

INSIDE: WHAT HAPPENED TO THE APPLE WATCH SERIES X?

# Macworld

NOVEMBER 2024

REVIEW

## iPhone 16 Pro

APPLE TAKES ITS  
TOP-OF-THE-LINE  
PHONE EVEN  
HIGHER



**APPLE TV HACKS**  
UNLEASH YOUR  
TV EXPERIENCE



**My entire  
life changed**

when I took  
a chance and  
got my high  
school diploma  
at age 22.

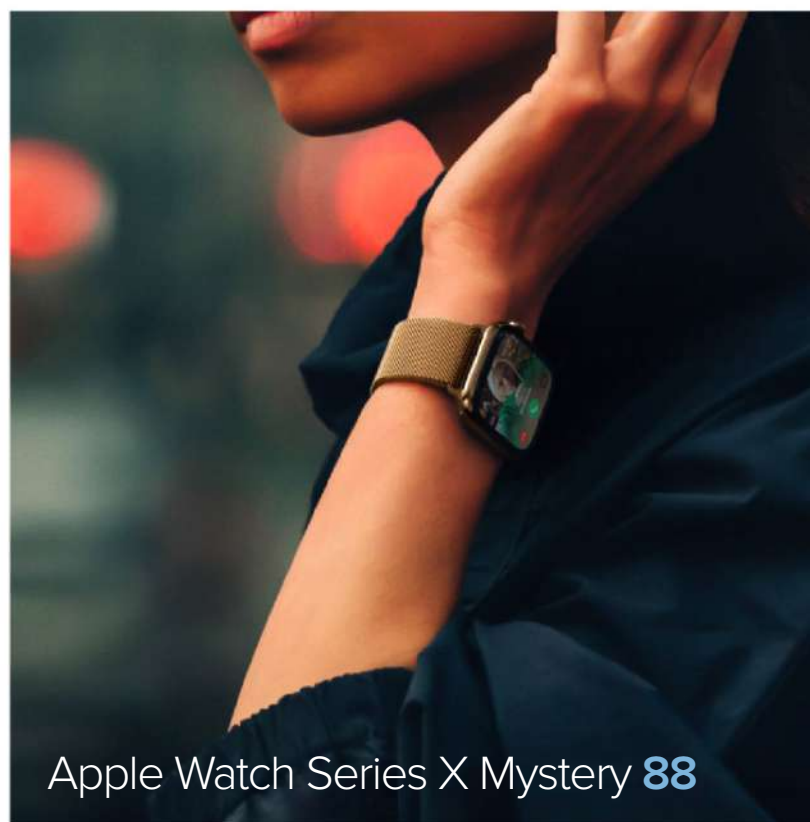
*Ariel*

Find free adult education  
centers near you at  
**[FinishYourDiploma.org](https://FinishYourDiploma.org)**.



DOLLAR GENERAL  
LITERACY  
FOUNDATION

# NOVEMBER 2024 CONTENTS



---

## MACUSER

---

6 reasons why you need to upgrade to macOS Sequoia **7**

iPhone Mirroring lets you access your iPhone on your Mac **11**

This new Safari feature lets you snap away ads like Thanos **16**

These 10 Apple event keynote moments changed everything **19**

MacUser Reviews **27**

Hot Stuff **39**

---

## iOSCENRAL

---

The silliest iPhone apps of all time **43**

Why you should skip the M4 Macs and switch to an iPad Pro instead **48**

Everything you can do with the iPhone 16's Camera Control button **53**

Apple's free Passwords app can replace your paid password manager (kinda) **55**

iOS 18: Change app color icons **59**

iOS Central Reviews **63**

---

## WORKINGMAC

---

Carbon Copy Cloner: A handy utility that's well worth a shot **95**

Readdle PDF Expert review **99**

NordPass review **102**

Gemini 2: Useful app that helps keep your duplicates in order **106**

---

## PLAYLIST

---

Apple TV hacks: These 5 tips and tricks are game changers **111**

AirPods 4 with ANC review **115**

Sonos Roam 2 review **121**

---

## HELPDESK

---

Don't buy locked Apple hardware when shopping for used gear; control the brightness of your iPhone or iPad; decipher storage space between your Mac and iCloud; remove a firmware password for an Intel Mac **125**

# Macworld

**EDITORIAL DIRECTOR** Matt Egan

**EDITOR IN CHIEF, CONSUMER BRANDS** Jon Phillips

**DESIGN DIRECTOR** Robert Schultz

**EXECUTIVE EDITOR** Michael Simon

## Editorial

**SENIOR EDITOR** Roman Loyola

**STAFF WRITER** Jason Cross

**SENIOR CONTRIBUTORS** Glenn Fleishman, Rob Griffiths,  
Joe Kissell, Kirk McElhearn, John Moltz, Dan Moren, Jason Snell

**COPY EDITOR** Gail Nelson-Bonebrake

## Design

**ART DIRECTOR** Steve Traynor

**DESIGNER** Rob Woodcock

## Advertising

**SALES INQUIRIES** [www.foundryco.com/contact-us/](http://www.foundryco.com/contact-us/)



**CHAIRMAN OF THE BOARD, INTERNATIONAL DATA GROUP**

Walter Boyd

**CEO, IDG**

Genevieve Juillard

---

**HOW TO CONTACT MACWORLD SUBSCRIPTION SERVICES**

---

Access your subscription account online—24 hours a day, 7 days a week—at <http://go.macworld.com/mwcs>. You can use online subscription services to view your account status, change your address, pay your bill, and renew your subscription. To get answers to frequently asked questions, visit [macworld.com/faq](http://macworld.com/faq). To report a missing issue or other problem, please email [support@macworld.zendesk.com](mailto:support@macworld.zendesk.com).

To start subscribing, visit [macworld.com/subscribe](http://macworld.com/subscribe).

**U.S. MAIL** Macworld Subscriptions Department  
501 2nd Street, Suite 650, San Francisco, CA 94107  
(If you are writing about an existing account, please include your name and the email address at which you subscribe.)

**EMAIL** [support@macworld.zendesk.com](mailto:support@macworld.zendesk.com) (Send your full name and the email address at which you subscribe.)

The one-year (12-issue) subscription rate is \$34.97; the two-year rate, \$59.97; and the three-year rate, \$79.97. Checks must be made payable in U.S. currency to *Macworld*. Please allow 3 to 6 weeks for changes to be made to an existing subscription.

---

**MACWORLD EDITORIAL**

---

The editors of *Macworld* welcome your tips, compliments, and complaints. Some stories and reviews from past issues can be located at [www.macworld.com](http://www.macworld.com). We are unfortunately unable to look up stories from past issues; recommend products, or diagnose your Mac problems by phone or email. You can contact Apple toll-free, at 800/538-9696, or visit the company's website, at [www.apple.com](http://www.apple.com).

---

**HOW TO CONTACT MACWORLD STAFF**

---

Our offices are located at 501 Second Street, Suite 650, San Francisco, CA 94107; phone, 415/243-0505; fax, 415/512-7130. *Macworld* staff can be reached by email at [firstname\\_lastname@idg.com](mailto:firstname_lastname@idg.com).

---

**BACK ISSUES OF MACWORLD**

---

Starting with the June 2003 *Macworld*, back issues can be downloaded in digital format, from [www.zinio.com](http://www.zinio.com) (\$6.99; Mac OS X 10.1 or later required).

---

**REPRINTS AND PERMISSIONS**

---

You must have permission before reproducing any material from *Macworld*. Send email to [permissions@macworld.com](mailto:permissions@macworld.com); please include a phone number.

---

**MAILING LISTS**

---

We periodically make lists of our customers available to mailers of goods and services that may interest you. If you do not wish to receive such mailings, write to us at *Macworld*, 501 2nd Street, Suite 600, San Francisco, CA 94107, or email us at [support@macworld.zendesk.com](mailto:support@macworld.zendesk.com).

---

**PUBLICATION INFORMATION**

---

**November 2024, Volume 41, Issue 11**

*Macworld* is a publication of Foundry and International Data Group, Inc. *Macworld* is an independent journal not affiliated with Apple, Inc. © 2024 by Foundry (formerly IDG Communications, Inc.). All rights reserved. *Create*, *Playlist*, *Mac User*, *Macworld*, and the Macworld logo are registered trademarks of International Data Group, Inc., and used under license by Foundry. *Apple*, the Apple logo, *Mac*, and *Macintosh* are registered trademarks of Apple, Inc.

**SMOKEY**

**80 YEARS**

— OF PREVENTING —  
WILDFIRES TOGETHER

**KEEP A SHOVEL AND BUCKET OF WATER NEARBY  
TO EXTINGUISH YOUR CAMPFIRE**



[SMOKEYBEAR.COM](http://SMOKEYBEAR.COM)





## 6 reasons why you need to upgrade to macOS Sequoia

Here are the key features that will convince you to upgrade to the latest version of the Mac operating system.

BY ROMAN LOYOLA

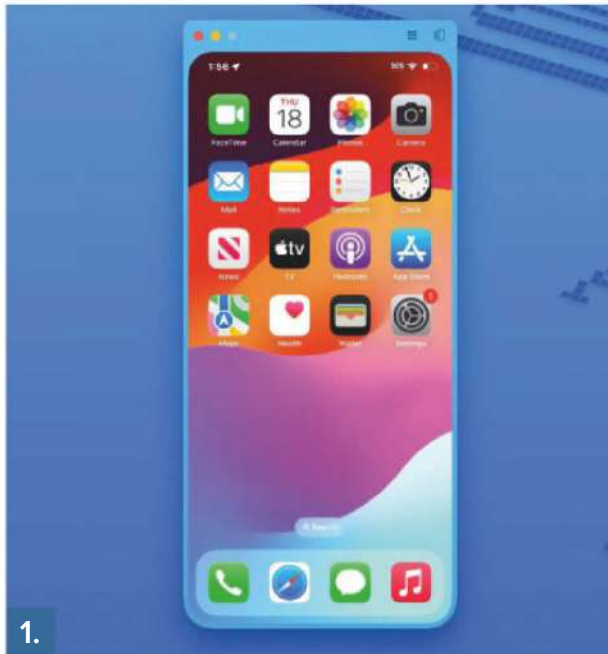
Since macOS is such a mature operating system, there's no need to rush to upgrade to the latest version as soon as it's released. But Apple does include features that you'll want to use regularly as soon as you discover them, and macOS Sequoia is no exception in this case.

Here are the top six features in the latest Mac operating system, macOS Sequoia. Sequoia has many more features,

but these are the ones that will convince you to press that download button.

### 1. IPHONE MIRRORING SEQUOIA

Mac users tend to also use iPhones, and while iCloud helps with syncing between the two platforms, there's still a clear line of separation between the two. With iPhone Mirroring, that line blurs quite a bit, allowing users to access their iPhones



directly from their Macs—literally. The feature allows you to see your iPhone’s screen on your Mac to check notifications, launch apps, and do anything else you’d do if your phone were in your hand.

To use this feature, you do need to check off some requirements:

- > Your Mac must be an M-series model or an Intel Mac with a T2 chip
- > The iPhone must have iOS 18 ([fave.co/3BK1PTU](https://fave.co/3BK1PTU)) installed
- > Wi-Fi and Bluetooth need to be turned on

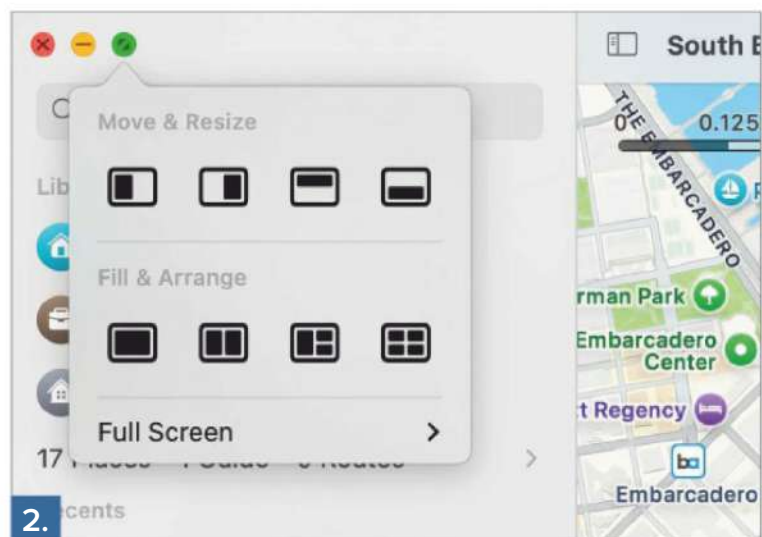
With iPhone Mirroring, your iPhone appears on your Mac and you can use it as if were in your hands—well, almost, because using a mouse or trackpad on

your Mac is different from navigating an iPhone touchscreen. Get all the details on iPhone Mirroring ([fave.co/4eBdXyb](https://fave.co/4eBdXyb)).

## 2. WINDOW TILING

You see that mess of windows you have open on your Mac right now? It’s going to get a lot better with macOS Sequoia’s window tiling. When you drag a window to the edge of the screen, you’ll find a place on the desktop where you can slot that window. You can sort your windows and make it easier to find the one you need.

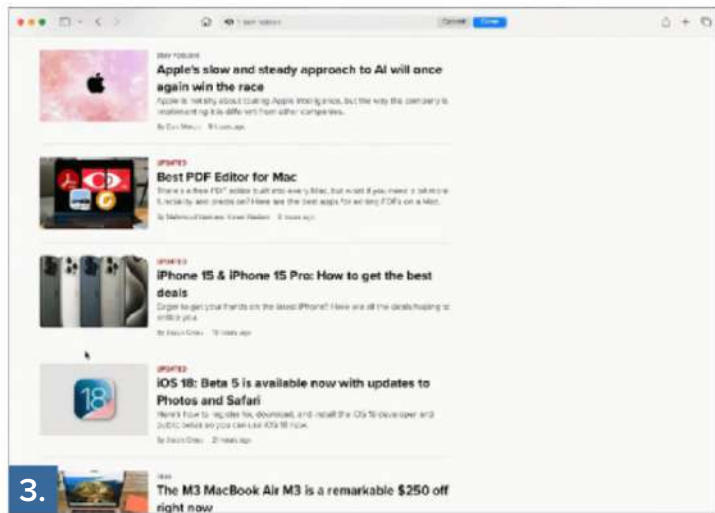
Sequoia’s window tiling has some limits, but it’ll be good enough for most people. If not, there are an array of third-party windows tiling utilities available ([fave.co/3RJecOF](https://fave.co/3RJecOF)) that extend the capability. Whatever the case, Sequoia’s new feature takes you down the path toward windows sanity. Learn all about macOS Sequoia Window Tiling ([fave.co/47lvbYa](https://fave.co/47lvbYa)).





### 3. SAFARI DISTRACTION CONTROL

Wish you could do away with annoying ads, images, videos, and whatever else you run into on the web? You can now make them disappear with a click in Safari in macOS Sequoia (and iOS 18, [fave.co/3BK1PTU](https://fave.co/3BK1PTU)). With Distraction Control turned on, all you have to do is point and click on an element, and poof! It's gone. The web feels safe again. Learn all about Safari Distraction Control ([fave.co/4gBZm7t](https://fave.co/4gBZm7t)).



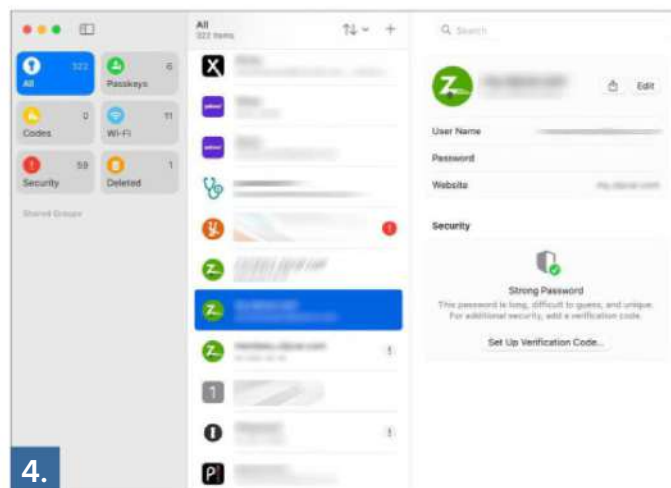
### 4. NEW PASSWORDS APP

Admit it: Your passwords are written on pieces of paper scattered across your desk, maybe even on sticky notes attached to your display. Or you use the same password for all your accounts because it's too difficult to remember all those complicated letters, numbers, and

symbols. Don't do that anymore! Get started with good security habits by using the new Password app in macOS Sequoia.

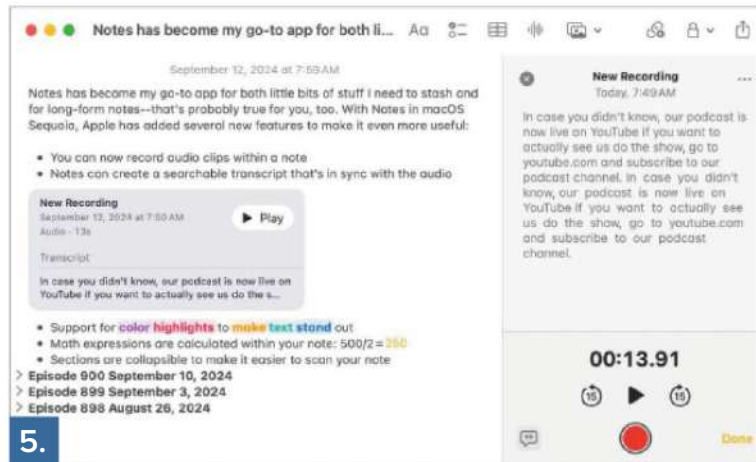
The Passwords app ties into Safari, and it's also on iOS 18 and iPadOS 18, so your passwords are accessible no matter which platform you are using. If you use Google Chrome or Microsoft Edge, extensions are available.

If you already use a third-party password manager, bravo! You probably won't abandon it. Check out our hands-on with the iOS 18 Passwords app ([fave.co/4gGx4c4](https://fave.co/4gGx4c4))—but the Sequoia version is nearly identical.



### 5. BETTER NOTES APP

Notes has become my go-to app for both little bits of stuff I need to stash and long-form notes—and that's probably true for you, too. With Notes in macOS Sequoia, Apple has added



5.

several new features to make it even more useful:

- > You can now record audio clips within a note.
- > Notes can create a searchable transcript that's in sync with the audio.
- > Sections are collapsible to make it easier to scan your note.
- > Math expressions are calculated within your note.
- > Support for color highlights to make text stand out.

## 6. RETRO 'MACINTOSH' WALLPAPER

I saved the best new feature for last. (I'm exaggerating, but this is pretty cool.) Apple always adds new wallpaper in major macOS upgrades, but the one in Sequoia is a nice surprise. The new "Macintosh" wallpaper artistically showcases old UI elements of

the original Mac operating system in various colors. It looks fantastic and is a wonderful ode to the Mac's origins. The Macintosh wallpaper can also be used as a screen saver.

## WHAT ABOUT APPLE INTELLIGENCE?

Why are none of the AI-based features called Apple

Intelligence on this list? They're not ready yet—Apple announced that Apple Intelligence will start to roll out AI features ([fave.co/3MZugcd](https://fave.co/3MZugcd)) with macOS 15.1 next month, with more to come across in 2025.

A few Apple Intelligence features are in the Sequoia 15.1 beta that is currently in testing. The features it includes are summaries, writing tools, photo search, and more. It doesn't have any ChatGPT-based features, which will come next year. ■



6.

# macOS Sequoia: How iPhone Mirroring lets you access your iPhone on your Mac

Access your iPhone directly from your Mac.

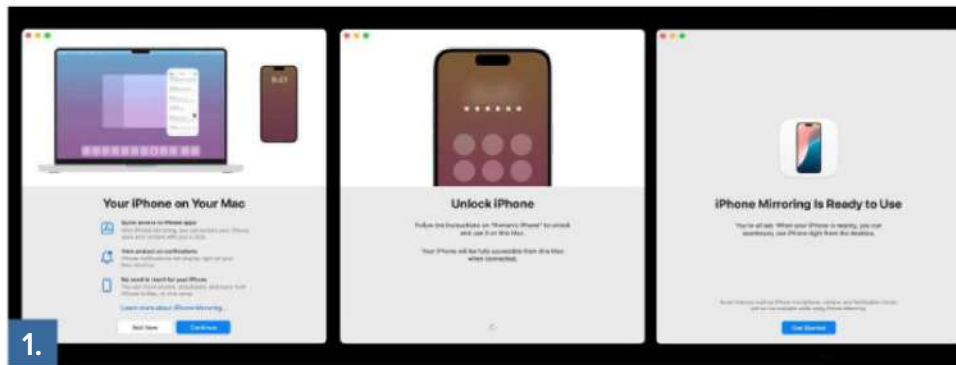
BY ROMAN LOYOLA



The marquee feature of macOS Sequoia ([fave.co/3JCjJlw](https://fave.co/3JCjJlw)) is iPhone Mirroring. As part of Apple's Continuity ([fave.co/3zxQ8IF](https://fave.co/3zxQ8IF)) feature set, iPhone Mirroring enables a user to access an iPhone through a Mac. Not only that, but

notifications that usually appear on the iPhone also appear on the Mac, and you can even drag and drop files between the two devices.

iPhone Mirroring creates a wireless connection between the Mac and iPhone, so Bluetooth and Wi-Fi are needed. Also,



the iPhone must run iOS 18 and the Mac needs macOS Sequoia. (We have all the details about iOS 18 [[fave.co/3Bk1PTU](https://www.fave.co/3Bk1PTU)] and macOS Sequoia [[fave.co/3JCjJlW](https://www.fave.co/3JCjJlW)] in our superguides.) The Mac and iPhone must be signed into the same Apple Account.

Here's a look at how to use iPhone Mirroring. The guide below uses an M3 MacBook Air and an iPhone 11 Pro Max.

## 1. IPHONE MIRRORING: FIRST-TIME SETUP

**1.** In macOS Sequoia, go to the Dock and you'll find a new icon for iPhone Mirroring. Click it. (The Dock icon is an alias for an iPhone Mirroring app that's in the Applications folder.)

**2.** A window explaining the new feature appears. Click Continue.

**3.** You are instructed to unlock your iPhone to continue.

**4.** After a bit of setup (you may have to

enter your PIN on your iPhone), an "iPhone Mirroring Is Ready to Use" window will appear. Click Get Started.

**5.** Your iPhone screen appears,

but it's under an alert labeled "Require Mac Login to Access iPhone?"

> If you want to use Touch ID or be asked for a password every time you use iPhone Mirroring, click Ask Every Time.

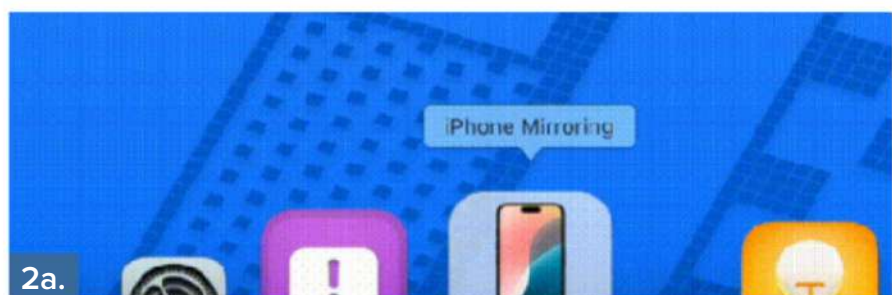
> If you don't want to authenticate every time, click Authenticate Automatically.

**6.** If you change your mind about this setting, you can adjust it in the iPhone Mirroring settings.

## 2. USING IPHONE MIRRORING AFTER SETUP

**1.** Open the iPhone Mirroring app. (Click on its Dock icon or launch it in the Applications folder; see **2a.**)

**2.** An iPhone screen will appear and





button you can click after locking the iPhone. If you are using the iPhone while the iPhone Mirroring app attempts to connect, an “iPhone in Use” screen appears, and you must then quit the app, lock the iPhone, and restart the iPhone Mirroring app.

show that “iPhone Mirroring Is Locked.” Use Touch ID or type in your user password to unlock it. (See **2b.**)

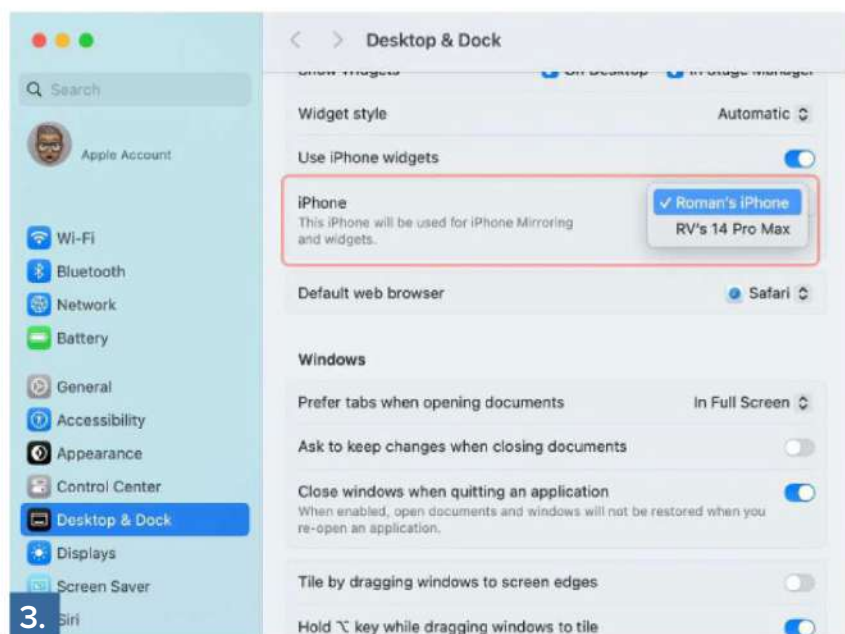
**3.** A “Connecting to [your iPhone’s name]” screen appears. (See **2c.**)

**4.** Once the connection is established, you’ll see your iPhone’s screen and you can access it.

Suppose you decide to access your iPhone directly while iPhone Mirroring is active. In that case, the session ends in the iPhone Mirroring app and an “iPhone in Use” screen will appear, with a Try Again

### 3. IPHONE MIRRORING APP: SETTINGS

The iPhone Mirroring app has only one setting for whether you want to



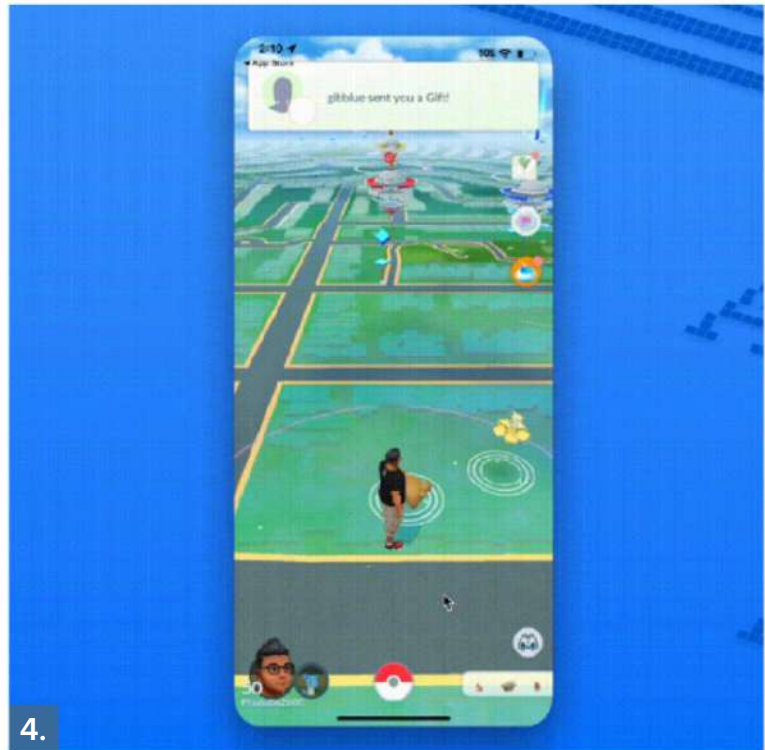
authenticate your identity every time you launch iPhone Mirroring. Select “Ask every time” if you want to authenticate all the time; otherwise, choose “Automatically authenticate” if you do not.

iPhone Mirroring requires Apple Account access; this tells the app what iPhones are associated with the user. If you have more than one iPhone, you can select which iPhone to access in System Settings → Desktop & Dock; in the Widgets section, look for iPhone. (See the screenshot on the previous page.) A pop-up menu displays the iPhones associated with your user account. Select the one that you want to access.

## 4. WHAT CAN YOU DO WITH IPHONE MIRRORING?

You have complete access to your iPhone and can do just about anything you’d normally do with the iPhone in your hands. For example, in the screenshot above, I played Pokémon Go on my iPhone through iPhone Mirroring.

If you’re using a trackpad on a Mac, use two fingers instead of one when performing the usual swipes you do on the iPhone. For example, to turn pages from



the Home screen, swipe to the left or right with two fingers.

Notifications that usually appear on your iPhone will appear on your Mac. When you click a notification, it triggers that action in the iPhone and shows it in iPhone Mirroring.

iPhone Mirroring supports file transfer from the Mac to the iPhone via drag and drop, but at the time of this writing, this was not enabled in the beta.

## 5. RESIZING THE IPHONE WINDOW

With the beta 4 of macOS Sequoia and iOS 18, Apple added the ability to resize the iPhone window. In the View

menu, users have three resize options: Smaller, Actual Size, and Larger. You can't click and drag an edge or corner of the window; you must use one of these three sizes. It's not likely that Apple will add the ability to click and drag, since aspect ratios need to be maintained for proper presentation.

## 6. HOW TO DISABLE IPHONE MIRRORING

If you want to disable iPhone Mirroring, this isn't done on the Mac. Instead it's done through the iPhone's iOS 18 settings.

Go to Settings → AirPlay & Continuity → iPhone Mirroring. Tap the Mac that is associated with the iPhone, and then tap Edit. Tap the delete icon (a dash in a red circle) and tap the Delete button that appears. When you do this, the

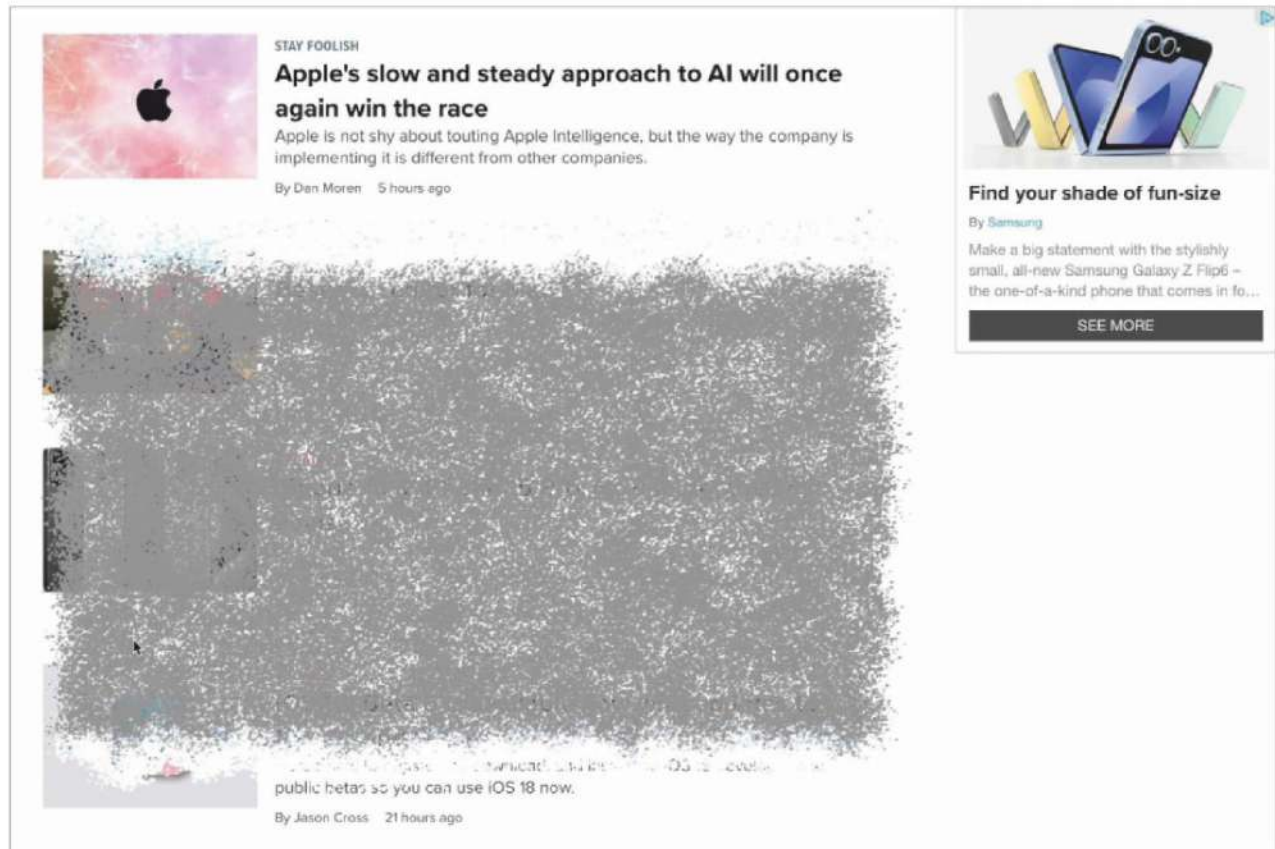


For presentation purposes, this image has been modified from what the user actually experiences.

iPhone Mirroring section disappears from the AirPlay & Continuity settings.

