessive energy use. Over a few days, watch the apps at the top of the list, and check their settings, whether they've started getting your location all the time instead of only when active, and their notifications.

While you're doing this, make the most of battery power by shutting your device down instead of leaving it to sleep overnight, and regularly recharge it fully before letting it run on battery power alone. If none of this helps, and it's more than a couple of years old, battery replacement may prove your best option. Apple will test the battery, and if out of warranty or AppleCare+, charge \$69 to swap it for a new one.



Watch apps listed in Settings > Battery to discover which are using it most and might have incorrect settings.

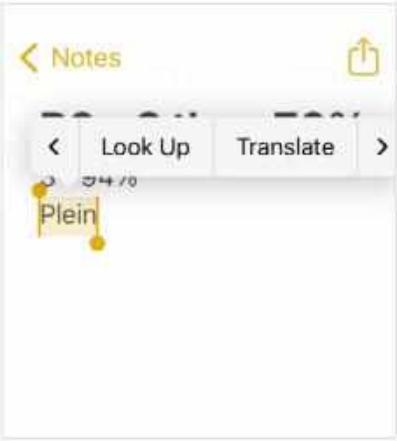
## Quick-fire questions & answers

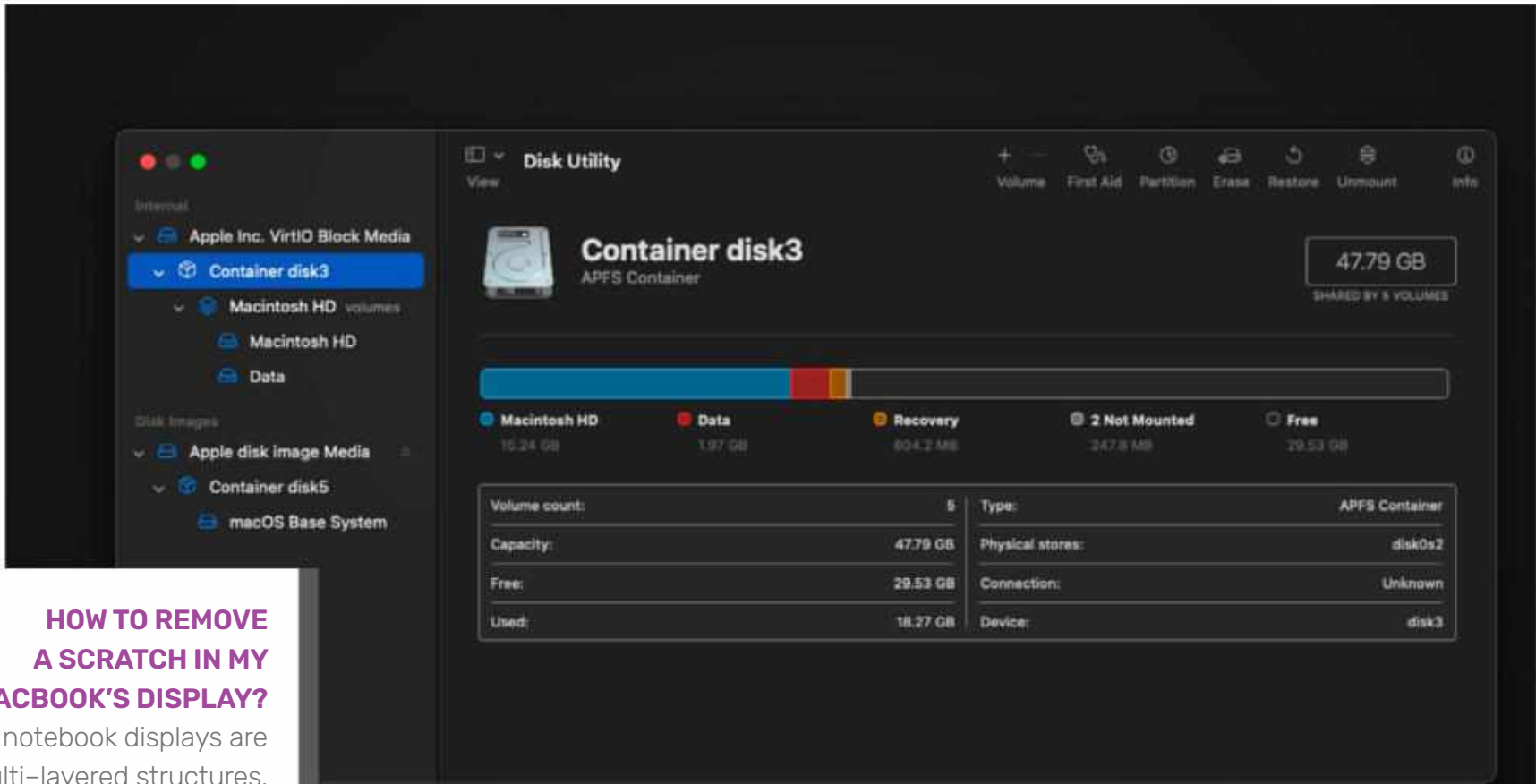
### HOW TO SAVE ALL MY NOTES TO MY IPAD, NOT iCLOUD?

Provided you have sufficient free space in your iPad's storage, this is easily set up for new notes. Tap Settings > Notes and there enable the On My iPad account. Then change the Default Account setting to On My iPad. It's also worth checking the accounts listed there, as you might wish to clean them up.

### HOW TO LOOK UP A WORD IN A FRENCH DICTIONARY?

First enable the French to English dictionary in the list in Settings > General > Dictionary. Then double-tap on the word, scroll the commands to the right until you see the Look Up option. Tap that and scroll down until you reach the entry from that dictionary.



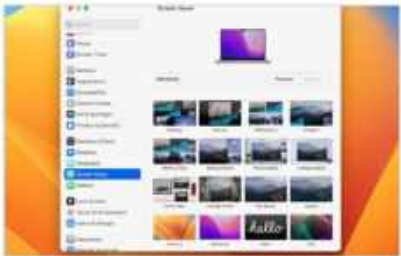


HOW TO REMOVE  
A SCRATCH IN MY  
MACBOOK'S DISPLAY?

Apple notebook displays are multi-layered structures. You'll see suggestions of using lightly abrasive paste, or toothpaste, to polish small scratches out, but that invariably makes them worse. The only options are a costly replacement display or living with the mark.

HOW DOES A  
SCREENSAVER SAVE MY  
iMAC'S DISPLAY?

Screensavers originated with monochrome cathode-ray tube (CRT) displays, where over time they could physically destroy themselves. Some claim flat-screen displays aren't prone to damage from showing the same image for long periods, but they can and do degrade; the changing image in a screensaver can save your display from that ageing.



If you can get your Mac to start up in regular or fallback Recovery, check its disk out using Disk Utility there.

> Bring an M1 MacBook Air back to life

After upgrading to Ventura, my M1 MacBook Air has gone dead and won't start up. What can I do?

There are three likely causes: corrupted firmware, damage to the internal storage, or a fatal hardware failure.

First try starting it up in fallback Recovery. Connect your MacBook Air to mains power, open it up, hold the Power button for 20 seconds to ensure it has shut down, leave it half an hour in case it needs to charge, then press the Power button twice in rapid succession, keeping the button held with the second press. Ideally, it will then display a message that it's entering Options. Keep the button held until the Options screen appears, then use tools like Disk Utility to discover what happened.

If it shows no signs of life, it could still be a recoverable failure, but needs to be put

into DFU mode while connected by a USB-C cable to another Mac running Apple Configurator 2. To try that, download Configurator from the App Store and follow the instructions in its Help book to restore an Apple silicon Mac. If you can't do that, get one of the team at an Apple Store to do it for you.

Fatal hardware failure can occur at any time, and is rarely anything to do with macOS updates. As your Mac won't start into Recovery mode, you can't run hardware diagnostics, and the only solution is to return it to an authorized Apple Service Provider, preferably under warranty or AppleCare, as it's likely to require a replacement logic board.



Lifting the lid of an Apple silicon notebook just after the tone to indicate it's charging can stop Auto Boot.



## > How to disable M1 Auto Boot

**How do I stop my M1 MacBook Pro from starting up whenever I open its case?**

This is a feature known as Auto Boot. In most Intel notebooks it can be disabled by changing a setting in the non-volatile memory (NVRAM), but although you'll see some claiming otherwise, that doesn't work with Apple silicon models. And despite a lot of testing, no one has yet discovered a simple way to disable Auto Boot in M1 and M2 Macs.

However, if you can connect your MacBook Pro to the mains power supply using its MagSafe adaptor at the same time as opening its case, you may be able to use

a maneuver that can work at least some of the time.

This relies on the fact that another way of starting up Apple silicon notebooks is to connect them to mains power. There's a short delay before the notebook emits a tone to indicate it's running on mains power. If you open its case a split second after you hear that tone, you can fool it into staying shut down with its case open.

However, the moment you press any key, it still starts up, so it won't help you clean its keyboard, for instance.

### WHERE TO FIND SYSTEM INFORMATION IN VENTURA?

Hold Opt+⌘, and you'll see About This Mac becomes System Information. It's also available from System Settings > General > About, where it's confusingly opened by the System Report button.

### WHY CAN'T MY MACBOOK PRO 2017 ERASE ALL CONTENTS?

This feature, new to Monterey, erases all contents and settings on your Mac. It relies on the fact that T2 and M-series Macs encrypt internal storage using their ARM chips. Your notebook has a T1 chip, which unlike a T2 doesn't perform encryption, so this isn't available.

## > Adding Touch ID support

**Which Macs support Touch ID – can I get my iMac 27-inch to use it?**

Fingerprint recognition in Touch ID requires an ARM processor, provided in an Intel Mac by either a T1 or T2 chip, or in an Apple silicon Mac, together with a keyboard with a built-in fingerprint sensor.

