



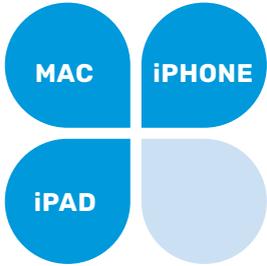
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like a pro on  
your iPhone

The ultimate  
desktop speakers?  
**KEF LSX II** on test



**6** of the very  
best iMovie  
alternatives

# Mac | Life



FEBRUARY 2023 NO.202

## UPGRADE YOUR APPLE GEAR

The right way to back up,  
move to, and set up a new  
**Mac, iPhone, iPad or Watch**



**PLUS**  
24 pages of  
tech help &  
how-tos

### HOW TO:

- Customize your desktop layout
- Master the Clock app in macOS
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# ROUGH WITH THE SMOOTH



**ONE THING I** look forward to every day in my job as editor on *MacLife* is opening the mag's email inbox, and perusing through the lengthy list of emails to see what goodies wait for me inside. I say goodies, but the majority of my emails tend to be press releases for products or software that aren't particularly interesting, and there's always a modicum of what I like to call "casual" spam, but occasionally I'll get an email from you — the reader. If I'm honest, I definitely don't hear from you enough, but I appreciate we all live busy lives and we don't always have time to check in, or

perhaps we don't even consider doing so — after all, if you're happy with the reading experience, why would you?

If you've held back on sending an email over, because you had something negative to say, and were worried about how it might be perceived, then all I can say is don't worry! Feedback, whether it's negative or positive, is a good thing in my book, because it helps me to better understand what we're doing well, and where we could improve things.

Case in point: I had a reader email me a month ago explaining how he felt we've lost some of the charm or "community feel" of *MacLife* old, and asking whether it's possible to inject some of this back in. Now, it's possible that some people might take offense at this sort of criticism, especially when it's their pride and joy concerned, but for me it was just a very honest piece of feedback. Turns out, the thing that'd I'd changed previously in the letters page because my editorial mind assumed was the better way, wasn't necessarily good for the readership. Granted, this was one person, and their opinion might not be shared with everyone, but after mulling it over, I agreed with their opinion, despite it going against my initial best interests.

So, to reiterate: if you've got something to say about the mag, please feel free to email me any time. I might be slow to respond, but I always respond. Your feedback is precious, "warts and all". ■

*Nick*

**NICK ODANTZIS**, Editor

Twitter: @maclife

## >>> THE TEAM



**Matt Lochrie**

**Art Editor**

If you have any feedback on the visual aspects of the magazine, Matt is definitely all ears!



**Rachel Terzian**

**Production Editor**

"I don't need to follow Apple Maps!" said Rachel, moments before getting lost in a huge forest.



**Hollin Jones**

**Contributor**

Hollin channeled his inner Scorsese, putting several iMovie alternatives through their paces (p52).



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# START

THE LATEST NEWS FROM THE WORLD OF APPLE

## iPhone 14 Pro supply problems

Production in China slowed by lockdowns and unrest

BY ALEX SUMMERSBY

**IPHONE 14 PRO** models may be in short supply for some time.

In November, Apple took the unusual step of warning suppliers would be constrained over the holiday season because “COVID-19 restrictions have temporarily impacted the primary iPhone 14 Pro and iPhone 14 Pro Max assembly facility located in Zhengzhou, China.” However, things seem to be more complicated than that.

Apple’s main contractor in China, Foxconn, routinely hires seasonal staff to meet peak demand. In 2022, at Apple’s request, it started its annual recruitment drive two months early, offering big sign-on bonuses to attract the estimated 100,000 extra staff required. Local authorities also attempted to mitigate the impact of government-mandated lockdowns by inviting retired military personnel to help.

However, mass protests — widely described as “riots” — broke out in late November, with angry recruits complaining they had not received their bonuses. Foxconn apologized,



claiming “a technical error occurred during the onboarding process.” As many as 20,000 staff reportedly accepted a compensation payment of about \$1,400 and left.

Protesters also said they had been housed in the same accommodation as COVID-positive workers, which Foxconn called “patently untrue”. The iPhone plant had been isolated from Zhengzhou city, where there was a COVID outbreak. But COVID restrictions, followed by widespread protests, have both badly disrupted productivity and daily life in China.

Analysts say Apple is reducing its dependence on China. Foxconn plans to ramp up iPhone production in India from 2–4% of global shipments to 40–50% over “the next few years”. India’s Tata Group, which produces components including iPhone cases, reportedly plans to add 45,000 to its workforce of 10,000 “within 18 to 24 months”.

Tim Cook has confirmed that Apple will be buying chips from a plant being built by TSMC in Arizona, although production is not due to start before early 2024. TSMC, the world’s largest contract chipmaker, is based in Taiwan, which is under constant threat of blockade or worse by China.

TSMC also verified the new plant will make chips using 3-nanometer technology, which Apple will be the first to use. The A16 processor in the iPhone 14 Pro range is produced using TSMC’s 4nm process, the most advanced currently available.

In this sense, delaying a purchase can work in your favor. Analysts expect demand to remain strong, so shortages won’t mean lost sales, only deferred ones. The production hitch, they say, could simply push several billion dollars of iPhone revenue from the December quarter to the March quarter.

## > Major League win

Another sports exclusive for Apple TV

**APPLE AND MAJOR** League Soccer have announced that MLS Season Pass will launch on February 1, 2023, introducing an unprecedented subscription service to fans in over 100 countries and regions that features every live MLS regular-season match, the entire playoffs, and the Leagues Cup, all with no blackouts.

MLS Season Pass will bring MLS to its biggest worldwide audience ever, in a more simple and streamlined way. All matches will be available on billions of devices through the Apple TV app on Apple devices, smart TVs, streaming devices, set-top boxes, game consoles, and the web at [tv.apple.com](https://tv.apple.com).

Fans will be able to watch MLS matches featuring English and Spanish speaking broadcast crews, and can listen to a club's home radio broadcast

on the Apple TV app. All matches involving Canadian teams will be available in French.

The launch of MLS Season Pass marks the official kickoff of a ten-year partnership between MLS and Apple, a historic first for a major professional sports league.

An MLS Season Pass subscription on the Apple TV app will cost \$14.99 per month during the season or \$99 per season, and Apple TV+ subscribers can sign up at \$12.99 per month or \$79 per season. A selection of MLS and Leagues Cup matches, including some of the biggest playoff matchups, will also be available at no additional cost to Apple TV+ subscribers, with a number of matches available for free on the Apple TV app. The MLS 2023 regular season starts on February 25.

## > Satellite SOS launches

**APPLE'S EMERGENCY SOS** calling via satellite service is now available to iPhone 14 users in the US and Canada, and is due to launch any day in France, Germany, Ireland, and the UK.

The service lets iPhone 14 and iPhone 14 Pro models connect directly to a satellite, enabling messaging with emergency services when outside of cellular and Wi-Fi coverage.

Apple revealed it invested \$450m from its Advanced Manufacturing Fund to provide the key infrastructure that supports the system. Most of this goes to Globalstar, a global satellite service based in Louisiana with facilities across the US. Apple's investment provides critical enhancements to Globalstar's

satellite network and ground stations, with more than 300 Globalstar employees supporting the new service. Custom ground stations located at key points all over the world are staffed by Apple-trained specialists who can relay messages if local emergency services are not equipped to receive text messages.

Look out for an in-depth guide on Emergency SOS via satellite in *MacLife*.

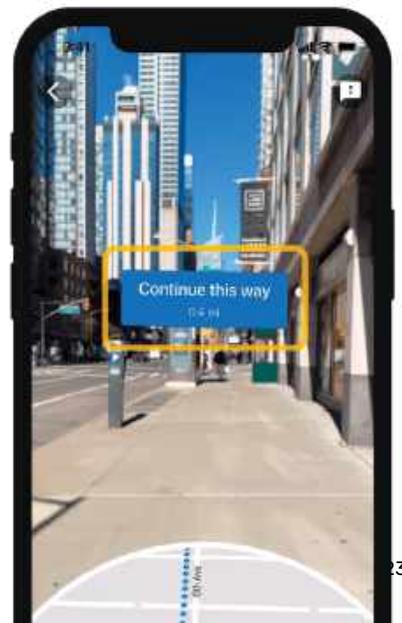


## News in brief

A bite of the Apple

**> AR COMES TO** Google Maps. Google Maps has introduced Live View, which displays information on top of the scene you're viewing through your phone camera. Live View works on iOS and Android, and is initially rolling out in Los Angeles, San Francisco, New York, London, Paris, and Tokyo. You tap the Live View icon and point your camera at buildings, street signs, or any element of scenery that Google Maps can match against Street View data in the area. Once it recognizes where you are, it will overlay AR pop-ups on the scene with info such as ATM, coffee shop, and store locations, opening times, and prices. Tap the carousel at the foot of the screen for more, such as offers and ratings. It also highlights out-of-sight points of interest. For walking navigation, it will overlay directional arrows and distance info to guide you to your destination.

Apple Maps has had AR navigation assistance using 3D visualizations since the release of iOS 15 in October 2021. Tim Cook says AR is "a critically important part of Apple's future".



## > THE SHIFT

**MATT BOLTON** thinks that Stage Manager on iPad needs *(a lot)* more work, but it makes him imagine a smarter, adaptive future



**W**ITH THE ARRIVAL of iPadOS 16, I've been playing with Stage Manager. Sadly, "playing" is the right word there; not "working with" or even just "using". I suppose you could go with "investigating", since a big part of your early time with Stage Manager tends to be figuring out its quirks. It has intentional behaviors I find counter-intuitive, seemingly unintended behaviors that get in the way of how the iPad is supposed to work, and stability problems that just rule it out of contention for now.

But! There's also something really interesting in there that hints that the future of the iPad could be as an even more flexible and changeable device. When holding my iPad Pro in my hand, I found Stage Manager to be more fussy and fiddly than Split View and Slide Over multitasking; but when using it with the Magic Keyboard, a couple

of things clicked. Specifically, the Cmd and Tab keys.

### UNLOCKING POTENTIAL

Just as I find Stage Manager infuriating when using touch, I find Split View interminable when using a trackpad and keyboard. I'm a long-time Mac user, and although macOS has given us lots of multitasking options over the years, my personal technique is to use overlapping windows so that I have a sense of the "physical" space of my apps, and then to just ride Cmd+Tab. I don't like to have different Spaces — I just like to know where all the windows are, and when I do, I can flit between them rapidly and purposefully. Split View on iPad doesn't allow for this — you can use Cmd+Tab to switch between apps sure, but everything is split between different screens and you're thrown around them, like you're Evelyn in *Everything Everywhere All At Once*, pulled to different worlds on a whim.

But Stage Manager is designed to more closely replicate how it works on Mac. You can have overlapping windows on the same screen — and if you do switch to another screen, there's more of a sense of arrangement to it that I personally can follow. Stage Manager is much



Windowing works okay on iPad... but not if you have to fuss around with them using your finger.

closer to working in the way that my brain wants an OS to work with a trackpad and keyboard after so many years of Mac use.

I'd love a switch in the iPad's settings that automatically enables Stage Manager when the iPad is connected to the Magic Keyboard, and switches back to the more touch-friendly option when you disconnect. Right now, you can do this with the Stage Manager trigger in Control Center, but I'd like it to be a more responsive option.

The more Apple throws powerful processors at the iPad, the more it's clear that some kind of change in how it can be used is needed to actually unlock its potential. For me, Stage Manager is proof that its future is in embracing its duality, not trying to smooth its desktop and touch modes into one mush.



If a keyboard case is gonna cost this much, then it should trigger some fancy tricks in iPadOS, right?

>>> 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."

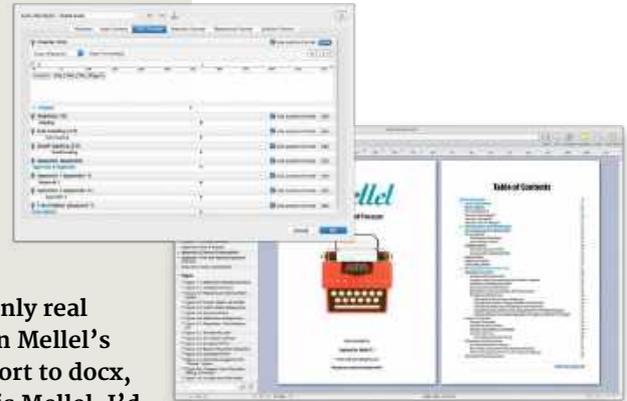
# LETTER OF THE MONTH

I read your recent “Mac Writing Apps” article and would like to add two more for another time: Nisus Writer Pro and Mellel. For some reason, I’ve never been interested in using Pages. I’m not happy with Word’s one-time price, nor its monthly fee. But then I came across Nisus, which to me had always been a slightly complicated word processor. I found the new Pro version, however, very easy to use with simple formatting of two things I use often: ease in changing the header between “chapters”, and ease in formatting a hanging paragraph. But, after about nine years of writing my diary, it takes more than three minutes to reopen it.

As a genealogist and diary writer I’m looking for a functional, easy and inexpensive one-time purchase word processor. Nisus Writer Pro fitted that until my file size got too large. So, I went looking for another word processor for large documents and came across Mellel, which takes about six seconds to open the 1,600+

pages of my file. It’s not as easy to use as Nisus Writer Pro, but of course any time we move to a new app, there’s bound to be a learning curve, and I’ve had Mellel only a few years. My only real complaint is it saves in Mellel’s own format; I can export to docx, but the working copy is Mellel. I’d be really interested to see a review of these two programs in *MacLife*.  
**GEORGE NETTLETON, PA**

It’s great to hear about alternatives to the usual writing apps that we normally cover, so thanks for the recommendations George. We’ve never covered any Nisus writing apps before, but we did review Mellel back in issue 147, where our reviewer stated it was “A fast, powerful document editor for writing documents where normal word processing just isn’t enough”, which is fair praise indeed. Perhaps we’re due an update soon.



**\$59.99/year (\$99.99 one-off), which is pretty reasonable if you’re using it fairly regularly.**

## Link it all up

In the digital version of *MacLife*, it’s disappointing that there is no way to click through to the items mentioned in your articles, especially “Best of the Best” on my iPad. Come on – direct links to websites have been available for ages; you can’t even highlight them to cut and paste, though that, to be honest, I can understand. You should at least be able to click on the item, company or vendor and be sent to that item’s company or website. Thanks for listening.

**CHARLIE GIBSON**

**We greatly appreciate the feedback of our readers – so much so, that for the last few issues all links are clickable/tappable in future. It takes a while for us to implement and check these every month, but if our readers feel that it’s worth having, then we’re happy with the extra work.**

## Keep on burning

What’s the best software for burning Video\_TS movies to a DVD? I have macOS Ventura on a five-year-old iMac, and I use Toast Titanium 18 but it keeps burning coasters. The movies are not complete, with no menu and not much else that should be there. I don’t find the customer support particularly good either.

**JOHN POLJACK**

**Good question John. Have you heard of Wondershare UniConverter? If not, we’ve got a review of it in the next issue: it’s a capable video converter and burning tool. There’s also a free trial (you can only burn 1/3 of the length of your video – this means a wasted DVD to test its effectiveness, but you could check to see if it works for you). The paid-for version is**



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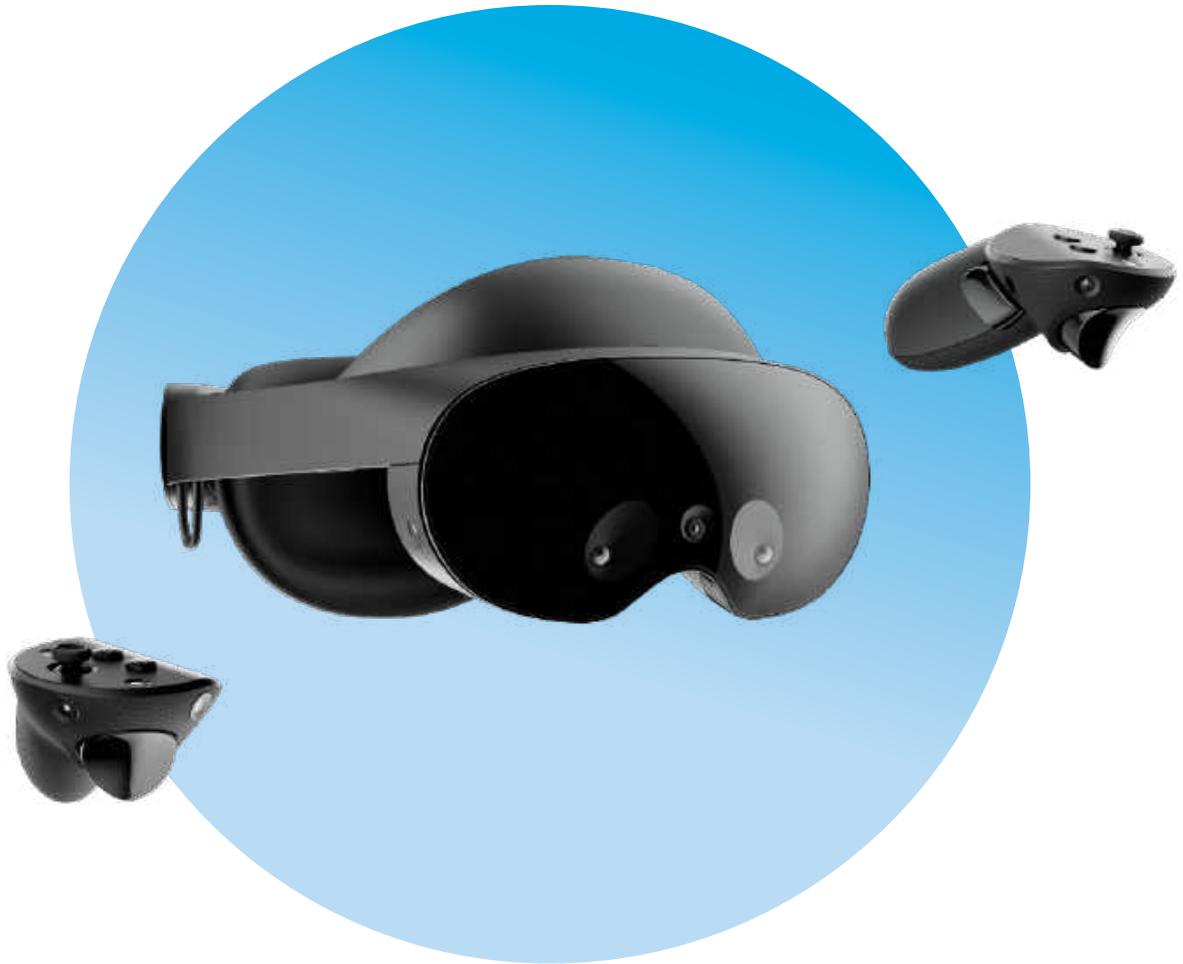
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# CRAVE

THE GEAR WE'RE LUSTING AFTER



## Meta Quest Pro

**\$1,499** From [meta.com](https://www.meta.com)

>>> While we wait for Apple's heavily rumored mixed-reality headset to drop, Facebook owner Meta has revealed its own high-end device that blends virtual and augmented reality: the Meta Quest Pro.

It's loaded with some pretty impressive features, including eye and expression tracking, full-color mixed-reality visuals, and four times the resolution of the Meta Quest 2. You navigate through virtual worlds using the two included Meta Quest

Touch Pro controllers, which boast haptic feedback and precision pinch to allow for more immersive experiences. It's also comfortable for glasses-wearers — a plus.

Meta is positioning the Quest Pro as both a workplace and recreational device, something that can help you collaborate with colleagues around the world as much as it can aid your relaxation after a long day. Will Apple's own headset be able to compete? We'll have to find out.



The Meta Quest Pro offers a truly premium visual experience.

## Caviar Daytona iPhone 14 Pro

**\$133,670** From [caviar-us.com](http://caviar-us.com)

>>> Caviar is known for its, well, extravagant takes on Apple's iPhones. The company usually starts with standard iPhones and dials them up to 11 on the flamboyancy scale. Its iPhone 14 Pro is no different.

Dubbed the Daytona, this iPhone has an actual Rolex watch made from gold and diamonds fitted onto the back. Above it are three 18-karat gold dials (showing a speedometer, oil gauge and fuel level) harking to the racing pedigree of the Daytona name. And there are even three 18-karat gold decorative dashboard switches at the bottom.

It's not exactly subtle, but then nothing Caviar does ever is. And at over \$133,000, it's a 13,280% price increase over the standard iPhone 14 Pro!



## Air.0

**\$69** From [myair0.com](http://myair0.com)

>>> Working with a mouse on the go is never ideal. You're either stuck with a bulky full-size pointer, or a tiny, uncomfortable portable one. Inspired by origami, the Air.0 mouse starts out completely flat, allowing it to easily fit inside any bag or holder. When it's time to use it, you just fold it up and it magnetically snaps into shape.

Unlike most travel mice, the Air.0 is full size, so you don't have to make do with a tiny pointer that sits uncomfortably in your hand. It's light, sturdy, and totally wireless — and at \$69, it won't break the bank either.



## Amazon Kindle Scribe

**\$340** From [amazon.com](http://amazon.com)

>>> Amazon's Kindle was strictly a reading device — until now. The company has just launched the Kindle Scribe, the first Kindle you can write on.

The 10.2-inch display (with 300 ppi resolution) is the largest screen on any Kindle, which means there should be plenty of space for drawing and marking up with the included stylus. The pen never needs charging, and Amazon says using the Scribe feels like writing on real paper.

It also comes with an auto-adjusting front light, an adjustable warm light, and weeks-long battery life.



## Balmuda The Speaker

**\$399** From [us.balmuda.com](http://us.balmuda.com)

>>> The Speaker from Balmuda combines three light tubes with clear, crisp audio to create what the company describes as a "live stage experience from your home."

Aurally, The Speaker pumps out 360-degree sound via either Bluetooth or an aux cable. There are three different settings available for the lights: in time with the music, as a more subtle ambient glow, or an option that mimics the gentle flickering of candles.

The Speaker is a beautiful and unusual device that would make an excellent centerpiece for any room.

# UPGRADE YOUR APPLE GEAR

Received a shiny new Apple device for Christmas? Here's how to transfer everything that matters, from photos to preferences

WRITTEN BY CARRIE MARSHALL

**WHETHER YOU OWN** an older Mac, iPhone or iPad, or even one of those pesky Windows PCs or Android phones, moving your stuff across to your sparkly new device is easy – and we're going to show you exactly how over the next 12 pages.

As we'll discover, there are lots of different ways to transfer everything from an older device to a brand-new one. If you've been using Time Machine to back up your Mac you can copy from

that; if not, it's easy to clone some or all of your Mac's storage and move it seamlessly across. On iPhone and iPad, iCloud backups can make your new device just like your old one, and if you're moving from a PC or Android phone, it's easy to transfer your important files and data from those too.

As you follow the tips in this feature, you will notice that many of the tools and tricks we'll be using to move data from one device to

another are also very useful for backing up your important files, folders, and photos – so if you're not already backing up regularly, then it's a good idea to make that your New Year's resolution. It's never been simpler to keep backup copies of the things that really matter to you, and as we'll discover, it'll make moving to your next Mac, iPhone or iPad an awful lot easier. ■







# CLONE YOUR MAC

Make a copy of everything on your Mac before you start. Here's how...

**THERE ARE LOTS** of ways to move to a new Mac, and one of the easiest is to clone your existing one. This creates a perfect copy of your current Mac's system, data and all your files, and it's straightforward. All you need is a decent amount of external storage and a cloning app. We particularly rate Carbon Copy Cloner and SuperDuper! (see below), both of which make it exceptionally easy to clone some or all of your Mac system. Just make sure both Macs are running the same version of macOS.

Before you consider cloning, though, it's a very good idea to do some housekeeping so that any messy bits from your old Mac don't make it across to your

new one. A good place to start is in the Settings > General > Storage menu, or if you're running a macOS prior to macOS 13 Ventura, in **Apple > About This Mac > Storage**. This enables you to see what's taking up space on your Mac; for example, you might have some old apps gathering digital dust in a remote corner of your Applications folder, or a Documents folder full of old files you should have deleted years ago.

Cloning isn't just for moving data from one Mac to another. It's also a useful form of backup, and the same third-party tools that make cloning so simple also feature useful backup options and scheduling tools. For



example, while the free version of SuperDuper! offers unlimited cloning, by paying the small purchase fee you unlock the Smart Update feature that keeps your clone up to date.

## MAKE YOUR CLONE

Cloning a Mac will likely involve transferring a lot of

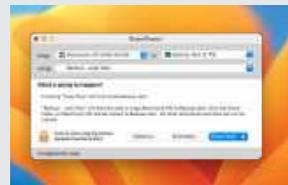
data — our MacBook Pro has over 400GB of data on its built-in SSD — so it's unlikely that you'll be able to simply clone to a USB stick. External USB 3.0 drives are the best trade-off between price and speed (provided that your Mac has USB 3, of course; if it doesn't you'll be limited to USB 2.0 speeds). For

## 5 BEST BACKUP APPS & SERVICES

Although every Mac comes with Apple's Time Machine software, it's not necessarily the best solution for backups. Third-party backup apps and services offer more options, more control over what gets backed up and when, and many also make it easy to access your data from other devices such as your iPhone. Here are some of our favorites.



**Carbon Copy Cloner**  
\$39.99 [bombich.com](http://bombich.com)  
Simple enough for beginners but powerful enough for more demanding users, Carbon Copy Cloner is one of our very favorite Mac utilities thanks to its friendly interface, speedy performance and extensive scheduling options.



**SuperDuper!**  
\$28 [shirtpocket.com](http://shirtpocket.com)  
This is another favorite, delivering effortless cloning as well as options for scheduling and organizing backups to keep your data safe. It's a superb backup and cloning app with a simple and straightforward interface.



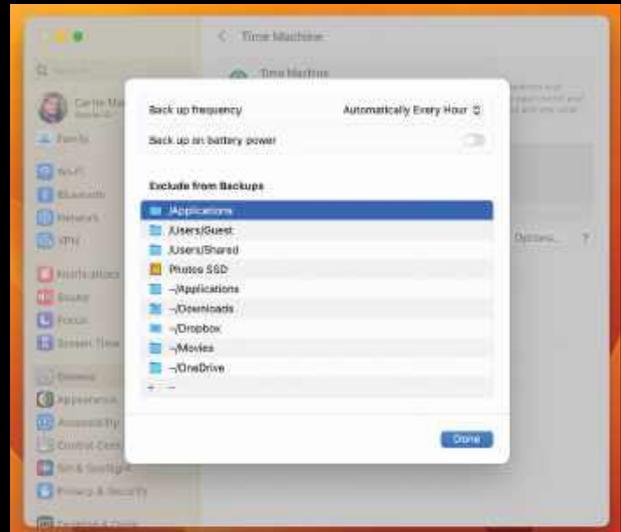
**Backblaze Personal Backup**  
\$7/month [backblaze.com](http://backblaze.com)  
Backblaze backs up to the cloud, enabling you to access data on the web, iOS and Android as well as on your Mac. You can request your backup on a USB drive — handy if you have a slow connection.

## Get on board the Time Machine



Apple's helpful backup system, Time Machine, doesn't just back up your files; it also enables you to revert changes you've made to a document, or recover data. It backs up hourly, and stores those hourly backups for 24 hours, daily backups for a month, and weekly backups forever. You don't need to do anything; it'll automatically delete old backups when it needs to free up space.

You can recover files and folders from Time Machine on your Mac, or use your Time Machine backup to move everything to a new one via Migration Assistant. You don't need a super-speedy drive to run it — our Time Machine backups go to a simple external SSD that chugs away every hour — and you can copy from external drives too. That's handy if, like us, you keep your Photos and Music libraries on external drives.



example, the 1TB external SSD we've used in our tutorials was a reasonable \$98. Hard disks may be cheaper — a 1TB external hard drive is about \$55 — but they're a lot slower. Always buy more storage than you think you'll need.

If you don't already have an external drive or SSD, you'll

probably need to format it before you can clone your Mac to it. Most drives come pre-formatted with exFAT, which is used by Windows, but for Macs you'll need to go into Disk Utility and format your new drive as macOS Journaled or better still, APFS. APFS is the Apple File System and it's the fastest,

most reliable standard format for Mac storage.

### USE YOUR CLONE

If you've made a complete, bootable clone (the default option in most cloning apps) then it's just a matter of connecting your external drive with the clone on it to the Mac you want to copy it to. In Settings > General > Startup Disk (on older Macs, it's System Preferences > General > Startup Disk), choose the external drive as your startup disk and click Restart. Then use the cloning app to copy your clone to the destination disk or SSD.