However, at the time of this writing, the iPhone was still accessible in iPhone Mirroring even after iPhone Mirroring had been deleted on the iPhone. This feature was still in beta, so Apple should have fixed this in the official version available this fall. ■





# This new Safari feature lets you snap away ads like Thanos

Temporarily remove distractions on webpages with Distraction Control in macOS Sequoia and iOS 18.

BY ROMAN LOYOLA

In macOS Sequoia and iOS and iPadOS 18, Apple is introducing a new Safari feature called Distraction Control, which allows users to select an element on a website and make it disappear. It's not an ad blocker in that it doesn't stop ad elements from loading in

the first place; ads still load, but if you implement Distraction Control, you can make them go away temporarily.

The feature isn't just for advertisements—it can be used on any webpage element, including actual content elements such as headlines,



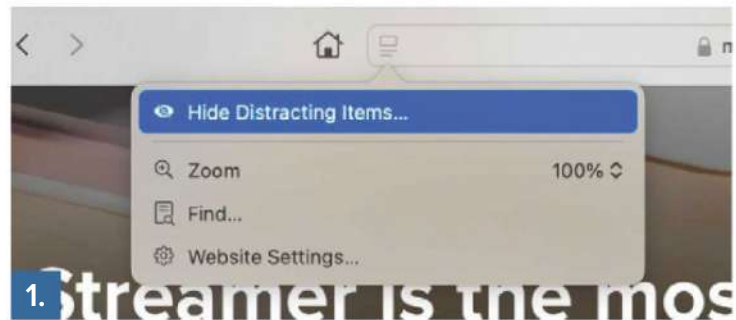
paragraphs, images, video windows, and more. Anything that you deem distracting, you can use Distraction Control to dismiss.

Distraction Control is part of the macOS Sequoia beta 5 that was released to developers in August, and also is included in the public release of September 16. (This article was written based on testing of the beta.) It's not in the macOS Sequoia 15.1 beta that features Apple Intelligence, and it's not known if it will be available in later versions of that beta. It's also not clear if the feature will be coming to Safari in macOS Sonoma or other older versions of macOS. Here's how to use Safari's Distraction Control in Sequoia:

## 1. PAGE MENU OPTION

In Safari for macOS Sequoia, you'll find a new Page Menu icon on the left side of the address bar. It replaces the symbol for "Add page to Reading List," a circle with a plus-sign icon (+), that would appear when you moved the cursor to that space.

Click on the Page Menu icon and you'll see a pop-up menu. If the page can be formatted for Reader View, a Show Reader button along with the title of the webpage appears at the top of

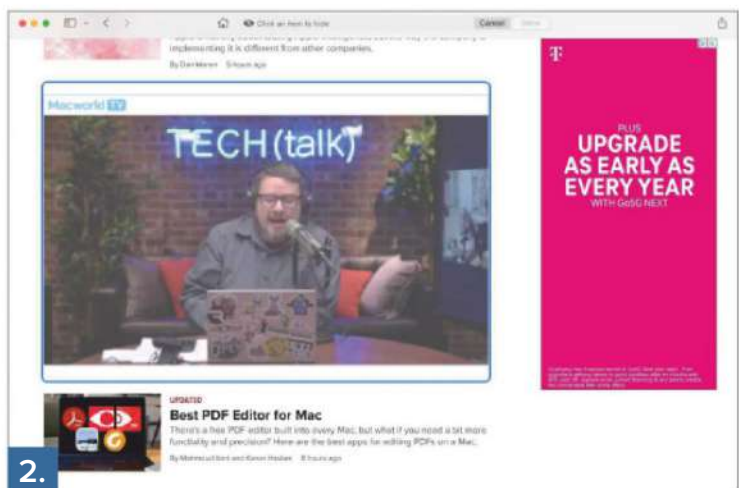


the pop-up. Below that (or at the top, if the Show Reader option isn't available—see image above), you'll find a Hide Distracting Items option.

Click on Hide Distracting Items. A pop-up appears: "Hiding distracting items will not permanently remove ads and other content that updates frequently." Click OK and then proceed to step 2.

## 2. PICK YOUR DISTRACTING ITEM

After activating Hide Distracting Items, whenever you move the cursor over something on a webpage, you'll see a





blue box surrounding it. This indicates which element will disappear if you click on it.

### 3. MAKE THE ITEM DISAPPEAR

When you want to make an item go away, hover over it until the blue box appears, and then click. You'll see an animation of the element dissolving and then disappearing. (I like to call Distraction Control the Thanos feature; [fave.co/3XXWr1t](https://fave.co/3XXWr1t).) When you remove an item, the webpage reorganizes to fill in the gap so that you're not left with a distracting blank space.

In the macOS Sequoia beta, there didn't seem to be any restrictions on what you can make disappear. You can select the very top header of a webpage, the very bottom footer, and anything in between. You can make everything on a webpage disappear and end up with a blank page.

The items are supposed to stay hidden through page refreshes or reloads unless something about that item

changes. In my experience with macOS Sequoia beta 5, the behavior of items staying hidden through page reloads was inconsistent. However, this could change in future versions.

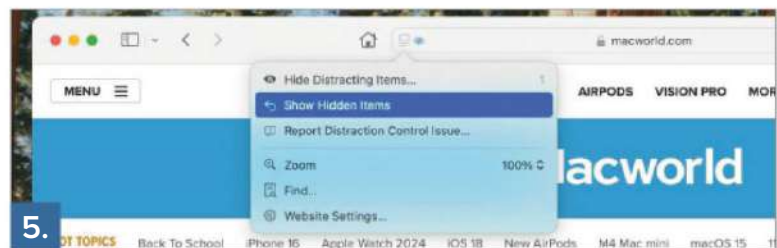
### 4. CANCEL OR DONE

In the address bar, you'll see a tally of the items you've removed. You can click Cancel to reinstate the items or Done if you're satisfied.

### 5. MAKE THE ITEMS REAPPEAR

If you decide you want to be like Bruce Banner ([fave.co/3Y15m1d](https://fave.co/3Y15m1d)) and bring the items back, here's how:

1. Click the Page Menu icon in the address bar.
2. A new Show Hidden Items option appears. Select it to unhide the items.
3. A confirmation window will appear. Click Show if you want to proceed or Cancel if you change your mind.
4. The items are reinserted into the webpage. You can hide them again if you wish. ■



# These 10 Apple event keynote moments changed everything

Apple events are filled with memorable moments. Here are our favorites.

BY ROMAN LOYOLA



For Apple enthusiasts, Apple events are a must-watch, not just because of the products involved, but also because of the little moments that happen. They're just a few seconds or minutes of a larger presentation, but they stand out because of their profoundness—they're an "ah-ha!" moment that opens your eyes to

something bigger.

We often refer to these pivotal moments when talking about Apple's history or analyzing the company's moves past and present. In many instances, they're the moments that define the event—or a whole era.

We could come up with a list of dozens of such moments, but we wanted to narrow

it down to the 10 best. We decided to narrow the list down to standalone events, so we're not including FaceTime, Apple silicon, or other Worldwide Developers Conference keynote announcements. (We have a separate list of our favorite Mac moments from WWDC keynotes, [fave.co/3zwOvuS](https://fave.co/3zwOvuS).) And we kept things chronological to prevent any arguments about which announcement is the biggest (though obviously it's the iPhone). Without further ado, here are the 10 best moments in Apple's special event history.

## 1984: WELCOME TO MACINTOSH

About 45 minutes pass before Steve Jobs (who started the event by reciting verse two from Bob Dylan's "The Times They Are A-Changin'," [fave.co/4eEHMxG](https://fave.co/4eEHMxG)) finally gets to the moment that started it all: the reveal of the Macintosh. Once Jobs inserts a startup disk, "Chariots of Fire" ([fave.co/4eCWZzl](https://fave.co/4eCWZzl)) starts to play in the auditorium (in the 1980s, any staged, dramatic moment used Vangelis' song in the background [[fave.co/4e9l4Otj](https://fave.co/4e9l4Otj)]).

After a few seconds, the word "MACINTOSH" scrolls horizontally across the all-in-one's screen, followed by a splash screen where "insanely great" is written in cursive.

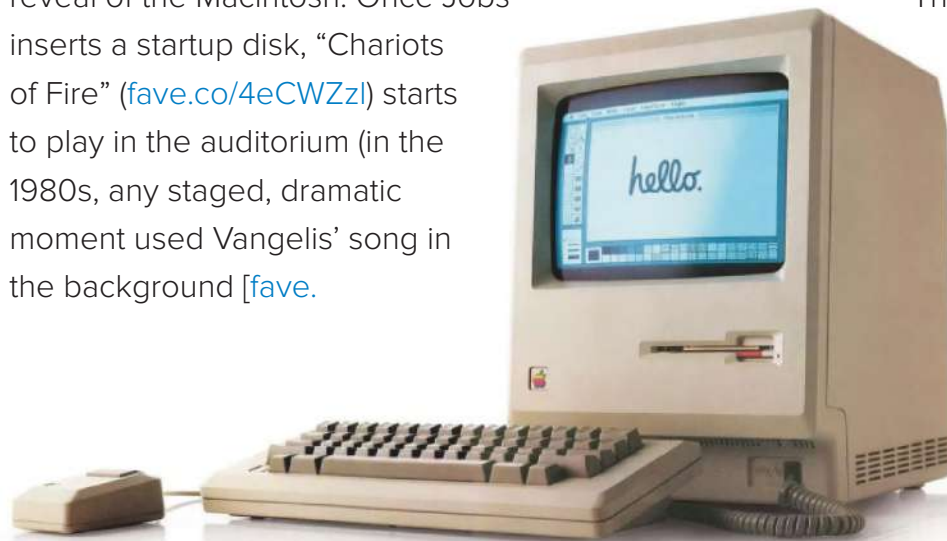
A few minutes later, the Macintosh itself speaks: "Hello, I am Macintosh. It sure is great to get out of that bag." It was a moment that changed everything not just for Apple but for all of technology.

A personal anecdote: I wasn't at this event (I was in middle school), but I was in a reenactment of the event for the *Steve Jobs* movie ([fave.co/3N2BZWU](https://fave.co/3N2BZWU)). "Chariots of Fire" was not played at that event.

## 1997: THE RETURN OF STEVE JOBS

We're sure you're quite familiar with Steve Jobs leaving Apple in 1985 and the company's struggles in the mid-1990s.

"The last year in the Mac market felt like being on a bit of an emotional roller coaster," said Macworld's then-CEO Colin Crawford during the 1997 Macworld Expo keynote. Apple acquired Next Inc. earlier that year, the company Jobs



The first Mac was unveiled in 1984.

created after leaving Apple. NeXTSTEP provided the foundation for Mac OS X, and Jobs provided the foundation for all the rest.

Jobs taking the stage at that keynote was one of the biggest moments in the company's history—if not the biggest. Apple and its customers needed a glimmer of hope, and Jobs provided it as soon as he appeared. At that moment, everyone thought if anyone could save Apple, it was Jobs.

## 1998: THE MATRIX AND THE iMAC

Here's a question for you longtime Apple users: Do you remember what Apple's Mac lineup was like in the early- and mid-1990s? It was a mess—Apple had too many models. (Bonus points if you can describe the difference between Apple's regular Mac lineup and the Performa Macs.)

A couple of years after Steve Jobs's return, he decided that they needed to simplify the Mac lineup into four sections: consumer desktops and portables, and pro desktops and portables. It was a moment that brought clarity to Apple's lineup and an approach that helped boost sales. It's a philosophy that the company still uses today, for the most part ([fave.co/3BsKOqq](https://fave.co/3BsKOqq)).



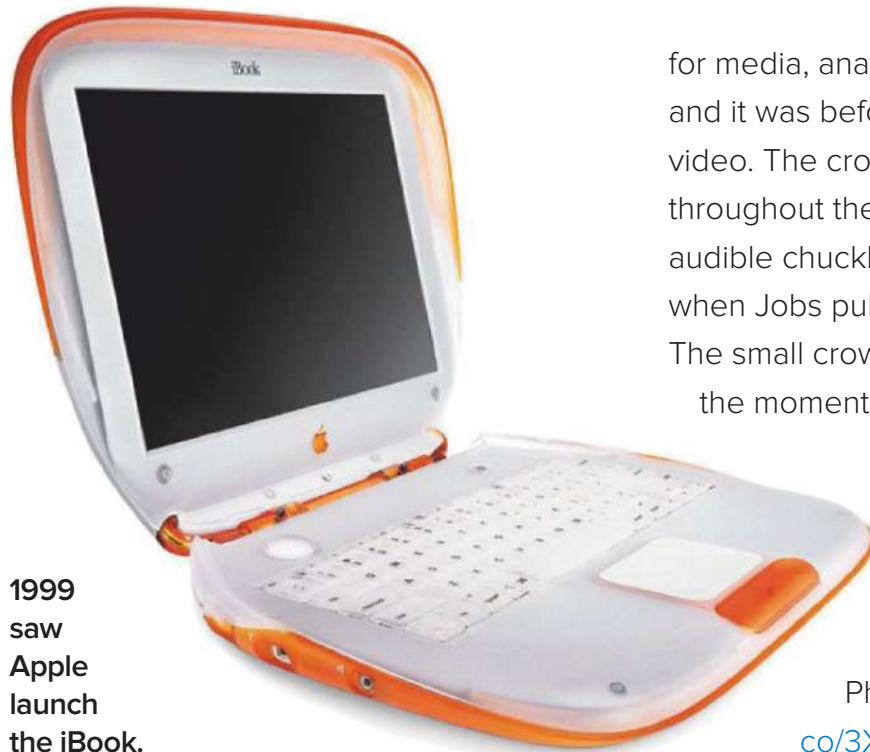
**The G3 iMac was an instant icon when it was released in 1998.**

During that same keynote, Jobs unveiled the original G3 iMac to fill the consumer desktop part of that matrix. It was a computer like no other, graced the cover of several magazines, and was an instant icon. It had the spirit of the original Macintosh and solidified Jobs' legacy in business and popular culture.

## 1999: 'ONE MORE THING...'

During the 1999 Macworld Expo keynote, Steve Jobs introduced the iBook, which brought wireless connectivity to the masses. It seemed like he was about to wrap up the show, but he paused and then said, "There is one more thing," and he proceeded to introduce the AirPort, Apple's first Wi-Fi router that looked like a UFO.

That was the first of many "One more thing" announcements. Jobs used it again



**1999**  
saw  
Apple  
launch  
the iBook.

later that year at the Seybold Seminars keynote ([fave.co/3XJwRMm](https://fave.co/3XJwRMm)) to introduce the Apple Cinema Display—this time, he made it more dramatic and his delivery of the line made it clear that “One more thing” was going to be a thing. Apple eventually figured out that to add drama to “One more thing,” it should be used for announcements that are more impressive than a new router or display—it was most recently used to introduce Apple Vision Pro ([fave.co/3XEPEsi](https://fave.co/3XEPEsi)). Now, at the end of Apple keynotes, we all wonder if that’s all there is, and wait to hear those three fateful words.

## 2001: YOUR WHOLE MUSIC LIBRARY IN YOUR POCKET

The event for the original iPod was only

for media, analysts, and special guests, and it was before the advent of streaming video. The crowd reaction is subdued throughout the whole event, but there’s an audible chuckle followed by applause when Jobs pulls the iPod out of his pocket. The small crowd didn’t know how seminal the moment was, but Steve did.

Another personal

anecdote: I didn’t go to the iPod event, but my wife was there ([fave.co/47Lc0gu](https://fave.co/47Lc0gu)), sitting next to

Philip Michaels ([fave.co/3XIM2W4](https://fave.co/3XIM2W4)) and behind Jason

Snell ([fave.co/4doGyWp](https://fave.co/4doGyWp)) as Macworld

representatives. Like the other attendees, she left the event with an iPod in her pocket and later showed it to me during dinner, which went cold while I marveled at the scroll wheel and the user interface.

## 2006: INTEL ARRIVES

At the Macworld Expo in 2006, Intel’s Paul Otellini, clad in a bunny suit ([fave.co/4eE0pIC](https://fave.co/4eE0pIC)), made a dramatic entrance to the stage and greeted Steve Jobs with a chip wafer. They let everyone know that the two companies were ready for the transition.

This wasn’t Apple’s initial announcement that it was switching to Intel processors—that happened six months earlier at the WWDC 2005

keynote ([fave.co/3zwOvuS](https://fave.co/3zwOvuS)). The 2006 moment told the Apple market that yup, this is really happening. It also let the world know that Apple was going to do whatever it took to not only remain relevant but move forward with its technology, even if it meant converting rivals into partners.

## 2007: THREE REVOLUTIONARY PRODUCTS

An Apple mobile phone had been rumored for a while before its official reveal, so those of us who follow Apple closely were always on the lookout for such a release. Still, when Steve Jobs declares, “An iPod! A phone...are you getting it!” It’s one of Jobs’ greatest moments, and it was easy to get caught up in the fervor, even if some of us had a pretty good idea what was coming.

I was lucky enough to be at the iPhone announcement, which was at the Macworld Expo keynote. What’s funny about that moment in retrospect is that when Jobs started by saying there were three new products, the “widescreen iPod with touch controls” and the “revolutionary mobile phone” got huge responses from the audience, but the

“breakthrough internet communications device” got only a smattering of applause. If we knew then what we know now (that it would bring us instant messaging, FaceTime, social media, and so on), the reaction would be very different—the response to the internet device would be thunderous.

## 2008: THE ENVELOPE, PLEASE

Steve Jobs was a master showman. What made him great was that he didn’t do things just for show—he was excellent at providing context for what he did on stage. His actions had a profound effect on understanding the point he was making. A great example of this occurred during the MacBook Air reveal in 2008.

Jobs explained how thin the Air was by providing its measurements and comparing it to the thinnest PC laptop on



The original iPhone was launched at 2007’s WWDC.

the market. Most presenters would've thought that was enough, but to make it real and tangible to the audience, Jobs smoothly slid the Air out of an interoffice envelope. It gave people better context for the new model—the ohs, ahs, and laughs from the audience were everyone saying, “I get it.” It was genius.

### 2014: WATCH AND LEARN

The Apple Watch introduction was actually a “One more thing” item at the end of the 2014 iPhone event—Monday’s “Glowtime” event would happen exactly 10 years later. It was the first time Apple CEO Tim Cook launched a major new product. “We believe this product will redefine what people expect from its category,” he proclaimed. And that it did.

### 2020: THE START OF A NEW ERA

At WWDC in June 2020, Apple announced the Mac was switching from Intel processors to Apple’s own silicon. The WWDC announcement was a big moment on its own ([fave.co/3zwOvuS](https://www.fave.co/3zwOvuS)), but the actual introduction of the M1 chip and the first Macs to have Apple silicon was an even bigger one.

For about 10 minutes of this 49-minute event, Apple explained the components of its M1, explained how each is implemented, and showed how each

performed against the Intel chips being replaced. It was eye-opening and exciting, and it truly felt like the Mac was entering a new era. Like 1984 all over again, it gave the Mac a new voice.

### BONUS MOMENT: KANYE WEST AT THE 2005 APPLE MUSIC EVENT

Apple used to hold music events to announce new iPods and iTunes features. Those events had a musical guest at the end, and in 2005 the guest was Kanye West. He performed uncensored versions of his hits “Gold Digger” ([fave.co/3Nlrb6J](https://www.fave.co/3Nlrb6J)) and “All Falls Down” ([fave.co/47LyL3F](https://www.fave.co/47LyL3F)), and the audience of journalists, analysts, and special guests sat still and quiet for the whole performance, except for a couple who awkwardly danced in the aisle. I have never cringed so many times at an Apple event as I had at this one. (The “Mother Nature” sketch [[fave.co/3XZ4Vph](https://www.fave.co/3XZ4Vph)] in 2023 came close.)

Apparently, Apple felt similarly, because there’s no footage of West’s performance to be found anywhere online. Even the “complete” videos of the event, like the one linked above, have West’s performance cut off. The only hard evidence online of this event, besides the numerous media writeups, is a photo collection ([fave.co/4gynd89](https://www.fave.co/4gynd89)). It was indeed a memorable moment—for all the wrong reasons. ■



**If you are  
anywhere  
in your  
journey with  
substance  
use disorder,**

I want you to stop,  
look around  
and open your heart.

Revel in the abundance  
of your existence.  
See how small  
substance use disorder  
can be when sat next  
to all that you are  
or ever could be.

Fill your existence  
with beauty, purpose  
and a life of service.

And your substance  
use disorder—  
your history of  
addiction,  
the things you  
may have done  
that you are not  
proud of—will one day  
be small enough  
to deal with  
while allowing you  
space to live this life  
of joy.

Hold on.

We are not the sum  
of our scars but rather  
a beautiful mosaic of the  
life they hold together.

—Joseph  
Washington, DC  
In recovery from  
substance use  
disorder

**Learn how  
substance use  
recovery can**

**[StartWithHope.com](https://www.startwithhope.com)**



I am  
more  
than  
who  
I am  
on  
paper.




Jeff, STAR

It's time to let your skills shine.  
Find resources for breaking through barriers like  
degree screens and stereotypes. It's time to tear the  
paper ceiling limiting STARs: workers *Skilled Through  
Alternative Routes* rather than a bachelor's degree.

**TEAR THE PAPER CEILING.ORG**

#HireSTARs

**STARs** \*  
SKILLED THROUGH  
ALTERNATIVE ROUTES.

 Opportunity  
@Work

**ad**  
COUNCIL



MONITOR

## DELL ULTRASHARP U2723QE: THIS MONITOR PLUS DOCK GOES WELL WITH YOUR MAC

BY CHRISTIAN RENTROP

If you don't want to spend the money on an Apple Studio Display ([fave.co/3E5nXk4](https://fave.co/3E5nXk4)), be prepared to search for an alternative. Monitors that are well suited to the Mac and come with the appropriate software are few and far between. However, Dell recognized the need and released the Dell Display and Peripheral Manager for the Mac software ([fave.co/4gDf3Lz](https://fave.co/4gDf3Lz)).

This makes many of the newer Dell displays viable Mac solutions. One particularly interesting model is the U2723QE: a 27-inch display with a 4K

panel, powerful charging function, and plenty of connections.

See how this monitor compares to others in our round-up of the best displays and monitors for Mac users ([fave.co/435WyIB](https://fave.co/435WyIB)).

## SPECIFICATIONS

**Size:** 27 inch IPS

**Resolution:** 3840×2160 pixels

**Brightness/HDR:** 400 nits

**Response time:** 8 ms

**Refresh rate:** 60 Hertz

**Color ranges:** 100% Rec. 709, 100% sRGB, 98% DCI-P3

**Ports:** 2× USB-C PD; 5× USB-A; gigabit ethernet; DP-in/DP-out; 1× HDMI; USB-C upstream (for daisy chain)

**Power delivery:** Yes (90 watts) USB-C + (15 watts) USB-C

**USB hub:** Yes (5× USB-A, 1× USB-C)

**Audio:** Line-out

**Webcam:** No

**Price:** US\$550/UK£506

## SETUP

Out of the box, the U2723QE requires some assembly. The base that houses a practical cable guide and stand must first be screwed together and then attached to the Vesa connection of the display, which is rounded at the back, reminiscent of older iMacs. This can be done in a minute without tools.

With the U2723QE, Dell uses a lot of plastic and the narrow stand doesn't initially inspire much confidence. However, once assembled, set up, and plugged in, the U2723QE stands very reliably. Nothing wobbles, instead the monitor stands solidly and elegantly on the desk.

The stand allows tilting (–5 degrees or +21 degrees), swiveling (±30 degrees), height adjustment by around 16 centimeters (6.3 inches), and pivoting. The height adjustment isn't particularly smooth, however. It is interesting to note that the screen can be set very low—but be careful, because the cables can get in the way here, as they can get caught in the narrow guide hole when adjusting the monitor. They should be pushed in manually when adjusting.

The U2723QE connects to the Mac with a USB-C cable. When connected, the monitor charges MacBooks and other laptops with up to 90 watts, enough even for a MacBook Pro.

In addition to the charging function and, of course, the transmission of the video signal, the single USB-C cable also connects the display's hub with six USB ports and gigabit ethernet. This makes the display a complete USB-C docking station for MacBooks and a good extension for the Mac mini or Mac Studio.

Two of the USB ports (one USB-A and one USB-C) are located on the bottom



**The Dell U2723QE comes with many ports, including Ethernet.**

edge of the display and are easily accessible. That USB-C port also has a charging function, but at 15 watts it is only suitable for smartphones or other small devices. Another USB-C upstream port on the back is used to connect a second U2723QE in a daisy chain.

The ports on the back are hard to reach and not entirely in logical positions. The two connections at the front are also arranged at the bottom, which makes plugging them in from the bottom a gymnastics exercise every time. A side or rear-facing solution like Apple's would be better here.

Also good: The monitor has an internal power supply unit, and the power plug is attached directly to the device. This display does not have speakers.

## IMAGE QUALITY

Dell advertises the U2723QE with “exceptional contrast.” This is made

possible by the panel's IPS Black technology. Indeed, the screen offers an unusually high contrast ratio of 2000:1: That means black looks like true black, and colors are very clearly distinguishable.

Thanks to its wide color space support (100 percent Rec. 709, 100

percent sRGB, and 98 percent DCI-P3), it is on par with modern Apple LCDs. The maximum brightness of 400 nits, which is lower than the Apple Studio Display's 600 nits, but it's sufficient for most people. There were no visible shadows or halos on our test unit.

The display offers various pre-calibrated modes, such as for DCI-P3. However, manual calibration is recommended for the optimum setting when editing images.

The resolution of the U2723QE is 3840×2160 pixels. For full Retina operation (pixel quadrupling like the iMac or MacBook Pro) the display would have to run with a virtual resolution of 1920×1080 pixels, which in practice leads to a “too large” display. It is better to use the QHD equivalent of 2560×1440 pixels, which the monitor displays very well, albeit with minimal blurring. This is relativized by the normal viewing distance.

## DELL DISPLAY MANAGER

The screen settings can be adjusted using the joystick on the back, or directly from the Mac desktop using the Dell Display and Peripheral Manager software. Here you can quickly adjust the brightness and contrast. There is also the option of defining a schedule for changing the brightness or contrast. If required, users can also define hotkeys for brightness and contrast control. Unfortunately, there is no synchronized control with the MacBook's internal display, as is possible with Lunar ([fave.co/3TK6y7s](https://fave.co/3TK6y7s)).

However, the Dell Display Manager also includes control of the KVM function. If required, software can be installed for this purpose, which means that in addition to the monitor, wired keyboards and mice can also be quickly switched between two connected end devices such as a MacBook and a desktop PC. The screen allows application windows to be quickly arranged in any grid using Easy Arrange.

There is also a PowerNap mode, which saves power when a screen saver is active by dimming the monitor or switching it off while the saver is running.

Dell webcams can also be controlled via the software, and firmware updates also find their

way to the monitor with the Display Manager. In short, the Display Manager makes life with Dell monitors easier and is a good argument in favor of monitors from this manufacturer.

One major issue that was confounding is that the software works on the MacBook, Mac mini, and Mac Pro, but not on the iMac—this is specifically called out by Dell. The iMac already has a large 24-inch display, but you can still use the U2723QE with it, but you can't use the Dell Display Manager software with the Dell display. The software only supports devices running macOS 11 or later, and 2018 Mac or later; users with such devices should check whether the software can be installed before purchasing.

## VERDICT

If you are looking for a screen for your

MacBook or Mac mini, the overall package of the Dell U2723QE is well put together. This monitor is well equipped, has an excellent picture, and is very bright. Its highlight is the built-in hub that brings not only a total of six USB ports but also an ethernet port. Thanks to the 90-watt charging power, the screen becomes a docking station—and the price is right, especially when compared to Apple's offerings. ■



### Dell UltraSharp U2723QE

#### PROS

- Manager software.
- Many connections.
- Wide range of setting options.

#### CONS

- Plasticky design.
- Ports difficult to access.

#### PRICE

\$550

#### COMPANY

Dell



HARD DRIVE

# WD MY PASSPORT ULTRA FOR MAC: BOATLOADS OF SPACE AT A NICE PRICE

BY JON JACOBI

Let's face it: External portable HDDs such as the WD My Passport Ultra for Mac offer slow speeds by today's SSD standards. That said, they still provide by far the most storage capacity for the smallest outlay, to the tune of 6TB for only \$200 in this case.

As to the performance I referred to at the start of this review, faster is of course better, but the 110MBps reads and writes the My Passport Ultra delivers are fine for media streaming as well as Time Machine backups running in the background. It'll get the job done.

## FEATURES

The My Passport Ultra for Mac (could we have a longer name, please?) is a 2.5-inch



The Type-C connector and power-activity light are on the end of the My Passport Ultra for Mac.

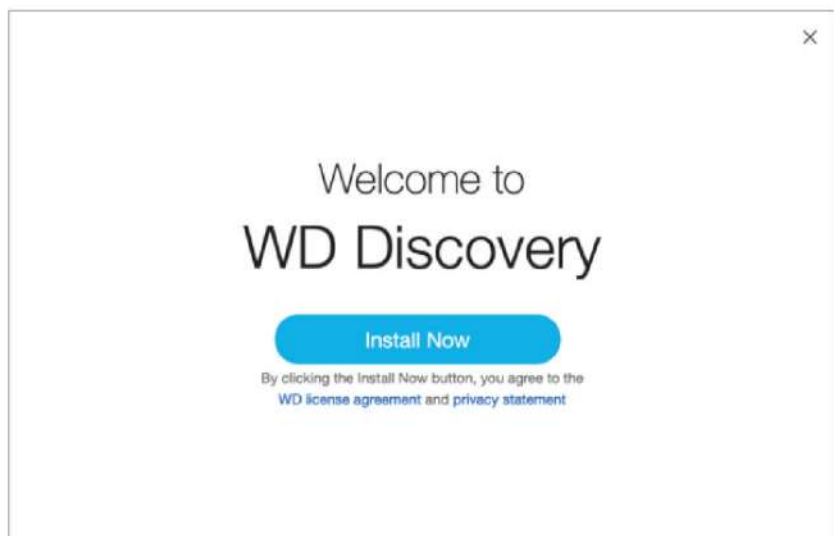
external USB hard drive sporting a USB-C port that's on the same end as the small power-activity light. The drive enclosure is styled in dark gray and silver and measures approximately 4.3 inches long by 3.2 inches wide by 0.86 inches thick.

Weight is around 8.9 ounces including the cable, which, along with four anti-skid pads on the bottom, gives it a decent chance of not getting knocked around the desktop or other smooth surface.

Until very recently (this drive), external 2.5-inch USB hard drives unanimously used USB micro-B SuperSpeed connectors (for extra power) on the drive and USB-A (the old USB port that used to be on Macs and other computers) on the other end of the cable. To

accommodate the older as well as current connection scenarios, WD bundles a USB-C to USB-C cable, plus a USB-C to USB-A adapter.