Touch ID is a standard feature of MacBook Air and MacBook Pro notebooks with a supporting ARM chip, where the sensor is built into their internal keyboard. Although recent Intel Mac minis and iMacs have T2 chips, according to Apple those models aren't compatible with its Magic Keyboards equipped with a Touch ID sensor.

The situation is different with Apple silicon Macs. Again, MacBook Air and MacBook Pro models come with the sensor built in to their internal keyboards, but you'll need to buy one of Apple's Magic Keyboards with Touch ID included if you want to use it with an iMac, Mac mini or Studio. For that you'll pay a premium of at least \$50 on top of the cost of the basic keyboard, even more if you want the larger version with a numeric keypad. There doesn't appear to be any alternative to Apple either.

Your Intel iMac doesn't currently support Touch ID; the most likely way to gain that facility is to replace it with a new Apple silicon model, assuming that you pay extra for its keyboard.



Apple silicon notebooks feature Touch ID and it can be added to desktops with the right keyboard, but not to Intel desktops.

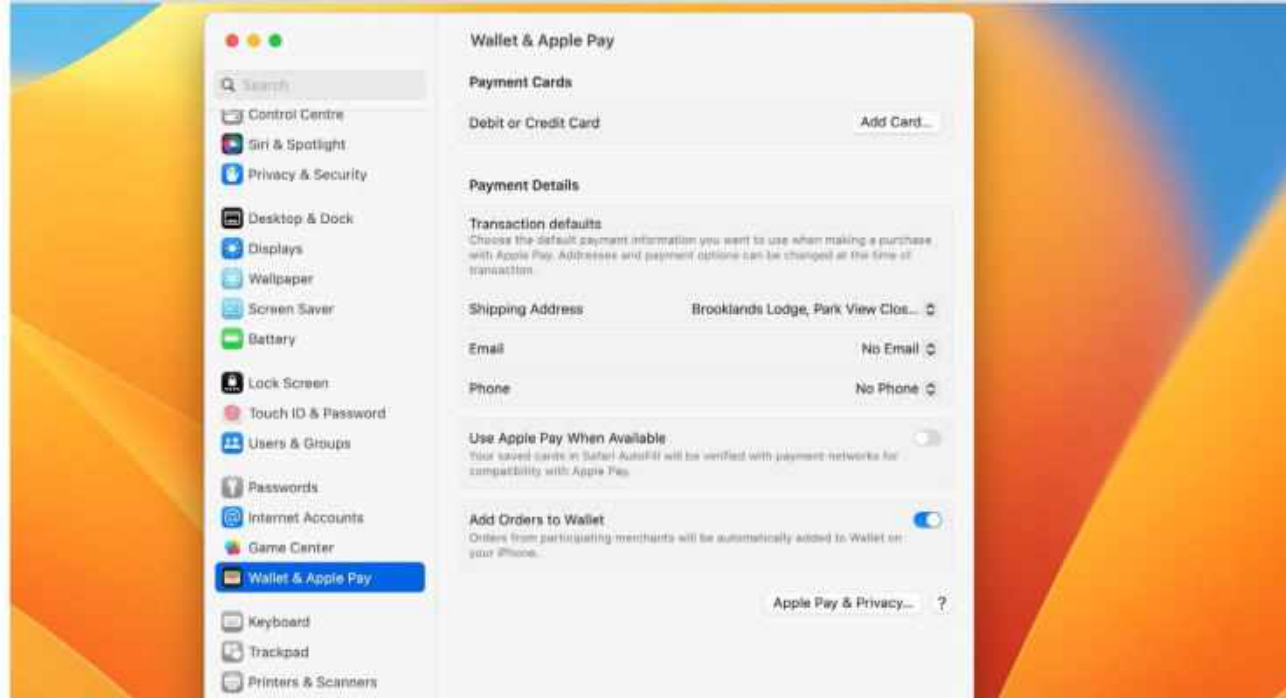


## > Can't add cards to Apple Pay

After I solved a sync problem by logging my MacBook Pro out of iCloud and back in again, I tried replacing my credit cards in Apple Pay. It now tells me that can't be set up, as my Mac's security settings have been modified. How can I fix that?

When you log your Mac out of iCloud, Apple Pay is immediately disabled, and all credit, debit, prepaid transport and ID cards are removed from its Wallet. When you sign back in, you should be able to add them back. This is a good reason for not logging out of iCloud if you can avoid it.

In this case, it's most probably because the System Integrity Protection (SIP) settings have been



Logging out of iCloud and back in again disables Apple Pay, and you'll have to add all your cards back again.

changed. You can check these in `Opt+⌘ > System Information > Software`. Fuller details are also available if you type `"csrutil status"` into Terminal's command line.

If SIP is anything other than fully enabled, start your Mac up in Recovery mode, open Terminal there, and enter the command `"csrutil enable; reboot"` to enable SIP again and restart your Mac immediately afterwards. Occasionally, when SIP

status is reported as unknown (Custom Configuration), that alone may not restore it. In that case, reset your Mac's system management controller (SMC) and NVRAM according to the instructions given at [bit.ly/ml203nvram](https://bit.ly/ml203nvram) to clear it, and confirm that SIP is fully enabled.

If that doesn't restore Apple Pay so you can add your cards back to your Wallet, you'll need to get Apple Support to talk you through it.

## COULD I RUN VENTURA ON MY MACBOOK PRO 2016?

Yes. First install Dortania's OpenCore Legacy Patcher ([bit.ly/mac386opencoreLP](https://bit.ly/mac386opencoreLP)). This will require that System Integrity Protection is partially turned off for it to work, but OCLP handles this itself, and most users find it performs well.

## CAN I USE MY OWN PREFERENCE PANES IN VENTURA?

Yes, third-party preference panes already compatible with Monterey should work in Ventura's new System Settings. You can install them in either of the two traditional folders, `PreferencePanels`, in the main Library or the Library in your Home folder.

## > Lost admin user

I foolishly seem to have set my Mac's only user to have standard rather than admin privileges. How can I reverse that?

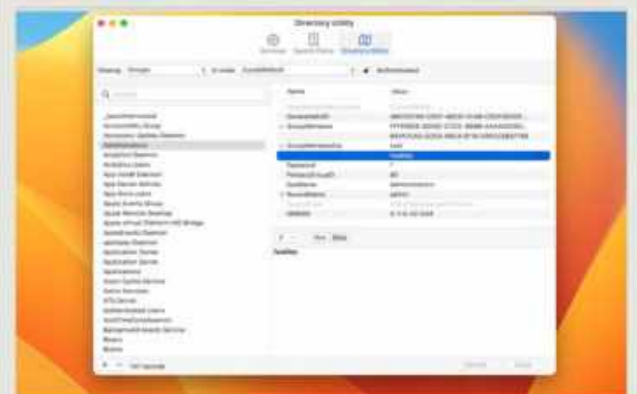
To change a user from standard to admin, you need to be an admin user. For example, the command `"dscl"` can do that in Terminal, but has to be run using `"sudo"` to have the required privileges. Similarly, in Users & Groups, or the Directory Utility in CoreServices, you would need to authenticate as an admin user in order to make this change.

As your standard user doesn't have the privileges to do that, the best approach is to perform a clean install of macOS and migrate from the last backup before you changed that account to a standard user.

Ensure the drive containing that backup is connected to your Mac, start up in Recovery mode, and there install macOS and migrate from that backup. That should

restore all your previous files to its new primary admin account.

This demonstrates the importance of not making changes to your Mac unless you're certain of their consequences.



If you explore Directory Utility, don't be tempted to make any changes unless you fully understand their potential outcomes.



## > Can't search calendars

**Since I upgraded to Monterey, I've been unable to find events in my Calendar, although they worked before. How can I restore this feature?**

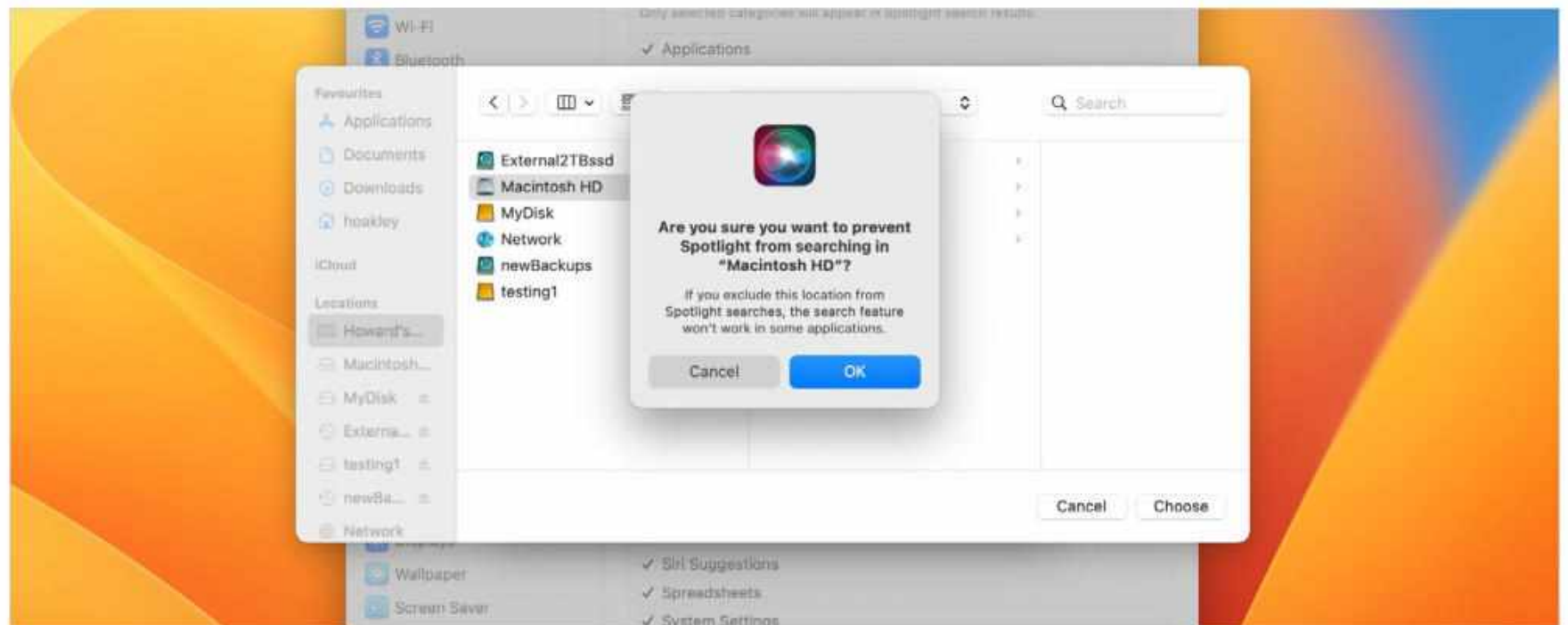
There are only two controls over Spotlight and calendars in Monterey and Ventura. In System Preferences > Security & Privacy, select the Privacy tab, then the Calendars item at the left. Check that you don't have anything suspicious in the list, particularly if its checkbox is unchecked. Apps listed there should only be third-party products, and most should be checked unless you know they shouldn't have

access. Ventura's equivalent is Privacy & Security in System Settings.