If you chose to make a disk image rather than a bootable clone, that's simple too. Connect your external drive but don't change the startup disk: launch Migration Assistant and choose the option to restore from your disk image. ■

## TO CLONE OR NOT TO CLONE?

Cloning used to be the easiest way to copy from Mac to Mac by making a bootable copy of an entire boot disk or SSD, but then Apple threw a security spanner in the works with macOS Big Sur. A new security feature called Sealed System Volume meant that third-party cloning tools couldn't make bootable clones; the only way to do it was with Apple's own rather unfriendly Apple Software Restore tool. However, Apple made changes in May 2021 with macOS 11.4, enabling our favorite cloning apps to make bootable drives once more.



### Carbonite Home

\$7/month

carbonite.com  
Carbonite's basic plan offers unlimited backup for data and supports all the key file and photo formats. If you want to back up external drives or video you'll need the \$10/month Plus plan.



### iDrive Personal

Free 10GB idrive.com

iDrive offers 10GB of storage for free, but the best option is the \$79.50 per year 5TB package. That's more than enough to back up your Mac and your iPhone or iPad too, and the service is easy to use and impressively fast.

# BACK UP YOUR OLD PC

## Moving from a Windows machine to a Mac? Here's what you should know

**WINDOWS PCS AND** Macs run completely different operating systems, so there's always going to be some adjustment when it comes to moving from PC to Mac. But it's easier than ever before to move your essential documents, photos, and files from one to the other.

In many cases you don't need to move anything. If your email is Gmail, your messages aren't stored on your computer; they live in the cloud, and you can access them in Safari just as you did in Edge. You can also add Gmail to the Mail app on macOS by going to Mail > Add Account. It takes about one minute. It's the same with Google Docs and other cloud-based services.

One of the biggest differences when you move from a Windows PC to a Mac is that not all of the apps are the same. However, that's much less of a problem than it used to be: all the key apps such as Edge, Chrome, Firefox, Steam, Microsoft Word, Outlook, PowerPoint and so on are also available on the Mac. Although you can't usually transfer the license for a paid PC app to a Mac one, there are exceptions: if you're an Office 365 subscriber, go to **office.com/myaccount** on your Mac and look for Install > Install Information and deactivate your Windows PC. You can now install Office on your Mac and use the same license. Similarly with Adobe

Creative Cloud, your subscription is linked to you, not your computer.

In many cases, though, we'd recommend trying native Mac apps rather than looking to replicate your PC experience exactly. For example, Apple's Pages and Numbers are excellent alternatives to Word and Excel, and can read and write Word and Excel documents. There are stacks of wonderful third-party apps out there too, and some have no direct

equivalent on PC, such as Apple's glorious GarageBand.

### MAC TO PC PORT

Actually moving from Mac to PC depends very much on what you'd like to do. The easiest way by far is to use Apple's Migration Assistant, which we'll cover over the page. It automatically exports from the likes of Outlook and copies photos, videos, music, and documents across automatically. If you'd like more control you can simply



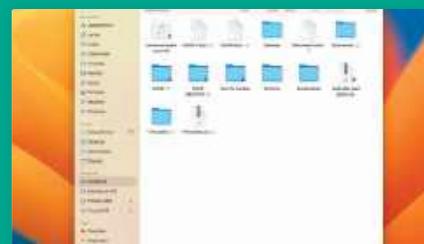
## HOW TO Move data from your PC



**1 External drive**  
If you haven't changed the defaults, you can copy documents, music, videos and so on to an external drive. Copy them in File Explorer and paste them to the appropriate drive. Then connect the drive to your Mac.



**2 Use cloud storage**  
OneDrive looks like an ordinary folder, but it's cloud-based – and you've got 5GB of space. Drag the documents, files or photos into "OneDrive – Personal" on your PC, then install OneDrive on your Mac.



**3 Get the data**  
Now all you need to do is connect your external drive to your Mac or run OneDrive. As you can see here, the same documents you added to OneDrive (or the external drive) are here, ready for you to drag and drop.



# 5 BEST BACKUP DRIVES

When you need to back up a lot of data, external drives will make your life much easier. They're faster than cloud storage, have more capacity than USB sticks, and you simply connect them to your Mac and let Time Machine or a third-party backup app keep them up to date.

copy files and folders from your PC to an external drive, and then plug it into your Mac and copy them across; if you don't have huge amounts to copy, a free service such as OneDrive gives you 5GB of cloud storage accessible on PC and Mac alike.

Whatever method you choose, it's very important that you don't erase your Windows PC until you're absolutely sure that everything important has been carried across. ■



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**LaCie Mobile Drive 1TB**  
**\$79.99** [lacie.com](http://lacie.com)  
 This is an affordable option that's good for travel and for taking your backups offsite. It's not as tough as the same brand's orange Rugged drives, but that means it blends in better with your Mac.

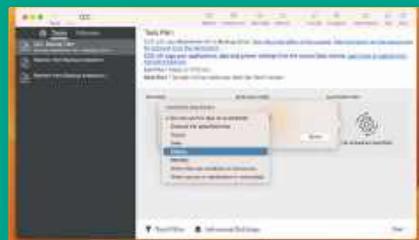


**LaCie 1big Dock 4TB**  
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 The Big Dock is a fast Thunderbolt 4/USB 4 drive that's ideal for huge files such as video, and it doubles as a hub for external devices. Prices start at \$369 for 4TB, rising to \$999 for 20TB.

## HOW TO Use Carbon Copy Cloner



**1 Choose your backup**  
 Open Carbon Copy Cloner and first choose the Source (your old Mac), then the Destination (external drive) you want to copy all your data to. Press Start, then wait while Carbon Copy Cloner backs up your stuff.



**2 Customize**  
 Carbon Copy Cloner makes a faithful one-to-one copy of everything on your old Mac, right down to its System, meaning you could boot from it in a pinch. To take regular snapshots, click Automation, then set a schedule.



**3 Restore from backup**  
 To transfer the files to your new Mac, open Applications > Utilities > Migration Assistant, choose the backup drive you created, then select the files that you wish to copy across.

# MOVING TO YOUR NEW MAC

Everything's ready – now it's time to migrate

**WHEN YOU'RE MIGRATING** from one computer to another, or from a mobile device to a Mac, the goal is to get up and running on your new Mac with the minimum of fuss in the shortest possible time. Apple goes out of its way to make that process as fast and as fuss-

free as possible, and for computer-to-computer transfers it does that via a handy app called the Migration Assistant.

This tool is on every new Mac and can be downloaded to Windows PCs too, and its job is to transfer all the important things from your

old computer to your new Mac. It will copy all of your documents and apps, your user accounts and your settings from one Mac to another, and it does a great job of it.

The Windows version of Migration Assistant is slightly different, and will transfer

contacts and calendars; email accounts and key folders; desktop and documents folders; and music, movies and pictures folders. It can't transfer your apps (Windows apps don't run on Macs, although there are Mac versions of most that you can download via the App Store),

## HOW TO Use Migration Assistant



**1 Open and set up**  
When you first run your new Mac you'll be taken through a setup that includes Migration Assistant, but if you've skipped that then go to the Applications > Utilities folder and run the Migration Assistant app.



**2 Choose your source**  
The Mac you're moving from needs to be connected directly to your new one with an Ethernet cable, or on the same wired or wireless network, and running Migration Assistant too. You should now see a list of available Macs.



**3 Select your stuff**  
All you need to do now is decide what you want to carry across from your old Mac to your new Mac. If you're doing this with a new Mac that already has a user account on it, you'll be asked if you want to rename or replace it.



**4 From Time Machine**  
Migration Assistant can also transfer from Time Machine backups. The disk or SSD containing your Time Machine backup needs to be directly connected to or on the same network as your new Mac.



**5 Pick your backup**  
Time Machine will usually have multiple backups, and in most cases you want to go for the most recent, unless you're trying to travel back in time to just before some kind of unthinkable computing disaster.



**6 Restore contents**  
As with copying from an existing Mac, you can now choose to restore the entire contents of the Time Machine backup or just selected parts. In this case we'd keep everything checked and then click on Continue.

and there are limits to the apps it can move data from.

The Windows app (from [support.apple.com/en-gb/HT204087](https://support.apple.com/en-gb/HT204087)) is available in different versions, and you need to choose the one that matches the operating system on your new Mac. In most cases that's the one for Ventura and Monterey, but there are versions going back to El Capitan and earlier.

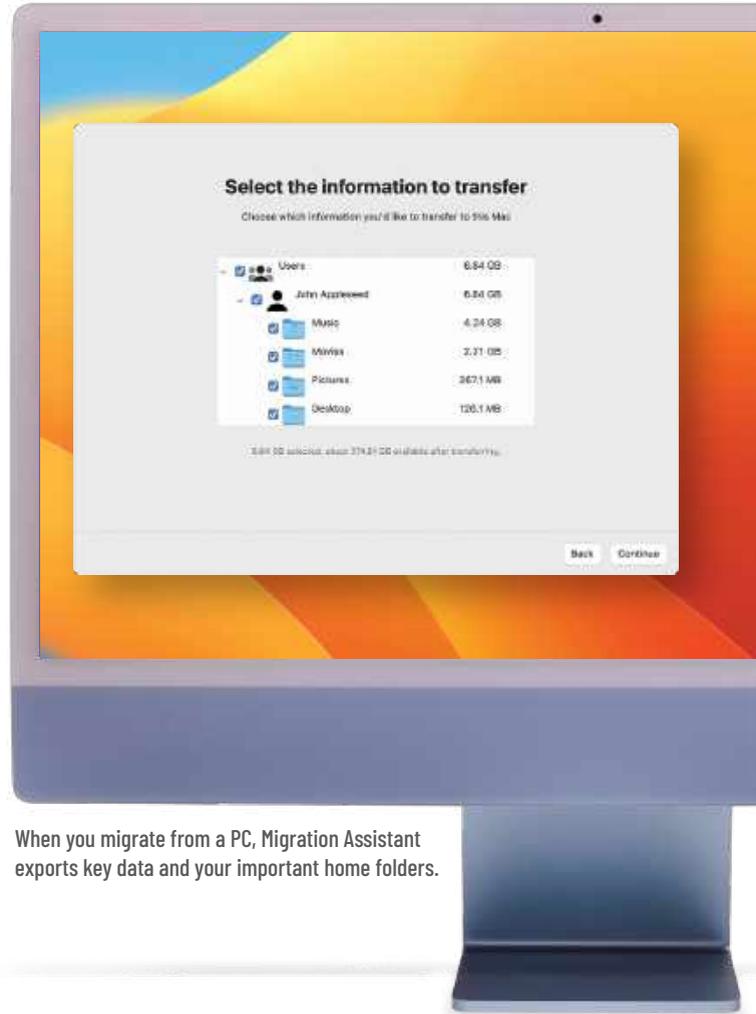
## OS ISSUES

Migration Assistant can move email and settings from Outlook and Windows Mail; contacts from People, Outlook and your Contacts folder; calendar entries from Calendar and Outlook; music, podcasts, audiobooks and TV/ movies; browser bookmarks from Edge, Chrome, Firefox, Internet Explorer and Safari for Windows; custom desktop pictures; and non-system files from your home drive, usually the C: drive.

Some features of Migration Assistant are only available if

you're migrating to macOS Ventura from your PC, so while you can export your Outlook email and calendar entries to all the available macOS versions, you can only export Outlook's tasks and your saved Wi-Fi passwords and login details to a Mac running Ventura. If you use third-party apps on your Windows PC, you'll need to export their data manually unless they're cloud-based services, in which case you will be able to log in on your Mac without having to transfer anything.

Unless you have a very small amount of data to transfer, Migration Assistant can take a long time to complete; moving from our Intel iMac to our M1 MacBook Pro took many hours, and that was despite most of our stuff already being stored on external drives that Migration Assistant wasn't copying. Apple thus recommends that you "allow migration to complete overnight". ■



When you migrate from a PC, Migration Assistant exports key data and your important home folders.

## HOW TO Migrate from your old PC



**1 Get the app**  
Search [support.apple.com](https://support.apple.com) for Migration Assistant and you'll be taken to the download page. There are different versions – Ventura and Monterey; Big Sur; Catalina and Mojave; Sierra and High Sierra.



**2 Give permission**  
If you're running security software on your PC, it may have a firewall to limit incoming and outgoing network connections. If so, you'll need to unblock Migration Assistant in your security app before you can continue.



**3 Find your Mac**  
Your PC needs to be on the same network as your Mac, either via Wi-Fi or with an Ethernet cable connecting the two. If your Mac or PC doesn't have an Ethernet port – many don't – you'll need the appropriate adapter(s).



If you're already an iCloud user, well done — all your important settings and data such as calendars will be synchronized with your new Mac.

# SETTLE INTO YOUR NEW MAC HOME

Now it's time to get Mail, Music and Messages going

**FOR THOSE WHO'VE** used Apple's Migration Assistant to move everything from an old Mac to a new one, all your apps, customization and settings should have migrated too — so you'll have the correct account details in Mail, your purchased content in iTunes or Music, and messages up and running.

If you're already a Mac user, chances are you're using

iCloud for a lot of things: synchronizing Safari bookmarks and settings, contacts, calendars, and passwords stored in Keychain. You may be using iCloud Drive and iCloud Mail too. If you are, great; as soon as your new Mac is logged into iCloud, it should start synchronizing all of that data.

If migrating manually, however, or if you're coming

from a Windows PC rather than a Mac, there's a bit of housekeeping you'll need to do before you congratulate yourself on a job well done.

What's involved depends very much on what services you use. For example, if you have a Gmail or iCloud account for your email then you don't need to worry about copying your mail archive across; it lives in Google's or

Apple's servers. All you need to do is enter the appropriate account information in the Mail app's Preferences > Accounts or Settings > Accounts. However, if you use POP3 email, where messages are downloaded and stored locally, you'll need to export your messages either as Apple Mail or .mbox format and import them into Mail on your new Mac manually. ■

## Quick troubleshooting tips

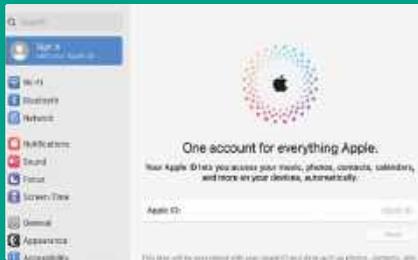
For third-party apps that use your iCloud data, such as calendar apps that access your iCloud calendar, you may need to create a new app-specific password. If you don't, they won't be able to connect to your iCloud and access the required data.

To create one you'll need to have two-factor authentication enabled on your iCloud account. Go to [appleid.apple.com](https://appleid.apple.com) > Sign-in and Security > App-Specific Passwords and you can generate a new password or revoke existing ones.



Apps that use your Apple ID to access iCloud data need to have app-specific passwords.

## HOW TO Get your new Mac up and running



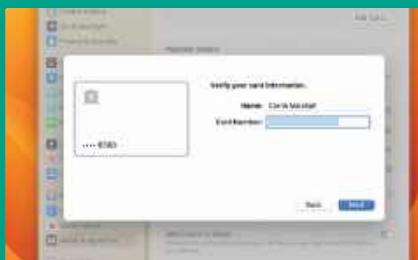
**1 Enter your Apple ID**  
The key to a happy new Mac is to log in with your Apple ID so you can access your iCloud data. Don't worry if you're asked to do this more than once; iCloud can be a little odd and ask for the same login multiple times.



**2 Check your iCloud**  
In System Settings > Apple ID > iCloud, you can switch on the iCloud services you want to use and switch off any that you don't. Click on Options if you want to change what apps iCloud Drive will store and sync data for.



**3 Enable Touch ID**  
If your new Mac has a Touch ID sensor, you'll be asked whether you want to use Touch ID for unlocking your Mac, for Apple Pay, and for auto-filling passwords. You'll need to provide your fingerprints for this.



**4 Enable Apple Pay**  
If you choose to use Touch ID for Apple Pay, the next step is to add cards so you can use them whenever you authorize a payment. If you've used the Migration Assistant from an older Mac it will copy your stored cards across.



**5 Confirm the card(s)**  
Whether you're adding a card or using one copied across from your old Mac, the card issuer(s) will need to authorize your card for use with Apple Pay. You can do this via a text message, or by calling the card issuer.



**6 Set up your SMS**  
SMS forwarding is handled by your phone, so if messages aren't appearing on your Mac, the culprit is probably in your iPhone's settings. Go to Settings > Messages > Text Message Forwarding to include your new Mac.



**7 Manage devices**  
For the Music and TV apps, there's a limit to how many Apple devices you can use with your account. Go into the app and select Account > View My Account > Manage Devices to remove any devices you no longer have.



**8 New passwords**  
You may need new passwords for third-party apps that access your iCloud data, such as email or calendar apps. Get new ones at [appleid.apple.com](https://appleid.apple.com) > Security > App-Specific Passwords > Generate Password.



**9 Delete old devices**  
In [icloud.com](https://icloud.com), go to Security to see the devices currently connected to your Apple ID. If you spot a device you no longer have, click on it, check it's the right one and then select Remove From Account to disconnect it.

# BACK UP YOUR OLD IPHONE OR IPAD

Get ready to transfer all your important data to your brand-new device

**MOVING TO A** new iPhone or iPad? Well, there are multiple ways of doing that, too.

Whichever option suits you best, it's a very good idea to ensure that you have a full backup of absolutely everything on your current device before you move to

your new one, and that you keep backing up your new device to keep your important data safe.

Apple offers two kinds of device backup: wirelessly to iCloud, and via a cable to iTunes or Music, with the backup stored on your Mac.

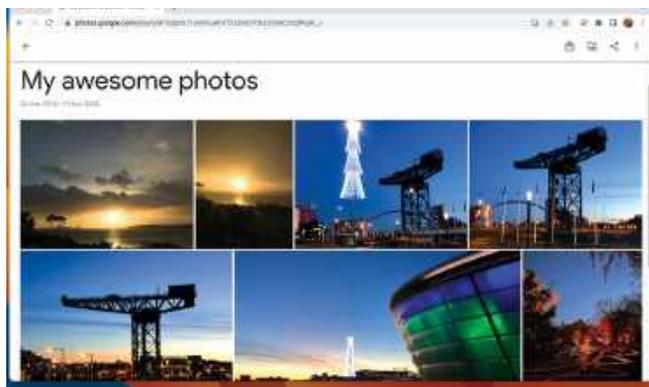
The former is more convenient, but you're limited by the size of your iCloud account, which for non-students is 5GB unless you pay for a larger storage capacity or have an Apple One subscription.

There is a workaround, though: if you head into Settings > General > Transfer or Reset iPhone > Prepare For New iPhone, you can get 21 days of extra iCloud storage to move your apps and data to your new device.

Once that 21-day period is over, you revert back to your standard storage amount, and the free 5GB tier just isn't enough to back up even the most modest iPhone. That means you'll need to get more storage if you want to keep using iCloud for your backups.

Go to Settings > iCloud > Manage Storage; the cheapest upgrade is currently \$0.99 a month for 50GB, rising to \$2.99 for 200GB and \$9.99 for 2TB.

If you're moving from an Android device or Chromebook to an iPad, you've got multiple options here. If you've been using Google's services and apps such as Google Photos, Google Calendar, Google Chrome and so on, which are the defaults on most Android and Chromebook devices, you can install Chrome on your Mac and access Google's apps in that or in Safari. If you'd rather use Apple's apps, use Google Takeout to export your data in Apple-friendly formats. We'll show you how to do that here. ■



Google's key services are all cloud-based and work in any browser, including Chrome and Safari.

## HOW TO Back up an old iPhone or iPad to iCloud or Mac



**1 See its settings**  
Check the backup settings in Settings > Your Name > iCloud > iCloud Backup, where you can enable iCloud Backup and tell your iPhone or iPad to back up now. iCloud backup is very convenient but it can also be quite slow.

**2 Get connected**  
If you connect your iPhone or iPad to your Mac, it'll appear in the Finder sidebar once you've told the device to trust your computer. Here, our iPhone is set to back up to iCloud. Let's change that to "...to this Mac".

**3 Encrypt it all**  
Your Mac will ask if you want your backup encrypted. You do, or your Mac won't be able to back up passwords, health data and HomeKit data from your iPhone or iPad. Click Encrypt Backups and enter a password to protect it.

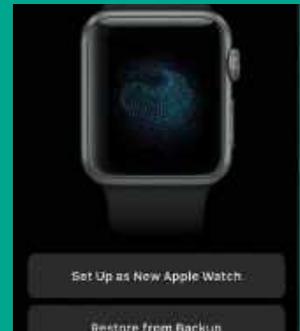
## Switching to a new Apple Watch

Your Apple Watch will constantly make a backup of your key settings and data that it stores on your paired iPhone. If the Watch belongs to another family member that you manage via Family Setup, their Watch data is backed up to their iCloud account.

With a new Watch, all you need to do is unpair the existing Watch, pair the new one with your iPhone, and choose Restore From Backup rather than Set Up As New Apple Watch.

Your backup includes almost everything — Watch faces, Home Screen app

layout, notification settings, health data and so on — but it doesn't include credit or debit card details from Apple Pay or your Watch's passcode. It doesn't back up your messages either, but if you use Messages in the cloud they'll still be stored online.



Once you've paired your new Apple Watch you can simply restore everything from backups of your previous one.

## HOW TO Back up an old Android phone or tablet



### 1 Use the cloud

Although Apple has a Move To iOS app for Android, there isn't an equivalent Move To Mac. That means we'll need to do things ourselves, but don't worry; it's just a matter of exporting from Google's cloud services such as Google Photos.

### 2 Download the pics

On your new Mac, log in to Google Photos with your existing Google account and click on the Settings icon in the top right. If you now scroll down you'll see an option to export your data. Click on that and then Backup.

### 3 Adjust the options

You'll now be taken to a second screen called Google Takeout. This enables you to choose what to export from Google Photos; here we're going with everything, so we're not going to make any changes.



### 4 Add more products

Google Photos isn't the only service you can export from using Google Takeout. If you click on Show More Products you can also export data from Google Drive, Google Calendar, Contacts, Chrome, Maps and more.

### 5 Choose destination

You can now choose to have Google email you a download link or export the data to Dropbox, OneDrive or Box. We'll go for the email link here. The more data you have, the longer this bit will take — it can be hours or even days.

### 6 Import your data

If you're planning to use Apple's own apps, you'll need to import your Google data — the .mbox file from Gmail, photos from Google Photos, contact data from Contacts and so on. You'll find the import option in each app's File menu.

# TRANSFER TO A NEW IPHONE OR IPAD

Whether you're upgrading from Apple or switching from Android, moving on is easy

## UPGRADING FROM APPLE

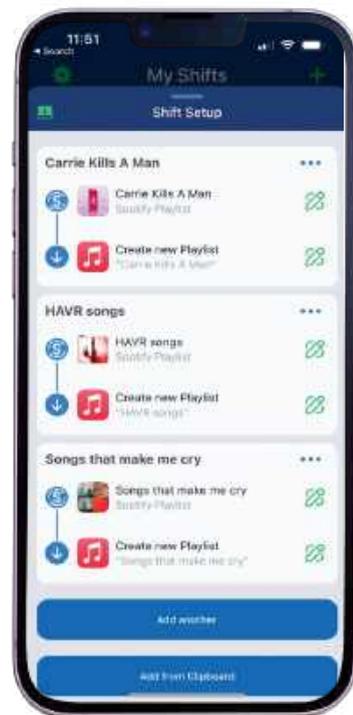
to Apple is really easy — especially if you use iCloud. Apple has made it remarkably simple to migrate all your data, apps and preferences from one device to another.

If you're moving from Android, you'll find that all the big-name apps are available for iOS and iPadOS too: Google's many apps from Photos to Maps are in the App Store, and so are all the popular apps for music streaming, TV, messaging and so on. In many cases that means it's just a matter of

installing the appropriate app, like Google Photos, WhatsApp or Spotify, and logging in with your username and password.

The key apps are all present, but if you find that there's one you really like and it's not in the App Store then, unfortunately, you're out of luck: unlike Android, where you can "sideload" apps from sources other than the Google Play Store, Apple won't let you install any apps from anywhere else. If Apple doesn't approve it, you can't have it.

If you want to migrate from Google services to Apple ones, that's best done on a Mac with Android File Transfer. For example, to move your photos from your Android library to your Apple one, use the app and navigate to DCIM > Camera on your device and drag the photos and videos you want to a folder on your computer. You can then add them to your Photos Library and it'll sync with your devices. It's the same with other content like ePub books and PDFs. ■



The excellent SongShift app can export your existing streaming playlists to Apple Music.



## Quick troubleshooting tips

### My new iPhone has Activation Lock on the Home Screen.

Then it isn't a brand-new iPhone. Activation Lock is part of Find My, which enables you to remotely lock your iPhone. So if you see the activation Lock Screen on your new iPhone, then either you've bought a second-hand one, or a problematic product from a dubious source. If it's the former you'll need to contact the seller, but beware — as Apple points out, some scammers do this deliberately so they can demand another payment to unlock it.

### My new iPhone isn't activating.

Is the SIM card inside? Try popping out the SIM tray with the included

SIM eject tool that came with your new phone. Take the SIM out and carefully reseal it and pop the tray back in again.

The problem could be at Apple's end. Check the System Status page at [apple.com/support/systemstatus](https://apple.com/support/systemstatus) and see if there's a green dot next to iOS Device Activation. If there isn't, there's a server problem and you should try again later.

### Quick Start isn't working.

Assuming you have iOS 11 or later on both your old and new devices (Quick Start isn't available for older versions of iOS or iPadOS), the most likely culprit is that Bluetooth is turned off on your existing iPhone or iPad. You can

switch it back on in Settings > Bluetooth. Still no luck? Restart both devices.

### What do I do with my unwanted old device?

If you haven't already arranged to trade it in, you could sell it on eBay or Gumtree or if it's really old, recycle it. Whichever option you choose, don't forget to erase your old device (and if it's an Apple one, disable Find My first and then log out of iCloud) when you're sure that you've transferred everything you need.

## HOW TO Migrate from iPhone or iPad using Quick Start



**1 Bring them together**  
Power up your new iPhone or iPad and sit it close to your existing one. Make sure it's connected to your Wi-Fi or the mobile phone data network. You'll need to set up Touch ID or Face ID before you can continue.

**2 Pick your method**  
You'll be offered two options. You can download from iCloud, or you can transfer directly from your previous device. The first option carries on in the background so you can start using your new device immediately.

**3 Keep them close**  
Whichever method you choose, transferring all your apps and data takes quite a while. You'll need to ensure that both devices remain close during the transfer, and keeping them connected to mains power is wise too.

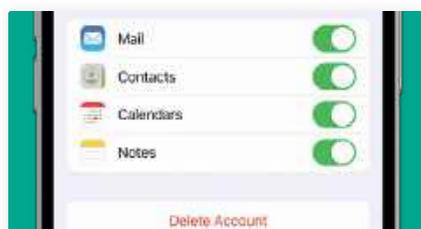
## HOW TO Migrate from an Android phone or tablet



**1 Use manual mode**  
Your new iPhone or iPad will offer to use the Quick Start feature to copy from an existing device, but that's only available when moving from Apple hardware: we want to click on the Set Up Manually option at the bottom.

**2 Choose Android**  
As you can see, there are several different ways to move data to your new device. The one we want here is Move Data from Android, which does exactly what you'd expect it to. Tap on that option to continue.

**3 Verify it's you**  
On your Android device, install and run Apple's Move To iOS app. If you don't already have it, the iPhone or iPad will display a QR code that you can scan to take you to the appropriate bit of the Google Play Store.



**4 Choose content**  
Simply tell Move To iOS what you want to transfer and tap Continue. Once the transfer is complete, you'll still need to add some things manually – for example, your Gmail account. It's easy: go to Settings > Mail > Accounts.

**5 Move your music**  
If you stream your music it's just a matter of installing the appropriate app and logging in, but to transfer music files from your Android device you'll need to do it manually by transferring it to your computer first.

**6 Use the app**  
If your computer's a Mac, you can use the free Android File Transfer app from [android.com/filetransfer](https://www.android.com/filetransfer) to transfer your music. Once you've done that, connect your Android with USB and use iTunes or Music to sync the songs.

