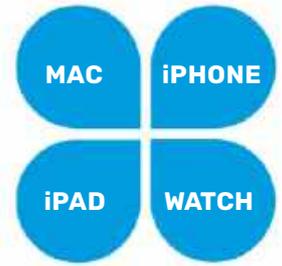


Mac | Life



DECEMBER 2023 NO.213

macOS Sonoma

YOUR FREE MAC UPGRADE

✓ Interactive widgets ✓ Smart video calling ✓ Custom Safari profiles



New M3 iMac & MacBook Pro revealed!



ISSUE 213

Tips to get the most out of iPadOS 17



Get more drive space with this cleanup hack

New iPhone 15 & Apple Watch Ultra 2 on test



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LAST MINUTE MACS



JUST AS I was putting this issue of *Mac|Life* to bed, satisfied with the way it was looking, at the last minute Apple goes ahead and announces new products due to be launched just a day later. Interestingly, back when we were a print-first title, this would have been a non-issue. Even if my publisher would have allowed me an extension on my deadline, the news would have still been massively out of date by the time it hit the shelves, compared with news sites online, that is. But now that we're a digital-only title, things are a little bit easier. Getting an extension is straightforward, as there is no valuable

print slot to carefully manage, and it means that when *Mac|Life* does go on sale just a week later after it's been put to bed, the content is much more timely. Naturally, we're never going to trouble online news outlets which are able to get the content out there within minutes of it being announced, but then again they're never going to trouble the high-quality, carefully curated nature of magazines. So there. Plus, I figure that a decent number of people reading magazines are a little more relaxed about what's going on in life, and probably aren't desperate to have the latest Apple news instantly beamed to their iPhones.

Going back to that last-minute event from Apple, then. Not surprisingly, given the details had already been leaked by Apple insider Mark Gurman, a new, "scary fast" M3 chip was revealed, in various guises, and along with it an updated MacBook Pro (14- and 16-inch), and (finally!) an updated iMac (24-inch). We still don't know exactly why Apple skipped the iMac with the M2 chip, though. The new Macs are available now, and you can find out more about them in our Start section on page 4.

On another note, a few weeks ago we combined forces with our sister title *iMore* for our newsletter updates. If you're already subscribed, this means you'll get the weekly *iMore* newsletter sent to your inbox, plus a bi-monthly one from yours truly. If you're not yet subscribed, head to page 79 to do so. Scan the QR code to be taken to the sign up page. It's worth it! ■

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THE TEAM



Andrew Cottle
Art Editor

Andrew is intrigued to read how Apple is facing climate challenges, and happy that it's determined to advance in an ecologically sounder way (p6).



Rachel Terzian
Production Editor

Rachel is having fun in iOS 17 creating Stickers from photos, then sticking them to other photos to create "artistic" (in her view, anyway) collages.



Carrie Marshall
Contributor

Not yet tempted by a new Apple Watch? Carrie's guide to all the new features in the latest watchOS 10 might just change your mind (p61).

START

THE LATEST NEWS FROM THE WORLD OF APPLE

New Macs with M3 chips

Next-gen Apple silicon arrives in laptops and iMac

BY ALEX SUMMERSBY



APPLE HAS INTRODUCED a new MacBook Pro lineup, plus a new 24-inch iMac, all powered by a new generation of Apple silicon.

Apple says the 14-inch MacBook Pro with M3 chip is up to 60% faster than the 13-inch model with M1, and it now starts at \$1,599 — \$400 less than before. The 16-inch MacBook Pro with M3 Pro and M3 Max still starts at \$2,499. The M3 Max model is up to 11x faster than the fastest Intel-based MacBook Pro, Apple says.

Models with M3 Max support up to 128GB of unified memory, and the range is configurable with up to 8TB of storage. M3 Pro and M3 Max models also now come in Space Black, a new dark aluminum finish.

All MacBook Pro models feature a Liquid Retina XDR display with 1,000 nits sustained and 1,600 nits peak brightness for HDR content. SDR content is now displayed at up to 600 nits, which is 20% brighter than before. All models have a built-in

1080p camera, and an immersive six-speaker sound system. The power efficiency of Apple silicon means that, unlike PC laptops, the MacBook Pro lineup deliver the same performance whether plugged in or on battery, with up to a huge 22 hours of battery life.

NEW IMAC WITH M3

The new 24-inch iMac with M3 chip starts at \$1,299 and is up to 2x faster than the previous generation with M1, Apple says, and is 4x faster than the

News in brief

A bite of the Apple



> APPLE PENCIL (USB-C)

Apple has added a new Apple Pencil to the range, giving users three to choose from. With “pixel-perfect accuracy,” low latency, and tilt sensitivity, the new Pencil is compatible with all iPad models that have a USB-C port, including iPad Pro, iPad Air, and iPad mini. At \$79, compared to \$129 for the 2nd-gen Apple Pencil, the new USB-C model is more affordable, but it is not pressure-sensitive, does not charge wirelessly, and does not have the 2nd-gen’s double-tap to change tools feature.

> ELGATO PROMPTER

Want to add that professional touch to your recordings, streams, and YouTube videos? Professional teleprompters help you connect with your audience with natural eye contact but typically cost thousands of dollars. The Elgato Prompter is a new \$280 all-in-one device that’s compatible with most cameras, webcams, and iPhones. It connects to your Mac over USB-C and includes a 9-inch monitor that can display any app, file, or browser you choose, so you can read your script while still looking at the viewer.



The new model has faster wireless connectivity, with Wi-Fi 6E, which delivers download speeds up to twice as fast as the previous generation, and Bluetooth 5.3, for connecting to the latest Bluetooth accessories.

MEET THE M3

The M3 family are the first personal computer chips manufactured using the industry-leading 3-nanometer process. This means more transistors can be packed into a smaller space, improving speed and efficiency. M3 has 25 billion transistors — 5 billion more than M2. M3 Pro has 37 billion transistors and an 18-core GPU, while M3 Max has 92 billion transistors, two ProRes engines, and a 40-core GPU that is up to 50% faster than M1 Max.

The CPU performance cores are 30% faster and efficiency cores 50% faster than those in M1, and the Neural Engine 60% faster. Plus, using a new technology called Dynamic Caching, the GPU allocates the use of memory for each task in hardware in real time, serving to dramatically increase GPU performance for the most demanding pro apps and games.

The M3 chips also bring new rendering features such as hardware-accelerated ray tracing and mesh shading to Mac for the first time. Rendering speeds are now up to 2.5x faster than on the M1 family of chips. Plus, a new media engine includes support for AV1 decode, providing more efficient and high-quality video experiences from streaming services.

most powerful 21.5-inch model with Intel chip.

The new iMac has a “best-in-class” 1080p FaceTime camera, studio-quality mics, and six-speaker sound system with support for Spatial Audio. The 24-inch 4.5K Retina display has 11.3 million pixels, P3 wide color gamut, and 500 nits brightness. The M3 chip inside has an 8-core CPU, up to a 10-core GPU, and support for up to 24GB of unified memory.

MacLife

INVESTIGATES

Apple's green credentials

Apple likes to emphasize the work it does to protect the environment, but how robust are its green credentials? **BY CHARLOTTE HENRY**

It's October 2020, and while almost all of us are dealing with some form of lockdown or COVID-19 restriction, Lisa Jackson is on the roof of Apple Park. It is that year's crucial iPhone keynote address, and Apple's vice president of environment, policy and social initiatives is explaining how, by 2030, "we plan to have Net Zero climate impact across our entire business." She points out previous environmental progress the firm has made and announces new developments, for instance that the magnets in the iPhone 12 use 100% recycled rare earth elements. Oh, and EarPods headphones and power adapters are no longer going to be included in the box with a new iPhone, helping to reduce packaging, materials required, and carbon emissions. Apple had long talked about its environmental concerns, but for many that was the moment the commitment became clear. The company was literally shouting about it from the rooftops!

Jackson's appointment to her role is an important element in the story. She joined Apple in 2013, having previously served as administrator of the US Environmental Protection Agency (EPA) under president Barack Obama. She reports directly to CEO Tim Cook, underlining the value he puts on her work. Indeed, he announced the hire himself at the AllThingsD conference in May 2013. Part of the conversation focused on Apple's environmental initiatives, and he used the opportunity to tell the audience: "Lisa Jackson is joining Apple. Lisa was running the EPA for the last four years. She's going to be coordinating a lot of this activity across the company."

He added that Jackson, a trained chemical engineer, would "fit right in with our culture." Arguably, she has not just fitted into company culture but helped shaped it. Jackson now regularly speaks during Apple keynote events, explaining the latest environmental steps being taken in Cupertino and beyond.



As said, those goals all lead to Apple being Net Zero by the end of the decade. This is not just about what happens at company HQ or even its factories. The intention is that Apple will be carbon neutral across its business, supply chain and product life cycle. It is a huge undertaking requiring the involvement of numerous third parties.

SUSTAINABLE STEPS

Cut to September 2023. Octavia Spencer is in the Apple boardroom. The Oscar-winning actor and star of the Apple TV+ series *Truth Be Told* is playing Mother Nature. She is demanding an update on environmental initiatives from top Apple execs. Cook is there, as is



Jackson, helping to emphasize how important this all is to their firm. Among other things, Mother Nature is told that all plastic will be gone from Apple packaging by the end of the year, about the use of recyclable aluminum in various products, and that all Apple offices, stores and data centers run on clean electricity. The skit goes on for over five minutes. It's a bit cheesy, but it allows Apple to reiterate once again its dedication to being green.

Away from keynote addresses, the company releases an Environmental Progress report every year. Its 2022 report boasted: "In fiscal year 2021,

our environmental initiatives avoided over 23 million metric tons of emissions across all scopes, and we reduced our carbon footprint by 40% compared with fiscal year 2015. Efforts and initiatives that we've been growing for years made this possible — like sourcing 100% renewable electricity for our facilities, transitioning suppliers to clean energy, and using low-carbon materials in products."

Looking at the supply chain, the document said that 213 suppliers had "committed to renewable electricity for Apple production". It is a

somewhat vague statement, but it nonetheless highlights the considerable power and influence Apple has over other firms. Apple is in control of not just its own environmental practices, but those of other companies who don't want their (lack of) green credentials to mean that a lucrative deal with Cupertino comes to an end.

Many of us trade in our old Apple kit when we want a new one. It helps reduce the cost. But what happens to those discarded devices? Well, they get to meet Daisy. Introduced in 2018, Daisy is a robot that can dismantle iPhones. Up 1.2 million of them a year, in fact. The valuable materials are then recycled. In that 2022 report, 



>>> Start

Apple's recycling robot Daisy [left] disassembles iPhone devices to enable recovery of its valuable materials, whereas the Taz machine [below] recycles modules containing rare earth magnets.



Apple announced that it was utilizing certified recycled gold. Furthermore, it said it was using more than twice the amount of recycled tungsten, rare earth elements and cobalt as it had previously. This all meant that in 2021, 20% of all material used in its products contained recycled material.

Lately, Apple has also removed leather from its own line of iPhone cases in a further bid to reduce carbon emissions, replacing them with the FineWoven range. (The Apple Store description also points out that the cases are made from “68% post-consumer recycled content”.) There are also FineWoven Apple Watch straps. However, there are still leather iPhone cases and Apple Watch straps

available from third parties; Apple can't control everything.

NOT EASY BEING GREEN

In general, then, things are positive. Apple is making serious progress in its goals to make itself and those it works with greener. But is it that simple? Is Apple, a worldwide tech giant that hovers around a market cap of \$3 trillion, all that bothered about the environment? Doesn't it just want to make more gadgets so that we all buy more gadgets, and the company makes more money? Ultimately, isn't this merely a PR exercise? Isn't it... greenwashing?

The University of Pennsylvania Center for Science, Sustainability and

the Media were certainly unimpressed by the “Mother Nature” video.

Academics Joseph Romm and Auden Schendler, in an article originally for The Messenger but republished by the institution, said that the clip “represents monumental greenwashing. Worse, the company's dubious carbon-neutral claims may even set the company up for a potential lawsuit. And Apple is not alone: rival Microsoft — and many other companies — are playing similar games.”

They noted that the company had declared the latest Apple Watch “its first carbon-neutral products”. However, Apple has decided this means that it has achieved “at least a



Apple assures that by 2030, all its devices will have a net zero climate impact.



The company uses 100% recycled cobalt in the battery of the Watch Series 9 and Ultra 2.



All Apple Watch cases since Series 5 have used 100% recycled aluminum.



Apple also has a goal to be plastic-free in its packaging by 2025.

75% reduction in product emissions for each model”. The remaining 25% is covered by “high-quality carbon credits,” but there is growing legal wrangling in this area.

WHAT ABOUT PRODUCT LIFESPAN?

There is also the hotly disputed issue of so-called planned obsolescence — the idea that Apple deliberately designs its products to have a limited lifespan so that customers need to replace them. This would undoubtedly be terrible for the environment and the company’s green credentials, although good for its profits.

Back in 2021, ZDNet writer Adrian Kingsley-Hughes alleged: “Apple is actively working to curtail the lifespan of products by making them unduly hard to repair, charging uneconomical repair prices, and locking out third parties from being able to offer more reasonable repairs.”

Apple categorically denies that planned obsolescence happens. It could point to the improved durability of its products: the iPhone 15 Pro is made from titanium, for instance. It would also likely highlight its increasing (albeit slow) embrace of the right to repair, whereby consumers can fix their own devices instead of having to send them away to specialists or buy new ones. This all leads to a longer lifecycle for devices.

LEADING FROM THE TOP

There can be little doubt that people at the top of Apple really do care about the environment and are legitimately trying to limit the damage done to it by the company they run. In his biography of Tim Cook, author Leander Kahney recalls how the CEO told conservative investors complaining about a potential hit to

APPLE IS MAKING SERIOUS PROGRESS TOWARDS ITS GOALS... BUT IS IT THAT SIMPLE?

the bottom-line from environmental initiatives: “If you want me to do things only for ROI reasons, you should get out of this stock.” A bold statement indeed from a company leader. The book also reports that Cook told Lisa Jackson that he wanted to “leave the world a better place than we found it.”

There is praise in there too from Gary Cook, then a senior figure at environmental charity Greenpeace. He said that “Tim Cook thinks it’s important. He has been quite outspoken on the need for climate change.” He also noted the significance of hiring Jackson.

Cook has without doubt shown more interest in environmental initiatives than his predecessor Steve Jobs ever did. However, his record is not perfect. In that biography, Kahney recalls an incident in 1998 in which Cook appears to have allowed “tens of thousands of unsold Macs” to end up in landfill as a way to reduce the inventory that was on the company’s balance sheet. Not very green...

A BETTER FUTURE?

Overall, it seems fair to say that under Tim Cook, Apple has made genuine progress on reducing the negative impact that the company and its products have on the environment. Hiring individuals like Lisa Jackson, with the credentials she has, undoubtedly demonstrated a serious commitment to the cause.



A new tool in the Home app, Grid Forecast, aims to help users consider their electricity usage.

Yet it is also undeniable that regularly talking about the environment is a good marketing exercise. It boosts the Apple brand in the same way consistently stating its commitment to privacy does. It makes us feel good about buying its products.

We as consumers and fans of Apple have to keep things in perspective. The company is not perfect. That probably is not even possible. But we need to ask ourselves, even if there is some greenwashing going on, would we rather that than the company doing nothing at all?



Apple’s “Mother Nature” sketch served to make consumers aware of the steps the company has been taking towards its environmental targets.

> THE SHIFT

MATT BOLTON is worried that Apple's Neural chips are bringing back software class divisions we'd nearly left behind



ONE OF THE benefits of Apple producing its own chips, and of a general plateauing of Intel chip improvements in Macs even before the Apple switch, over the last few years has been that we didn't get much of a "left behind" syndrome when new OS updates were released. In the days of OS X, it wasn't uncommon for some of the new features of an update to be locked away if your Mac was too old. But we got to a point where that wasn't so much of an issue, and effectively any new feature coming to Mac or iPhone especially would be available on anything the software runs on.

FEATURES BASED ON MACHINE-LEARNING TECHNIQUES REQUIRE APPLE'S NEURAL CHIPS



If I had just bought Apple's most premium headphones, and they didn't get the latest features, I'd be very unhappy.

The "left behind" syndrome didn't totally go away (on iPad, it really reared its head recently with Stage Manager, which only works on specific machines with heftier processors), but for most of us, the fear of our devices being missed off the list of cool upgrades is rare now. But it's growing again in 2023, and it seems to come down to the rise of features based on machine-learning techniques that require Neural chips. There are two obvious examples from this year of new "features" that are all about software, but aren't available on older models because their processors aren't up to it.

The first is the Adaptive Audio features that just arrived on AirPods Pro 2. These create a new kind of Transparency mode that more selectively blends the outside world with what you're hearing, and can automatically switch modes when you talk to someone, so you can hear the response. Evidently, it requires the power of the H2 chip, which is only used in the second-gen AirPods Pro right now. That's a big shame for owners of the first-gen AirPods Pro, but it's even more frustrating for anyone who recently bought AirPods Max — Apple's most expensive and premium headphones, still on sale right now, and lacking support for these latest features.

The second is the new "double tap" gesture introduced on the Apple Watch Series 9, which is



The new "double tap" gesture would be a great upgrade for existing Apple Watch users, but it's on Series 9 only.

detected using heart and motion sensors that are the same as on Apple Watch Series 8 (and 7), but seem to need the new Neural chip to accurately interpret them... even though a version of this feature has been available on Apple Watch for a while, among the Accessibility options. And while we're talking about Apple Watch, let's also mention the new on-device Siri speech understanding, which again is available on the new model solely because of its Neural comprehension power.

All of these are very useful features. Neither requires new dedicated hardware such as sensors or mics to make them happen — it's about the speed to run them to Apple's satisfaction. We're entering a world of very interesting software possibilities with the rise of machine-learning tools and the hardware to run them in every device, but I don't love that it's bringing back a two-tier system of software, with divisions even between devices being sold today.

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

LETTER OF THE MONTH

I am looking for a “packing” list rather than a To-Do app. The Palm PDA had an app that had three views: the total list of items to consider, the list (view) of checked items, and a list of unchecked items. This list could be reset to uncheck the (checked) items so that the list could be used to repeat the actions needed. The reusable list was a simple listing of items (actions, for example), was easy to use while packing, and was easy to maintain.

Most To-Do lists are intended to be a reminder of some to-do action. Once completed, the To-Do app wants to delete the checked item or to file the item out of sight. The list is not instantly reusable.

Do you have any suggestions on an app that is similar to the Palm PDA reusable list?
CHARLES JENNINGS

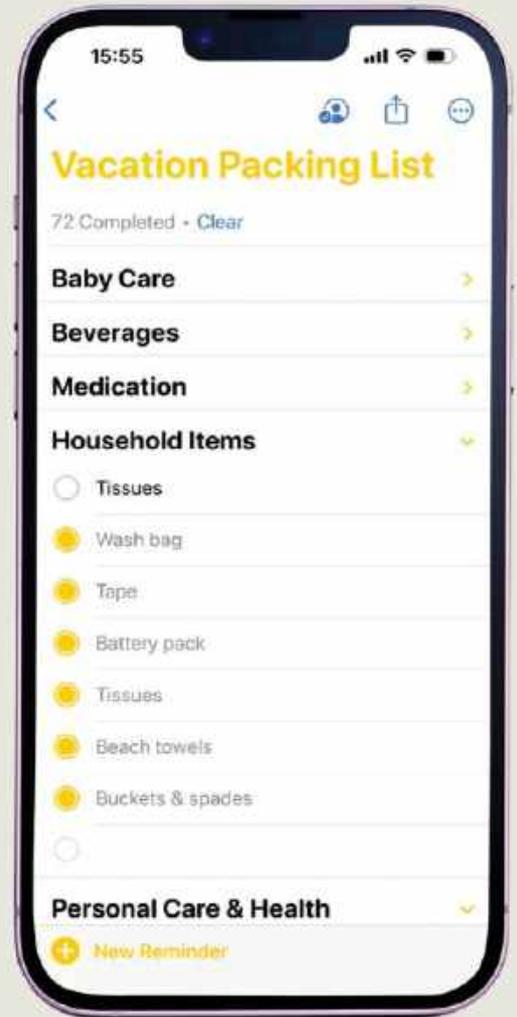
Charles — we’ve not featured a packing list-type app for some while now, but fear not: we’ve got a

very good alternative to suggest, and best of all it’s completely free. The Reminders app already on your iPhone is a great alternative to apps that are purpose built for such a task. And as far as we’re aware, it can do everything you need it to.

By creating a list in Reminders, you can add items to it which can then be checked off, and most importantly recovered at a later date to re-use the list. The app will allow you to display checked and unchecked items, and will also show the number of items that you’ve completed (though for some reason it doesn’t show you the total number of items remaining).

You can also create sections in order to group similar items together, such as food or clothing. Plus, you can share lists with other people you know, enabling two or more people to collaborate on a packing list — very useful for couples or families.

If you know of a better way to create a packing list, then do get in touch with us.



Staying alive

In the August issue the article on reviving old Macs was great! I have been a fan of keeping them going since my first PowerBook. I just got a 2012 MacBook Pro to run Ventura, no problem with OpenCore! It seems to be running great, and I’ve already tested it with Zoom. Now I have to decide if I want to try Linux Mint on the 2010 MacBook I still have...

JEFF KIDMAN

Ah, there’s nothing better than keeping an older

machine running — especially when there’s nothing wrong with it, apart from the hardware being a little out of date. About six years back we were still running the MacBook Pro (Retina, 13-inch, Late 2012) in the MacLife offices, and it was a thing of beauty; never had any issues. It was the perfect size for throwing in a bag too. We’re now on the MacBook Pro (16-inch, 2019) which is a bit of a beast by comparison and often chugs under the load of many publishing applications.

We’ve no doubt we’ll be moving to Apple silicon soon enough, which should see an improvement in speed and cooling.

Easy printing

In response to the letter from Mike Kennedy in the October issue (MacLife #211), yes there is a way to print — I selected, copied and pasted the question and your response in the app to this email, just to show it could easily be done. I could have pasted this text into Pages or Word to size and print. The only negative to this

way is that it only works with text — embedded pictures and graphics don’t come along in the process.

LEN CARMICHAEL

Thanks Lee, that’s a good bit of advice. Copying and pasting text works easy with that way, if a little on the laborious side (and as you say it only works with plain text, but not with images or page layouts). The method we suggested is pretty quick when you consider you get the whole magazine page to print.

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MacLife

SONOMA SUPERGUIDE

What exciting new features does the latest release of the Mac's operating system have in store for us? It's time to take a look at macOS 14: Sonoma

WRITTEN BY IAN OSBORNE

ONCE AGAIN, A new version of the Mac's operating system, macOS, arrived in the fall packed with useful new features and enhanced capabilities.

For the last decade, Apple has named each new version of macOS after a Californian landmark, and this year's release – macOS 14 – is no exception. macOS Sonoma takes its name from a city in the North Bay region of San Francisco Bay. Wes Craven's *Scream* was partly filmed there, but the new version of macOS is certainly no horror story.

Sonoma takes a fresh look at screen savers and adds widgets to the desktop. New video conferencing features let you place your own image on top of your presentation, and Game Mode enables your games to run better by giving priority to the CPU and GPU. In Safari, you can divide your browsing between Profiles, and save out web pages as Dock applications. In Reminders, your tasks can be displayed as a kanban board and you can share AirTags and accessories with up to five other people in Find My. It's all in the amazing macOS Sonoma.

macOS Sonoma works with...

As you'd expect, macOS Sonoma drops support for some older Macs. If you're running macOS Ventura on a 2017 MacBook Pro, a 2017 iMac or a 2017 12-inch MacBook, you can't upgrade to Sonoma. Unfortunately, some features in Sonoma are for Apple silicon Macs

only, and cannot be used on Intel Macs running Sonoma. These include Presenter Overlay, the abbreviated wake word "Siri" (instead of "Hey Siri"), and Game Mode. To run macOS Sonoma, your Mac must meet the following system requirements...

Desktop Macs

- ✓ iMac: 2019 and later
- ✓ iMac Pro: 2017
- ✓ Mac Pro: 2019 and later
- ✓ Mac Studio: 2022 and later
- ✓ Mac mini: 2018 and later

Notebook Macs

- ✓ MacBook Air: 2018 and later
- ✓ MacBook Pro: 2018 and later







In macOS Sonoma, widgets can be taken out of the Notification Center and placed on the desktop. When you're doing something else on your Mac, they fade into the background to avoid distractions.

Desktop & screen savers

Beautiful landscapes look amazing on a Mac's Retina screen



THE WAY YOUR Mac uses widgets has had a very welcome overhaul. In previous versions of macOS, you had to open the Notification Center by clicking on the time and date in the menu bar. In macOS Sonoma, you can drag them out of the Notification Center and place them

anywhere on the desktop. You can then review the information they offer at a glance. So they don't distract, when you open an app on your Mac, the widgets blend into the background, intelligently lifting color from the wallpaper behind them. It's easy to get back to the widgets. All you have to do is click on the desktop, and application and

Finder windows are then pushed to the edges of the screen, just like they are when you do a four-finger spread gesture on a trackpad. Your widgets are then easy to see. Naturally, clicking on a widget (whether it's diminished or not) opens its parent app. And thanks to Continuity, widgets from your iPhone are also available on your Mac.



Apple's new screen savers feature slow-motion video scenes from around the world. Here we see Sonoma, California.

Screen savers & wallpapers

macOS Sonoma features some gorgeous slow-motion video screen savers of places around the world. Look out for the Hong Kong skyline, Monument Valley's sandstone buttes and, of course, the hills and valleys of Sonoma, the Californian territory that gave the operating system its name.

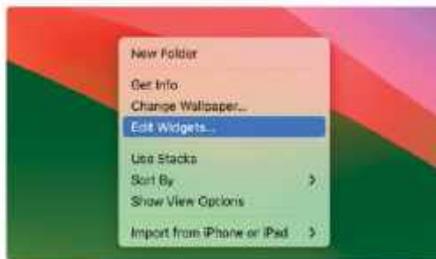
When you wake your Mac ready to unlock it with your password or biometrics, the time and account photo stay out of the way so they don't detract from the screen saver. After logging in, the screen saver stops moving and becomes your desktop image. They look great, and give your Mac an all-in-one aesthetic.

HOW TO Add widgets to your desktop



1 Choose a widget

To add widgets to your desktop from the Notification Center, click the time and date display in the menu bar to open it, then simply drag a widget onto the desktop. You can drag it back again too if you change your mind.