In Spotlight > Search Results, check that Events & Reminders is checked. Also check that, in the Privacy tab, you don't have any folders or volumes that might contain your calendar(s). In Ventura, these are easier to use in System Settings > Siri & Spotlight.

If neither of those resolutions helps, then you can rebuild Spotlight's

indexes for the whole of your Data volume. To do that, go back to the Spotlight Privacy tab, click the "+" button and add your Macintosh HD volume to the list. Close that pane, wait a few moments, open it again, select that volume in the list and click the "-" button to remove it again. Rebuilding indexes can take several hours to complete, following which Spotlight should work fully.



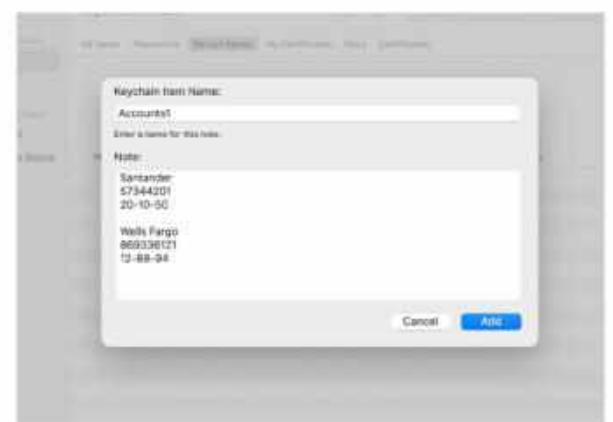
In Ventura's System Settings, adding your internal disk to Spotlight Privacy requires you to confirm your action.

### WHY AM I ASKED TO GIVE AN APP KEYCHAIN ACCESS?

Some apps will need to access passwords or certificates stored in your Mac's keychains. Their documentation should explain why, and their request should make clear what they want to access. If you're uncertain whether it's genuine or fake, click on Deny.

### HOW TO SECURELY STORE DETAILS OF BANK ACCOUNTS?

Ventura provides two ways of storing notes in complete security. The traditional method is to add a secure note to your login keychain, using Keychain Access. In the Notes app, you can now lock any note using either your login or a different password, and that note can be shared in iCloud.



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**MacLife**

# CREATE

HOW TO DO ANYTHING ON YOUR MAC, IPHONE & IPAD

## Master Stage Manager

Organize your desktop with this new window-management feature

### REQUIRES

macOS 13

### YOU WILL LEARN

How to use Stage Manager

### IT WILL TAKE

5 minutes



**STAGE MANAGER IS** a brand-new way of organizing your desktop, which comes to the Mac with macOS Ventura. It's designed to work hand in hand with existing desktop manager features such as Mission Control, Spaces, Stacks and Finder Tabs, but it works very differently.

When you have too many windows open on your Mac, activating Stage Manager pushes them all — except the one you're currently using — into a column in the left-hand side of the screen, organized according to the app that created them. You can then switch to another app's window simply by clicking on it; the new app window is

opened, and the one you were previously using is minimized into the Stage Manager area. It's available on Macs running macOS Ventura, and also iPadOS 16, although some models — such as the new iPad 10.9-inch — can't use it.

Let's take a look at how to launch and use Stage Manager, and how to get the most from it. **IAN OSBORNE**



## HOW TO Use Stage Manager



### GENIUS TIP

You can have Stage Manager appear in the menu bar if you wish. Head over to System Settings > Control Center > Stage Manager and use the pull-down to set it up.



### 1 Open Stage Manager

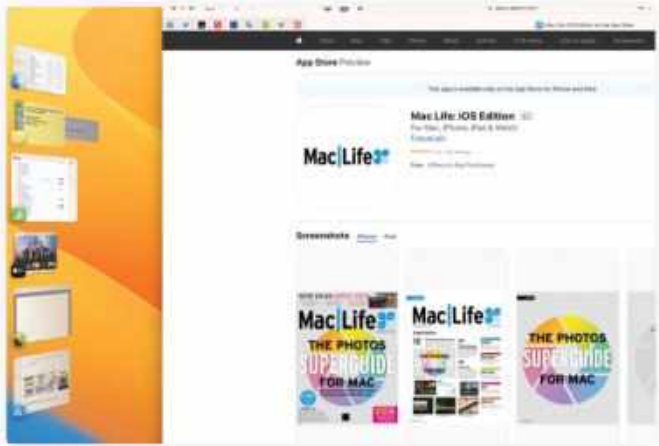
Launching Stage Manager is easy. Click on the Control Center icon in the menu bar, the one next to Siri that looks like two switches, and click the box marked Stage Manager in the window that appears.



### 2 Pop-up window

The first time you launch Stage Manager you're shown a window showing what it does. If you're ready to use the feature, click the button marked "Turn On Stage Manager". Your open windows are gathered.





3

## A neat column

Windows that are open but not currently being used are shown gathered in a left-hand column. If the window currently in use is too close, this Stage Manager column is hidden and shown, like the Dock.



4

## New app windows

When you have an app open, you can launch more windows in that app without closing the old one. To minimize a window you don't need, click the yellow button (top left), and it closes into Stage Manager.



5

## Open/close windows

If you have numerous windows from a single app open in the Stage Manager stacks, you can open them one at a time by clicking on this stack. Again, to collapse a window back into the stack, click on its yellow button.



6

## Hold Shift key

If you hold Shift and click on a Stage Manager stack, you open the top window on that stack without minimizing the one you're currently using. This is great for when you need two apps open at the same time.



7

## Grouped apps

If you're using more than one app and you open a third app while using Stage Manager, the apps you have open together are grouped in the Stage Manager stacks. These now open together when you click them too.



8

## Click on desktop

If you need your desktop files while using Stage Manager, click on the desktop to show them. You can drag them into an app window you're currently using, or click them to open in the application that created them.



## JARGON BUSTER

Stage Manager is Apple's latest feature for managing your desktop windows in macOS. It was unveiled by Craig Federighi during Apple's June keynote at the Worldwide Developers Conference 2022.



## GENIUS TIP

Stage Manager customization options are found in System Settings > Desktop & Dock > Stage Manager. Turn the feature off and on here, and click the Customize button for options regarding how it works.



# Use Handoff in FaceTime calls

You can now switch between iPhone, iPad and Mac mid-call

## REQUIRES

macOS 13, iOS 16, iPadOS 16

## YOU WILL LEARN

How to use Handoff during a FaceTime call

## IT WILL TAKE

30 minutes



**FACETIME, ALONG WITH** its competitors Zoom and Teams, came into its own when we were all stuck at home during lockdown. When we couldn't leave the house, being limited to using only one device during a call wasn't a problem. Now that we're back to being able to come and go, swap home for office and back again, and socialize with friends in real life, it's more of an issue.

Video calling is here to stay and so Apple's solution to enable us to move around without breaking a call is to bring Handoff to FaceTime. You may remember that Handoff, which has worked with most Apple apps for the best part of a decade, allows you to switch seamlessly from working in an application on your Mac to your iPhone or iPad. And now you can do that in FaceTime too, mid-call.

Are you talking with friends in a group call in your living room and need to head

out? No problem. You just Handoff the call from your Mac to your iPhone and head for the front door. Or, you could answer a call on your iPhone while you're out and transfer it to your Mac or iPad when you arrive home. As with other Handoff options, using it in FaceTime is pretty seamless and, as long as your devices are on the same Wi-Fi network and signed in to the same Apple ID, should "just work".

And if you're using a Bluetooth headset, it will automatically switch devices along with the call, so you don't miss anything.

**KENNY HEMPHILL**



If you're taking part in a FaceTime call, when you put the device you're talking on next to another of your signed-in devices, you'll see a notification.

## QUICK LOOK Switching between devices

### PREVIEW IMAGE

You'll see a preview of your camera image before you confirm.

### MUTE OR NO IMAGE

You can mute the mic or turn off the camera before completing a switch.



### SWITCH OR JOIN

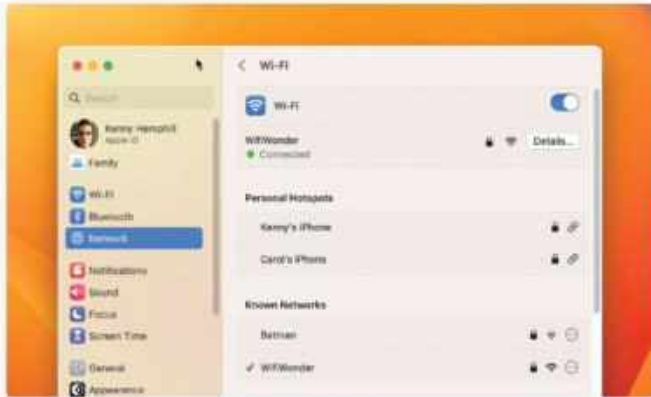
On the Mac, the Switch command is replaced by a Join button.