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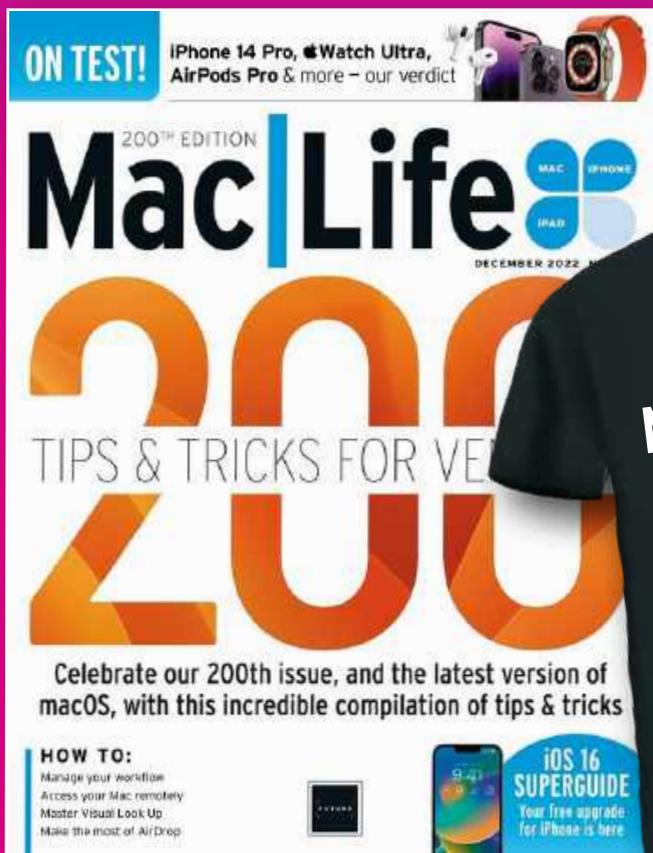
  
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# iPhone photography superguide

Discover how to shoot, edit and share better-looking photos

WRITTEN BY GEORGE CAIRNS

**T**hat old saying that “the best camera is the one you’ve got with you” is more true than ever these days thanks to the advanced hardware and software of the iPhone range — especially in relation to Pro models such as the iPhone 14 Pro Max.

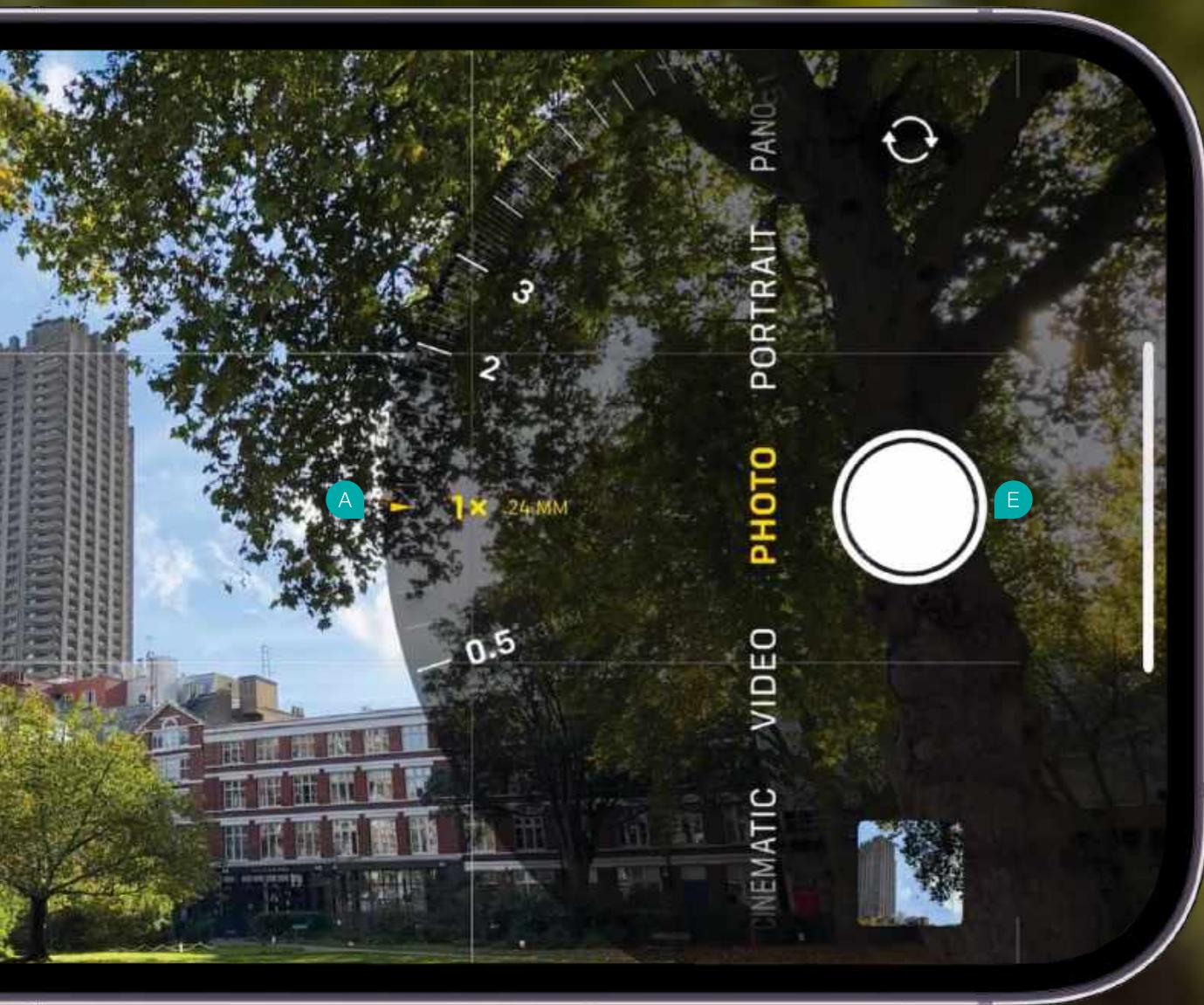
Devices such as the iPhone 11 Pro onwards enable photographers to switch from telephoto to wide to ultra-wide lenses in a few taps — capturing moments that a DSLR user might miss while they fumble to swap detachable lenses. Thanks to the Apple ProRAW format, users of the iPhone 12 Pro onwards can

capture much more information about a subject’s colors and tones, narrowing the image quality gap between iPhone and DSLR even further. DSLR users need to choose a metering mode to measure the amount of light in a scene. This can lead to skies being overexposed if the incorrect mode has been selected. The iPhone has the edge when it comes to exposure thanks to Smart HDR 4, which uses machine learning to combine multiple exposures that reveal maximum color and detail.

The iPhone is the perfect gadget for photographers. As well as being

the camera that’s close to hand, it is a digital darkroom packed with tools that can fix problems with color, tone and composition. It’s also a portable gallery that lets you display photos on a high-resolution display or share shots to thousands of screens via social media. iPhones also draw less attention when you’re taking a photo (compared to using a bulky DSLR camera).

Although we predominantly used an iPhone 14 and iPhone 14 Pro Max for this feature, you can apply many of our tips, tricks and techniques to older iPhone models and produce great-looking photos. ■



## The Camera app explained

A

### CAMERA ICONS

On the iPhone 14 Pro Max tap the .5x, 1x, 2x and 3x icons to zoom in or out to compose your shot. Or, swipe to summon the zoom wheel. Up to 3x is an optical zoom. Any higher is an inferior-quality digital zoom.

B

### GO RAW

If you have an iPhone Pro 12 or newer then you can toggle on the higher-quality Apple ProRAW format, which gives you more editing control. However, in Raw format, you can't apply Apple's Photographic Styles.

C

### CHEVRON

Tap here to toggle between the shooting modes (Time-lapse, Slo-Mo, Video, Photo, Cinematic, Portrait, Pano) and other settings including Flash, Night mode, Aspect Ratio Exposure and Self-timer.

D

### LIVE PHOTO

Tap here to toggle Live Photo on/off. A Live Photo captures a short video sequence that springs to life if you press and hold on the image in Photos. In Live Photo mode you can't capture a higher quality Raw format file.

E

### SHUTTER BUTTON

Snap a shot in Photo mode or record a clip in Video mode. In Photo mode, you can hold the shutter button and swipe up/right to record video. Hold the shutter button and then swipe down/left to trigger burst mode.

# Portrait & landscape photography

Learn how to capture perfect portraits and scenic landscapes

**P**eople and pets are common subjects for a photograph, or you may prefer shooting urban cityscapes or rural landscapes. Whatever your subject preferences, you'll find that the iPhone packs all the tools and shooting modes you need to capture a wide variety of subjects, from attractive portraits to majestic vistas. Here are some shooting tips and techniques that will help you capture the perfect picture.

**1 SHOOT IN PRORAW**  
Professional DSLR photographers tend to capture Raw format photos instead of JPEGs. This is because uncompressed Raw files contain more information

about a scene's colors and tones than compressed JPEGs do. You can then use an editing app such as Photos to restore more of a Raw file's missing colors and details than you could with a JPEG. If you own an iPhone Pro, go to Settings > Camera > Formats and toggle on Apple ProRAW. When shooting in the Camera app's Photo mode, you'll see a Raw label you can toggle on and off.



Portrait mode adds a classic DSLR-style bokeh effect.

The downside of shooting in ProRAW is that the large files require more storage. A 48-megapixel (MP) ProRAW file captured on an iPhone 14 Pro Max weighs a whopping 75MB, though you can choose to capture a smaller ProRAW resolution of 12MP (25MB) in Settings. If you don't own a Pro model iPhone you can still shoot in Raw format using third-party apps such as Lightroom, which has a built-in Raw capturing camera.

**2 BEAUTIFUL BLURS**  
One of the hallmarks of a professional-looking portrait is a soft blurred background. This blur (or bokeh) makes the sharply focused foreground subject

## HOW TO Photograph a range of subjects



**1 Recompose in a tap**  
Here the 1x Main Camera's 24mm focal length captures a typical city scene. By switching to the 3x Telephoto camera's 77mm lens you can recompose the shot to magnify distant details. We shot this on iPhone 14 Pro Max.



**2 Go wide**  
The .5x Ultra Wide 13mm camera is perfect for capturing wider views of landscapes or cityscapes. However, the resulting distortion can stretch figures, so this lens is more suitable for shooting places than people.



**3 Close encounter**  
On iPhone Pro models, you can capture a closer shot of a subject using the Macro mode. Move your iPhone close to your subject and the flower-shaped Macro icon will appear as the iPhone switches to the Ultra Wide camera.

The Pano mode can capture a wider field of view than any single iPhone camera, making it the perfect choice for landscape photography.

stand out (as well as obscuring distracting objects in the background). Digital SLR camera users can manually choose a wide aperture setting (such as f1.6) to create a blurred background in their shots.

You can create a flattering DSLR-style bokeh using your iPhone Camera app's powerful Portrait mode. Simply tap the Portrait label and make sure that your main subject is within eight feet of the lens. If you hold the iPhone vertically, you'll see an f-stop icon at the top right. Tap this to summon the Depth dial. Swipe the Depth dial to adjust the strength of the blur. A wide aperture value of f1.4 creates a strong background blur, whereas a narrow aperture value such as f16 creates a weaker blur. Tap the shutter button to capture the portrait.

As the iPhone uses software to isolate the subject and blur the background, you are then able to use the Photos app to change the strength of the blur after you've snapped —



Since iOS 16 the Portrait mode will blur both foreground and background areas while leaving the main subject nice and sharp.

Go to Settings > Camera > Grid to summon a Rule of Thirds grid to help you with your landscape composition.

something that most DSLR cameras can't do.

### 3 PERFECT PANORAMAS

The Camera app's Pano mode lets you pan the iPhone to capture a wider field of view. By default, you need to pan the iPhone left to right to capture a panorama, but if you tap the arrow it will jump to the opposite side of the screen, to pan from right to left.

The Pano mode works best on static landscapes. If the location contains moving subjects such as people, they can become distorted when the panned video feed is stitched together into a single shot. The downside to Pano mode is that the horizon may be warped or curved. Try going to Photo mode and tap the chevron to access the aspect ratio controls. By choosing the 16:9 aspect ratio and switching to the Ultra-Wide lens, you can capture a panoramic-style shot in a single tap. ■

## Best third-party apps

### Lightroom

**Free (IAPs)** [adobe.com](https://www.adobe.com)



Lightroom has a more advanced set of retouching tools than the iOS Photos app. It also boasts a camera mode that can shoot Raw .DNG files. This enables you to tease out missing detail without adding compression artifacts, creating pro results.

### Slow Shutter Cam

**\$2.79** [cogitap.com](https://www.cogitap.com)



This amazing app gives your iPhone the ability to use manual slow shutter speeds — just like a DSLR user can. This enables you to add motion blur to people or light trails to vehicles during a night shoot (see the next page).

### Halide MK 11

**Free (IAPs)** [halide.cam](https://www.halide.cam)



This powerful app enables you to take more manual control over focus, shutter speed and ISO values. Handy clipping warnings show you areas that may be overexposed and a focus peaking overlay shows you exactly which subject is sharp.



# Master low-light photography

## Tips and tricks for shooting with the iPhone's handy Night mode

**S**hooting in low light can be a challenge for any camera. Most cameras will automatically use a higher ISO speed and a slower shutter speed to let in more light, but this can add digital noise and shake-induced blur to the shots. Fortunately, the iPhone is adept at shooting in low light, especially if you use these tips and techniques.

### 1 NIGHT MODE

Thanks to the iPhone's sensor-shift optical image stabilization system, you can get sharper Night mode shots without adding camera shake-induced blur. The iPhone 14 Pro Max uses Deep Fusion to merge

multiple exposures into a single shot (even when creating ProRAW files). This enables you to capture more detail in different parts of a shot, even in low light.

iPhone 11 models onwards will automatically activate Night mode in low-light locations. This causes the Camera app to use a slower shutter speed, letting in more light and revealing more detail. The Night mode icon automatically appears when the light is low. It sets the exposure time automatically but you can manually dial in a longer exposure time (see step 2 below). This level of control enables you to capture blur-



You can snap sharp night-time subjects even with a handheld iPhone and no tripod.

free shots at night even when shooting handheld. On iPhone Pro models Night mode is also available using Portrait mode.

### 2 TRY THE FLASH

You can activate the iPhone's built-in flash by tapping the Camera app's flash icon. Flash is not always the ideal solution for dealing with

## HOW TO Shoot in low light



### 1 Night mode

Here the yellow Night mode icon has activated automatically. It has chosen a two-second exposure to capture the dark location's details. Keep the two cross hair icons overlapped to capture a blur-free, low-light shot.



### 2 Manual exposure

By default, the Night mode exposure time is set to Auto. If it's dark enough, you can tap the Night mode icon to summon a shutter speed slider. Swipe the slider to dial in a longer exposure up to a maximum of ten seconds.



### 3 Available light

Thanks to the iPhone 14 Pro Max's Deep Fusion feature you can capture Night-mode style shots in Portrait mode. To avoid Night mode's long exposure, position your subject to take advantage of light sources such as street lamps.

## Best iPhone photography accessories

### Manfrotto Pixi Mini

**\$32.99** [manfrotto.com](http://manfrotto.com)

This mini tripod will keep your iPhone rock steady during longer exposures, completely eliminating blur caused by camera movement. This will work especially well when using the Cogitap Slow Shutter app.



### Nanlite PavoTube T8-7X

**\$95** [en.nanlite.com](http://en.nanlite.com)

This lightweight 3ft long tube lamp can light up subjects. You can also use the free Nanlink app to adjust colors for a more creative look. Using a slow shutter speed, and your subject holding the tube, you can create amazing light streak effects.



low light. Although a burst of flash can illuminate a person standing close to the iPhone, it might plunge the more distant background into underexposed shadow. The iPhone 14 Pro Max has a new Adaptive True Tone flash that adjusts the pattern and strength of nine LEDs depending on the focal length of your photo, so you should get better-looking night portraits. To disable flash, just tap the Flash icon.

### 3 USE A TRIPOD

With a tripod you can keep the iPhone rock steady during the long exposure. This can help to ensure static subjects look pin-sharp even in

low light. Moving subjects such as cars and people may appear motion-blurred depending on the shutter speed, which adds a dynamic sense of movement to the night scene. A small tripod, such as the Manfrotto Pixi, will fit in your coat pocket.

### 4 SHOOT IN RAW

Photo file formats such as HEIC and JPEG compress the image so it takes up less space. This can make it harder to reveal color and detail in low-light shots. By capturing an uncompressed image such as a .DNG, you can restore missing detail without revealing as many nasty compression artifacts. ■



### 4 Add a light

A portable light, such as the PavoTube T8-7X, gives you the freedom to shoot in any low-light location. You can adjust the tube's color temperature to match the surrounding lights or go for a creative neon look.



### 5 Motion blur

This Night mode shot was captured with a handheld iPhone 14. Despite the automatically chosen slow shutter speed of 1/20 sec, the static background looks sharp while the light streaks from the car add motion.



### 6 Better blurs

It's difficult to take manual control over the iPhone's shutter speed, but thanks to the Cogitap Slow Shutter Cam app (see p31), you can dial in different shutter speeds and blur amounts. It even has a dedicated Light Streak mode!



# Discover the Photos app's digital darkroom tools

Get your photos and clips looking their best

**A**fter shooting a photo or capturing a clip, you may need to tweak its color, tone and even composition. Fortunately, iOS 16's Photos app boasts a powerful digital darkroom to counteract common problems. It can also process footage using the same tools, helping your clips to make the grade.

**1 TINTS AND CASTS**  
Capturing true colors can be a challenge due to the different color temperatures of light. Daylight can cause a shot to look too cold and blue, and artificial light can make some skin tones look too warm and orange. Your Camera app performs an Auto White Balance (AWB) operation to capture cast-free colors. If it can get white objects to be free of blue or orange casts, then the rest of the image will have cast-free colors too.

If your shots still suffer from color casts, you can counteract these in your iPhone's Photos app. Tap Edit, then tap the Adjust icon and swipe to the Warmth slider. Drag the slider

left to warm up a cold, blue shot, or right to cool down a warm, orange cast. You can also remove green or magenta color tints using the Tint slider; drag this left to counteract a green tint or right to reduce magenta.

**2 TONAL TWEAKS**  
In contrasting light, your iPhone may struggle to capture both shadow and highlight detail. The Adjust panel's Shadows slider enables you to lighten underexposed shadows without overexposing highlights; the Highlights slider can then claw back sky detail without underexposing a darker landscape.

**3 DISTORTION**  
If you shoot a tall building from a low angle its vertical walls appear to

Tapping the Mono filter removes distracting color information so you can emphasize contrasting shapes and tones.

converge inwards towards the top of the frame. This phenomenon is called perspectival distortion. If you use the Ultra Wide camera then you'll want to embrace this perspectival distortion as a feature of wide-angle photography. However, when using other lenses you can process the picture to make the walls of a building run parallel with the side edges of the frame. Tap Edit then tap the Crop icon. Tap the Vertical correction icon. Drag the slider right to reduce vertical perspectival distortion.

Use computer-generated lighting effects to enhance your Portrait mode pictures.

**4 FABULOUS FILTERS**  
The Camera app's Filter icon lets you quickly grade a photo or clip's colors and tones to produce a wide range of looks in seconds. Nine thumbnails act as springboards to create striking effects such as Vivid Warm or Dramatic Cool. You can also produce high-contrast mono effects such as Silvertone. The strength of each filter can be dialed down for more subtle looks if desired. ■



You can straighten converging vertical lines by using the Crop tool's perspective correction slider.



## Sharing images on social media

One way to create attention-grabbing images on your social media feed is to combine a collection of photos as a creative collage. The Photos app can't do this, but the free Photoshop Express app certainly can!

In Photoshop Express, tap Collage, then tap Albums and browse to an Album in Photos. Tap multiple thumbnails to select up to eight shots. Tap Next. You can then tap various grid templates and experiment with a range of layouts. You can pinch and swipe within a grid to fine-tune the composition of the inserted photo.



## HOW TO Create the perfect picture



**1 Burst mode**  
It can be tricky to capture fast-moving subjects. By tapping the shutter button then sliding down or left, you can capture a rapid burst of stills. In Photos, tap Select then swipe to choose the best frame. Tap Done.



**3 Portrait mode**  
After snapping a shot in Portrait mode, you can change the strength of the background blur. Tap the f-stop icon, then swipe the depth slider to choose a low value such as f1.6. This creates a blurrier looking background.



**5 Motion blur**  
On a DSLR camera, you can use a slow shutter speed to add motion blur to moving people or objects. You can mimic the result of this technique by applying the Long Exposure effect to a Live Photo of moving subjects.



**2 Photographic styles**  
You can make every shot you snap have a specific look (as long as you're not shooting in Raw). Tap the chevron then tap the Photographic Styles icon. Swipe to choose a style such as Cool, Vibrant or Rich Contrast.



**4 Creative lighting**  
Portrait mode gives you access to a host of photo studio lighting effects. In Photos, tap the Lighting icon. Swipe through the lighting effects to creatively illuminate faces or instantly add a black studio backdrop.



**6 Restore edges**  
An aspect ratio of 16:9 gives you a widescreen cinematic style image. To restore missing edge details tap the Crop tool. Tap the Aspect Ratio icon. Tap the Original label to restore detail at the top and bottom.

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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.

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## 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

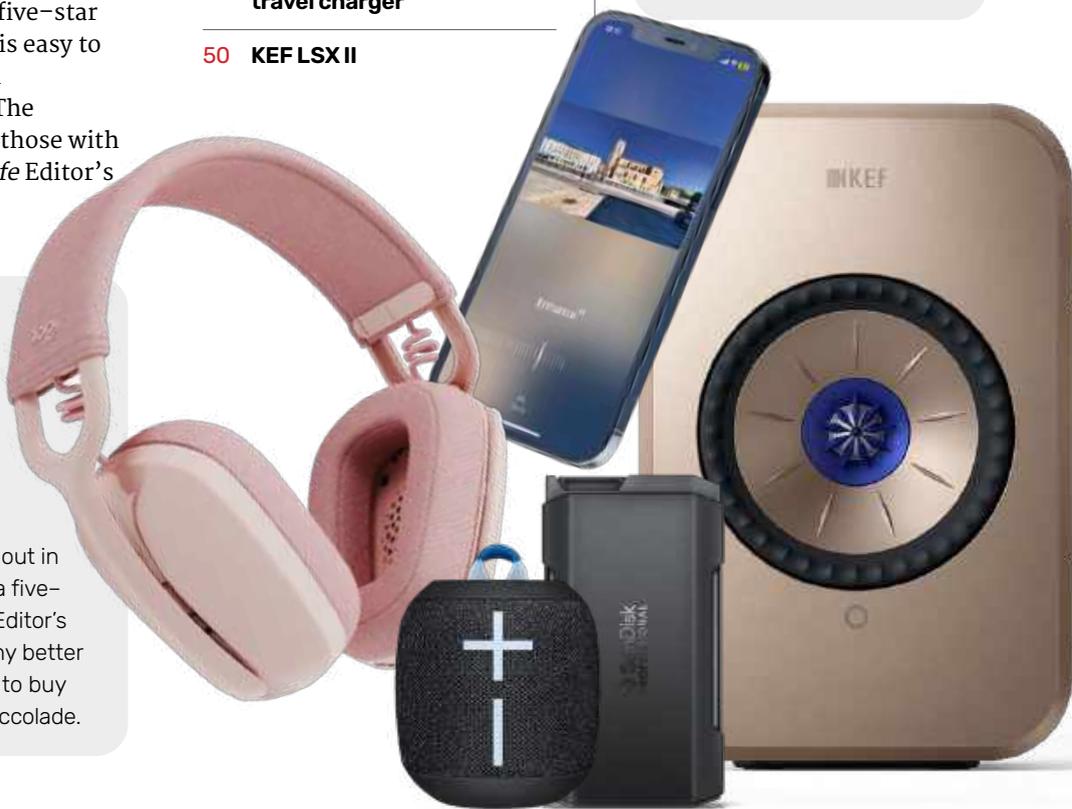
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# SanDisk Pro-Blade SSD

Fast, swappable SSD storage

**\$69.99 (Caddy only); \$239.99 (1TB mag); \$359.99 (2TB mag); \$659.99 (4TB mag)**

From [westerndigital.com](http://westerndigital.com)

**Features** USB-C, swappable SSD magazines, rugged caddy  
**Needs** macOS 10.13 or later

A theoretical 20Gbps read and write speed means you can work with hi-res video.



## THE BOTTOM LINE

Fast and flexible SSD storage for professionals.

- Compact and rugged build
- Easy swapping of mags
- Fast read and write speeds
- Macs can't access maximum speeds

**EXCELLENT** ■■■■■

**PROFESSIONAL PHOTOGRAPHERS AND** videographers tend to favor using fast external SSDs for working on shoots. Small and light, they are a much more cost-effective way of adding storage to your Mac than paying Apple's premium for a larger internal drive when you first buy your computer. SanDisk takes this concept a step further with the Pro-Blade system, a rugged caddy paired with removable SSD magazines. The idea is that you can swap magazines in and out as you work without needing to carry multiple regular-sized drives.

The caddy itself is relatively inexpensive and comes with a heavy-duty USB-C cable that's certified for up to 20Gbps. Different cables may look similar but can have very different capabilities, so it's advisable not to just use one you have lying around. The caddy is small but extremely well built, with SanDisk claiming three-meter drop resistance as well as 4,000lb crush resistance. It's probably not in too much danger being tossed into your kit bag.

The mags, which come in 1, 2 or 4TB capacities, are very light and compact and slide into the caddy with a very reassuring fit. There's no catch system but you feel it dock properly, and removing the mag is equally smooth. Our brand-new review model arrived formatted for Mac though you can of course re-format using Disk Utility should you wish. The drive is certified for read and write speeds of up to 2,000MB/sec or 20Gbps, though in

tests on a 2020 Intel MacBook Pro it topped out at around 950MB/sec. It turns out this is actually the Mac's fault, with virtually every Intel and M-powered Mac actually offering only around 10Gbps over their USB-C ports.

This is unfortunate but does seem to be a known issue, and for the vast majority of users the speeds you can achieve by pairing a Mac with the Pro-Blade will be more than acceptable. A 250GB folder of multiple items copied from the Mac in around four and a half minutes and running the Blackmagic Disk Speed Test showed the performance as sufficient for working with up to 8K video files, in excess of the 4K that is much more common. Even certain formats of 12K video would work at these speeds. The caddy has an integrated heat sink though it barely got warm under load in our tests.

The fact that the mags can be swapped means you have more flexibility in buying the capacities you need as you need them, perhaps scaling up when bigger jobs come around. In a studio or on-set situation you might find yourself swapping mags between a caddy attached to a laptop and one attached to a desktop machine, ferrying footage or sessions back and forth without constantly unplugging USB-C cables. As a system it's possibly slight overkill for home users but for professionals needing high-capacity, fast, swappable storage it's a very effective solution. **HOLLIN JONES**



SSD modules in capacities from 1 to 4TB can be easily swapped in and out.



Compact and rugged, the caddy is built to withstand shocks.



Thanks to no longer needing a fan, the new Apple TV 4K sports a smarter, slimmer figure.

# Apple TV 4K (2022)

Apple's black box has been given a refresh yet is cheaper than before

**From \$129** From [apple.com](https://apple.com)

**Features** A15 Bionic chip, 64GB (Wi-Fi model) or 128GB of storage (Wi-Fi+Ethernet model), Wi-Fi 6, Bluetooth 5.0, 1x HDMI 2.1 port, 1x Gigabit Ethernet port (Wi-Fi+Ethernet model only), Siri Remote



The remote is genuinely user-friendly and now boasts a USB-C charging port instead of Lightning.

## THE BOTTOM LINE

The Apple TV media streamer is the unsung hero of Apple's product line-up. The latest version is phenomenal.

- Super-quick A15 Bionic chip
- More on-board app storage
- Cheaper than before
- USB-C charging on Siri Remote

**AWESOME** ■■■■■

**NOW SPORTING THE** same A15 Bionic chip as the iPhone 14, the latest Apple TV 4K comes in two versions: the \$129 model ditches the previous gen's Ethernet port and Thread smart home support, but now comes with 64GB of storage; while the \$149 model retains both Ethernet and Thread, and comes with 128GB of storage. Both also come with the redesigned Siri Remote that came with the second-gen Apple TV 4K, only this now has a USB-C charging port instead of Lightning. Both new Apple TV 4K models also now support HDR10+ (the high dynamic range standard available on Samsung TVs) as well as Dolby Vision, regular HDR, and HLG (Hybrid Log Gamma), a version of HDR that's used by many broadcasters.

The new Apple TV 4K has also had a couple of cosmetic changes. The Apple TV logo on the top has been replaced with a regular Apple logo, and the box is also smaller, measuring 3.66 x 1.2 inches instead of 3.9 x 1.4 inches like before — the reason being that the Apple TV 4K no longer needs a fan.

Which model you choose depends on what you want it for. If you want to be able to use your Apple TV 4K as a smart home hub and download a lot of apps and games, then the \$149, 128GB Wi-Fi+Ethernet model is the one to pick; and if you don't, you can save \$20 and get the cheaper 64GB Wi-Fi version.

Either way, the Apple TV 4K (2022) is incredibly quick for a media streamer, with the A15 Bionic making light work of everything from menu and app navigation to Apple Arcade gaming (you can even pair the Apple TV with a PS5, Xbox One or SteelSeries Nimbus+ controller if you wish).