2 Check out the gallery

Alternatively, you can Ctrl-click on the desktop and, from the contextual menu, select Edit Widgets. A Widget Gallery appears, from which you can add widgets to your desktop, or to the Notification Center if you prefer.



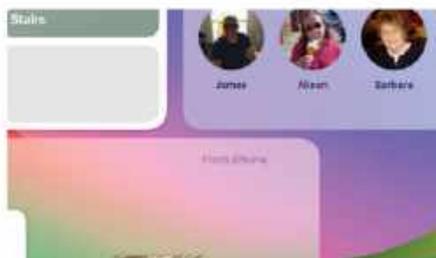
3 Organize widgets

Drag widgets from the Widget Gallery to the desktop, and place them where you like. To drag a widget into the Notification Center, click the time and date display to open it (everything moves to accommodate it) then drag it in.



4 Use and interact

You can drag widgets around the desktop, and click on one to open its parent app. Here we clicked on Clock. Widgets are interactive, so you can use them to operate their parent apps without having to open them.



5 Access from iPhone

Thanks to Continuity, you also have access to widgets from your iPhone in macOS Sonoma. Just make sure your phone is nearby or on the same network. Like all widgets, choose a size that's best suited to your needs.



6 Deleting widgets

You can drag widgets around the desktop – just click on one and drag it into a new space. To delete a widget, open the Widget Gallery and click on the “–” sign in its top-left corner to remove it. You can always add it again later.

HOW TO Do more with screen savers



1 Choose a screen saver

In the Apple menu (top-left corner of desktop), select System Settings. In the left-hand sidebar, choose Screen Saver. Scroll the right-hand window up and down to see what screen saver options are available on your Mac.



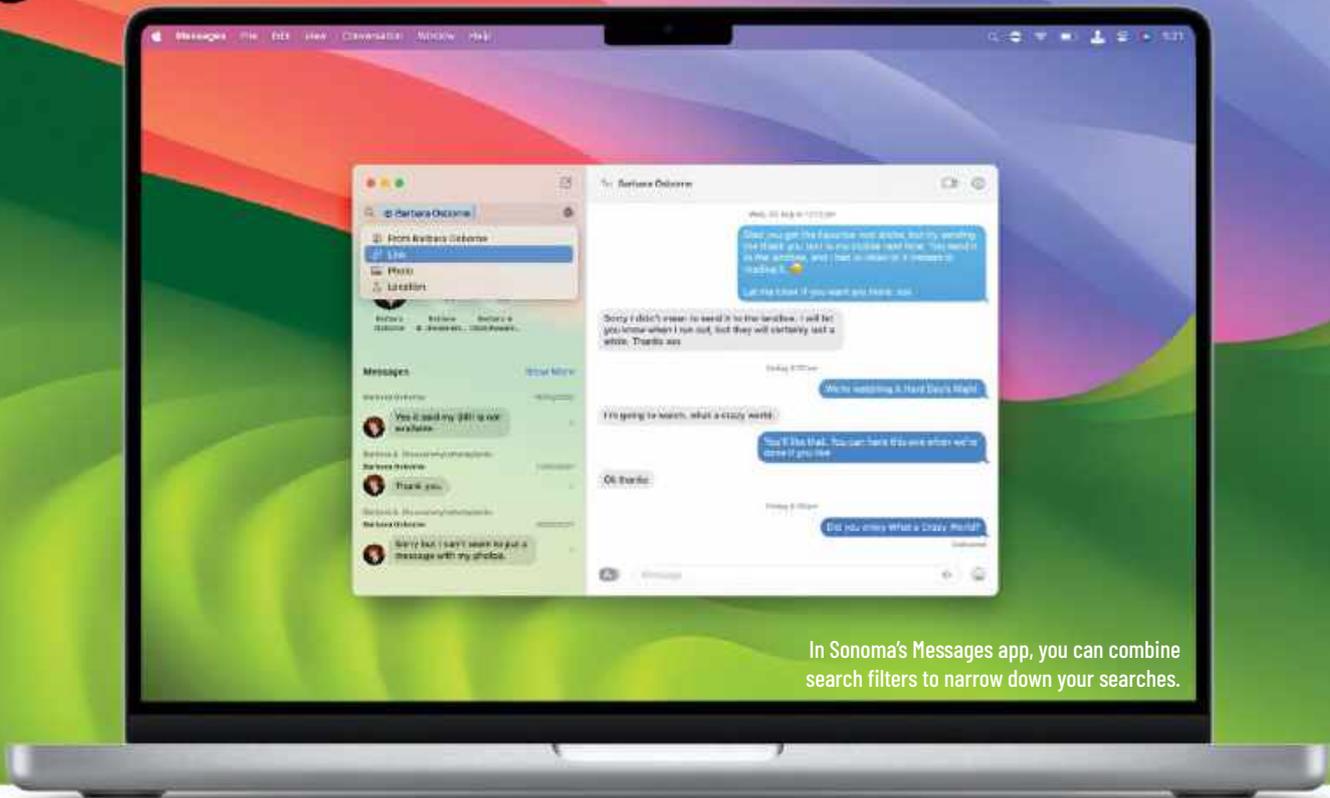
2 Slow-mo videos

Slow-mo video screen savers include landscapes, cityscapes, underwater scenes and images of the Earth. Click on one to choose it. Choose one, and if it doesn't download automatically, click the Download button.



3 Set as wallpaper

To use the screen saver as a desktop wallpaper, click the switch. If you want to change your wallpaper to something other than the new screen savers, in System Settings, click on Wallpaper in the sidebar.



In Sonoma's Messages app, you can combine search filters to narrow down your searches.

Messages

The Mac's messaging app gets a few new features

Stickers

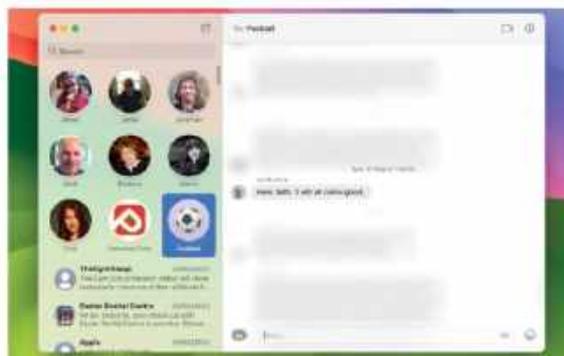
The application drawer has been tidied up, with all stickers found in one window. Click the "A" icon to the left of the text input field for a menu of things you can add to a message. Select Stickers for a pop-up sticker picker. This has three tabs: the clock face tab shows recently used stickers; the middle tab depicting a peeling sticker shows all your stickers, including those made on your Apple mobile devices; and the last tab is Memoji stickers.



You'll find stickers are much more accessible in macOS Sonoma.



IN SONOMA, THE Messages app is now easier to search. In common with iOS and iPadOS 17's Messages apps, you can use search filters to narrow down your results and zoom in on what you're looking for. After typing a search term, you can then add additional terms. Search filters can be names, files, locations, web addresses and more. When you begin to type a name, for example, completion suggestions are offered in a menu. Choose one, and it becomes a search filter. Choose Link, Location or Photo from the menu that follows, and you can search for pictures,



Swipe a message to the right, and you can reply to it directly, as long as it was sent as an iMessage.



Audio messages are now transcribed and offered in text so you can read it as well as play it.

web addresses or places associated with that Messages chat.

If you've not checked a group chat for a while, an up-pointing chevron icon in the top right lets you zoom to the oldest message you've not read. In group or individual chats, you can reply to an individual message in the conversation by two-fingered swiping it to the right, though this only works with iMessages, sent through Apple. Incoming audio messages are now transcribed too. You can still click the Play icon to listen to them, but their content is also offered as text.

Video conferencing

macOS Sonoma brings us some great new ways to present remotely



SINCE THE PANDEMIC and resultant lockdown, video chat has become more widely used on all platforms. To make video communication even better, macOS Sonoma brings Presenter Overlay to Apple silicon Macs, a new feature that can be used with any video conferencing app, not just FaceTime. If you're sharing content such as

your desktop or a slideshow, you can use Presenter Overlay to impose your image on top of whatever it is you're showing, so the people you're presenting to get to see you as well as your presentation. This is especially useful for business chats.

For more casual video conversation, there are Reactions (Apple silicon Macs only). These let you trigger graphical displays

with hand gestures. Make a peace sign and the screen is filled with balloons. Two thumbs up gives a fireworks display, making a heart shape with your fingers throws up lots of heart icons, and more. If hand gestures aren't your thing, these Reactions can be triggered using a menu too.

HOW TO Use Presenter Overlay (Apple silicon Macs only)



1 From the menu

While sharing your screen or a presentation in a video conference, click on the icon showing a screen and a silhouette in the menu bar. You see this menu. As you can see, Presenter Overlay can be Off, Small or Large.



2 Small presenter overlay

If you select Small in the Presenter Overlay section, you appear in a small bubble that can be dragged around the screen and placed wherever you like. This image is, of course, taken from your own webcam.



3 Large presenter overlay

The Large option in Presenter Overlay gives you a greater prominence. You're to the fore, with your presentation being placed between yourself and the background. Again, this information is supplied by your webcam.



4 How it works

Large Presenter Overlay uses the Neural Engine to take the image from your webcam, separate you from the background, and place your screen in between the two, with your picture in front of your content.



5 Walk, talk and move

The webcam continues to pick up your movement, enabling you to move around in front of your presentation, while the background remains behind it all. Naturally, you can talk to your viewers too, as usual.



6 Making reactions

You can use Reactions in a video chat, either choosing from the menu as shown, or by giving a gesture. You can use these new effects with a large range of video chat apps, such as FaceTime, Zoom, Teams, Webex and more.

Safari

Do more with the Mac's web browser



NO NEW VERSION of macOS would be complete without some new Safari features and improvements, and of course Sonoma is no exception. According to Apple, in macOS Sonoma, Safari is the world's fastest web browser.

Private Browsing gets a significant update in Sonoma, helping you keep your web surfing even more private when needs must. You'll now find that trackers are automatically blocked, and that Private Browsing windows are helpfully locked when you're not using them.



New Safari Profiles let you divide your browsing into categories such as Work, Home and more.

To further streamline your general Safari use, you can use Profiles to separate your browsing into user-defined categories. You can have one for websites associated with work, one for personal browsing, one for a specific hobby or subject you enjoy, and so on. The Profiles feature not only keeps your

bookmarks separate, but also compartmentalizes your cookies, history, extensions, Tab Groups and Favorites, so you can set up each browsing experience as you choose. If you use a site for both work and personal use with separate login accounts, you can sign in to them separately and switch between them quickly.

To use Safari Profiles, open Safari and in its application menu, choose Settings. Click the Profiles tab, and add or remove profiles using the "+" and "-" icons in the bottom-left corner. When set up, you can switch between profiles using a pull-down menu in the browser's toolbar.

Perhaps the most useful update to Safari is the ability to make web apps out of websites. They're saved to the Dock and the Applications folder, and function like regular apps. If you've ever explored a website and wished it was available as an app instead, this feature is for you.

Enhanced Private Browsing

Safari now locks Private Browsing windows when you're not at your Mac, so no one can see what you were looking at. You can lock them manually using Window > Lock All Private Windows, or Cmd+Ctrl+L. Known trackers are blocked from loading, and trackers that are added to web addresses as you browse are automatically removed.



You can lock Safari's Private Browsing windows.

HOW TO Make web apps from websites



1 First steps
To start, launch Safari and open the page you want to turn into a fully functioning web app. In Safari's File menu, select the option titled "Add to Dock" as shown above – you will find it towards the bottom of the menu.



2 Name the app
A window appears in the middle of the screen. Edit the name of the website (which will be the name of the web app) and its web address if you wish. Choose something short for the name. When you're ready, click the Add button.



3 In the Dock
Close the Safari browser window. Your web app can now be found in the Dock, with your other apps. Simply click on it to open the web app, which now functions independently of Safari, with a simplified set of controls.

Privacy & Security

Help keep yourself and your children safe online



COMMUNICATION SAFETY

IS a useful feature for parents to use for helping prevent their children from seeing

something they shouldn't. It's accessed through Apple menu > System Settings > Screen Time. Click on Communication Safety, and you can turn on the "Check for Sensitive Photos" option for your children's devices. In the Messages app, this feature checks for nudity and provides them with guidance and age-appropriate resources should such a picture be sent to them. It does not give Apple access to these photos.

With Sonoma, Communication Safety



Set up the Communication Safety feature through Screen Time. It's a great parental control feature.

also covers AirDrop, the Photos picker, incoming calls and FaceTime messages, further reducing the chances of your child viewing an inappropriate picture.

Another new feature of Sonoma is Sensitive Content Warning, which helps prevent adult users viewing something they'd rather not see. Covering AirDrop, Messages, incoming calls, incoming Contact Posters and FaceTime video messages, it warns you that the video or picture might be sensitive and asks whether you want to see it. This optional feature can be switched on or off in Apple menu > System Settings > Privacy & Security.



Sensitive Content Warning is a great way of keeping nude and vulgar pictures off your Mac.

Password and Passkey sharing



A new feature in macOS Sonoma lets you share your passwords and

passkeys with a select group of friends. After forming a group, anyone in it can add and edit passwords and passkeys, keeping the resource up to date.

You choose what you share – the group doesn't simply gain access to all your password information – and the group's originator can remove a group member at any time. Sharing is through iCloud Keychain, so it's end-to-end encrypted.



You can share passwords and passkeys with a select group of trusted friends.



4 Edit web app

Click the web app's menu and select Settings, and you can edit the name, web address and icon used for the app, and more. Under the Privacy tab, you can access Privacy & Security Settings and clear the website data.



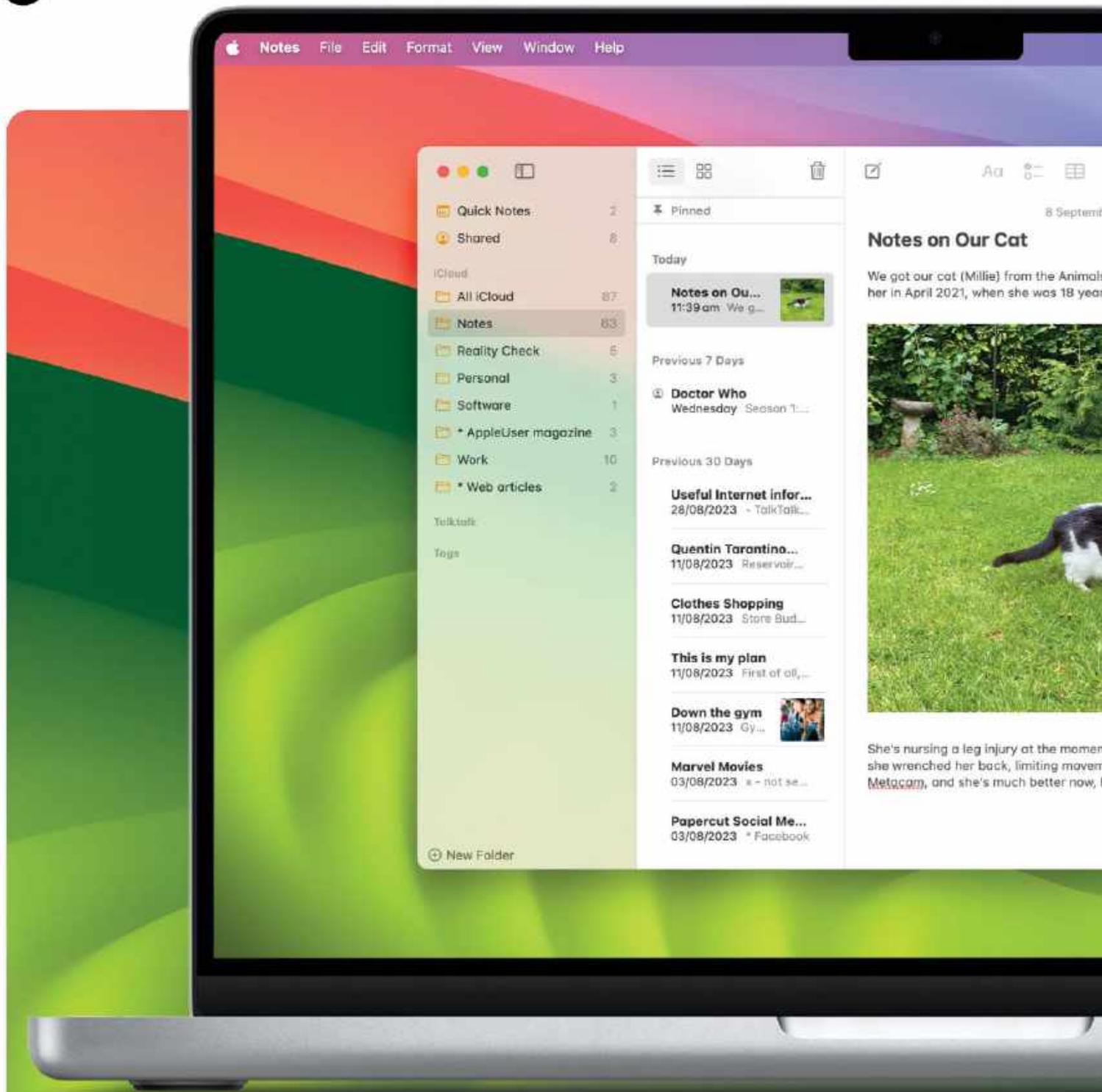
5 Launch the app

You can also find your new web app in the Launchpad (open it from the Dock) and the Users > [Name] > Applications folder. Another way of launching it is to use Spotlight; just open the Spotlight window and type its name.



6 Delete web apps

You can remove a web app from your Dock by Ctrl-clicking on its icon and choosing Options > Keep in Dock. To delete it completely, in Launchpad, drag it onto the Trash, then confirm you want to remove it.



PDFs & Notes

Sonoma provides a boost to handling PDFs with the Notes app



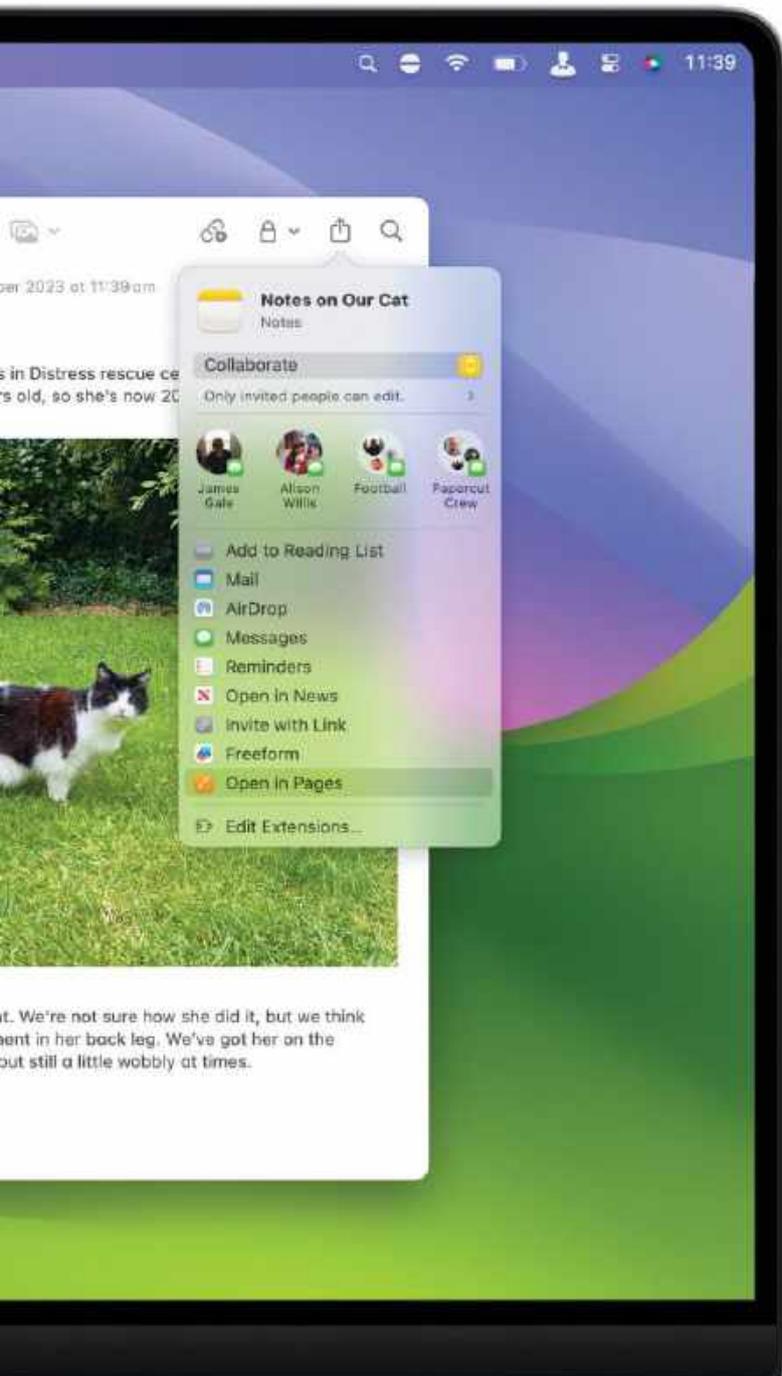
THE PDF (PORTABLE DOCUMENT FORMAT) is a very important type of file, and one that many of us use a lot today. The way we work with PDFs has been enhanced and improved in macOS Sonoma.

Using machine learning, text fields in PDF forms are identified and made available for typing. You can use AutoFill to quickly fill out a form, and simply type into fields where no AutoFill is available.

You can add a signature you have saved in Preview or make a new one, and check

boxes are ticked when you click on them. This works on documents you scan with your iPhone or iPad's camera and open on your Mac, as well as those sent to you as a PDF.

In the Preview app, click the Show Markup Toolbar button for more options.



In Sonoma's Notes app, you can begin to type a note, then move it to the Pages app where you can continue.

Finish in Pages



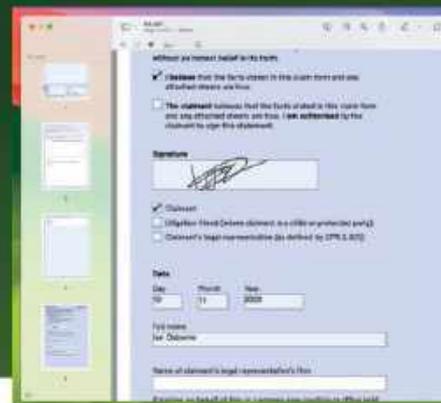
Ever started typing a note in the Notes app, and wished you'd done

it in Pages? In Sonoma, you can turn a note into a Pages document, quickly and easily, and with no copying and pasting required.

In the Notes app's toolbar, click the Share icon. From the Share menu, select Open in Pages and the Pages app is launched, and the note you were working on is turned into a Pages document. Images are carried across as well as text.



...t. We're not sure how she did it, but we think
...ent in her back leg. We've got her on the
...out still a little wobbly at times.



These include a text entry tool, a drawing tool, a redaction tool, a signature button and a new text box.

How the Notes app handles PDFs has also been improved. You can open a PDF stored within a note at full-width view within the Notes app, keep multiple PDFs in the same

note, and with Live Collaboration, changes made to a PDF you're working on with another person are made in real time.

Another improvement to the Notes app is that you can now add inline links from one note to another. With a note open, click on the place in the note where you want the link

In macOS Sonoma, it's much easier to fill in and send a PDF form on your Mac.

to appear, and Ctrl-click. From the menu, select Add Link and you can then type or paste a web address or the title of another of your notes. You can add a name if you wish.

Everything else

There's lots more that's new in macOS Sonoma...



HAVING COVERED THE main new features of macOS Sonoma, let's take a look at what else it offers. For example, if you set up Siri to react to a spoken instruction, on Apple silicon Macs that instruction can now simply be "Siri", not "Hey Siri". A useful change, especially if you've got so into the habit of saying "Hey Siri" that you say "Hey Alexa" when waking an Amazon device.

To change the wake instruction for Apple's personal digital assistant, first open

the System Settings app from the Apple menu in the top-left corner of your screen. In the left-hand sidebar, click on Siri & Spotlight. Then, in the right-hand window, make sure the Ask Siri switch at the top is on. Below this switch is a pull-down menu (the default position of which is "Off") that lets you turn on the wake words, so you can summon Siri with your voice as well as by clicking



In Sonoma, you can wake the digital assistant with "Hey Siri" as before, or just "Siri".

on the Siri icon in the top bar. From this menu, choose "Siri or Hey Siri" if you want either to wake the digital assistant, or "Hey Siri" if you prefer to do things the old way.



By doubling the Bluetooth sampling rate, Game Mode greatly reduces latency when using a PlayStation or Xbox controller.

Game Mode & Porting Toolkit

Often when it comes to video games, the Mac promises much but delivers little. Every new operating system seems to have new features to make the Mac a more attractive platform for games publishers, but the expected take-up never appears. With Sonoma, we have Game Mode to look forward to. This gives your games priority on the CPU and GPU, reducing resources used for background tasks. We're told this dramatically reduces latency with wireless accessories like AirPods and Bluetooth controllers. Game Mode works with any Mac game, so expect titles you currently own to enjoy a boost.

For games developers there's Game Porting Toolkit, which makes it easier to port games from other platforms to the Mac. Evaluating how well a game is likely to run on a Mac is a process that used to take months; with the Game Porting Toolkit, it can be done in days. Converting the game to the Mac platform is easier too, significantly reducing development time.

Yet the game Apple showcased during the keynote was Hideo Kojima's *Death Stranding*, a title that's new to the Mac but has been out on other platforms since 2019. It seems the Mac is destined to lag behind when it comes to new games for some time to come.

Kanban boards in Reminders

A kanban board presents information in columns, and allows you to move individual pieces of data between them. Reminders in Sonoma never uses the term, but its Column View is a kanban board in all but name.

In Reminders, start a new list and in the View menu, choose As Columns. Ctrl-click or two-finger click on the main window, and from the menu, select New Column. You can then add reminders in the usual way, Ctrl-clicking on a reminder and choosing "Move to Column" to move it between columns.



The Reminders app now lets you organize lists in a kanban-like column view.



A better People album – now with pets!



We all love our pets, right? They're part of the family. In macOS Sonoma's Photos app, they're recognized as just that. Launch Photos and make sure View > Show Face Names is enabled. Open

a picture with your pet's face in it, and click the Info icon in the toolbar (the one that looks like a globe with shining stars). If your pet has been circled, simply type his or her name in the space under the ring around their face. If the face isn't

circled, click the plus sign in the info window to produce a circle, drag it over your pet's face, and then add the name. Then, when you close the Photos app and reopen it, in the People & Pets album, you see your furry little friend recognized by name.