When you first attach the WD My Passport Ultra for Mac and open it in Finder, you'll see a .dmg file (a Windows .exe file is also present) for installing WD's Discovery background and menu bar

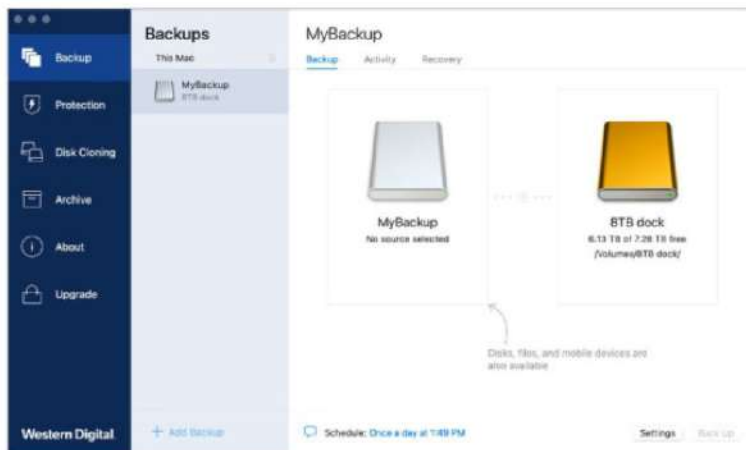


**WD loads its Discovery software on the drive that can download your data from popular online storage services, as links to Acronis True Image and other downloads.**



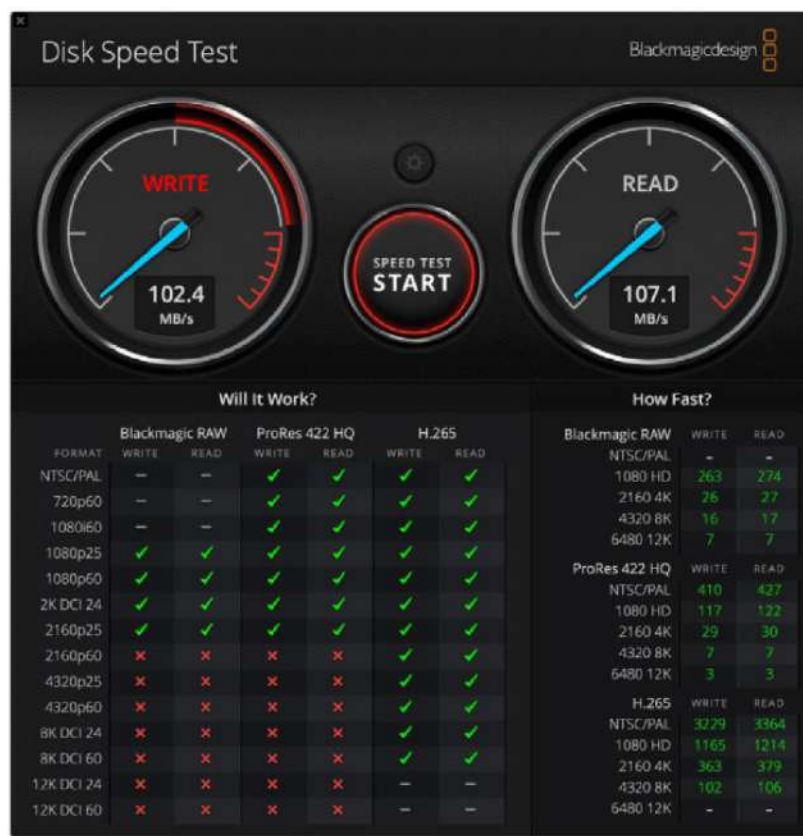
application (shown below). Discovery will import your data from your Dropbox, Google Drive, or OneDrive accounts, and provide download links for the WD Drive Utilities, WD Security (encryption, password protection), and a branded version of Acronis' True Image backup software.

That's a pretty fair software bundle, though True Image will only back up to a WD local drive. I was, however, able to also back up with True Image to a non-WD NAS box, so



WD's version of Acronis' True Image backup program.

there's that. I suppose there's no way to differentiate. You can, as always, decide to not use the software at all and erase it.



Blackmagicdesign's Disk Speed Test showed hard drive-like performance, 102MBps writing and 107MBps reading.

## PERFORMANCE

The My Passport Ultra for Mac is a 2.5-inch hard drive. In a world rapidly accustomed to 3GBps speed on USB4/Thunderbolt external SSDs, the approximately 110MBps this hard drive delivers could never be considered as fast (or maybe not as fast, but fast at all).

However, as I said previously, a transfer rate of 100 to 110MBps is fast enough for several audio or movie streams. Hence, the My Passport Ultra for Mac is still a



**AmorphousDiskMark 4 delivered a slightly sunnier picture of the My Passport Ultra for Mac—almost 110MBps reading and 107MBps writing.**

great storage device for a large multimedia collection. (My collection is on hard drives in a NAS box, albeit 16TB 3.5-inchers with 250MBps transfer rates. Several people can stream across the network [2.5Gbps] simultaneously with no issues.) 100MBps is also plenty fast enough for background backup with Time Machine or the bundled Acronis True Image.

As to the actual performance numbers, Disk Speed Test showed familiar hard drive–like performance: 102MBps writes, and 107MBps reads.

AmorphousDiskMark 4 delivered a slightly sunnier picture of the My Passport Ultra for Mac (geez, I’m tired of writing this long-winded

moniker!) with almost 110MBps reading and 107MBps writing.

As I’ve pointed out several times now, the WD My Passport Ultra for Mac and its brethren are all about affordable capacity. Note that while hard drives slow a bit as they fill up, it’s not to nearly to the degree that some SSDs will. Hence, you don’t have to overpurchase in terms of capacity as we recommend with NAND-based storage technology.

## PRICE

Here are the prices for the My Passport Ultra at the time of this review. Yes, you do pay a bit of a premium for the highest capacities.

**2TB:** US\$84.99/UK£84.99/CA\$119.99

**4TB:** US\$129.99/UK£143.99/CA\$179.99

**5TB:** US\$139.99/UK£167.99/CA\$184.99

**6TB:** US\$199.99/

UK£204.99/CA\$264.99



### Dell UltraSharp U2723QE

#### PROS

- Up to a whopping 6TB of storage.
- Far cheaper per terabyte than SSDs.
- Type-C connectivity.
- Attractive design fits in your (large) pocket.

#### CONS

- Hard drive–level performance.

#### PRICE

From \$85

#### COMPANY

Western Digital

## VERDICT

The My Passport Ultra for Mac is super affordable storage for multimedia playback as well as unattended or background operations. The 5TB unit currently offers the best bang for your buck at \$28 per terabyte, making it our top recommendation. But the 6TB model is \$33 per terabyte—not a bad deal at all. ■



MONITOR

## LOGITECH WAVE KEYS: A NOD TO VINTAGE APPLE KEYBOARDS WITH A MODERN TWIST

BY HALYNA KUBIV

Apple's current keyboards are known for one thing: They're flat, whether it's a keyboard on the MacBook or an external Magic Keyboard for a Mac or an iPad. But long before the current Magic Keyboard, Apple's keyboards had a more traditional, classic keyboard design. Those old Apple keyboards have almost achieved cult status—the devices were almost indestructible.

Logitech's approach with its Wave Keys keyboard harkens back to those old Apple keyboards: mechanical keys with a deep stroke and a characteristic clack. Apart from the ergonomic wrist rest at the lower end, typing feels just like typing on the classic Apple keyboard.

But Logitech goes a little further: The keyboard is shaped according to hand

position and finger length. The rows of keys follow a wave pattern, which is designed to make typing with the index and little fingers easier. The keys directly in the center and at the outer ends are slightly raised so that your fingers do not have to stretch as far for each key.

## LOGITECH WAVE KEYS SETUP

When I took the Wave Keys out of its packaging, I was initially confused, as I didn't find an activation button on the underside. The activation controller is located on the back directly below the Logi logo. If this is pushed to the right, the Bluetooth module is switched on. On the Mac, you can then connect the keyboard via the Bluetooth settings.

Alternatively, you can also set up the keyboard using the supplied Logi Bolt USB Receiver, but it is a USB-A device. If your Mac has only USB-C, you will need an adapter, which is not included. The keyboard uses AAA and does a good job of using power efficiently.

## THE PRACTICAL EXPERIENCE

Switching from a standard Mac keyboard to a mechanical keyboard like the Wave Keys was a little difficult, especially if you've been using Apple

keyboards almost exclusively for several years. But anyone who hates Apple keyboards and misses scissor mechanisms will love the Wave Keys. The stroke is very similar, as are the feel and acoustic feedback of the keys.

The Wave Keys also has several keys specially for Windows users, including a screenshot and emoji key. Additional special characters such as the Euro and @ signs are also included on the keyboard. You also don't have to do without square brackets or curly brackets on the corresponding keys—you just need to know which additional key (option key) to press.

The Wave keyboard is perfect for people with a perfect command of the 10-finger typing method ([fave.co/3XZvkTJ](https://fave.co/3XZvkTJ)). If you have to look at the keys and reach over to other keys with your hands, the curved design will occasionally get in the way.



### Logitech Wave Keys

#### PROS

- Mechanical keys with long stroke.
- Ergonomic layout.

#### CONS

- Lots of plastic.
- For 10-finger system.

#### PRICE

\$60

#### COMPANY

Logitech

## VERDICT

The Logitech Wave Keys is a good keyboard with a generous stroke and familiar clicking sounds. The padded tray relieves strain on the wrists when typing. If you don't like the feel of Apple keyboards, the Wave Keys could be a good choice. ■



USB HUB

## ANKER 565 USB-C HUB: THIS COMPACT HUB GOES TO 11

BY THOMAS BERGBOLD



Eleven ports on a hub sounds like a lot, and it's a number more often associated with a full Mac docking station ([fave.co/3h1wVoY](https://www.fave.co/3h1wVoY)). The Anker 565 is a smaller, more portable solution, measuring 5.4×2.2×0.6 inches (13.7×5.7×1.4 centimeters). Its ports are distributed over three edges of its boxy design.

On one side are two USB-A 2.0 ports for devices such as a keyboard and mouse; one USB-A 3.2 port and one USB-C 3.2 port each rated at 10Gbps and suitable for storage and other devices that need faster speeds. The USB 3.2 ports deliver impressive performance, with data transfer rates of 827MBps (write) and



### The USB 3.2 ports deliver impressive performance.

864MBps (read) with a LaCie Rugged Mini SSD ([fave.co/47H8IL0](https://fave.co/47H8IL0)).

It is important to know that the USB-A and USB-C ports don't charge devices, but this does bring us to the ports on the opposite side of the 565. You'll find a USB-C PD Input port where you can plug in a 100-watt power supply, which then charges the MacBook it is connected to at 85 watts—you need to provide your own USB-C power supply ([fave.co/3Aopnms](https://fave.co/3Aopnms)). Next to the USB-C PD Input port are an SD Card (UHS-I) reader and a microSD card reader, a DisplayPort, and an HDMI port.

The DisplayPort and HDMI port both support 4K displays at 60Hz. However, you can only use one display at a time to get those specs. The hub worked when I tested with the 4K BenQ SW272U and SW321C displays. The memory card reader remains within the specification

of UHS-I, with a maximum of 79MBps (write) and 91MBps (read) measured with a Kingston Canvas Go Plus.

The third side of the 565 has a 3.5 mm audio jack and a gigabit ethernet connection with two activity LEDs. The gigabit ethernet port achieved

data transfer rates of 62MBps (write) and 63 MBs (read) when tested with a network-attached storage device.

The 565 has an attractive plastic housing with an attached braided nylon USB-C cable. The ports are labeled, but the color choice for the labels makes it difficult to read on the dark silver housing.

## VERDICT

The Anker 565 USB-C hub is a good solution for when you need more than what a MacBook Pro or Air offers. You can't use the USB ports to charge, but that's not a problem if your devices don't need charging or if they have their own power supplies.

The alternative Anker 555 PowerExpand 8-in-1 USB-C Hub ([fave.co/3BwjNCv](https://fave.co/3BwjNCv)) is a little cheaper (around \$15) but has fewer ports, and we rate the 565 as the better value. ■



### Anker 565 USB-C Hub

#### PROS

- Equipped with HDMI and DisplayPort.
- USB with 10 Gbps.

#### CONS

- Memory card reader only UHS-I.
- USB ports do not provide charging.

#### PRICE

\$66

#### COMPANY

Anker

# Hot Stuff

What we're raving about this month

## TINY CIRCUITS TINYTV 2

[tinycircuits.com](http://tinycircuits.com)

This small retro-style video player features a 1-inch color screen and a battery that can last about 2 hours. It has 8GB of storage and holds about ten hours' worth of videos that loads through its USB-C port. It even has a small infrared remote control for "changing the channel."

—ROMAN LOYOLA



# Hot Stuff



## LOGITECH MX CREATIVE CONSOLE

[logitech.com](https://www.logitech.com)

If your primary tools involve the Adobe Creative Suite, the MX Creative Console offers greater control and faster productivity when editing photos, videos, and audio. The keypad has nine dynamic LCD buttons that can launch different apps and perform various actions within each app. The customizable dial is for various scrolling-style actions, whether that's adjusting brush sizes in Photoshop, scrubbing through timelines in Premiere Pro, or zooming in and out in Lightroom.—**VIKTOR ERIKSSON AND JOEL LEE**



# DOCKCASE SMART MAGSAFE M.2 NVME SSD ENCLOSURE

[dockcase.com](https://dockcase.com)

---

With support for 2230 and 2242 M.2 SSDs, this enclosure features MagSafe connectivity so it can attach to an iPhone and connect via USB-C. Use it to save the 4K ProRes video you're shooting for your next project. It has a 100W PD port for fast charging, 10GBps transfer speeds, a cooling system, and more. —ROMAN LOYOLA

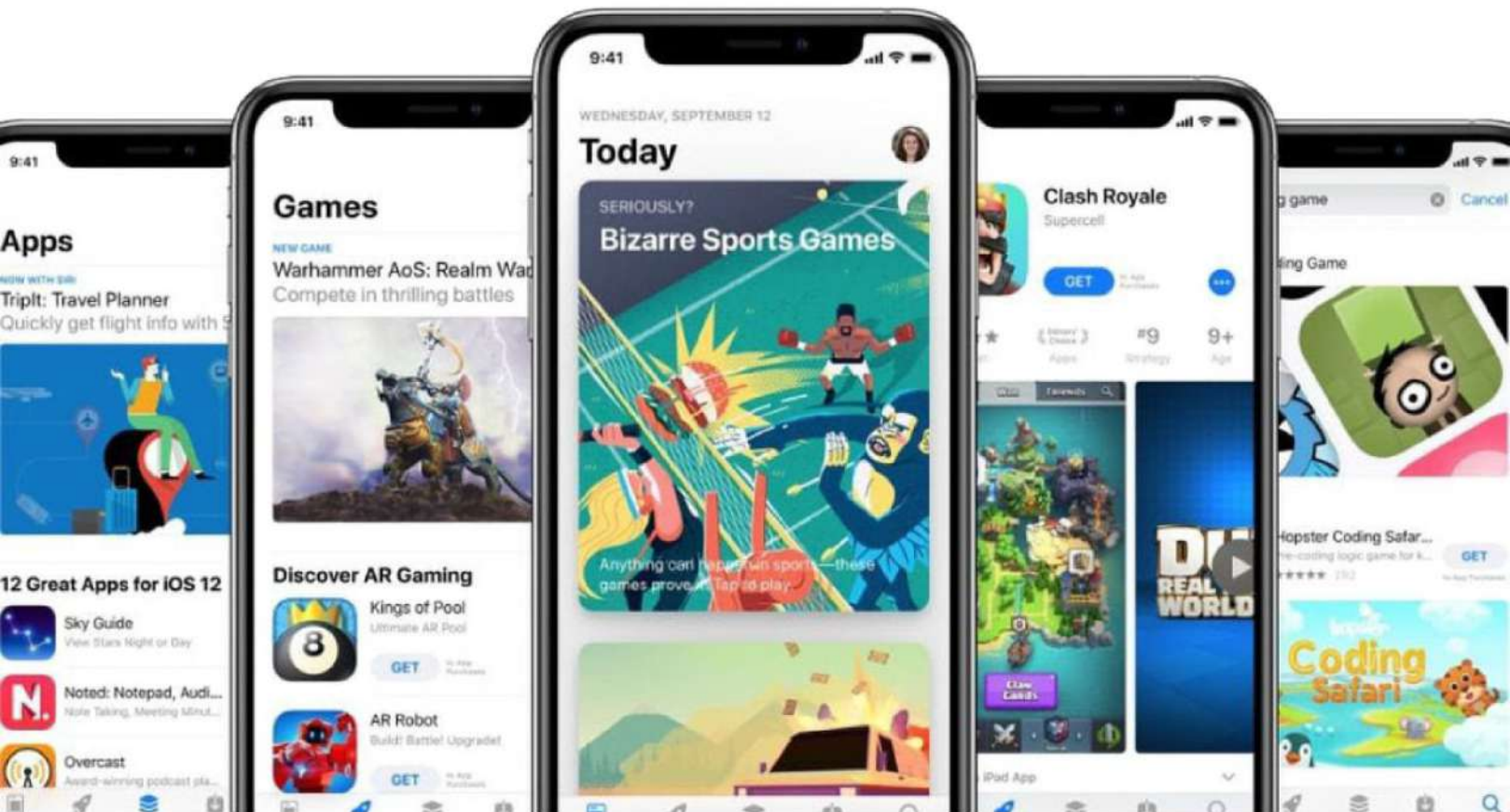


# MAKE SURE CUTIE PIE IS IN THE RIGHT SEAT.

[NHTSA.gov/TheRightSeat](https://www.nhtsa.gov/TheRightSeat)



**NHTSA**



## The silliest iPhone apps of all time

In July 2024, Apple's App Store listed around 1.96 million apps—including some that are just absurd.

BY FLORIAN KASTNER

Sometimes you wonder what you're supposed to do with all the technology in your trouser pocket. The answer? Well, some developers have given it some very special thought. Here's a selection of the most bizarre apps that turn your iPhone into a veritable marvel of uselessness.

### 1. IS IT DARK OUTSIDE?

Have you ever desperately wondered if it's dark outside—but just didn't have the heart to get up and check? Is It Dark Outside? ([fave.co/3TMaDIB](https://fave.co/3TMaDIB)) solves that problem. The app checks whether the sun has set—that's it.

It's ideal for anyone who thinks windows are overrated or who wants to

practice living in a bunker for potential zombie apocalypses. It's also for those who can't be bothered to look at the sunset time in the Weather app—or to just ask Siri.

## 2. PIMPLE POPPER

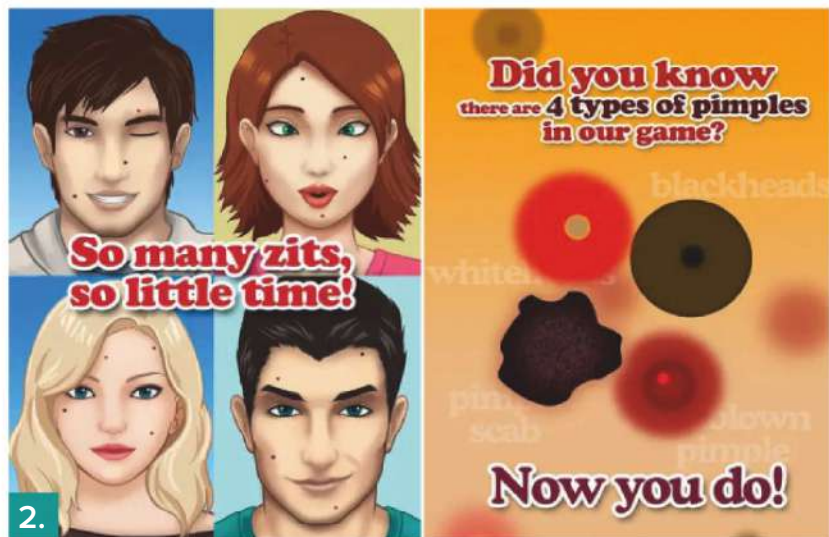
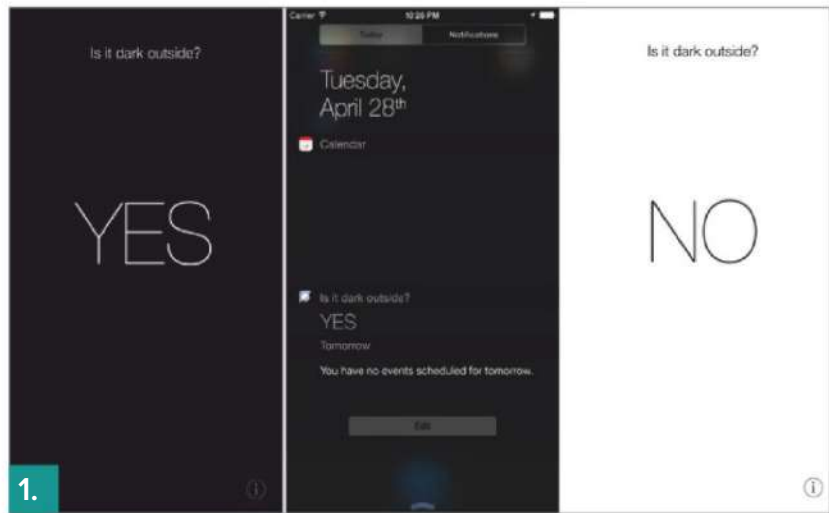
For those who find relaxation in the art of squeezing pimples, there's an app for that: Pimple Popper ([fave.co/3TLMn9s](http://fave.co/3TLMn9s)). Press, squeeze, and squirt up to four different types of pimples to your heart's content. We warned you!

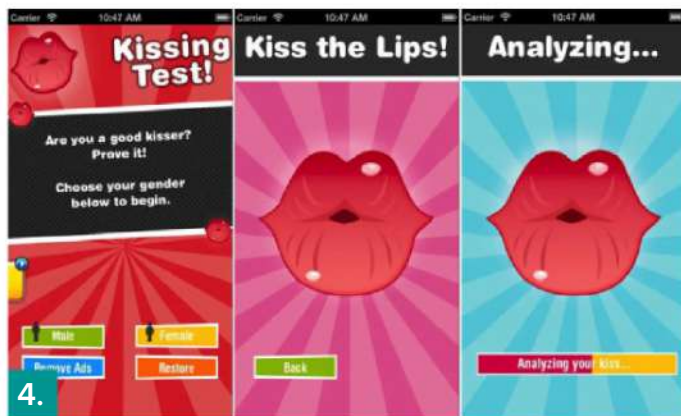
## 3. iBEER

A beer that never runs out and doesn't give you a hangover? Sounds too good to be true. But with iBeer ([fave.co/3ZFEIgl](http://fave.co/3ZFEIgl)), you can drink endlessly—without spilling a drop. Cheers!

## 4. KISSING TEST

Have you ever wondered how good your kissing skills are? Kissing Test ([fave.co/3zq7tDt](http://fave.co/3zq7tDt)) delivers the merciless truth, without any



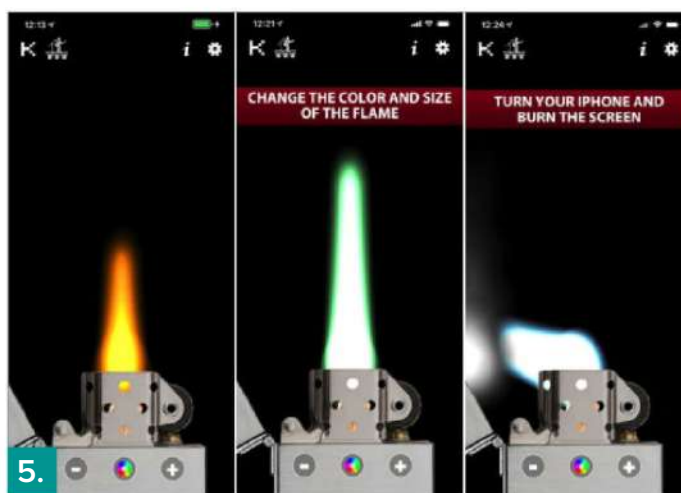


4.

embarrassing moments or lipstick stains. Simply select the appropriate gender and you're ready to go. Please clean the display beforehand. And afterward too.

## 5. LIGHTER

It can do everything a real lighter can do, except start a fire. Lighter ([fave.co/3N2N2zx](http://fave.co/3N2N2zx)) is the perfect app for all those moments when you need a lighter but don't want to risk a flame—for example, at concerts. Everyone else is waving their smartphones with the flash switched on while the ballad is played, while you—stylishly—use a lighter like it's the '80s.

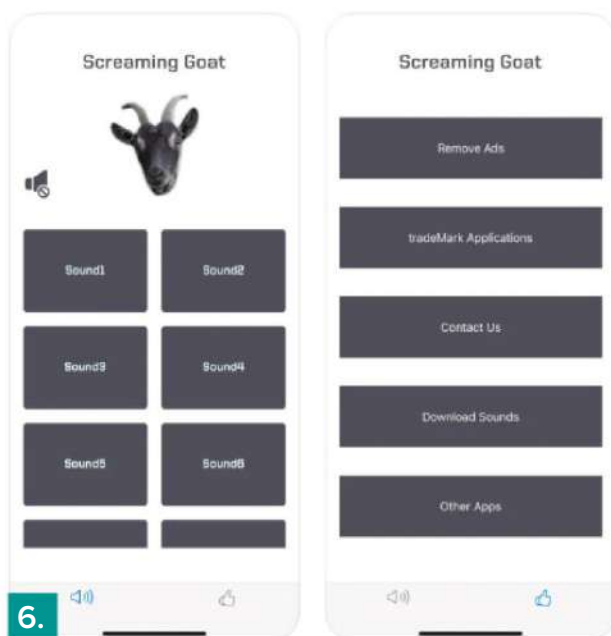


5.

## 6. SCREAMING GOAT

Who hasn't always wanted a screaming goat in their pocket?

Exactly nobody. But if you do, Screaming Goat ([fave.co/47H21ss](http://fave.co/47H21ss)) is the perfect choice. One click and the goat screams—you just have to calm it down afterward.



6.

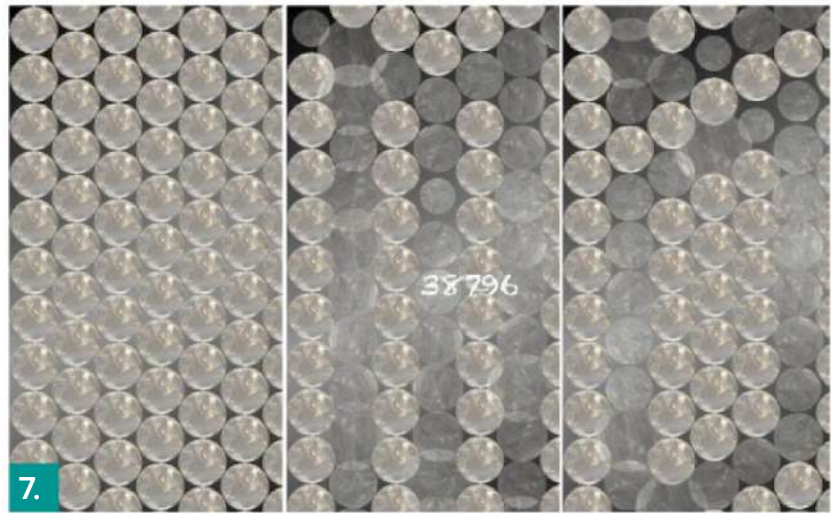
## 7. PLOPP—BUBBLE WRAP

For many, popping bubble wrap is one of life's few true pleasures. So why wait for real foil when you can have it digitally? Plopp—bubble wrap ([fave.co/3zDkBoF](http://fave.co/3zDkBoF)) lets you pop plastic bubbles wherever you are, with a 3D touch feeling (on supported devices). Incidentally, the bubbles also

respond to pressure with the Apple Pencil ([fave.co/3TItZhu](https://fave.co/3TItZhu)).

## 8. GHOST RADAR CLASSIC

If you have the feeling that your neighborhood is haunted, just let your iPhone do the work for you. Ghost Radar Classic ([fave.co/3TKxvZ4](https://fave.co/3TKxvZ4)) recognizes ghosts—or at least anything that sounds vaguely like one. Whether this is really reassuring remains to be seen.



## 9. MILK THE COW: COW MILKING

If you've always dreamed of milking a cow but never had the opportunity, here's your chance! Milk the Cow ([fave.co/3zMiPS6](https://fave.co/3zMiPS6)) lets you squeeze for all you're worth and see just how much milk you can collect in a minute. Udder ridiculousness included.

## 10. ANT SMASHER

For all those who like to squash ants—but only



digitally, please. Ant Smasher ([fave.co/3zImnVu](http://fave.co/3zImnVu)) allows you to practice destroying little crawlers. It could even be a little therapeutic if only the adverts weren't so annoying.

## \$1,000 FOR NOTHING: THE LEGENDARY I AM RICH APP NO LONGER EXISTS

In August 2008, the app I Am Rich by German developer Armin Heinrich

caused head-scratching around the world: For a whopping \$999.99, you could buy an app that did nothing more than display a red ruby on the screen.

In fact, it was even purchased eight times (!) before Apple removed it from the store due to public outcry. Heinrich

defended his work as “art”—but a wave of criticism for the most expensive yet useless app of all time was inevitable.

Today, I Am Rich remains a curious chapter in the history of the App Store. ■

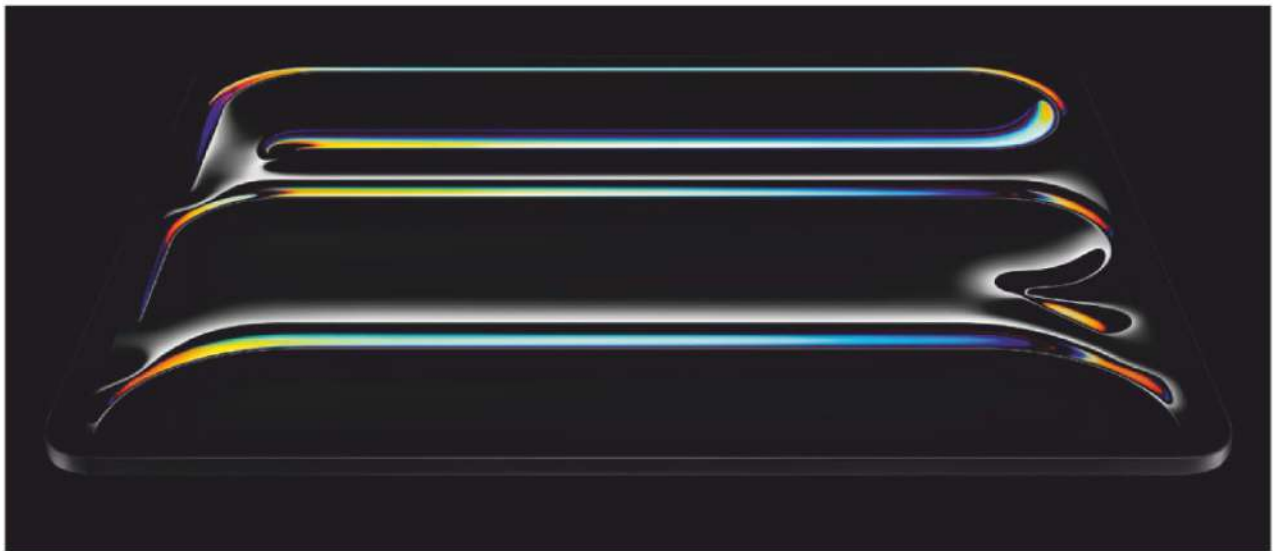
**I Am Rich appeared briefly on the App Store before it was pulled.**



# Why you should skip the M4 Macs and switch to an iPad Pro instead

It's got the power and performance for all but the most demanding tasks.

BY THIAGO TREVISAN



**T**he distinction between traditional computing methods has been slowly eroding during the last few generations of Apple products.

The Mac has long been Apple's go-to workstation, but with the introduction of the new M4 iPad Pro, there's a viable option to consider for your serious tasks.

The powerful M4 iPad Pro has overwhelming computing power, a gorgeous screen, and a MacBook-like Magic Keyboard. Consumers have always shown interest in having a touchscreen Mac, but since Apple won't oblige, the

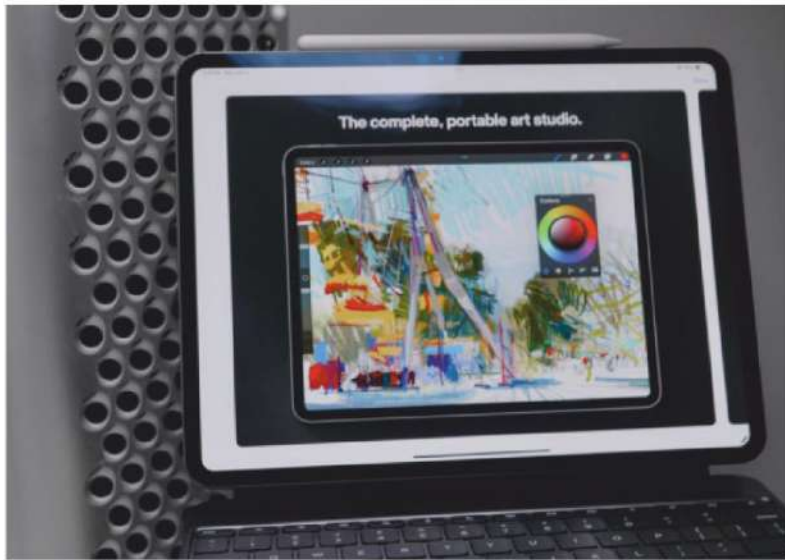
iPad Pro is the next best thing.