### INVITE EVERYONE

You can invite others by sharing a link before confirming the switch.



## HOW TO Transfer a FaceTime call



### JARGON BUSTER

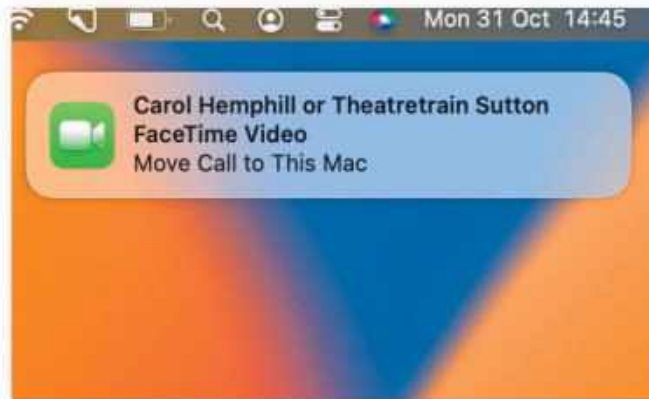
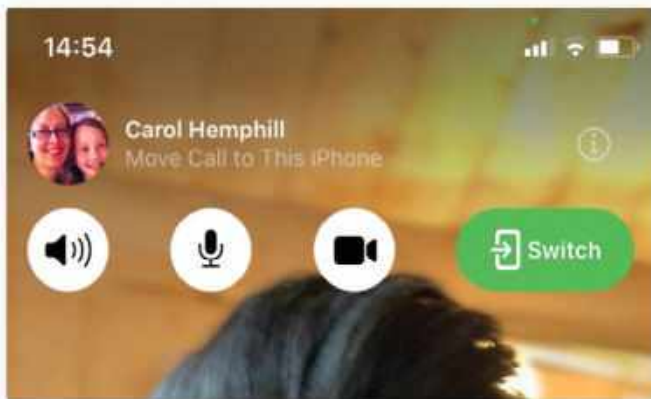
Handoff is Apple's term for switching seamlessly between devices while using an app. You can see the iPad FaceTime icon in the Dock on the Mac here.

### 1 Before you start

Make sure that the devices you want to Handoff from and to are on the same Wi-Fi network and have Bluetooth switched on. You must also be signed in to both devices using the same Apple ID.

### 2 From Mac to iPhone

If you start a FaceTime call on Mac, to switch to iPhone, move your iPhone close to the Mac. You should see a notification on the Lock Screen that says "Move Call to This iPhone". Tap this to initiate the switch.

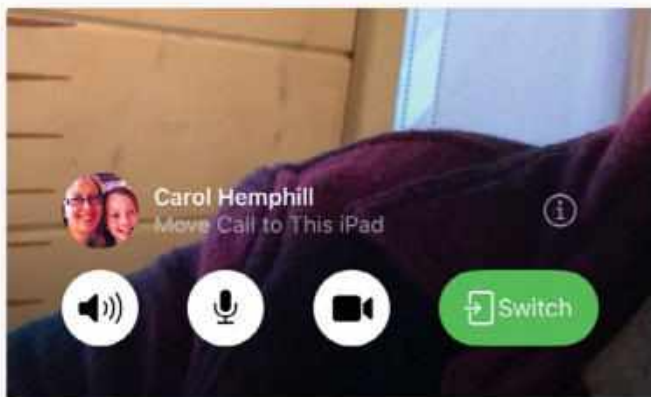


### 3 Complete the handoff

You'll see a preview of the call on your iPhone showing the camera, microphone and audio settings. If you're happy to go ahead, tap Switch. The call will move to your iPhone and you'll see a banner on your Mac confirming.

### 4 From iPad to Mac

When you're in a FaceTime call on your iPad, move close to your Mac and tap the iPad screen. You will see a notification on your Mac suggesting you "Move Call to This Mac". Click it, then click Switch. Click Join to confirm.



### 5 From iPhone to iPad

If you come home while on a call on your iPhone and want to switch to your iPad, move close to the iPad and tap the notification when it appears on the Lock Screen, confirm camera and audio settings, and tap Switch.

### 6 If Handoff doesn't work

If you don't get the option to switch a call, on iPhone or iPad, go to Settings > AirPlay and Handoff and make sure Handoff is toggled to On. On Mac, the switch can be found in System Settings > General > AirDrop & Handoff.



### GENIUS TIP

If the notification disappears too quickly, click the camera icon in the Mac menu bar or at the top of the iPhone/iPad screen.



# Navigate System Settings

The Mac's preferences interface has a new look and a new name



**REQUIRES**  
macOS 13

## YOU WILL LEARN

How to open and navigate System Settings to configure your Mac

**IT WILL TAKE**  
5 minutes



**APPLE'S ONGOING PLAN** to bring its operating systems closer together and form a single all-purpose ecosystem took another step forward with macOS Ventura, as System Preferences got an iOS-inspired makeover.

Now called System Settings, it functions in much the same way as the old System Preferences, but instead of being arranged in a grid of preference panes, it's now far more like the Settings app in iOS and iPadOS, with a long list of

individual settings options. In macOS this list is set into a sidebar, with the settings options themselves in the main window.

Unlike Apple's mobile devices, it doesn't offer settings for individual apps that came bundled with the operating system or that you've installed yourself. These are still found in the app itself, under the pull-down bearing its name. But all the Mac system configurations are achieved through this new System Settings interface, so let's take a look and grasp its numerous options. **IAN OSBORNE**

## HOW TO Configure your Mac in System Settings



### 1 Open the menu

To open System Settings, you can use **Apple > System Settings** in the top-left corner of the screen, the Dock icon or the Launchpad. Or you can Ctrl-click on the Dock icon and go straight to the Settings window you need.



### 2 Check your Apple ID

Click your name at the top of the left-hand sidebar to access your Apple ID settings. Click the photo to change it for a Memoji, a picture or another photo. You can set up a Family Sharing account from here too.



### 3 Monitor devices

Below your Apple ID settings is a list of all the devices currently logged in to it. Click on a device for information such as its serial number, what OS version it's running and more. Sign out of your Apple ID at the foot of this window.





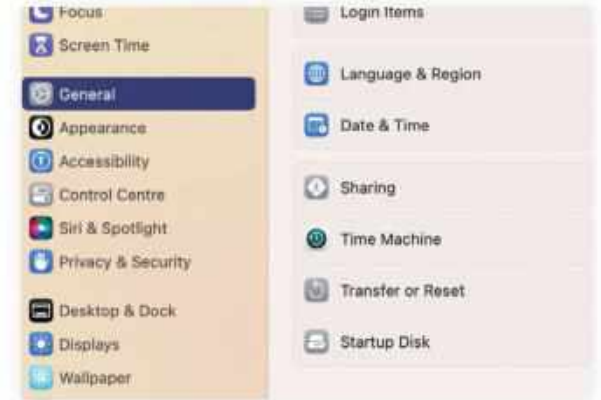
## 4 Networking settings

This cluster of settings is for networking. Use Wi-Fi to manage your wireless internet, Bluetooth for pairing your Mac with wireless peripherals, Network for other connectivity options, and VPN for a Virtual Private Network.



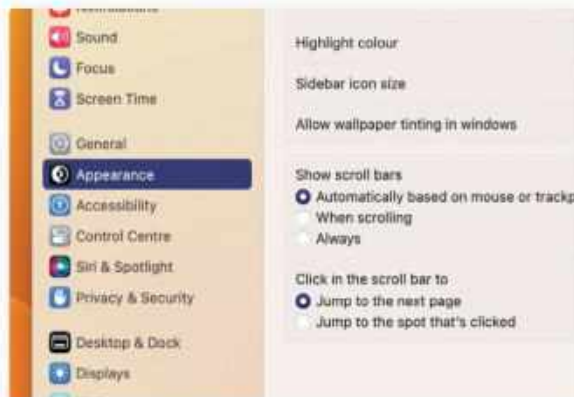
## 5 Notification choices

Here you set up your Notifications options, as well as configuring your Focus preferences and Screen Time features. In Sound, you can change your alert sound, set up external microphone and speaker options, and more.



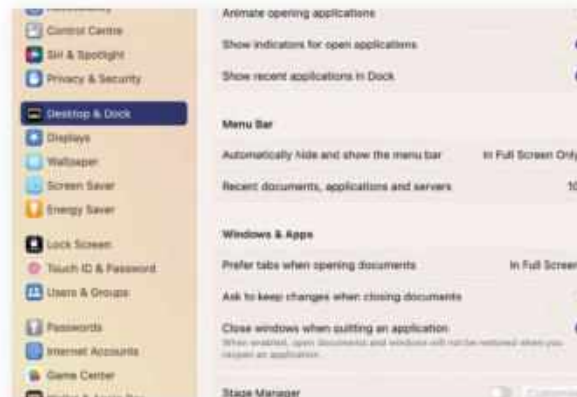
## 6 The General tab

The General System Settings page is one of the most important. It's here you go to update your Mac's operating system, as well as managing login items, transfer your data to another Mac, manage your storage and more.



## 7 More options

The rest of this cluster controls your Mac's appearance – Control Center, Siri, Spotlight, and Privacy & Security. Under Accessibility, you can configure your Mac to be easier to use to support vision, hearing, learning needs and more.



## 8 Visuals & savers

Familiarize yourself with these; they're fun. You can change your desktop pattern in Wallpaper, Desktop & Dock is packed with customization options, and the Displays section is great for getting more from your screens.