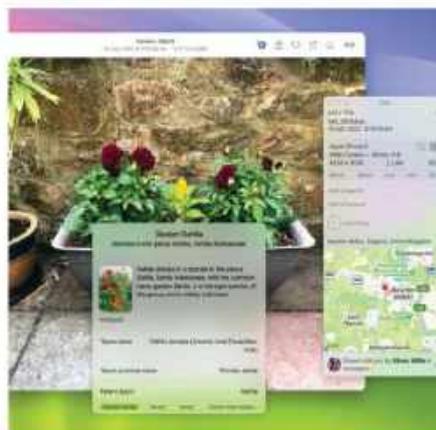
The Mail app



Not much is new for the Mail app in Sonoma, but it does get a couple of fresh and useful features. One-time verification codes received in Mail now auto-fill in Safari, making logins more streamlined. If you're planning a holiday or a business trip, Mail pushes related emails to the top of your search results as the travel date approaches. Finally, if you click on the emoji icon in a new email's toolbar (the smiley face), you can add up to three large emojis in a row. If you add a fourth, or type anything that shares a line with an emoji, they shrink back down to their regular size.



Like the Messages app, Mail now lets you use large emojis in your emails, as long as there are three or fewer.



With the Visual Lookup feature, you can identify plants, animals and even recipes from the Photos app.

Visual Lookup

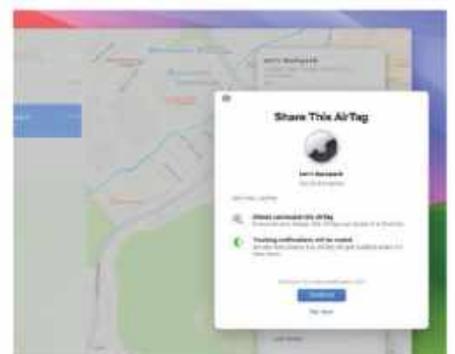


Visual Lookup is awesome, and it's had a revamp. Open a picture of a plant or animal in the Photos app, then click on the Info icon. Click on the icon that appears on the subject, and it's identified. You can also use Visual Lookup on food and have it suggest similar recipes, and it now works with paused videos as well as photos. It's an excellent feature for the curious, or those with an interest in wildlife, gardening, cookery or other such subject that benefits from Apple's Visual Lookup feature.

Find my shared AirTags



Apple's AirTags are great for keeping an eye on your property. Pop one in your backpack, suitcase or wallet, and you can trace its whereabouts using the Mac's Find My app. In macOS Sonoma, as well as locating your AirTag, you can also share that info with up to five people, so not only you but your friends and family can also keep an eye on where it is. Give one to a child, for example, and both parents could find them should they wander off, and you could all keep tabs on communal luggage too.



Share the location of your Apple AirTags with up to five people in macOS Sonoma's Find My app.

New Accessibility options



THE LATEST MAC operating system brings a host of new Accessibility features, with which you can customize your computer to make it easier to use should you have a disability.

For the hard of hearing, devices such as hearing aids that are certified Made for iPhone can now be connected to your Mac for telephone and FaceTime calls, as well as listening to music or videos. If you find speaking a challenge, you can use Live Speech to type what it is you want to say in a call, and have it change the text to speech for you. If you are at risk of losing the use of your voice in the future, you can also use your iPhone or iPad to train Live Speech to sound just like you do now, and then sync

that personal voice with your Mac.

If you have motor disabilities, when dictating and editing text with Voice Control on your Mac, phonic suggestions for alternative words appear. This differs from when you mistype a word, and the Mac bases its suggestions on what it thought you typed.

With Voice Control, the suggestions are based on what it thought you said instead.

Animated images like GIFs can be automatically paused in Messages and Safari, and those with vision impairments



With Sonoma's Accessibility features, you can use an alternative voice in Live Speech, and even train the feature to use your own.

can customize the text size in Mac apps to suit their preference. These features are found by opening System Settings from the Apple menu, and clicking Accessibility in the left-hand sidebar.

AirPods

There are a few new features for Apple's AirPods, assuming you own a set that's recent enough to enjoy them. Updates to Automatic Switching mean moving between your Apple devices with your AirPods is much quicker. This feature is limited to AirPods (2nd and 3rd gen), AirPods Pro (1st and 2nd gen), and AirPods Max. Also, when on a call, you can press the stem of your AirPods to mute and unmute yourself, assuming you have AirPods (3rd gen), AirPods Pro (1st and 2nd gen) or AirPods Max with the latest firmware.



Apple's own earbuds enjoy an update, but the newest features aren't available on the oldest AirPods.



We'll soon be able to create collaborative playlists in the Music app, and work on them with our friends.

Music playlists

A feature that isn't in macOS Sonoma at the time of writing but is due "later this year" is collaborative playlists in the Music app. We've long been able to share playlists with others, but with Sonoma (and indeed iOS/iPadOS 17), we can join forces with a few friends and fully collaborate on one. Anyone in the group can add new tracks to the playlist, delete songs and reorder them in the playlist. You can react to your friends' choices with emoji too. This feature isn't even in the beta yet, but we look forward to seeing it.

Home activity history

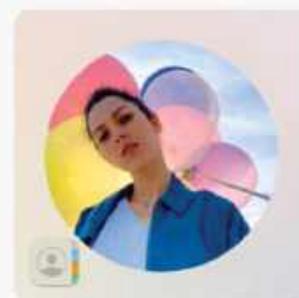


In Sonoma's Home app you can now access more info than before. The app shows who locked or unlocked a door, and when they did it. Recent activity for HomeKit-compatible garage doors, contact sensors and security systems are also logged, and accessible through Home.

To access these new features, you have to upgrade your Home app to the new Apple Home architecture. Open the app, and at the top of the main window is a notification that an upgrade is available. Click Learn More, then Continue. If you missed this notification, click the "..." icon (top right), Select Settings and click Software Update.



Upgrade your connected home to the new Apple Home architecture to use new features in the app.



The Journal app curates information from many other apps on your Mac to combine into your digital scrapbook and diary.

Journal

Later this year, we can all keep our digital jottings and cuttings in one place



A new app coming “later this year” helps you curate your memories, taking information from several different apps and storing them in a digital scrapbook/diary hybrid. Journal is coming to iOS/iPadOS 17 as well as Sonoma, and syncs across all three platforms.

Like a diary, Journal lets you write down your thoughts each day for later review. But using machine learning, it also makes

suggestions of other things to include gleaned from apps such as Photos, Contacts, Maps, Fitness and more. Pictures you took, people you met, places you visited and workouts you did are all suggested, for you to place in your digital journal for the day. It’s up to you what goes in there — you don’t have to accept every suggestion.

Apple is going to release an API that allows developers to include Journal integration into their own applications too,

so you will be able to add information curated from third-party apps as well as Apple’s own.

In typical Apple style, the app is built with privacy in mind. You can lock it when you’re not using it, so if you hand your unlocked phone to someone, they can’t simply launch the app and take a sneaky read. And all processing is done on the device in question, so nothing is sent to Apple’s servers and Apple can’t read your entries.

Other journaling apps

Day One



> Free (IAPs) > dayoneapp.com

This digital diary is built for reminiscing. It’s cross-platform, available on iPhone, Apple Watch, iPad, and Mac, with syncing available if you buy a premium membership. As a free app with a paid-for tier, it’s free to use forever with unlimited text entries. Custom templates make journaling easy.

My Treehole



> Free (IAPs) > Mac App Store

Another diary-meets-scrapbook, this one’s lockable for the sake of your privacy. My Treehole is free, but with in-app purchases for premium content such as more font styles, cloud backup and sync, Night Mode support, and Touch ID/password protection. It’s a gorgeous way to store your innermost thoughts.

Diarily



> Free (IAPs) > diarily.app

The Diarily app is described as a “private daily bullet notepad”. It boasts a minimalistic, uncluttered design that makes it easy to concentrate on your thoughts. An all-in-one journaling solution, it has calendar, map and timeline views and can store images and photographs too.

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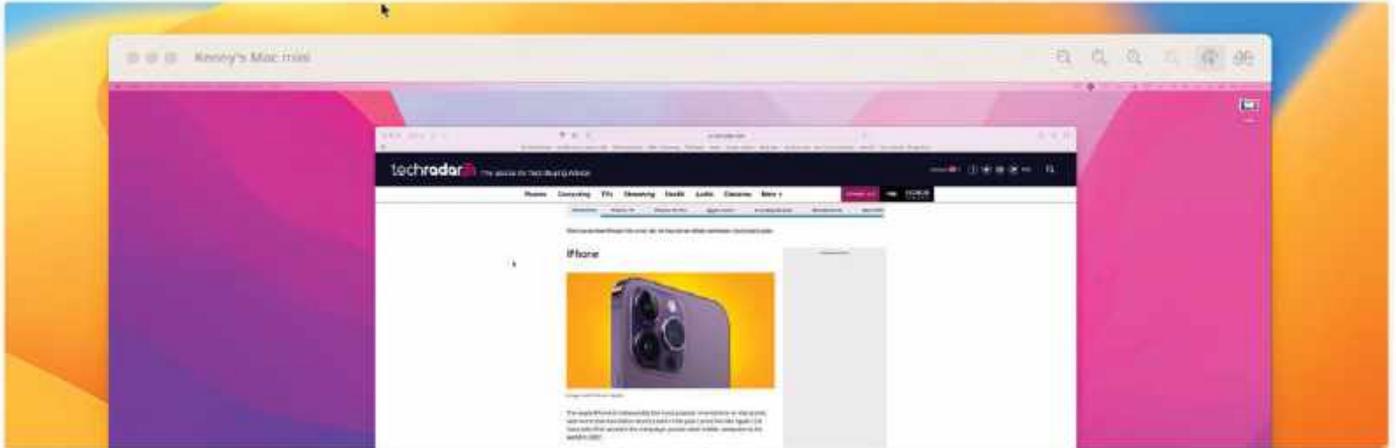
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CREATE

HOW TO DO ANYTHING ON YOUR MAC, IPHONE & IPAD



Master screen sharing

Whether near or far, it's easy to share your Mac's screen with someone else

IT WILL TAKE

30 minutes

YOU WILL LEARN

How to share your Mac's screen

YOU'LL NEED

macOS 12 or later for SharePlay



WHATEVER THE REASON, sharing a screen from one Mac to another is pretty simple, whether you're in the same room or another continent. You don't need third-party software — though there are third-party tools that add more features — and you can

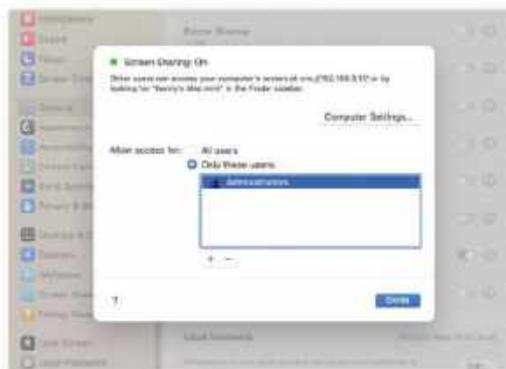
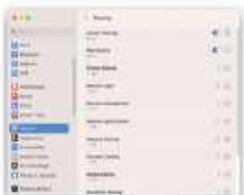
even copy and paste from one Mac to the other. All the tools you need are built right into macOS. Screen sharing has been around for ages, but if you want to share a screen in FaceTime or Messages using SharePlay, you'll need to be running macOS 12 or later.

KENNY HEMPHILL

HOW TO Share your screen

GENIUS TIP

You can't use Screen Sharing and Remote Management at the same time. So, when you enable Screen Sharing, make sure Remote Management is off.



1 Share on a local network

On the Mac whose screen you want to share, go to System Settings > General > Sharing. Turn on Screen Sharing. Click the "i" and take a note of the VNC address. Choose whether to allow access to all or specific users.



2 Allow more access

Click Computer Settings. If you want to access the Mac's screen from a PC or iPad third-party client, click "VNC viewers may...". If you want to allow anyone to request permission to view your screen, enable that.



3 Start sharing
 On the other Mac, open a Finder window, click Network in the sidebar, click the first Mac and choose Share Screen. Alternatively, click the Go menu, choose Connect to Server, and type in the VNC address you noted.



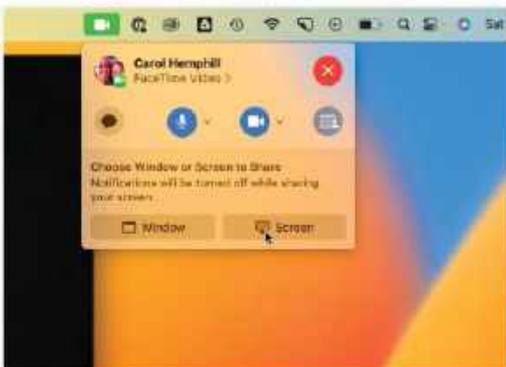
4 Screen share remotely
 On the Mac you want to share to, invoke Spotlight, search for "Screen Sharing" and click it to launch it. In the "Connect to" window that opens, type the Apple ID to which the other Mac is logged in, then click Connect.



5 Allow sharing
 On the Mac whose screen is being shared, click Accept when the request to share the screen appears. Then choose Control My Screen to give the other Mac control, or Observe My Screen to keep control.



6 Manage settings
 If you're sharing a bigger screen to a smaller one, click the Screen Sharing menu, then Settings. Use the Display tab to set how the larger screen will scale and "Scroll the screen" to determine how it will scroll.



7 Share with FaceTime
 In a FaceTime call, click the camera icon in the menu bar. Click the Screen Sharing button. Then, either choose "Share the app window", and click on the app window, or "Share the Whole Screen" and click anywhere.



8 Share with Messages
 In Messages, click on a conversation or send someone a message. Click the "i" and choose Share. Select either "Invite to Share My Screen" or "Ask to Share Screen", depending on which screen you want to share.



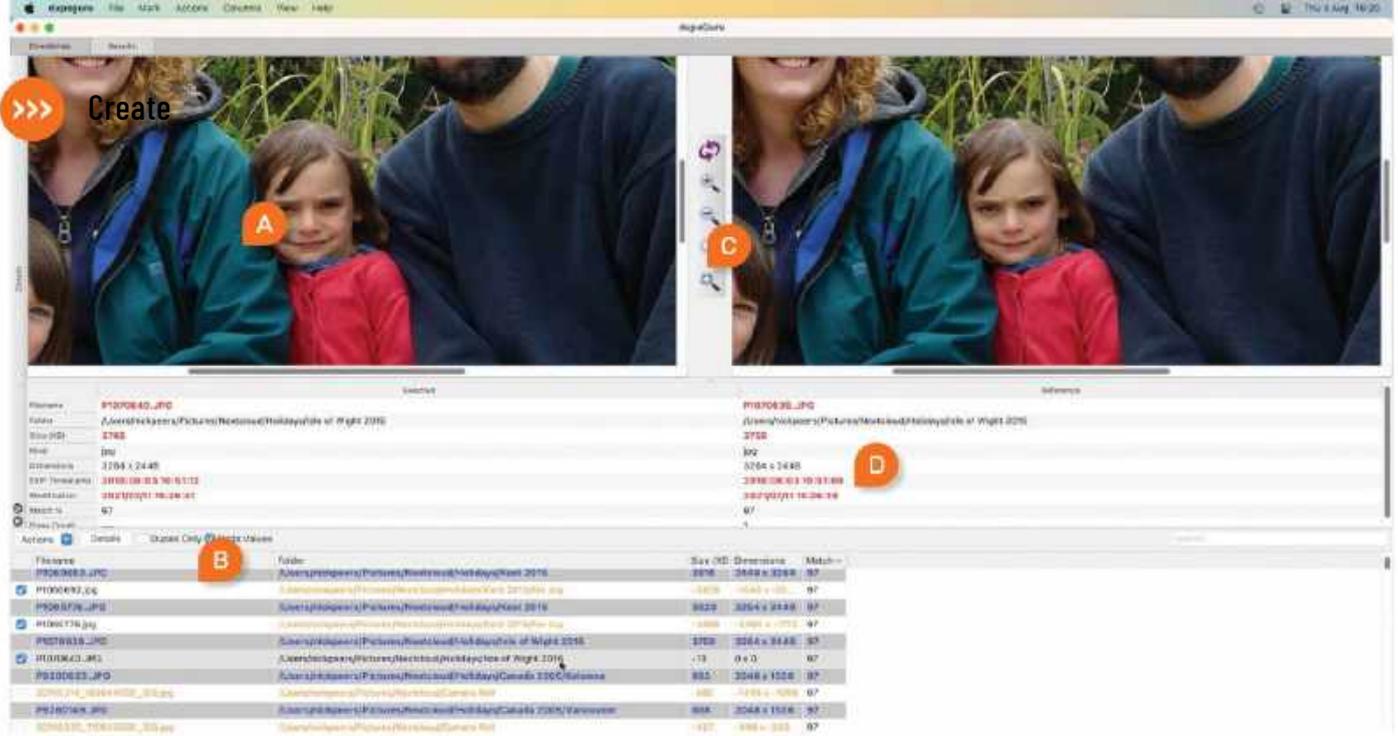
GENIUS TIP

When you share a screen, your viewing options depend on your network connection. Click the View menu in Screen Sharing to see your choices.

JARGON BUSTER

SharePlay is a sharing feature in macOS and iOS that allows you to "watch along" with friends in FaceTime and Messages, and can also be used to share a screen.





A
PREVIEW
dupeGuru enables you to place two photos side by side to check if they're duplicates or to compare differences.

B
DELTA VALUES
Tick this and the file list will highlight the differences between a reference file and potential duplicates.

C
ZOOM CONTROLS
Use these controls to see your two chosen photos up close. This makes it easier to spot any differences.

D
FILE DETAILS
This panel provides a more detailed comparison between your two selected files in terms of attributes.

Regain drive space with dupeGuru

Remove photos, music and other files from your Mac with dupeGuru

REQUIRES
dupeGuru, macOS
10.12 or later

YOU WILL LEARN
How to identify duplicate and similar files, plus delete unwanted copies

IT WILL TAKE
15 minutes

SEARCH MUSIC FILES BY TAG, FROM A CHOICE OF TRACK, ARTIST, ALBUM, TITLE, GENRE AND/OR YEAR

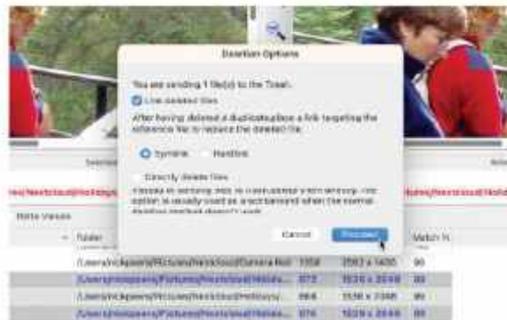


WHEN IT COMES to keeping your drive clean and clutter-free, duplicate files are a huge contributor to wasted space. But thanks to a free tool called dupeGuru (<https://dupeguru.voltaicideas.net>), identifying those files and removing them just got a whole lot easier. The tool doesn't just identify exact duplicates, either — it can also identify any files with the same (or similar) content.

dupeGuru offers three search modes: Standard, Music and Picture. Both the Standard and Music modes can search by

filename and content, while you can also include tags in searches for music files, enabling you to identify tracks stored in different formats, such as MP3 and FLAC. Just pick your mode, scan the type and click Options to refine the search.

You'll also find universal preferences, such as the Filter Hardness slider, which performs "looser" searches to match similar — but not identical — files, as well as options related to the specific type of search you're performing. For example, you can search music files by tag, and choose which ones to include from a choice of track, artist, album, title, genre and/or year.



If an app needs access to any files you're about to delete, create a Symlink so it's redirected to the retained version.

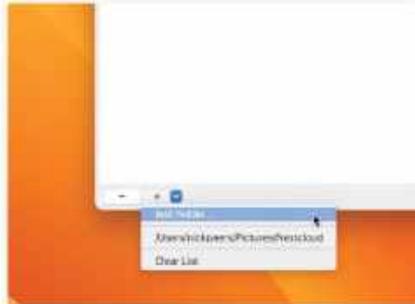
FIND SIMILAR IMAGES

In this tutorial, we're focusing on dupeGuru's ability to bring order to your images. The step-by-step guide opposite reveals everything you need to know about scanning your Mac for photos — both exact duplicates and close matches. This will enable you to compare multiple attempts to capture the perfect shot, ensuring that you only keep the best ones for posterity. Let's take a look. **NICK PEERS**

HOW TO Identify and remove redundant photos



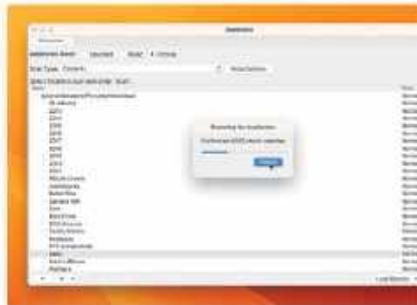
1 Select scan type
 Select Picture under Application Mode and set the Scan Type to Contents. Click More Options to set the Filter Hardness to "95" and tick "Match pictures of different dimensions" to match similar (but not identical) photos.



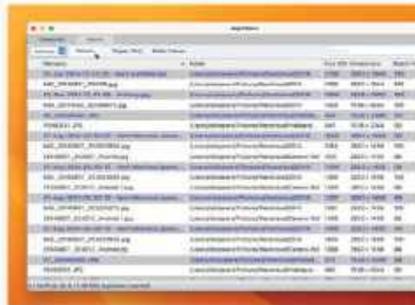
2 Select folder or drive
 Click the "+" button followed by Add Folder to select a drive or specific folder to include in your scan. You can scan a single folder or widen your search by including other drives and/or folders in the scan too.



3 Set reference folder
 If searching for duplicates, you may wish to set a "reference folder" – any photos found inside here will be deemed the original and are left untouched by default. Click Normal next to the folder or subfolder to do so.



4 Scan your drive
 Once you have configured your search parameters, click Scan. A progress bar will then appear – depending on the size of the folder(s) being examined and the speed of the drives, the scan may take some time.



5 Quick review
 Once the scan finishes, a list of files will appear. Files marked in blue are the "reference" file that are protected from being deleted – any files beneath this are considered matches or exact duplicates of that file.



6 Review closely
 dupeGuru has several tools that helps compare your photos and verify if the matches are either exact duplicates or close matches. The annotation (see facing page) reveals how to access them and what each one does.



7 Files to remove
 If you're happy to remove any superfluous photos, place a tick next to them or use the Mark menu to select multiple files at once. If you'd rather keep one of the copies, Ctrl-click it and choose "Make Selected into Reference".



8 Perform cleanup
 Once you've highlighted some files you'd like to remove, click the Actions dropdown menu where you'll see options to delete the selected files to the Recycle bin, or move or copy them over to another drive.



9 Sort many files
 If there are too many results to process in one go, choose File > Save Results to save your scan results as a file. When you next open dupeGuru, select Pictures and click Load Results to carry on where you left off.

AFTER

BEFORE



PART
3 of 3

Add FX to home movies

Add excitement to your films with Adobe Premiere Elements' FX tools

REQUIRES

Adobe Premiere Elements 2023, macOS 11 or later

YOU WILL LEARN

How to distort footage, style color, create composites

IT WILL TAKE

20 minutes



ONE WAY TO make your home movies stand out is with the addition of eye-catching special effects, and Premiere Elements 2023 can make this happen with creative options that will instantly change the look of your footage.

The video effects are grouped into sections in the FX panel. We'll look at Artistic, Distort and Keying here, but there are many more effects to explore. Once you've added an effect, you can also modify its properties as we'll also demonstrate.

We'll run through how to digitally distort your clips to create a surreal dream sequence. You'll also learn how to make a video clip look like a living painting, and even add a zombie to a city street courtesy of a Hollywood-style green-screen key.

However, in order to access these special effects, you'll need to venture out of the comfort zone that is Premiere Elements' Quick and Guided workspaces and head over to the more powerful Expert editing tab. We'll show you how in these steps.

GEORGE CAIRNS

HOW TO Create an animated painting effect



1 Add assets

Click the Expert mode tab, then choose File > Add Media from > Files and folders. Import your clips and drag them into the timeline. Click on the "fx" icon, then click the Video tab. Set the Effect panel's dropdown menu to Artistic.



2 Create effect

Now drag the Mosaic effect onto a clip in the timeline. This applies the effect and opens the Applied Effects viewer. You can also access the Applied Effects viewer by clicking on the "fx" icon that has a pencil by it.



3 Adjust intensity

You can adjust the various properties of an effect in the Applied Effects viewer. As we'll see later, some effects have multiple sliders. The Mosaic effect has a single Intensity slider – drag it right for a more "painted" look.

HOW TO Get creative using digital distortions



1 Lens distortion
As well as changing colors and tones, you can use effects to displace pixels for a more stylized look – great for dream sequences! Go to the Distort collection and drag the Lens Distortion effect onto a clip.



2 Adjust properties
In Applied Effects, drag the Curvature slider to the left to make the edges of the frame curve towards the viewer. By dragging the Vertical Prism FX slider to the left we stretched the subject's hair to the right of the frame.



3 Combine effects
Once you've applied an effect such as Lens Distortion, you can stylize the clip further by adding other effect layers. In our example, we've added in a Lens Flare effect from the Effects panel's Generate category.

HOW TO Produce a green-screen composite



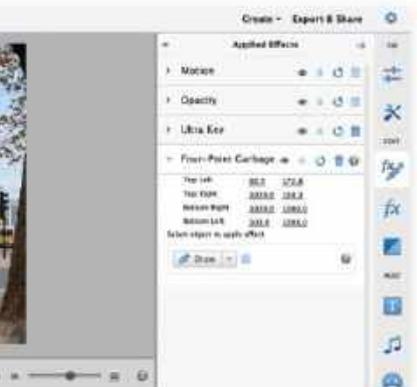
1 Layer parallel clips
To use a green-screen clip, import it, then import a background clip. Drag the background clip onto the Video 1 track in the timeline. Now place the green-screen clip onto Video 2 so it runs parallel to the background clip.



2 Take a sample
Click on the "fx" icon, then go to Keying. Drag the Ultra Key onto the top green-screen clip, and click on the eyedropper tool next to Key Color. Click to sample the green backdrop. The sampled color will turn transparent.



3 Fine-tune key
The green-screen transparency may vary due to shadows. Toggle open Matte Generation, then drag Tolerance to the left to make more of the green transparent. Drag Pedestal to the right to hide remaining pixels.