But can the iPad Pro be a competent Mac replacement? Considering the iPad Pro's pure power, it looks like a slam-dunk, but outside that, the limitations of the platform linger. Let's look at how close the iPad Pro is to being a workstation users can rely on.

## IMPRESSIVE HARDWARE

The iPad Pro has extraordinary performance chops, beating the well-seasoned M3 ([fave.co/3zB1ifF](https://fave.co/3zB1ifF)) in benchmark tests. The new iPad Pro also





**The iPad Pro's stunning display is great for professionals.**

has an adequate 8GB of RAM, or 16GB of RAM in the 1TB models. With the higher tier of storage for the iPad Pro, the M4 has more RAM and one more CPU core, akin to how Apple does MacBook Pro tiers of upgrades—take it as a sign of the iPad Pro being a real Mac replacement. The 10-core GPU and 16-core Neural Engine provide more processing power.

It gets even better. The iPad Pro's tandem OLED display ([fave.co/4dqBgK7](https://fave.co/4dqBgK7)) is a beauty to behold. With a stunning 264 pixels per inch and 120Hz Pro Motion refresh rate, there is not much to complain about. A nano-texture version with 1TB and above models gives professional users an option for bright working conditions. Add

beautiful and accurate colors, and it competes with much more expensive monitors. Sure, the 13-inch iPad Pro is still shy of the 16-inch MacBook Pro in size, but it more than makes up for it with its touchscreen flexibility.

Apple also released the new Magic Keyboard for iPad Pro ([fave.co/4eFIA5r](https://fave.co/4eFIA5r)).

Designed to look even more like a MacBook Pro keyboard, it now also features a function

row that's full of utility. Together with a responsive touchpad, the tactile nature of the iPad Pro is unmatched by any MacBook Pro.

With such a suite of hardware utility on iPad Pro, it is easy to overlook the Apple Pencil Pro ([fave.co/4aBnvqy](https://fave.co/4aBnvqy)). Newly



**The new Magic Keyboard enhances the iPad Pro's functionality. The Apple Pencil Pro gives the iPad Pro an advantage over a MacBook.**

designed with new tricks up its sleeve, this is the ultimate tool for artists and productivity users who require that nuance only afforded by a stylus.

Taking all that the hardware has to offer under consideration, we can confidently say that the M4 iPad Pro does have what it takes to become a Mac replacement. But it's not all about hardware.

## HERE'S THE CATCH

The iPad Pro hardware can certainly have you racing down the highway of productivity, but then you hit a bottleneck: iPadOS. iPadOS just isn't designed for daily production on a larger scale, but Apple has carefully curated a suite of apps that are designed specifically with iPad Pro

users in mind to make it a valuable tool in smaller instances.

Final Cut Pro and Logic Pro ([fave.co/4eCEH1c](https://fave.co/4eCEH1c)) are just two of the heavy-hitting apps that Apple is tuning up for the iPad experience. Both make great use of the M4 chip in the iPad Pro. The intuitive controls have also been fine-tuned, making it a pleasant overall experience for creatives.

But then there are issues with the way iPadOS behaves when power users try to push it beyond its limits. iCloud and the file system have been great additions to the iPad Pro, but the file system is still inferior to that of macOS. It's a lot easier to organize large projects on a Mac.

Then there's the ability to multitask. On

iPadOS, it can range from useful to frustrating. Stage Manager ([fave.co/3XW1RKp](https://fave.co/3XW1RKp)) is a good idea in theory but clumsy in its execution when it comes to resizing and adjusting windows.

At Apple's recent Worldwide Developers Conference, the push into AI (aka Apple Intelligence, [fave.co/4d8uxoF](https://fave.co/4d8uxoF)) was on full display, and the iPad Pro seems like an ideal platform for such features.



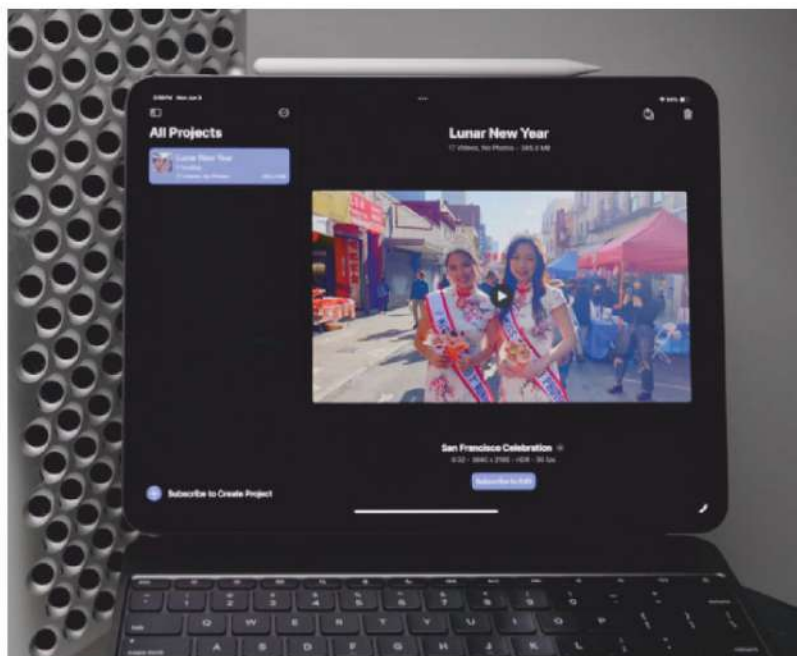
**Stage Manager is a good idea in theory but clumsy in its execution of resizing and adjusting windows.**

Apple gave quick demos of AI features that are coming, but until it's actually in the hands of users, the software user experience is still undefined. We can hope for practical uses of AI, since the iPad Pro is one of the first early devices at the helm of whatever AI goodies Apple intends to spread across its lineup.

As a touch platform, iPadOS does have its benefits and works well. The software interaction with the Apple Pencil Pro is fantastic, with impressive details such as the appearance of the Pencil Pro shadow and the new squeeze function.

## SITUATIONAL USE CASES

Apple is careful not to completely cannibalize its MacBook Pro lineup, leaving the iPad Pro just capable enough to attract some niche users. That said, the iPad Pro can certainly be a superior laptop replacement for the right user. One major issue, regardless of the use case, is price. The iPad Pro can easily go beyond the \$2,000 mark when fully adorned with its accessories and higher-end specs. There are other iPads in Apple's lineup for budget constraints, but this makes the iPad Pro a seemingly high-end product that



**The new Final Cut Pro includes new features that make it a better tool on the iPad Pro.**

needs to compete on its merits against the MacBook lineup. Here's how the iPad Pro fits in based on the use case.

**The home user:** If all you need is a fantastic webcam device, coupled with a screen and competent keyboard, the iPad Pro has you covered. iPadOS offers easy access to apps such as Mail, Safari, Messages, FaceTime, and even Keynote, Numbers, and Pages. It can connect to larger monitors, enabling it to punch above its weight when more screen real estate is needed. The iPad Pro also has a penchant for being an entertainment powerhouse thanks to its gorgeous screen, fast hardware, and access to music- and video-streaming apps.

**Creative pros:** There's a good selection of apps available for amateurs and expert users, but professionals may not find the apps they need. The Apple Pencil Pro is a crucial tool that has no equal on the MacBook. With one of the best OLED screens available, together with Pencil Pro, artists will find no want in such a device. Photographers can also find plenty of portability and utility with iPad Pro, and the nuance of photo touchups can be easier for some on this device. With third-party software such as Adobe Photoshop, there is a breadth of capabilities baked into iPad Pro.

**Final Cut Pro:** Apple has been making a big push into Final Cut Pro for iPad Pro. With nicely fine-tuned controls, and the ability to use the iPad Pro itself to capture images, it makes a good case for usability for all but the highest-end power users.

**Logic Pro:** Logic Pro for iPad Pro, much like Final Cut Pro, takes advantage of the powerful hardware embedded within to make easy work of most workflows in a neat, portable device. While power users will still want to work with a full-fledged macOS desktop for large projects, this is a step in the direction of making the iPad Pro well rounded.

**3D graphics and gamers:** The 10-core GPU within the iPad Pro has up to four times faster rendering performance than the M2 chip, together with ray-tracing

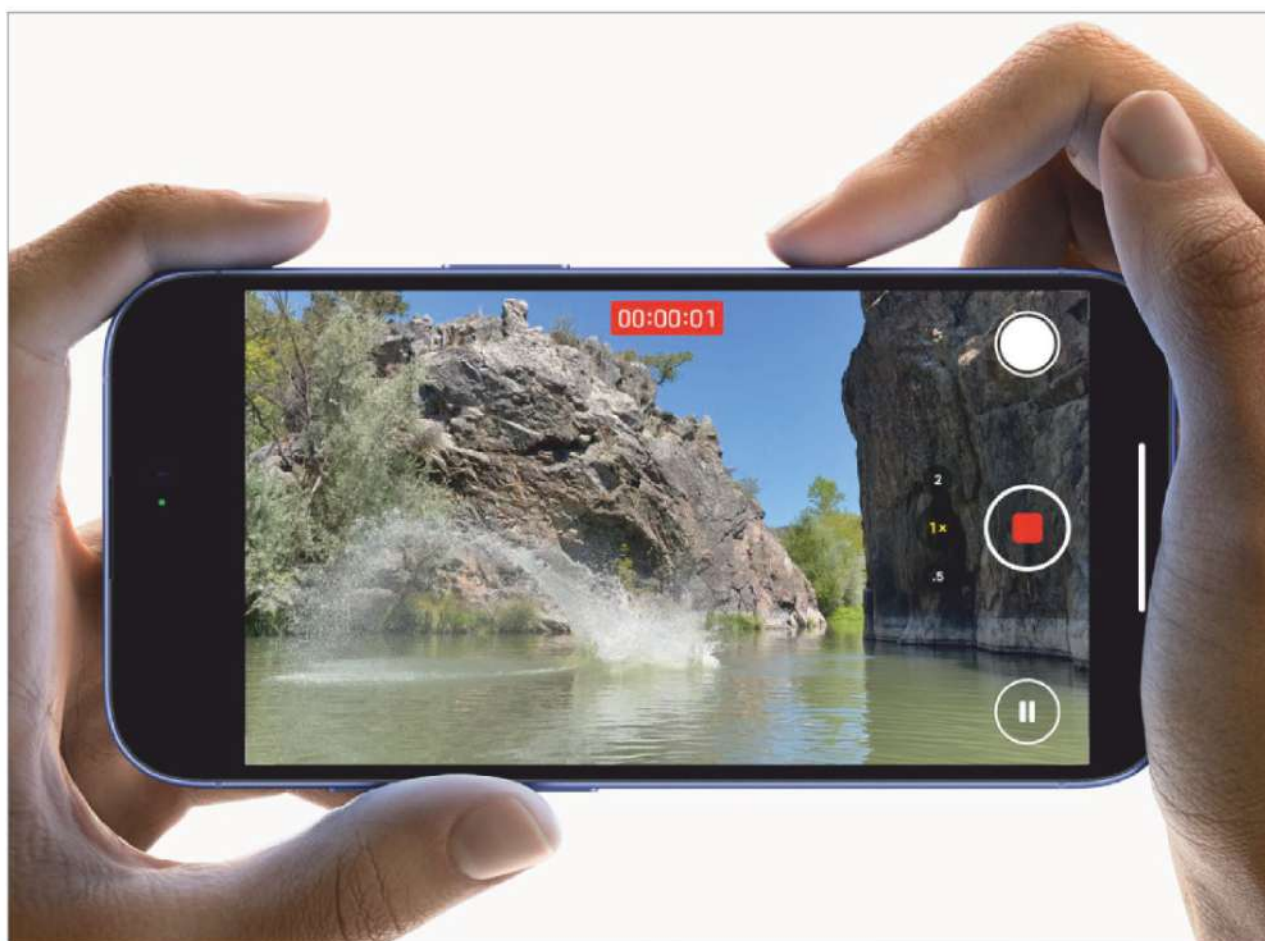
capabilities. Though it may not match the performance of a Windows PC with a discrete GPU, the iPad Pro can certainly impress with competent gaming performance as shown by *Resident Evil 4* and similar titles.

## IT CAN REPLACE A MAC (MOSTLY)

The iPad Pro can clearly replace many functions for most users who typically rely on desktops or laptops. It has the power for a wide range of tasks such as word processing, video editing, and even pinpoint graphics work. The iPad Pro has a great form factor, and its thin and portable nature can best even the diminutive MacBook Air—it can be used more comfortably in mobile or nontraditional work situations.

However, iPadOS doesn't always keep up with the needs of more demanding users who may shy away from the lack of competent file management. And while the iPad has a great software library, many professional apps aren't on the iPad. The macOS ecosystem is still vast and full of choices for such users.

The iPad Pro remains a valiant challenger to the Mac (more directly, the MacBook). With the upcoming updates to iPadOS and more AI technology, it could become a more viable platform that replaces the Mac. ■



# Everything you can do with the iPhone 16's Camera Control button

Instant photos, Visual Intelligence, easy access to camera settings, and more.

BY DAVID PRICE

Apple unveiled the iPhone 16 and 16 Pro, [fave.co/3XGSzkb](https://fave.co/3XGSzkb) (alongside a new Apple Watch [\[fave.co/3BmPWN3\]](https://fave.co/3BmPWN3) and AirPods [\[fave.co/4epXFso\]](https://fave.co/4epXFso) models) at an action-packed press event in September.

The company focused heavily on new AI features, but we knew quite a lot about Apple Intelligence already; many company watchers, including this one, were more interested in the iPhone getting a second new button in as many years.

As had been rumored ahead of the event, all four new iPhone models for 2024 ([fave.co/3zqvASt](https://fave.co/3zqvASt)) feature a new capacitive, gesture-sensitive button called Camera Control. This sits in a slight recess low down on the righthand edge, below the power button; hold the device in landscape mode and it lines up conveniently with your right index finger, like the shutter on a camera. It works in portrait mode, too.

Fairly obviously, given the name, this control is intended for use when taking photos. Here's what it can do.

**Launch the Camera app:** This is pretty apparent, but clicking the button once will open the Camera app.

**Take a photo:** Once the Camera app is open, click the Camera Control button again to take a photo. You have to do a proper click, not a light press, because that does something else (as we shall see).

**Take a video:** If you're in video mode, clicking the Camera Control button will start a recording session. You can also long-press in photo mode to instantly start recording video.

**Zoom in and out:** Instead of clicking, lightly press the button when in the viewfinder, and a zoom dial will pop out next to your finger. Swipe left and right on the control to zoom in or out.

**Other camera controls:** This time, do a light double tap, and a swipearable menu

of various camera controls will pop up. You can access zoom, depth effects, exposure, and other options by swiping along the button.

Those are the main features Apple lists on the iPhone 16's product page, but Camera Control doesn't stop there. The company also revealed during the keynote that Camera Control will be used for an Apple Intelligence feature called **Visual Intelligence**. Point your iPhone at an object or place, click and hold Camera Control, and then marvel at relevant AI-powered analysis: If it's a dog, it'll tell you the breed; if it's a restaurant, it'll tell you the hours, and so on. But this isn't a launch feature. It will come to Camera Control later in 2024, Apple says.

Likewise, Camera Control can be used to **search** for things you can see. Point the camera at a bike, for example, and clicking the button will use Google Image Search to find out more about it. You can also search using **ChatGPT**.

As with new hardware controls in the past, Apple is hoping that third-party app makers will come up with inventive ways to use Camera Control. Over the coming months, iPhone 16 and 16 Pro owners are likely to see further uses of the button to quickly access apps and app features in various ways. It remains to be seen whether this will be a hit or a flop, but for now, the potential is appealing. ■

# Apple's free Passwords app can replace your paid password manager (kinda)

Apple's new Passwords app can replace your passwords manager, but there are a few rough edges to smooth out.

BY JASON CROSS



Password managers such as 1Password ([fave.co/3xGI3QU](https://fave.co/3xGI3QU)) and LastPass ([fave.co/3zwxOzH](https://fave.co/3zwxOzH)) are great. We maintain a recommended list of Password managers ([fave.co/4bPSGza](https://fave.co/4bPSGza)) for a reason—a good one makes it easy to use strong, unique

passwords everywhere on the web, no matter what platform or browser you happen to use.

But to get the most out of them, you need to pay a subscription fee. It only makes sense—there's a cost to running these cloud services. Now that Apple is

introducing a standalone Passwords app in iOS 18 and macOS Sequoia, I wondered if I could drop my 1Password subscription and save a few bucks a month. I also use Authy for two-factor authentication keys ([fave.co/3QrUogl](https://fave.co/3QrUogl)), and I love it, but since Apple's Passwords app supports standard 2FA keys as well, I could effectively eliminate *two* apps from my iPhone.

About a week ago I took the plunge, and I learned that most users can replace their paid password manager with Apple's free solution. There are a few wrinkles and annoyances, but it's definitely "good enough" for most everyday users. Apple could stand to polish up its app in a few places, and it's not going to get the job done for power users, but the biggest annoyance I ran into was actually making the switch, not using the Passwords app after getting it all transferred over.

## MAKING THE SWITCH IS THE WORST PART

The worst part of moving from 1Password and Authy to Apple's Passwords app has been literally making the switch.

Getting passwords out of 1Password was easy enough. 1Password can quickly and easily export passwords to CSV format (comma-separated values), and the Passwords app quickly imports them. It dealt with duplicates well enough, and only a handful of passwords didn't import.

Dealing with those was more annoying—either reconciling the problem in 1Password and exporting again, or adding them manually. It's not difficult, but it's a tedious process.

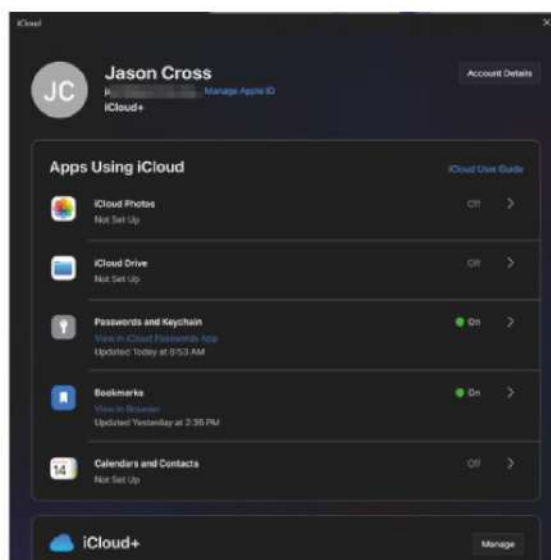
Even worse was moving 2FA codes from Authy. I love Authy's cloud sync and backup, but there's no official *export* function. Without relying on third-party tools that I might not trust (and don't want to set up), that means logging in to every account I have a 2FA code for and adding a new one. In many cases, the service only allows a single 2FA code, and I had to disable 2FA and set it up again from within the Passwords app.

That's easy enough—it supports the standard manual code or "scan a QR code with your phone camera" methods. Again, it's not a hard task, but it's an hour of busy work I'd rather not have had to do.

Then there are other apps. I use Chrome a lot, so I had to grab the iCloud Passwords extension for autofill to work there. I also had to install the iCloud app on my Windows machine to sync my passwords there (Apple provides no password management on Windows, but the passwords sync to the browser extensions through the Windows iCloud app). The whole process took most of an afternoon, and I spent the next few days cleaning up the occasional bad URL or duplicated password.



Those who use non-Apple software may need to grab the iCloud Passwords extension for autofill to work.



Those who don't already have a password manager won't have to go through any of this, of course. If you're thinking of switching to save the fee for your password manager, expect it to take a little time.

## GOOD ENOUGH FOR MOST

Apple's Passwords app works well enough for the basic functions most of us rely on. It stores and fills login passwords, Wi-Fi passwords, 2FA codes, and passkeys. It warns you of easy-to-guess passwords, reused passwords, and passwords that have appeared in major data breaches. It's also relatively easy to securely share passwords with others. Apple also provides its own suggested passwords for new signups.

It doesn't give you much in the way of other features—stored credit card and

identification info to autofill in forms, secure document storage or notes, and so on. Apple has other apps that do those things in encrypted ways, but if you use other platforms and browsers, they're not easily available.

I prefer the interface of some other apps to Apple's rather pedestrian effort, too.

After setting up the browser extension in Chrome,

you'll have to enter a six-digit passcode (generated by the iCloud Windows app, [fave.co/4eCJyQ0](https://fave.co/4eCJyQ0)) to sync the browser extension with your stored passwords. It won't enter 2FA codes, so you'll have to look at your iPhone for that. If you use Firefox or a browser that doesn't support Chrome extensions, you're out of luck: Apple doesn't make an add-on.

Good news, though: With macOS Sonoma and the new Passwords app, the Chrome and Edge extensions now work on the Mac, too.

Suffice it to say that for most users, Apple's Passwords app gets the job done. It's not a luxury experience, but most people don't use a password manager at all...getting them in the door this way is a good thing. If you just *love* your current password manager and use it to connect to multiple platforms and browsers, it may

well be worth continuing to pay its subscription fee.

If you primarily use Apple products and Safari, you're going to have a smoother ride, and it's hard to recommend a paid password manager for all but the most picky of power users.

## AREAS WHERE APPLE CAN IMPROVE

Apple could make the Passwords app a really great solution for most users with a few improvements. Increasing the font size on the 2FA codes by a few points would help. There's text at the top of the Codes screen that shows you how long until the codes reset, but it scrolls off the top of the screen when you scroll down



Apple users will find the Passwords app easy to use.

your list—it should stay anchored at the top of the screen.

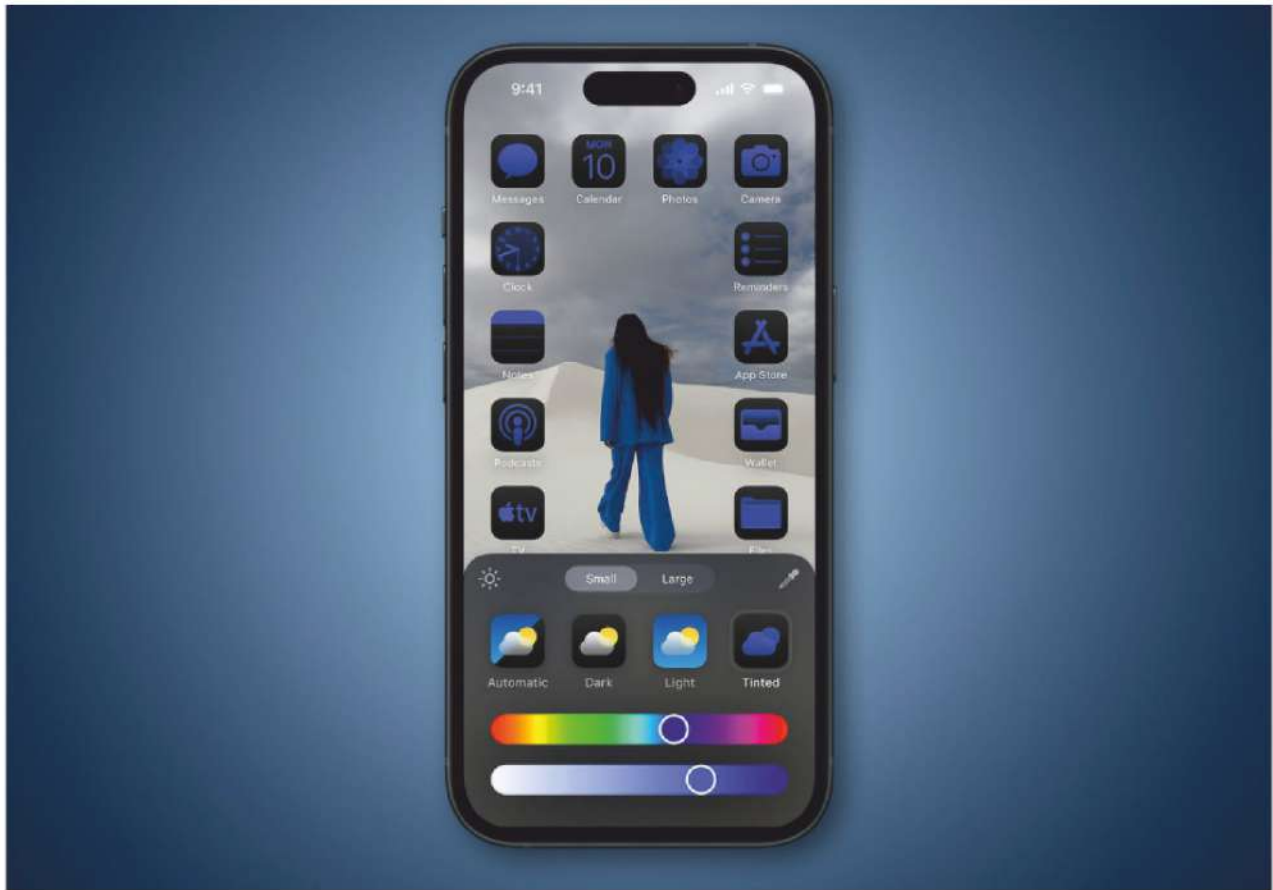
There should be a Firefox extension at least, and both it and the Chrome extensions should use the same foundation as passkeys to allow you to unlock them with Face ID on your iPhone if you don't want to type in a six-digit code on Windows (on Mac, you use Touch ID to unlock the Mac passwords app).

You can easily export all your passwords on a Mac, but doing so on an iPhone or iPad doesn't seem possible at all. Something as critical as our passwords shouldn't be dumped into a one-way bit bucket like this.

Even without these changes, the new Passwords app is...fine. For the bulk of

Apple users who don't regularly use other platforms or browsers, it's very low friction, and even for those who use Chrome or Edge and even Windows, it gets the job done well enough. It's a big step up from the status quo in iOS 17 and macOS 14, which is all your password stuck three menus deep in Settings, and it's a great first step for the majority of users who don't use a dedicated password manager.

I just hope Apple doesn't wait until iOS 19 to make some improvements, because it could be *great*. ■



# iOS 18: How to change the color of app icons on your home screen

Light mode, dark mode, even tint icons to whatever shade you want.

BY JASON CROSS

**W**ith iOS 18, Apple is giving us unprecedented (for Apple) control over the layout of our home screens.

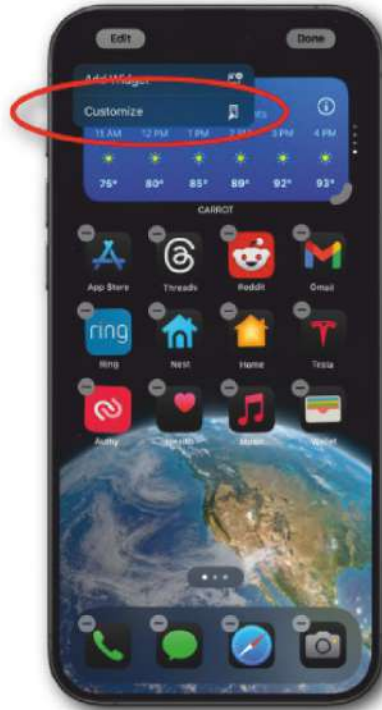
A big part of that is customizable icon colors. That's right, icons can have separate light and dark mode coloring,

and you can even force all your app icons to use a custom tint. Here's how it works.

## LIGHT, DARK, OR CUSTOM TINT

To change the appearance of an icon, start with a long press on your home screen in an area where there is no app icon for a

iOS 18 lets you customize the home screen.



You can change the color of your apps and widgets.



couple of seconds. Your apps will jiggle and show a minus-sign (–) remove button in the upper left corner of each icon. This is your home screen edit mode, where you can easily move or remove app icons and widgets.

Tap the Edit button in the upper left. A popup menu will show Add Widget and Customize. Select Customize. At the bottom of the screen, you'll see app and widget controls. You can change between small or large icons (with no labels), as well as choose how they appear:

**Automatic:** Switch between Light and Dark mode to match whatever mode your iPhone is in ([fave.co/3zyGZj8](https://fave.co/3zyGZj8)). Helpful for those whose iPhone is set to go to dark mode at sundown, for instance.

**Dark:** Force dark mode icons at all times.

**Light:** Force light mode icons at all times.

**Tinted:** Choose a custom tint to override the color of all your apps and widgets. This does not need developer support.

Dark mode icons are not necessarily supported by all apps—developers have to make use of a new API to define a dark mode icon. It will work on all of Apple's apps, and it's likely that many third-party apps will be updated to include a dark mode icon once iOS 18 is released.

If you select a mode and don't like it, just go back to this menu and select another one. ■

He's 6'1",  
but he still  
looks up  
to me.

Adopt a teen.  
You can't imagine the reward.



A D O P T U S K I D S . O R G

**AM I  
OKAY  
TO  
DRIVE?**

**BUZZED DRIVING**

**IS DRUNK DRIVING**



POWER BANK

## UGREEN 48000MAH PORTABLE POWER BANK: MORE POWER AND PORTS THAN THE AVERAGE BATTERY PACK

BY SIMON JARY



The Ugreen 48,000mAh 300W Portable Power Bank boasts a larger-capacity battery than any other power bank we have tested. At 48,000mAh, it is built like the missing link between a laptop power bank and a full-scale portable power station.

It's small and portable enough to be designated a personal power bank, but it has the miniature look of something you might connect with your solar panels and keep in the garage.

With its 140W PD 3.1 USB-C port, it's a nice fit with Apple's top-end 16-inch

MacBook Pro ([fave.co/41w6LOh](https://fave.co/41w6LOh)), which can be fast-charged at 140W using Apple's USB-C to MagSafe 3 Cable.

## TECH SPECS

**Battery capacity:** 99.56Wh

**Fastest power output:** 140W

**Total power output:** 300W

**Power input:** 140W

**USB ports:** 1× USB-C (140W PD 3.1); 2× USB-C (100W PD 3.0); 2× USB-A (22.5W)

**Dimensions:** 6.3×5.7×3 inches (16×14.5×7.6cm)

**Weight:** 3.6lb (1.65kg)

## PERFORMANCE POWER

We managed to recharge our test 14-inch M2 MacBook Pro 1.8 times, so we'd expect it to recharge a MacBook Air at least twice over. With the Pro, we got from 5% charge to 90% in an hour, which is impressive.

Once we'd run the MacBook down to 5% again, the power bank's display showed 43% of its own battery charge remaining, but this oddly dropped quickly to around 22% when we plugged it back into the laptop.

Batteries do charge in a nonlinear fashion. Rather than taking in energy at a constant, predictable rate, the rate at which a battery charges changes due to many variables—most important, how much charge it already has. The fuller the battery, the slower it absorbs energy.

We still got from 5% to 80% on that reduced charge, so it looked like an initial display error. The most important thing is that the power bank kept charging for so long.

With its 140W USB-C port, this power bank is best suited to the top-end 16-inch MacBook Pro as it can be fast-charged—although Apple requires that you use its USB-C to MagSafe 3 Cable rather than a standard USB-C to USB-C charging cable. The cable that ships with the power bank is capable of 240W, but Apple insists you use its cable for 140W fast charging.

While the 140W USB-C is great news for owners of Apple's top-end laptop, the Ugreen 48000mAh battery pack is a powerful solution for all MacBook models, as it has such a high capacity and more ports than we've seen from the competition. See our list of MacBook battery capacities ([fave.co/478s3V1](https://fave.co/478s3V1)) for more details on the whole range of Apple laptops.

It is perfectly safe to charge even the 5W Apple AirPods charging case using a 140W port, so don't worry that you are oversupplying power. This is regulated by the device receiving the charge. That said, this power bank can be set to Trickle Charging Mode, which provides a constant, low-level charge for devices that require minimal wattage to charge. To





**The Ugreen 48000mAh Power Bank can simultaneously charge up to five devices.**

enable this mode, press and hold the power button for three seconds.

## MORE USB PORTS THAN MOST

While its primary function is for charging laptops, the Ugreen 48000mAh Power Bank can simultaneously charge up to five devices. You could charge a MacBook at the same time as one or two iPhones, iPads, AirPods or Apple Watch.

The first USB-C port is rated at 140W, and the other two each at 100W. A couple of 22.5W USB-A ports are there for legacy devices.

Maximum power output is 300W—again a high in all our laptop power bank reviews—so you can't use all three USB-C ports at full power, but there are many options using the five ports.

For example, you could charge three MacBooks at 100W each, using all the USB-C ports at the same time. Or power a 16-inch MacBook Pro at 140W and another MacBook at 100W, with the other ports spare for less power-hungry devices.

Between the two USB-A ports there's a simple-to-use power button, so you can halt recharging without having to unplug cables from ports.

## HIGH CAMP CAPACITY

The number of ports and that generous 300W total power output, plus the sheer size of the battery capacity, gives you lots of options. This power bank looks like a great choice for camping trips where you might need to use it just to charge an iPhone 15 Pro ten times over.