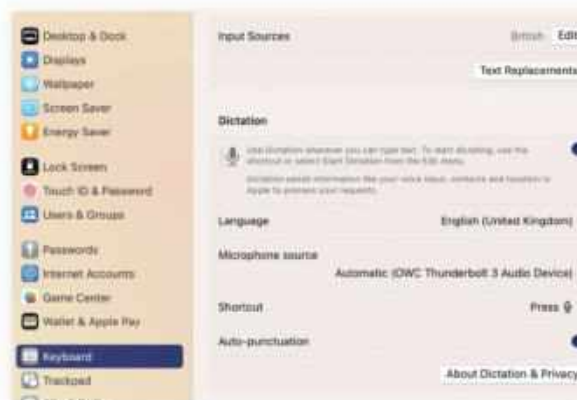
## 9 Passwords & users

Your Lock Screen is where you sign in when you boot your Mac. Configure it here, as well as setting up your Mac's password and, if you have it, Touch ID. This is where you go to add more users and set up guest access too.



## 10 Internet things

All passwords you've saved from logins on websites can be managed in Passwords. Internet Accounts covers things like iCloud, Google and your ISP's email. You can manage payment options in Wallet & Apple Pay.



## 11 Hardware connections

You can manage any hardware you have connected here. This includes your Apple keyboard, mouse and/or trackpad, along with drives, printers and scanners. Check battery levels, set options and more.



## 12 Third-party apps

Apple's System Settings no longer includes any third-party apps that you have installed. Here we can see that Paragon Software's NTFS for Mac's preferences, functions and options have been moved to the app itself.



# Set up background sounds

Use your Mac's ability to play white noise to help you focus

**REQUIRES**  
macOS 13

**YOU WILL LEARN**  
How to use  
background sounds

**IT WILL TAKE**  
20 minutes



**SOME OF US** like to work in complete silence. Many of us don't, but then we also find music, podcasts, or other background noises in our workplace distracting. And sometimes, when meditating or just trying to find some stillness during a stressful day, neither absolute silence, nor the stimulus that comes from listening to something like music, will do.

On these occasions, white noise is often the solution. Soothing background sounds that fill the ears and block out what's

going on around us without creating further stimulation can benefit all of us. Apple introduced the ability to play background sounds on iPhone in iOS 15, and macOS Ventura now brings the feature to the Mac.

The controls for the feature are tucked away in the Accessibility section of System Settings, giving a hint that Apple sees this inclusion as particularly helpful for neurodivergent users. However, as we've discussed, it's a feature that can benefit anyone, in many situations.

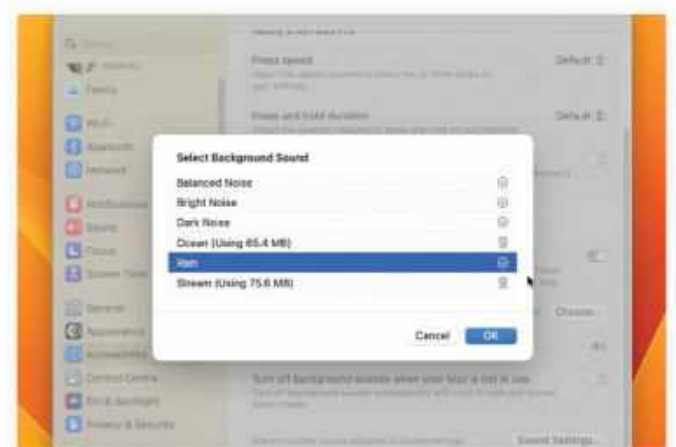
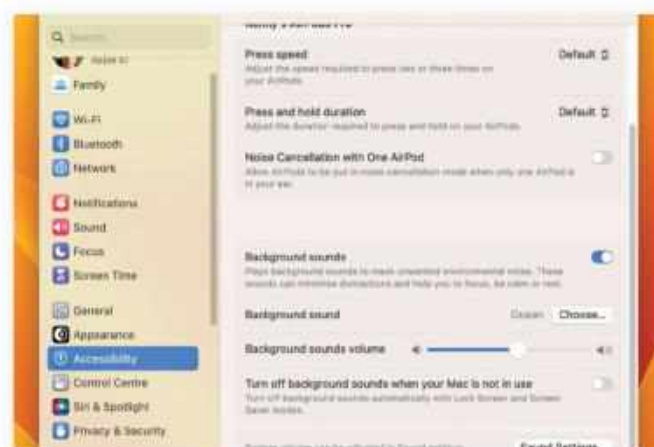
**KENNY HEMPHILL**

## HOW TO Enjoy soothing sounds on your Mac



### GENIUS TIP

You can listen to background sounds on and offline. But the first time you choose one, you will have to be online so it can be downloaded.

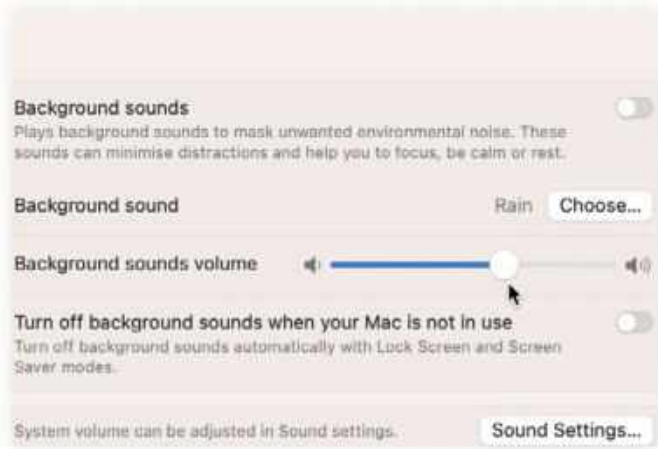


**1 Toggle the switch**  
Go to **Apple > System Settings > Accessibility > Audio**. In the Background Sounds section, toggle the "Background sounds" switch to On. You should now hear sound coming from your Mac or headphones.

**2 Download a sound**  
To specify the sound you want to hear, click Choose next to "Background sound". You will see a list of six sounds. Click the arrow next to the one you want to listen to. It will start to download, when it's finished, click OK.

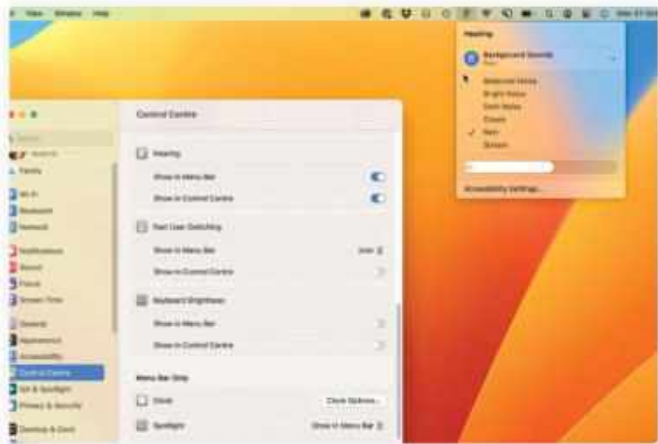






### 3 Finish setting up

You can set the volume using the slider. The background sounds volume is separate from the system volume setting. To turn off background sounds when you're not using your Mac, toggle that switch.



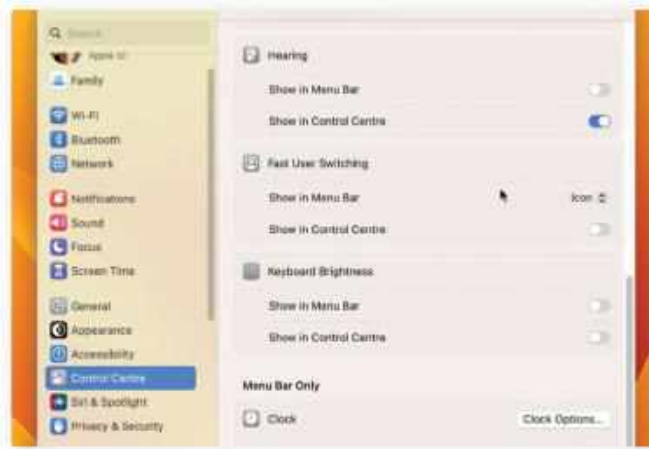
### 5 Add to menu bar

As well as Control Center, you can also add the controls to the menu bar. In System Settings > Accessibility, under Hearing, toggle "Show in Menu Bar" to On. Click the ear in the menu bar to see Background Sounds.



### 7 Try an app

If you're not an Apple Music subscriber, or can't find anything there that you like, there are several third-party apps on the App Store that will play background sounds. Noizio is one example and includes 40 ambient sounds.



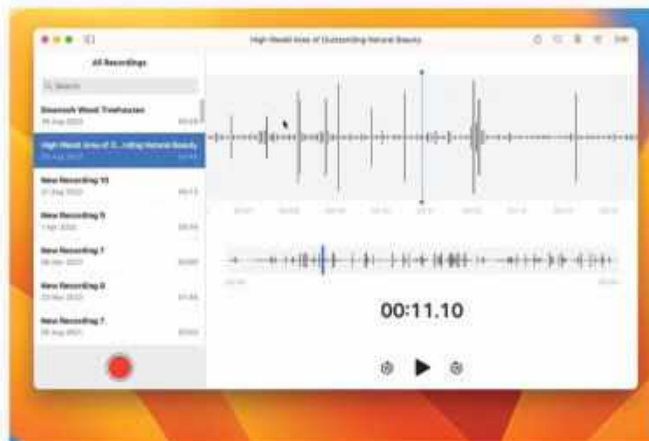
### 4 Add to Control Center

You can add Background Sounds controls to Control Center, so you don't have to keep going to System Settings. In System Settings > Control Center, under Hearing, toggle "Show in Control Center" to On.



### 6 Search Apple Music

If you want more sounds than are available in Background Sounds and you're an Apple Music subscriber, search in that app for the sounds you want. Launch Apple Music and type "background sounds" in the search bar.