> GARBAGE MATTE

Hide objects in your green-screen composite

You might not have a large enough green screen to fill the frame. In our example, we can see the curtain rail and part of a studio light at the top of the frame. To make these non-green areas become transparent we need to create a "matte". From the Keying panel, drag a Four-Point Garbage Matte onto the top clip. By increasing the values in the right-hand column of the Top Left and Top Right points, we are able to move the top of the garbage matte downwards so that the curtain rail becomes completely transparent at the top of the frame.



Manage website permissions

Take action so that sites in Safari start behaving the way you need them to

REQUIRES
Safari

YOU WILL LEARN
How to manage Safari's preferences so that websites work the way you want them to

IT WILL TAKE
15 minutes



WEBSITES AREN'T ALWAYS fun. Some insist on auto-playing media. Others bombard you with pop-up surveys. And many will interrupt your reading with adverts. In a lot of cases, websites will do all three (and more), but the good news is you can start to take control of websites by managing preferences in Safari.

Apple's web browser enables you to determine whether you want to be sent notifications, view videos, download content, grant access to various functions of

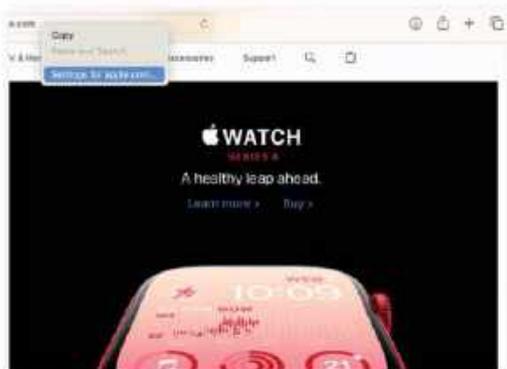
your Mac, and see pop-up windows. For even more control, you can nail a particular preference to every website you visit or create settings on a site-by-site basis. You can also quickly manage all of the changes you make.

Such versatility is complemented by Reader — a quick-fix mode that formats web pages to make them easier to read by handily removing distractions. Reader doesn't offer as many bespoke options as Safari's preferences, however, as you're about to see. **DAVID CROOKES**

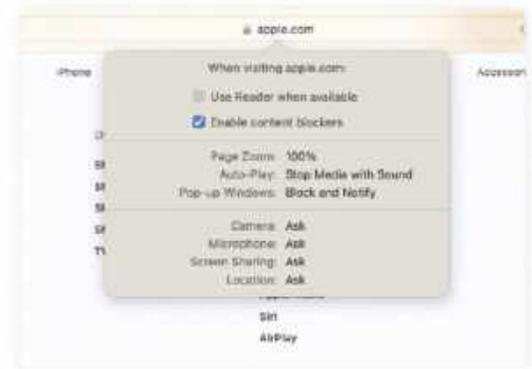
HOW TO Set Safari's preferences

 **GENIUS TIP**

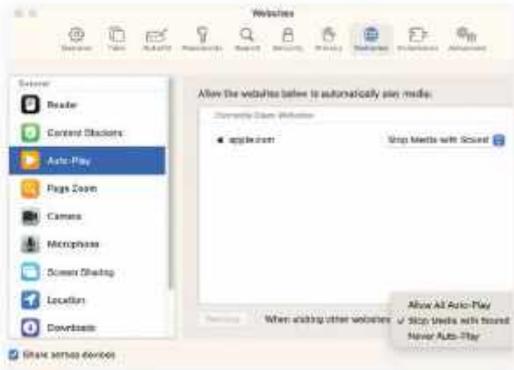
Click Reader in the search field to strip web articles of ads, videos and surveys. Ctrl-click and you can set it to automatically appear on all future visits.



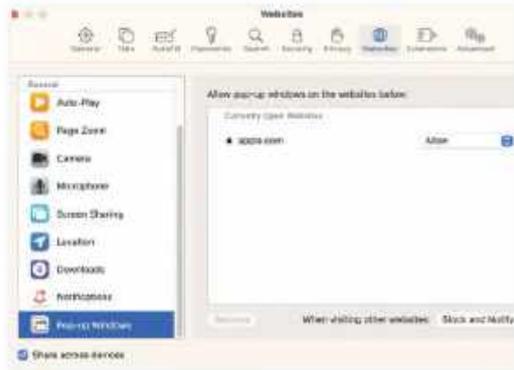
1 Find the settings
There are two ways of managing Safari's Preferences. The first is to Ctrl-click the Smart Search field and click "Settings for [website]". This instantly displays the preferences that only affect the website you're viewing.



2 Stop auto-playing
You could, for example, manage auto-playing media on a website. To do this, click Auto-Play and use the menu to allow or stop the function, or prevent media with sound. Preferences are remembered for future visits.



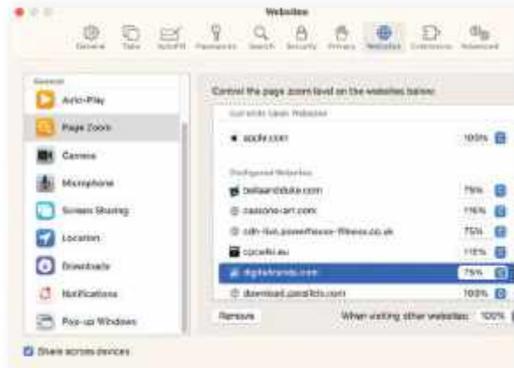
3 Apply to all websites
 The second way to control Safari is handy if you want to apply the setting to all websites. Go to Safari > Settings > Websites, then click Auto-Play and choose the option from the “When visiting other websites” menu.



4 Manage pop-up windows
 The same procedure applies for many other settings and it works both ways. Want to block pop-up windows across all websites yet allow them for a few? Set the main preference to Block and set the individual website to Allow.



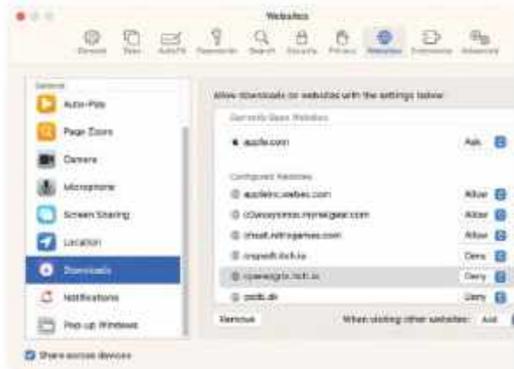
5 Set access options
 Ctrl-clicking the Smart Search Field doesn't offer as many options as steps 3 and 4, but you can set page zooms or determine if a website can access your camera, mic, location and screen, or needs to ask each time.



6 Make quick changes
 Making a quick change is simple. When you configure a website it's added to a list in Settings > Websites. Just click a setting you want to manage or make changes to, or select a website and click Remove.



7 Manage notifications
 Settings > Websites also enables you to manage notifications. If a website has asked for permission to show alerts, click Notifications and you can change the status (Allow/Deny) or uncheck a box to stop all websites from asking.



8 Limit downloads
 Play around and go through all options in the left-hand pane. The Downloads options enable you to Allow or Deny downloads from currently open websites. Click the Content Blockers options to manage ads.



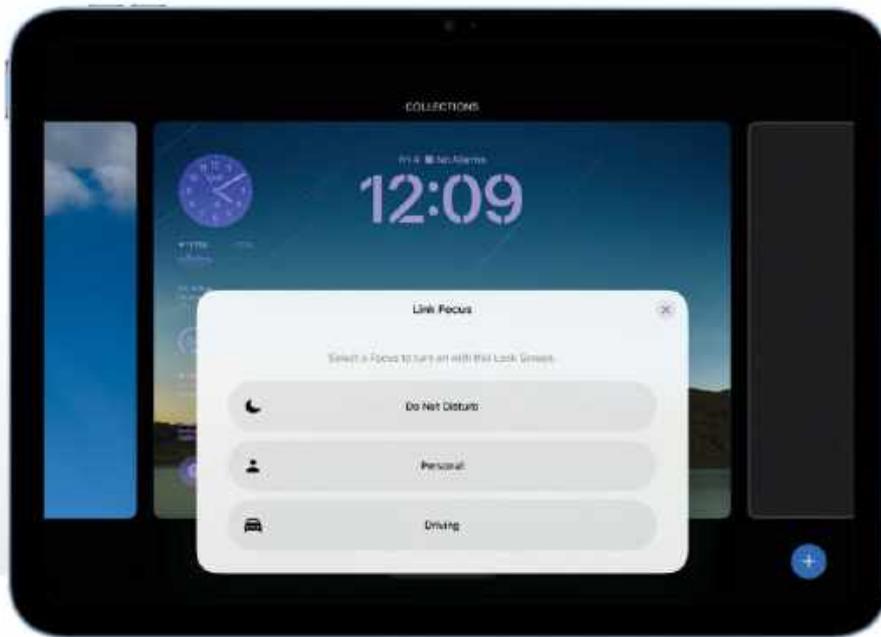
JARGON BUSTER

Content blockers are apps containing rules preventing certain items from appearing on a site. In Safari > Safari Extensions, search “content blocker”.

GENIUS TIP

To apply your website preferences to all the Apple devices you own, go to Safari > Settings > Websites and make sure that “Share across devices” is ticked.





Customize your Lock Screen

Make handy changes to your iPad's Lock Screen with iPadOS 17

REQUIRES
iPadOS 17

YOU WILL LEARN
How to personalize one or more Lock Screens on iPad

IT WILL TAKE
10 minutes



SINCE iOS 16, iPhone users have been able to create multiple Lock Screens featuring a host of widgets drawn from a wide number of first- and third-party apps. You can also take your pick from a selection of suggested wallpapers, alter the way the time is displayed, see helpful information at a glance, and play around with a variety of color schemes. In other words, it allows for greater personalization.

With iPadOS 17 this same functionality is now available on iPad, and there's plenty to

get stuck into. Want a Live Photo as your Lock Screen and see it animate? Well, now you can! Fancy a Lock Screen that reflects the weather in your area? No problem, you got it! You can even select an emoji and replicate it across your display, or create more than one Lock Screen for every occasion you could think of, from work to particular hobbies.

One thing's for sure, Lock Screen creation is heaps of fun and, thanks to the widgets, it's convenient, productive, and customized to your preferences. **DAVID CROOKES**

HOW TO Pick a new wallpaper



1 Customize mode

To change the wallpaper on the Lock Screen you currently have, go to Settings > Wallpaper and tap Add New Wallpaper. To start afresh, tap and hold on the Lock Screen until you enter the editing mode, then tap "+".



2 Add new wallpaper

Either scroll down and view the suggested and featured wallpapers, or use the options at the top of the screen. You can select images from your photo library, create a photo shuffle of favorite images, use emoji and more.



3 Make changes

Each wallpaper has its own customization options. You may be able to swipe left/right for more colors and patterns, tap an icon (bottom right) to switch between light and dark, or add gradients to plain colors. Tap Add.

HOW TO Add a depth effect

1 Use a depth effect
Before changing the look of the time itself, let's briefly cover Depth Effect. This 3D effect can be turned on and off via the "..." icon when using a photo as a wallpaper. It places part of an image over the clock display.



2 Change the font
Tap the time and you can choose a different font. Simply swipe left and right to see the various typeface options and use the slider to adjust the size. You can tap the world icon to switch to a different language too.



3 Tweak the color
You can also choose a different color – one that will better complement the background, perhaps. There are a number of suggested options, but if you select the multicolor icon you can choose exactly what you want.

HOW TO Add Lock Screen widgets

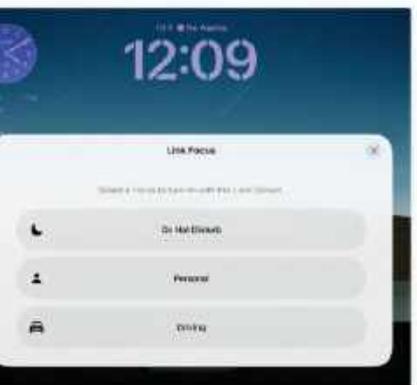
1 Start from the top
Widgets display at-a-glance info and there's space for one at the very top of the screen. By default, the top-most widget displays the date. Tap it to add Calendar, Weather, Reminders, Health, Stocks or Clock widgets instead.



2 Add to the side
Widgets can be added in the sidebar. Just tap the area to see what's available, either using the search field to look for widgets, perusing the suggestions or tapping the categories. Then tap the widget you want to add.



3 Reorganize widgets
Widgets can also be dragged into position from the selection panel. You can move widgets around in the sidebar too. They come in various sizes, but you may have to remove some to make room for new ones.

**> USE FOCUS MODES**

Control how you receive notifications

Once you have set up another Lock Screen, you can link it to a Focus mode – a feature that lets you customize how and when you receive notifications on your iPad. This ensures the Focus settings automatically activate when a particular Lock Screen is being used, which is handy if you want to create Lock Screens for different situations such as work and home, for example. Just tap and hold on the Lock Screen to enter the customization mode, then tap Focus on the Lock Screen you want to use before choosing the Focus option.



Master Smart Stacks

The redesigned watchOS 10 makes it much easier to see what matters

REQUIRES
watchOS 10

YOU WILL LEARN
How to organize and customize Smart Stacks

IT WILL TAKE
10 minutes



THIS YEAR'S BIG Apple Watch upgrade wasn't hardware; it was watchOS 10, which makes compatible Apple Watches feel like new. And one of our favorite new features in this latest upgrade is Smart Stacks. Like its iPhone equivalent, Smart Stacks enables you to stack multiple app widgets together for fast access to the information you need most.

As you'll see from our screenshots, Smart Stacks look rather like the Siri watch face we've already seen in watchOS. But not only does it look better, it works better too. That's because over time, Smart Stacks learns what your days are like — and once it's gleaned that, it can then customize the Smart Stacks for different times of the day. So, first thing in the morning, it may prioritize the weather forecast and Music; later on it might bring your workout-related apps to the fore.

EASY TO CONTROL

To begin with, Smart Stacks only works with Apple's own apps, such as Activity, Weather, Messages and so on. But third-party developers can add their own widgets.

To make room for Smart Stacks, certain elements have moved around a little in the Apple Watch interface; swiping up no longer reveals the Control Center's various buttons, because that's now where the Smart Stacks live. Now to bring up Control Center you simply press the side button; it works just like it did before and features the same controls for Focus modes, Airplane mode and so on. **CARRIE MARSHALL**



GENIUS TIP

Smart Stacks widgets show more than just static information. They can also feature controls, for example pause and resume in Now Playing.

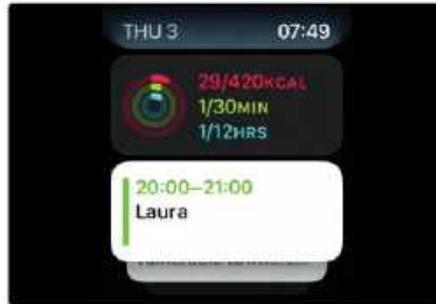


Smart Stacks learn your schedule over time, automatically organizing your widgets over the course of your day.

HOW TO Sort your Smart Stacks



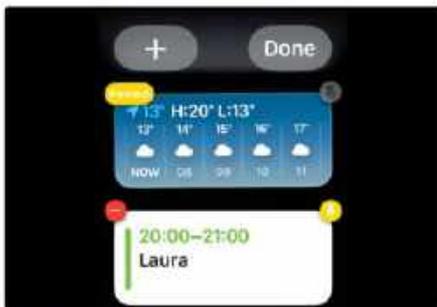
1 See your Stacks
To display Smart Stacks, either swipe up from the bottom of your Apple Watch's screen or rotate the Digital Crown upwards. You should now see a display like this, with the date and clock at the top and widgets below.



2 Swipe through
To move your Stacks, swipe your finger upwards or downwards, or turn the Digital Crown. The Stacks will move like a vertical carousel, displaying the selection of widgets such as your Calendar, the Weather app and so on.



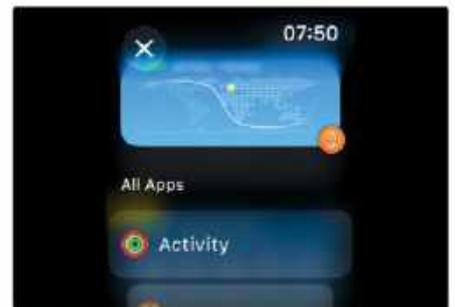
3 See more info
The widgets give at-a-glance information; for more details, tap on an app widget to open the corresponding Apple Watch app. Here we've tapped on the Weather widget to see when the best time would be to walk the dog.



4 Stack your Stacks
Smart Stacks organize the widgets for you, and it gets better the more you wear your Watch. Press and hold to select a widget or widgets for the top of the Stacks, then tap the yellow pin icon on the appropriate widget to fix it.



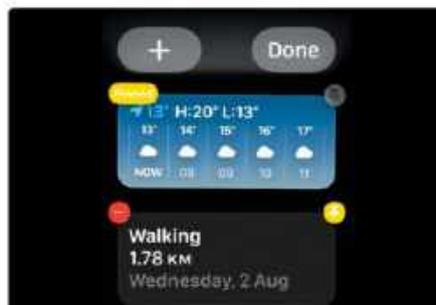
5 Select your look
Some apps have multiple widgets you can use in Smart Stacks. For example, the Calendar app shown here has widgets showing your schedule or just the day and date in big letters. Press and hold a widget to see its available styles.



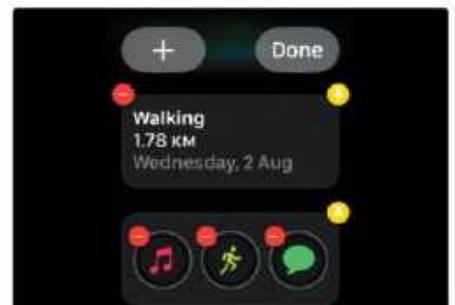
6 Add more apps
To add more apps to your Smart Stacks, swipe up to display the Stacks, and then press and hold the screen. You should now see a large button with a "+" in it; tap on that and you'll see the app selection screen shown here.



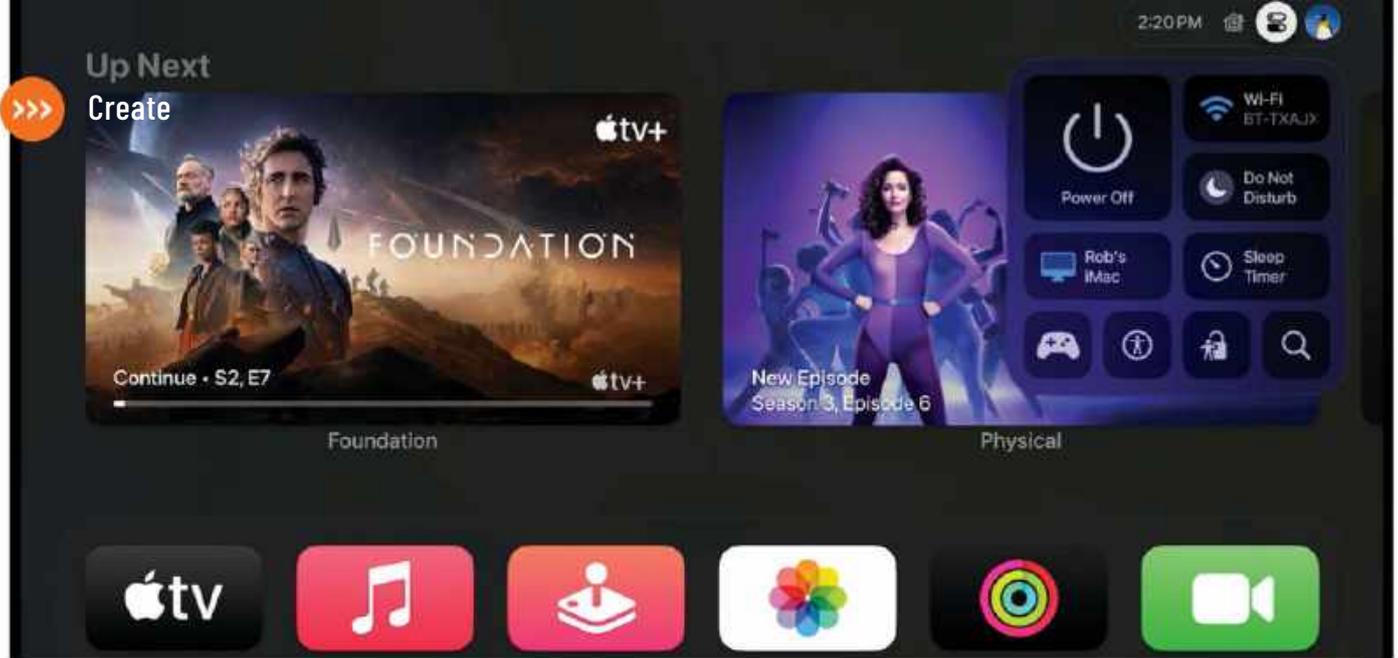
7 Set their style
As with existing Smart Stacks apps, long-pressing on an app will display the widget styles if there are multiple ones available. You can then tap the widget you want and watchOS 10 will automatically add it to the Stack.



8 Erase an app
You may not want all the standard widgets, or you might decide you don't want one after trying it out. To delete apps from your Smart Stack, long-press, then tap the red delete icon. This removes the widget but doesn't uninstall the app.



9 Erase the icons
You can remove the panel of shortcut icons for Music, Workouts and Messages by scrolling to the bottom of your Smart Stack and tapping the red "-" icon — or you can move them to the top of your Stack by tapping the pin icon.



What's new on Apple TV

tvOS 17 brings some cool improvements — and FaceTime too!

REQUIRES

Apple TV 4K or Apple TV HD, tvOS 17

YOU WILL LEARN

All about some of the new features in tvOS 17

IT WILL TAKE

10 minutes

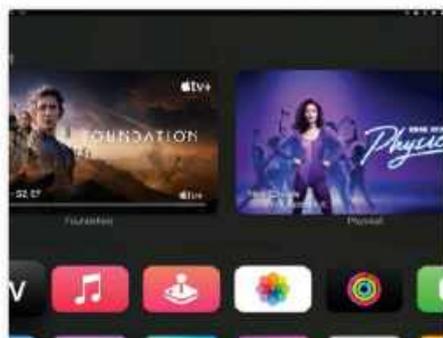


UNLIKE MACOS, iOS and iPadOS, tvOS updates for the Apple TV streaming box tend to be stealthily incremental in nature, and are often not noticeable at all. This year's update is different. For one, tvOS 17 brings FaceTime to Apple TV 4K (2nd or 3rd generation) by leveraging Continuity Camera on iPhone and iPad, with support coming for third-party apps such as Zoom and Webex by Cisco too. Plus, Apple Music Sing — which enables you to sing along to your favorite tracks in karaoke fashion —

will also work with Continuity Camera too, meaning no-one need miss out on the fun... yikes! (Requires Apple TV 4K 3rd gen.)

Those of us who primarily use their Apple TVs for, y'know, actually watching movies and TV, will love the changes tvOS 17 brings — these include Enhance Dialogue, which leverages the power of HomePod to make it easier to understand those Hollywood mumblers. Plus, Dolby Vision 8.1 “brings a more cinematic movie experience,” according to Apple. Let's look at some of the key changes. **ROB MEAD-GREEN**

HOW TO Discover what's new in tvOS 17



1 Home Screen changes

Your Apple TV's Home Screen now lets you see more apps at a glance. This should mean that you'll need to do less scrolling with the Siri Remote or the remote on your iPhone to find apps hidden from view.



2 User Profile tweaks

The Home Screen now shows the time, a user profile icon and more, in the top-right corner. Long-pressing the TV button on the Siri Remote expands that to show the Control Center, which has been completely redesigned.



3 Control Center

More compact and iPhone-like than before, the new Control Center gives quick and easy access to key features such as Power Off and AirPlay. It may also contain a Home app shortcut for any smart devices you have connected.



4 Connect with AirPlay
To connect your Apple TV to one of your AirPlay devices, select the AirPlay button in Control Center to reveal a list of those available. Scroll up or down using the Siri Remote, then press the center button on the remote to select one.



5 Set a Sleep Timer
If you're in the habit of nodding off while watching TV, you can change how long it'll be before your Apple TV switches off. In Control Center, select the Sleep Timer, then choose one of the timed options from the drop-down menu.



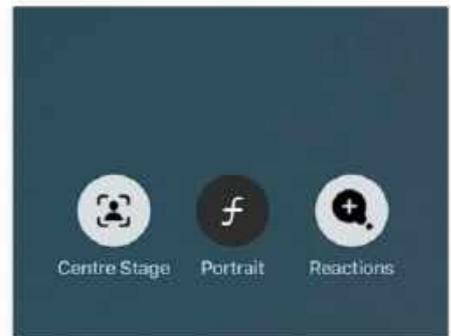
6 Do Not Disturb
To avoid being distracted while watching your favorite show, select Do Not Disturb from the Control Center. Once you've finished watching, select it again to switch it off – now you're ready to receive FaceTime calls.



7 Let's FaceTime!
To use FaceTime on your Apple TV, you'll need to connect it to a compatible iPhone or iPad using Continuity Camera. Start by selecting the FaceTime icon on your Apple TV using the Siri Remote, then select the user you wish to use.



8 Position your iPhone
On your iPhone or iPad, you should now see a screen similar to this. You'll need to have your iPhone or iPad's rear camera aimed towards you. On iPhone, you'll need to use landscape orientation. Tap Disconnect to end the connection.



9 FaceTime options
During a FaceTime call, use the icons at the bottom of the screen to switch between three different modes. Center Stage follows your movements, Portrait blurs the background, Reactions turns real-world gestures into effects.



10 Find that remote!
While it lacks the U1 chip, finding a lost Siri Remote is easy with your iPhone. On your phone, open Control Center. Tap the Apple TV Remote, then the device list, and tap Find. Now follow the visual prompts on screen to locate the remote.



11 Smart home control
Tap the Home app icon in Control Center and you'll be able to view any HomeKit cameras you have connected. Or if you have smart lights at home, activate any lighting scenes you've created – as shown here.



12 New screen savers
The Apple TV has always had some great video screen savers showing stunning locations around the world. With those arriving on macOS Sonoma, two more are coming soon: Monument Valley in Arizona, and California redwoods.



Adaptive Audio and ANC

AirPods do a brilliant job of removing unwanted noise – let's find out how



YOU WILL LEARN

How ANC and Adaptive Audio can silence the outside world

ANC IS A DOUBLE WIN: IT DELIVERS BETTER AUDIO, AND IT HELPS PROTECT YOUR HEARING TOO



KEY FACT

Anything you put in your ears offers passive noise cancellation by blocking some of the sounds around you – it's like closing a door or sticking your head under water. But this kind of noise cancellation isn't very effective and reduces the volume of everything, including sounds you might still want to hear.



iOS 17's clever Adaptive Audio feature is only available in the AirPods Pro 2; earlier AirPods don't have the necessary processor.