While its 153Wh battery capacity is just within the maximum permissible in-flight limit of 160Wh (if approved by the airline), it's unlikely you'd need all that power even on a long-haul flight. There are more portable but still high-capacity power banks better suited to air travel, such as Ugreen's own Nexode 20,000mAh Power Bank ([fave.co/4eCdNGI](https://fave.co/4eCdNGI)).

It is better suited to travel in a car, or possibly kept charged at home or in the



**This is a great choice for camping trips.**

office in case of local power outages. Preppers might prefer something with a colossal battery capacity, however. Again, just choosing from Ugreen's own range, we point preppers in the direction of the PowerRoam 2400W 2048Wh Battery Backup ([fave.co/3XLdFOe](https://fave.co/3XLdFOe)), which is so large that it requires its own set of wheels.

## CHARGING THE DEVICE

Of course, once spent the power bank itself needs charging. It takes about an hour and a half to recharge using the 140W USB-C port.

## BIG BUT STILL PORTABLE

It's slightly insulting to call the Ugreen 48000mAh power bank big. It's actually quite compact for such a large battery, but compared

to other laptop power banks, it is on the chunky side. It's more like a small handbag compared to the suitcase-like portable power stations ([fave.co/47Ji7Se](https://fave.co/47Ji7Se)).

It weighs over 3.5 pounds (1.65kg), compared to other laptop power banks that weigh around 20 ounces (550g).

But with its handle it's easy enough to carry around the house. It is certainly not pocketable, and would sit rather heavily in a standard backpack.

It looks cool in its gunmetal gray, although it does pick up greasy finger marks quite easily—so you should stick to using the handle.

The display on the front of the power bank shows a large Remaining Battery percentage, and below that at either side



**This power bank is compact for such a large battery.**

are readings for Total Input Power and Total Output Power.

While its display is not as colorful as some laptop power bank smart displays, it is easy to read even in bright light.

## PRICE

The Ugreen 48000mAh Portable Power Bank is priced at \$199.99 ([fave.co/47G9msh](https://fave.co/47G9msh))/£199.99 ([fave.co/3TLHGw6](https://fave.co/3TLHGw6)).

A rival laptop power bank, the 27650mAh Anker Prime ([fave.co/3zDpgXM](https://fave.co/3zDpgXM)), has a smaller battery capacity in a more compact form and two fewer ports, but costs just \$20/£20 less.

To be fair, it's a different proposition, being much more portable, but if you are looking for a great power-price ratio, it's hard to beat the Ugreen 48000mAh Power Bank.

## VERDICT

The Ugreen 48000mAh 300W Portable Power Bank is larger than most laptop power banks, but it is still remarkably compact for such a high-capacity battery pack. It has the largest battery capacity we've seen outside of a prepper's portable power station, and it



**While not as colorful as some laptop power bank smart displays, it is easy to read even in bright light.**

boasts more ports, as well as beating all comers with its maximum 300W simultaneous power output.

Hide it away for emergencies or take it along on a camping trip, where it will keep several of your devices charged for a long weekend.

It is particularly well suited to owners of the 16-inch MacBook Pro, which can take advantage of its 140W PD 3.1 charging and full battery capacity, but MacBook Air owners will be able to charge their laptops and other devices more than once using this neat power bank. ■



### Ugreen 48000mAh Portable Power Bank

#### PROS

- Huge battery capacity.
- 140W (PD 3.1) charging power.
- Portable with handle.

#### CONS

- Larger than most.

#### PRICE

\$200

#### COMPANY

Ugreen



CHARGING STATION

## ESR 3-IN-1 TRAVEL WIRELESS CHARGING SET: GOOD LOOKS AND QI2 ON THE GO

BY THOMAS BERGBOLD

ESR is bringing all of its charging solutions up to the Qi2 standard, starting with a revised 3-in-1 Travel Wireless Charging Set. At first glance, it resembles its MagSafe predecessor, but there are small improvements in the details.

The most important feature: The Qi2 standard offers MagSafe compatibility with a 15-watt charging power. In addition to the MagSafe charging slot for the iPhone 12

and later, the charging station also has a charging slot for earphones such as the AirPods Pro 2, as well as a charging slot for all Apple Watch models.

The special feature of the Apple Watch charging station is that it comes in the form of a USB-C dongle. This makes it easy to remove and take with you.

The stand's design is slim, which makes it easier to place on a nightstand or desk. Available in white or black, the stand has a pleasing appearance. The weight of 348 grams makes the stand feel sufficiently solid, and its four rubber feet are important as they provide reliable protection against slipping and scratches. ESR specifies a magnetic holding force of 1,000 grams. We have not measured this, but we can attest that the ESR charging station has a very good hold.

The certification by the Qi2 standard and that of Apple for the Apple Watch charging dongle should guarantee maximum compatibility and speed. We measured the charging speed for the iPhone 15 and the Apple Watch 7 after several rounds at 34 percent and 43 percent, respectively, after 30 minutes of charging. It was noticeable that the charging times for the Apple Watch varied between 32 and 52 percent.



**The charging station's special feature is that it comes in the form of a USB-C dongle.**

ESR has positioned its latest charging station in the lower-price market without compromising on the basic features of fast charging and compatibility. To realize the low price, the active cooling of the more expensive models has been omitted. As a result, the charging performance is somewhat lower but still in the top class.



#### **ESR 3-in-1 Travel Wireless Charging Set**

##### **PROS**

- Good charging times for the iPhone.
- Solid stand.

##### **CONS**

- Charging times for Apple Watch vary greatly.

##### **PRICE**

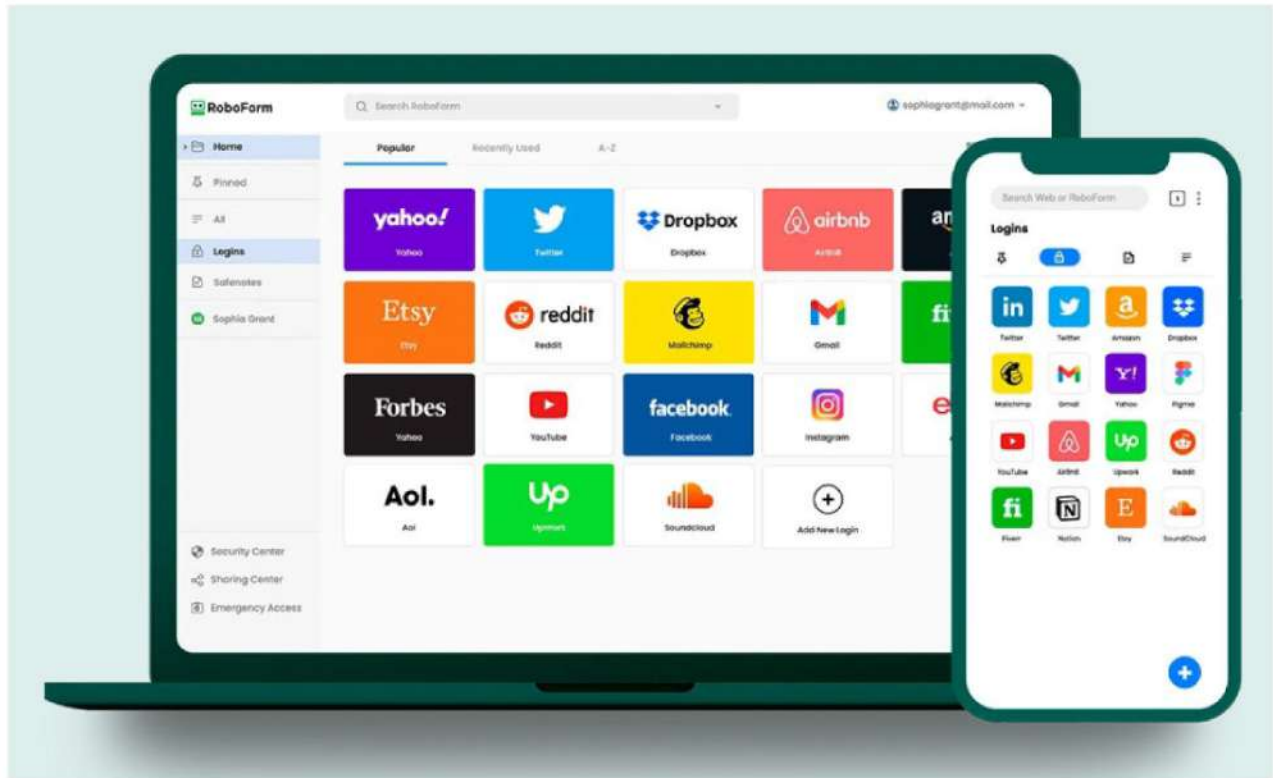
\$70

##### **COMPANY**

ESR

## **VERDICT**

Overall, there is a lot to like about the ESR 3-in-1 Travel Wireless Charging Set. It can charge the iPhone, Apple Watch, and AirPods at the same time, and it has a solid and sturdy design. The Apple Watch charging is compromised, but having a removable watch charger comes in handy. ■



PASSWORD MANAGER

# ROBOFORM: QUIET AND EFFICIENT PASSWORD MANAGER THAT GETS THE JOB DONE

BY MARTYN CASSERLY

Remembering all our passwords is becoming impossible these days. There are too many sites and services we sign up for, all requiring different criteria for how passwords need to be constructed. RoboForm aims to cut through this stress by doing the work on your behalf, with only a single master password required to log into everything, all while upgrading the security of your online life. So, does it deliver?

For more options, take a look at our roundup of the best password managers ([fave.co/4bPSGza](https://fave.co/4bPSGza)), plus you can upgrade your digital security habits by following our guide on how to make your passwords stronger ([fave.co/3R1g5Wu](https://fave.co/3R1g5Wu)).

## SOFTWARE AND FEATURES

RoboForm has been around for a number of years now, gaining itself a solid reputation in that time. It works across iPhone, iPad, and Mac (mainly through browser extensions, but you can install a desktop client if you prefer), plus you can use it on Windows and Linux as well as Android.

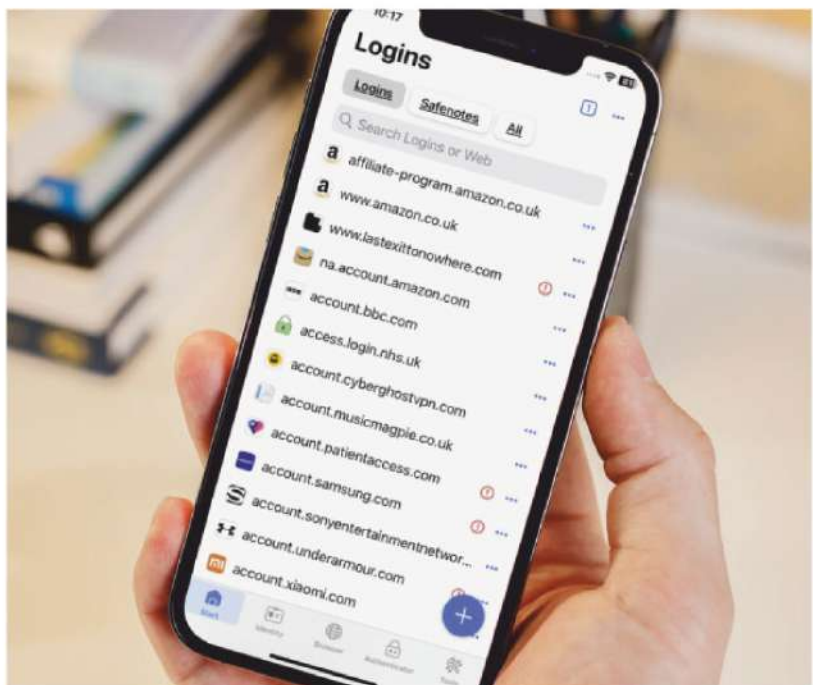
Getting set up is quite simple. Download the relevant app or extension, then sign up for an account. There's a free trial that gives you access to the Premium tier features for 30-days, then you can either continue to use it for free on the quite limited tier or sign up to a fully functional paid variety.

As you'd expect from a modern password manager, you can import your existing login details from other services or your browser, then enable RoboForm as your manager of choice for auto-fill—and you're pretty much good to go.

It's not just for passwords, though, as you can also store personal details such as your address and phone number for completing online forms, alongside secure storage for your passport, driving license, and other sensitive data that

you might want to access in a hurry. It's all pretty standard stuff.

The interface is fine, if a little basic, with the desktop client looking like a Finder window. RoboForm says this is a legacy issue, and it seems to have put more effort into the web and browser version. On the iPhone, the main page is home to your password, while buttons along the bottom allow you to quickly move to Identity (passport and so on), the built-in Browser, and the Authenticator, as well as a Tools section where you can use the password generator, securely share, and set up the Emergency Access feature that allows family or close contacts to access your information in an emergency.



**You can import your existing login details from other services or your browser.**

The browser is interesting, as it features RoboForm's one-click login, where you simply select the site from your logins or history that you want to access. RoboForm will open the page and automatically log into your account without you having to do anything else. You can create bookmarks if you want to use the site often, but I'm sure most people will stick with their normal browser of choice, in which case RoboForm acts like any other password manager in that it prompts you when you tap on a login box, offering the stored account details. It works well and makes interacting with sites quicker than logging in manually.



The browser features RoboForm's one-click login.

If you want to upgrade your passwords, which is usually a good idea, then the password generator is the perfect tool for the job. You can select the number of characters to use, whether it has numbers, symbols, and upper- or lowercase letters, and there's even the option to create passphrases, with choices for the number of words, separators and capitalization.

The built-in authenticator saves you from having to install a separate app for this task, as RoboForm can handle two-factor authentication duties all within the app. You can also use passkeys instead of passwords, which adds a further level of security.

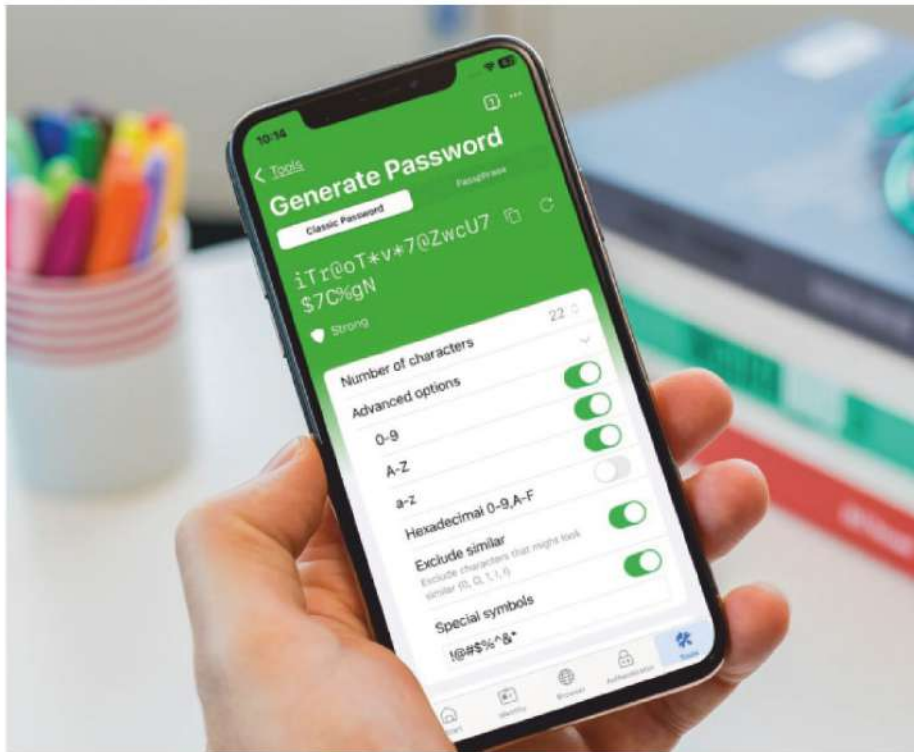
There's a solid selection of features

available to the user, which should cover most things you'd want from a password manager. The interface doesn't quite have the polish of the more high-profile services such as 1Password or Dashlane, but it gets the job done.

## SECURITY AND ENCRYPTION

Features are nice, but a password manager is primarily about security,





**If you want to upgrade your passwords, then the password generator is the perfect tool for the job.**

so it's good that RoboForm has a strong and secure service to offer. Within the software there's a Security Center that analyses the current state of your password integrity. This includes how many times you've repeatedly used the same ones, how complex they are, plus any that have been involved in any hacks. This gives you a good overview of your online safety and can provide motivation to delve into the password generator to add more sophisticated logins.

Everything you do on RoboForm is end-to-end encrypted via AES 256-bit encryption, with PBKDF2 SHA256

(basically, the more letters, the better, when it comes to digital security). The company also runs a zero-knowledge approach, so even the employees at RoboForm won't be able to see your details or your master password.

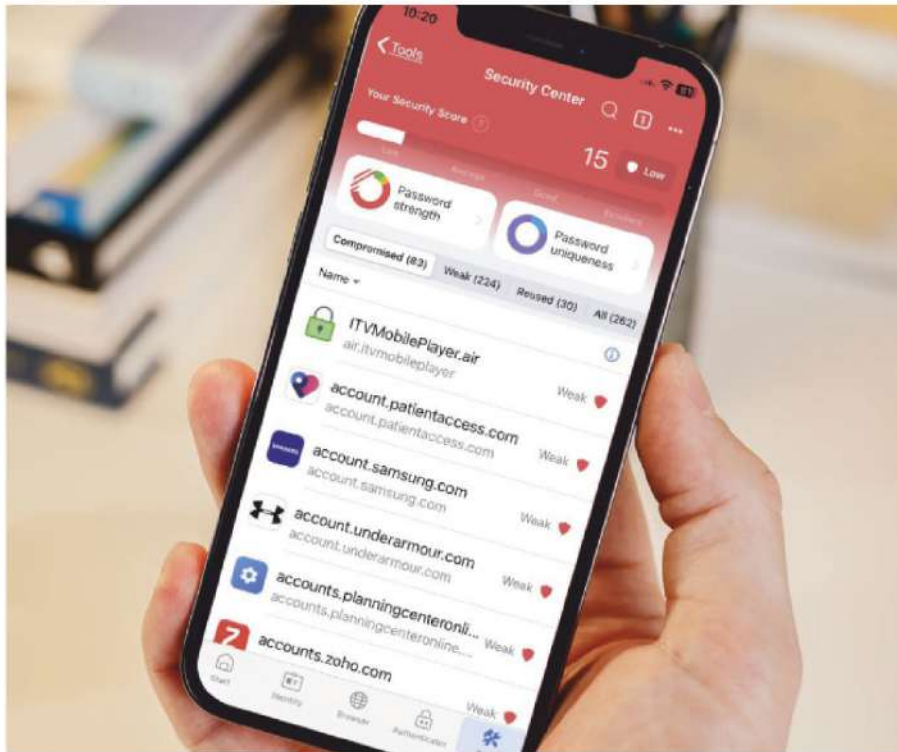
As mentioned above, you can select an emergency contact that will be added to your account. That person can access your

details if you become incapacitated. There's also the option to reset your master password without your account details being wiped (a standard security feature) if you enable it in the settings.

We haven't seen any reports of hacks on RoboForm, which suggests that its security protocols are effective and well maintained. That is a main consideration when looking for a password manager.

## PRICE AND AVAILABILITY

RoboForm does offers a free tier, albeit with quite a few limitations when compared to the paid tiers. It allows you



Within the software there's a Security Center that analyzes the current state of your password integrity.

to use one device but with unlimited passwords. There's also support for 2FA, cloud backup, secure share, and emergency access. It's not a bad setup if you only use your iPhone, but if you want to sync passwords across multiple devices, then you'll want to sign up for a paid subscription.

The Premium tier, which used to be called RoboForm Everywhere, has everything from the free tier plus the security center, access on all your

credentials, offers plenty of useful features, and works across all the main platforms. I can't see people using the browser too often, as we're creatures of habit and will normally default to our standard browser, but there's plenty of other capabilities that make RoboForm a solid choice. The only question is whether, since Apple launched its Passwords app ([fave.co/3N3oiqX](https://fave.co/3N3oiqX)) in September 2024, you still need a separate password manager. ■



### RoboForm

#### PROS

- Solid selection of feature.
- Built-in authenticator.
- Passkey support.

#### CONS

- Most people won't use the browser
- Interface is a little basic.

#### PRICE

From \$30 per year

#### COMPANY

RoboForm

devices, additional customer support options, plus web access to your account. It's available for \$29.98/£29.99 per annum, although there is a deal on right now that means it's \$11.90 a year. The Family plan, which comes with five Premium accounts, normally costs \$47.76/£49.99.

## VERDICT

There's plenty to like about RoboForm. It has fine security

# CHECK IN ON YOUR FRIENDS

EVEN THE “STRONG” ONES



It's okay to not be okay.  
Learn how to reach out to a friend about  
their mental health at [SeizeTheAwkward.org](https://SeizeTheAwkward.org).

**SEIZE THE AWKWARD**



American  
Foundation  
for Suicide  
Prevention



The Jed Foundation



# iPhone 16 Pro & Pro Max: Built for Apple Intelligence\*

\*APPLE INTELLIGENCE NOT YET  
AVAILABLE. **BY JASON CROSS**



**W**e are now well into the era in which yearly smartphone updates have become rather ordinary. Where the

Apple Store lines would once stretch around the block and attract local news crews, today the first question everyone asks is, “Should I upgrade this year?”

The iPhone 16 Pro and Pro Max fit into this zeitgeist neatly. Yes, they’re better. They’re faster, they have better cameras, and they include one new feature (the Camera Control button). But for most of the things most people use their iPhones for, many of these improvements won’t make much of a difference over last year’s model or the one from the year before.



**The iPhone 16 Pro lineup is built with Apple Intelligence in mind.**



**VIDEO: iPhone 16  
EARLY IMPRESSIONS**

Watch now at [fave.co/4gKqAZA](https://fave.co/4gKqAZA)

Enter Apple Intelligence. When hardware fails to excite, it’s up to slick new software to make you feel like you just have to get the new iPhone. And with all the buzz around generative AI lately, Apple Intelligence is that gotta-have-it software. It’s a suite of new AI features that summarizes notifications and emails, makes Siri a lot smarter, lets you generate custom images and emojis, transcribe calls, and more.

So important is this AI stuff to the

iPhone 16 that Apple’s marketing calls them the first iPhones “built for Apple Intelligence.” (Yes, the iPhone 15 Pro works with Apple Intelligence, but Apple no longer sells that model.) There’s just one problem: Apple Intelligence isn’t out yet, and it’s going to dribble out in multiple stages over months. It’s also coming to regular non-Pro iPhone 16 models.

So, why buy and iPhone 16 Pro or Pro Max?

Let's see if Apple's latest Pro iPhones can make a case for themselves.

*Note: The iPhone 16 Pro and iPhone 16 Pro Max have identical features and performance, save for the obvious (size and battery life). This review covers both models.*

## DESIGN: IT'S AN iPhone

The iPhone 16 Pro and Pro Max look very much like last year's Pro phones at a glance. Technically, both models are just a touch larger and heavier than their predecessors, and combined with slimmer bezels you get a slightly larger display: 6.1 inches becomes 6.3, and 6.7 becomes 6.9.

The titanium body and colors are basically the same. There's white, black, and natural titanium. Last year's special color, blue titanium, has been replaced by desert titanium, which has a bronze look to it.

The only thing that really looks or feels any different is the new Camera Control button, located about where the 5G mmWave antenna was on earlier iPhone U.S. models and the SIM tray was on some international models—about two-thirds of the way down the right side under the power button. This new feature also comes with the regular iPhone 16.

Despite the size difference, the displays more or less look like those on



**The iPhone 16 Pro Max (right) is just a little bigger than the iPhone 15 Pro Max (left).**

the iPhone 15 Pros, with equal brightness, ProMotion, and always-on capabilities. A small improvement I really appreciate is that the display now goes all the way down to a mere 1 nit of brightness. It's just the thing for those who use their phone in bed with the lights off—but again, this is also available on the non-Pro models.

The size increase over last year's iPhones is not dramatic, but I still found myself gravitating more to the 6.3-inch iPhone 16 Pro while I used to prefer the Pro Max. The slightly larger display makes the smaller of the two Pro phones more usable without saddling me with the undesirable bulk of Apple's biggest phone. If you're one of those who doesn't love the size of the Pro Max but uses it because you *need* that screen size, take a close look at the Pro this year.

There's nothing wrong with this year's

design, but the iPhone is in serious need of a refreshed design. Big, heavy, thick metal slabs with large, offset camera bumps that make the phone wobble on your desk (and make it hard to seat properly on some charging stands or wireless chargers in cars) just feel a little old and dull in 2024. Not much has changed since iPhone 12.

## FEATURES: CAMERA CONTROL

Most of what is new in the iPhone 16 Pro is on the inside, but the one big new external feature for the entire iPhone 16 line is the Camera Control button. It's a physical button set flush with the edge of the body, touch and pressure sensitive, with haptic feedback.

Press the button once and you open the Camera app. You can select a third-party camera app to launch in Settings → Camera, and an app like Instagram will typically launch right into its photo- and video-taking mode. Once in the Camera app, a firm press takes a photo. Press and hold to take a video for as long as you hold the button.

Tap once lightly and you'll pop up a Camera Control function (zoom by default), which you adjust by swiping back and forth or dragging the control on the display. Double-tap lightly for a list of different functions that can be adjusted in this way: exposure, depth, camera

selection, photographic styles, or tone. It does a lot—and it's not always obvious what to press to do something.

I have mixed feelings about the Camera Control button. The full press to launch your most-used camera app is a huge boon. It's fast, you can do it without fiddling with the screen, and it allows you to replace the camera launch on your lock screen with something else without losing any utility. Pressing the button as a shutter, or holding it down to take video, works great. It's a game changer for snapping photos while wearing gloves.

The pressure-sensitive functions, on the other hand, are too fiddly. It's too easy to accidentally do a light press when you mean to click the shutter, or vice versa. Sliding back and forth to adjust a control requires a lot of fine motor control in a small space; I often found myself going past the zoom I intended and having to carefully nudge my finger just a millimeter the other way to go get it right.

I don't really enjoy the way using the Camera Control button makes the whole camera interface go away, either, as it's not always my only or last adjustment before I take the shot. In the end, I turned that Clean Preview option off in Settings and rarely used the Camera Control button for adjustments. I always use it to launch the camera and as a shutter, though.

As far as photo and video quality goes,





**Some of the Camera Control functions are very useful, while others are sort of finicky.**

Apple is once again making small but significant strides. A faster video pipeline enables up to 4K at 120fps. The Photos app lets you change the playback frame rate. Improved microphones allow for wind noise reduction and better overall sound quality. The new Photographic Styles are a little more nuanced, with easier control, and can be applied nondestructively after the shot is taken. The ultrawide camera has been upgraded to 48 megapixels, though to my eye the shots don't look very different from the older 12MP camera. The 5x telephoto lens is no longer restricted to the Pro Max model, so those who like the smaller Pro size can enjoy zoomier zoom. And it's clearly the biggest upgrade from standard to Pro other than titanium.

My favorite new feature? The ability to change audio mix on a video with a tap, between Standard, In-Frame, Studio, and

Cinematic. They make a huge difference. (This feature is yet another that's also available on the standard iPhone 16.)

But these are relatively minor changes. Power users trying to film their next indie epic on iPhone will love this stuff but the vast majority of users will find that, maybe, if they squint just right, the new iPhone takes slightly

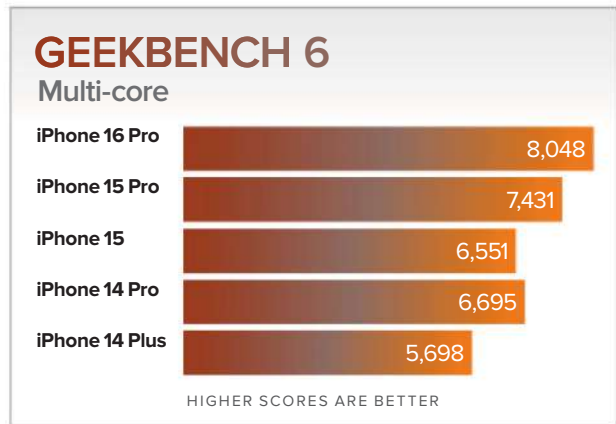
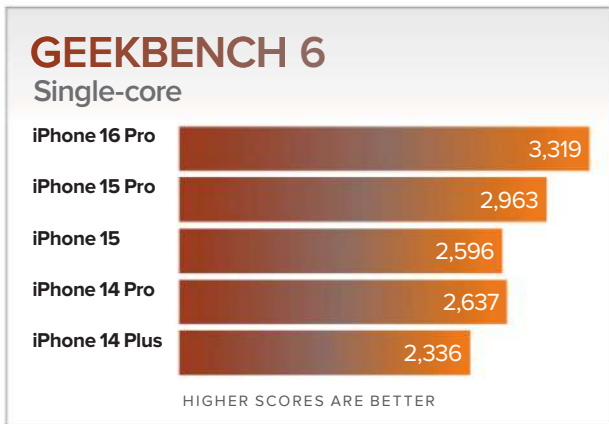
better pictures than the old one. The biggest camera upgrade this year is definitely the dedicated button, and the non-Pro models get that, too.

If you want to protect your new iPhone, read our best iPhone 16 Pro and 16 Pro Max case reviews ([fave.co/4eKyArB](https://fave.co/4eKyArB)).

## **PERFORMANCE: A18 PRO**

The A18 Pro is similar to the A18 found in the regular iPhone 16, with a few small upgrades. It's got the same two performance and four efficiency CPU cores but with larger caches, which should improve performance a bit. There's an additional GPU core. The media engine (video encode and decode, image processing, and so forth) is beefier.

Both chips are made on an upgraded 3nm manufacturing process that delivers better power efficiency, and Apple has

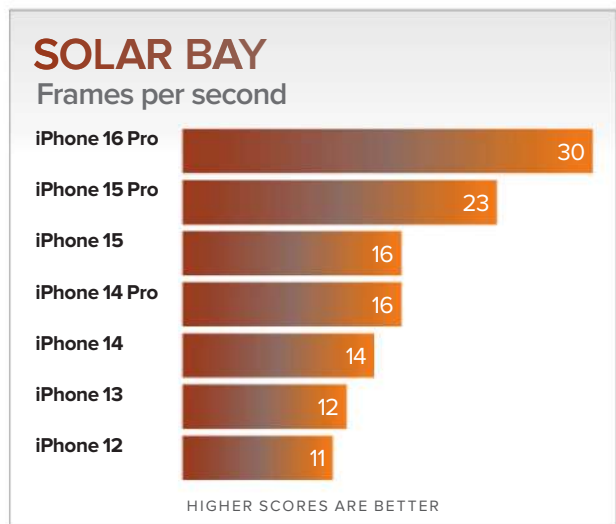
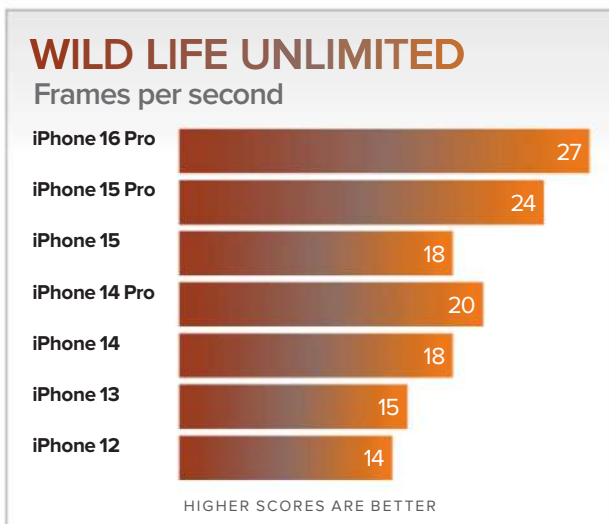
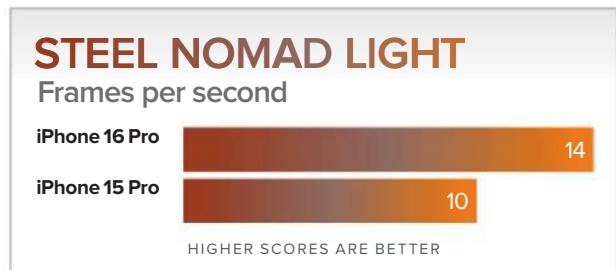


improved thermal design and management to help minimize throttling when the phones get hot.

How does all this translate into performance? Well, this thing is *fast*. Single-core CPU performance is 15 percent higher than that of the A17 Pro, and it crushes every other smartphone on the market. Multi-core performance is around 10 percent faster, and considerably faster than any Android phone. It is not a stretch to say this iPhone is like having an

M1 Macbook Air in your pocket, and in some ways it is faster.

The GPU gets a nice uplift in performance, too. In really advanced high-end graphics applications, especially



those with ray tracing, we're seeing an improvement of 30 percent or more.