And, despite the presence of Apple TV+ on third-party devices from the Roku Streaming Stick to Sony TVs, the Apple TV box is still the best way to experience the Apple TV+ service, and streaming media in general — thanks to support for a huge range of apps and services (including Amazon Prime, YouTube and Disney+) and the speed, design and user-friendliness of the Apple TV interface and tvOS. **ROB MEAD-GREEN**



# GoPro Hero 11 Black

Is this new offering worth the upgrade?

**\$500 (\$350 with GoPro Subscription)** From [gopro.com](https://gopro.com)

**Features** HyperSmooth 5.0 stabilization, automatic highlight videos, waterproof to 33ft

Make no mistake, this will give you fantastic images — albeit ones not wildly different to the Hero 10's.

**THE GOPRO HERO 11** Black is here, following on from the powerful and well-received Hero 10 Black. GoPro claims its new, larger sensor delivers the highest resolution, 10-bit color depth, video stabilization and the widest field of view ever featured natively in a HERO camera. But is this upgrade too incremental?

When you go to the official specs, you'll find the GoPro Hero 11 Black is exactly, to the half-millimeter, the same physical size as the GoPro Hero 10 Black. Indeed, apart from the new "11" gracing the side of the unit, the two are indistinguishable.

So what's the difference? The first key change is a new, upgraded 1/1.9-inch sensor. This opens up a new world of "full-sensor video modes" in 8:7 aspect ratio, on top of the usual 16:9 or 9:16, as well as increasing the available photo resolution — now up to 27MP in 8:7.

The new HyperSmooth 5.0 video stabilization, now "Emmy Award-winning" according to GoPro, is an improvement, but another incremental win — better, but not mind-blowing.

A key plank in the GoPro Hero 11 Black's armory of easy-to-use tools is the new auto-highlight video, which takes a maximum of 75 photos + videos, no limit on length, captured within a 12hr window, and automatically creates a highlights video from them in the cloud.

The GoPro Hero 11 Black is in many ways the ultimate in incremental evolution. It's a better camera than the GoPro Hero 10 Black in several areas, and identical in most of the others. As an upgrade for existing GoPro Hero 10 Black owners it's an unlikely shout, but as an upgrade for earlier model owners it's a good one to go for. **MARK MAYNE**

## THE BOTTOM LINE

A better camera than the GoPro Hero 10 Black in some areas, but it's identical in most other ways you can measure.

- New, improved sensor
- Better battery life
- Easy to use
- An incremental improvement

**AWESOME** ■■■■■



# Logitech Zone Vibe 100

A comfortable and lightweight wireless headset for voice and video calls at work

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

**Features** Bluetooth 5.2, with AAC; weighs 6.52oz; 1.57-inch drivers; 18 hours battery

**LOGITECH IS WELL** known for its range of Mac-compatible mice and keyboards, but it's recently been making a push into other areas too, with new products such as the Zone Vibe 100 wireless headset, which is very much designed for voice and video calls when you're working from home or in the office.

There are two models in the Vibe range, with the Vibe 100 offering basic Bluetooth connectivity for \$99.99. The Vibe 125 model costs a little bit more at \$129.99, and also includes a USB wireless adaptor that provides a more secure and reliable connection than Bluetooth.

Both models share the same basic design, with a lightweight headset and 18-hour battery life that are designed for all-day use at work. The earpieces are thickly padded, with an adjustable headband to provide a comfortable fit, and the headset weighs only 6.52oz so it should be light and comfortable enough to wear through any long meetings. The lightweight plastic doesn't feel all that sturdy, so the Vibe 100 is probably best suited for indoor use rather than traveling around the world in a backpack, but that's an acceptable compromise in order to keep the weight down.

There's a noise-canceling boom mic on the left earpiece, but you can fold this up into the body of the headset when it's not needed (which automatically mutes the mic as well). There are also handy button controls on the

earpieces to Play/Pause music, Answer/End voice calls, and for adjusting volume.

## AUDIO CLARITY

The Vibe 100 doesn't provide a wired audio connection at all, using Bluetooth 5.2 with Apple's AAC codec for wireless audio. This provides good audio quality for both music and video or voice calls. Voices are clear and detailed during calls, and the noise-canceling microphone does a good job of dampening down background noise. The headset works well for music too, catching the breathy whisper of Billie Eilish on "Bad Guy", and delivering a deep, firm sound on the song's catchy bass riff.

It's also possible to pair the Vibe 100 with two different devices at the same time. You can only listen to audio from one device at a time, but the headset automatically switches from one to the other when you start playing audio on each device. If you're listening to colleagues on a video call on your office Mac and it gets a bit boring, then you can just play some music on your iPhone and the Vibe will switch to it until you stop the music again. And, just for good measure, Logitech's Tune app for Mac, Windows, iOS and Android includes additional controls, such as customizable EQ settings, and a diagnostic mode to make sure everything's working properly before you start an important video call with the boss. **CLIFF JOSEPH**

## THE BOTTOM LINE

It's a little pricey, but the Vibe 100 is a versatile wireless headset for video and voice calls at work.

- Lightweight and comfortable
- 18-hour battery
- Good audio quality with AAC support
- No wired connections

**GREAT** ■■■■

The lightweight and comfortable headset is designed for all-day use at work.





The charging mat features a wireless MagSafe pad for iPhone and a wireless pad for your AirPods.

# Journey ALTI Desk Mat

Desk declutter and wireless charging in one

**\$129.99** From [journeyofficial.com](https://journeyofficial.com)

**Features** 15W MagSafe charger (7.5W Qi), 5W wireless charger, 14.5in (W) x 30.7in (L) x 0.15in (D)



Acres of space to rest your devices, but the underside could do with some anti-slip material.

## THE BOTTOM LINE

A neat way to desk-declutter that is just slightly far from being perfect.

- Looks super slick
- MagSafe-ready 15W iPhone charger
- Mat is a bit slippery
- Charging place for AirPods is weak

**GOOD** ■■■■ ■

**IF YOU WANT** to make your desk space cleaner and more efficient, then Journey's ALTI Wireless Charging Desk Mat is worth a look.

The mat itself offers a huge surface on which to rest your mouse, keyboard, and hands on. It features two sides: on one an attractive vegan leather surface which feels luxurious, and the other a soft felt material — perhaps the better option for resting your hands on a cold day.

The two sides are actually separate pieces, joined at the one end by a felt spine. Journey's idea is that between the two pieces of material you can hide all manner of paper notes, with them neatly sandwiched inside. Though we're sure many will like this, there are those of us who have gone paperless, so a single-piece mat would've been preferable.

In use, the mat was a nice place to work on, though we did find that the mat had a tendency to slip underneath our hands at times. Perhaps in a future iteration Journey

will add a bit of anti-slip rubber to both sides, or forego the felt side for a completely anti-slip underside.

Joining the mat to the left of the felt spine is a wireless charging mat, again vegan leather with a subtle Journey insignia embossed. This attaches magnetically, allowing you to quickly detach it when you want to flip the main mat over. Unlike the main mat, it features an anti-slip underside. A USB-C cable attaches to the top.

It features a MagSafe charging pad so a compatible iPhone gets a fast 15W charge (or 7.5W wireless charging on an older iPhone). There's also an additional charging pad for AirPods (or any Qi-compatible headphones). Unfortunately, we found that the charging sweet spot was a bit too high, and it wouldn't charge our AirPods Pro 2 with the case on.

Journey's charging mat is a good place to work on, but it needs a few tweaks in order to complete its journey. **NICK ODANTZIS**



# UE Wonderboom 3

Punchy performance in a portable package

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

**Features** 360° sound, Bluetooth 5.2, Outdoor Boost, stereo pairing, 131 feet range, 5-foot drop-tested, hang loop, volume buttons, IP67, 4.1 x 3.8 inches, 14.8oz

**DESPITE ITS PORTABLE** size, the Ultimate Ears Wonderboom 3 packs a punch. If you've seen the Wonderboom 2, v3 will look familiar. It's essentially a fabric-swathed orb with comically large volume controls on its side. The top features the power button, Bluetooth pairing button and pause/play/skip control, while the Outdoor Boost toggle is on the bottom.

Weighing less than 15 ounces, the Wonderboom 3 is distinctly portable. Its 4.1 x 3.8 inches fits comfortably in a hand, but a stretchy loop makes it possible to hang the speaker where you like.

The sporty look isn't just for show: its IP67 durability rating means it can withstand dust, dirt and water submersion for up to 30 minutes.

The Wonderboom 3 is capable — and not just for its size. It handled electronic synth riffs of Van Halen's "Jump" with

precision, while Rihanna's "We Found Love" sounded vibrant and punchy. Overall the Wonderboom 3's audio performance proved well balanced, even at high volumes. You can even pair two for stereo sound.

The Outdoor Boost mode does mess with balance a little, but it's a neat feature for listening outdoors, where there usually aren't walls for sound to bounce around. It adjusts the sound profile to make up for the lack of bass outdoors.

Battery life is about 14 hours, which is an hour longer than the Wonderboom 2's: a minor improvement, then. Charging was a disappointment, however — the speaker took over two hours to charge from dead, which is probably down to the use of an outdated microUSB port, rather than the de-facto USB-C standard.

**KATE KOZUCH**

You'll never struggle to find the volume controls on the Wonderboom 3...



## THE BOTTOM LINE

One of the most well-rounded Bluetooth outdoor speakers.

- Impressive audio
- 14-hour battery life
- Can be paired for stereo sound

➤ No USB-C

**EXCELLENT** ■■■■■



# ROUNDUP The best hubs designed for the modern iMac

Expand the ports on the iMac 24-inch (M1, 2021) with these stylish hubs

## > HyperDrive 6-in-1 USB-C Hub

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

**Features** 6x ports, pass-through charging, color faceplates

Hyper's hub is designed to blend in with the iMac 24-inch, with soft curves to the corners, and a white bezel. It also comes with color-matched faceplates so you can choose the one that suits your iMac. We tried the silver faceplate on our Silver iMac — the color didn't quite match, but still looked great.

Installation is simple: loosen the rear screw to allow you to pull away the rear casing from the chassis, then attach it to your iMac and tighten the screw to secure it in place.

The HyperDrive features six ports: SD, microSD, 2x USB-A and a single USB-C (all the fast 10Gbps USB 3.2 Gen 2 variety), and unlike any other hub here, you also get a single HDMI port on the rear for connecting up an external display at 4K 60Hz. There's also pass-through charging of up to 7.5W from the orange-colored USB-A port, which is convenient.

➤ Great array of ports ➤ Slightly pricey

**EXCELLENT** ■■■■■

## > Satechi USB-C Clamp Hub

**\$54.99** From [satechi.net](https://satechi.net)

**Features** 6x ports, aluminum design, available in silver or blue

Though it's the cheapest hub here, you wouldn't think it by looking at it — Satechi's USB-C Clamp Hub is made of aluminum (as is the Satechi way with its products) and feels very premium. It comes in either silver or blue. The rear plate that screws into the body to clamp it to the iMac display surround also looks fabulous. We had no issues with installation, and once clamped it was held in place securely.

That low price does, unfortunately, appear to mean a compromise elsewhere, although visually it's hard to spot — there are a plentiful six ports on offer, including SD, microSD, a generous 3x USB-A ports, and a single USB-C. Sadly, all USB ports are the lowlier USB 3.2 Gen 1 standard, which is capped at 5Gbps. Unlike the HyperDrive and Anker, the Satechi doesn't support pass-through charging either.

➤ Lots of ports ➤ Slower transfer speeds

**GREAT** ■■■■■



**LIKE MODERN MACBOOKS**, ports on the latest generation iMac have gone the way of the dodo. Instead of a plethora of connections — think USB-A, SD, and Ethernet — the entry-level iMac 24-inch (M1, 2021) has just 2x Thunderbolt/

USB-4 ports, while the upgrade model has an additional 2x USB-3 ports and Gigabit Ethernet (located on the power adapter).

If you want to bring back those legacy ports to your modern iMac, then you'll

need a hub. The hubs here are specifically designed to work with the latest iMac — they're each made to integrate neatly with the iMac, allowing you to keep your desk space clean and uncluttered. **NICK ODANTZIS**

## > Anker 535 USB-C Hub (5-in-1)

**\$59.99** From [anker.com](https://www.anker.com)

**Features** 5x ports, pass-through charging, works with previous generation iMac

If you value good design, you'll appreciate the way Anker has put its hub together. The 535 features the same dial at the rear for clamping to an iMac's screen surround, but unlike the other two front-facing hubs, the mechanism is hidden inside the body, with two exposed prongs that push against the back of the screen. The dial feels incredibly smooth and satisfying in use. It's also very easy to install.

The Anker hub is shy of a single port compared with the other hubs here, which is a slight shame, but it makes up for it with the quality of the ports it does have. On the front plate you'll find SD, microSD, 2x USB-A and a single USB-C. Like the HyperDrive, all USB ports are the super speedy 10Gbps USB 3.2 Gen 2 type, which is twice as fast as USB 3.2 Gen 1 (or USB 3.0, as it used to be called). The 535 offers great bang for buck.

⊕ Super fast ports ⊕ Good value

**AWESOME** ■■■■■

## > Satechi USB-C Slim Dock

**\$149.99** From [satechi.net](https://www.satechi.net)

**Features** 6x ports, NVMe SATA NGFF enclosure, available in silver or blue

Satechi's other iMac-compatible offering in this test is a sleek aluminum dock designed to nestle snugly on top of an iMac stand's base — once in place it looks like it was made for it.

In terms of ports, you get six in total: on the side a single USB-C and USB-A (both the faster 10Gbps USB 3.2 Gen 2 type), SD, microSD, and at the back 2x USB 2.0 ports — painfully slow by today's standards (up to 480Mbps), but would do the trick if you're just connecting USB accessories like a mouse and keyboard. There's no pass-through charging, unfortunately.

Though the price is high, the Slim Dock has a trick up its sleeve: an NVMe SATA NGFF enclosure, allowing you to quickly add an M.2 NVMe or M.2 NVMe SATA SSD. This supports up to 10Gbps speed and 2TB capacity — a useful means of offloading files away from your main disk, or as a back-up drive.

⊕ Ports and SSD enclosure ⊖ No pass-through

**GREAT** ■■■■



With both USB-A and USB-C connections, the Envoy Pro Mini is universally compatible.



# OWC Envoy Pro Mini

A fast and versatile pocket drive

**\$79 (250GB), \$99 (500GB), \$149 (1TB)** From [owc.com](http://owc.com)

**Features** USB-A and USB-C, bus powered, bootable, Time Machine support

It's fast enough to work with 4K video or large media libraries and has up to 1TB of storage capacity.

**OWC'S MOST PORTABLE** solid state drive weighs just 0.06 pounds and is machined from aluminum, which gives it a premium feel. Its USB-C connector is housed behind a cap and the USB-A plug can be extended out from the body and reversed, clipping into place to give you a choice of either plug that realistically covers any user's needs. A lanyard is supplied too for convenience.

The Envoy Pro Mini comes in 250GB, 500GB and 1TB capacities and all are attractively priced considering the amount of storage they add to a typical Mac or iPad. With Apple still charging a hefty premium for larger storage capacities, this is a far more cost-effective way to get more space with only the very minor inconvenience of having to plug a drive in.

The specs are impressive, with the drive supporting Time Machine and booting and running whole systems as well as being compatible with smart TVs, game consoles

and pretty much anything else. OWC claims a maximum read and write speed of up to 946Mb/sec and while our tests consistently topped out at around 580MB/sec, that's still pretty fast for such a tiny drive, copying a 10GB video file in around 12 seconds. Only demanding users working with lots of data will really feel it could be a bit quicker.

While the Envoy Pro Mini is a great way to transfer files between Macs or run backups, another ideal use is for storing media libraries for use with USB-C iPads. Imagine you're traveling with a 64GB or even 128GB iPad with limited space for storing your movies and TV shows. A new iPad with more storage costs a lot, but adding this drive hugely expands your capacity for far less money. And when you get home it can still be a back-up drive or plug into your Smart TV. And thanks to its dual USB connectors there's no messing about with adaptors. A truly versatile SSD drive. **HOLLIN JONES**

## THE BOTTOM LINE

An affordable and versatile SSD drive for any user.

- Lightweight and well built
- USB-C and USB-A plugs
- Add lots of storage
- Attractively priced

**AWESOME** ■■■■■



# Mophie 3-in-1 travel charger

The perfect solution for charging Apple gear on the go?

**\$149.95** From [zagg.com](https://www.zagg.com)

**Features** 15W MagSafe charging pad, Apple Watch magnetic charging puck with adjustable angle, AirPods charging pad, 30W USB-C PD wall charger, USB-C to USB-C cable, carry case

**MOPHIE'S TRAVEL CHARGER** might be the ultimate companion for keeping your Apple devices charged when you're away from home. It features a compact felt case with three compartments to house each of the components, and fastens shut via an elasticized loop which hooks over a large black button. It's stylish, easy to use and offers protection for the contents.

Speaking of which, there's a 3-in-1 travel charger in the main section. This folds out to reveal three charging pads: a magnetic Apple Watch puck, which can be angled from flat through to 90°; a wireless charging pad for your AirPods, or other Qi devices; and a 15W MagSafe-compatible pad for your iPhone. When not in use, it folds up neatly and stays shut thanks to a magnetic strip at the closure point.

As well, you get a 30W USB-C PD wall adapter that fits in the middle section,

and on the outer, a USB-C to USB-C cable. So, you don't need to bring any other adapters or cables on your travels.

Mophie's 3-in-1 travel charger isn't just a good design — it offers impressive charging. Employing the usual *MacLife* testing methodology, we checked how quickly all our devices — iPhone 14 Pro, Apple Watch Series 8, and AirPods Pro 2 — charged in tandem from 0% to 100%. After 30 minutes, it was 21/23/32% respectively, after 1 hour 43/46/52%, while after 2 hours 30 minutes all devices were at 100%. So, it's great for a quick battery boost, or for fully charging your devices.

Yes, it's pricey, but by comparison Apple's MagSafe Duo Charger is \$129, only charges two devices, and there's no carry case. Mophie's travel charger is a standout bit of gear that's essential for those who travel light. **NICK ODANTZIS**



Stowed in its neat carry case, this travel charger won't take up much space in your bag.

## THE BOTTOM LINE

Fast charging for three devices, in a neat, portable design.

- Three devices at once
- Fast charging
- Compact carry case
- Everything in one box

**AWESOME** ■■■■■

The LSX II is fully loaded with wired and wireless connections, and its compact size means it will fit comfortably into any setting.



### THE BOTTOM LINE

A great-sounding system with excellent flexibility, and is great value for money.

- ▶ Compact size
- ▶ Extensive connectivity
- ▶ Enjoyable sound
- ▶ Can't fill larger spaces

**AWESOME** ■■■■■

# KEF LSX II

## This second-gen streaming speaker package is seriously stellar

**\$1,399.99** From [kef.com](http://kef.com)

**Features** Uni-Q driver array (0.75in aluminum dome, 4.5in magnesium/aluminum alloy cone), frequency range 49Hz – 47kHz, connectivity: HDMI ARC, USB-C, optical, 3.5mm jack, 2x Ethernet (1x network, 1x interspeaker), AirPlay 2, Google Chromecast, Wi-Fi 5, Bluetooth 4.2. Dimensions: 9.5 × 6.1 × 7.1in. Weight: 15.6lbs

**ALMOST FOUR YEARS** since KEF first miniaturized its excellent LS50 Wireless streaming speaker system into something more handily sized, the company is back with an upgrade.

The LSX II use the same driver arrangement as the outgoing model – it's the 11th generation of KEF's remarkable Uni-Q arrangement that positions an aluminum tweeter in the throat of an aluminum mid/bass driver. At 200 Class D watts (30W to each tweeter, 70W to each mid/bass driver), power is unchanged too.

Connectivity is improved, though, and significantly. As well as the Ethernet, digital optical and analog 3.5mm inputs on the left-channel "primary" speaker, there's now also HDMI ARC and USB-C.

They can be paired wirelessly, but a hard-wired connection is preferable if for no other reason than it allows the LSX II to function at 24bit/96kHz. Paired wirelessly, the speakers max out at 24bit/48kHz – although no matter how you connect them they're always compatible with MQA and file sizes up to 24bit/384kHz and DSD256.

As far as design goes, there's virtually nothing to differentiate the LSX II from the model it replaces: only a long stare at the specs sheet reveals any meaningful differences. Mind you, that's not automatically a bad thing. The original KEF LSX was a good-looker, and just because the design is

getting on for four years old that doesn't mean it's any less attractive.

At a useful compact 9.5 × 6.1 × 7.1 inches per speaker, the LSX II is simple to position more or less anywhere – as long as you bear in mind each speaker has a rear-facing bass-reflex port, that is. There are some bespoke KEF speaker stands available (the S1) for \$350 a pair, as well as the B1 wall bracket (\$230) and P1 desk pad (\$180) – so your placement options are extensive.

### SIZE ISN'T EVERYTHING

Yes, it's obvious – but it needs saying. The KEF LSX II are not big speakers, and they don't feature big drivers. So if you're expecting the sort of scale of audio presentation that can fill a fairly big room with sound, think again.

But as long as you're not expecting unlikely scale, the rest of the news regarding the way the LSX II performs fluctuates between "very good" and "great". The soundstage they describe is well laid out, easy to understand and allows every element of even a complicated recording a little elbow room in which to do its thing.

As far as tonality is concerned, the LSX II is just slightly warmer than absolutely neutral. It's not in any way overheated – it almost makes the KEF system sound more accommodating and welcoming than it otherwise would.

The speakers don't dig as deep or hit as hard in the low frequencies as bigger



MacLife  
EDITOR'S  
CHOICE  
★★★★★



alternatives, but the bass the KEF system produces is nevertheless solid, textured, detailed and really well controlled. The attack and decay of individual bass sounds is straight-edged and convincing.

The midrange is equally accomplished, with the KEF extracting even fine details from a singer's performance. And the top of the frequency range is almost a mirror image of the bottom: there's substance, detail and control, all delivered with real energy.

One of the most admirable traits of the KEF Uni-Q driver arrangement is the remarkable stereo focus it delivers. And because the LSX II is so compact, there's bound to be a temptation to use them on a desktop — and if you do, the Uni-Q comes bounding into its

Rhythms move forward in a natural-sounding manner.



own. The focus and precision of its presentation is really brought into sharp relief by the near-field position — and so the closer you sit to the speakers the more accurate and engrossing their sound.

If you already own a KEF LSX system and you're not desperate to introduce your TV into its sphere of influence, it's hard to make a case for upgrading to the LSX II. If you want to fill a pretty big room with sound, you should probably look beyond this system too.

For the rest of us, though, it's hard to make a case not to investigate it fully — the LSX II is small, expansive in its functionality, features a well-implemented control app, looks the business and sounds the business too.

**SIMON LUCAS**



# GROUP TEST

REVIEWED BY HOLLIN JONES

## ON TEST...

- > Adobe Premiere Elements
- > Apple iMovie
- > CyberLink PowerDirector 365
- > HitFilm
- > Lightworks Create
- > Wondershare Filmora

# EASY VIDEO EDITORS FOR MAC

Take the next step on your movie making journey



**APPLE GIVES iMOVIE** away for free, and while it's a great app for making quick and simple movies, it's not designed for more in-depth projects. That's not to say however that you have to step up to a much more complex system to achieve great things. The apps on test represent a more affordable middle ground, with significantly more powerful editing tools and more features while retaining a sensible price point and for the most part, not placing too high a technical burden on the user.

Some of these apps focus more on guiding you through the process of movie-making and using effects, while others provide in-depth tools for creating complex edits. Each has a selection of downloadable content including clips, music, graphics and sound effects that you can use and in some cases more expert capabilities like 3D motion. All enable you to export to social media as well as movie files, though your choice of app may depend on how heavily you lean towards one type of destination for your content.

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## How we tested

Importing footage from a range of devices and locations, we considered how well each app dealt with conforming it to a project, as well as the general performance and workflow of the app itself. Ease of use was a major factor, with some apps requiring more effort to learn than others. Comparing each app with iMovie, we assessed its likely target user and how much further they might want to go in terms of processing and editing their footage. Pricing models were also a key criteria.

## Things to consider...

### >>> Feature set vs. price

The addition of more pro-level editing tools like 3D or motion tracking may be things you can live without, so you can opt for a cheaper version.

### >>> Approachability

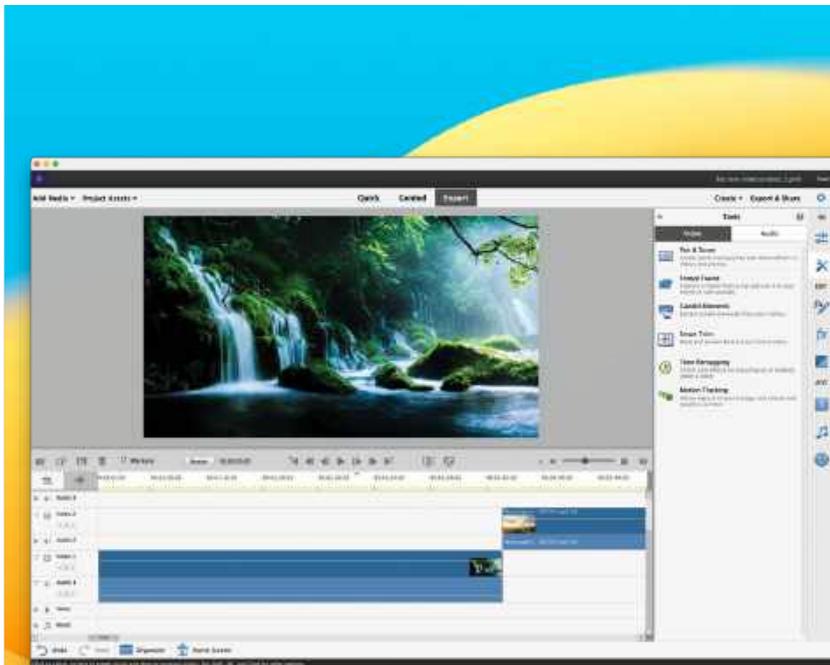
Some apps put all the features at your fingertips while others require more menu-diving, even if they may offer more fine-grained control.

### >>> Guided features

Certain apps have features that guide you through editing tasks and even have automatic tools to create edits for you.

### >>> Why not iMovie?

Identify what it is that iMovie isn't currently doing for you. Maybe you want to grade your footage more professionally or do green screening. Look for an app that checks these boxes.



1

## > Adobe Premiere Elements

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

**1** Premiere Elements is a feature-heavy video editor with several modes you can use to start a new project depending on what type of movie or content you're creating. It focuses heavily on helping you do specific tasks including animating graphics, creating picture-in-picture effects, and tailoring footage for social media channels.

There's a lot on offer for those who want to "fix" or edit single clips or combine a few sources into internet-friendly content. This extends to export options too, where you'll find presets for all major social channels. Long-form movie-making is

supported of course, and a plethora of downloadable content, including music, sound effects and graphics, is available, as well as useful project templates.

It's powerful, with tons of options and tooltip-led walkthroughs to help you. Adobe's experience shows, with plenty of tools, but workflow and interface design could be neater and more streamlined, and it feels sluggish compared to iMovie.

- ▶ Great for social media content
- ▶ Lots of tools and options
- ▶ Feels comparatively sluggish
- ▶ Interface not very Apple-like

**GOOD** ■■■■ ■

## > Apple iMovie

Free From [apple.com](https://apple.com)

**2** Apple positions iMovie as a way for Mac users to put together footage quickly and makes it easy to drag in content from your Photos library. There's also support for Apple-specific tools like Cinematic mode on the newest iPhones, and project exchange with iMovie for iOS which gets more love than the Mac version, and with Final Cut Pro. It's easy to use – drag footage into the timeline then use the effects to change colors, cropping, speed and audio levels and also perform stabilization and audio cleanup if required. Adding backgrounds, project themes and the included sound effects is simple too.

The toolset on offer is sufficient for making simple movies and trailers, though there's not the depth of features found elsewhere. Exporting is one area where your options are limited. The way content is dealt with in the timeline is also more simplistic than in the other apps on test, offering less fine-grained control which some users may find gives it a less professional feel. That said, it is of course free.

- ▶ Great iOS integration
- ▶ Very easy for simple projects
- ▶ Lacks more advanced tools
- ▶ Limited export options

**GREAT** ■■■■ ■



2



3

## > CyberLink PowerDirector 365

**\$19.99/month, \$69.99/year** From [cyberlink.com](http://cyberlink.com)

**3** Taking a somewhat similar approach to Filmora, PowerDirector seeks to place all your tools within a unified window, though the interface here is a little less refined. There's conventional multitrack video and audio editing with full drag and drop of content and effects, with a good selection of downloadable looks, filters, graphics, sound effects and music available. More advanced visual effects like chroma keying are on offer too and the whole editing experience is solid.