WITHOUT A DOUBT, our favorite feature on the AirPods and AirPods Max is the ability to turn down noise coming from the outside world. Whether it's the chatter of a busy cafe, the thrum of an airplane engine or the rumble (and grumble) of a train full of rush-hour commuters, AirPods, AirPods Pro and AirPods Max make it easier for you to listen to what you want by getting rid of what you don't want.

With the introduction of iOS 17, the most recent models are turning noise canceling up to 11. AirPods Pro 2 already had active noise cancellation (ANC) but now that iOS 17 is here, they also gain a new feature called Adaptive Audio. This monitors the audio around you and lets you hear your chosen sounds while blocking any noise that you find distracting. It's all very clever, but how does it work?

LET'S HEAR IT FOR ANC

There are two kinds of noise cancellation: passive and active. Passive noise cancellation is when you put your fingers in your ears, use earplugs or have in-ear headphones that fit very tightly: each of those things effectively blocks a certain amount of sound waves getting into your ear canal. But the problem with passive noise cancellation is that it doesn't discriminate

between different sounds; it's like an in-ear bouncer banning every frequency from coming in, including all the things you still want to hear.

The other problem with passive noise cancellation is that it doesn't particularly work very well. While it reduces sound, it doesn't remove it altogether, so your earbuds or headphones still need to overpower louder background noise. And that often means turning up the volume of your audio. However, that's not very efficient — low-frequency rumble from things like buses and underground trains can make the low frequencies in music harder to hear, even when you turn everything up — and more importantly, it's not good for your hearing health. As your Apple Watch will happily tell you, there are risks involved with long-term exposure to overly loud sounds, and the damage this does is irreversible.

Active noise cancellation (ANC) is much smarter. It doesn't just reduce the volume of background noise, it removes it. And it can do that without eliminating the sounds you want to hear. That's important because, as mentioned, without ANC the only way to drown out the outside world is to turn up the volume. So ANC is a double win; it delivers a better audio experience, and it helps protect your hearing health too.

> AIRPODS AS HEARING HELPERS

Researchers at Taipei Veterans General Hospital conducted an experiment that involved 21 people, hearing aids, and AirPods Pro/Pro 2. Each person had mild to moderate hearing loss, and the experiment sought to compare AirPods against dedicated hearing aids. In all but one scenario, AirPods with Live Listen performed just as well as

standard hearing aids. They also met four of the five criteria required by the official ANSI/CTA-2051 hearing aid standards. This could be a very big deal, because, until recently, the US regulated hearing aids as medical devices, which kept their prices high and meant only around 20% of the people who needed hearing

aids could afford them. Now, with the Food and Drug Administration (FDA) having established new rules, you can buy hearing aids over the counter. As a typical hearing aid costs ten times the price of AirPods Pro, this rule change should open the market to all kinds of alternative providers, Apple, Sony and Bose included.



WAVE HELLO, WAVE GOODBYE

Active noise cancellation is based on a simple premise: because sound travels in waves, to cancel it out you play the same wave in reverse. This means every peak becomes a trough and vice-versa, and the opposites cancel each other out. The result? Silence. However, delivering this is not as simple as it sounds...

Active noise cancellation was developed by engineers at Bose, when they were creating headphones for the Voyager — a powerful aircraft that was also incredibly noisy to sit in. The headphones featured microphones that listened to the sounds around the wearer. This information was then sent to a dedicated processor that analyzed the noise, worked out what should be removed, and created “antisound” waves. These waves were then added to the sound coming from the headphones.

WHY AIRPODS ARE SO SMART

Although the principles of active noise cancellation haven’t changed — detect sound, create antisound — the technology that handles it gets better with each generation, identifying what sounds we want and what sounds we don’t want.

The tech also enables earbuds and headphones to provide a Transparency Mode. This selects some outside sounds and plays them to you — sometimes for safety, so you can hear a bus coming rather than risk stepping out in front of it, for instance. It’s also convenient, meaning you can clearly hear transport announcements and other sounds you really don’t want to miss.

In the latest generation of AirPods Pro, the improved processing power also means you get Adaptive Audio. And that’s the



Active Noise Cancellation in AirPods Pro and Pro 2 means you don’t need to listen to your audio at ear-damaging volumes, even when you’re in a noisy environment.

smartest ANC we’ve ever heard. Adaptive Audio, launched in iOS 17, is a blend of ANC and Transparency Mode. It uses machine learning to analyze the sounds around you in a much smarter way, and can tell the difference between the sounds when you’re walking down a busy street and the sounds inside a building. It can also tell when those sounds change — so, if someone starts digging up the road with heavy machinery, for instance, your AirPods will notice and then eliminate that extra noise.

The ANC and Adaptive Audio in iOS 17 can also pick up the difference between the buzz of a conversation around you compared with somebody speaking directly to you. Along with the Conversation Awareness feature that uses the same processing, that means AirPods will intelligently adjust what you hear — boosting the sounds you need, upping the volume of other people’s speech, and reducing the ambient audio so you can hear better. **CARRIE MARSHALL**



KEY FACT

Active Noise Cancellation (ANC) improves your listening experience by reducing the need to turn up your earbuds. With less (or no) background noise to compete with, you will be able to focus on your music, audiobook or podcast without turning up the volume to levels that could potentially damage your hearing.

ASK

TECH SUPPORT & TECHSPINATIONS



Software Update insecurity

JUST AS WE don't all want to drive automatic vehicles, some of us prefer to download and install updates when we choose, rather than leaving it to the Software Update pane to decide. There are hidden dangers in that; going fully manual with all the pane's

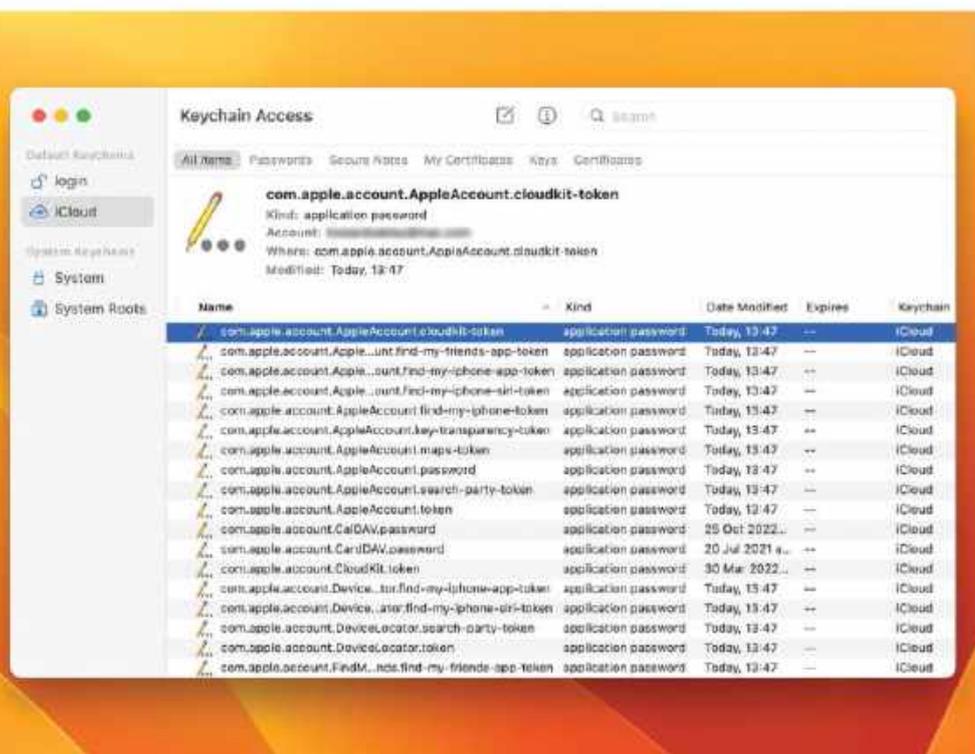
settings disabled can fail to detect updates to macOS's built-in malware protection, leaving your Mac at risk.

Unless you check for and install those using other means, such as the softwareupdate command or the free app SilentKnight, every Mac should run with the last item,

and install security responses and system files (or similar) enabled in Software Update. That still gives you control over whether and when macOS updates are downloaded and installed, and should stop your Mac being left with out-of-date security protection.

> Share certificates across Macs

How can I share security certificates in my iCloud Keychain?



Keychain Access only sees passwords in the keychain shared in iCloud, and can't add other secrets like certificates.

You don't appear to be able to share secrets of your own choosing, apart from internet and other passwords, using the

keychain shared in iCloud. That isn't because of any limitation in the keychain, but is due to the fact that you can't add your own keys

or certificates to the keychain that's shared.

Macs have two types of keychain. The login keychain, that's normally used to store our own certificates and secure notes, uses an ancient format, is stored in our Home Library's Keychains folder, and can't be shared in iCloud. The Keychain Access app has full access to its contents, which makes it simple to add certificates and other secrets.

The iCloud Keychain uses a different format with access controls for better security, but Keychain Access can only see its passwords, not the rest of its contents, preventing us from adding our certificates so they can be accessed by other Macs and devices sharing that keychain.

Apple intends moving away from the old file-based keychains like login, and using "data protection" replacements like the keychain shared in iCloud. For now, the only way to use those certificates on multiple Macs is to add them to the login keychain on each.

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Mac|Life

Get official documentation at support.apple.com | Get help with hardware at support.apple.com/repair

> Never share your Apple ID

My wife and I share an Apple ID, but I can't use my profile photo for calls on my iPhone, as it says two phone numbers are associated with one Apple ID?

Your Apple ID and iCloud account are intended for one individual to use, and shouldn't be shared with anyone else, no matter how close you are. Although Apple doesn't try to enforce that, it's explicitly included in iCloud's terms and conditions. You and your wife would do much better to have your own Apple IDs for separate iCloud accounts, that can then be grouped together with Family Sharing to bring you the same benefits and shared features, and your own profile photos.

Apple explains how to tackle this in <https://apple.co/473luCc>. Setting up a family group is straightforward: you each need your own distinct Apple IDs, and one of you becomes the organizer of the group. The organizer then opens their Apple ID in Settings on their iPhone or iPad, or System Settings on a Mac, and opens Family Sharing there to set it up and add each of the other Apple IDs as family members.

You are then able to share your iCloud+ storage (as explained at <https://apple.co/4091171>), Photo Libraries, and subscriptions to Apple's services including News+. Having individual accounts ensures that both your accounts are kept secure, and that your iCloud access is kept separate in the event that you might ever need to have solo or private access to contents stored in iCloud.



Add family members in Settings, and allocate shared subscriptions, iCloud+ storage and other features.

Quick-fire questions & answers

WHICH BROWSERS COULD I USE INSTEAD OF SAFARI?

There's now a wide choice of third-party web browsers to choose from. These include Firefox, Microsoft Edge and Google Chrome, and more specialist apps like Brave, DuckDuckGo, Opera and high-privacy options like Ulaa. Avoid those whose titles start with "Private Browser", or which aren't more widely available.

HOW CAN MAPS TELL WHERE I'M LIKELY TO GO NEXT?

When enabled, your iPhone or iPad keeps a list of significant locations that you visit repeatedly, and shares that with the Maps app to suggest routes. Enable this in Settings > Privacy & Security > Location Services > System Services > Significant Locations.





Mac Hardware

We're here to help solve your hardware issues

Quick-fire questions & answers

SHOULD I SPLIT OR REPLACE MY iMAC'S FUSION DRIVE?

If it's over three years old, it may not have much life left in either the SSD or hard drive. If you can afford it, have the drive replaced with an SSD, to extend its working life for several years. Otherwise, get a Thunderbolt SSD and start up from that instead.

WHY CAN'T I UPGRADE THE SSD IN MY M2 MAC?

Most Apple silicon Macs have their internal storage soldered in, so it can't be replaced independently. It isn't a normal SSD, but relies on the M2 chip as its disk controller, and its Secure Enclave for data encryption. It also makes theft of your Mac and its data almost impossible.



> Unlock a used Mac

I bought a used Mac mini 2018, but when I try to start it up, it asks for a password or the Apple ID of its previous owner. How can I bypass those, install a fresh copy of macOS and use it?

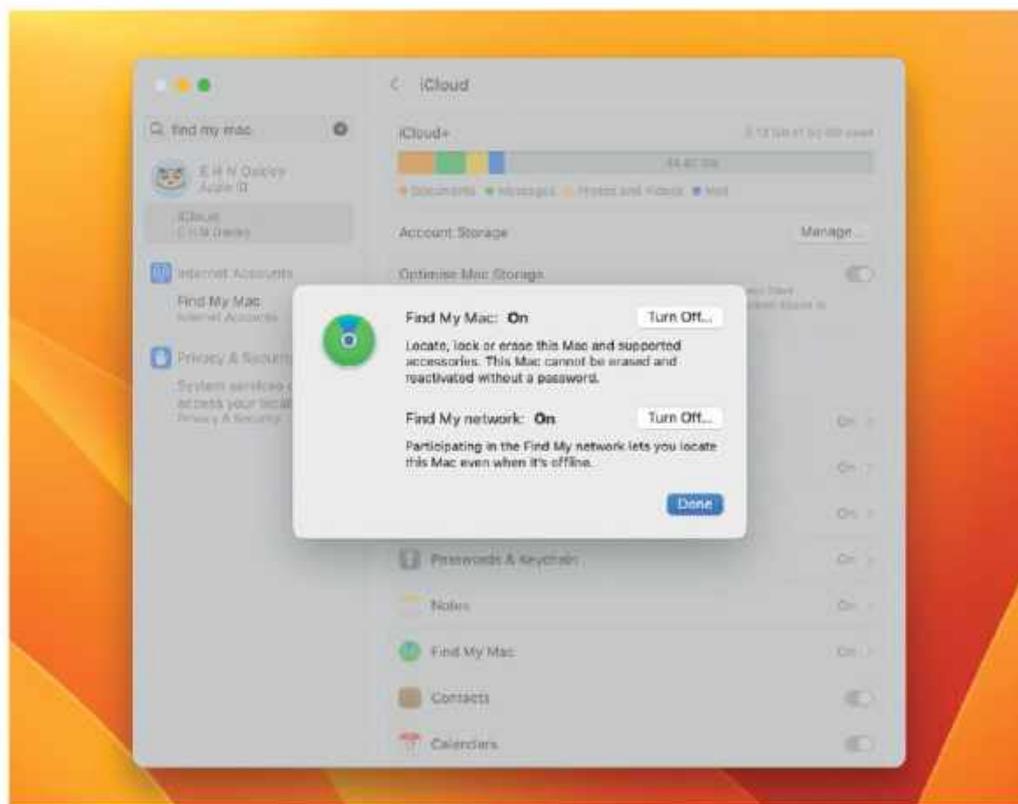
Unfortunately, only its previous owner can open that Mac up, as it still has Activation Lock enabled. This is linked to Find My Mac, and prevents anyone else from starting up a Mac protected by its T2 or Apple silicon chip. This isn't a feature of older Intel Macs without a T2.

What the previous owner should have done before parting with it is run Erase All Content and Settings, which not only destroys all their personal data kept on its internal storage, but it also disables Find My Mac and Activation Lock.

They can disable it in their account at icloud.com/find by removing that Mac from

the list of All Devices there. However, if it still has FileVault enabled, you'll need their password before you can access its internal SSD. With Activation Lock disabled, you could restore that Mac in DFU mode from another Mac, using Apple Configurator 2 (free from the App Store), but that's not for the faint-hearted and should only be a last resort.

If you're unable to get the Mac's previous owner to help, but have proof of purchase, you may be able to persuade Apple to unlock your Mac, but be aware that this often happens with stolen Macs, so you're going to require good evidence that it's now legally yours.



At the least, the previous owner has to disable Find My Mac before selling a Mac, or its purchaser will be locked out.



> Prepare your Mac for repair

What should I do to protect the personal data on my iMac when it goes in for a screen repair?

Any repair to your Mac, even to the display, could potentially require more extensive surgery. To safeguard your data, ensure that you back your Mac up thoroughly before it goes anywhere.

If you've already enabled FileVault on its internal storage, that will protect it from prying eyes. If FileVault isn't yet enabled and your Mac has a T2 or Apple silicon chip, then you should turn it on, as the data is already encrypted — so all FileVault has to do is protect the key used for that encryption, which happens instantly.

If FileVault isn't already turned on and your Mac has an Intel processor but not a T2, it could take many hours before it would provide the protection of encryption. You might then be better off removing or encrypting just your most sensitive data.

Finally, remember to turn off Find My Mac in the iCloud section of the Apple ID item in System Settings, and disable any firmware password by starting in Recovery and using Startup Security or Firmware Password Utility there. If you don't disable those, the technician may not be able to access your Mac.

Quick-fire questions & answers

WHAT'S THE COST TO REPLACE A MACBOOK PRO BATTERY?

Apple should give you a quote at <https://apple.co/46KRY4q> for around \$249, using original parts and covered by its warranty. Beware of others who might fit inferior replacements.

HOW TO CLEAN THE KEYBOARD IN MY MACBOOK AIR?

Remove any dust using a vacuum cleaner with care, and clean off solid residue using a little isopropyl alcohol and a lint-free cloth. Although you can use its Lock Screen to stop this from generating keypresses, the best solution is the free KeyboardCleanTool from bit.ly/3Fsewef.

> Recover files in Target Disk Mode

My MacBook Pro 16-inch 2019 is sick and can't start up properly. Is there any way to retrieve files from its internal SSD?

If possible, try using Target Disk Mode with another Mac. To do this, your sick Mac needs to be able to start up in this mode; depending on what part of its hardware is sick, that may not be possible. Start it up with the "T" key held until you see the Thunderbolt symbol appear on its display. If that doesn't work, press the Power button to shut it down again.

If this does work, connect it using a Thunderbolt 3 or 4 cable to another Mac; if it's running Catalina or earlier, you should be able to use a USB-C data cable if you don't have a Thunderbolt one. Shortly after connecting the other Mac, the Target's internal Data volume should mount in that Mac's Finder, and you'll then be prompted to enter its FileVault password (if enabled).



When you've finished rescuing files from it, eject the Target Mac's disk in the Finder, then press and hold the Power button on the sick Mac to shut it down again. If you can't get this to work and still need files rescued, ask an Authorized Apple Service Provider or Apple technician; they have a tool they can use that could still work, although some seem reluctant to use it.



macOS

Shine a spotlight on the solutions to your most irritating Mac problems

> Ignore any permission problems

I moved my image library and documents to my new Mac on an external drive, but when I try to use them I seem to hit permission problems. Why, and what can I do about it?

When inspecting permissions in the Finder's Get Info dialog, each item has an owner and group, with their set permissions, and for all users. Although shown there with names like your user name, that isn't how the file system sees them: instead, owners and groups are converted into numbers. On most Macs, the first admin user is given the number 501, and subsequent users have numbers upwards of 502. Sometimes users are removed, and it can happen that an external disk ends

up with user numbers that differ from those in that Mac. If a file is then owned by user 505, but there's no user with that number, that can throw the permissions system.

Thankfully, macOS provides a workaround intended for external drives. Select that drive or volume in the Finder and open the Get Info dialog. In the lowest section, Sharing & Permissions, click the padlock and authenticate with your admin password. The bottom line offers the

checkbox to "Ignore ownership on this volume". Tick that and your weird permission problems should vanish, as macOS then won't worry whether the owner is 501 or 505.



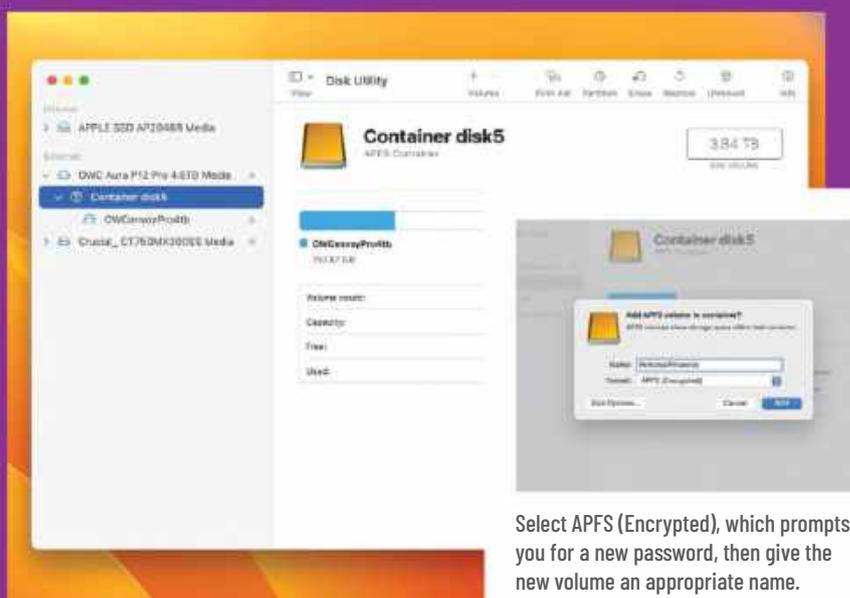
> Lock private data away

How can I secure personal data on an external drive, in case it gets lost or stolen? Could I use permissions?

Permissions don't provide privacy protection, and only limit access for apps that behave themselves. The only trustworthy way to prevent access to personal data is to encrypt it using a robust method such as APFS encrypted volumes, or encrypted disk images. Because all APFS volumes in a container share its free disk space, it's easy to add an APFS encrypted volume to your external drive.

In Disk Utility, set the View tool to Show All Devices, then select the container on your external disk in the sidebar. Click the "+" to add a new volume, select "APFS (Encrypted)" as its format, give it an unguessable password, and an appropriate name before clicking the Add button.

First select the container on the disk where you want to add the encrypted volume. This will share space with the existing volume.

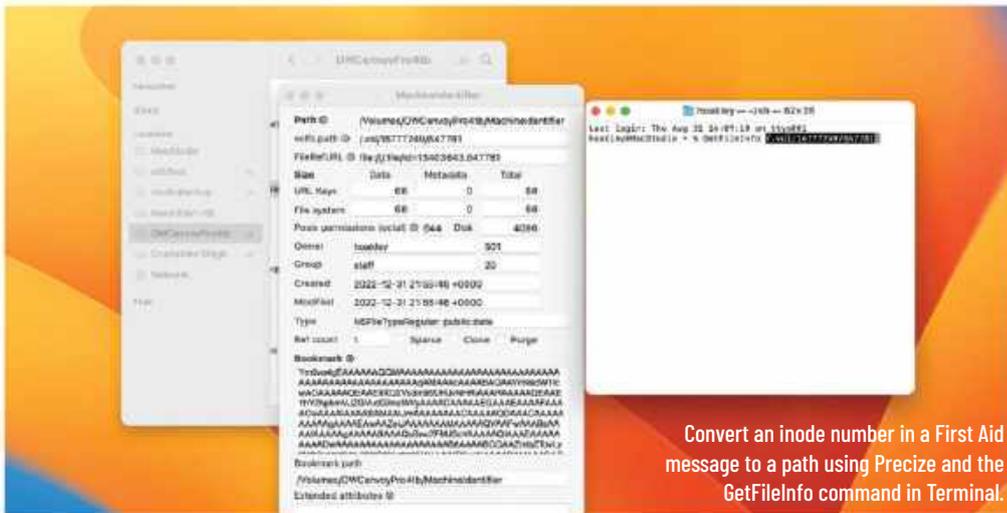


Select APFS (Encrypted), which prompts you for a new password, then give the new volume an appropriate name.

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Convert an inode number in a First Aid message to a path using Precize and the GetFileInfo command in Terminal.

> Find the file causing an error

When running First Aid in Disk Utility, I am warned that a “Resource Fork xattr is missing for compressed file”, but the message gives an inode id and doesn't tell me which file is at fault. How can I stop those errors?

Warnings like that aren't uncommon, and generally clear themselves over time. If it recurs, then you first need to identify the file that's responsible. Inode numbers uniquely identify every item in a volume, and can be used in an alternative low-level file system known as volfs. Because the inode number is only unique within that volume, to discover which file it is you also need to know the number of that volume.

One easy way to do this is using another file on the same volume. Open that in the free utility Precize from bit.ly/3FsnYhw, and in its second line it gives its volfs path. Next open Terminal and type:

GetFileInfo

with a trailing space. Then copy the volfs path from Precize and paste it into the command line after that space. Delete the last number, which is the inode of the wrong file, and paste in the inode number given in Disk Utility's warning message, to create that item's path in a command like:

```
GetFileInfo /.vol/16777238/402194151
```

Press Return, and a few seconds later Terminal gives the full path to that file or folder, together with other information about it. You can then work out whether you want to delete that item.

WHY DOES DRAGGING A FILE TO iCloud MOVE IT THERE?

Dragging a file within the same volume moves it, but between two different volumes it's copied to preserve the original. Volumes connected via a network are considered to be separate, but iCloud is different, and an integrated part of your Mac's Data volume. To copy instead of move, use Opt-drag.

WHY DOES TERMINAL TELL ME IT HAS BEEN RESTORED?

When you open Terminal, any open windows are returned to their previous status by restoring that session, including any saved window contents, command history and environment. A new window instead gives the time and date of the last login, when you last opened Terminal, as it has nothing to restore.



Quick-fire questions & answers

HOW OFTEN SHOULD MACOS CHECK ITSELF FOR MALWARE?

In macOS Catalina or later, XProtect scans for malware should run daily, or more frequently when Apple considers the threat is high. Scans should run in the background when your Mac is awake but not being used heavily.

HOW TO REMOVE APPS FROM THE OPEN WITH MENU?