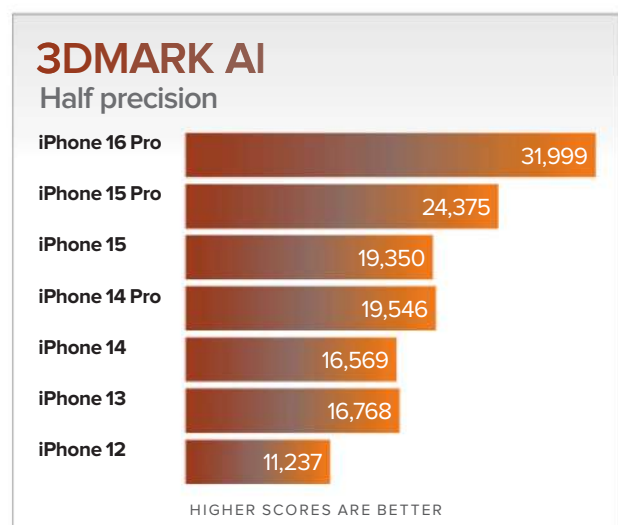
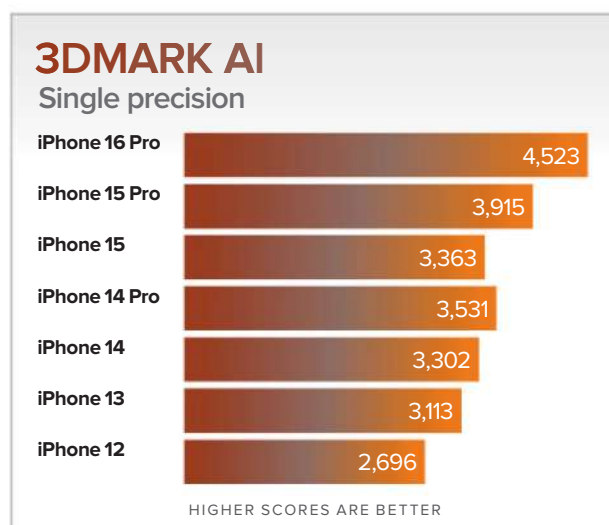
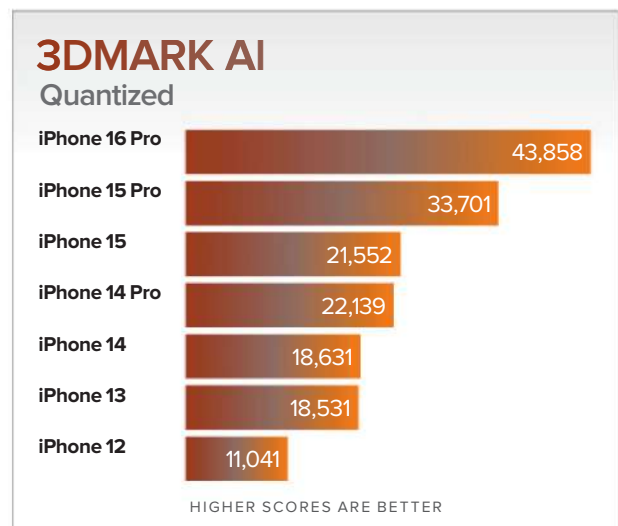
New to our testing suite is Geekbench AI ([fave.co/47NR4oR](https://fave.co/47NR4oR)), a cross-platform benchmark that performs a suite of common machine-learning tasks like object identification, image segmentation, and machine translation. It can run on the CPU, GPU, or Neural Engine; we're testing the latter to see improvements in Apple's dedicated AI hardware over time.

The Neural Engine in the A18 Pro is anywhere from 10 to 40 percent faster than the one in the A17 Pro. It's hard to compare the same test on different hardware when it uses different software frameworks, but no other mobile device appears close to Apple's NPU performance.

Every year we say Apple has, on balance, the fastest smartphone around. And this year we repeat that. It's not what

most people are buying iPhones for—they've been more than fast enough for years. There is something to be said for the future-proofing of having an overpowered iPhone today so that it can continue to run powerful software for years to come.

On the other hand, the iPhone 16 Pro has 8GB of RAM, the same as last year's iPhone 15 Pro and the standard iPhone 16.



That doesn't seem like a lot for a \$1,000-plus phone these days. And if you don't think that will matter in a few years, just ask the iPhone 15 owners whose year-old phone can't run Apple Intelligence because it has 6GB of RAM, while the iPhone 15 Pro owners can.

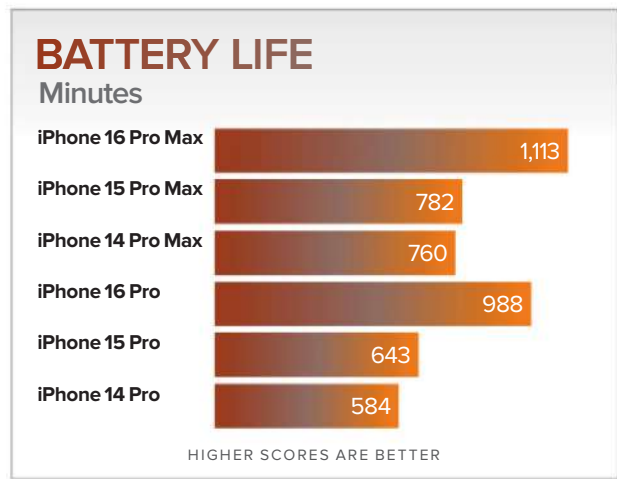
## BATTERY: A MASSIVE BOOST

Perhaps the best improvement of the iPhone 16 Pro hardware is its fantastic battery life. Apple stuffed in slightly larger batteries this time around, but battery life is a combination of so many things—processor and RAM efficiency, power usage of wireless chips, efficiency of the display, and more. And all of it is better.

We use Geekbench 4's old battery rundown test, which loops the Geekbench 4 CPU and GPU tests (with short breaks between) until the battery dies. We do this after setting the display to a constant brightness of 200 nits with all adaptive brightness features off. That's about as bright as you would set it in a normal office environment.

We expected an improvement, but not this much! The iPhone 16 Pro lasted *54 percent* longer than the iPhone 15 Pro, and the 16 Pro Max kept running for about *43 percent* longer than the 15 Pro Max! We got almost 19 hours on the Pro Max and about 16.5 hours on the Pro.

I can't say I experienced a 50 percent



improvement in battery life in my day-to-day use, but it lasted *hours* longer. For several days, I took my iPhone 16 Pro off the charger in the morning at 90 percent (where I set my charge limit with iOS 18's new options) and finished the day with 40 percent. Only when I ran through several strenuous benchmarks or played a high-end 3D game for hours on end did I ever come close to running through the battery.

Everybody loves longer battery life, and the iPhone 16 Pro and Pro Max deliver a big boost over last year's model. And if you're coming off a phone that is two or three years old, it's going to feel like your new iPhone is lasting literally twice as long.

## APPLE INTELLIGENCE: NOT INCLUDED

If the new iPhone is just a little faster or takes slightly better photos or videos, it's not going to inspire users to upgrade.

Battery life might, but what we are looking for are major new *features*. Camera Control is one, but the big one, the one that's supposed to sell you on the iPhone 16, is Apple Intelligence, Apple's name for its homegrown suite of generative AI tools.

The marketing tagline for the iPhone 16 Pro is "Hello, Apple Intelligence." Apple calls it "the first iPhone built for Apple Intelligence." It will summarize all your notifications! It will make images and custom emojis! It will erase people from the background of your photos! It will transform Siri into a supersmart personal assistant that actually understands you! The Camera Control button will launch a new Visual Intelligence feature that gives you AI-powered info on whatever you point your camera at!

You've probably seen the ads showcasing these awesome features. They may make you want to run out and buy an iPhone 16.

There's only one problem: It isn't out yet. And it's not going to be out soon—not really. Apple Intelligence is coming to iPhone 16 in bits and pieces over the next half year, or longer if you don't live in an English-speaking region. Apple isn't even clear about whether the entire European Union will get

Apple Intelligence at all.

We have a breakdown in our guide ([fave.co/3MZugcd](https://fave.co/3MZugcd)) that describes the features and when they are coming, but only the first tranche of AI features are available for us to test in beta: notification and email summaries (very useful), writing tools (less useful), and a Siri update that makes it understand you a little better (meh) and gives the screen a full glowing edge (nice).

In other words, *the* selling point of iPhone 16 is nothing more than a pinky-swear from the world's most valuable megacorporation. This is a phone designed to run, and marketed on, untestable promises.

We're reasonably sure about the quality and usability of the AI features coming in iOS 18.1 ([fave.co/3TPOSyc](https://fave.co/3TPOSyc))



**It's hard to get excited about this general design after years of the same old thing.**



**Apple's iPhone 16 Pro models have a dedicated 5x telephoto camera.**

because we've been testing it for weeks, but without the ability to thoroughly test the others, we can't possibly consider them as a feather in the iPhone 16's cap. So consider this part one of our review.

## VERDICT

More than ever, it's hard to recommend the Pro model iPhone over the non-Pro model. It's a tiny bit faster, has a dedicated 5x telephoto camera, and can take some really fancy high-end video in formats that only pros will care about. It has ProMotion and an always-on display, but frankly, it's kind of crazy that Apple doesn't include those things on the regular iPhone at this point.



### Apple iPhone 16 Pro/Pro Max

#### PROS

- Camera Control can be very useful.
- Fantastic battery life.
- Great performance.

#### CONS

- Camera Control can also be finicky.
- Apple Intelligence is not yet available.
- Heavy and dated design.

#### PRICE

From \$999/\$1199

#### COMPANY

Apple

The big selling points—longer battery life, the Camera Control button, Apple Intelligence (eventually)—are all available on the non-Pro model which also now has the Action button, the new Photographic Styles, and macro photography, too.

In benchmarks and specs sheets, the iPhone 16 Pro is clearly better than last year's iPhones, but when you *use* it every day, does it really feel different? Without Apple

Intelligence, the most substantive improvements are longer battery life and the Camera Control, both of which are on the regular iPhone 16.

Perhaps, when all the major Apple

Intelligence features are actually available, our recommendations will change. But for now, the iPhone 16 Pro, for as good as it is, might not be worth your money. Our recommendation is to hang on to your current iPhone if it's only a year or two old. If you're coming from an iPhone 13 or earlier, it's time to upgrade, but even then, the iPhone 16 or 16 Plus is a better deal than the iPhone 16 Pro for all but the most demanding and picky iPhone photographers and videographers. ■

# Think that's scary?

Sharks can be terrifying.  
But what's really scary,  
and even deadly,  
is distracted driving.

**Eyes forward.  
Don't drive distracted.**









# WHAT HAPPENED TO THE APPLE WATCH SERIES X?

APPLE'S LONG-RUMORED APPLE WATCH OVERHAUL STILL HASN'T MATERIALIZED.

**BY ROMAN LOYOLA**

Once upon a time, rumors of an overhauled Apple Watch with a flat design circled the web around the time the Series 7 ([fave.co/3ZNFCrs](https://fave.co/3ZNFCrs)) was due to arrive. Despite that rumor's persistence, it never materialized, and all we got at the time was a slightly larger Series 6. History tends to repeat itself, and Apple watchers will recall a similar rumor ahead of this year's Series 10 ([fave.co/3BmPWN3](https://fave.co/3BmPWN3)) launch. Reputable leakers had suggested that 2024's Apple Watch would feature the most significant overhaul yet, only for the Series 10 to follow in the Series 7's footsteps. So, what gives?

## WHAT WE EXPECTED

Just like the iPhone X, the Apple Watch Series X—as it was rumored to be called—was expected to mark a major milestone for Apple's decade-old wearable. It was rumored to bring radical changes, including a new flatter design with a much thinner case along with a new magnetic band attachment mechanism ([fave.co/47f8mtQ](https://fave.co/47f8mtQ)).

Beyond the superficial changes, initial rumors pointed to the addition of a blood pressure monitor ([fave.co/3ZGhW8q](https://fave.co/3ZGhW8q)), which would alert users when it detected



The Apple Watch Series 7 (pictured) was once rumored to get a redesign.

hypertension.

This would have further enriched the Apple Watch's health-related capabilities and potentially helped affected users become aware of the underlying medical conditions.

Given that Tim Cook unveiled the first Apple Watch as a One More Thing exactly a decade before the Glowtime event, it made sense for Apple to celebrate the occasion through the sleeker form factor and new health sensor. Expectations were high leading into the event for the most significant Apple Watch overhaul ever.

## WHAT WE GOT INSTEAD

Of course, that didn't happen. All we got was an incremental Apple Watch Series 10 upgrade with few meaningful new features.

While the iPhone maker claims that the

Series 10 features an all-new design, our eyes see otherwise. The overall case still looks identical to those of its recent predecessors. Apple may boast about a 10-percent thinner build, but it boils down to just a single millimeter compared to the Series 9 (10.7mm to 9.7mm) that many users won't notice. I acknowledge that slimming down an advanced smartwatch by even 1mm is no easy task, but calling it an all-new design is a little disingenuous—especially when rumors were claiming there would actually be an all-new design.

Beyond that, the aluminum models are now around two grams lighter, which won't really impact your life in any way. In Apple's defense, however, the new titanium variants are significantly lighter than their (now-retired) stainless steel counterparts, despite sharing the same outer look. (And let's not forget that previous Apple Watch Editions were available in titanium.)

In the health department, blood pressure monitoring is a no-show, reportedly due to some engineering difficulties.

Meanwhile, Apple hasn't managed to find an alternative to its blood-oxygen sensor ([fave.co/3SI0pgC](https://fave.co/3SI0pgC)), which it no longer offers in the U.S. due to a patent dispute. The sensor is presumably included on the Series 10 but disabled, but even so, there's no indication that Apple will switch it on anytime soon.

And while the Apple Watch Series 10 will be able to detect sleep apnea, the feature won't be exclusive, as the Series 9 and Ultra 2 will offer it, too. In short, Apple's 2024 smartwatch takes a step backward when it comes to health monitoring.

Otherwise, the Series 10 unleashes a new built-in speaker, allowing Apple Watch users to blast music or podcasts without using AirPods—which is fine, but please don't do it when you're in public. It also borrows other Apple Watch Ultra 2



**The Apple Watch Series 10 is nice, but it's hardly an all-new design.**



**With the exception of the Ultra, the Apple Watch hasn't really changed much since its 2015 launch.**

perks, such as the depth gauge (with some limitations) and the water temperature sensor.

Is it a notable upgrade for someone coming from a Series 6? Yes, without a doubt. But does it take the same big leap forward as the iPhone X and adopt groundbreaking changes to mark the decade? Far from that.

## IS THERE ANY HOPE?

I find it frustrating that we've now gone through two rounds of major Apple Watch redesign rumors that didn't come to fruition. While Apple has notably improved the smartwatch's aesthetics throughout the years, it ultimately still looks the same. We've obviously gone through a few size increases and bezel reductions. However,

its build has largely remained unchanged, and the way we interact with it hasn't evolved much. And no, the double-tap gesture is not it.

Nevertheless, I still have some hope. While the Apple Watch was announced in September 2014, it didn't go on sale until April 2015. So, it's possible Apple will mark the 10th anniversary with a new model in 2025. This

could be through a special edition with those rumored magnetic band attachments and a further slimming of the Apple Watch's size that forgoes some of the higher-end health features. After all, the iPhone 17 Air is rumored to make its debut with a focus on its ultra-thin body rather than high-end features, and Apple could go for a similar approach with its smartwatch, allowing customers to choose between a stylish design or high-end features.

Ultimately, it's too early to guess what products we'll see next year. Plans change, prototypes get axed, and AirPowers get forever locked in underground basements. What I know for sure, though, is that I won't be falling for Apple Watch design change leaks going forward. ■



“Early detection gave us time to adapt together, as a family.”

---

If you're noticing changes, it could be **Alzheimer's**. Talk about visiting a doctor **together**.

[ALZ.org/TimeToTalk](https://www.alz.org/TimeToTalk)



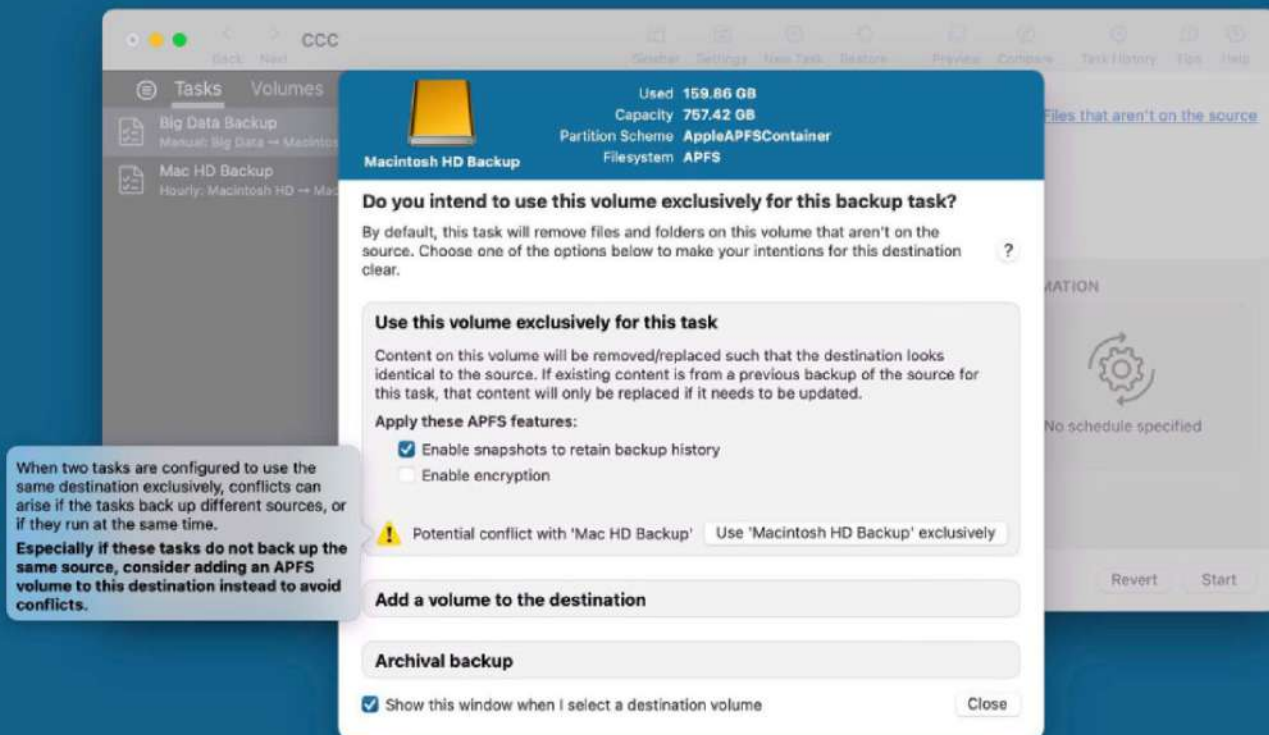
A man in a blue graduation gown is adjusting a purple graduation cap on a woman in a red dress. They are both smiling and looking at each other. The background is a blue textured wall.

When  
you  
graduate,  
**they**  
**graduate.**

Find free adult education  
centers near you at  
**[FinishYourDiploma.org](https://FinishYourDiploma.org)**.



DOLLAR GENERAL  
LITERACY  
FOUNDATION



## Carbon Copy Cloner: A handy utility that's well worth a shot

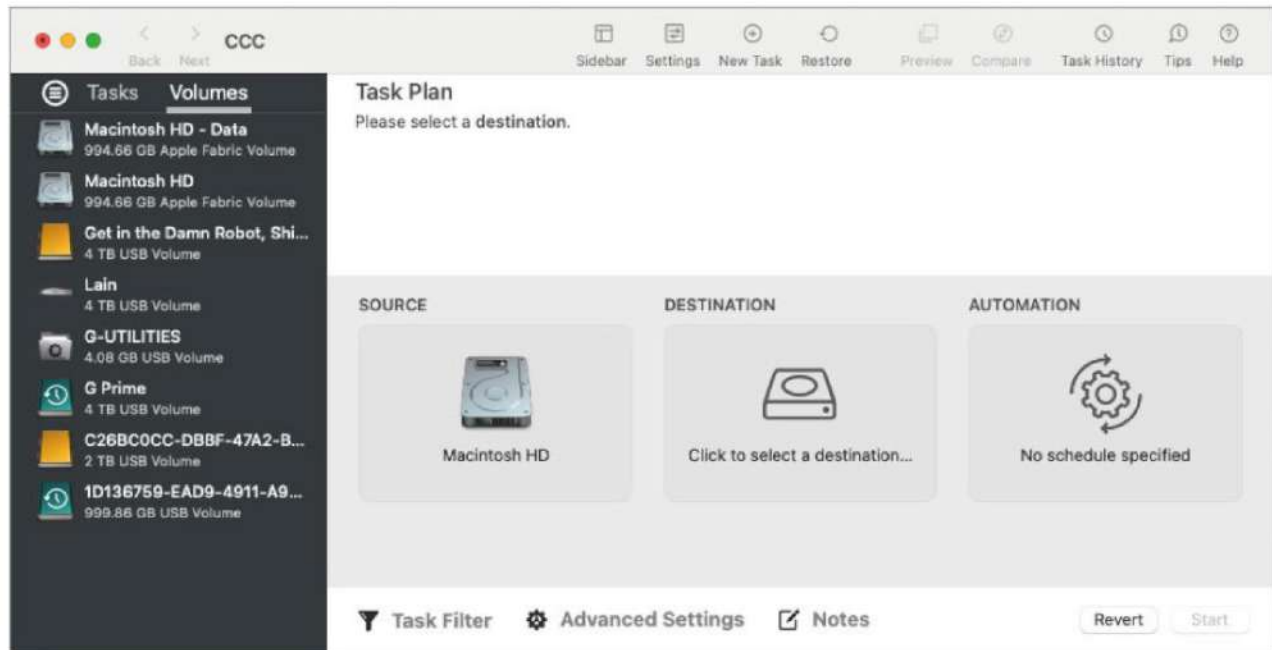
How does this utility for cloning data from one volume to another on the Mac perform in our tests?

BY CHRIS BARYLICK

For 22 years, Bombich Software's Carbon Copy Cloner has been one of the absolute go-to utilities for cloning data from one volume to another on the Mac. When the software first arrived in 2002, it was considered a bit tricky to use, but worth looking at. Over the decades, Carbon Copy Cloner's

feature set has grown, and it has become increasingly reliable in its core task: getting dead-on perfect copies of your files where they need to be.

The software retails for \$49.99/£40.10 for a Personal and Household license (an upgrade license is up to 50% off). There's also an easy-to-start, full-featured 30-day



The Volumes view of the Carbon Copy Cloner's home screen.

trial with no account needing to be created or credit or debit card number sent along to the company to be charged later. If you like it and want to pay for it, it can always be bought later (a respectful hat tip to Bombich's previous experience as a shareware company).

To begin, simply download Carbon Copy Cloner from Bombich ([fave.co/2VuKEtD](https://www.bombich.com/2VuKEtD)), install it, assign it full permissions over your hard drives, and you're set.

Carbon Copy Cloner 7.0.1 requires macOS 13 Ventura or later to install and run, supports the HFS+ and APFS drive formats, and can back up to local volumes as well as NAS-enabled volumes sitting on a network, but is unable to back up

Windows file formats, to optical media such as CD-ROM or DVD-ROM, or to web-based platforms such as WebDAV, FTP, NFS, assorted cloud platforms, or Apple's Time Machine platforms.

Carbon Copy Cloner doesn't seek to be the Swiss Army knife of Mac cloning utilities and instead plays extremely well to its particular strengths. During testing, standard cloning went through without a hitch, and Bombich has outfitted newer versions of its software with a more comprehensive user interface, filters that can be customized so only necessary files are cloned, accessible use of Apple's Snapshots technology, and easy access to an astounding array of configuration options, such as disk encryption, task

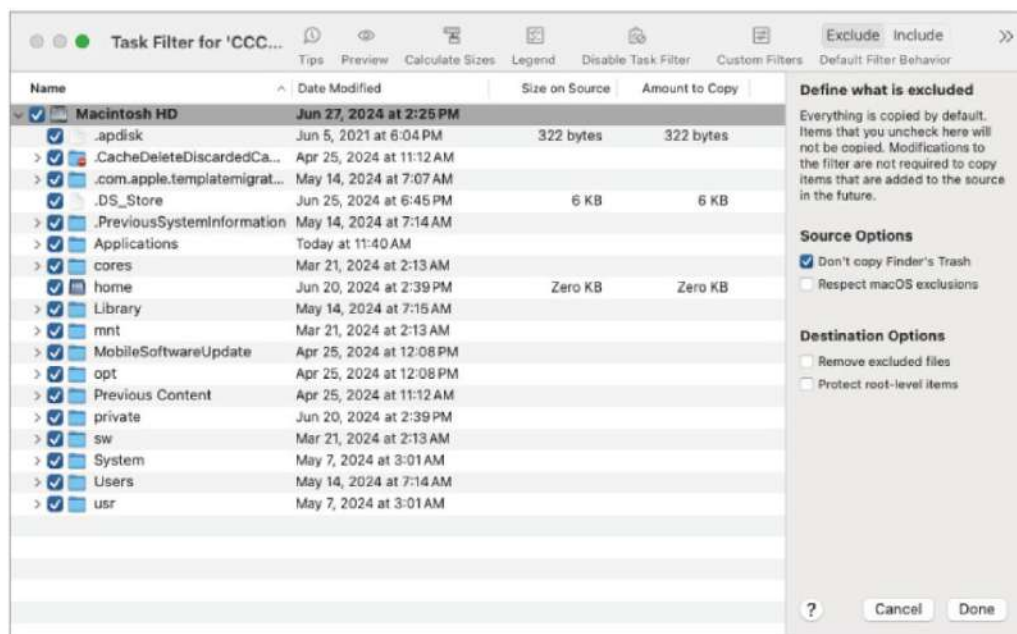


notes, and bandwidth configuration for NAS backups.

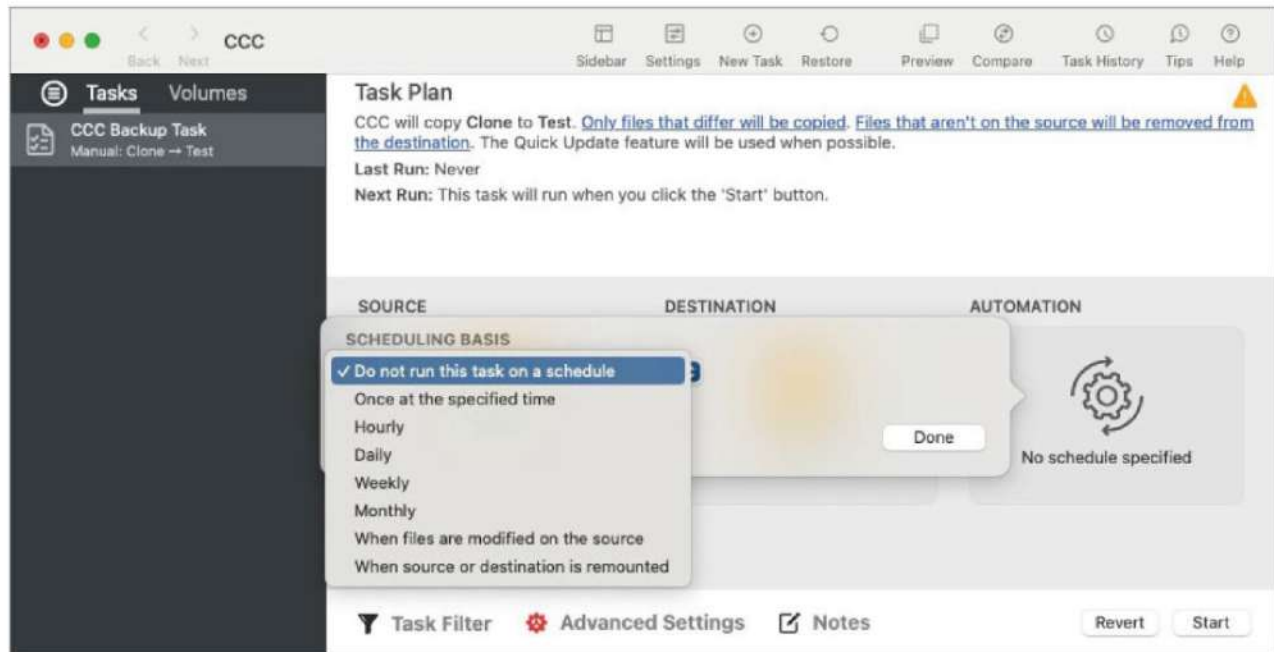
Other tools, such as scheduling, performed without a hitch, and the task manager shone in its ability to save and configure multiple backup tasks. A cool scripting feature allows for custom scripts to be loaded and activated as needed for power users, and a handy quick view of each mounted volume shows useful information such as the protocol it's using, drive technology, ownership settings, drive format, and encryption status. Carbon Copy Cloner's SafetyNet feature can also be configured to allow for drive formatting or stop a process before it overwrites data on a volume, which is a good addition.

There are only a couple of weak points for Bombich to address with Carbon Copy Cloner 7.0.1, and one of them is due more

to Apple's lack of openness than a failing on Bombich's part. Creating a boot drive in Carbon Copy Cloner is currently a hit-or-miss proposition, and test runs at creating a bootable external volume of my M2 Mac Studio's solid-state drive met with what I initially thought was a victory that later failed. While the operating system was cloned over cleanly, Apple's demand for verification of the operating system from the external volume prevented the unit from booting successfully. This is due to Apple's current protocols, and in the past, it was far easier to create a bootable external drive that could readily serve as a backup boot partition for an Intel-based Mac. Bombich recommends the user work with the Legacy Bootable Copy Assistant option, but this is still up in the air until Apple and the developer community can



Configuring the Task Filter in Carbon Copy Cloner.



### Setting up scheduled backups in Carbon Copy Cloner.

find some common ground on this topic.

Finally, the initial price of the software is a sticking point, and while \$24.99 hits the sweet spot for an upgrade, the initial asking price of \$49.99 is higher than one might expect, even if the software pays off in the long run.

## VERDICT

While Bombich's current quibble with Apple over bootable drive creation is annoying, this isn't a deal breaker, and other utilities are facing the same issues with everyone's favorite fruit company. That said, Carbon



### Carbon Copy Cloner

#### PROS

- Excellent performance, helpful user interface, and support guides.
- Amazing level of configuration.
- Frequent updates, good customer support, and great user community surrounding the app.

#### CONS

- Creating a bootable drive is currently in the hit-or-miss stage for Apple Silicon Macs.
- High \$49.99 price point for the initial Personal and Household license.

#### PRICE

\$50

#### COMPANY

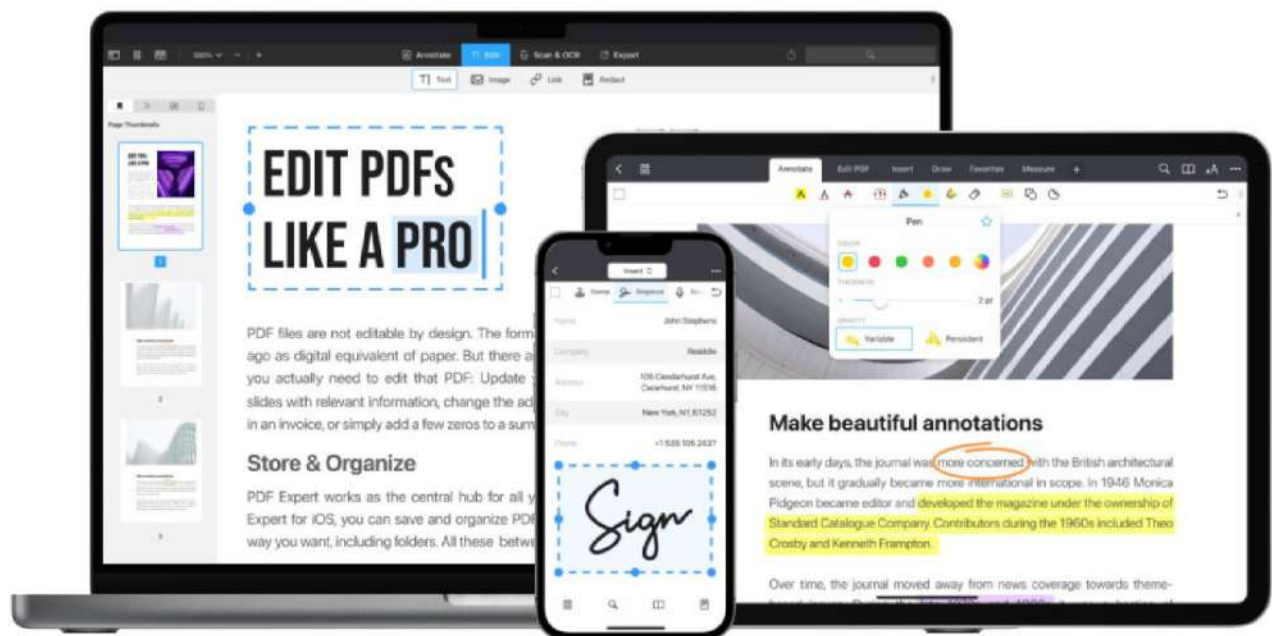
Bombich Software

Copy Cloner pairs off well with utilities such as Time Machine, Apple's Migration Assistant, and SuperDuper. The company's customer support and feedback are friendly and speedy, the software offers quick access to help guides and resources, and there's a supportive community that lives and breathes this utility. This, combined with frequent updates from the developer only makes the software better, and if Carbon Copy Cloner isn't in your arsenal of handy utilities, you should download it and give it a shot, as it should be. ■

# Readdle PDF Expert: More than enough features for most users

Readdle's PDF Expert may be the only PDF editor most Apple users will ever need.