The interface is more menu-heavy than iMovie and as an app it feels less Apple-like, though once you've got

used to all the menus it's pretty easy to use. The one exception is export options, which may be a little technically dense for less-experienced users. If you were to opt for the monthly subscription, PowerDirector would work out quite expensive though on a yearly basis it's comparable with some others on test. Ultimately though its workflow feels like it could be more refined.

➤ Decent feature set

➤ Lots of downloadable content

➤ Interface feels dated

➤ Monthly sub works out expensive

**GOOD** ■■■■ ■



4

## > HitFilm

**\$7.50/ \$12.50 p/m (Creator/Pro)** From [fxhome.com](http://fxhome.com)

**4** HitFilm comes in several editions: from a limited free version, the Creator version as tested here, and a Pro version with more advanced effects such as 3D and a wider selection of downloadable audio clips and templates. It performs well, feeling slick and responsive. A tab bar lets you manage workspaces and effects and there's the conventional drag-and-drop approach to workflow as well as dedicated windows for working with the various video and audio effects and motion control.

There's much more on offer here than in iMovie in terms of power and tools,

and though the interface may require a little more learning, for the most part it is logically laid out. It's aimed more at those who want to make and edit longer form video and less at those wanting a quick social media splash — though plenty of export presets are available there's less "auto" stuff to guide you when editing. The app is also a little aggressive with its upgrade prompts.

➤ Many more tools than iMovie

➤ Fine-grained FX and edit controls

➤ Learning curve for beginners

➤ Some features require upgrade

**GREAT** ■■■■ ■



## > Lightworks Create

**\$9.99/mth, \$99.99/yr, \$154.99 one-time** From [lwks.com](http://lwks.com)

**5** With a relatively small footprint, Lightworks Create is the entry-level version of this developer's app, but still offers some pro-level features. It feels closer to a high-end editor than most of the others on test, while still delivering snappy performance and making efficient use of your Mac's hardware. The tradeoff is that the learning curve is a little higher and you'll have to invest more time in finding your way around it than you do with iMovie, though the optional tooltips are certainly helpful. There's much more granular control of your footage however, with a solid selection of video and audio

effects and dedicated tabs for tweaking these. The audio mixer and effects are powerful, and managing transitions and edits is nicely implemented. There are plenty of export options for social media and other video formats, though some of the highest resolution formats require an upgrade. With a monthly subscription option you can try it out without a long-term commitment.

- ▶ Powerful, granular tools
- ▶ Feels snappy and efficient
- ▶ Audio tools particularly good
- ▶ Somewhat steeper learning curve

**GREAT** ■■■■

## > Wondershare Filmora

**\$69.99/year, \$109.99 one-time** From [wondershare.com](http://wondershare.com)

**6** Filmora treads a line between the friendly interface of iMovie and the wider feature set of more advanced editors with aplomb. Working in a single window, it's very well laid out and places all its tools within easy reach. Even less experienced editors will find what they need with no hassle. Media management is a breeze and you get access to thousands of downloadable video, audio and graphical assets directly from inside the browser, while overall workflow is very smooth and snappy. Creating edits all feels very logical and there are clever features like integrated screen recording,

text-to-speech support, keyframing, and even beat matching edits to music.

It feels like Filmora helps you get to your end result rather than making you hunt for things, and it's the most approachable app on test that still delivers a really powerful feature set. Comprehensive format and social media export options can be as simple as one click, or you can customize them to your liking.

- ▶ Excellent design and workflow
- ▶ Tons of downloadable content
- ▶ Powerful but friendly
- ▶ Smooth performance

**AWESOME** ■■■■



# THE WINNER



# WONDERSHARE FILMORA

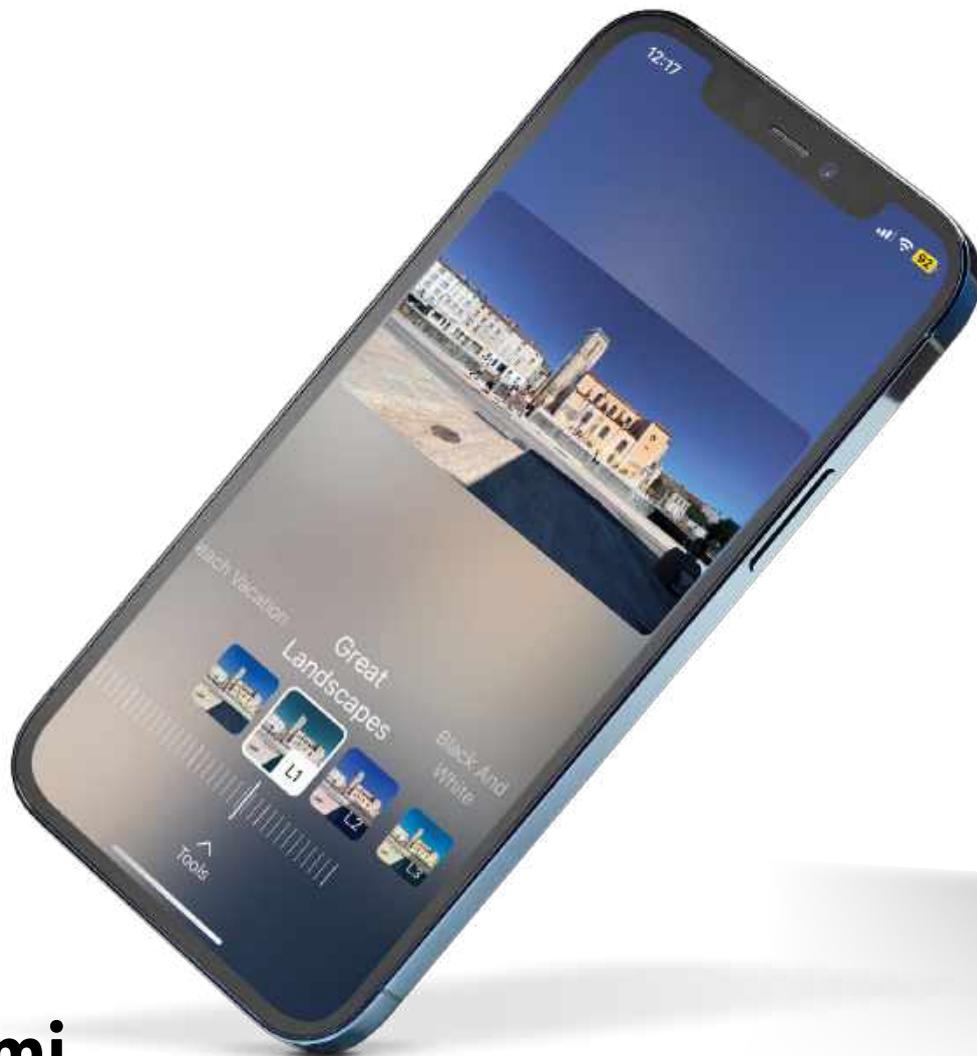
The perfect balance of power and usability,  
a serious step up from iMovie

**FILMORA STRIKES THE** perfect balance of features and design, marrying the friendly approach of iMovie with the much wider feature set of some of the other apps we tested. Despite having a ton of powerful features it manages to feel fast and approachable, keeping everything inside one nicely designed window. Performance is excellent and it even adds in some unique features like screen recording and beat matching picture to music.

Lightworks Create gets a notable mention, with very powerful tools especially in the audio department, albeit also with a slightly more clinical interface. Hitfilm also performs well and doesn't require too much learning, though you might want to opt for the Pro version to access the more advanced effects. Ultimately however, if you are stepping up from iMovie, you'll find Filmora makes the transition easy while giving you a bunch more tools to work with. A free trial is available too.



Categorized Instagram-style filters are available for quick enhancement.



# Imgmi

AI-powered image enhancement and editing

**\$2.49 weekly, \$19.99 yearly, \$39.99 one-time purchase** From [imgmiapp.com](https://imgmiapp.com)

**Needs** iOS/iPadOS 15 or later



**IMGMI FOR IPAD** and iPhone takes some of the core technologies from Skylum's desktop Luminar image editor and puts them into a mobile app. The developer says that Imgmi is for people who want to enhance and correct photos quickly, perhaps for social media, without moving to the desktop to perform detailed edits. It loads one image at once from your Camera Roll, though there's no direct access to the camera and no library of its own to manage.

The first tool you come to is sky replacement, and this is able to identify part of a photo and substitute in a new sky from a built-in selection. This works well although it struggles to identify smaller areas of sky in an image, preferring a sky that takes up more of the frame. The sky selection ranges from various clouds to more outlandish Milky Way images, and there are tools to vary the edge detection where the sky meets the horizon. Sky replacement can certainly punch up an overcast image in a few taps.

The app's AI is also employed in some of the other tools. Power line removal can identify and remove vertical lines and the Erase tool is adept at painting out smaller objects, though as is often the case it can struggle with larger ones on complex backgrounds. Oddly there's no undo command, but a Restore brush can re-paint the original content back in.

Perhaps a more useful tool for casual photographers is the AI Enhance, which gives you a variable slider to adjust color, contrast and clarity in one go,



The AI-powered enhancement punches up color, clarity and vividness.



Object removal works well, though is best with small objects on clear backgrounds.

instantly making images look more striking. Then there are some more conventional tools for tweaking, including exposure, contrast, shadows, highlights and saturation all with their own sliders. These work well but are not wildly different to those you'd find in Apple's Photos or many other photo apps. A bunch of Instagram-style filters are available too, which mostly look good and stop short of being too overbearing.

Imgmi is a solid photo editing app but feels like a first step, and indeed Skylum is known for regularly pushing out updates to its software with new features. The interface could be easier to follow, and an undo button wouldn't go amiss. It doesn't work in landscape mode which means a lot of screen space on today's widescreen iPhones goes to waste, and if there was ever a time to really take advantage of widescreen, it's for photo editing. There's no

facility to copy and paste edits between images or save your own presets.

Though it's definitely helpful for Instagrammers wanting to spice up their shots prior to posting, it's arguably not compelling enough at present to warrant the price, given that there are other apps that do a lot of this stuff for less. That's not to say that this will always be the case, and the app will surely get fleshed out and improved over time. There is a fully functional seven-day free trial available which will let you decide whether you want to take the plunge.

**HOLLIN JONES**

#### THE BOTTOM LINE

A solid image editor but lacks a stand-out feature.

- AI tools are effective
- Sky replacement works well
- Interface needs fleshing out
- Pricey vs. the competition

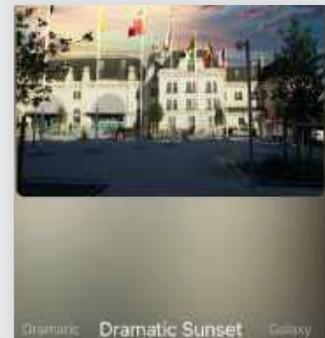
**SOLID** ■■■■

#### APP TIPS

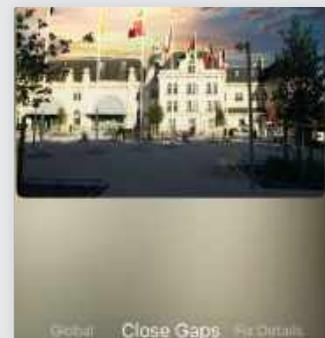
## Add a dramatic sunset backdrop



Sky replacement works best on images with a clearly defined sky area. Objects within the sky seem to pose no issues.



When using a very different sky to the original, the app will also re-light and re-color the rest of the image to suit.



Vary the masking where the sky meets the horizon to better close gaps and fix details for a more authentic result.

# Tim 7.2.0

Keep track of the time you spend working on projects

**\$11.99** From [tim.neat.software](http://tim.neat.software)

**Needs** macOS 11.0 or later



showing how much of your time you spend working for each client or on each project. Or you can analyze a stacked, color-coded bar chart that shows in detail how much time you spent each day working on each task for any given client. And, because you input an hourly rate when you create a task, you can generate reports and charts for revenue, too.

One of the things we like about Tim is its emphasis on privacy and data security. There's no need to create an account, and all the records you create are stored on, and backed up to, your Mac. Data can be exported in CSV, JSON and iCal formats and you can archive groups when you no longer need them, so they don't clutter up the menu.

This focus on privacy and simplicity, as well as being a great strength, means that you do have to remember to start and stop timers. Tim doesn't monitor your use of applications or your location to try and guess what you're working on, as some time tracking apps do.

Tim is available as a free download from the App Store with limited functionality, but you'll need to pay for the in-app purchase if you want to unlock all of its features.

However, if you want a time tracker that's simple, unintrusive, fully macOS native and has support for Shortcuts and AppleScript, Tim should be on your list. **KENNY HEMPHILL**

Click on Tim's menu bar item and you can choose a task, then start the clock on the timer.



**ANYONE WHO WORKS** on a freelance or contract basis knows how important it is to keep track of how much time you spend working on a project or piece of work, especially if you're paid by the hour. The simplest way to do that is to use a time tracking app that you can just start and stop when you need to. And while there are several of those apps available for the Mac, few are as elegant or as intuitive as Tim.

Tim is very simple to use. You just set up a group for each client you work for, or project you work on, and within those groups, create tasks. When you start working on a task, click Tim's menu bar item and choose the task. You'll see the timer tick away in the menu bar. When you're done, stop the clock. You then repeat that for each task you work on throughout the day.

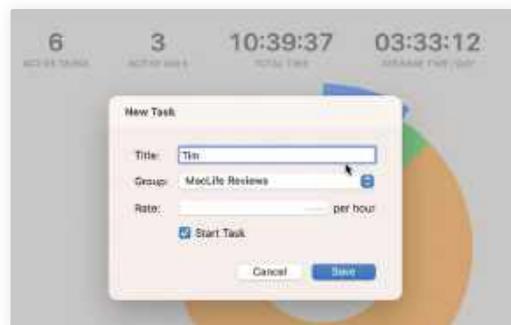
The beauty of Tim, in addition to its simplicity, is the way it displays the records you create when you start and stop the timer. You can, for example, view a pie chart

## THE BOTTOM LINE

A simple, privacy-focused time tracker that's ideal for anyone who is paid by the hour.

- ➕ Easy to use
- 🔒 Privacy focused
- 📊 Excellent visual data display
- 🔔 Need to remember to start and stop timers

**EXCELLENT** ■■■■■



Create a task, allocate it to a group and attach an hourly fee to it, and you can easily see how much to invoice for.

# Intruder in Antiquonia

Short but not very sweet

**\$12.99** From [intruderinantiquonia.com](http://intruderinantiquonia.com)

**Needs** OS X 10.11 or later



## INTRUDER IN ANTIQUONIA

centers on a girl named Sarah who wakes up outside a small Spanish town with no memory of who she is or how she got there. People in town shun the internet and distrust outsiders, and soon you start to get the feeling you are being followed.

The game is a point-and-click adventure where you must use clues in your environment to uncover Sarah's story. What is her real name? What lies in her past? How did she get to Antiquonia? And who are the shadowy people looking in through every window?

Unfortunately, the game falls far short of point-and-click greats like *Day of the Tentacle*. Where that production was a funny and challenging tale that saw you traversing time to solve deep, layered puzzles, *Intruder in Antiquonia* is shallow and disappointingly simplistic. The answers to most puzzles are apparent the moment you stumble upon them, meaning you spend a lot of time simply clicking through dialog boxes.

## TIME TO SAVE THE WORLD, I GUESS

Being a short game, only a few hours from start to finish, the story zips along at a rapid pace. That means it feels a little



The game's various settings are well designed, but its story and characters are lacking.



rushed, without having the time to build the backstory and develop the characters.

Speaking of the game's characters, none are relatable or even particularly interesting. Even Sarah is one-dimensional, despite discovering she is at the center of a sinister international conspiracy. As a result, it's hard to get on board and root for her, and the story of her crusade is clunky and clichéd.

It's not all bad. The sets are very well designed and there are a few good musical numbers to enjoy. There are some welcome quality-of-life touches, too: double-clicking a doorway lets you go straight to it without walking, and you can press Tab to highlight all the interactive elements in each setting. But these positives can't save *Intruder in Antiquonia* from its own wooden storytelling and undercooked characters.

If you're a fan of point-and-click games, *Intruder in Antiquonia* will fill a lunch break or two. But just don't expect the next genre classic. **ALEX BLAKE**

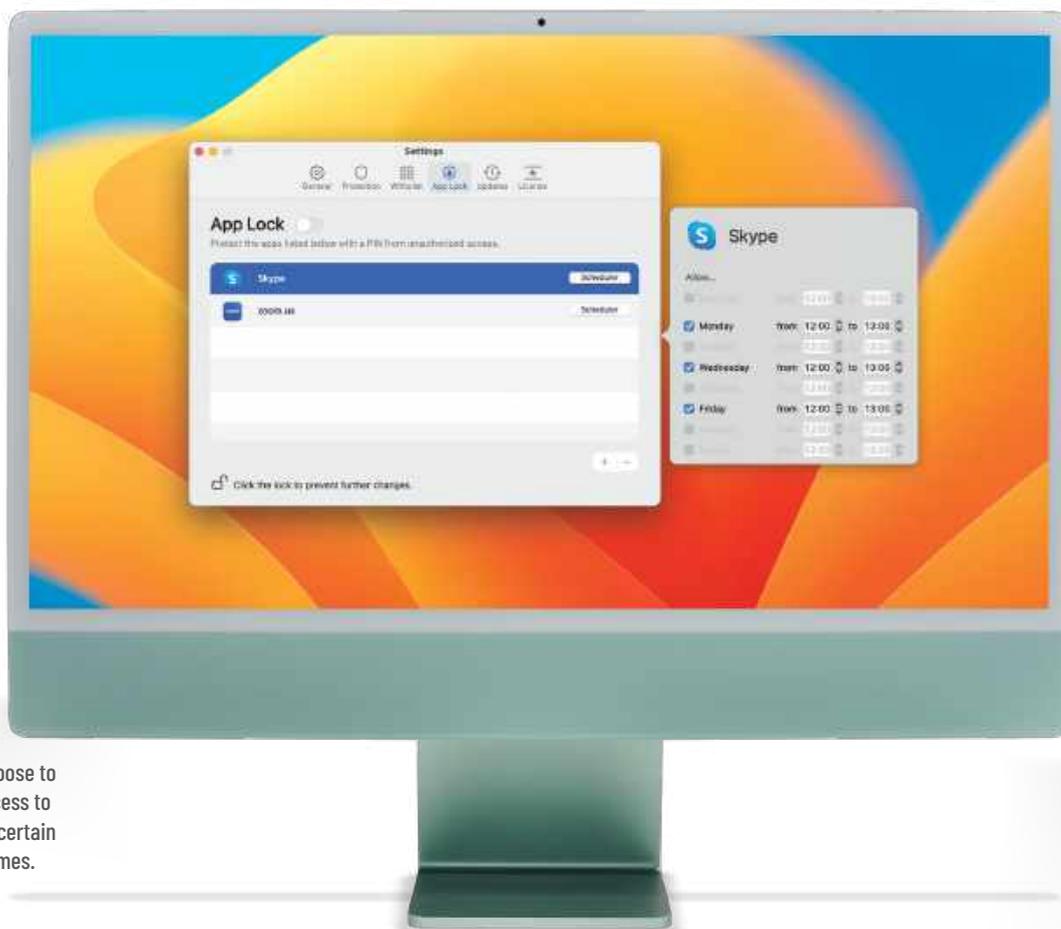
It's hard to relate to the game's characters, even its main one.

## THE BOTTOM LINE

A disappointingly forgettable adventure.

- Good level design
- Clichéd storytelling
- Unrelatable characters
- Limp, floaty animations

**WEAK** ■■■■■



You can choose to restrict access to any app to certain days and times.

# Camera Guard for Mac

Lock down your Mac with ease

**\$29.90** From [protectstar.com](https://protectstar.com)

**Needs** macOS 10.15 or later



**IT'S A SLIGHTLY** uncomfortable truth that nobody can be absolutely sure that their webcam and microphone haven't been compromised. While suggestions that government agencies may be spying on you veer somewhat towards the outlandish, it's certainly the case that malware exists and can be a problem. The Mac platform is secure but it's not perfect, and just because the little green light by the camera is not active doesn't mean you are 100% safe. In our constantly connected world, cyber

theft and spying are issues that we do need to be aware of.

If you have concerns about this, Protectstar makes Camera Guard, an app for Mac that can block your microphone and webcam and also provide access control for other apps installed on your system. Apple doesn't provide any way to completely disable either device, short of taping them up which is suboptimal. The interface is pretty straightforward, with camera and mic protection simply on or off, and the option to receive a notification if any access attempts are made on your camera.

You can set a whitelist of apps that can access the camera so you can ensure no hassles with FaceTime or Zoom for example, while still guarding for other unauthorized usage. You can also switch on Deep Detective which apparently keeps watch in a more aggressive way, though the company doesn't explain this in detail, probably for reasons of security. This includes low-level constant scanning to guard against ransomware and other nasties. A further option lets you block the execution of Java files, which can be a source of malware.

All access attempts are logged and the app can boot with the system.



## RESTRICTED ACCESS

A slightly less alarmist feature is one that will be useful for parents, which is the ability to set a PIN-controlled access list for apps. This is really straightforward to use and will prevent a user being able to open messaging apps or games for example, if you are looking to restrict their access. A granular option lets you set a schedule per app, meaning you can control what times an app is able to be used. No messaging apps after bedtime would be a typical example of this sort of thing.

Camera Guard is surprisingly unobtrusive for an app that's constantly monitoring your Mac's hardware, and doesn't appear to place any significant load on the

The app is able to constantly monitor your Mac for ransomware and other threats.

system unlike antivirus apps of old. The camera and mic protection are good to have if this is something you worry about, but the more general threat scanning and the ability to limit app use by schedule are also things that will be useful, the latter especially to parents. In testing we didn't receive any notifications about threats, which is of course good since that presumably means our system is clean, but it's nice to have the peace of mind that your Mac is protected, and indeed that nobody is maliciously trying to access your microphone or camera. It's sensibly priced too and doesn't use a subscription model, though the price only gives you one year of updates. **HOLLIN JONES**

## THE BOTTOM LINE

A slick way to lock down your Mac's hardware.

- ➕ Slick and unobtrusive protection
- ➕ Whitelist or limit apps
- ➕ Schedule app access
- ➖ Lifetime updates not included

**EXCELLENT** ■■■■■

# 6 APPS To level up the Dynamic Island

Clever uses for the iPhone 14 Pro's coolest party trick **BY ALEX BLAKE**



## Lock Launcher

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

**Needs** iOS 16.0 or later

 Lock Launcher already lets you fire up apps right from your Lock Screen, but its Dynamic Island update takes its capabilities even further. Now you can store a goody bag of apps inside the Dynamic Island, and expanding it with a long press lets you launch any of them with just a tap. Instead of scrolling through pages of apps to find the one you need, just store your favorites in the Dynamic Island. It's like a second, even more expansive Dock in addition to the one your iPhone already has.

## GoodTask

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

**Needs** iOS 14.0 or later

 GoodTask is a top-notch reminders app, putting tons of control and customization at your fingertips. It recently got even better by adding Dynamic Island support that cleverly demonstrates an excellent use case for the new iPhone feature. GoodTask can now display your next upcoming task in the Dynamic Island, meaning you're never far from knowing what's on your plate during the day. With your reminders quickly visible, you no longer need to drop what you're doing to stay on track.

## Just Press Record

**\$4.99 From** [openplanetsoftware.com](https://openplanetsoftware.com)

**Needs** iOS 14.0 or later

 If you're recording something on your iPhone, there are times when you'll want to minimize your audio capture app and work on something else, keeping the recording going in the background. For times like those, Just Press Record's new Dynamic Island functionality is perfect. It lets you jump right back in to adjust, pause, or finish your recording without needing to minimize other apps — ideal for when you need to quickly make adjustments without digging around for the app.



## Sports Alerts

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

**Needs** iOS 13.2 or later

 When your favorite team is playing, you'll want to keep track of the score and all the latest events in the game. But flicking back and forth to your sports app while you're trying to do something else can be a hassle. Instead, use Sports Alerts. Just dismiss it to the Dynamic Island and it shows the live score of the game you're tracking. Long press to expand it and you'll get more detailed information that helps you keep up with the game as it unfolds. You'll never miss a key moment again.



## Carrot Weather

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

**Needs** iOS 13.0 or later

 Knowing when rain is due to start can save or scupper anybody's plans, giving you time to get under shelter and out of the squall. Carrot Weather makes that easy with its Dynamic Island support, which lets you track a storm's approach right from the top of your iPhone. As long as the rain is forecast to begin within the next hour, Carrot Weather's Dynamic Island widget will show exactly when you can expect it, letting you avoid it with certainty. Now you'll never be caught in the rain again.



## Pestle

**Free (IAPs)** From [pestlechef.app](https://pestlechef.app)

**Needs** iOS 15.0 or later

 Cooking up a storm in the kitchen is a breeze with Pestle's clever use of the Dynamic Island. By default, it will show a running countdown on any cooking timers you have active. It can show one timer or several, unlike Apple's own timer app. Tap and hold the Dynamic Island, and the Pestle widget expands to show details of the next step in your recipe, so you always know what you need to do next. And if you have other activities on the go, the timer minimizes into a smaller view, saving space.



# 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	liene-life.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
<b>ACTION CAMERA</b>	<b>GoPro Hero 11 Black</b>	<b>gopro.com</b>	<b>\$500</b>	<b>#202</b>
SMART TV PLAYER	Roku Streaming Stick 4K	roku.com	\$49.99	#190
PORTABLE DAC	iFi Go Blu	ifi-audio.com	\$199	#189
PORTABLE SSD	OWC Envoy Pro FX	eshop.macsales.com	\$219	#201

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	notability.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
<b>VIDEO EDITOR</b>	 Wondershare Filmora	wondershare.com	\$109.99	#202
SCREEN CAPTURE	 ScreenFlow 9	teletream.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

NEW!





# WATCHOS 9

## SUPERGUIDE

Everything you need to know about the best watchOS yet

WRITTEN BY **CARRIE MARSHALL**

**THEY SAY YOU** can't please all of the people all of the time, but Apple seems to have done just that with watchOS 9. The latest and best version of Apple's wearable OS is packed with improvements across almost every aspect of the Apple Watch experience, and in many ways it delivers on the promises made in watchOS 8; its Focus modes are much more useful, its workouts offer greater customization and deliver more information, its sleep tracking is more detailed and its accessibility features are even better than before.

There are also some important interface tweaks, including not just three new watch faces but big improvements to the existing ones, and much more choice when it comes to colors and complications

for Apple and third-party apps. That alone means that watchOS 9 will make your Apple Watch feel shiny and new all over again, but there's substance here as well as style: whether you use your Apple Watch for monitoring your health, keeping yourself organized or getting fitter — or a combination of all of these things — there are lots of improvements that will make your Apple Watch more useful as well as more you.

Inevitably a new version of watchOS means that some older Apple Watches will be left behind, and this time it's the turn of the Series 3: watchOS 9 is for the Series 4 or later; Watch Mirroring requires a Series 6 or later; and the new multilingual keyboard needs a Series 7. ■

# What's hot in watchOS 9

Why watchOS 9 is the upgrade many of us were dreaming of...

## NEW FACES

watchOS 9 updates many existing watch faces and introduces three brand-new ones: the classy Metropolitan, the beautiful Lunar, and the bubbly Playtime.



Metropolitan is complication-rich and has a range of white and dark color combinations.



Playtime is big, bubbly fun with an optional brightly colored starry background.



The starkly beautiful Lunar can integrate the Chinese, Hebrew or Islamic calendar.



## THE WATCHOS 9 UPDATE

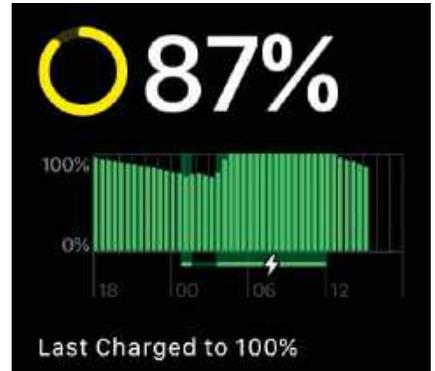
should delight pretty much every kind of Apple Watch user, from fitness fanatics to those of us with a more laid-back lifestyle.

One of our favorite features is the ability to have different watch faces for different Focus modes; so for example you might have one face and set of complications for driving, another for the gym and something completely different for school or work. There are some great new watch faces, and many of the existing ones have been given more options and complications too.

## MORE POWER!

We particularly like the new Low Power Mode, which is a vast improvement over the previous Power Reserve. Power Reserve tried to maximize your battery life by making your Apple Watch pretty much useless, but Low Power Mode isn't such a blunt instrument.