### 8 Create your own sounds

You can record your own background sound in Voice Memos. Record the sound on any signed-in device, then drag the recording from the sidebar in macOS Voice Memos to the desktop and double-click to open it in Music.



### JARGON BUSTER

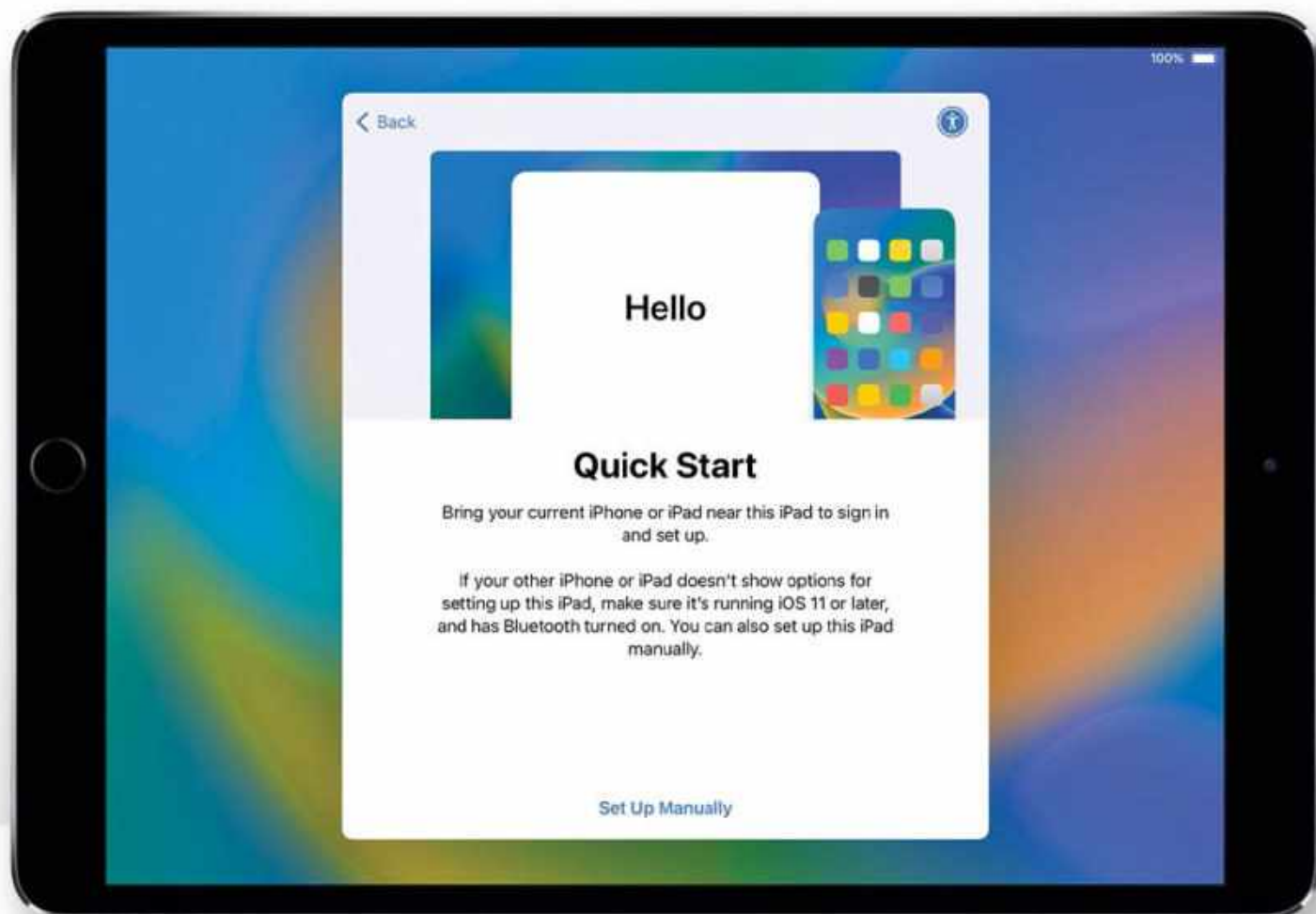
Apple's Accessibility options provide a range of adjustments in macOS and iOS that are predominantly intended for users with additional needs.



### GENIUS TIP

Combining Background Sounds with a Focus (Apple > System Settings > Focus) can be a powerful way to concentrate on getting some work done.





# Family Sharing in iOS 16

Sharing content with the ones you love is now easier than ever

## REQUIRES

iOS 16 or iPadOS 16

## YOU WILL LEARN

How to use iOS 16's handy new sharing features for your family

## IT WILL TAKE

10 minutes



## GENIUS TIP

The same family set-up feature for iPhone and iPad also works for Apple Watch, enabling you to quickly personalize an Apple Watch for a family member.



## APPLE'S PARENTAL CONTROL

and Family Sharing features are superb, but as they've become more comprehensive, they've also become pretty unwieldy.

iOS 16, iPadOS 16 and macOS Ventura have changed that, with a brand-new Family page in Settings that makes everything simpler. Although most of the changes are in Settings, there are some



The same Settings panel is in macOS Ventura, and it works in exactly the same way as it does on iOS/iPadOS.

other useful new ones too. Family members' Screen Time requests are now sent to their parent or guardian via Messages for faster responding, and there's also a great new feature called Quick Start. If you have already added other people in the Family section, the next time you switch on a brand-new iPhone or iPad for the first time it'll ask you who the device is for. Simply choose the appropriate person or create a new child account. We put this one to the test with a new iPhone, and it set the device up perfectly.

The most significant new feature is the Family Checklist, which we'll show you in this tutorial. It's designed to bring all the most important Family Sharing and parental control features together in one place, enabling you to get everything just-so with very little effort. It also enables you to take advantage of features you might not otherwise have known about, such as creating a Recovery Contact in the event of forgotten passwords or passcodes. **CARRIE MARSHALL**



## HOW TO Set up Family Sharing



- 1 Open Settings**  
When you open the Settings app on your iPhone or iPad, you'll see that Apple has done a little bit of decorating. The iCloud bit is the same, but the Family section has been moved to a more prominent position below it.



- 2 See your family**  
Tap Family and you'll be taken to the new Family page, which has thumbnails of your family members (if you've already got them set up) and then sections for each of you. There's also the new Family Checklist.



- 3 Check it out**  
The Family Checklist area is designed to make the often convoluted Family Sharing options much simpler and more straightforward. As you can see, it provides fast access to the key settings and features.



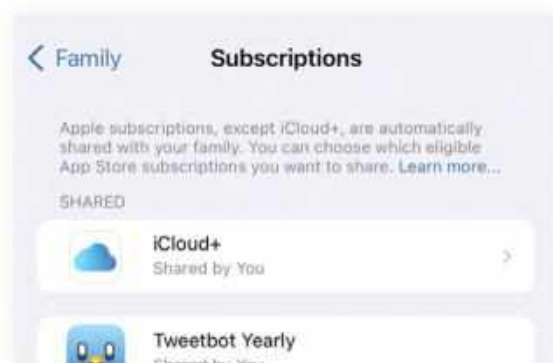
- 4 Set the limits**  
Say your youngest has their first iPhone, and you're wary about who they can call, and who can call them. In Family, tap their name then Screen Time > Communication Limits to limit conversations to friends and family.



- 5 Parental controls**  
The next page, Parental Controls, is more familiar. You can choose to enter your child's age and set age limits based on that, or you can do what we've done here and set your own custom age limits.



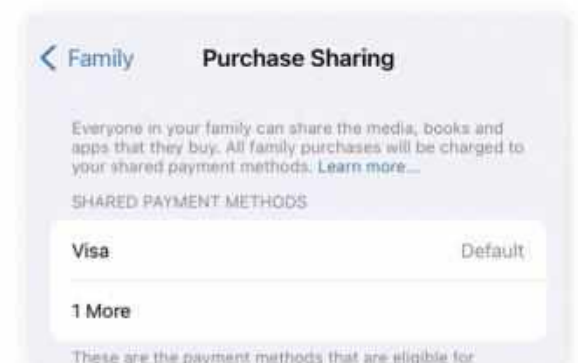
- 6 See subscriptions**  
Go back to the Family page and tap Subscriptions. You'll see a list of the apps and services that you've shared with family. iCloud isn't shared by default, but if you have iCloud+ or Apple One you can share it from here.



- 7 Manage subscriptions**  
Scroll down and tap on Subscriptions For Family. You'll be taken to the App Store and shown a list of apps and services you own or subscribe to that you can share with family members.



- 8 Recovery Contact**  
This is a useful one; you can nominate a recovery contact, who can give the okay if your family member forgets their password or device passcode. The recovery contact must be 13+ and have an Apple device.



- 9 Say who pays**  
Be careful with this one: if you enable Purchase Sharing then your whole family's purchases are charged to your payment method. Choose Stop Purchase Sharing if you don't want to share your purchases.



# Enhance landscape pics

Make selective adjustments to reveal more color and detail

## REQUIRES

Lightroom, iOS 14 or later

## YOU WILL LEARN

How to make tonal adjustments to enhance parts of a landscape

## IT WILL TAKE

15 minutes



**THANKS TO YOUR** iPhone's Deep Fusion processing powers, the Camera app can capture a series of different exposures for brighter and darker parts of the scene and then combine them in a single, correctly exposed shot. This should result in a photo that features detail and color in the shadows, midtones and highlights.

However, sometimes you might need to make some manual tweaks to reveal more detail and color in underexposed shadows

or overexposed highlights. Take the shot in step 1 here for example. This was snapped on an iPhone 12 and while the sky looks fine, the building's details are lost in shadow.