Launch Services builds that menu from the apps on your Mac, and which types of document they can open. An app that's stored outside the main Applications folders won't normally be included, but to be certain, put the app in an archive or remove it altogether.



iPADOS 17

TIPS, TRICKS & SECRETS

We delve into the latest version of iPadOS and its raft of new features

WRITTEN BY IAN OSBORNE

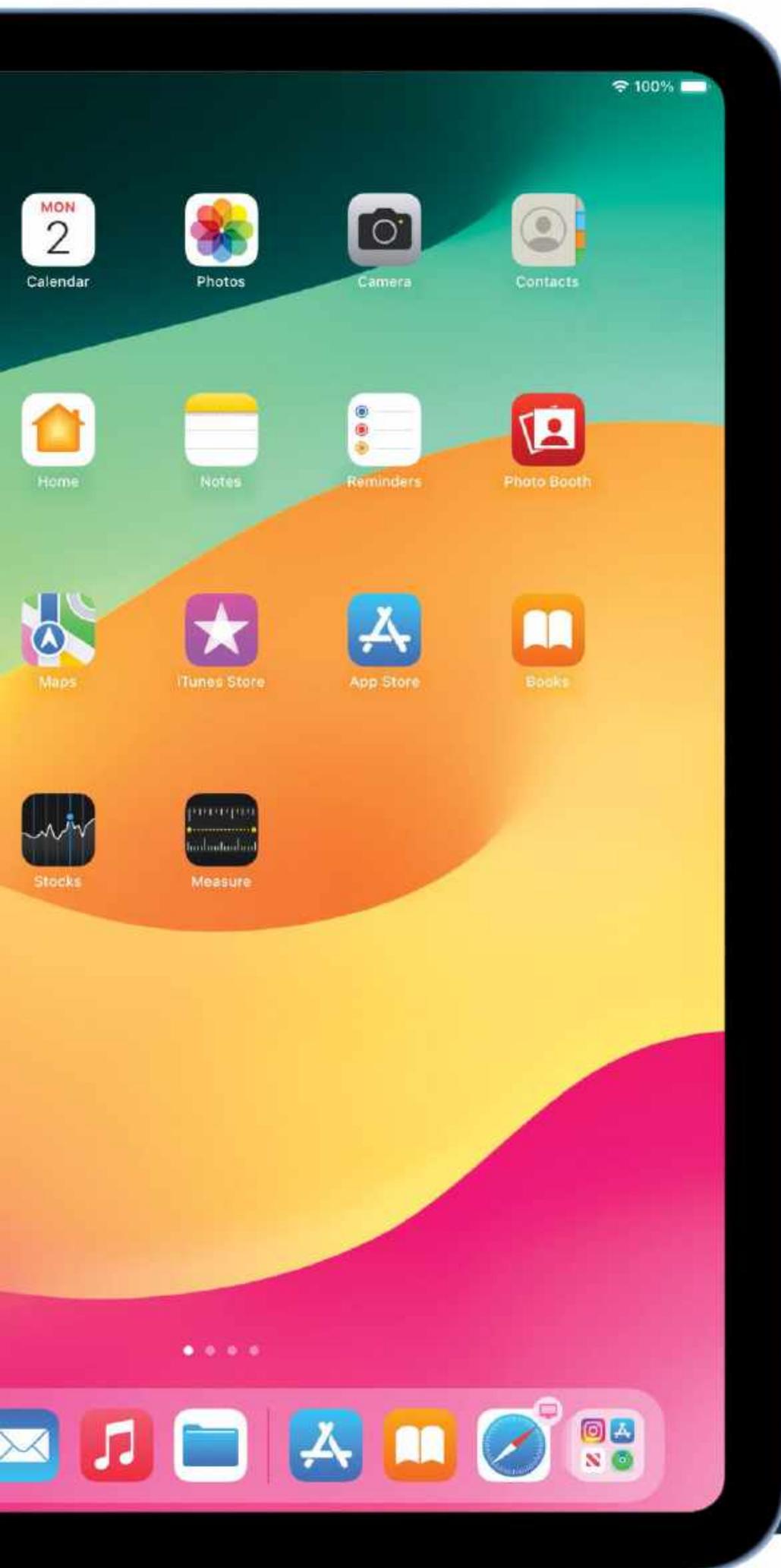
THE IPAD'S OPERATING system, iPadOS, had a welcome upgrade this fall, but it's not as radical an overhaul as the iPhone's or Mac's. The tablet's Lock Screen gained new customization options, including widgets, bringing it up to date with the iPhone which gained these features last year. The iPad gets a Health app with iPadOS 17, and it's optimized for the larger screen, allowing developers to better display their data and make it accessible for review.

The Messages app, which has long been a favorite among iPad users, has had an interface overhaul, giving easier access to attachments such as photos, stickers and more. You can also now create Live Stickers by lifting subjects from your photos.

A new AutoFill feature, coming later this year, makes working with PDFs easier than ever. If you have a form to fill in, iPadOS detects text fields and lets you add names, addresses and emails directly from your Contacts app. You can collaborate when annotating PDFs stored in the Notes app too, and link individual notes to make it easy to find related content.

Like the Mac and iPhone, if you make a FaceTime call and the other person doesn't pick up, you can leave an audio or video message. Safari gains the same Safari Profiles feature as macOS Sonoma and iOS 17, Stage Manager is more flexible, and there's new Freeform tools and autocorrect features too. Let's take a look at them all and discover how to make the most of this new update.





Which devices will work with iPadOS 17?

To download and install iPadOS 17, you need one of the following iPads:

iPad Pro 12.9-inch (2nd gen or later)

iPad Pro 10.5-inch

iPad Pro 11-inch (1st gen or later)

iPad Air (3rd gen or later)

iPad (6th gen or later)

iPad mini (5th gen or later)

New Lock Screen

You can now customize it with widgets and more

APPLE SKEPTICS MIGHT argue Android users have had them for years, but we welcome them anyway. Lock Screen widgets come to the iPad with iPadOS 17, and they add a whole new perspective on what you can see and do on your tablet before you unlock it. By adding widgets for apps such as Reminders, Calendar, the World Clock and more, you can glean information at a glance, and as these widgets are interactive, you can (for example) tick off reminders, turn Home-controlled lights on and off, or play and pause your music, right there from the Lock Screen. Plus, widgets displayed on your Home Screens are interactive now too.

There are lots of widgets to choose from. Open the Settings app on your iPad, and in the left-hand sidebar, tap the Wallpaper option. Alternatively, tap and hold the Lock Screen. Now you can choose a new wallpaper for your Lock and/or Home Screens, or use the Customize button on your current wallpaper to modify the one you have already. From there, tap the widgets bar on the left (landscape mode only) and then add and remove widgets. From this screen, you can also change the color and font of your time, change today's date above the clock to a different widget, and using the icons in the bottom-left corner, turn the depth effect on or off so the clock can be partially covered by wallpaper details. You can also select between Light or Dark Mode, or change between them automatically.



Widgets are now interactive, whether they're found on your Home Screen or your Lock Screen.

Also in Settings > Wallpaper, you can tap the Customize button for your current Home Screen wallpaper and change it to a solid color, use a gradient, choose a photo from your Photos app for a wallpaper and add a blur effect. If you use a Live Photo for your wallpaper, an advanced machine-learning model renders additional frames, giving you a slow-motion effect that activates whenever you wake your iPad. You might find them too busy for everyday use, but they look absolutely gorgeous.

A Customize

Tap and hold anywhere on the Lock Screen, and then tap Customize at the bottom, to edit this screen to suit your own requirements and tastes.

B Time & date

On the customization screen, you can tap the time to edit the font, color and weight used for the numbers. Tap the date to change it to something else.

C Widgets

You can choose what widgets appear on the Lock Screen's sidebar. They're interactive, so you can operate them without unlocking your iPad.

D Astronomy

The astronomy wallpapers have been overhauled for iPadOS 17. They're optimized for the big screen, and you can choose your planet too.

How to Personalize your Lock Screen



1 Customization screen

Tap and hold the Lock Screen to go straight to its customization options. Alternatively, in the Settings app tap the Wallpaper option in the sidebar. You can now choose new wallpaper or customize your current one.



2 Tweak the time

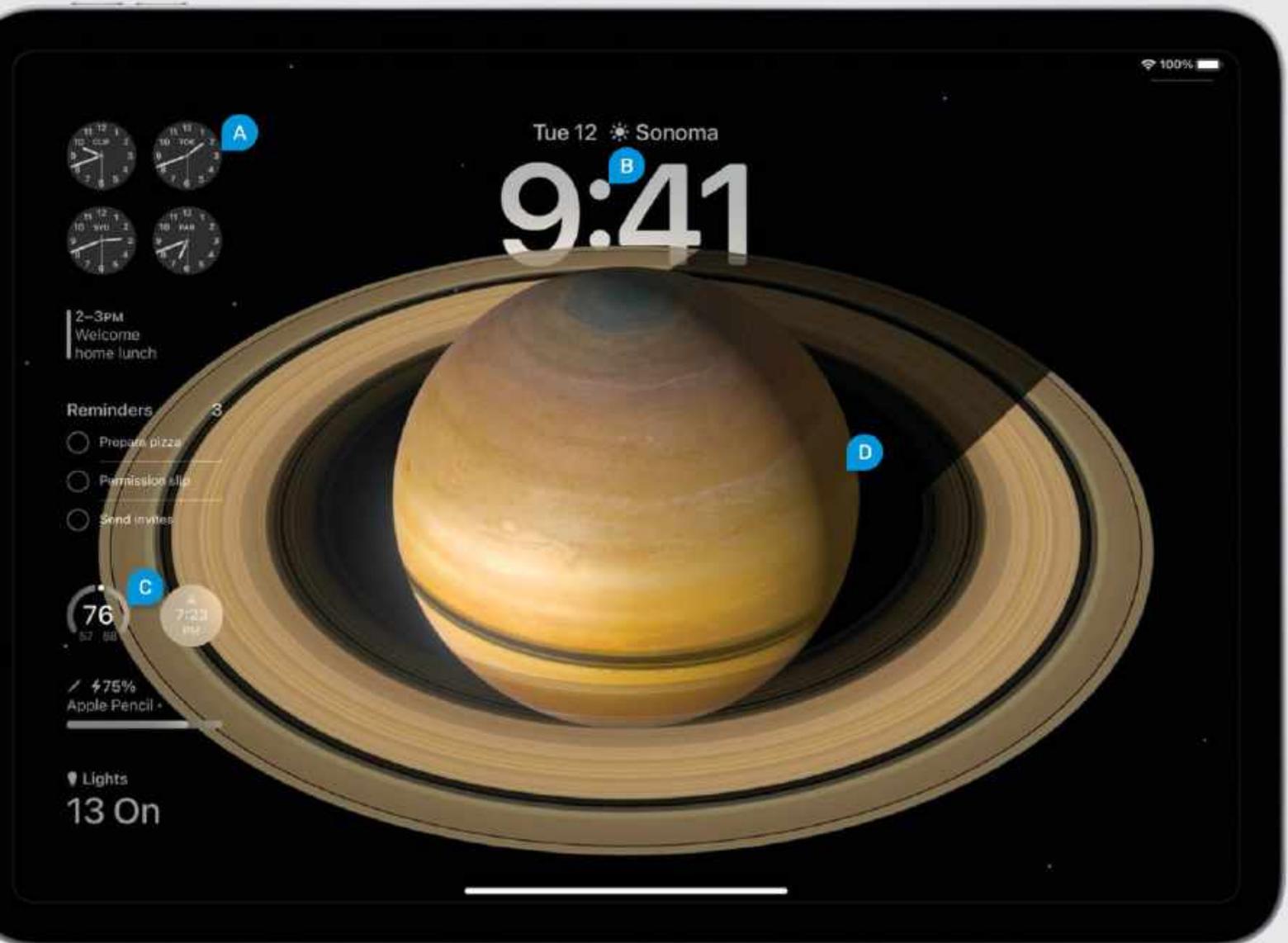
Choose to customize the Lock Screen. Tap the current time and a window pops up, allowing you to change its font, weight, color and shade using sliders. Tap the globe icon in the top-left corner for non-standard numbers.



3 The date widget

If you want, you can tap today's date above the time and change it to a different widget. Again a window pops up, from which you can choose the weather, forthcoming events, alarms, reminders, stocks and more.

Quick Look iPadOS 17 Lock Screen



4 Finding widgets

In landscape mode, tap the Widgets Sidebar on the left. The Widgets Picker appears. Choose an app from the left-hand sidebar to see its widgets, and swipe them left and right for differing widgets from the same app.



5 Add & remove widgets

Tap a widget in the Widget Picker to add it to the sidebar. Widgets come in various shapes and sizes; slide left and right and choose one. To remove widgets, on this customization screen, tap the minus icon in its corner.



6 Change wallpaper

To select your wallpaper, go to Settings > Wallpaper and tap the “+ Add New Wallpaper” button. Choose something from the picker. Swipe between wallpapers you’ve customized and added, and tap Set as Current to choose one.

Messages, Stickers & FaceTime

New communication upgrades include some highly requested additions

New Memoji stickers

iPadOS 17 brings us three new Memoji stickers, namely Halo, Peekaboo and Smirk. This brings the total number of Memoji stickers available to 54. To use one of the new stickers (or an older one) in Messages, tap the plus icon next to the text field and in the window that pops up, tap Stickers. In the row at the top of the stickers window, tap the Memoji option. Your new stickers are there, along with the rest of the range.



The new operating system upgrade brings us three new Memoji stickers to use in the Messages app and more.

I T'S BEEN A long time coming, but at last, it's here! In iPadOS 17 (and indeed iOS 17), if you make a FaceTime call and the other party doesn't pick up, you can leave a video or audio message so they know what the call was about. It's easy to do. When you make a video call and the other person fails to answer, you get a screen saying they're unavailable, just like you always have in FaceTime. But now there's a button inviting you to record a video message.

Tap the Record Video button and a countdown timer starts, after which the video recording begins. You can stop the countdown timer mid-flow by tapping the circular Pause button. To resume a paused video recording, tap the red Record button. Once you've finished recording your video message, tap the Send button to send it, or tap Retake to re-record it. To save your message to Photos, tap Save.

There are a few things to bear in mind. To send a FaceTime Video Message, both you and the person you're ringing must have iPadOS 17 or iOS 17 installed. You can't leave video messages with people running earlier versions of iOS or iPadOS. Also, you can only leave a video message if the person on the other end lets their device stop ringing of its own accord, as opposed to declining the call. A FaceTime video message can be up to



FaceTime users can now leave a video message if the person they call doesn't answer. According to Apple, it was one of their most-requested features.

three minutes long, and there's no option to record only audio after a failed video call, so if you don't want to leave a video message, you'll have to cover the camera with your hand while you speak.

Note, too, that a bug in the first versions of iPadOS 17 meant that video message recording didn't work properly for everyone, with the Send, Retake and Save options missing. The problem was finally fixed in iPadOS 17.1.

Another communication app that gets some love in iPadOS 17 is Messages. The

FaceTime gestures

If your iPad is new enough, you can trigger some great effects by making hand gestures in a video call. Not just in FaceTime, but in almost any app supporting the standard iPhone camera APIs, including Microsoft Teams, Google Meet and Zoom. While on a video call, open the Control Center to find two new buttons. Tap Video Effects and make sure Reactions is on. Now you can

trigger a thumbs up or down by making that gesture with your hand, a spray of hearts by making the two-handed heart gesture, two thumbs up for fireworks, two thumbs down for rain and more. Look out too for balloons produced by the peace sign, confetti by two peace signs, and a laser display by giving double devil horns.



A two-thumbs-up gesture gives an impressive fireworks display in a video chat. It doesn't even have to be on FaceTime either.



search facility has been improved by adding search filters. You can now start a search and add additional terms, narrowing the results and making it easier to find what you're looking for.

If you've not looked at a conversation for a while, and a lot of messages have been sent without you reading or replying to them (this is most likely to happen in a group chat), an up-pointing chevron appears in the chat window. Tap it and you're taken straight to



If you make a FaceTime video call and the other person doesn't pick up, tap the Record Video button to leave a video message.

the first message you haven't read, making it easy to catch up. Replying to a specific message is easier too. Swipe it to the right and tap the curly arrow there. Audio messages are now transcribed, so you can read them on screen as well as tapping Play to listen to them.

If you like using stickers in Messages, you'll be glad to hear you can use your own photos to create Live Stickers. Open a photo and pick a subject within that photo; it could be a face, a flower, or just about anything. Tap and hold it and it's cut out for you to save as a sticker. To use a sticker, tap the "+" sign next to the Message app's text field. A new window appears, from where you can choose an attachment, including stickers.

Inline Location

Another feature that came to Messages with iPadOS 17 is Inline Location, which allows you to check someone's whereabouts directly from the Messages app. In Messages, tap the plus icon next to the text field and then tap the Location option. A pop-up window allows you to send your own current location to the person you're messaging, and also to request theirs. In the conversation, tap their name at the top to see where they are.



In the Messages app, you can now share your location with the person you're chatting to, and ask for theirs too.

How to Create Live Stickers



1 Find a photo

On your iPad, open your Photos app. Look for a subject in one of the photographs that you'd like to use as a sticker, then tap the photo in question to open it. The subject can be anything you like.



2 Make a sticker

Tap and hold on the subject contained in the photo you wish to use as a live sticker. You will see the subject shimmer when it is cut out successfully. Lift your finger for an options bubble; tap Add Sticker.



3 Your collection

The item you chose is now added to your stickers collection. A window appears showing your live stickers. Tap and hold one for a bubble that lets you rearrange your stickers, delete it or add an effect.

PDFs, Notes & Freeform

iPadOS 17 lets you use PDFs in a new way, and Freeform gets extra tools

A FEATURE COMING LATER in the year will make it much easier to work with PDFs on your iPad. AutoFill will identify and fill text fields in PDF forms and allow you to quickly add details such as names, addresses, and emails from your Contacts app.

Using new machine-learning models, iPadOS can quickly identify the fields you're being asked to fill in on the form, such as your name, address, email, phone number and more. You can then use AutoFill to enter the required information. It even works on documents you scan yourself using the iPad's camera. If you need to sign the document, you can add a saved signature or make a new one with your Apple Pencil.

The AutoFill button even lets you reply to the person that sent you the form, returning it filled in using the Mail app. It's a really handy way of dealing with PDF forms.



On a FaceTime call, you can collaborate on a PDF that's an attachment in a shared note.

PDFs are often stored in the Notes app, as attachments on individual notes. The way these are handled has also been upgraded. You can annotate a PDF stored on a note by tapping to open it, then sketch and write on it with your Apple Pencil. If you're collaborating on that note with another person you can both annotate the document, with notes and additions synced in real time. As you work on the PDF, the other person's edits appear as they write them. It even works with stickers and images added to the PDF.

The new features really take working with PDFs to the next level. Markup has never been more powerful, and filling in forms is no longer a chore.

Quick Look Using AutoFill in PDFs

A AutoFill button

Tap the AutoFill button to get a pop-up window, from which you can populate the fields on your PDF with details from Contacts.

B Text fields

Using machine learning, iPadOS identifies areas on the form where you're expected to add text, and makes them text fields.

C Adding info

You can add information gleaned from your Contacts app to fill out the text fields, inputting a name, address, email and more.



New in the Notes app

As well as inline PDFs, the Notes app has gained a few new features in iPadOS 17. You can now create links between notes. For example, if you're visiting a new city, you might make a note for your travel information, and then add links to other notes about the location's amenities, hotels, restaurants, and more.

Using the Format menu, you can format a portion of text in your note as a block quote, indenting it from the rest of the text. Also using this menu, you can opt for a monostyled format, which basically turns it into plain text. If you'd rather continue editing a note in Pages, you can do so by tapping the Share icon and choosing Open in Pages.



In the Notes app, you can turn a paragraph of text into a block quote, and import the contents – text, images and formatting – into a Pages document.



In iPadOS 17 and its sister upgrades for iPhone and the Mac, the Freeform app gains a series of new features and tools.

More tools in Freeform

The iPad's Freeform app, a digital collaborative feature that brings the office whiteboard to online meetings, gains a few new tools in iPadOS 17. The watercolor brush, for example, lets you illustrate with the distinctive pastel colors offered by water-based paints. If you need something more solid and stylish, there's also a fountain pen for calligraphy. Other new drawing tools include a variable-width pen and a ruler. With iPadOS 17, you can take your drawings to a whole new level.

The Freeform app's shape recognition feature works like that offered by the Notes app. If you draw a regular shape with your Apple Pencil, such as a square, a circle or a triangle,

as soon as you've finished it snaps into a perfectly formed geometric version. Your squares have perfectly straight sides and all angles are exactly 90 degrees, for example, and your circles look like they were drawn with a compass instead of freehand on the screen.

Look out too for a new feature called Follow Along, that lets you follow a collaborator, tracking them on the whiteboard and watching as they make changes. Just the thing if the person speaking during a video or voice conference is illustrating what they're saying on the Freeform board. You can follow their movements without having to manually move the board.

How to Link notes together



1 Add link

First of all, find and open the note on which you want the link to appear. Here we're linking notes about a Christmas trip to the note we made about travel times. Tap where you want the link, and tap Add Link from the menu.



2 Choose destination

A window appears. Add a URL or a note title. If adding a note, auto completion makes it easy to find what you're looking for. If you don't want to use the note's title as link text, tap the switch and type in your own link text.



3 Move between notes

Add as many links as you like. You can then open the note or URL directly from the note to which you added the links. Just tap on the link you made, and you're taken straight there. It's a great, speedy way to collate information.

Everything else

What more does the new iPadOS 17 have to offer?

LIKE MACOS SONOMA and iOS 17, in iPadOS 17 you can summon Apple's digital personal assistant by saying "Siri" instead of "Hey Siri". To choose, open the Settings app and in the Siri & Search section, tap Listen For. You can also invoke Siri during a telephone or FaceTime call now.

You can check activity history in the Home app, allowing you to see who has used a smart door lock and when, for example. Garage doors, contact sensors and security systems are also covered. If you like crosswords and subscribe to Apple News+,

you can now do crossword puzzles in the News app too.

Visual Lookup was introduced with iPadOS 15, and lets you look up information on subjects in photos you've taken. With iPadOS 17, you can look up recipes based on photos of food. At last, you can take a picture of your restaurant meal without being laughed at.

For the first time, you can share AirTags with up to five family and friends. Everyone in the group can then track an item's location and have the AirTag make a sound.



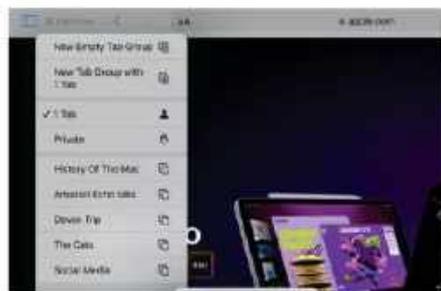
In iPadOS 17, you can share AirTags with up to five others, so several people can keep track of its whereabouts.

Just the thing for tracking communal property or having several adults keeping tabs on a child. And that's not all...

Safari Profiles

Safari has gained a new feature across Apple's product range. Using Safari Profiles, you can compartmentalize your browsing. Create profiles for home, work, school and more, with each profile having a separate history, cookies, website data, extensions, Tab Groups and favorites.

To start a new profile, in the Settings app tap Safari in the sidebar and look for the Profiles section. To switch between profiles, tap the profile button in Safari, tap the current profile at the foot of the window that appears, then choose another one.



With Safari profiles, you can keep your browsing for work and home separate. It's easy to set up new profiles and switch between them.



Choose an area to download, then use the map offline on your iPad.

Offline maps

In the Maps app, you can now download maps to use offline. This is great news for hikers or those that like exploring remote areas, where cellular coverage might be patchy or even absent.

To download a map, in the Maps app tap your picture or initials at the top of the floating sidebar and choose Offline Maps. Accept one of the app's suggestions or tap Download New Map, then search for the area you want to download. You're shown the map. Use the handles on the rectangle that selects the area covered, then tap Download.

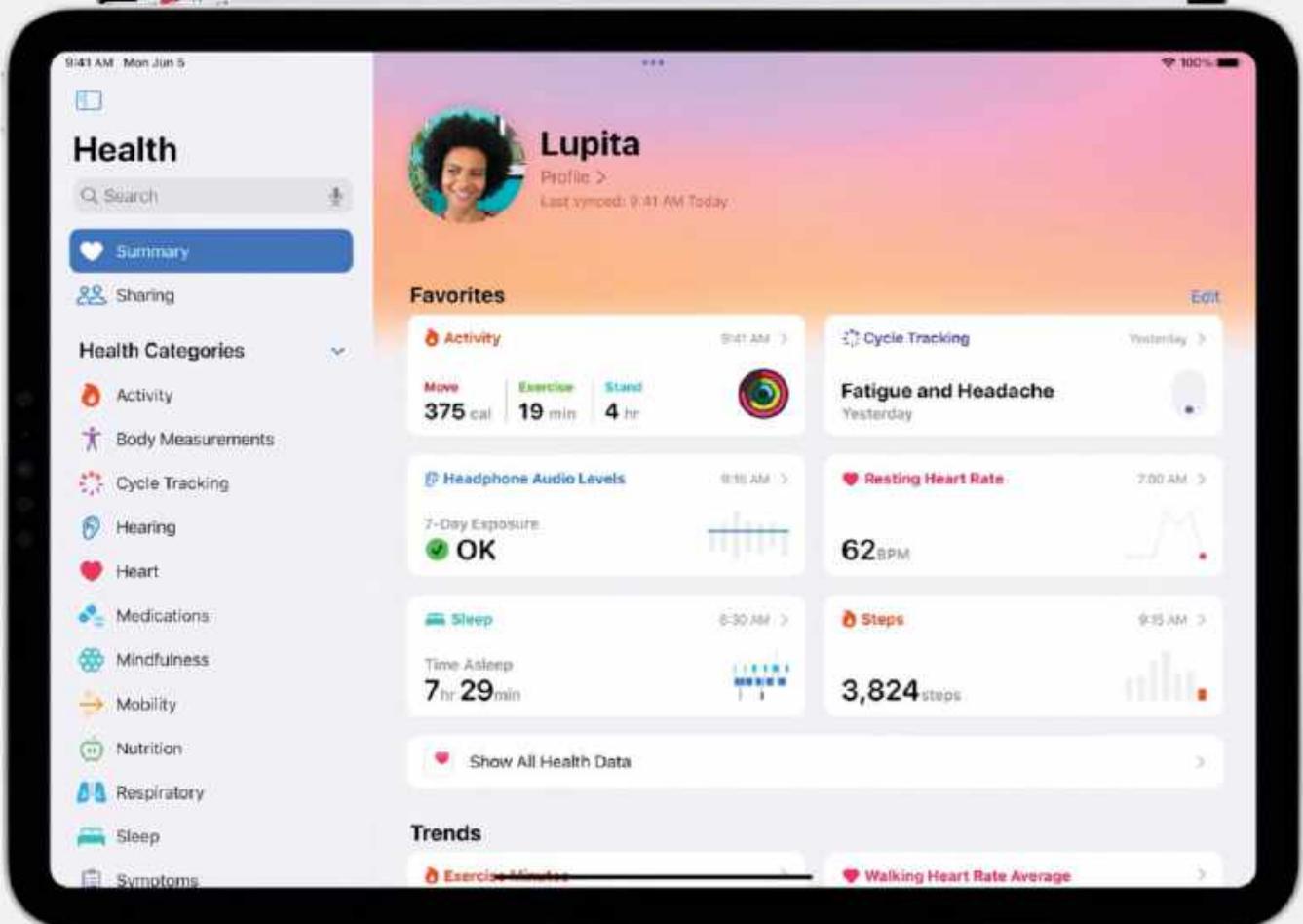
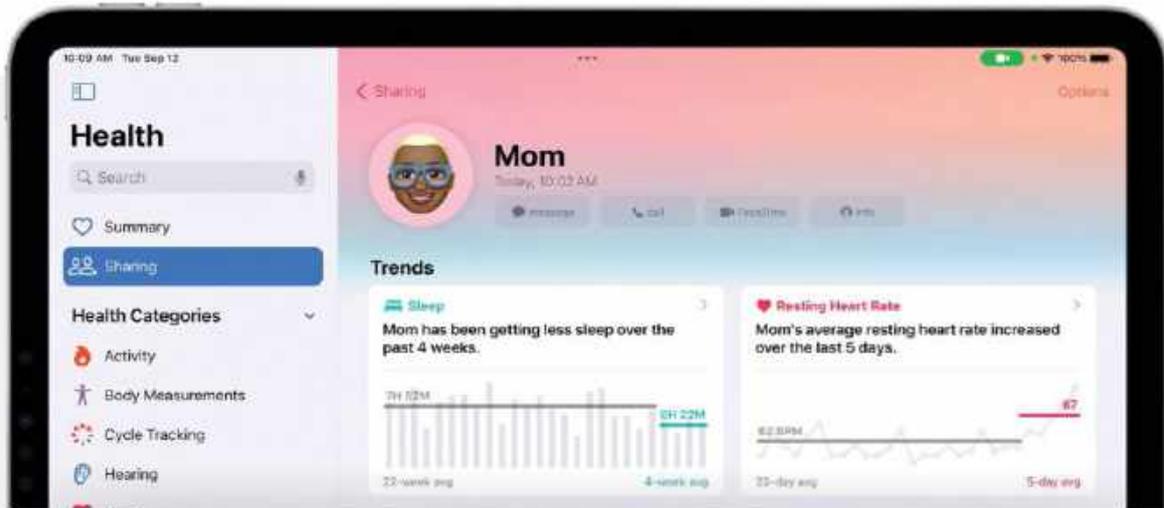
Journal

The Journal app has been promised for the iPhone "later this year", and it seems extremely likely to arrive on the iPad as well. A cross between a digital diary and a scrapbook, Journal lets you keep a day-to-day record with your notes augmented by data gleaned from your device's native apps.