Low Power Mode enables you to turn off power-hungry stuff — such as the Always-On display, background heart rate checking, and frequent mobile data requests on cellular models — without turning absolutely everything off. Apple



Low Power Mode can deliver up to 36 hours of battery life by turning off inessential features.

reckons with it on you can get up to 36 hours between charges on a Series 8 and 60 on the Apple Watch Ultra.

The improved fitness features are another big draw here, because they bring the Apple Watch up to speed with many high-end running watches and fitness tracking devices; for example, there's new Heart Rate Zone monitoring and more customization of workouts and the info provided during them. Health features have been improved too: sleep tracking is more detailed, and your Watch can now ensure you don't forget to take essential medications as well as track your heart rhythms for any irregularities. 🇮🇹

## Productivity boosters

**WATCHOS 9 INTRODUCES** A number of useful enhancements to help you be more productive. Improved Focus modes can switch watch faces and complications at specific times, locations or when other criteria are met, so you just see the info that matters. Notifications are less intrusive, appearing as slim

banners when using your Watch, and you can now add or edit details to Reminders and create new Calendar alerts on your Watch.

Assistive Touch in Settings has new Quick Actions, and there's a double-pinch action you can customize to carry out functions like ending a call or taking a photo.

# HOW TO Personalize your Apple Watch



## 1 Find your face

Press and hold your Apple Watch face and the Share and Edit buttons appear. Let's find something more interesting. Swipe from the right of your Watch until you see the New icon. Tap it to see the available faces.



## 2 Style or substance?

Some watch faces, such as Contour, are more about style – but the Modular faces are designed to be packed with lots of handy information. Simply tap the Add button to add it to your Watch.



## 3 Choose a background

Certain faces give you a choice of a black or colored background. To move between them, turn the Digital Crown and you'll see the background change on screen. Don't worry about colors: that's our next step.



## 4 Pick your colors

Swipe from the right and you should now see the Colors screen. Options vary from face to face, and in the case of Modular there are some subtle, pastel and almost monochrome versions as well as the more colorful.



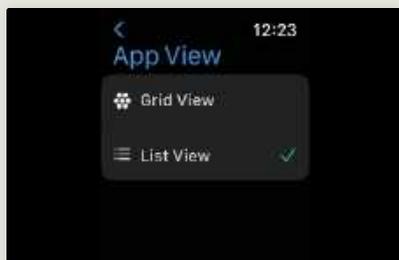
## 5 The complications

Swipe from the right again and you'll see the available complications slots. Some are very limited – the slot currently showing the date can only show that – but most have a huge selection of different complications.



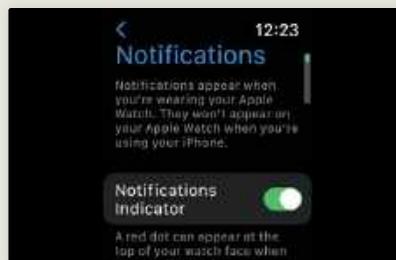
## 6 Your personal taste

With Modular you can have one big complication in the middle – we've picked the rain forecast from the Weather complication – and four icon-only ones. We've picked alarms, timer, analog time and temperature.



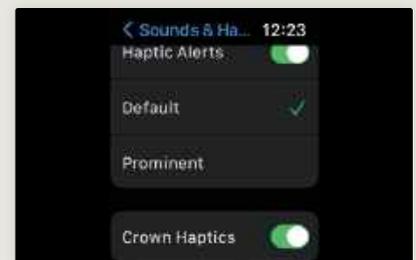
## 7 Change the app view

You may find the App View pretty but also hard to navigate because of its tiny icons, and you can change it in Settings > App View. Choosing the List View replaces the grid with a scrolling list in alphabetical order.



## 8 Adjust notifications

In Settings > Notifications you can make your notifications more or less prominent – for example by disabling the red dot indicator or by getting Siri to read out new notifications when using headphones.



## 9 Tweak the haptics

You can change the vibrations by going to Settings > Sounds & Haptics. You can make vibrations stronger and enable or disable vibration when you use the Digital Crown. You can also adjust the volume of audio alerts.



# Health & Fitness improvements

Completely customize your workouts and the info you see on screen

## MEDICATION REMINDERS

The new Medications feature lives in the iPhone Health app and uses your Watch to remind you when and what to take.

Tell it what medications you want to be reminded of – you can specify the shape and even the colors for easy identification – and when you want to be reminded. Your Apple Watch will do the rest.

Medications is really useful for people who have to take multiple medications at different times of day, or for anyone who sometimes forgets their meds because they were busy doing something else.



**FOR MANY OF** us, the killer apps for the Apple Watch are its health and fitness features. watchOS 9 improves that already impressive collection with new SWOLF efficiency ratings for swimmers, better tracking of triathlons, significantly improved running features including form monitoring and an option to save favorite routes, and the ability to build your own custom workouts directly from your Watch. The new Heart Rate Zone training is particularly welcome, bringing the Apple Watch up to speed with rivals' dedicated running watches.

Your Watch's heart rate monitoring has been improved too, with a new AFib History feature that detects and records arrhythmic

events that you might not be able to detect with the ECG feature. It's intended for people who have been diagnosed with atrial fibrillation and designed to be shared with their healthcare provider.

watchOS 9 also introduces a handy new Cardio Recovery feature to help you get the right amount of rest between sessions.

### CHECK YOUR TECH

However, it's worth noting that many of the new features require the gyroscope and accelerometer technology introduced in the Apple Watch Series 6, so unfortunately, and of course rather frustratingly, owners of the older Watches won't get to benefit from the full suite of fitness features. 🇩🇪

## Sleep tracking

**THE APPLE WATCH'S** sleep tracking functionality has been given an upgrade with watchOS 9, and it now includes useful data via its Sleep Stages feature.

Sleep Stages enables you to see how much of your bedtime is spent in deep sleep, how much of it is in REM sleep (when there's rapid eye movement, often associated with

dreams) and how much of it is spent staring at the ceiling regretting things you did when you were nine. It does this by taking data from the accelerometer and heart rate sensor, and it also provides a new Comparisons tab in the iPhone app to show you your heart rate and respiratory rates over time.

# Accessibility changes

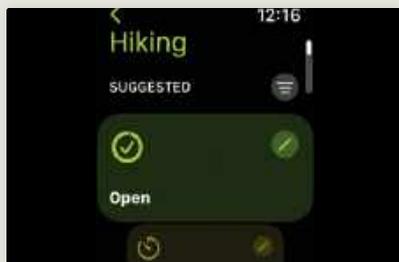
**AS WELL AS** new support for Bluetooth keyboards and the inclusion of new Quick Actions in Assistive Touch, watchOS 9 also introduces a huge new accessibility feature: Apple Watch Mirroring. This connects your iPhone and your Apple Watch via AirPlay, and it enables you to control the Watch from your iPhone. That means you can take advantage of your iPhone's helpful accessibility

features such as Voice Control and Switch Control.

To enable the mirroring feature, open Settings > Accessibility on your paired iPhone and then choose Apple Watch Mirroring. A large version of your Apple Watch face will now appear on your iPhone, and it's fully functional. Anything you do on your iPhone will be mirrored instantly on your Apple Watch and vice-versa.

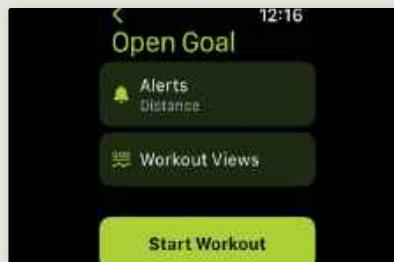


## HOW TO Customize your workouts



### 1 Pick your workout

Customization is available across all available workouts, so pick a workout type and then tap the three dots to its right. Tapping Suggested enables you to filter the available workouts; tap the pencil icon to create a new one.



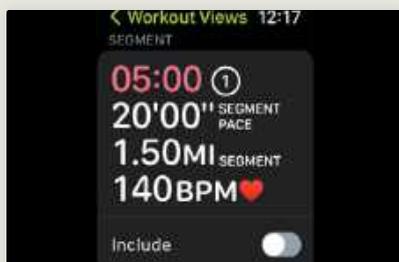
### 2 Change the view

Now we want to set our Workout Views, which specify what information we want to see during our workouts. You can also use this screen to set alerts, for example for heart rate targets or times. Tap Workout Views.



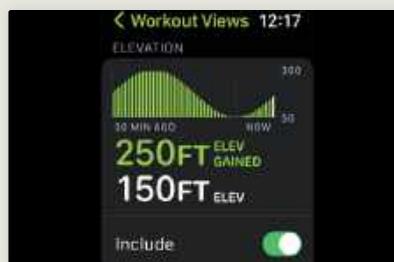
### 3 A new selection

In the Workout Views section, which looks like the installed watch face gallery, tap Edit then use the Digital Crown or touchscreen to scroll through the available views. Tap the Include button next to a view.



### 4 Keep on scrolling

Some views are for segments, which divide a workout into multiple parts – for example, hilly climbs then flatter terrain. By double-tapping the screen during a workout you can create a new segment.



### 5 See your progress

As we're in the hiking workout, we're going to include this view of our elevation, which shows how high up we've been during our exploration. As with other views, tapping on Include let us scroll on to it during a workout.



### 6 Edit the metrics

On metric-based views you'll see a pencil icon. Tapping that enables you to select which metrics to display in which slot. For example, you might want your distance at the top. Make your selection and tap Done.

# ASK

TECH SUPPORT & TECHSPLANATIONS



Email Mac|Life at [ask@mac|life.com](mailto:ask@mac|life.com)

## Notarize now very crucial

### WHEN NOTARIZATION WAS

introduced by Apple, it didn't seem too important. Its checks on apps proved fallible, and opening unnotarized apps merely added an extra step to the process. Once you'd got an app through its first run, there didn't seem to be any difference either, and the Finder doesn't even tell you what's notarized.

This changes in Ventura. Now, every time you run a notarized app, it's checked just the same as if freshly installed to ensure its contents match the signature, and that the signature and notarization are valid.

Not so for apps that aren't notarized, though: once past their first run, they can still modify themselves or be modified maliciously — something that isn't difficult to do. The time has come to reflect whether those unnotarized apps have become your Mac's greatest vulnerability.

## > You can't speed up background tasks

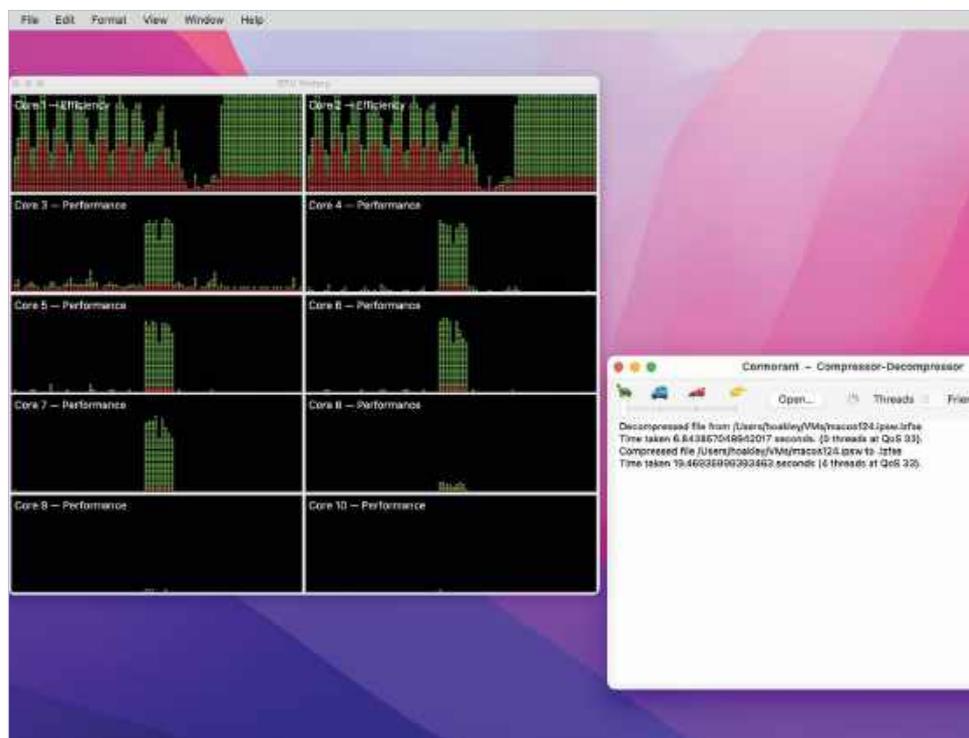
When TechTool Pro runs on my Mac Studio, much of its work is done on the M1 chip's slow cores. Is there any way that can I force it to use the fast cores instead, so it completes that work more quickly?

Apps normally run time-consuming tasks in parallel threads to avoid locking the app up with a spinning beachball. When those threads are created, the code should assign them a priority, known as Quality of Service (QoS), a setting of great importance when running on M-series chips.

In Apple silicon Macs, the QoS also determines which type of cores those threads are run on. Only the lowest QoS causes macOS to run those threads just on the Efficiency (E) cores, even when there are Performance (P) cores available. So in this

case, the threads doing that work are set with that lowest QoS.

While you can use the command tool `taskpolicy` to demote threads with higher QoS to run on the E cores, there's currently no way to promote threads with lowest QoS so they can be run on P cores instead. Some apps now give the user control in their settings, but without that there's no way of changing the QoS and getting the app to make better use of available P cores. You should ask the developer of that software to give the user that control.



Few apps give the user control over which type of core they run on in Apple silicon Macs.

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)

## > Keeping copies of your Passkeys

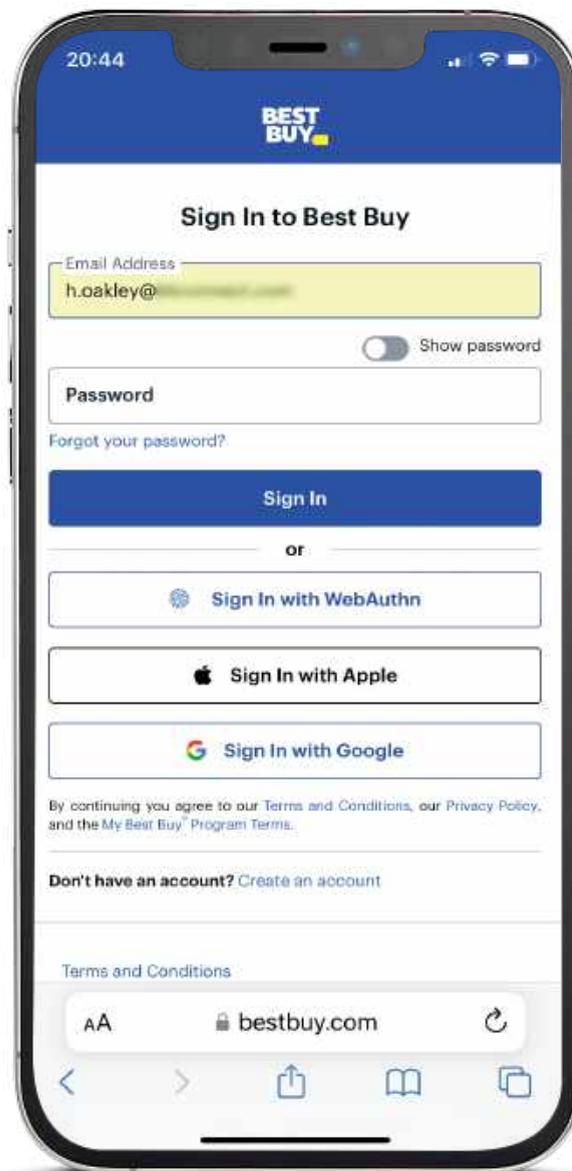
**I keep a secure written record of all my passwords. How then can I make a copy of, or back up, my Passkeys as I switch to using them instead?**

Passwords, even long, randomized ones generated for you by iOS, are easy to record on paper, easily extracted from you in a phishing attack when you're conned into giving your password away, and often compromised when a server is breached, as it contains your password too.

Passkeys are different, as they consist of a pair of keys, very large numbers. The more important of the two is the private key, which is kept securely in your iPhone's keychain, not known to anyone else, and neither you nor the server you connect to can discover it. All that iOS ever releases is the public key, which can't be used to work out the matching private key. So writing down that public key is of no use.

The best way to ensure your Passkeys are never lost is to share them across your devices and Mac by putting your keychain in iCloud, a secure custodian. Even Apple can't access your Passkeys there, only you and your authorized devices can. Should you lose your iPhone, or if it were to break, then by authorizing a replacement to access your iCloud account, it can automatically use all your Passkeys.

While this may not give you the comfort of a physical copy, it also ensures that those who mustn't get hold of your private key can't do so, in the way that they originally could with your passwords.



Some online stores and services like Best Buy already offer Passkey support, here called WebAuthn.

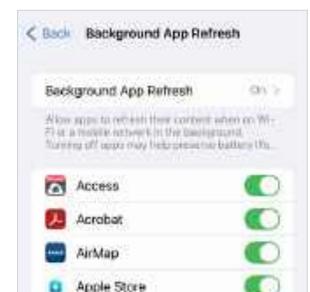
## Quick-fire questions & answers

### CAN MACOS CHECK iOS BACKUPS FOR MALWARE?

No it can't. As far as we know, no Apple or third-party malware scanning software looks through your iOS backups. As they're required to be encrypted if they're to contain sensitive data such as health information, that puts them even further from the reach of any malware scanning.

### WHY SHOULD A NEW APP WARN THAT IT'S SHORT OF MEMORY?

Unlike macOS, iOS and iPadOS can't use "swap" memory to extend the physical memory in the device. When an iPhone or iPad starts running short of memory, all it can do is quit other apps that are running in the background in order to free up as much as it can, and that's when you'll see this warning.





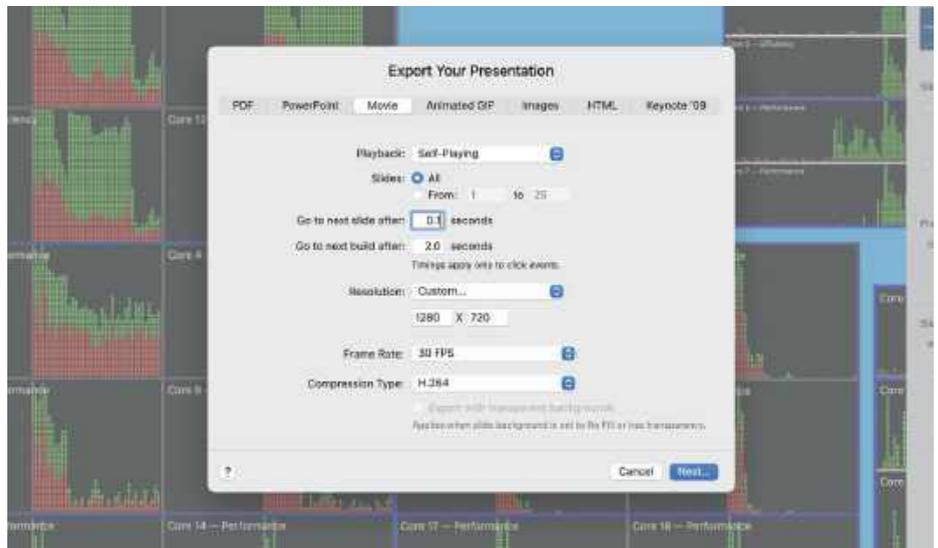
## Ask

### SHOULD I SAVE MY PHOTOS IN JPEG OR HEIC FORMAT?

HEIC wasn't supported until High Sierra, but delivers more efficient compression at each level of quality. For images only accessed by Macs and Apple devices, it's preferred and usually the first choice for iOS cameras. JPEG is more universal, and supported elsewhere, on websites and social media.

### HOW TO ELIMINATE PROMOTED TWEETS FROM TWITTER?

Although the Twitter app is popular and supports new features, many prefer third-party alternatives like Tweetbot and Twittrific. These work a little differently, so they can have a slight time lag particularly with DMs, but you only get to see the tweets of those you follow, with no promotions at all.



When exporting a Keynote presentation as a movie, adjust the pause between slides to maintain the flow.

## > Make a movie from your slideshow

**What's the best way to turn a slideshow I've built in Keynote into a movie with narration that I can put online?**

Keynote can do this very well, and gives you two options for how you want to record the narration before exporting the presentation as a movie. If you'd prefer to record a continuous narration for the whole movie, select the Document tool from the sidebar, then the Audio tab. However, most find it easier to record narration one slide at a time, which makes faultless delivery easier.

If choosing the latter option, for each slide in turn, click the Media tool at the top and select Record Audio. When you're ready to start recording, click the big red button, and click it again to stop.

If your Mac's built-in microphone isn't up to scratch, consider investing in a USB

microphone intended for those making their own podcasts, or if you have a recent iPhone running iOS 16 you could use Ventura's Continuity Camera feature.

Those audio clips are attached to each slide, so all you have to do to turn that into a movie is use the Export To > Movie command in the File menu. In the Export dialog, you then need to set Playback as Self-Playing, and reduce the time between slides so there isn't an awkward pause. Set the resolution, frame rate and compression type for the finished movie, and Keynote will create it. You may need to adjust those, particularly the gap between slides, but it's a good start.

## > Saved Word documents are invisible

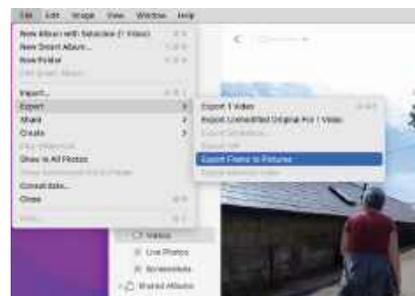
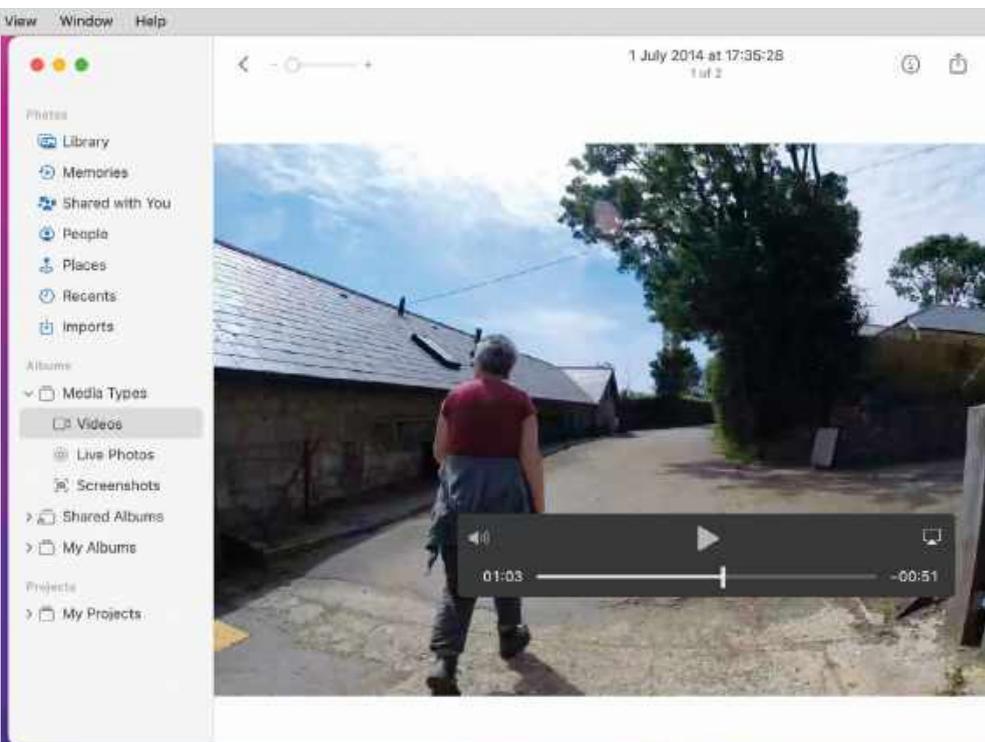
**When Microsoft Word 2019 saves documents to folders shared on the network from my Mac mini's external RAID system, they become invisible in the Finder on connected Macs. How can I make them visible again?**

Microsoft doesn't appear keen for you to save Word documents directly to shared folders, although it does recommend its own OneDrive cloud or a SharePoint service. There's no good reason why Word shouldn't be perfectly capable of creating and accessing documents on file shares on your Mac.

Problems can sometimes arise because of the network file sharing protocol being used. In the past, AFP was popular, but particularly for use with Apple's newer file system APFS, SMB is now preferred, and for Apple silicon Macs sharing from APFS can be mandatory. Using a mixture of older and

newer versions of macOS can also cause a variety of problems, as can the RAID software.

If you can, upgrade your Mac mini to the latest version of macOS it supports, and see whether that stops those Word documents from becoming invisible. You may find it beneficial to use a more



Use the Export Frame to Pictures command to save the still image of that frame to your Pictures folder.

Open the video in Photos, hover the pointer over its image and slide the bar to select the frame you want to save.

## > Export a still image from video

**When I tried to take a photo on my iPhone, I accidentally shot it as a short video which I've now copied to my Mac. How do I export a still photo from that video clip?**

This is readily done in Photos, which is a good place to keep that video clip anyway, alongside your other images.

Open the video clip within Photos. Hover the pointer over the video and the play control bar appears low down over the image. Drag the playhead bar to the frame

you want to export as a still image, then use the Export > Export Frame to Pictures command in the File menu to save it as a still image in your Pictures folder.

A file named "Frame" followed by the date should then appear there, ready for you to use elsewhere.

### CREATE SPREADSHEET FORMULAE WITH VOICEOVER?

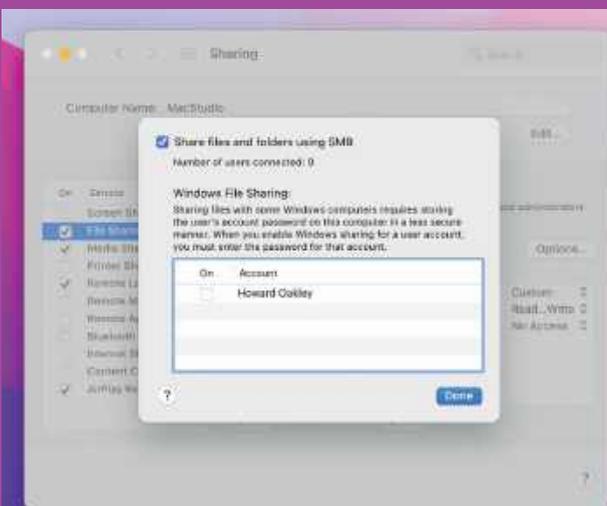
Provided your Mac is running a recent version of macOS and Numbers 12.0 or later, this should work well. Set VoiceOver up, and when you open Numbers you should be able to use it to build and edit its formulae.

### HOW TO MAKE A FANCY DISK IMAGE?

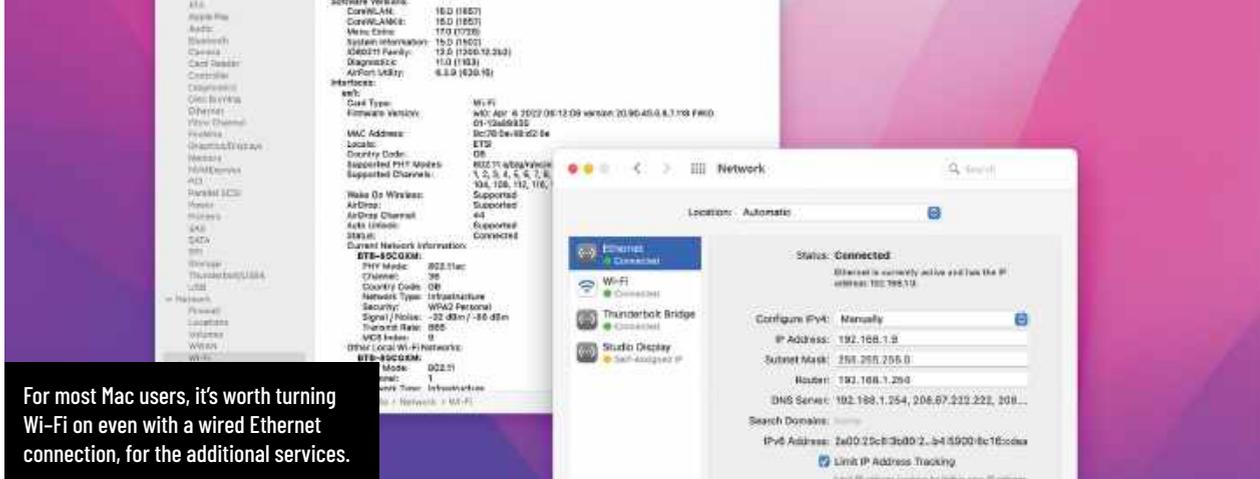
It's fiddly to craft these by hand. Most, including those creating disk images for commercial software distribution, use C-Command's DropDMG ([bit.ly/ml202dropdmg](http://bit.ly/ml202dropdmg)). That supports license agreements, custom volume icons, Retina-optimized backgrounds, and a link to install to Applications.

recent version of macOS on clients, so they're using the latest version of SMB, and updating Word to version 16.65 or later also helps.