We'll show you how to use a range of Lightroom iOS's powerful and versatile selective adjustment tools to help you target problem areas without changing the colors and tones in the image as a whole. As you'll see, by shooting in Raw, you can reveal missing detail even in overexposed white skies. **GEORGE CAIRNS**

## HOW TO Reveal more shadow detail



1

### Lost in shadow

Here our camera has exposed for the sky correctly but the backlit buildings lack detail. If we increase the Exposure value the buildings will brighten up but the sky will become overexposed (also known as clipped).



2

### Lighten shadows

To lighten up the photo's underexposed buildings without overexposing the sky, tap the sun-shaped Light icon. Drag the Shadows slider to the right (to around +85) to reveal more shadow detail.



3

### Enhance color

To boost color in the restored shadows, tap the Color icon. Drag Vibrance right to selectively boost weaker colors without over-saturating stronger ones. Warm up the cold colors by increasing Temperature to 6096K.



## HOW TO Reveal missing sky detail



- 1 Overexposed sky**  
Our start image has a boring, overexposed sky that lacks color and detail. If we reduce the Exposure, we'll see more sky detail but underexpose the land. Fortunately, we can selectively tease out more sky detail.



- 2 Radial gradient**  
Tap the Masking icon, then tap Radial Gradient. Swipe down from the top of the screen to draw a gradient that overlaps the sky. This creates a mask that will alter the sky more strongly towards the top of the image.

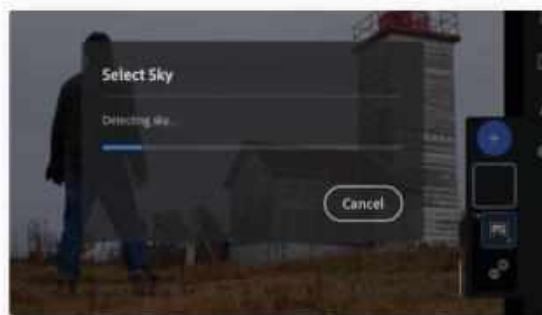


- 3 Reveal detail**  
Tap the Light icon and drag the Exposure slider down to  $-1.86$ . Tap the Effects icon and drag the Dehaze slider right to  $+57$ . This powerful tool reveals missing color and tonal detail in the masked sky section.

## HOW TO Target the sky more accurately



- 1 Overlapping**  
Here we could use a linear gradient to reveal missing sky detail, but this would also darken the man and lighthouse since they overlap the sky. Fortunately, Lightroom can isolate a problematic sky with precision.



- 2 Select sky**  
Tap the Masking icon. Tap Select Sky. Lightroom will analyze the shot and select the sky, indicated by a red mask. The mask enables you to selectively adjust the sky without altering the man or the lighthouse.



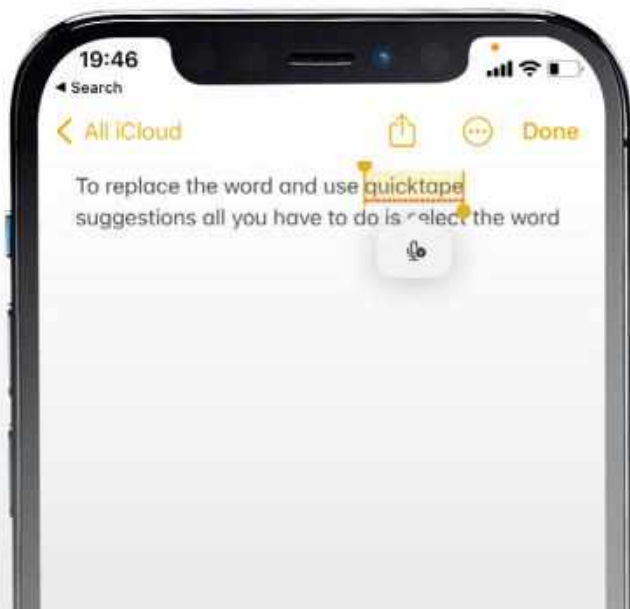
- 3 Color and tone**  
Tap the Light icon. Drag the Exposure slider left to  $-0.23$  to darken the sky. Tap on the Effects icon and drag Dehaze to  $+48$ . Tap the check mark to apply the mask's adjustments. Tap Color and boost Vibrance to  $+61$ .



## > GO FOR RAW

### Give yourself more editing choices

If you have a Pro model iPhone, shoot in Raw rather than JPEG if you want more creative control over your image processing. Raw files contain more information about a scene's colors and tones than a compressed JPEG, enabling you to use Lightroom's selective adjustment tools to restore clouds to a bland white sky or reveal shadow detail without adding noise artifacts. To shoot in Raw, go to Settings > Camera and toggle on Apple ProRAW. Non-Pro iPhone users can use the Lightroom iOS app's Camera to capture DNG Raw format shots.



# Learn to use dictation

iOS and iPadOS have improved the way dictation works. Here's how...

**REQUIRES**  
iOS/iPadOS 16

**YOU WILL LEARN**  
How to use the new dictation features on iPhone and iPad

**IT WILL TAKE**  
20 minutes



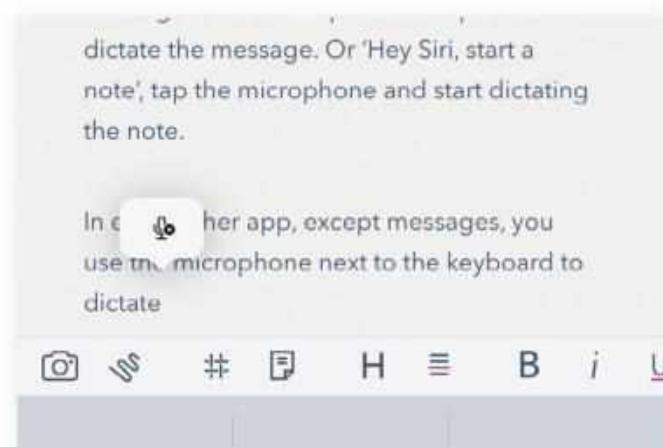
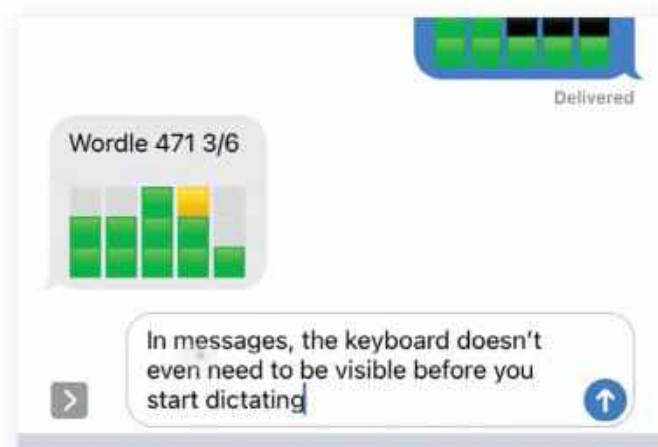
**WE'VE LONG BEEN** able to dictate text in iOS, whether it's in Messages, Mail, or any other app where we would normally type. However, in iOS 16, dictation has been significantly improved. It now punctuates automatically, using the context of what you're typing and the pauses in your speech to determine whether to add a comma, full stop or other punctuation mark. You can still manually punctuate by dictating the name of the punctuation you want to add.

Swapping between dictation and typing is easy and makes for a fluid writing experience, and you can even add emoji using dictation. You will, though, need to know the official unicode name for the emoji you want, so it's worth brushing up on those if you plan to dictate emoji a lot. To make composing text even faster, you can also insert QuickType suggestions using dictation. If you haven't tried dictation for a while because you found it clunky or inaccurate, it's well worth giving it another go. **KENNY HEMPHILL**

## HOW TO Dictate with ease

### GENIUS TIP

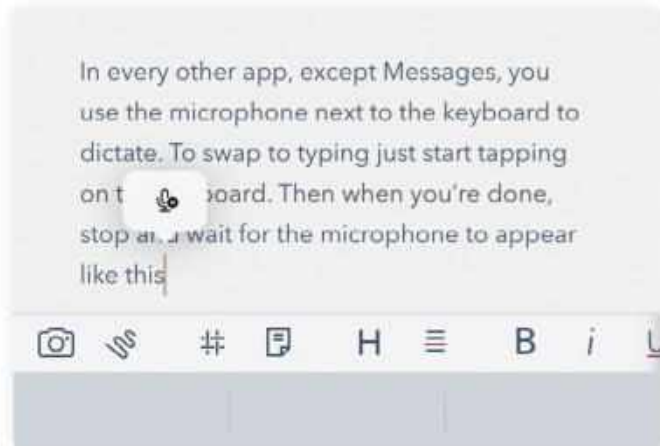
As well as tapping the microphone in the text box in Messages, you can tap the microphone next to the keyboard to start dictating.



**1 Dictate in Messages**  
Tap Messages, then tap on the conversation you want to add to, or search for a contact. Tap in the text box. Tap the microphone and start dictating your message. When you're finished, tap the send arrow.

**2 Dictate in any app**  
In any app that takes text input but isn't Messages, tap on the screen where you want to add text, then tap the microphone at the bottom of the keyboard and start dictating. You'll see text appear on screen.





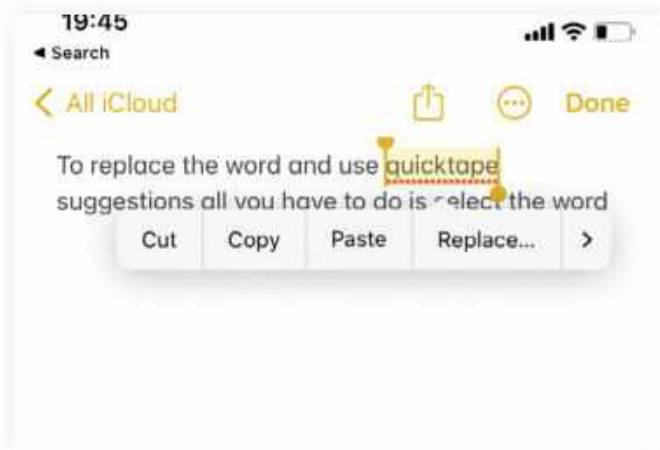
### 3 Swap to typing

You'll notice a microphone hovering over the text, denoting that iOS is listening. To switch to typing, just tap on the keyboard and to switch back to dictating, just start talking again and iOS will recognize it.