Using on-device machine learning, the Journal app offers personalized suggestions of what to include, which could be photographs you've taken, music and podcasts you've enjoyed, maps of places you visited, and even workouts you carried out.



The Journal app lets you write about your day, and add material gleaned from a range of Apple's and third-party applications.



iPad gets a Health app



It's been a long-awaited addition, but with iPadOS 17, the Health app

finally comes to iPad. Naturally, all your information is synced with your iPhone and Apple Watch, but the tablet format gives you much more

space to review and analyze your health data. The app has been optimized for the large screen, and third-party developers have been invited to optimize their own health experiences too.

One area where the Health app benefits significantly from the

larger screen is when it comes to viewing interactive charts. It's far easier to delve into the details of your health data and assess changes over time when viewing on the iPad. Information is synced securely with your other Apple devices, so there are no privacy issues.

WHAT IS AVAXHOME?

AVAXHOME-

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

Unlimited satisfaction one low price

Cheap constant access to piping hot media

Protect your downloadings from Big brother

Safer, than torrent-trackers

18 years of seamless operation and our users' satisfaction

All languages

Brand new content

One site



AVXLIVE:ICU

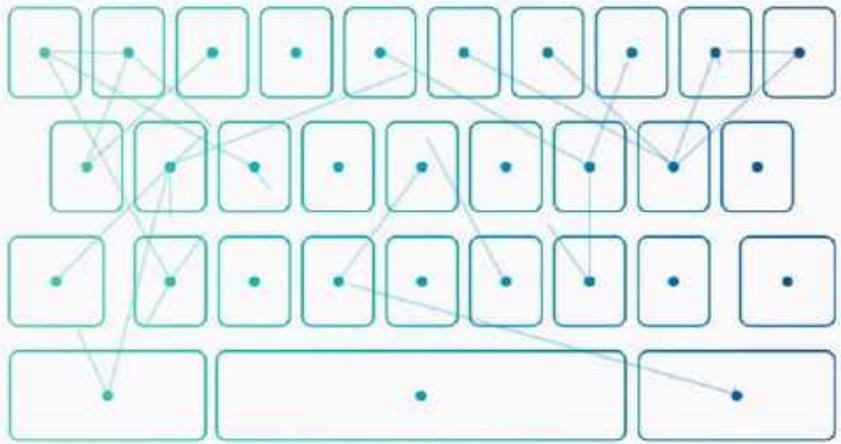
AvaxHome - Your End Place

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

Autocorrect

Text input has also been enhanced with the latest update, making it much easier with both the keyboard and dictation.

Autocorrect, powered by on-device machine learning, is now more accurate than ever. You can roll back an incorrect autocorrection by tapping the underlined word, and Predictive Text now offers predictions inline as you type, and finishes entire sentences as well as words. If a predicted word or sentence offered in the text field is correct, just tap Space to accept the suggestion.

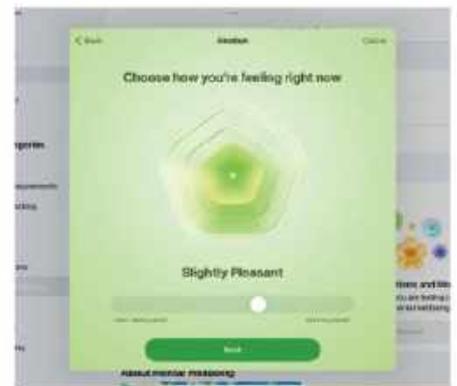


Machine learning takes predictive and corrective text to a whole new level with the iPadOS 17 update.

Mental health

If you wish to track your mental health, a new feature found in the Health app helps you record your moods and reflect on your state of mind. Open the Health app and tap Mental Wellbeing in the side column. Tap “Logging Your Emotions and Moods”, and you can add information on how you feel right now and your general mood throughout the day. Over time, this builds into a detailed overview on your mental health.

Also available is a mental health questionnaire that assesses your risk of suffering from anxiety or depression.



Mental health features in the iPad's new Health app allow you to log your moods over time and reflect on what might contribute to your emotions.



Stage Manager

Assuming it's recent enough, you can already connect your iPad to an external display for extra screen space. In iPadOS 17, this feature gets a boost. The position and size of your windows is more flexible. You can resize windows, move them around the screen and

place them wherever you want. If you're in a video call or conference, you can use your external display's inbuilt webcam instead of the one on your iPad. This is really handy if you regularly use your iPad alongside an Apple Studio Display for video chatting.



watchOS 10 masterclass

Make your Apple Watch feel brand new with this incredible upgrade

WRITTEN BY CARRIE MARSHALL

THE APPLE WATCH'S 10th birthday isn't until 2025 but its operating system, watchOS, is now in double figures. Last year's watchOS 9 wasn't a big deal, but this year is different. In fact, we think watchOS 10 is the biggest Apple Watch upgrade in years.

watchOS 10 is designed to improve the Apple Watch experience in three key ways: health, fitness and customization. In the first category, you'll find new features to help with

your mental health as well as your physical health. In the fitness category there are huge improvements for cyclists, new features for hikers, and a wealth of enhancements to the Fitness app and the Fitness+ service. And, in the customization category, you'll find new faces, more in-app options and a new feature, Smart Stack, that makes your Apple Watch even more you.

Here's everything you need to know about this significant Apple Watch update. ■

watchOS 10 works with...

Apple Watch Series 4
Apple Watch Series 5
Apple Watch Series 6
Apple Watch Series 7
Apple Watch Series 8
Apple Watch Series 9
Apple Watch Ultra
Apple Watch Ultra 2
Apple Watch SE

What's hot in watchOS 10

Time to tick these improvements off your wish list

New faces

This year's new Apple Watch faces are Snoopy and Palette. The former, featuring Charles Schulz's famous cartoon dog, may well be the cutest Apple Watch face yet – and Palette may well be the prettiest.



Snoopy and his pal Woodstock play with the watch hands, and motivate you during workouts.



Palette has a gorgeous color-shifting display, and lots of customization options.

WHETHER YOU'RE WEARING

an Apple Watch Series 4, an Apple Watch SE or an Apple Watch Ultra, watchOS 10 will make your Apple Watch feel brand new. In addition to the usual selection of new features, watchOS 10 also changes the way your Watch looks and works.

The first thing you'll notice is that it's visually quite different. Apple's own apps are brighter and more glanceable, with a unified design that's coherent, consistent and very clear. The Control Center has been moved to the side button to make space for a new collection of widgets that Apple calls Smart Stack, and there are two fun new faces as well as lots of customizations and complications.

SMART CONTROL

Smart Stack is more than just widgets. It uses machine learning to try and work out what information you'll want to see and deliver it when you want to see it, so you'll see different things based on the time of day, your typical schedule, your location, and even the weather. We're very impressed by it so far, and by the way it also brings key controls for the apps you're using – such as your podcasts or workout controls.

There are big improvements to fitness tracking and Fitness+, to the Maps app for hikers, and to workout tracking for cyclists. But one of the most interesting health features is new: mental health. Apple is building on its mindfulness features by offering mood tracking and, shortly after iOS 17 launches, by providing a journaling app



Smart Stack uses machine learning to predict what information you'll need and to deliver it when and where you need it.

that could be a very powerful way to identify the things, places and people that make you happier.

That's not all. NameDrop enables you to give someone your contact details by bringing your Apple Watch next to their iPhone, Maps now has the same offline mapping as the iPhone app, and group calls are now supported over FaceTime Audio. You can even view FaceTime video messages on your wrist. ■

Introducing Smart Stack

When you swipe up from the bottom of your Apple Watch or turn the Digital Crown, you'll see the new Smart Stack feature (Control Center is now in the side button). Smart Stack looks a lot like the Siri watch face, and it's designed to bring you info

in little glanceable widgets, just like widgets do on iPhone, iPad and in macOS Sonoma. You can choose which widgets appear, and the stacks will change based on the time of day, your location, whether you're working out, and so on.

The big benefit of Smart Stack is that it provides quick access to info you might not want or need to have as a complication (or because your favorite face doesn't have room for enough complications): simply swipe or turn and they're there.

WHAT'S NEW In watchOS 10



1 Clearer call alerts

Even the Ultra isn't big enough to display a full Contact Poster like on iPhone, but with watchOS 10 you get a call alert that uses a photo to show who's calling. It's a nice touch: we recognize faces faster than we read names.



2 Serious sleeping

The Sleep app has had a makeover: instead of showing your sleep schedule it now takes you to your sleep data. The schedule information is now accessed via the alarm clock icon (top left). It still can't track your naps, though.



3 Great outdoors

There are tons of improvements for outdoor types, including new waypoint features in Compass (pictured) and lots of new metrics for cyclists to track their rides. US Apple Watch users also get new topographic mapping in Maps.



4 Attractive activities

The Activity app has been redesigned to make all of your key info more glanceable and swipeable, and it shares a common design language with other apps such as the Sleep app; everything feels more cohesive.



5 More weather

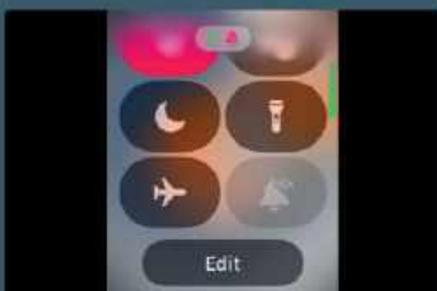
The Weather app is now super-powered. Its background reflects current weather conditions; the colored ring shows expected temperatures, and integrates with Smart Stack to show the forecast in the morning.



6 Everything is better

The World Clock app is a great example of the redesign: while it shows the same time, sun location, sunrise and sunset details, it's much brighter, clearer and friendly than before and devotes more of its display to glanceable info.

HOW TO Customize the Control Center



1 Swipe it up

Control Center now lives in the side button, so press that to display it and then swipe until you get to the bottom of the icons. That's where you'll find the Edit button, which enables you to adjust the order or add and remove icons.



2 Tap to delete

Icons behave like they do on your iPhone Home Screen when you go into edit mode: tapping on the red "-" icon will remove that app from Control Center. You can't remove everything — features such as Wi-Fi and Battery are fixed.



3 Add new icons

If you swipe past the current Control Center icons, you'll see a second section with green "+" icons instead. These are the icons that aren't currently in Control Center; add them by tapping on the "+" sign and dragging to their new location.

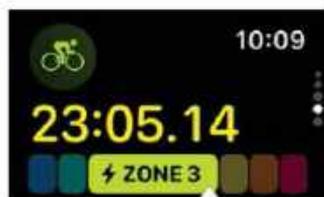


Health & fitness

watchOS 10 introduces huge improvements to help you live a healthier, happier life

Power Zones Workout View

watchOS 10 contains a lot of important upgrades for cyclists, including the ability to calculate personalized power zones from your activity and from connected devices such as cycle computers. watchOS 10 can then estimate your Functional Threshold Power, which is the highest average power you can sustain for an hour, and tell you what power zone you're in. In addition to the color-coded zone indicator — ranging from blue for easy to dark red for super hard — the view shows your elapsed time, your time in the zone, your cadence in RPM, and your power output in watts.



SPEAKING TO *OUTSIDE* magazine Tim Cook said “I really believe that if you zoom out to the future and then look back and ask, ‘what has Apple’s greatest contribution been?’ it will be in the health and wellness area.” And with watchOS 10, the already impressive Apple Watch health and fitness features have now become even better.

When it comes to exercise, your Apple Watch does everything from cycle tracking to cyclist training. And there are significant improvements to the latter, including lots of new metrics to analyze your rides and support for Bluetooth devices such as cycling computers and power meters.

Hikers get some very useful new navigation and emergency features, and all kinds of workouts

(including third-party apps too) can take advantage of Live Activities to show crucial data on your iPhone without you having to unlock it. Apple’s Fitness+ service has got some very welcome improvements too, including the ability to build a personalized Custom Plan, and all the health and fitness apps have been given a visual refresh to make them even more useful.

One important new feature is one you can’t see. There’s a new Workouts API for app developers to record workout data directly on your Watch instead of to a paired phone, and that should enable them to deliver more useful real-time data.

Cycling metrics on iPhone

With watchOS 10 and iOS 17, your iPhone becomes a bike computer. The phone displays the same metrics as your watch, but takes advantage of the larger display to make the speed indicator much clearer while showing the metrics you want to focus on. The display is customizable,

and it’s scrollable to deliver more information when you want to read it. That means your iPhone and Watch cover the essentials you’d normally need a cycling computer for — and if you



Stick your iPhone on the handlebars and you’ve got a pretty great cycling computer with a customizable display.

already own one, you can get its data on your phone’s friendly interface.

Apple Fitness, custom plans and Stacks

If you're a subscriber to Apple Fitness+ or have it in your Apple One bundle, you'll like the advances in watchOS 10. Following on from the custom workouts of watchOS 9, you can now create custom Fitness plans too. You can set a weekly schedule, specify the number of weeks you want to do it and how much time

per day you want to spend, and you can then select the activity types you want to include. You can add specific workouts, trainers, and even select the music.

The other new feature we really like in Fitness is Stacks. This is effectively a fitness playlist, enabling you to add multiple workouts and/or

meditations to the same stack and then move seamlessly from one to the other.

Not all features are obvious. Watch apps get new sensor information to detect rapid changes in direction and acceleration, which should make golf, tennis and badminton apps even better.



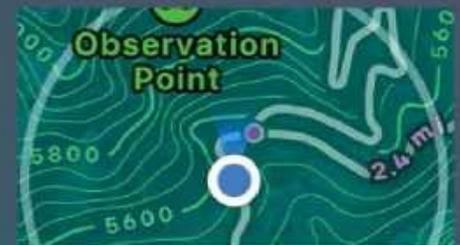
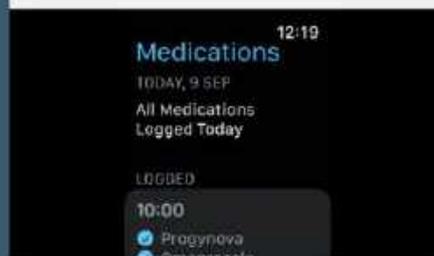
Vision health

Daylight isn't just good for your mood. It's good for your eyes too, and the new Time In Daylight feature in the Health app is designed to ensure you get enough of it. The International Myopia Institute recommends children get 80 to 120 minutes outside each day and adults at least 20 to reduce the likelihood of near- or short-sightedness, and your Watch can automatically track your outside time and tell you if you need to get out more.



Medication reminders

If you need to stay on top of a medication or a food supplements schedule, medication reminders are genuinely life-enhancing and potentially life-saving. In watchOS 10 they're even better. You can now get the app to give a follow-up reminder if you haven't logged your medication, vitamin or supplement at the usual time, and you can set those reminders as critical for ones you must not miss.



Hiking

A revised Compass app has new views including Elevation View and Cellular Connectivity Waypoints: if you go completely off-grid, your Watch can tell you the last place you were able to get a phone signal, so you can retrace your steps if you need to make or take a call — a feature that's potentially very beneficial. US users can also take advantage of the new topographic hiking maps and trail navigation discovery in the Maps app.

Mental health

You can now log your current or daily mood, and that information goes to a new part of your iPhone's Health app: Mental Wellbeing. Apple recommends you log your mood twice daily to build up a picture of your mental health, but part of that picture is still missing: the

new Journal app, which has been designed to work alongside the mood tracking, activity tracking and fitness apps to help keep a record of your days and suggest mentally healthy things to do, was due to arrive with iOS 17, but is now "coming later this year". We've yet to try

Journal's mental health features for ourselves, but we're definitely intrigued: an app that with your permission uses your phone history (calls, messages, photos, workouts, location and more) alongside mood reporting could be a very useful wellbeing tool.



The iOS 17 Journal app, which combines journaling, input from multiple apps, and your own mood reporting, didn't arrive in time for the watchOS 10 launch.



There are two wired inputs, but no Bluetooth or digital features.

THE BOTTOM LINE

The lack of digital inputs might deter some, but the SP3 provides a compact, high-quality set of desktop speakers.

- + Compact and sturdy
- + Clear, detailed sound
- + Powerful 80W output
- Only supports wired audio

GREAT ■ ■ ■ ■

FiiO SP3

Wired desktop speakers with powerful sound

\$299.99 From www.fiio.com

Features Inputs - RCA, 3.5mm; frequency response - 65Hz - 20KHz
Dimensions 6.4 x 4.7 x 5.2in, 3.5 lbs (each)

STEREO DESKTOP SPEAKERS have gone slightly out of fashion in recent years, with more and more people opting for one-piece speakers such as the Apple HomePod instead. However, there are still times when a good, old-fashioned stereo system works a treat for listening to music, a spot of gaming action, or for creative work such as audio recording or video editing.

FiiO's SP3 speakers are very much designed for desktop use, but could also be used as part of a wider home entertainment system, providing a pair of compact speakers that stand just 6.4" high, 4.7" wide, and 5.2" deep. They'll sit neatly on either side of your monitor without taking up too much space, but the 4.5-foot power cable that links the two speakers gives you plenty of room to experiment with positioning in order to get the best sound. They're solidly built, too, with an aluminum casing that feels very firm and solid, and you can either sit them flat on your desk or use the removable stands to tilt them up at an angle of seven degrees in order to disperse the sound more widely.

WORKING IN TANDEM

Each speaker houses a 3.5-inch mid-woofer to handle the bass and mid-range, as well as a 1.0-inch tweeter for higher frequencies, with the two speakers together providing a very healthy 80W output. The back panel of the right-hand speaker houses all the controls, with both stereo RCA (cable included) and 3.5mm inputs (cable not included) and an Input button that lets you switch between them. For the gaming crowd, there are glowing lights built into the base of each speaker that can cycle between a number of different

lighting effects – or just be turned off altogether, if you prefer.

There are also separate controls for volume and bass, but there's no remote control provided, so having to reach behind the speaker to adjust the controls might get a bit irritating after a while. Arguably, the SP3 takes the "old-fashioned" approach a little too seriously, as there are no digital inputs at all – no Bluetooth, and no USB input either. You could still use a DAC – a digital-to-analog converter, such as FiiO's own BTR7 – to provide digital input from a Mac or iPad, but the lack of digital features does seem like an odd omission in our modern mobile world.

But if you don't mind that old-school approach, the SP3 really delivers the goods on sound quality. You're not going to get pile-driver bass on compact speakers such as this, but the SP3 delivers the catchy bass riff on Queen's *A Kind Of Magic* with a firm, punchy rhythm. The drums are tight and precise too, while the Queen harmonies sound silky smooth as they hum "magiiiiiiic" in the background. And, with the two speakers set as far apart as our desk will allow, the SP3 picks each note out clearly as Brian May's finger-picking arpeggios bounce merrily from side to side – a stereo effect that's completely lost on single speakers like the HomePod. The SP3 packs a punch, too – it's loud enough to annoy the neighbors at around 60% of maximum volume, and will certainly work well for audio recording or video-editing work. It'll even handle a bit of party music as well – although that's where the lack of digital features might start to feel a bit limiting, especially if you're streaming your playlists from Apple Music or any other streaming service. **CLIFF JOSEPH**



The SP3 provides a compact but powerful stereo speaker system that's ideal for desktop use.

"IT'S LOUD ENOUGH TO ANNOY THE NEIGHBORS AT AROUND 60% OF MAXIMUM VOLUME"



The dock can supply up to 96W of power to a laptop while powering USB devices.

OWC 11-Port Thunderbolt Dock

A compact, fast Thunderbolt dock

\$229.99 From www.owc.com

Features Create 3 independent daisy chains; 31.5" Thunderbolt cable included; 96W charging power
Needs Apple silicon M1 or M2 Mac, Intel Mac with Thunderbolt 3 (check site for detailed model support)

OWC'S LINEUP OF Thunderbolt docks continues to grow with the 11-port model, which is a little more compact and portable than some of its siblings while still offering a good selection of ins and outs. Shipping with a 135W external power supply, it is able to provide up to 96W directly to your laptop through its host Thunderbolt 4 port, which also carries data. Also on the front of the dock you'll find a 3.5mm headphone jack, USB 2 port and an SD card slot with up to 312MB/s transfer speeds.

The rear panel sports three further downstream Thunderbolt 4 ports that can supply 15W power each and have the same 40Gbps speed as the front port. Though Thunderbolt 4 is only included with some of the very latest Mac models, Thunderbolt 3 offers essentially the same theoretical speeds. There's no HDMI port on the dock, though you can add an adapter if you wish. Also on the rear are three USB 3.2 ports with up to 10Gbps speed and a moderate 7.5W of power, which is decent for connecting older devices.

OWC notes that it has designed the architecture so that you can create three "branches" on the Thunderbolt bus, meaning you can remove daisy chained devices from one chain without disrupting the others. It also says you can connect multiple bus-powered SSDs to the dock without sacrificing performance, and indeed this worked well in practice. Last but not least a Gigabit Ethernet port is provided for networking at much higher speeds than most Wi-Fi allows.

In testing the dock performed very well and while Thunderbolt speeds were short of the theoretical maximum — a known issue with Macs for various technical reasons — they were more than respectable, making editing 4K video from an external SSD while hooked up to a second monitor a breeze. Connecting multiple devices, some requiring power, was a smooth experience, with the dock unobtrusive on the desk. For most users, this dock will prove a useful addition for expanding whatever model of Mac you own. **HOLLIN JONES**

THE BOTTOM LINE

With plenty of power and more than respectable speeds, this dock will prove a great companion for any Mac.

- Good selection of USB
- Up to 135W total power
- Fast transfer speeds
- Host port on front face

GREAT ■ ■ ■ ■ ■

No Man's Sky

A world of infinite exploration finally finds its way to Mac

\$59.99 (on Steam) From <https://hellogames.org>

Needs macOS 12.3 or later, 64-bit processor, 8GB RAM, 15GB storage space

PLAYING GAMES ON a Mac can be both a blessing and a curse. The Mac has fewer titles than other formats, and the games we do get are often released years later. Take *No Man's Sky*. It was released with great fanfare on Windows and the PlayStation 4 back in 2016. It's since appeared on the PS5 and Xbox Series X and S in 2020, and even the Nintendo Switch in 2022. Yet it didn't appear on the Mac — a system that's more than capable of running it — until 2023.

Yet being this far behind has its advantages. On its initial release, *No Man's Sky* was plagued with problems, disappointing both critics and gamers. Seven years on, the bugs have been fixed, the features installed, and the game as a whole polished and expanded.

The game takes place in a procedurally generated, completely open universe. If you can see it, you can go there. There are 18 quintillion planets to explore, but don't try to visit every one. That would take an estimated 585 billion years.

Exploration and discovery are its key themes. As you travel the universe, you find new life forms, valuable minerals and exotic flora and fauna, all of which you can record as you go. Precious resources you collect can be traded in for upgrades to your equipment and your space ship.



A key feature is resource management. As you progress, you learn to build new equipment using what you collect.



SO, WAS IT WORTH THE WAIT?

To be honest, it's mixed news. *No Man's Sky* clearly shows the danger of using procedurally generated environments instead of writing them by hand. It may make for a potentially huge game, but it's often at the expense of depth. There may be more planets to explore than you could handle in a lifetime, but they frequently feel way too alike. Similar gravity, similar mineral deposits, similar plant life and wild creatures that differ only aesthetically.

You can follow the game's storyline, or you can ignore it and just explore, treating *No Man's Sky* as a simulated life in space rather than a game to be completed. The storyline itself is thin, but living your best life in space is satisfying.

No Man's Sky has been compared to *Elite* and its sequels, but perhaps a better comparison would be *Animal Crossing*. It gives you a world to live in and enjoy, with "completing" the game of secondary importance. It's something you may come back to again and again if you enjoy it. Just don't believe the hype. **IAN OSBORNE**

Finding and logging new creatures is an interesting part of the game.

THE BOTTOM LINE

An interesting and rewarding experience, but only if you focus on the journey instead of the destination.

- 👉 Huge amount to explore
- 👉 Visuals and acoustics very good
- 👎 Weak storyline
- 👎 Planets can feel samey

GOOD ■ ■ ■ ■ ■ ■ ■ ■ ■ ■



The iPhone 15 has finally dropped the old model's notch in favor of the Dynamic Island — and it's much better for it.