At worst, you may find it a better option to save your Word documents locally and sync those folders with your shared RAID system.



Upgrading to the latest version of macOS should improve the reliability of network shares using SMB.



For most Mac users, it's worth turning Wi-Fi on even with a wired Ethernet connection, for the additional services.

## > Does my Mac need Wi-Fi?

Why do I need to turn my Mac's Wi-Fi on when it has already got a wired Ethernet connection?

If the only network connection your Mac needs can be provided over a wired Ethernet cable, then you don't have to turn its Wi-Fi on if you don't want to. While your Mac should always be able to establish any internet connections that it needs over the wire, sometimes that can prove easier when Wi-Fi is also available.

Many newer features in macOS depend on wireless connections involving both Bluetooth and Wi-Fi, and can't substitute over wired Ethernet. These include the Handoff group, AirDrop, Sidecar, Universal Control, and some Studio SharePlay. If you only have one Mac and no Apple devices, then these features won't be

a loss, but for many they do make Wi-Fi essential.

When you do enable both wired Ethernet and Wi-Fi, it's worth making Ethernet first choice. Open the System Preferences > Network pane, click the More button at the lower left, and select Set Service Order in the pop-up menu to put Ethernet at the top.

### HOW TO STOP A LARGE FILE FROM CHOKING iCLOUD SYNC?

Try moving that file back from your iCloud Drive folders to local storage. Let iCloud settle for an hour or so, then try moving it back.

If it's still a problem, try restarting your Mac and possibly your internet connection.

### WHERE CAN I GET AN ETHERNET CROSSOVER CABLE?

These are now museum pieces. Even old Macs auto-sensed connections, so could be connected directly with an ordinary Ethernet cable. The 1000BASE-T standard made them irrelevant, as it transmits simultaneously on all four cable pairs, so both ends operate identically.

## > Backing up cloud storage

Before Monterey, I backed up data from Microsoft OneDrive to a local external hard disk with ChronoSync or Carbon Copy Cloner. Why has OneDrive stopped working now?

Until this year, many Mac users seemed happy with their use of OneDrive, provided by Microsoft with Office subscriptions. However, because it used support built into macOS that Apple changed in Monterey version 12.3, Microsoft had to make changes in the way that OneDrive functions. You should have been warned about those in an email sent to OneDrive users early in the year.

Since then, many Mac users have been unhappy with this service, and although Microsoft has made adjustments to try to accommodate Macs better, OneDrive still doesn't work the way it used to. Ensuring your files are available locally so they can be backed up is a matter of what Microsoft calls "pinning", which is explained at [bit.ly/ml202ondemand](https://bit.ly/ml202ondemand).

Unless you're committed to using Microsoft's OneDrive cloud storage service,

you should find iCloud much better-suited to your Mac, as support is integrated into macOS, and backup utilities should be more reliable provided that you don't enable Optimize Mac Storage, which would allow files to be stored only in iCloud and not locally. For successful backup, files can't be evicted into the cloud, but must be available in local storage.



"Optimize Mac Storage" allows iCloud files to remain in the cloud, so they're not available for backup.

## > Syncing iCloud across Macs

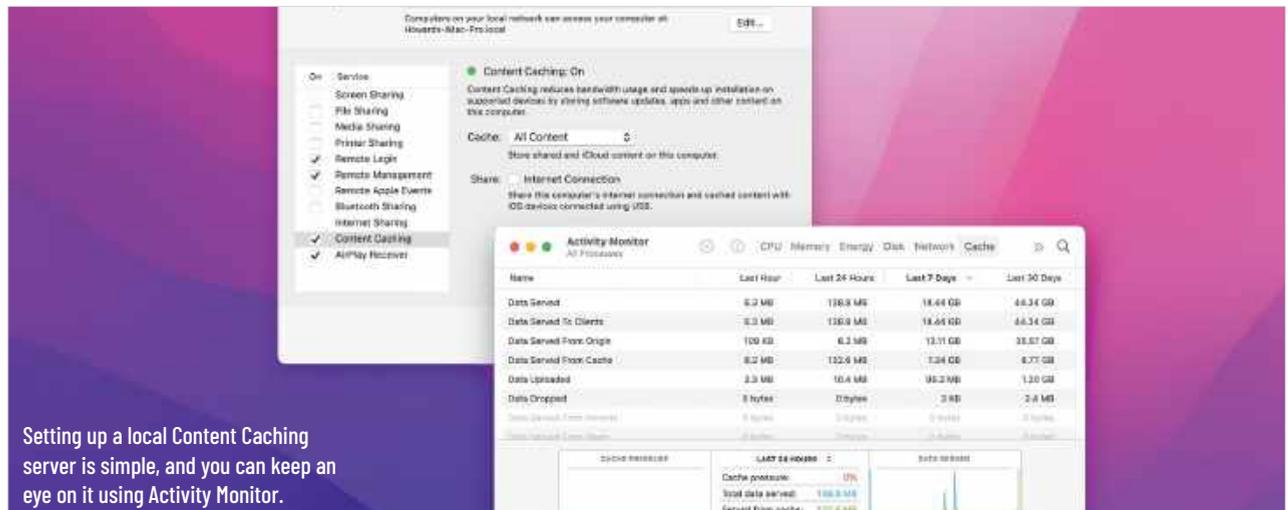
**My Macs and devices are all signed into the same iCloud account, but don't seem to remain in sync. Changes made on one of my Macs seem to sync best with the others, but those from my notebook and devices don't work as reliably. How can I fix this?**

This is one of the most common serious problems with iCloud. The best way to try to bring your Mac and devices into sync is this: when they're connected to the same Wi-Fi with a reliable and high-speed internet connection, check that each is correctly configured for that network, and able to access the shared services you use. Then, shut them all down. Bring them back up one at a time,

allowing ample time for each to sync fully with iCloud before powering up the next one. If that doesn't work, then contact Apple Support for iCloud to ensure there isn't a deeper rooted problem in your account settings.

Devices tend to fall out of sync when they don't have good and constant access to iCloud, such as when running on patchy mobile data connections. One way to work around this is to run a

Content Caching service on a Mac that remains on and accessible whenever the devices are sharing its local network. The process is simple to configure, but does need a Mac that's running and not asleep most of the time, and perhaps as much as 200GB of local storage, although this can be on an external hard drive. Enable this in System Preferences > Sharing. Set it to cache All Content, including iCloud.

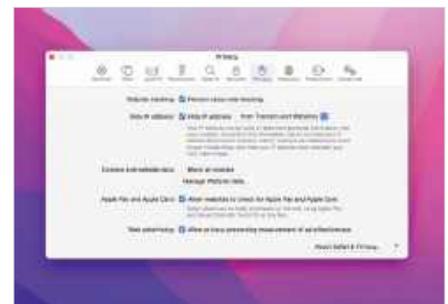


### WHY DOES MY MAC'S COMPUTER NAME CHANGE?

This can happen when a Mac thinks it can see another Mac using the same name, so changes its own to avoid the conflict. Some versions of macOS are prone to this, and may do it when renewing a DHCP lease with a router. Correct the name in the Sharing pane if it bothers you.

### IS IT WORTH LIMITING IP TRACKING?

This depends on whether you have an iCloud+ account. Without that, it tries to hide your IP address from known online trackers loaded by websites, which is helpful. With iCloud+, though, you can enable iCloud Private Relay, which works much better and covers websites as well as known trackers.



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Mac|Life

# CREATE

HOW TO DO ANYTHING ON YOUR MAC, IPHONE & IPAD

## Master the Clock app

At long last, the Clock app comes to desktop and notebook Macs

### REQUIRES

macOS 13

### YOU WILL LEARN

How to see world times, set alarms, and use the stopwatch and timer

### IT WILL TAKE

5 minutes



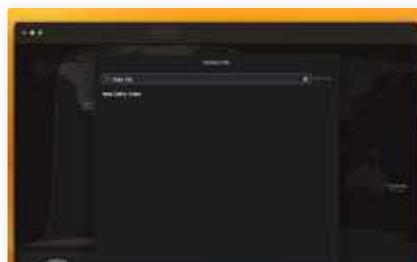
**THE CLOCK APP** does more than simply tell the time. It also offers world clocks so you can see what time it is elsewhere; you can set alarms that trigger at a time of your choosing; and it has a stopwatch with a digital or analog display and a lap timer, as well as a countdown timer that lets you know when a certain period of time has elapsed.

The Clock app has been a popular feature of the iPhone and iPad for many years, but with macOS Ventura, it finally comes to the Mac too. It doesn't sync with iCloud, so your world clocks and alarms don't carry across from your mobile devices, but you can always add them

separately if you wish. We'll show you how to get the most from the app, with a guide to its basic features and a few advanced capabilities that you might otherwise miss. Here's a tip right now: the app icon, whether in the Dock, a Finder folder or the App Launcher, accurately shows the current time, all day, every day. **IAN OSBORNE**



## HOW TO Use the Clock app's world clock



### 1 Add a world clock

Open the Clock app, and click on the World Clock tab at the top. Your current location's time zone is already shown. To add a new world clock, click the "+" icon (top right). Type the name of a city in the Search field.

### 2 Add its time zone

When you've found your city, click on it to add its time zone to the Clock app. The light and dark sections of the world map show the areas currently in daytime or night-time, as do the white or black clock faces.

### 3 Delete a clock

To delete a world clock from the Clock app, move the pointer over its clock face and a "X" appears in the top-left corner of its window. Click on this cross and that time zone disappears. You can add it again later.

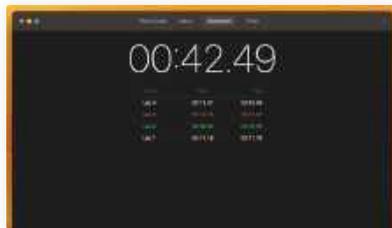
## HOW TO Set an alarm



**1 Set an alarm** Click the Alarm tab, then the “+” icon in the top-right corner. Click on the hours then minutes, and type the time you want to set. You can then set which days you want the alarm to trigger, give it a label and more.

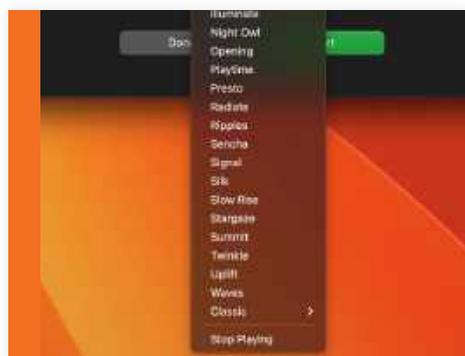
**2 Choose a sound** Click the Sound menu to choose a sound for the alarm. Then click Save to set the alarm. To edit an alarm, click on it and make changes. To delete it afterwards, hover over it and click the “X” in the top left.

## HOW TO Utilize the Stopwatch



**1 Time something** Click the Stopwatch tab. Click the green Start button to start timing, then click Lap to record a time without stopping the clock, or Stop to stop it altogether. The Reset button wipes it to zero, so you can start again.

**2 Other functions** In the Clock app’s View menu, you can switch between a digital or an analogue display for the Stopwatch. They do the same job. You can choose between the Clock app’s various functions in this menu too.



### > STOP PLAYING

## An overlooked feature of the Timer

The Timer section of the Clock app has an extra feature of which you might not be aware. At the foot of the “When timer ends” menu is an option called Stop Playing. Choose this option and whatever audio you’re playing on your Mac stops when the countdown timer reaches zero. It’s great for falling asleep to relaxing music or the radio, and having it turn off automatically after a certain amount of time. At the time of writing, the Stop Playing option doesn’t work on the Mac, though the option is there, so it will probably be fixed soon.

## HOW TO Use the timer



**1 Set the timer** The countdown timer is useful for signaling when a certain time has expired, for example, when baking a cake. Click the Timer tab, and click the hours, minutes and seconds, typing the values you want to use.



**2 Select a timer sound** Choose “When timer ends” and select a sound effect from the options available. Clicking one makes it sound immediately, so you can preview it. When ready, click Start and the countdown begins; you’ll hear the chosen tone when it’s finished.

# Make the most of Opera GX

Try a web browser that comes loaded with clever extras

## REQUIRES

Opera GX,  
OS X 10.11 or later

## YOU WILL LEARN

How to use the music,  
streaming, and games-  
related features of Opera  
GX, and more

## IT WILL TAKE

5 minutes



**OPERA GX IS**, on the surface, a gaming-focused web browser. It integrates neatly with Twitch, letting you watch livestreams from your sidebar, and has a dedicated tab showing the latest gaming news and deals.

But look a little closer and you'll see it has a bunch of features with much wider appeal for more than just gamers. As well as Twitch, you can pin your favorite messaging app or music player directly to the side of the browser. Its GX Control feature provides fine-grained options to rein in the app's resource usage, while GX Cleaner can quickly clear out browser cruft in just a click.

If you download the Opera GX app on iPhone or iPad, you'll also get access to its cross-platform features. That includes My Flow, which sends files between devices, and a tool that lets you use the browser one-handed called the Fast Action

Button. And it has the same visual customization and strong privacy focus that you get with the Mac desktop app.

All of these things make Opera GX a worthwhile download. Even if you don't care a jot for games, there's still plenty on offer that could enhance your web browsing experience. In this tutorial, we'll show you how it all works.

**ALEX BLAKE**



Opera GX comes with light and dark modes, plus a host of options to tailor its look to your tastes.

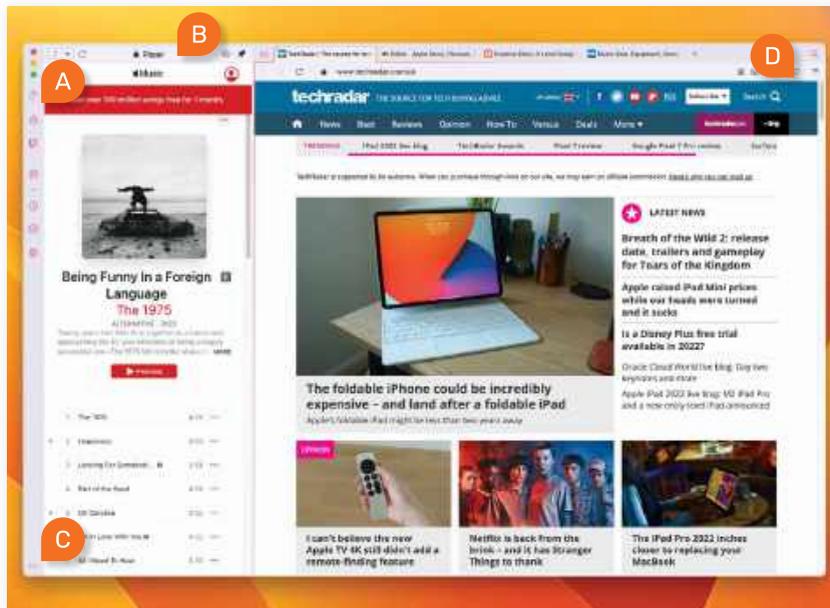
## QUICK LOOK Upgrade your web browser

### A SIDEBAR

Opera GX's sidebar contains quick shortcuts to music players, Twitch streaming, messengers, and more.

### B BUILT-IN TUNES

You can pin any sidebar item, including Apple Music, for easy access while you're browsing.



### C EXTRA SETTINGS

You can add messengers such as WhatsApp and Telegram from here, among other settings.

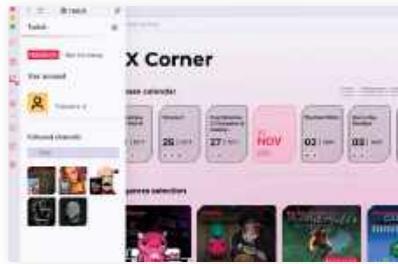
### D PERSONALIZE THE APP

Use this menu to change the app's theme, toggle ad blockers, enable background music, and more.

## HOW TO Get to grips with Opera GX



**1 Instant messaging**  
At the bottom of the Opera GX sidebar, click the “...” button. Under Messengers, click the button next to one you want to install (or “Show more” for extra apps). Click the messenger icon in the sidebar, and log in.



**2 Twitch support**  
Click the Twitch icon in the sidebar and follow the on-screen prompts to log in to that. You’ll now see accounts you follow in the sidebar. Click one to start watching, or click the cog to adjust Twitch sidebar settings.



**3 Music players**  
Below the Twitch icon, click the player button. Here, you can connect to Apple Music, Spotify, Deezer, and more. You can use more than one at once – simply click the music app dropdown in the top left to switch.



**4 Get a new look**  
Click the settings button in the top right. At the top, you can choose a light or dark mode. There are a range of themes that can be tweaked by clicking Configuration. You can also add custom wallpapers to new tabs.



**5 Ambient sounds**  
Scroll down the settings to the Features section. Here you can enable browser sounds, such as a typewriter effect when you enter text, and a range of ambient background music. Click Configuration for more options.



**6 Privacy settings**  
Below Features, you’ll find Privacy & Security. From here you can enable Opera GX’s built-in ad and tracking blockers. There’s also a shortcut to its VPN, and a one-click way to clear your browsing data.



**7 GX Corner**  
In the app’s top left is a controller icon for the GX Corner. This is like a start page for games, with info on upcoming game releases (filtered by platform, including Mac), videos, free games, deals, and more.



**8 GX Control**  
Returning to the left sidebar, click the speedometer icon. This is GX Control, which contains toggles and sliders to limit Opera GX’s memory, network, and CPU usage. You can also kill resource-hogging browser tabs.



**9 GX Cleaner**  
Click the broom icon in the sidebar to open GX Cleaner. This clears various browsing data, such as the cache, cookies, browsing history, and more. You can customize it or choose from the Min, Med, or Max presets.



# Manage windows with Warp

Save custom layouts and launch them with a keyboard shortcut

## REQUIRES

Warp (\$5.99), macOS 12 or later

## YOU WILL LEARN

How to arrange and save window layouts using Warp

## IT WILL TAKE

5 minutes



**IF YOU'RE A** Mac power user, you're probably a little dissatisfied with Apple's own window management tools.

Sure, there's Split View and a few options accessed from an app's green traffic light button, but there's not much customization and you're basically stuck with the limited options Apple gives you.

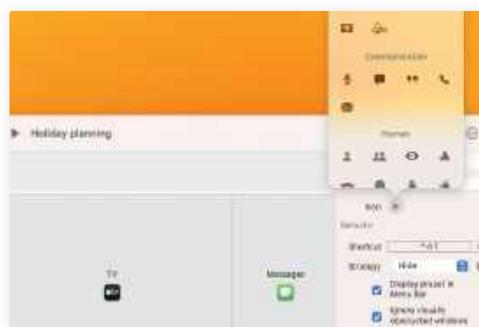
Or are you? There's a nifty little app called Warp ([warpmac.com](http://warpmac.com)) that can fix

that problem. It lets you save window layouts and then launch them with a keyboard shortcut, saving you the hassle of constantly rearranging your apps. It works with both Split View and regular app resizing, spans across multiple monitors, and persists across restarts. It's customizable too, and you can assign icons, names, and custom shortcuts to your layout presets.

Better yet, you can also use Warp in conjunction with other window management apps like BetterSnapTool and Magnet. This will let you arrange windows in specific positions (such as the top-left 25% of the display), giving you even more control. Once your windows are ordered, you can just save the arrangement in Warp.

It's all wrapped up in a lightweight app that lives in your menu bar. It's out of the way until you need it, and when you do want it to spring into action, all your layouts are just a keyboard shortcut away.

**ALEX BLAKE**



Warp has a few handy customization options, such as assigning icons and dictating how other apps behave.

## HOW TO Customize your window layouts



### 1 Create preset

Open Warp and click the “+” button, or click the Warp menu bar icon, then click Create Preset. Arrange your app windows how you like, then click Save Preset. You can manually arrange windows or use Split View.



### 2 Set it up

In Warp's main window, you can give your preset a name, icon, and custom keyboard shortcut. The Strategy menu lets you hide, ignore, or close open app windows that aren't part of your saved layout.



### 3 Launch your layouts

To launch a saved preset, just press its keyboard shortcut combination or choose it from Warp's menu bar icon. Alternatively, press the play button at the top of Warp's main window to launch the selected preset.



### 4 Restore after a restart

If the apps stored in a layout are closed when you launch the preset, Warp will open and arrange them into their saved positions. Window positions and sizes persist when you restart your Mac, as you'd expect.

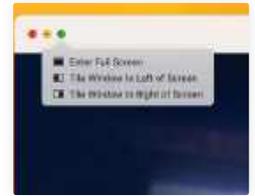


### 5 Rearrange presets

In the left-hand sidebar, you can drag and drop your presets to rearrange them into an order that suits you best. You can also Ctrl-click a preset in the sidebar and remove it by clicking Delete in the context menu.

### 6 Multiple monitors

If you have multiple monitors attached to your Mac, Warp can arrange your app windows across them. Just create a layout as normal, with apps spanning across your monitors, and save the preset when finished.



## JARGON BUSTER

Split View is Apple's window management system. It lets you split apps across your screen, but remains somewhat limited in the layouts it offers.

## GENIUS TIP

If you use multiple monitors, you can choose which one(s) your layouts appear on by clicking the Displays button when creating a new preset.





# Sleep better with your Apple Watch

Your Watch can track your sleep and stop apps from waking you up

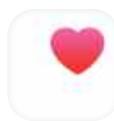
**REQUIRES**  
watchOS 9

**YOU WILL LEARN**  
How to get the most from Sleep Focus and sleep tracking

**IT WILL TAKE**  
10 minutes

**GENIUS TIP**

Sleep tracking and charging your Watch aren't compatible, but we've got the solution: charge when you get up and it'll be ready when you are.



**SLEEP MATTERS, BUT** there's more to it than how long you spend in bed. The quality of your sleep is what really counts, and your Apple Watch can help you work on that.

There are two key ways in which your Apple Watch can help you sleep more soundly. The first is Sleep Focus, which enables you to set a bedtime schedule and customize what your Watch does through

the night (or day, if you're on shifts) — so for example, you can decide what your Watch should display and whether you prefer a blanket Do Not Disturb, or if you want certain apps to notify you through the night.

### UNDERSTANDING YOUR SLEEP PATTERNS

The second is sleep tracking. Every night your Apple Watch uses its microphone, its accelerometer and its heart rate monitor to record how you sleep and how long you are in each of the key sleep modes: awake; REM, which is when your eyeballs are moving around and you're often having dreams; core sleep, also known as light sleep; and deep sleep. It then shows the results on a daily graph on your Watch; you can see weekly, monthly and annual data in the Health app on your iPhone.

You can use that data to identify patterns, especially if you also look at other data in your Health or related apps: for example, you might sleep really badly at the weekends because of your social whirl or noisy neighbors, or you might sleep better on days that you exercise.

**CARRIE MARSHALL**

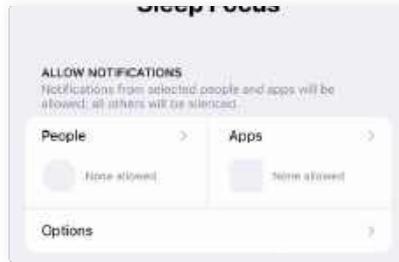


It knows when you are sleeping and knows when you're awake: you get a cheery good morning when you get up.

## HOW TO Use your Apple Watch's Sleep features



**1 Track sleep**  
Visit the Watch app on your paired iPhone. Tap Sleep, and you should see the screen shown here. Make sure the option "Track Sleep With Apple Watch" is selected if you want to use sleep tracking.



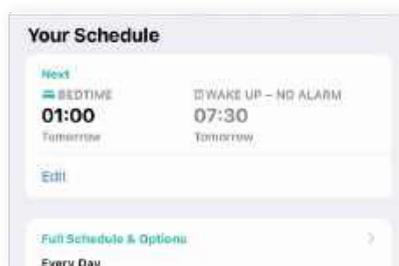
**2 Set Sleep Focus**  
Tap Manage Sleep Focus in Settings to edit the Focus Mode for when you go to bed. By default no apps or people can contact or notify you, but you can change this if you prefer – if you're on call, for example.



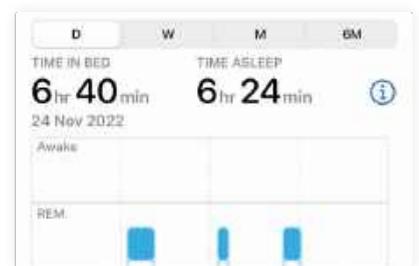
**3 Pick a face**  
You can set specific Lock Screens for your iPhone and Watch while Sleep Focus is active, useful if you're likely to take a bleary-eyed look at the Watch in the middle of the night. This option only shows installed faces.



**4 The Sleep Screen**  
If you prefer you can click on Sleep Focus > Options and select the default Sleep Screen, which removes almost everything but the time from your Apple Watch display when Sleep Focus is active.



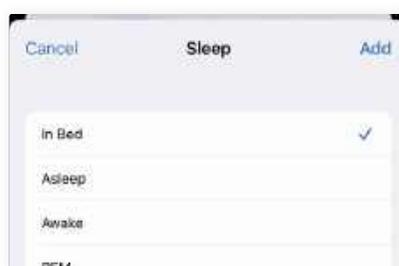
**5 Set your schedule**  
You can create a sleep schedule in your iPhone's Health app. This will automatically activate Sleep Focus at the time(s) you specify, and you can also use it to set regular alarms to get you out of bed for school or work.



**6 See your sleep**  
Wear your Apple Watch to bed. In the morning, you'll be able to see your sleep data in the Health app as well as on your Apple Watch. The tracking records four different sleep states: awake, REM, core and deep.



**7 Get more info**  
The Health app records more than just your sleep cycles. It also tracks your heart rate and your respiratory rate throughout your sleep, enabling you to get a better picture of your body's activity in different stages.



**8 Add your own**  
Don't worry if you forget to wear your watch to bed: your iPhone can still record the overall time you spent in bed, albeit without information about your different sleep stages. You can add your own data manually in Health.



**9 Try other options**  
Apple's own Sleep app isn't the only option for your Apple Watch, and if you scroll down in the Health app you'll see a selection of Health-compatible apps with links to the appropriate page in the App Store.

# Work with masks and color

Produce creative color effects using selection tools and masks

## REQUIRES

iOS 13 or later,  
Adobe Lightroom  
app (Free, IAPs)

## YOU WILL LEARN

How to select a person  
and desaturate their  
background; adjust an  
individual color's hue,  
saturation and lightness

## IT WILL TAKE

10 minutes



**ADOBE LIGHTROOM IS** a powerful image organizing and editing app that runs on iOS or macOS. In this tutorial, we'll focus on the iOS version to demonstrate how you can creatively edit images from the convenience of your device's display.

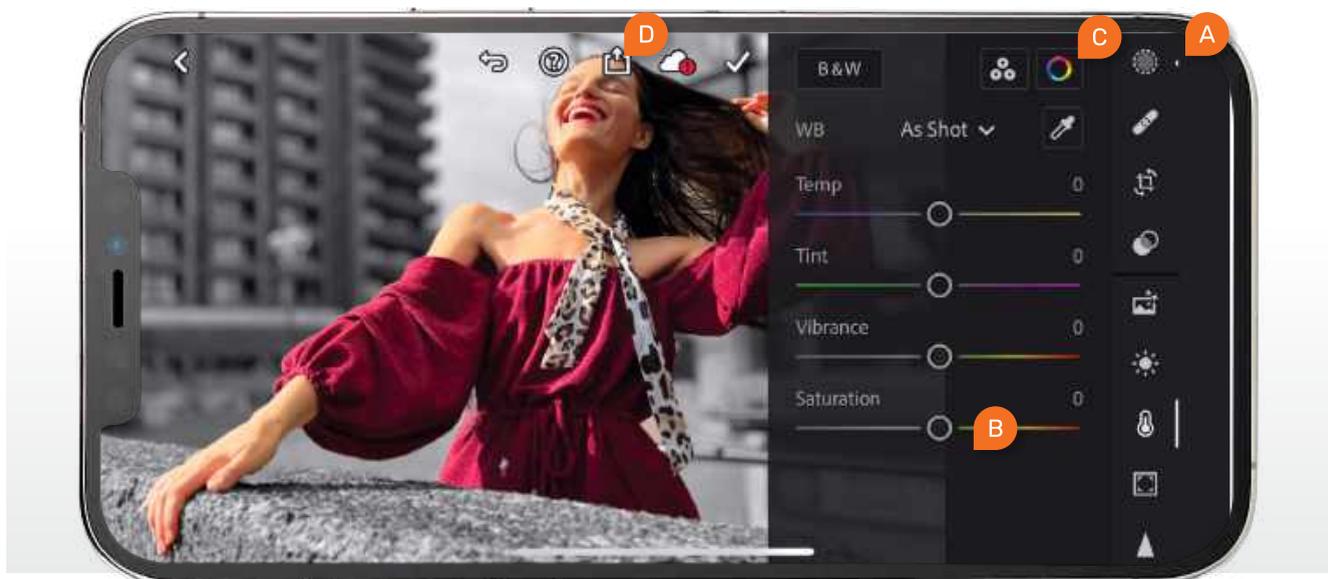
You can use most of Lightroom's tools on your iOS device for free, however the AI masking and selection tools in this walkthrough require you to have a Creative Cloud Photography Plan subscription. Download Adobe Lightroom for your iPhone or iPad, sign in using your Apple ID and access Lightroom's capture, organization and sharing features. You can use plenty of Lightroom's editing features for free too (on a relatively new

iOS device running iOS 13 and above).