BY MAHMOUD ITANI



Finding the best PDF editor for your Mac can be a challenging task. After all, countless companies offer all sorts of different apps that cater to various budgets and workflows, and things can get confusing really fast. However, there are a few options that stand out in terms of features, performance, and design. Readdle's PDF Expert is one of my personal favorites, as, in my opinion, it has mastered the PDF editing format.

## PRICE AND AVAILABILITY

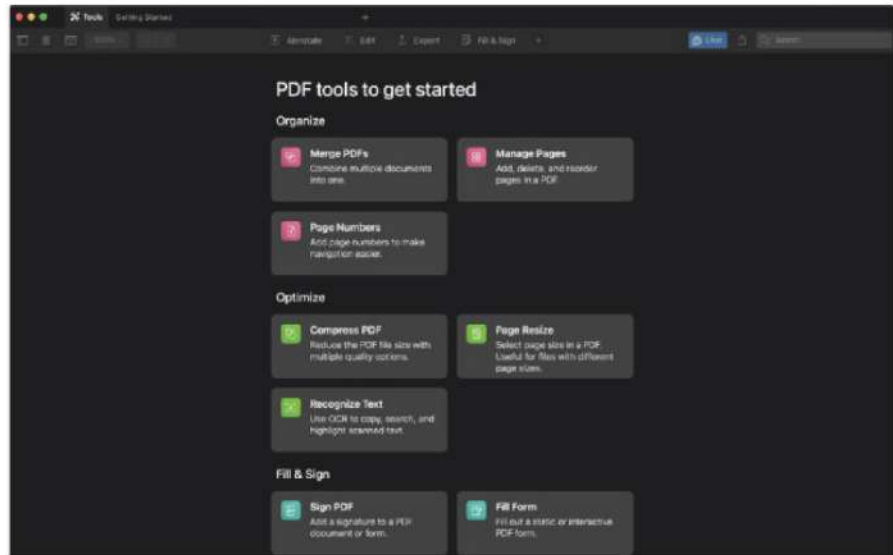
PDF Expert offers two payment options on macOS. For a one-time \$139.99/£139.99 fee (if you are in the U.K., it's cheaper to buy it from the Mac App Store [[fave.co/47Ji353](https://fave.co/47Ji353)], where it's £129.99 a year), you could own a lifetime license of the current Mac edition, but you'd miss out on future updates, mobile support, and the AI integration. Alternatively, you could pay \$79.99/£72.99 per year to run PDF Expert's latest, full-fledged versions

across iOS, iPadOS, and macOS. Readdle also offers eligible students and educators a 50% discount on its annual plan. There is also a free 7-day full-functioning trial you can download from Readdle's website ([fave.co/3BmC9Gj](https://fave.co/3BmC9Gj)). Notably, PDF Expert isn't available on Android or Windows devices.

## FIRST IMPRESSIONS

When you launch PDF Expert on your Mac, you'll be greeted by a Tools tab that highlights shortcuts to some of the app's handiest features. The list includes actions to organize, optimize, protect, review, or convert a certain document. You could also start from scratch by creating a blank PDF file if you don't want to edit an existing one.

The shortcut buttons are well categorized and color coded, making it easy to visually identify a certain action and directly jump to it. The app itself also runs fluidly and follows modern design guidelines. So you likely won't face any lags, glitches, or archaic user interface elements.



The shortcut buttons are well categorized and color coded.

## PDF EXPERT FEATURES

Once you load or create a document in PDF Expert, the app will surface a toolbar towards the top of the screen. On its left, you've got layout settings, which allow you to control the number of pages displayed at once, view bookmarks and the outline, in addition to inserting, deleting, or rotating pages.

On the right side, the toolbar offers an advanced search bar and an AI Chat button. Clicking the latter starts a conversation with the integrated chatbot. You can ask it to summarize the PDF, list key points, generate hashtags, and much more. Once it answers your question, it'll also link to the document page(s) it based its response on, which makes locating relevant information in large files much simpler.

Finally, the toolbar's center packs the most commonly used PDF editing functionalities, including annotation, editing, file conversion and exporting, signing, optical character recognition (OCR), and more. You also get to easily reorder this section's buttons as desired.

Through these features, you can pretty much fully control a PDF file. You get to edit its text and images, sign, fill checkboxes, add links, redact content in multiple ways, insert shapes, highlight text, doodle, and even measure the distance between two points or calculate specific areas.

I used the aforementioned tools extensively, and they all worked reliably on my end. In fact, I even tried to overload the app to reveal potential shortcomings or bugs, but PDF Expert didn't disappoint.

## VERDICT

While apps like Adobe Acrobat offer some more advanced tools that cater to the pros, I do believe that PDF Expert's features are more than enough for most users. Through it, you get to manipulate a document's content by adding or removing any elements, protecting the file with a password, shrinking its size, and so on. So, for many

users, there's not much to ask for beyond these core functionalities. It should meet (and, in some cases, exceed) the general expectations.

Beside the balanced set of tools, PDF Expert is simply pleasant to look at and use. I can't think of a single way Readdle could meaningfully improve the user interface or experience, as the entire app is intuitive to operate—in my opinion, at least. Despite PDF Expert being a feature-rich app, I didn't come across any overwhelming menus, either.

Perhaps the main downside here is the lack of Android and Windows clients, but that's irrelevant to those strictly using Apple products. Some users also won't appreciate that the iOS and iPadOS versions are only available through a recurring subscription.

Fortunately, Readdle offers a one-week free trial that users can claim without submitting their payment details. That's in addition to a 30-day money back guarantee, in case you change your mind after buying or subscribing to PDF Expert.

If I personally had to pick a single document editor to use indefinitely, it would most certainly be Readdle's PDF Expert. ■



### Readdle PDF Expert

#### PROS

- It provides a wide range of handy tools that work reliably.
- It has an intuitive user interface that is easy to grasp.
- It is well optimized and runs swiftly.

#### CONS

- The mobile version doesn't offer a one-time purchase option.
- It's unavailable on Android and Windows devices.

#### PRICE

\$140

#### COMPANY

Readdle



# NordPass: The VPN experts can now look after your passwords

Keep your passwords safe with NordPass.

BY MARTYN CASSERLY



You may be familiar with the NordVPN ([fave.co/3KkiF6j](https://fave.co/3KkiF6j)) brand, as it's one of the most popular VPNs around and features at the top of our best VPN chart ([fave.co/3Ao3N0D](https://fave.co/3Ao3N0D)). But that's not the only string in the company's bow, as a little

while back it introduced a password manager called NordPass. So does the expertise in one field translate to another? Here's how NordPass shapes up compared to the other Password Managers ([fave.co/4bPSGza](https://fave.co/4bPSGza)) we have looked at.

## SOFTWARE AND FEATURES

NordPass ([fave.co/3zuAPR7](https://fave.co/3zuAPR7)) may well be one of the newest password managers around, but it already feels like a mature product, with all the features you'd expect in a modern service.

Once installed, you can import your existing passwords from Chrome or Firefox browsers or output a CSV file from your previous password manager and import this to NordPass (there are helpful instructions to help you do this). After that, you should be good to go.

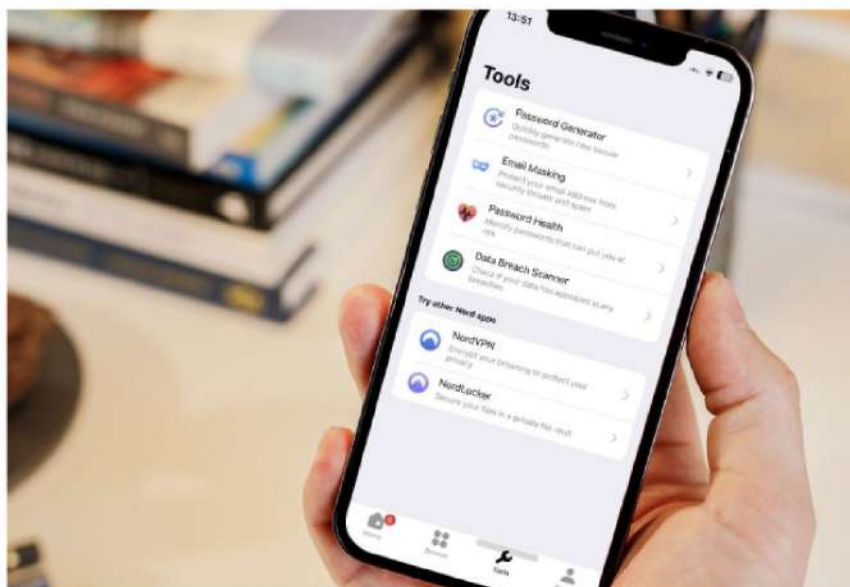
Importing existing passwords from iCloud Keychain is less simplistic, but it can be done, albeit only via a Mac. To import a CSV file to NordPass, click on Settings → Import Items and choose Safari. You can then upload the CSV file from iCloud Keychain.

There is also a NordPass Safari extension ([fave.co/3BmS0V3](https://fave.co/3BmS0V3)) that you need to install if you prefer to use Safari. To add this extension to Safari click on Safari in the menu bar, choose Settings, and then open Extensions and enable the extension. You may then need to pair the extension with a 4-digit code that will be supplied.

NordPass supports biometrics, so once you've created your master password you will only have to enter it occasionally as a security measure, and at all other times you can use Touch ID or Face ID to access your passwords.

As you'd expect, NordPass can autofill your login details on sites or apps, plus you can also store your address and credit card details so all of these will automatically populate text fields when you're checking out, saving lots of time.

The interface is on par with those of other password managers in that you have the main Home page where you can see your passwords, plus links to other features you can set up, such as entering the data for the form-filling features mentioned above.



**The Tools page is where you'll find options such as Password Generator, Email Masking, and Password Health.**

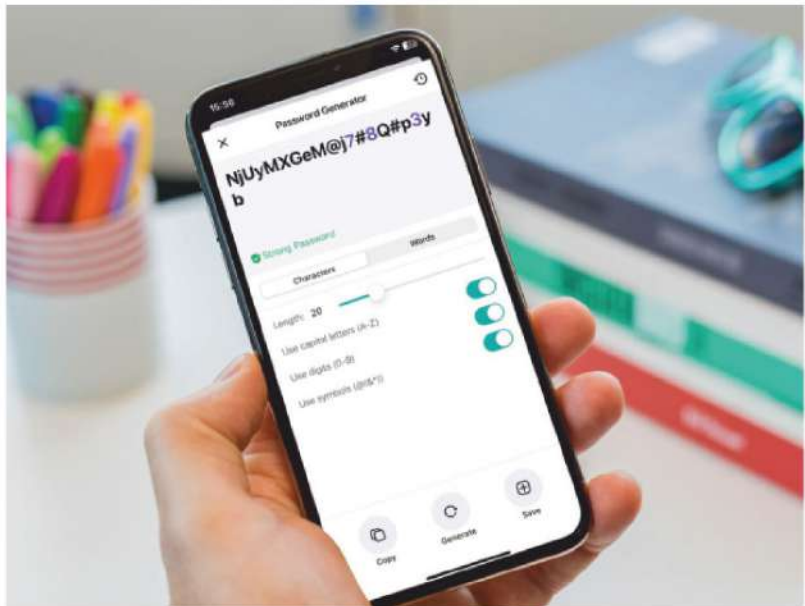
Along the bottom of the screen are tabs for various areas of the app. There's the Browse page, where you can quickly look at, enter or edit passwords, passkeys, secure notes, credit cards, and personal details, as well as organizing them into folders.

The next option is Tools, where you'll find the password generator. With this, you can easily create long and complicated passwords that are difficult to crack. There are also options to include or omit capital letters, digits or symbols, depending on what the app or site requires.

To check on the current security level of your passwords, there's a Password Health area that lets you know if any are particularly weak or overused.

For Premium subscribers, there's also Email Masking, which can generate temporary email addresses for when you're signing up to online services that you don't expect to use for long. It's basically the same as the Hide My Email service Apple includes with iCloud+.

You can also avail yourself of the Data Breach Scanner on the Premium tier, which will warn you if any of your passwords have appeared in leaks or security breaches reported online.



**The password generator lets you create long and complicated passwords that are difficult to crack.**

Finally, Premium members can securely share passwords with others (they don't have to be NordPass members) via links created in the app.

NordPass is available on macOS, iOS, Android, Windows, and Linux, plus there is the secure Web Vault that means you can access the information from any browser. Extensions are available on Chrome, Edge, Safari, Opera, Firefox and Brave.

## SECURITY AND ENCRYPTION

To protect your data, NordPass utilizes XChaCha20 encryption, which is arguably even tougher to crack than the AES-256 variant used by most password managers.

NordPass uses a zero-knowledge architecture, which means your data is



encrypted and decrypted locally on your device, so NordPass never has access to your master password or Login details. This is a pretty standard technique and one you'll find on most other password managers. The reason is that even if the NordPass servers are cracked, this won't expose your data as the encryption and decryption key required on your device.

As mentioned above, NordPass will monitor Premium accounts to look for any reports of data breaches, so you can change your account details before they become compromised.

Multifactor authorization is also available, allowing you to set up further levels of security to prevent hackers. This can be via a One Time Password (OTP) sent to your device or through authenticator apps such as Microsoft Authenticator or Google Authenticator, plus a USB authenticator if you're on a Mac or PC.

## PRICE AND AVAILABILITY

A free tier is available on NordPass, which also has a 30-day trial of the Premium features. If you want, you can stay free or pay \$20.28/£19.08 per annum for a single Premium account. Should you want the Family package, which gives you

six Premium accounts, then that will set you back \$35.88/£35.88 per annum.

The free tier is quite good in that it allows for unlimited passwords and passkeys, supports the autofill feature, Multifactor authorization, secure notes, and the password generator. If you're only using one device, then it's probably most of what you need. You can sync the passwords between devices, but only one can be logged in at a time, so bear that in mind.

Moving up to the Premium tier ([fave.co/3Y22LoS](https://fave.co/3Y22LoS)) opens up the ability to be signed in on multiple devices, while also unlocking secure sharing, Email Masking, and the Data Breach Scanner. These are useful tools, and as the overall asking price is quite reasonable, they look like a good value to us.



### NordPass

#### PROS

- Easy to set up and use.
- Good security features.
- Decent free tier.

#### CONS

- Password import from Keychain only via a Mac.
- The best features are on the paid tier.

#### PRICE

From \$20

#### COMPANY

NordPass

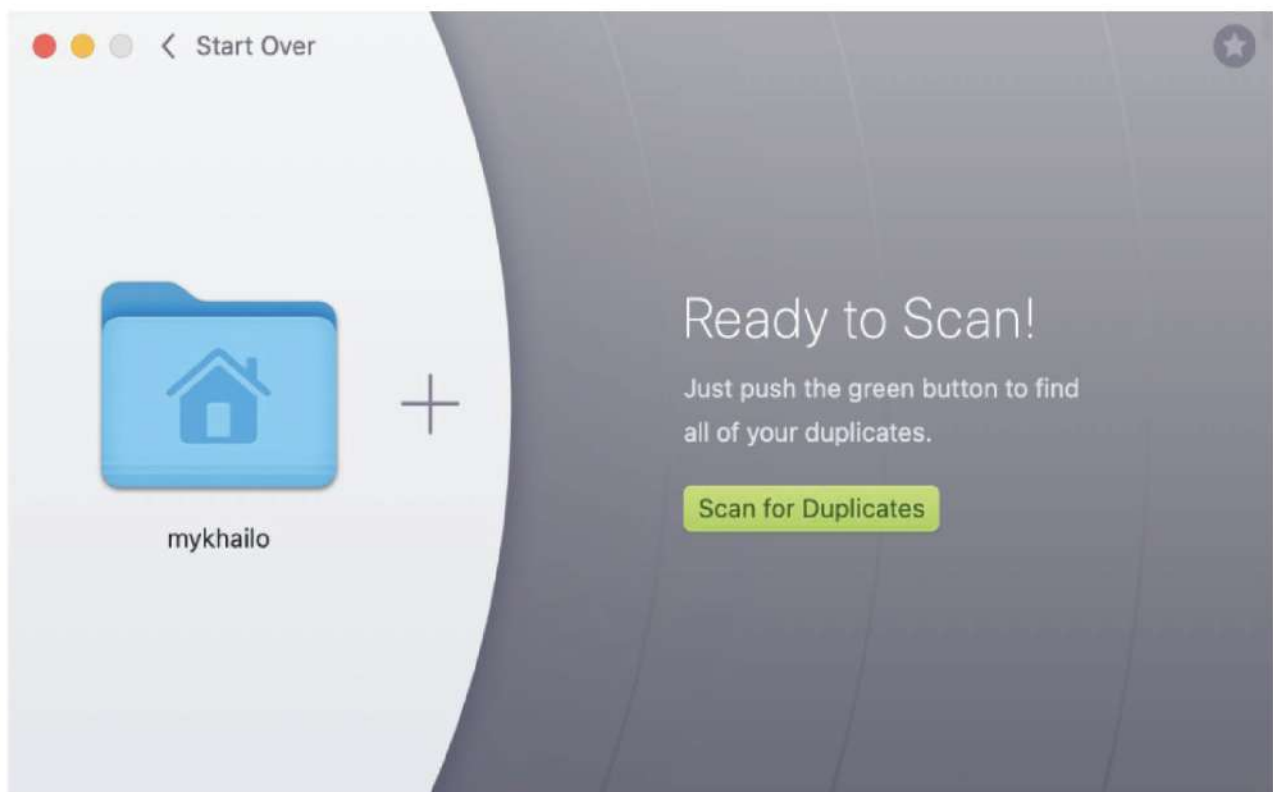
## VERDICT

NordPass is a solid and easy-to-use password manager that actually has a pretty decent free tier if you're not switching between devices too often. Support for biometrics, passkeys and multifactor authentication make it secure, while the wide range of apps and extensions means it should work on all your device. It's reasonably priced too. Good work, Nord! ■

# Gemini 2: Useful app that helps keep your duplicates in order

Gemini 2 is a helpful and fast-working app that deals with duplicates on your Mac.

BY CHRIS BARYLICK



There's something to be said for creating a utility that focuses on a given function and does it well.

This is the case with MacPaw's Gemini 2, a duplicate removal tool that focuses not only on the infamous problem of one's Photos library ballooning with thousands of duplicate photos but also handily hunts down duplicate files within

Apple Music as well as across the macOS operating system. This, in turn, helps remove gigabytes of fluff that can chew up space on your hard drive ([fave.co/3zID17x](https://fave.co/3zID17x)), which can come in handy.

Gemini II, which retails for \$19.99/£19.99 a year, and requires macOS 10.13 (High Sierra) to install and run, is currently available through Apple's App

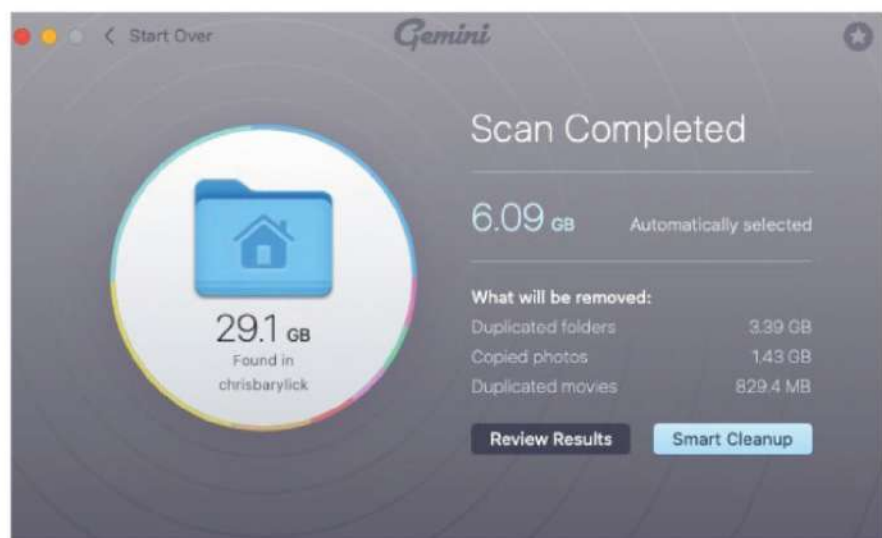
Store (Gemini 2: The Duplicate Finder on the Mac App Store [[fave.co/3BpdgK1](https://fave.co/3BpdgK1)]) as well as via MacPaw's SetApp ([fave.co/3N8yDSg](https://fave.co/3N8yDSg)) application, which grants access to Gemini and other apps for \$9.99 (£7.60) a month. It is as easy to install as one would expect. MacPaw currently offers a seven-day free trial in exchange for either your credit or debit card's information. Just download the app, install it, give it full access to your hard drive, and you're ready to begin.

The app includes scripts that allow for easy scanning of the Photos library and your Music library, and it allows for custom folders and external volumes to be chosen from a menu or dragged, dropped, and quickly scanned. Other bells and whistles include Menu Bar elements, which offer quick access to Gemini 2's features, whitelists you can create that are exempt from being scanned, and a Duplicate Monitor feature that helps compare files you're adding and works to head duplicates off at the pass before they begin to pile up.

Per testing itself, things could have hardly gone better. I'd wanted to remove duplicates

from my hefty Photos library, which weighed in at over 29GB, but I had been apprehensive to do so. Apple's duplicate detection and removal feature within Photos creates a Duplicates album and hunts down duplicates for you, but it's still up to you to manually remove these items. Put a little trust in Gemini 2 and it quickly hunts down duplicates, offers the option to remove them, and cleanly eradicates them from your hard drive. This also applies to music files and other document types, and the Duplicate Monitor helps out by warning you as to possible duplicates that have been carried over to your hard drive.

Granted, there are still some caveats to sort out. One issue I ran across was that after downloading and installing Gemini 2 from the App Store, I was advised to create a SetApp account and install it from



**Looking over scan results and the amount of duplicate photos that can be safely removed.**



Removing duplicate photo files from iCloud.

there. This seemed to cause some confusion as to account registration and permissions, which sorted itself out after I deleted the Gemini 2 version I had obtained from the App Store. Given that MacPaw is nudging its clients toward SetApp subscriptions, which offer full access to the company's apps for a given rate per month, there's some room for confusion here.

While Gemini 2 runs well, a scheduling feature for folder or volume scans would not go amiss. Perhaps the one wish list item, and one I hope to see in a future version of Gemini 3, is an improved filter for located duplicate items. The current filter allows you to break results down

by size, name, count, and selected count, but it'd be much more helpful to be able to group results by creation and/or modification date and have that much more control over the files in question. Yes, this is a version 3.0 wish list item, but it could only make a great application that much better.

## VERDICT

There are a few bells and whistles I'd like to see, and the transition between Gemini

2 being its own App Store app and part of the SetApp suite offered a few minor hurdles to overcome. But what's present here is well written, helpful, fast, works well with all kinds of duplicates, and lends a good feature set to the macOS operating system without being overbearing. Gemini 2 hones in on its tasks and performs them well to the point that I trust it to help keep my duplicates in order, and there's the feeling that the app has earned that trust, which is a rare thing. Take it for a spin, see what it can do, and odds are you'll like what's on the table. ■



### Gemini 2

#### PROS

- Quick, reliable performance and capable of finding multiple duplicate types.
- Excellent search customization, including folders and external volumes.

#### CONS

- Lack of additional filters makes sorting located duplicates more tedious than it should be.
- Confusion between App Store version of Gemini 2 and SetApp suite version of Gemini 2.

#### PRICE

From \$10 per month

#### COMPANY

MacPaw



# DROP THE F\*BOMB



## TALK TO YOUR KIDS ABOUT FENTANYL

Fentanyl is being used to make counterfeit pills and is being laced into other illicit drugs. Make sure your teens know the facts.

Learn the facts on fentanyl and start a life-saving conversation with your teen.

[DropTheFBomb.com](https://DropTheFBomb.com)





**AM I OKAY  
TO DRIVE?**

**BUZZED DRIVING  
IS DRUNK DRIVING**

  
**NHTSA**

**ad**  
COUNCIL



## Apple TV hacks: These 5 tips and tricks are game changers

Ever want to hurl your Siri Remote at the wall in frustration? These must-know hacks will streamline your Apple TV 4K experience.

BY BEN PATTERSON

With its silky performance and razor-sharp video resolution, the Apple TV 4K has been my streaming box of choice for years, but it has some quirks that drive me up the wall.

For instance, why does the TV button on the Siri Remote send you to the Apple

TV app rather than the main Apple TV Home Screen? What's with those Apple TV+ video promos that start playing automatically, complete with sound? And don't get me started on trying—fruitlessly—to pinpoint a particular moment in a video by clumsily swiping the remote's navigation pad.

Luckily, you can nip these Apple TV 4K annoyances in the bud with a few simple tweaks in the Settings menu. Read on for five tips and tricks that will change your Apple TV experience for the better.

## CHANGE HOW THE TV BUTTON ON THE SIRI REMOTE WORKS

Back in the early days of Apple TV, the Home button on the remote did what it said it would do: It took you to the Apple TV's Home Screen, where you could find all your ATV apps, just like on an iPhone.

Then the Apple TV app came along, and before we knew it, the Home button on the Apple TV remote (later dubbed the Siri Remote) jumped you to the Apple TV app rather than the home screen. Talk about annoying.

Luckily, there's a way to make the Home button—OK, fine, the TV button—on the Apple TV remote do what we actually want.

Go to Settings on the Apple TV, select Remotes and Devices, scroll to the TV Button setting, then pick an option: either Home Screen or Apple TV App. Pick the former, and you're all set.



**Changing what the Siri Remote's TV button does takes just a few clicks.**

## MAKE IT EASIER TO SCRUB FORWARD AND BACKWARD ON VIDEOS

When you pause the video on your Apple TV, you can swipe the touch surface in the



**Just swipe clockwise or counterclockwise along the rim of the Siri Remote's navigation pad to scrub forward or backward on a paused video.**



center of the navigation pad to scrub forward or backward, but doing so with precision can be a royal pain.

If you're getting frustrated, try this trick: Instead of swiping the touch surface in the middle of the navigational wheel, slide a finger around the rim of the wheel itself—clockwise for forward, counterclockwise for reverse. Using that gesture makes it a little easier to pinpoint an exact spot on a video.

## CHANGE WHAT'S IN THE TOP SHELF

You know when you scroll over the app icons in the top row of the Apple TV home screen and promo images or even autoplaying videos appear at the very top of the screen? Apple calls that promo area the Top Shelf, and for the most part you can't control the content that appears there as you scroll from one app to another.

There is a key exception, however: the Apple TV app. Normally, when you scroll over the Apple TV icon, you'll see a screen-

dominating "What to Watch" preview that begins playing automatically, complete with sound (more on the annoying autoplay audio in a moment). But for the Apple TV app, you have the option to change the Top Shelf's behavior to something more useful.

Try this: Go to Settings, then click Apps, TV, and scroll down to the Home Screen setting. Finally, toggle the Top Shelf setting from "What to Watch" to "Up Next."

Now, when you scroll over the Apple TV app on the Apple TV 4K's home screen (assuming you keep the Apple TV app in the top dock), you'll see what's in your "Up Next" queue, handy for jumping back into what you've been watching or teeing up something you already want to watch.

**Bonus tip:** You can set the "Up Next" promos to show either the cover art for the



**Put your "Up Next" row back where it belongs.**

TV show or movie you were watching or a still frame of the video; just toggle the Up Next Display setting.

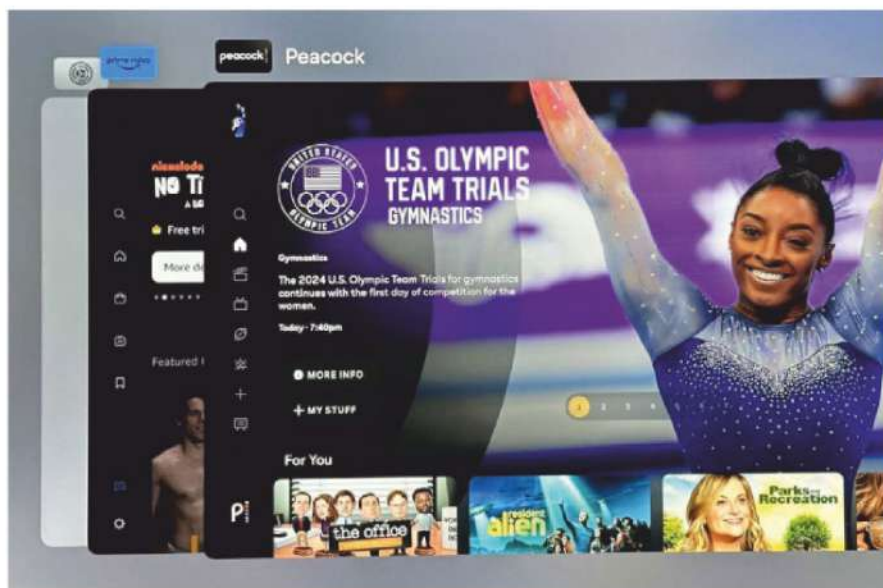
## SILENCE THOSE ANNOYING AUTOPLAYING PREVIEWS

One of the more aggravating features of the Apple TV app is its habit of automatically playing a preview—complete with sound—for any show or video that the Apple TV’s cursor happens to be hovering over.

Now, you can’t do anything about the autoplaying videos, but you can mute their sound (you can always scroll up if you do decide you want to hear the preview).

Go to Settings, click Apps, TV, scroll down to the Video and Audio heading, then toggle Autoplay Video Sound to Off.

Ah, that’s better.



Double-click the TV button to launch the app switcher.

## DOUBLE-CLICK TO SWITCH APPS

Navigating the Apple TV 4K’s convoluted screens and interfaces can be a tedious process, particularly when it comes to switching from one app to another.

For example, if you’re deep inside the Netflix app and you decide you want to check out Hulu, you’ll likely need to click the Back button multiple times to return to the home screen. Then you’ll need to navigate to the Hulu app icon and click that to begin, say, your binge-watching session of *The Bear*.

Of course, you could just click the TV button to zip back to the home screen (assuming you’ve followed my advice above), although you’ll still need to navigate to the app you want to open.

Instead, try this: Double-click the TV

button. Doing so will trigger the Apple TV app switcher, which will display a stack of windows for all your recently opened tvOS apps.

Swipe the Siri Remote’s touch surface to scroll through the windows, then click a window to launch its app. Easy-peasy. ■

# AirPods 4 with ANC: More pro for less dough

ANC support and a better fit make Apple's mid-range earbuds a compelling alternative to the AirPods Pro 2.

BY ROMAN LOYOLA



**A**irPods sure have come a long way in the eight years since their debut. So much so that their iconic status has waned a bit as the competition (including Apple's own Beats product line) has caught up—some may even say surpassed them. What can Apple do to compete?

Easy: Offer a model that delivers more with better design at an excellent price.

That is what Apple has done with the AirPods 4 ([fave.co/3Ne6MA5](https://fave.co/3Ne6MA5)): They offer many of the features found in the AirPods Pro 2, have a better fit than their predecessor, the AirPods 3 ([fave.co/3lrSfNP](https://fave.co/3lrSfNP)), and come at the same \$179 price tag.

Overall, Apple has made the AirPods 4 a better value than the version they replaced. How they *literally* fit, however,

does play a major role in whether you should pay the extra money and step up to the AirPods Pro 2.

## DESIGN AND FIT

The AirPods have been redesigned with each generation, each one promising a better fit. The AirPods 4, according to Apple, have a design with “a natural and secure fit for more people than ever.” The company said ([fave.co/4eMU5rJ](https://fave.co/4eMU5rJ)) it used an “unparalleled data set” to make “the most comfortable AirPods ever.”

Can “50 million individual data points” be wrong? In my specific case, the AirPods 4 are closer to being a proper fit than the AirPods 3, but I have a personal issue where the right earbuds fit better than the left ones, and that is still the case here.