### 4 Stop dictating

iOS will assume everything you say after you tap the microphone is dictation and will add it to your document. To stop dictating, tap the "X" on the microphone hovering over the text input on the screen (see step 3).



### 5 QuickType suggestions

If you want to change a word, tap on it and choose Select. Tap Replace, tap one of the suggestions, then tap on the screen where you want to continue adding text. Start dictating again and the text will be added.



### 6 Replace a word

As well as using QuickType suggestions, you can replace words by dictating them. Tap on the word you want to replace and tap Select. When it is highlighted on screen, dictate the word you want to replace it with.



### 7 Add emojis

To add an emoji while you're dictating, just speak the name of the emoji such as "grinning face with smiling eyes" or "exploding head" followed by "emoji". You must use the specific unicode name for each emoji.



### 8 Dictate with Siri

If you use Siri, you almost don't need to touch the screen at all. Try "Hey Siri, send a message to..."; Siri will ask what you want to say. Dictate the message and then confirm by tapping Send or Done.



### JARGON BUSTER

QuickType suggestions allow you to replace words in a passage of text without typing. Select the word and choose a suggestion from the options.



### GENIUS TIP

You can disable auto-punctuation if you don't like it. In Settings > General > Keyboard, under Dictation, you can switch off the Auto-Punctuation option.



# Apple's new passkeys

Can they really take the place of passwords? We take a look



## YOU WILL LEARN

What passkeys are, how they work and how to use them

**“WE’VE HELPED TO CREATE A NEXT-GEN CREDENTIAL THAT’S MORE SECURE AND EASIER TO USE”**

Darin Adler, Apple’s Vice President of Internet Technologies



## KEY FACT

According to Microsoft’s Vasu Jakkal, there are over 921 password attacks every second.



**WHAT A TURNAROUND.** It was only with macOS 12 (Monterey), iOS 15 and iPadOS 15 that Apple added a dedicated Passwords pane to the Mac’s System Preferences and the mobile device’s Settings... But with macOS Ventura, iOS 16 and iPadOS 16, the company is trying to make passwords redundant. Passkeys uses powerful cryptographic techniques and the biometrics built into your device to allow you to log in to a website, make an online purchase, and anything else that requires a login ID and a password, without needing to type anything at all. Instead, you simply use your Face ID or Touch ID to verify your credentials. You can even create a new account from scratch by using a passkey.

When you log on to a compatible website or app, you’re invited to create a passkey. If you choose to do so, you simply place your finger on your fingerprint sensor to use Touch ID, or look directly into a mobile device’s camera to

use Face ID — and that’s it. From then on, you can log in on that site or app simply by using your biometrics. Passkeys can only be used on websites and in apps that have made them available. At the moment, not too many do have them implemented, but they’re sure to become more popular over time.

## TWO KEYS, ONE LOCK

On making a passkey in this way, two digital keys are created; a public key stored on Apple’s servers, and a private key which never leaves your devices. When you use a passkey as a login, the site or app in question takes the public key and uses it to challenge the private key to prove it’s you logging in. The private key is able to answer this challenge, and login is completed. At no time in this process does the site or app get to see the private key. Ever phoned your bank and had them ask for a couple of letters from your banking password, but not the password itself? It works like that, albeit with a greater degree of complexity. Not that you’ll notice, of course. To the end user, logging in with passkeys is as simple as unlocking your Apple device with Touch ID or Face ID.

Passkeys creates unique digital keys for each individual website or app, and the private key is never entered using the keyboard or stored on a server. Because of the way it works, a passkey is never weak, and it’s not vulnerable to phishing, that is, clandestine attempts to get you to type your password on a fake website or supply it in some other way so



You can even use your passkeys on non-Apple devices, including Windows-powered laptops and desktops.



## > THE FIDO ALLIANCE EXPLAINED

Apple's passkeys are based on the Web Authentication API (WebAuthn), which was developed by the FIDO Alliance (FIDO stands for "Fast IDentity Online") and World Wide Web Consortium (WC3). Check out [fidoalliance.org](https://fidoalliance.org).

Launched in February 2013, according to the organization's website: "The FIDO Alliance is an open industry association with a focused mission: authentication standards to help reduce the world's over-reliance on



passwords. The FIDO Alliance promotes the development of, use of, and compliance with standards for authentication and device attestation."

Being an independent organization unaffiliated with any specific platform provider means standards and solutions developed by FIDO Alliance – in

association with industry giants like Apple, Google and Microsoft – avoid problems that can be caused by competing standards. Instead, the new solutions are adopted across the board, giving us a single standard that can be used on numerous platforms and operating systems.

it can be stolen by hackers or even criminals. As you never type it in, you can't steal it with a keystroke logger, and nor is it vulnerable to leaks, whereby computer-savvy miscreants can break into a website's server and steal users' passwords. With passkeys, there's nothing on the server to steal.

### ONE FOR ALL...

When you've created a passkey for one device, it's synced using iCloud so it becomes available on them all. Passkeys are available on the Mac, iPhone, iPad, and Apple TV. You can even use your Apple passkeys on non-Apple devices, or on web browsers other than Safari. When using a website on any computer or mobile gadget that doesn't offer biometrics or on, say, Google Chrome or Firefox, you use your iPhone to apply the passkey. Just get it to read an on-screen QR scanner, and let your smartphone do the rest. The QR code leads to a URL that offers single-use encryption keys, allowing the device to communicate with your iPhone over a secure Bluetooth network. This means that you can't fall foul of a fake website or a malicious QR code sent by email. As Apple engineer Garrett Davidson explained, "A remote attacker won't be able to receive the Bluetooth advertisement and complete the local exchange."

But can passkeys really take over completely from passwords? Apple thinks they can. According to Darin Adler, Apple's Vice President of Internet Technologies, "The transition away from passwords will be a journey, and we look forward to working with developers on the password-less future." Microsoft, one of the earliest supporters of the FIDO Alliance-produced standards, agrees. The company has been using password-less logins for some time now, and according to a blog post on [microsoft.com](https://microsoft.com) from Alex Simons of the Microsoft Tech Community, "You can use Windows Hello today to sign in to any site that supports passkeys, and in the near future, you'll be able to sign in to your Microsoft account with a passkey from an Apple or Google device." Talking of Google, according to a post on its website, "On Android, we aim to have passkey support available to developers towards the end of 2022."

At last, we can look forward to a world where you don't have to choose between weak, easily remembered passwords, or strong security you don't have a chance of committing to memory. The dangers of using the same password on a number of sites will be a thing of the past, and we never, ever again have to tell someone off for writing their login details on a Post-it Note and sticking it to the chin of their Mac or monitor. **IAN OSBORNE**



### KEY FACT

Passkeys are synced through your iCloud account, but even if you lose all your Apple devices you can still recover your passkeys. This is achieved through iCloud Keychain escrow: [apple.co/3fsF0q0](https://apple.co/3fsF0q0)

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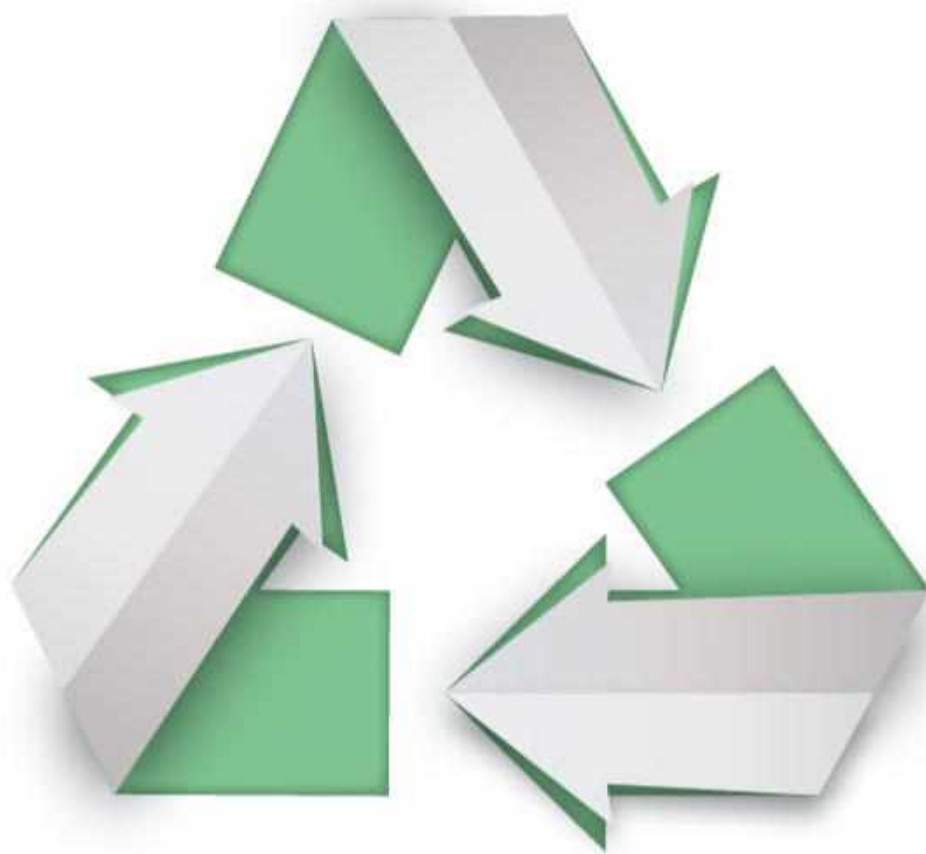
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