When holding your device vertically, you'll see handy text labels next to each tool's icon. Here, our image is landscape so we've edited in Lightroom on a horizontally held iPhone 14, but feel free to rotate your device vertically, especially when you need to identify a tool's icon.

In this tutorial, we'll show you how to quickly create and use masks to isolate a person from their background. You can then desaturate the background so that the eye is drawn to the colorful person. We'll also make creative adjustments to the shot's remaining colors by changing their hue, saturation and luminance (brightness) values via Lightroom's powerful Color Mix tool. **GEORGE CAIRNS**

## QUICK LOOK Perform speedy photo edits



A

### MASKING

The masking icon enables you to access the AI-enhanced Select Subject tool. This selects and masks a person in seconds.

B

### DESATURATE

Once you have inverted the person's mask you can desaturate the background by dragging the Saturation slider to the left.

C

### COLOR MIX

Tap here for Color Mix tools. These enable you to sample a color and drag to alter its Hue, Saturation or Luminance.

D

### SHARE

You can tap here to share your creatively processed shot on social media or save it to your device's Camera Roll.

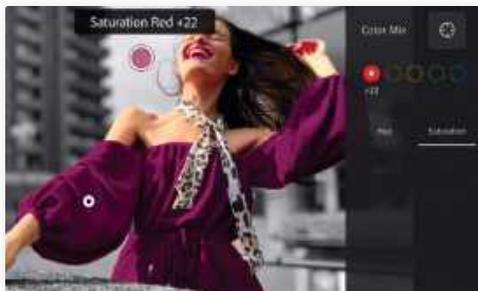
## HOW TO Use masks to make a pic pop



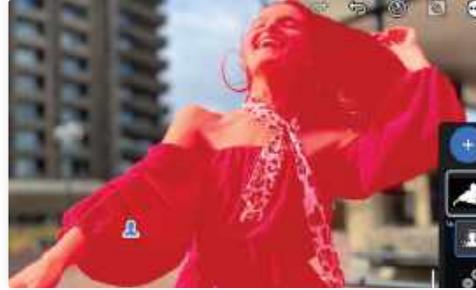
**1 Import photo**  
Launch Lightroom. Tap on the Library icon at the top left, then tap the Add Photos icon at the bottom right. Tap From Camera Roll then select a photo in your iPhone's Photos library. Tap Add to bring into Lightroom.



**3 Desaturate background**  
Tap the black and white mask icon (next to the "...") and choose Invert Mask. The person returns to full color and the overlay selects the background. Click the Color icon. Drag Saturation to  $-100$  to desaturate it.



**5 Adjust clothing**  
Tap Luminance. Tap to sample the now purple dress and swipe down to darken the clothing. The subject's colored lips also take on a deep purple hue. Tap Saturation and swipe up on the dress to create richer colors.



**2 Create subject mask**  
Tap the circular Masking icon at the top right. Tap the blue "+" and choose Select Subject. Lightroom uses AI to detect the subject. A red mask appears over the person in the shot to indicate the selected area.



**4 Target a color**  
Tap the check mark. The subject is now in color while the background is monochrome. Tap the Color icon, then Mix. Tap the Crosshair icon. Tap on the dress and swipe down to change the hue of the sampled magenta.



**6 Enhance skin tones**  
Tap Luminance. Tap to target the skin and swipe down for a sun-kissed look. Tap Saturation and swipe up to give the subject more of a tan. The colors now contrast even more from the black and white background.



### JARGON BUSTER

Lightroom enables you to adjust the Luminance of any color that you tap to sample. Luminance is just another word for brightness. Drag up to brighten a sample color or down to darken it.

### GENIUS TIP

When importing from Photos into Lightroom you can browse to a particular Photos Album to find specific shots more quickly and easily than scrolling through the Camera Roll.



# Enjoy a better ebook experience

Apple's Books app has had a few tweaks in iOS and iPadOS 16. Here's how to use them

**REQUIRES**  
iOS 16/iPadOS 16

### YOU WILL LEARN

How to read a book on your Mac; use the new audiobook player; purchase ebooks; and customize the reading experience

### IT WILL TAKE

As long as you like



**THE BOOKS APP** got a minor refresh with the move to iOS 16 and iPadOS 16. The audiobook player has also been revamped, with a new interface and a mini-player which makes it easier to listen to your book while doing other things on your iPhone or iPad. The interface has had a brush-up too, with more customization options and the ability to choose reading themes for different environments and moods.

As always, you can use the Books app to purchase reading material directly from Apple, and download samples of books before purchase. You can also add books obtained elsewhere, as long as they're in a supported format, and organize them in your library. Here's a guide on how to get the most from Apple's amazing ebook experience. **IAN OSBORNE**

**A**  
**MULTITASKING MENU**

Tap the "..." to bring up a menu that lets you switch between Full Screen, Split View or Slide Over views.

**B**  
**OPEN AND CLOSE**

There's usually an "X" icon here for closing the book, but it disappears when the options menu is open.

**F**  
**OPTIONS**

Tap the dots-and-lines icon in the bottom-right corner to open this options menu.

**G**  
**BOOKMARKS & HIGHLIGHTS**

How many bookmarks and highlights you've added to the book; tap it to see them.

**H**  
**SEARCH**

Select here for a search field where you can search for specific words and phrases in the book.

**I**  
**THEMES & SETTINGS**

Opens a window where you can change the font, text size, page color and more.

## HOW TO Get more from the Books app



**1 Browse audiobooks**  
To buy audiobooks in the Books app, in the sidebar on the left (tap the top-left icon to reveal it if you're holding the iPad in portrait mode), tap Audiobook Store. Select Browse Sections (top right) for useful options.

**2 Make a purchase**  
Find an audiobook you think you might like, and tap it. You can buy it directly from your iPad using the Buy button, tap Want To Read to add it to your wish list, or tap Preview to download a sample of the book for free.

**3 Audiobook player**  
Tap Audiobooks in the Library section of the sidebar, and tap one to play it. The audiobook player gives more controls and options than before, and you can minimize it by tapping the line icon at the top of the screen.



**JARGON BUSTER**

An ebook is an electronic book that is read on an ebook reader or app. The Books app can use ePub books, titles created in Pages, PDFs, and audiobooks in MP3, AAC and audible.com formats.

**GENIUS TIP**

The usual method of importing books to your Books app is to connect your iPad to your Mac and use the Finder, but you can email it to yourself instead. Then, in the email, tap and hold the book's icon, and choose Share from the pop-up. Then in the next window, tap Books.

**C OPEN/CLOSE CONTROLS**  
Tap anywhere on the screen to open and close the controls.

**D TURN PAGE**  
Tap on the right-hand side of the screen to turn the page. Tap on the left of the screen to go back a page.

**E CONTENTS**  
This shows how far you are through the book. Tap it to open a chapters list.

**C**

**D**

**E Contents • 1%**  
**F**

**F**

**J SHARING**  
Here you can share a link to the book in the Books app, using the usual methods.

**K BOOKMARK PAGE**  
Tap here to bookmark a page, and again to remove the bookmark.

**G Bookmarks & Highlights 2**  
**H Search Book**  
**I Themes & Settings**  
**J**

**K**



**4 Themes & Settings**  
Open the Themes & Settings window, and you're shown several preset options. Tap one to choose it. A theme sets the font, text size, and "paper," that is, the background on which the text sits. The themes can also be customized.



**5 Customize themes**  
Choose a theme to customize and tap Options. You can then change the font, make the text bold and alter things like Line, Character, and Word Spacing, and text justification by turning on Customise.



**6 Text size/columns**  
The options with the Aa icon make the text smaller or larger respectively. The small button to their right switches between single- and double-column view when in Landscape Mode, and you can adjust the brightness.



Create



# Create routes with stop-offs

Factor in stops, or direction choices, along your journey in Apple Maps

**REQUIRES**  
iOS 16

**YOU WILL LEARN**  
How to use Maps to plan routes with multiple stops

**IT WILL TAKE**  
30 minutes



**APPLE'S MAPS APP** continues to improve and is evolving into a very useful tool for planning journeys and getting directions while you're on the move.

Whether you're planning a trip abroad and want to know which sights you should visit and restaurants you should eat at, or need to find the quickest, least stressful route to a job interview, Maps can help you out with this.

One of the new features in Maps in iOS 16, iPadOS 16 and macOS Ventura is the

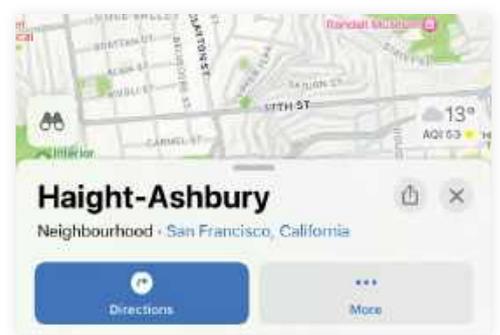
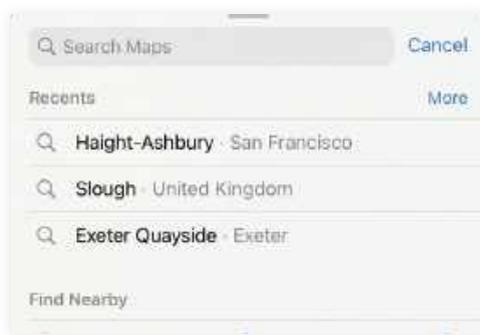
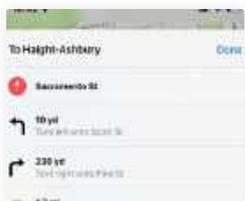
ability to add stops to a driving route. So, for example, if you have a long drive across California planned, you could decide to add a stop at Fresno. We'll show you how to do that.

Planned stops are only available for driving routes. However, once you've added a stop in a driving route, you can change transport mode and see directions on, say, public transport, to your first stop. You'll have to create a new route from there to your next stop or final destination, though. **KENNY HEMPHILL**

## HOW TO Add stop-offs to your routes

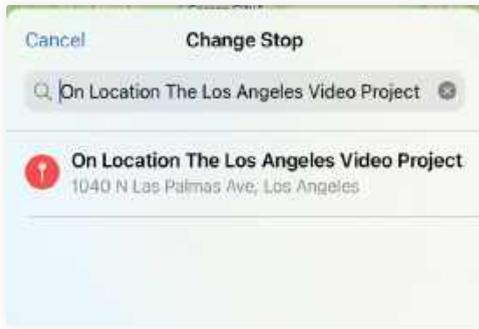
**GENIUS TIP**

To see the detail of a route as a list, tap the journey time of the route and you'll see turn-by-turn directions to your stops and destination.

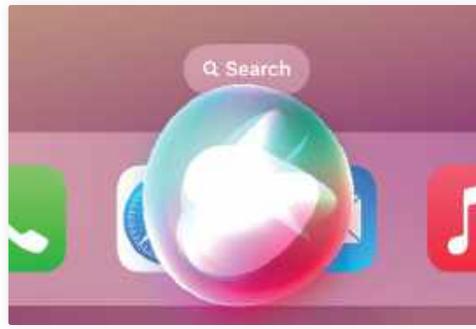


**1** **Locate your destination**  
To start planning a route, we first have to decide where to go. Open Maps, swipe up to see a list of Siri Suggestions, Favorites, and places you've recently searched for. If one of those is where you want to go, tap it.

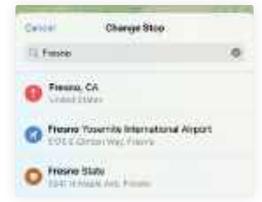
**2** **Search for a location**  
If the place you're traveling to isn't in Suggestions, Favorites, or Recents, tap the search bar and start typing its name. When you see it appear in the results below, tap it to set it as your destination for directions.



**3 Set your starting point**  
 The default starting point is your current location. If you want to start from somewhere else, tap My Location and type the name of where you want to start your journey. When the exact location appears, tap it.

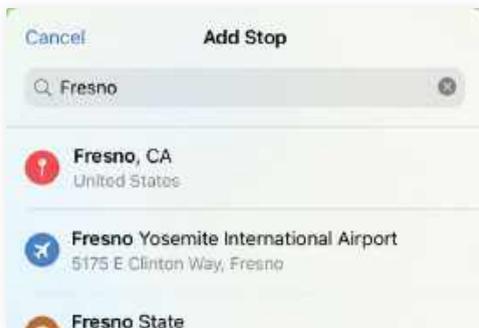


**4 Ask Siri**  
 If you don't want to type, or can't because you're driving, use Siri. With Hey Siri enabled, say "Hey Siri" then "Show me how to get to..." or "Plan a route to..." Be specific with the destination and Maps will show directions.

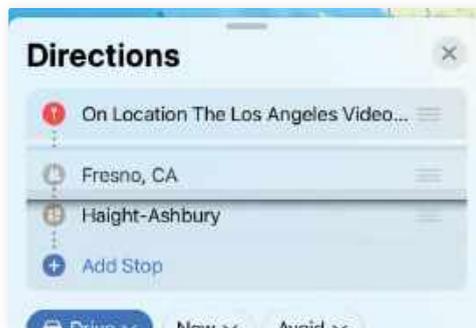


**JARGON BUSTER**

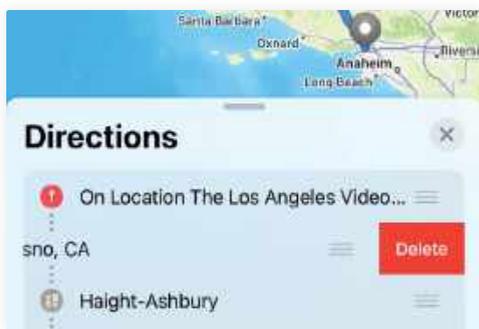
A stop doesn't have to literally be somewhere you break your journey. You can use it to ensure your route takes you via a location.



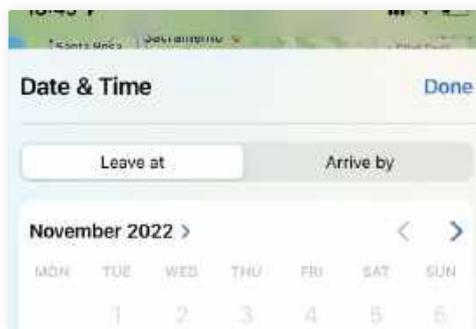
**5 Add a stop**  
 You now have a direct route from your chosen start point to your destination. Tap Add Stop then type the name of the place you want to stop at into the search bar, and tap it when it appears in the list of results.



**6 Change the order**  
 By default, when you add a stop, Maps places it at the bottom of the list, routing you via your final destination to the stop. To rectify this, tap and hold on the three lines next to the stop and drag it above the destination.



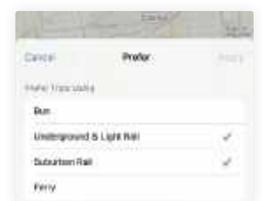
**7 Delete a stop**  
 Once you've added one or more stops to your route, you can delete any or all of them if plans change. From Maps' main screen, tap the route under Recents, then swipe left over the stop you want to remove and tap Delete.



**8 Change the start time**  
 The day and time you travel can affect the route Maps plans. To specify a date and time, tap Now, next to the mode of transport, and use the calendar to set a date. Tap time and use the wheels to set a departure time.

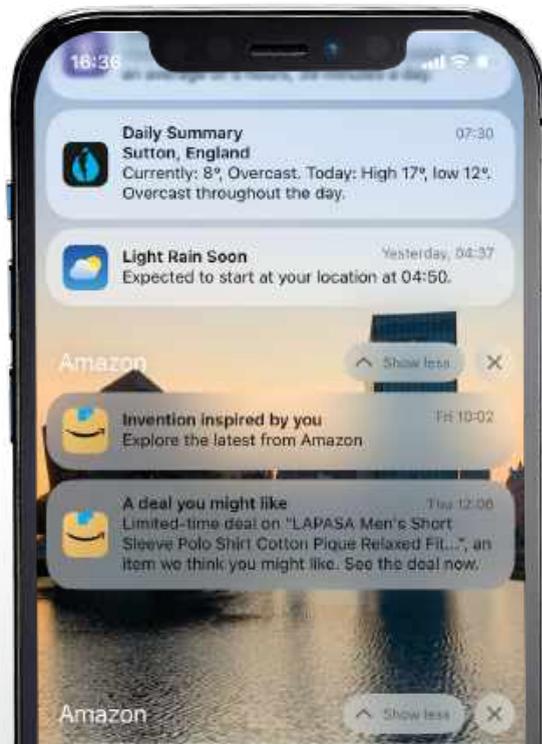
**GENIUS TIP**

To switch to public transport, tap Drive then Public Transport. Tap Prefer and choose your preferred modes of transport to your first stop.





Create



# Navigate your notifications

Discover the way notifications now work on your Lock Screen in iOS 16

## REQUIRES

iOS 16

## YOU WILL LEARN

How to customize the way notifications are displayed

## IT WILL TAKE

20 minutes



## GENIUS TIP

Turn off previews for Messages notifications when your phone is locked to prevent thieves seeing two-factor authentication codes.



**ONE OF THE** most striking new features in iOS 16 is the new Lock Screen. You can customize it in lots of different ways, including by adding widgets, and also create multiple Lock Screens so you can easily switch between them.

The addition of widgets to the Lock Screen has had a knock-on effect on notifications. In order to avoid them clashing with the widgets above and below the clock, notifications now slide up from the bottom of the screen, instead of down from the top. And you can now choose how to view them. There are three options: List, Stack, and Count. List displays notifications as we are used to them, one above the other. Stack displays them tucked behind the front-most notification, a bit like desktop stacks in macOS, and Count doesn't show any notifications at all, just a number at the bottom of the Lock Screen that represents the number of notifications.

While the way they are displayed on the Lock Screen has changed, notifications

themselves still work the same way. You are in control of which apps can send notifications, whether they appear everywhere or only in Notification Center, and whether they display a preview of their content.

We'll show you how to control the way notifications are displayed in iOS 16, as well as remind you how to manage them wherever they appear. **KENNY HEMPHILL**



Notifications now slide up from near the bottom of the screen instead of sliding down from the top.

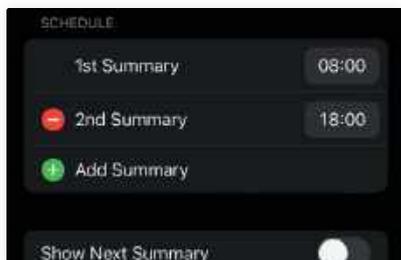
## HOW TO Control your notifications



- 1 Choose display**  
Tap Settings > Notifications. At the top you'll see three options: Count, Stack and List. Tap the one you want to use for notifications on the Lock Screen. Swipe up to exit Settings and return to the Home Screen.



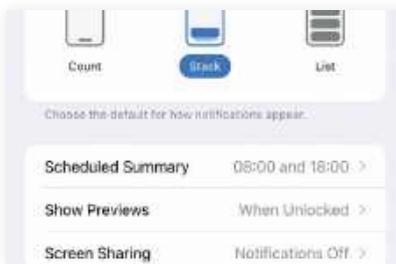
- 4 Manage notifications**  
On the Lock Screen, swipe left over a notification and tap Options. Choose from the menu to turn off notifications for that app, mute them for a period or go to Settings to change more options.



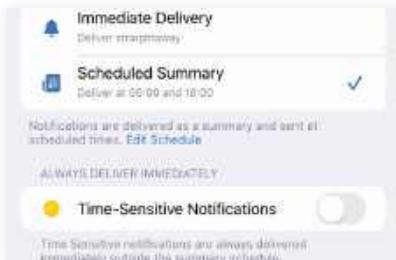
- 7 Set schedule**  
You'll see two summaries with times against them. Tap the time to set it. To delete the second summary, tap "-" or to add a third summary, tap "+" and set a time for it. Tap Turn on Notification Summary.



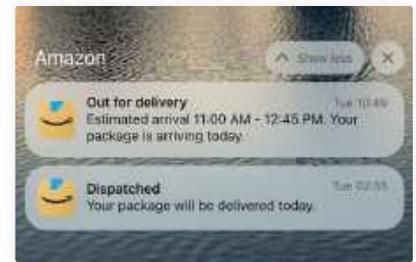
- 2 View notifications**  
From the Home Screen, swipe down from the top left to see the Lock Screen. New notifications will be displayed according to what you specified in step one. Swipe up from near the bottom to see more.



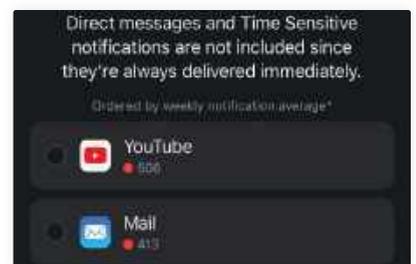
- 5 Schedule summary**  
Instead of having all notifications appear when they are sent, you can choose to see a summary at a set time, to avoid being disturbed frequently. Tap Settings > Notifications > Scheduled Summary.



- 8 Time-sensitive**  
By default, iOS ensures that time-sensitive notifications are delivered immediately, regardless of scheduling. To change that, go to Settings > Notifications, tap an app and toggle off Time-Sensitive Notifications.



- 3 Show more or less**  
To hide notifications, swipe down from near the top of the screen. To see all notifications from a specific app, tap on the front-most one and swipe up. Tap "Show less" to stack them again, or tap "X" to delete them.



- 6 Add apps**  
Toggle Scheduled Summary to on. Read the information on the screen, then tap Continue. Tap the box next to the apps you want to include in the summary, then tap Show More. Tap all the apps to include, then Add Apps.



- 9 Manage Focus**  
In Settings > Focus, tap a focus. Tap apps, then choose "-" next to an app to prevent it sending notifications while that focus is active. Or, tap "+" and select an app to add it to the allowed notifications for that focus.

# MagSafe

There's more to MagSafe than just a magnetic cable



## YOU WILL LEARN

The features and capabilities of Apple's MagSafe technology

## MAGSAFE ALLOWS THE CABLE TO PULL AWAY WITHOUT CAUSING DAMAGE



## GENIUS TIP

If you miss the functionality of MagSafe on your MacBook, it's possible to retrofit "MagSafe-like" functionality with a magnetic adapter. Chargeasap sells a 100W PD USB-C charging cable (\$55) with a magnetic "breakaway" connector at the laptop end.



**APPLE HAS AN** annoying habit of removing popular or useful features from its products — often just so it can make them a little bit slimmer and more elegant. The headphone socket on the iPhone and the HDMI port on the MacBook Pro have both been ditched in recent years so Apple can shave a couple of millimeters off the size of the device.

But, every now and then, Apple acknowledges that people actually liked these features and will then triumphantly declare that it's bringing the feature back. There was rapturous applause when Apple announced that the 14-inch and 16-inch MacBook Pro models introduced in 2021 would get their HDMI ports back — and the new MacBooks also saw the return of another popular feature, in the form of the MagSafe charging port.

Another factor in the return of MagSafe was the introduction of the Qi wireless charging technology for smartphones and other mobile devices. Apple likes to do

Apple's MagSafe Duo Charger is designed to charge the iPhone, along with AirPods or an Apple Watch.



things its own way, so it introduced MagSafe on the iPhone 12 to provide its own superior form of wireless charging. Some AirPods models now include MagSafe charging cases too. And, of course, Apple never misses an opportunity to sell premium accessories, and now makes its own range of MagSafe cases and chargers for iPhones, AirPods and the Apple Watch. This has also given rise to a small industry of MagSafe charging devices from third-party companies such as Belkin and Twelve South, which are often cheaper than Apple's own accessories, as well as providing a wider range of features — including many "multi-charger" devices that can charge an iPhone, AirPods and Apple Watch all at the same time.

## MAGSAFE AND SOUND

MagSafe actually had quite humble beginnings, and was introduced as a new safety feature on the earliest MacBook Pro models back in 2006. Many people have had accidents when they tripped over their laptop's charging cable, often causing major damage if the laptop fell off a table or desk. Sometimes, people might also forget to unplug the charging cable when they picked the laptop up, causing the cable or the connector to snap and requiring a costly replacement.

As the name implies, MagSafe used a new type of magnetic connector for the power cable. This held the cable in place while the MacBook was charging, but also allowed the cable to pull away without causing damage if you tripped

## > MADE FOR MAGSAFE

MagSafe was designed specifically for Apple devices, however, it is also compatible with the Qi wireless charging technology that is now widely used by non-Apple smartphones, earbuds and mobile handsets from many other companies.

You can charge an iPhone or AirPods on any standard Qi charging device, such as a Qi charging dock or stand. You can also use Apple's MagSafe charging devices, such as the MagSafe Duo Charger, with non-Apple devices, such as an Android smartphone that



has Qi. Because of this, many Qi charging devices will carry a label that says “MagSafe Compatible” or something similar. But there’s a difference between being “MagSafe Compatible” and “Made For MagSafe”, which is the term used for charging devices that officially support Apple’s MagSafe technology. For a device to be labeled “Made For MagSafe” it has to be

approved by Apple and meet specific technical standards for the MagSafe technology, including the ability to provide wireless charging with up to 15W power, compared to 7.5W for standard Qi devices.

over the cable or forgot to unplug it before trying to move the laptop.

It was a simple and elegant solution to a problem that many people experienced, and was a popular feature on the MacBook range for many years. The original MagSafe connector on the MacBook was rectangular, while the charging cable had an L-shaped connector that ran along the side of the MacBook. That was updated in 2012, with MagSafe 2, which had a thinner connector to match the more streamlined design of the latest Mac laptops, while the charging cable simply stuck straight out from the side.

However, Apple gradually started to remove the MagSafe connector from the MacBook range between 2016 and 2019, as it began to introduce the new multi-purpose USB-C connectors instead. But while USB-C can be used for charging, it doesn’t stop you tripping over the cable, and there was an outcry from many Mac users who wanted the extra safety of the old MagSafe connectors. And then in 2021, Apple announced that a new version of MagSafe (dubbed MagSafe 3) would make a comeback on the new MacBook Pro. (It generally takes Apple a couple of years to admit that it got something wrong — so expect an update to the Apple Studio Display sometime in 2024.)

The new MacBook models can also be charged via their USB-C ports, and that’s

a really handy option for many users. But, as well as its obvious safety features, MagSafe 3 also provides more power than USB-C — up to 140W for the 16-inch MacBook Pro — as well as a “fast charge” mode that can charge the MacBook from 0% to 50% in just 30 minutes. And, of course, the MagSafe 3 connector is thinner as well.

### MAGIC CIRCLES

But, in fact, the return of MagSafe actually began in 2020, with the iPhone 12. As well as supporting the Qi wireless charging technology, Apple used MagSafe to place a circular ring of magnets around the iPhone’s internal charging coil. This holds the iPhone safely in place while it is charging, and also helps to make sure that the charging coil inside the iPhone is precisely aligned with the charging device, in order to get the best power transfer while charging.

Apple now makes a number of its own MagSafe accessories, ranging from the simple MagSafe Charger (\$39) to the Duo Charger (\$129), which can charge an iPhone alongside a set of AirPods (in their charging case) or Apple Watch. And there are third-party companies, such as Belkin, which make their own accessories too — although it’s always wise to check if any non-Apple accessories are fully compatible with MagSafe. **CLIFF JOSEPH**



### KEY FACT

The Apple Watch is sold with a USB charging cable, and also supports wireless charging — but it’s a little temperamental about the charging devices it works with. Apple’s own MagSafe Charger isn’t compatible for wireless charging, so you’ll have to opt for the more expensive Duo Charger, or shop around for third-party devices that support MagSafe charging.



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