**Apple says these are the best-fitting AirPods ever, but don't take the company's word for it. Try them on before you buy.**

Both stayed in my ears while I was walking, but the left one fell out when I was running upstairs.

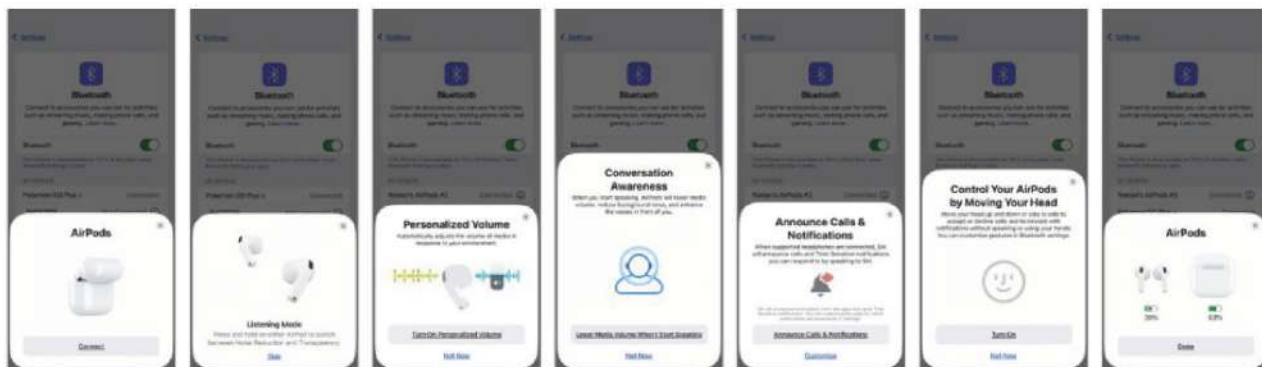
Overall, however, they're a vast improvement over the original AirPods ([fave.co/3TQWQjl](https://fave.co/3TQWQjl)) from 2016, which, I'll admit, I hated. They barely stayed in either of my ears, and I spent more time bending over and picking them off the ground than actually listening to them. Read: “AirPods 4 vs old AirPods: What's new?” ([fave.co/47Lqih3](https://fave.co/47Lqih3)).

For me, the AirPods Pro ([fave.co/3BGniRe](https://fave.co/3BGniRe)) with silicon ear tips fit a lot better and securely. However, there are some situations where I want the open design of the AirPods, so I'm not giving up on the AirPods 4 in those situations. (I do acknowledge the luxury of having two sets of AirPods at my disposal.) I'd like to say

the AirPods 4 will fit your ears, but every ear is different (even for one person), and how they fit will be the determining factor in your buying decision. If you can, try them on first before you buy them.

## ACTIVE NOISE CANCELLATION AND SOUND QUALITY

Apple offers the AirPods 4 in two variations: a \$129/£129 model and a \$179/£179 model with active noise cancellation.



**When you first set up the AirPods 4, Apple walks you through the setup of their features.**

Within active noise cancellation are two sound isolation modes: Adaptive Audio and Transparency. They also get Conversation Awareness ([fave.co/3ZMWiPH](https://www.fave.co/3ZMWiPH)), which was previously only available on the AirPods Pro.

Whether you get the AirPods 4 with or without Active Noise Cancellation, the hardware looks identical on the outside. Inside they're basically the same as well, with Apple's newest H2 chip and an identical feature set aside from active noise cancellation. It's not clear if the \$129 AirPods 4 have a modified H2 without the feature or if Apple is simply not enabling it through a software block on it. Either way, that's the only difference.

In use, the effectiveness of the AirPods 4's active noise cancellation is heavily affected by the open design. For example, while walking down a busy street, I found that the AirPods 4 cut down a majority of traffic noise to a point where you'd have to pay close attention to notice it. The AirPods

Pro 2 do a better job, but it's close. The AirPods 4 don't absolutely cancel the noise around you, which might be preferable, depending on your situation. If you're in conditions where you need to muffle as much as possible, you'll want to turn to the AirPods 2's snug ear tips.

My favorite feature is Conversation Awareness, where the volume automatically lowers when the AirPods 4 detect your voice and keeps it lowered as long as you are talking. The feature did a good job when I had one-on-one conversations, but when I was in a group where multiple people often talked at the same time, the volume would turn back up. It would turn back down again when I spoke in the group. The feature is really meant to be used for short person-to-person encounters, like a conversation at a store checkout or a discussion with a kiosk representative.

The overall sound quality is quite delightful for general-purpose, open

earphones. The AirPods 4 handle loaded tracks like 311's "Need Somebody" ([fave.co/4gJsYjl](https://fave.co/4gJsYjl)) and Buñuel's "Crack Shot" ([fave.co/3Bla3ek](https://fave.co/3Bla3ek)) with ease; these songs sound like a muddled mess on lesser earbuds. The bass in Real Boston Richey's "Help Me" ([fave.co/4dnBC44](https://fave.co/4dnBC44)) is clean, heavy, and most importantly lacks distortion. Katy Perry's "Woman's World" ([fave.co/4duPbin](https://fave.co/4duPbin)) and glaive's "minnesota is a place that exists" ([fave.co/4eMUtqb](https://fave.co/4eMUtqb)) exude the energy you want from pop tracks. And the guitars in acoustic tracks like Fog Swamp's "Split the Sky" ([fave.co/4gIYnIV](https://fave.co/4gIYnIV)) and Indigo Girls' "Romeo and Juliet" ([fave.co/3XQu6ZE](https://fave.co/3XQu6ZE)) are crisp and clear.

I was also impressed with the clarity and volume of voice recordings in podcasts and during phone calls. I didn't think voices would be as good as with the AirPods Pro with their ear tips—it's not, but it's close, and I can say the AirPods 4 produced excellent voice quality. The AirPods 4 have the same H2 chip as the AirPods Pro 2, so it seems logical to think that the sound generated would be the same quality, the major difference being the effect of open earbuds versus ear tips.



**The setup button on the back is gone. The AirPods 4 with Active Noise Cancellation has a case equipped with a Find My speaker (the three dots in this photo).**

## CHARGING CASE

The AirPods 4 USB-C case is also where you'll find Apple has made differences between the two models. Like the AirPods Pro 2 case, the \$179 model has a speaker to play alerts through Find My. It also supports USB-C or wireless charging—it works with the Apple Watch charger as well as Qi chargers. (It doesn't support MagSafe like the AirPods Pro case, but a MagSafe charger will work as long as you place the case in the dead center of the charger and balance it, since it doesn't make a magnetic connection to stay in place.) The \$129 model's case has only wired USB-C charging.

The case is a bit smaller than the AirPods 3 case, but still wider than the

original AirPods case. But compared to competitors in the market, the AirPods 4 case is solid and most importantly it's very compact. Some of the cases out there are way too big for the earbuds they are housing.

In a strange move, Apple also decided to get rid of the setup button on the back of the case. Instead, you press the area in front of the case, below the status light. Apple notes this in the AirPods 4 documentation, but since most people don't read manuals, there will be more than a few users wondering what to do if they're having setup problems. At least with a visible button, there's an intuitive sense to push it when troubleshooting. But to be fair to Apple, I can't remember the last time I had to push that button on any AirPods cases I've had.

## BATTERY LIFE

If you use active noise cancellation, it shortens the AirPods 4's battery life—when fully charged, Apple claims a 4-hour listening time with the earbuds and 20 hours of charge with the case. Turn off ANC, and fully charged earbuds can last 5 hours, and the case adds 30 total hours.

I got a bit better than that. To test the earbuds' battery, I used the AirPods 4 until the earbuds ran out of power, switching back and forth between the different active noise cancellation modes.

I set the volume to six clicks below the full volume and listened to a variety of songs and podcasts, as well as chapters from an audiobook.

The earbuds lasted 4 hours and 16 minutes, a few minutes longer than the stated battery life with active noise cancellation on. When I put the earbuds in the fully charged case, their battery life was at 27 percent after five minutes—Apple says that a five-minute charge provides an hour of life.

## PRICE

The AirPods 4 with Active Noise Cancellation in this review are \$179/£179. Apple sells the AirPods Pro 2 at their list price of \$249/£249, but it's not difficult to find them at a discount at third-party retailers such as Amazon. For example, during this review, Amazon in the U.S. ([fave.co/3zO1zfi](https://fave.co/3zO1zfi)) was offering the AirPods Pro 2 for \$190, only \$10 more than the AirPods 4. If you want "full" noise cancellation and you're comfortable with silicon ear tips inside your ear canal, it's worth the extra \$10.

Another bonus: The AirPods Pro 2 will soon get the new hearing aid support ([fave.co/3Bsc07v](https://fave.co/3Bsc07v)), which is not coming to the AirPods 4. Third-party retailers will eventually offer the AirPods 4 below their list price, likely in the \$150 range, which makes the decision a bit harder.



The AirPods 4 are a great, all-around set of earphones.

## AIRPODS 4: A CHEAPER ALTERNATIVE

Throughout this review, I've mentioned the AirPods 4 without ANC several times. In the interest of helping you make your buying decision, here's a summary of what these are and what they aren't.

Apple identifies this product as the AirPods 4, and they are priced at \$129. The earbud and case designs are the same as those of the \$179 AirPods 4 with ANC. However, the \$129 AirPods 4 *does not have* the following features:

- > Active Noise Cancellation (as well as Adaptive Audio and Transparency mode)
- > Conversation Awareness

- > A wireless charging case
- > A peaker on the case for Find My alerts

Otherwise, they're the same. The AirPods 4 have an H2 chip like the ANC model as well as the same audio quality, fit, and features. So you'll have to consider if those features listed above are worth the extra \$50. I think they are.

Take a look at our Best AirPods deals ([fave.co/3N7wJS8](https://fave.co/3N7wJS8)) to see if you can save some money.

## VERDICT

The AirPods 4 with ANC for \$179 are a much better value than the 3rd-gen AirPods with numerous pro-level features. They sound great, the active noise cancellation is extremely useful and works surprisingly well, they fit better than previous AirPods, and the wireless charging and Find My speaker on the case are much-welcomed conveniences. In short, the AirPods 4 are a great, all-around set of earphones—as long as they can stay in your ears. ■



### AirPods 4 with ANC

#### PROS

- Great overall audio quality.
- Effective active noise cancellation.
- Case with wireless charging support and Find My speaker.

#### CONS

- Will they fit?
- Price compared to AirPods Pro 2.

#### PRICE

\$179

#### COMPANY

Apple





# Sonos Roam 2: One of the best portable speakers around

The Sonos Roam 2 portable speakers provide strong sound quality and AirPlay 2 support. Find out how good they are in our review.

BY CLIFF JOSEPH

If it ain't broke, don't fix it. Sonos released the original Roam smart speaker back in 2021 ([fave.co/3zH3714](https://fave.co/3zH3714)), and it was one of the best portable speakers we've ever seen, providing very good sound quality in a highly compact design that also managed to squeeze in useful features such as wireless charging and even support for Wi-Fi and AirPlay for Apple devices. The new Roam 2 doesn't attempt to tamper with that successful

formula, but it fine-tunes a number of features such as its set-up and tuning process, and provides more straightforward controls.

Available in a variety of colors—including red, green, blue, and plain old black and white—the Roam 2 looks virtually identical to its predecessor (and the original Roam and Roam SL models are still widely available online, so make sure you choose the Roam 2 when buying).

The compact speaker is 168mm tall when you stand it upright, 62mm wide, and 60mm deep, and weighs about the same as a tin of beans at 0.43kg. It's not quite pocket-size, but it will fit easily into a backpack when you're out and about. It also has a sturdy IP67 rating for resistance to water and dust, which allows it to be submerged in 1m of water for up to 30 minutes without damage, so it's well suited to life outdoors or on the beach.

The compact design means there's not much room for a large battery, but the Roam 2 should last for up to 10 hours with music playing at around 50% volume. It needs to stand upright for wireless charging, as the power circuits are in the base of the speaker, while the volume, playback, and microphone controls sit on the top. However, a little set of rubber feet allows you to turn the speaker onto its side and lay it flat if you prefer, and there's a

USB-C port on the back that can be used for charging as well (with a USB-C cable included in the box). The Roam 2 starts at \$179/£179 (currently the price is marked down to \$143/£139 on the Sonos website). It's also possible to buy the Roam 2 with an optional wireless charging pad for \$228/£228, and there's an Adventure Set with two Roam 2 speakers available for \$358/£358—although if my math is correct that's exactly the same price as buying the speakers individually, so there's not much if any savings there.

As you'd expect, the Roam 2 supports Bluetooth—updated to 5.2—and it now has separate buttons for Power and Bluetooth pairing, which are easier to use than the fiddly multifunction button on the original Roam. Getting started is still a little fiddly, though. You can press the Bluetooth button on the back of the speaker to quickly pair via Bluetooth, but you really



**The Roam 2 is available in a variety of colors.**

need to download the Sonos app for iOS or Android in order to set the speaker up properly. The app has its own setup process, which uses an audio PIN—a series of chimes—to detect and connect to the Roam 2 via Bluetooth at first. You are then prompted to enter your Wi-Fi password in order to also connect the speaker to your home Wi-Fi network.



**The speaker's IP67 rating means it can be submerged in 1m of water for up to 30 minutes without damage.**

However, our office router transmits separate networks on the 2.4GHz and 5.0GHz frequencies, and this seemed to confuse the Sonos app—which has received a lot of criticism following a recent update—so we had to spend some time changing the Wi-Fi settings on our iPad in order to connect via Wi-Fi. But once that was done, the Roam 2 worked really well, and its support for AirPlay means that connecting it to additional Apple devices was much more straightforward.

Just like its predecessor, the Roam 2 provides very good sound quality for such a compact speaker, especially when using the higher bandwidth that is available with a Wi-Fi connection. It does a

good job with the sonic mashup of Sturgill Simpson's "Sing Along," laying down the grinding, fuzzy guitars that form the bedrock of the sound, while the fizzing EDM keyboard wails through the air with arm-waving energy. It's even got a respectable bass beat for such a small speaker, letting the electronic bass on Billie Eilish's "Bad Guy" bounce along with a relaxed, swaying rhythm. It also pulls out the crisp finger snaps

and ticking percussion that give the song a slightly erratic, nervous energy. Switching to a Bluetooth connection causes the sound to lose a little clarity—but that's a limitation of Bluetooth rather than the speaker itself, and the Roam 2 can go head-to-head with any portable speaker of this size and weight.

## VERDICT

The Roam 2 might not be an essential upgrade for owners of previous models, but this lightweight speaker still punches above its weight when it comes to sound quality. Its sturdy and lightweight design is great for outdoor use, but it also provides Wi-Fi and AirPlay support for when you get back home. ■



### Sonos Roam 2

#### PROS

- Lightweight, compact design.
- Strong sound quality.

#### CONS

- Battery life could be better.
- No wired input.

#### PRICE

\$179

#### COMPANY

Sonos

# AGING BRINGS DISCOVERY, NOT DISORIENT- TATION.

Some things come with  
age. Some others don't.

Learn the  
warning signs  
of Alzheimer's.

...

[10signs.org](http://10signs.org)



## Mac 911

Solutions to your most vexing Mac problems.

BY GLENN FLEISHMAN



### DON'T BUY LOCKED APPLE HARDWARE WHEN SHOPPING FOR USED GEAR

When purchasing used Apple hardware, make sure that it's unlocked before you hand over funds. Otherwise, you've bought something akin to a fancy brick. A number of people have written to *Mac 911*, and you find the problem constantly on online buying and Apple forums.

After thefts of iPhones and other mobile hardware skyrocketed in the early

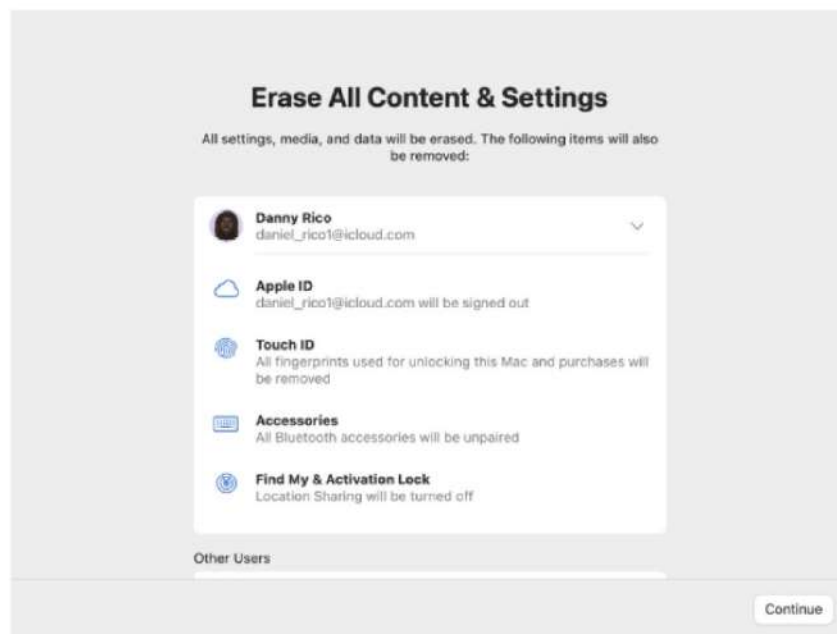
2010s, regulators and legislators made noises about forcing Apple and other companies to provide additional anti-theft protection. Apple released Activation Lock in 2013 for the iPhone, quickly extending it to the iPads, Mac, and Apple Watch. (Macs have to be running Catalina or later and be either an Intel model with the T2 Security Chip or any Apple silicon M-series model.) A similar locking mechanism, called Find My Lock, applies to AirTags and third-party Find My network tracking items.

With Activation Lock enabled on devices or Find My Lock enabled on a Find My item, other parties can't use the hardware. Erasing, resetting, or otherwise trying to zap the device or item doesn't disable Activation Lock or Find My Lock. Only the steps below do.

## How to disable an Apple lock

Here's how Activation Lock can be disabled before it's handed over:

> An iPhone, iPad, or Mac's owner can disable Find My before handing it over in Settings or System Settings → Account Name in iCloud settings or at the top level. The owner can also erase their device, which will also disable Find My and the associated Activation Lock.



**Erasing an iPhone, iPad, or Mac via Settings or System Settings**  
→ **General** → **Transfer or Reset (Device)** also disables Find My.

> An Apple Watch owner uses the Watch app to go to My Watches → All Watches, tap the info (i) button to its right, and then tap Unpair Apple Watch.

> With any of those four kinds of hardware, the owner can also remove the device from their account in their list of devices under Settings or System Settings → Account Name, though that requires the device having access to the internet to accept the removal.

With Find My Lock for an AirTag or third-party item, the tracking item has to be unpaired from an iPhone or iPad associated with the iCloud account used to create the initial association via the Find My app's Items tab:

> Go to the Find My app on an iPhone or iPad (the Mac app doesn't offer item unpairing). Tap the Items icon, select the item, and then tap Remove Item and confirm.

> If the item is within Bluetooth range, the unpairing happens, and the item typically makes a confirmation sound. If it's out of Bluetooth range, the Find My Lock was removed, but the item has to be reset manually using its particular reset sequence.

## How to check if a lock was disabled

When purchasing Apple hardware, you should require proof that the device or item has been removed from the owner's account. Otherwise, you are likely purchasing equipment that the seller doesn't own or to which they have lost access through losing an iCloud account login. The hardware may or may not be stolen: Many MacBook models have turned up for sale in a locked state after being purchased from governments or companies that didn't follow procedures for deaccessioning.

Here's how to avoid being scammed by an Activation Lock-enabled iPhone, iPad, Mac, or Apple Watch:

- > Before paying for a device, you should ask to see (in person or via live video) the device power up and then not display an Activation Lock message. It should show a standard setup screen or have a password that can be entered that the seller will provide.

- > If an Activation Lock message does appear, require the seller to enter the iCloud password and unlock the device, then disable Find My. Otherwise, don't give them money.

- > In the event that a device arrives locks, a seller can use the Apple ID site ([fave.co/3Y4PVWH](https://fave.co/3Y4PVWH)) to remove the device from their account, which removes the Activation Lock. If they cannot or won't do this, that's a very bad sign.



**Don't buy this iPhone! It cannot be used by you in this state.**

- > If you are making a purchase on eBay or similar online sites that guarantee sales listings are accurate, you can file a complaint and get a refund if the device that arrives has Activation Lock enabled and the seller won't or can't remove it from an iCloud account.

It's important to remember, too, that any device with Activation Lock enabled also has Find My enabled. That means a seller can identify your location.

With a Find My Lock:

- > With an AirTag, bring it near an iPhone or iPad and see if it's recognized. If not, try the next bullet item.

- > With third-party items, open Find My, tap the Items icon, and tap the plus sign to the right of the Items label. Choose Add Other Item (or Add AirTag if the previous bullet item fails for an AirTag).

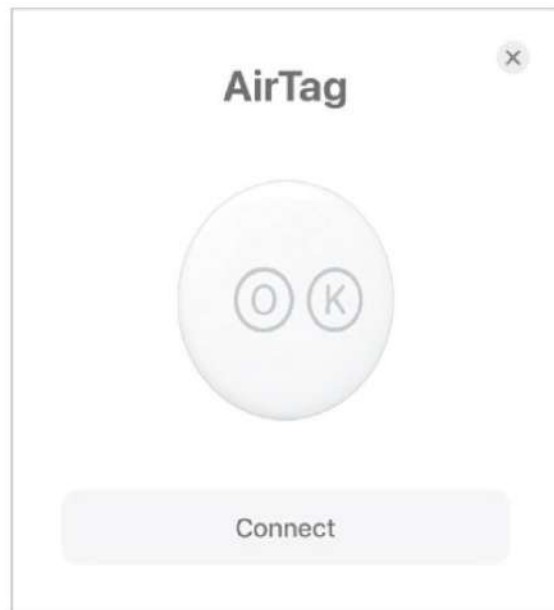
An AirTag should bring up a dialog no matter what app you're in that says AirTag and offers a 3D-rotating preview and a Connect button. A third-party item will similarly guide you through the pairing process in the Find My app.

If the two bullet points above don't work, use the Find My app's Identify Found Item link in the Items view. This should let you know if it's still registered. If it doesn't appear, try resetting it and trying the two bullet points above again. If that fails, the item cannot be paired.

## HOW TO CONTROL THE BRIGHTNESS OF YOUR IPHONE OR IPAD

We've come a long way in adjusting the brightness setting on our iPhones to strike a balance between legibility (especially in sunlight) and battery life. Modern iPhones and iPads have bright enough screens to remain clearly viewable in summer while also consuming much less power despite the larger size.

But brightness isn't everything. iOS and iPadOS generally adjusts the brightness of a device's display to match its analysis of the lighting conditions you're currently amid. You may not always want that. You can disable default settings and use manual controls to keep brightness where you want it.



**An unpaired AirTag should prompt this dialog on an iPhone or iPad that it's brought near.**

### Adjust brightness manually

Even with automatic brightness adjustment enabled, you can always swipe to display the Control Center and drag the Brightness slider up or down. That provides an override to the current setting until your iPhone locks after a specified delay, or you press the side or top button. (You can adjust the Auto-Lock duration in Settings → Display & Brightness.) You can also go to Settings → Display & Brightness to access the slider there.

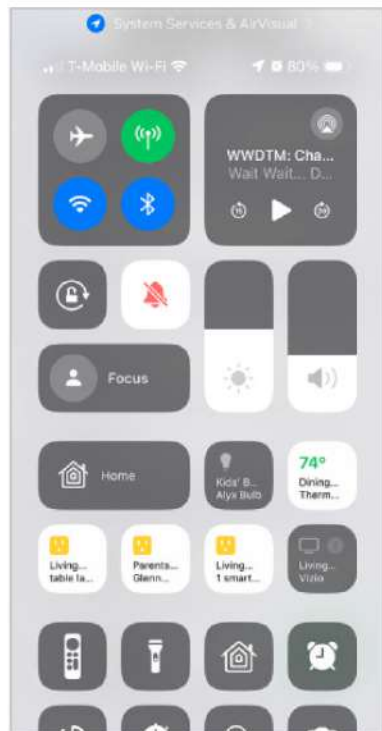
If you have an iPhone or iPad with True Tone, the Display & Brightness settings also show a True Tone switch. True Tone uses multiple sensors to determine the ambient lighting and then adjust the hue



and intensity. This can make images, videos, and flat colors onscreen appear visually the same in different lighting conditions. If you find that distracting, you can disable it. (True Tone appears in the iPhone 8 and later, iPhone SE 2nd generation and later, and many iPad models; [fave.co/4gQfTF1](https://fave.co/4gQfTF1).)

### Disable automatic brightness

You may find that your iPhone or iPad changing the brightness level automatically is less useful to you than letting you set a fixed brightness and adjusting it to your liking. If so, go to



You can manually adjust brightness from the Control Center (left), or opt to disable automatic brightness adjustment altogether (right).

Settings → Accessibility → Display & Text Size and disable Auto-Brightness.

Apple uses Auto-Brightness as part of the way it manages battery life on your device. After disabling the feature, you may notice faster battery consumption during normal usage. You can check how the battery's power drains over a day using the chart in Settings → Battery.

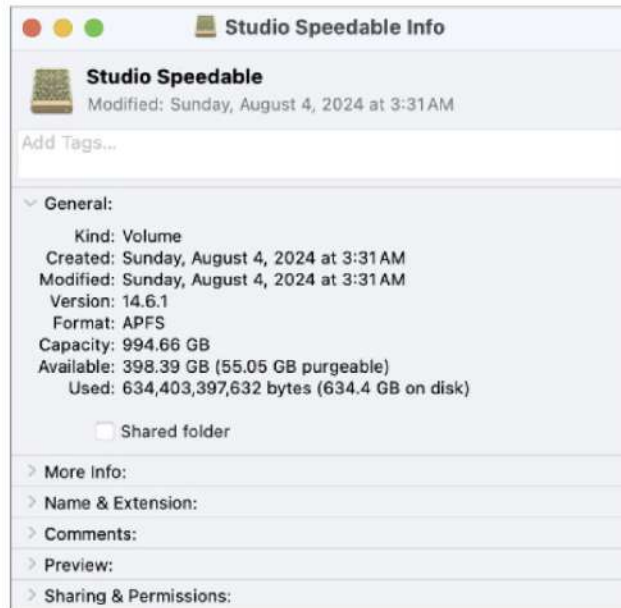
## DECIPHERING YOUR STORAGE SPACE BETWEEN YOUR MAC AND iCloud

A few years ago, Apple decided to offer seamless optimization for storage on your

Mac. Instead of knowing where every byte (or gigabyte) lived, you could enable optimization in Photos or iCloud Drive. With this feature turned on, your Mac would automatically perform an ongoing tradeoff of available disk storage and iCloud storage.

Presuming you have enough iCloud storage, you could have up to 12TB of data stored in the cloud that is accessible on demand from your Mac, even if you only have a 256GB SSD. In practice, it's more likely you have a 512GB or 1TB SSD and 2TB of iCloud storage, but Apple made both scenarios possible.

That doesn't seem to exactly describe my available storage.



Optimize Mac Storage enabled in *Apple menu* → System Settings → Account Name → iCloud, iCloud Drive deletes files but leaves stubs you can see and access.

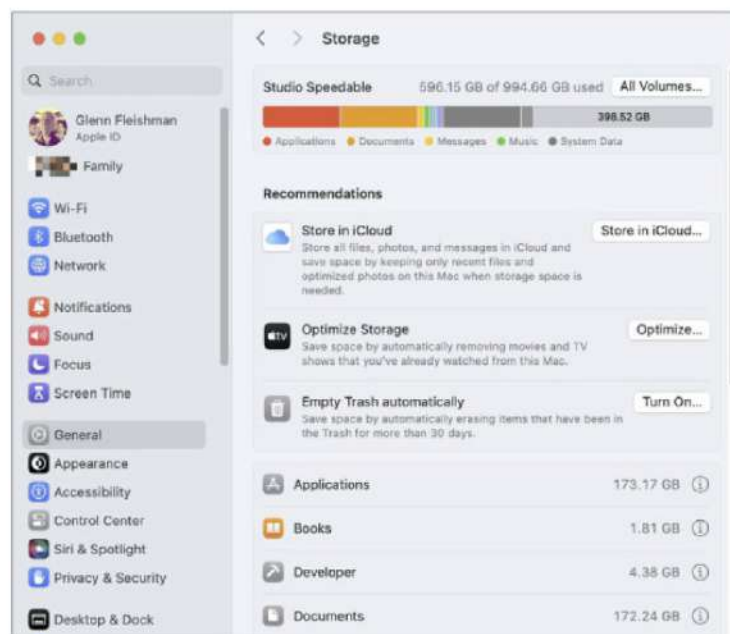
That all sounds reasonable, but if you start looking around the Finder and System Settings, you might get confused. On the desktop, you'll see the size of your startup volume and

As local storage gets tight, macOS automatically deletes local copies of files that are synced to iCloud, which uses invisible redundant storage to ensure that no one drive or Apple data center would mean the loss of your data. It's unknown how redundant

iCloud storage is, but it's been years since the last reports of data loss of iCloud-stored-only data.

If you have iCloud Photos and optimization enabled, Photos dumps images but retains thumbnails and metadata locally. With

then "X GB free." But use File → Get Info with the volume selected, and there's a more elaborate explanation: "Available X GB (Y GB purgeable)." The first number is as reported, but it includes files that macOS could dump in a pinch because



The Storage area shows a breakdown of what's allocated.

they're synced to iCloud.

Where this starts to get more absurd is when you go to *Apple menu* → System Settings → General → Storage. At the top, you see a bar that seems to represent actual data on your startup volume, including purgeable data. But scroll down to iCloud Drive, and it shows how much is currently on disk.

For me, that amount is listed as 200.1MB. When I open iCloud Drive in the Finder and choose File → Get Info, macOS reports that iCloud Drive has 154,806,040,705 bytes stored—not abbreviated as 154.81GB for some reason in the General section—but only 364.7 MB on disk. That latter number doesn't match the one in Storage.

This became an issue for me recently when something went awry when Apple had disruption across iCloud services, including iCloud Drive. Though it lasted briefly, it looked as if my drive suddenly had only 50GB of actual storage space available, an Adobe InDesign book project refused to load high-resolution previews from unrelated Dropbox storage (which is also set, like iCloud Drive, to purge as needed), and iCloud refused to let me select items, Control-click or right-click to show the contextual menu, and choose



**True, but not as useful as one might hope.**

Remove Download to force a purge.

Eventually, iCloud resumed normal service, Dropbox caught up, and my machine was back to normal. It seems like Apple should have a better way of integrating the amount of usage in macOS into one dashboard that helps avoid a full volume. So far, you have to collate across many sources.

## HOW TO REMOVE A FIRMWARE PASSWORD FROM AN INTEL MAC

Before Apple refreshed security on Intel Macs with the T2 Security Chip and FileVault, the company offered a different way to deter certain kinds of physical attacks. Intel Mac owners can set a firmware password, which prevents a volume other than the one set to start up the Mac from being used on restart or from a cold start.

Apple did away with the problem entirely



### Apple can reset the firmware password at an Apple Store.

with Apple silicon by adding low-level security policies and other system drives that prevent an M-series Mac from starting up with an arbitrary volume. (This also made it difficult to have a bootable backup in case of a drive failure, but SSDs—the only built-in option for M-series Macs—are far more reliable than hard drives.)

If you have or are planning to buy an Intel Mac and want to know how to remove the firmware password, it's an easy process:

1. Power up your Mac or restart it, and then immediately hold down Command-R until you see the progress bar under the Apple icon.
2. In macOS Recovery, the special boot mode, choose Utilities → Startup Security Utility (or, for older Macs, Utilities → Firmware Password Utility).
3. Click Turn Off Firmware Password.
4. When prompted, enter the firmware password. If you purchase the Mac or plan to purchase it, the seller must provide it.

There's no way on your own to bypass or reset it (an exception is below).

5. Quit the utility.
6. Then choose *Apple menu* → Restart.

Apple can reset the firmware password in person at an Apple Store or a store that's

an authorized service provider. However, the company has always required proof of purchase by the original owner and then proof of identity for the person with that receipt (digital or paper). As far as I can tell, if you're a secondary or later buyer, Apple or third-party personnel will not unlock the firmware. ■

## Ask Mac 911

We've compiled a list of the most commonly asked questions we get, and the answers to them: [fave.co/3KGVl8K](https://fave.co/3KGVl8K) to see if you're covered. If not, we're always looking for new problems to solve! Email us at [mac911@macworld.com](mailto:mac911@macworld.com) including screen captures as appropriate.

*Mac 911* can't provide direct email responses or answers for every question and we don't provide direct troubleshooting advice. For that, turn to AppleCare, an Apple Store Genius Bar, or the Apple Support Communities.

**Macworld**

# Macworld