The iPhone 15's dual camera system can shoot at up to 48MP, although Night and Flash photos are saved at 12MP.

instead of Lightning, although this time data transfer speeds are limited to 480Mbps (USB 2.0), rather than the 10Gbps speeds of the iPhone 15 Pro.

The iPhone 15 offers 128GB of storage for \$799, 256GB for \$899 and 512GB for \$1,099 — although if you're thinking of spending that kind of money, you might want to consider an iPhone 15 Pro with 256GB of storage as it costs the same.

PERFORMANCE

As you'd expect from a phone that sports last year's "pro" chip, the iPhone 15 is no slouch when it comes to performance. Apps launch quickly and run smoothly, thanks to the A16 Bionic's six-core CPU and five-core GPU, even if it can't quite scale the giddy heights of the A17 Pro chip in the iPhone 15 Pro.

Of all the new features, the camera is the thing that'll be of most interest to new buyers, but things here are a little complicated. That's because, in normal usage, the iPhone 15's Photonic Engine combines a 12MP low-light image with a 48MP super-resolution one to give you a more finely balanced 24MP result; while the 2x Telephoto "lens" uses a bit of photo trickery to cut a 48MP capture down to a 12MP one when you use the zoom. To capture a full-res image at 48MP, you'll need to head to Settings > Camera Formats and switch on Resolution Control to use the HEIF Max setting when using the Main camera at 1x.

Most interestingly, Portrait mode now enables you to adjust the level of bokeh (blur) when taking pictures of friends, pets or pot plants by tapping the "f" icon in the top-right corner, then swiping the focal length slider above the shutter button left or right. You can even change the focal length after shooting if you want. Very cool, and very clever. Just like the iPhone 15 itself. **ROB MEAD-GREEN**



You can easily adjust the focal length when taking photos in Portrait mode — and even shift the focus after shooting.

iPhone 15

How do we rate the key upgrades?

From \$799 From www.apple.com

Features 6.1-inch Super Retina XDR display (2,556 x 1,179 pixels), A16 Bionic chip, 128/256/512GB of storage, Wi-Fi 6, Bluetooth 5.3, 5G, USB-C port, Dynamic Island

WHILE APPLE'S "PRO" iPhones always get the best new features, those features eventually "trickle down" to the rest of us — and that's the case with this year's iPhone 15. Available in four pastel shades (Blue, Green, Yellow and Pink), plus Black, the iPhone 15 now sports the A16 Bionic chip from last year's iPhone 14 Pro and gets its Dynamic Island too — the animated area around the TrueDepth camera on the front that's used to display useful info, notifications and more.

Interestingly, this year's new iPhone also has a much-improved dual camera system with a 48MP Main camera for the first time, plus a 2x Telephoto option. Like the iPhone 15 Pro, the iPhone 15 also gets a USB-C port

THE BOTTOM LINE

The iPhone 15 is keenly priced and has some neat new features — that's a win!

- Hey, Dynamic Island!
- Improved cameras
- A16 is still plenty fast
- Hobbled USB-C

GREAT ■■■■■



Improved adventure features in watchOS 10 are easier to read in sunlight thanks to the brighter display.



The overall design of the Apple Watch Ultra 2 remains unchanged – aside from the use of recycled titanium.

Apple Watch Ultra 2

A modest update – it's still the ultimate Watch

From \$799 From www.apple.com

Features 49mm case size, Apple S9 processor, Always-On Retina display, dust-resistant to IP6X, water-resistant to 100m, dual-frequency GPS

THE APPLE WATCH Ultra 2 is still Apple's biggest and longest-lasting smartwatch, targeting outdoor sports enthusiasts with a rugged design and more advanced GPS tech than the flagship Apple Watch Series 9. There are few upgrades over the original Ultra, these being a brighter display, a complication-packed watch face, and a faster S9 processor.

The Ultra 2 still costs \$799, with a choice of Ultra-specific band, braided charging cable, and Cellular support. Its also has the same flat 49mm display, protruding right-side button array, and orange action button on the left.

SHINE BRIGHT LIKE AN ULTRA

The screen is brighter, up to 3,000 nits from 2,000 nits, a useful improvement in bright outdoor conditions. A bigger design change is the use of 95% recycled titanium, a major improvement from the virgin material used in the original. With the re-sourced Trail Loop and Alpine Loop, two of the best Apple Watch bands, the Apple Watch Ultra earns the carbon neutral certificate.

The S9 SiP is a major upgrade. Apple claims it's 25% more efficient, built on 5.6 billion transistors with 30% faster GPU animations and 4-core neural engines that enable

machine learning twice as fast. The processor makes the bright display possible without sacrificing battery life, and it also improves the Siri experience. Siri computing now takes place all on-device, resulting in faster responses and some offline functionality. It also enables the double-tap gesture. So, if you're hanging off a cliff, you could theoretically answer calls and open apps by tapping your index finger and thumb of your watch hand together. Users can conveniently double-tap to scroll through the Smart Stack, control music playback, use the camera remote app and more, too. And if you've misplaced your phone, the upgraded ultra-wideband (UWB) chip in the Apple Watch Ultra 2 can give you directions to its location. Sadly, this only works for those with an iPhone 15.

Even with a brighter display, the watch gets 36 hours of battery life with normal use. In low power mode, it gets up to 72 hours of battery, up from the 60 hours of the original. Still, this falls quite short of the battery capabilities of most other sports watches.

ADVENTURE UPGRADES

Thanks to watchOS 10, the Ultra 2 sees some enhancements to its sporting credentials, including the ability to connect to a range of cycling sensors over Bluetooth to see your power output, as well as mirrored workout metrics on the watch. The built-in Depth app gets an upgrade, too, with a record of all dives.

The Ultra 2 has the same compass app with track-back features, but now it displays current elevation in real time and shows waypoints in a 3D view based on relative elevation. For hiking workouts, there's a more detailed topographic map that flags points of interest. Nearby trail information appears upon starting a hike, providing insights on the trail length, type, and difficulty.

In terms of safety, the compass app will also detect two new waypoints: your Last Cellular Connection (or last reception location) and Last Emergency Call Waypoint, which will lead you to a place where an emergency call can be made on a carrier network. If you need instant help, the Siren app rings an 86-decibel alarm that can be heard up to 600 feet away.

Watch Ultra 2 makes enough incremental upgrades to justify the \$799 price. The future-proofing enabled by the new S9 chip, added convenience of the double-tap gesture, and extra brightness make for a strong second-generation attempt. **KATE KOZUCH**

THE BOTTOM LINE

Pre-existing Ultra owners look away, but for everyone else the best Apple Watch just got even better.

- ▶ Super bright display
- ▶ S9 SiP enhancements
- ▶ Carbon neutral
- ▶ Needs longer battery life for multi-day adventures

EXCELLENT ■■■■■

ESET Cyber Security 7

Security and anti-malware

\$39.99 (Pro \$49.99) per year From www.eset.com

Needs macOS 10.15–13

THREATS FROM MALWARE, phishing, and other online crimes keep growing.

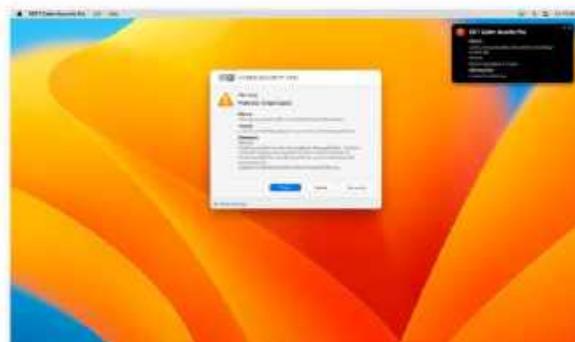
Although security protection built into macOS has improved greatly over the last couple of years, you may feel that more is required to keep on top of those increasing risks. ESET Cyber Security claims to provide real-time protection against malicious software, including potentially unwanted programs (PUPs) as well as real nasties, together with protection from phishing and other attacks over the web and in email messages.

To be of any true value, security software needs to be complicated. ESET Cyber Security consists of an app with helpers and two system extensions, one of which uses the built-in Endpoint Security system, while the other monitors network connections

to protect web and email. Those could make installation a nightmare, but ESET's staged onboarding support turns it into a series of steps negotiating each obstacle put in place by macOS, such as authorizing the system extensions in Privacy & Security settings and giving its components Full Disk Access.

EXTRA PROTECTION

ESET's presence is most noticeable for the first few minutes following startup, when your Mac is already busy maintaining its Spotlight indexes and making its initial backup. On a faster Apple silicon Mac you'll only notice this if you follow CPU History in Activity Monitor, but the app's process that scans files makes significant use of Efficiency cores. Overall, its protection imposes remarkably little overhead and remains



All nine malware samples were detected and removed promptly.

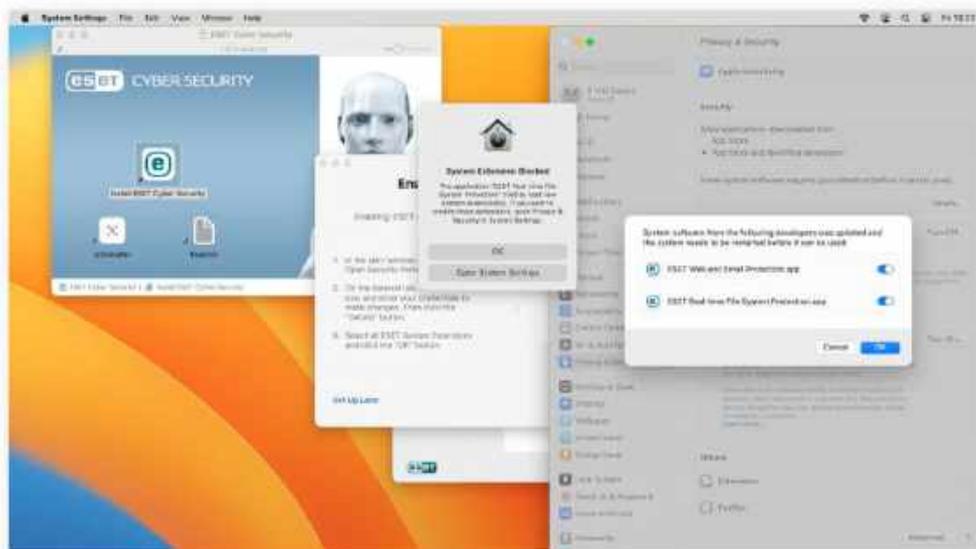
Installation guides you gently through its complications.

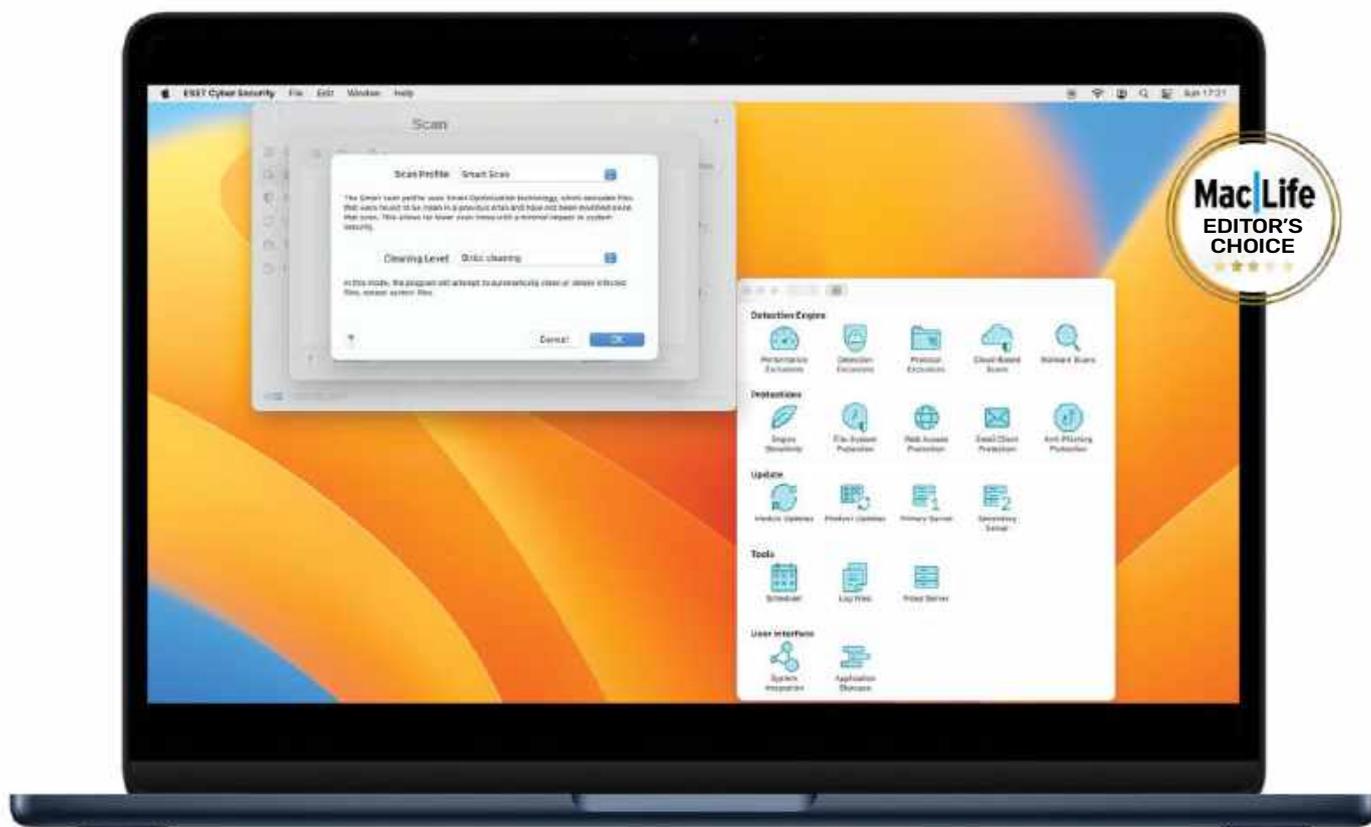
unobtrusive throughout. Automatic scans for malicious software are made once a week, although you can opt for a custom schedule or run them on demand whenever you wish.

Those can extend to your whole Mac or target individual folders or files. ESET Cyber Security also monitors what's happening with your Mac's files. Try unzipping a downloaded archive and it goes straight in to check whether its contents are malicious. This is a significant difference from macOS: although its XProtect tools scan daily, Gatekeeper checks are only run when you try to open apps and files, not when they're just being saved. If you want this more proactive protection, you'll need a product like ESET Cyber Security.

USER FRIENDLY

It has extensive settings to exclude items from its Detection Engine, adjust its sensitivity, and that of other protections. You can also allow, block, and exclude addresses from web access. The app keeps its own log records, covering any





malware detections it has made, filtered websites, the results of its scans, and other events including updates to the app and its Detection Engine. Help is online and consists of a detailed guide to the software, with access to ESET’s knowledge base and to customer support.

MALWARE DESTROYER

ESET’s single license covers both macOS and Windows 10, while its Pro version extends to cover Android phones and tablets. In addition, the Pro version adds a configurable software firewall, removable media blocking, parental controls, more extensive scanning of websites and email, and monitors for macOS updates.

To assess its performance against known malware, we pitched the Pro version of ESET Cyber Security, using the same scanning engine, against a Ventura 13.4 virtual machine packed with nine well-known and recent types of malware,

supplied courtesy of the Objective–See Foundation. To ensure that macOS didn’t provide any help, we disabled all built-in security, including Gatekeeper protection. Samples used included CloudMensis, DazzleSpy, Genieo, JokerSpy, KeySteal, MacKeeper, RustBucket, Shlayer, and XCSSET. In every case, ESET detected them as soon as they were unzipped from their encrypted archives and removed all trace of them, performing perfectly.

ESET Cyber Security is a highly effective solution in the

Each feature has options to balance security with intrusion.

For a higher cost, the Pro version brings even more features.

battle against malware, phishing, and other attacks over the web and in email messages. It delivers that with a small footprint and without annoying notifications — just quietly getting on with its job. The biggest question, though, is whether you need to pay its subscription, and that all depends on your assessment of risk and whether the protection built into macOS is sufficient for your needs. If you do decide that you want enhancements, then ESET Cyber Security or its Pro version should be ideal.

HOWARD OAKLEY

THE BOTTOM LINE

Excellent enhancements to security built into macOS without hitting performance, if you need them.

- ➕ Early detection of malware
- ➕ Low use of system resources
- ➕ Unobtrusive in normal use
- ➕ Guided installation process

AWESOME ■■■■■





Anker Soundcore Liberty 4 NC

Affordable wireless buds that pack a punch

\$99.99 From <https://us.soundcore.com>

Features Adaptive noise canceling, 6 microphones, wireless charging case, sound personalization, LDAC codec, 11mm drivers, IPX4 water-resistance

Up to 50 hours of charge in the case means no more battery anxiety.

ANKER'S LATEST WIRELESS earbuds pack a lot of functionality into a very affordable product. Available in a choice of colors, there's an impressive ten hours of charge in the buds and a total of 50 hours in the case, with a ten-minute quick charge providing up to four hours of playback.

Pairing is simple and along with the latest Bluetooth 5.3 standard, you also get multipoint connection so the buds will remember multiple devices without having to be re-paired. The Hear ID 2.0 system lets you run tests to tailor the sound to your particular tastes and store the settings; some will find this useful, though we found the user-customizable EQ a more satisfactory way to get things sounding how we liked.

Six microphones power the adaptive active noise canceling and there's a good selection of options here too, with five levels of canceling up to 98%, two transparency modes and four modes for different kinds of transport. Set to the higher levels, the noise canceling system

does an excellent job of isolating you from the outside world. Unlike Anker's other buds, this system adapts to both your ears and the external environment in real time. An AI system helps to reduce background noise during voice calls, with effective results. Plus, the buds are lightweight, secure, and comfortable to wear for long periods.

Most buds in this price range sacrifice either battery life or decent noise canceling, but the Liberty 4 NCs triumph on both counts. It's true that the plastic case doesn't have the same high-end feel of a pricier metal one, but build quality is still more than acceptable. They also lack the spatial audio features of some other models, but this is not something many people will particularly miss. With a pleasing sound, excellent noise canceling, and class-leading battery life, these earbuds are easy to recommend. **HOLLIN JONES**

THE BOTTOM LINE

Great-sounding and fully featured wireless earbuds at a very attractive price.

- ▶ Excellent battery life
- ▶ Effective ANC
- ▶ Customizable sound
- ▶ Affordable pricing

AWESOME ■■■■■

Under My Roof

Catalog your belongings and more!

Free (IAPs, \$3.99/month, \$24.99/year) From <https://binaryformations.com>

Needs macOS 11.1 or later, iOS/iPadOS 14.0 or later



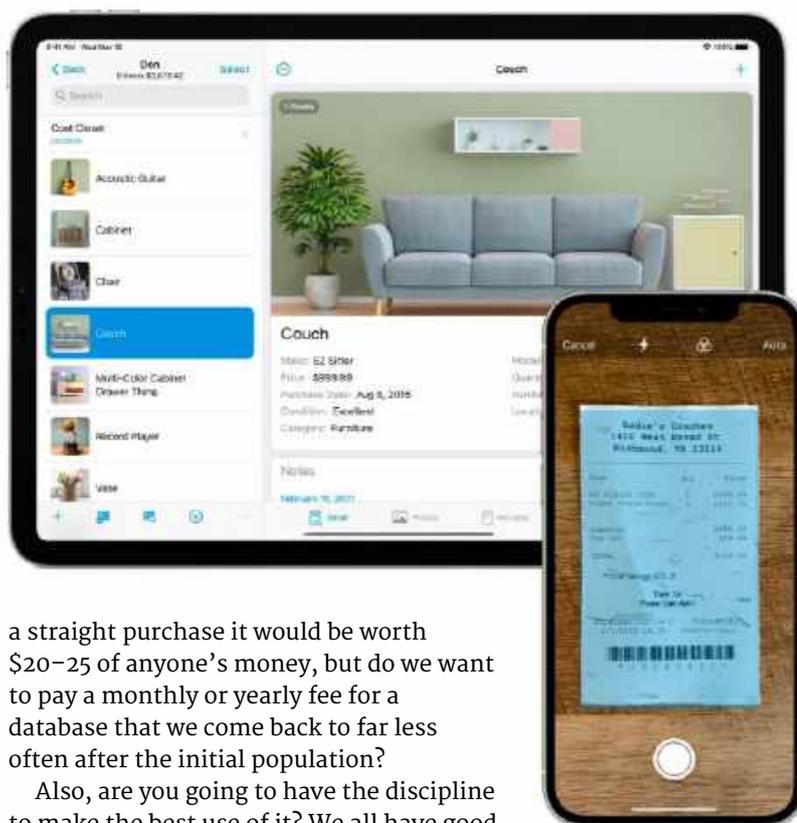
UNDER MY ROOF is a household property database that's free to download, but limited to indexing ten items. You can remove this limitation with a yearly or monthly subscription, and if you cancel you can still access inventory you've already added to the app. It's available for the Mac, iPad and iPhone, with your details syncing over iCloud and a single subscription covering the app on all platforms.

Index your household possessions, recording information such as make, model, price, condition, quantity, location and more. You can add a photograph of the item in question, and usefully, you can also include pictures of the purchase receipt and/or warranty information, and attach documents such as electronic instruction manuals. You can also index your house itself, including details such as its purchase date and price, square footage, the year it was built and more. You can even record routine maintenance and have the app notify you when regular checks or repairs are due. Under My Roof is nothing if not comprehensive.

BUILD YOUR INVENTORY

It's attractive too. Individual cards are clear and well laid out, and can be sorted into rooms if you wish. The interface is clear, and when you buy new items (or if you still have the box) you can bypass much of the typing by simply scanning the barcode with your iPhone. You can also use your mobile device's camera to scan paper documents such as contracts and rental agreements. As a functioning app, we've little here to criticize at all. Maybe the search function could be a little better tuned, but that should improve over time.

We do have a couple of reservations though. Firstly, the subscription model. As



a straight purchase it would be worth \$20–25 of anyone's money, but do we want to pay a monthly or yearly fee for a database that we come back to far less often after the initial population?

Also, are you going to have the discipline to make the best use of it? We all have good intentions, especially after moving house, but building and maintaining an inventory such as this takes time and patience. Are you going to keep it up to date, adding new products and purchases as soon as you make them? Or is your enthusiasm likely to whither before you've even finished indexing your house, with the app falling into disuse but still costing you a subscription fee as you forget to cancel?

If Under My Roof sounds like the sort of thing you'd find useful, and you're confident you can update it often enough to make it worthwhile, you won't be disappointed. But if you're not sure you can go the distance with it, maybe subscribe for a month or two and set a Calendar alert to remind you to unsubscribe if it's no longer used. **IAN OSBORNE**

You can add a comprehensive amount of detail about your belongings.

THE BOTTOM LINE

A solid, attractive app that might be too much like hard work to justify a subscription.

- 👍 Excellent user interface
- 👍 Comprehensive and detailed
- 👍 Very Apple-like
- 👎 Why the subscription model?

GOOD ■ ■ ■ ■ ■

Best of the best

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

> HARDWARE				
CATEGORY	PRODUCT	WEB	PRICE	ISSUE
MESH ROUTER	ASUS ZenWiFi XT9	asus.com	\$449.99	#201
4K USB-C MONITOR	BenQ EW3280U	benq.com	\$799.99	#169
THUNDERBOLT DOCK	CalDigit Thunderbolt Station 4	caldigit.com	\$379.99	#199
KEYBOARD	Cherry KW 9100 Slim for Mac	cherry-world.com	\$59.99	#208
PORTABLE PRINTER	Epson WorkForce WF-110W	epson.com	\$299.99	#185
PORTABLE HDD	Toshiba Canvio Flex 2TB	storage.toshiba.com	\$79.99	#197
NAS DEVICE	Asustor Flashstor 6 FS6706T NAS	asustor.com	\$449	#210
WIRELESS CHARGER	Belkin BoostCharge Pro Portable	belkin.com	\$59.99	#197
DESKTOP SPEAKERS	Creative Pebble Pro	us.creative.com	\$59.99	#204
IN-EAR HEADPHONES	Nothing Ear 2	us.nothing.tech	\$149	#209
SECURITY CAMERA	EufyCam 2C (two-pack kit)	eufylife.com	\$239.99	#171
SMART SPEAKER	Sonos Era 300	sonos.com	\$449	#212
OVER-EAR HEADPHONES	Sony WH-1000XM5	sony.com	\$399.99	#197
AIRPLAY SOUNDBAR	Sonos Beam	sonos.com	\$449	#187
WEBCAM	AnkerWork B600 Video Bar	ankerwork.com	\$219.99	#191
PHOTO PRINTER	Liene 4x6 photo printer	amazon.com	\$136.99	#190
PORTABLE BATTERY PACK	Anker 533	us.anker.com	\$49.99	#198
MOBILE DOCK	Kensington 8-in-1 USB-C Mobile Hub	kensington.com	\$77.55	#190
OFFICE CHAIR	Branch Verve	branchfurniture.com	\$549	#201
MOUSE	Logitech MX Master 3S	logitech.com	\$99.99	#198
ACTION CAMERA	GoPro Hero 11 Black	gopro.com	\$500	#202
DESKTOP MICROPHONE	Cherry UM 9.0 Pro RGB	cherry-world.com	\$139.99	#209
PORTABLE DAC	iFi Go Blu	ifi-audio.com	\$199	#189
PORTABLE SSD	Crucial X8	crucial.com	\$219.99	#203
THUNDERBOLT 4 HUB	Satechi Thunderbolt 4 Slim Hub	satechi.net	\$199.99	#205
CD/DVD DRIVE	NOLYTH External DVD Drive	amazon.com	\$39.99	#204
TRAVEL CHARGER	Mophie 3-in-1 travel charger	zagg.com	\$149.95	#202
IPHONE GAME CONTROLLER	Razer Kishi v2	razer.com	\$99.99	#203

> iOS/iPadOS APPS

CATEGORY	PRODUCT	WEB	PRICE	ISSUE
TO DO (PRODUCTIVITY)	 Things 3	culturedcode.com	\$9.99	#194
WRITING	 Scrivener	literatureandlatte.com	\$19.99	#138
EMAIL	 Spark	sparkmailapp.com	Free	#190
PHOTO EDITOR	 Pixelmator Photo 2	pixelmator.com	\$4.99	#193
VIDEO EDITOR	 Final Cut Pro for iPad	apple.com	\$4.99/month	#212
CAMERA	 Obscura 3	obscura.camera	\$9.99	#196
RSS READER	 Reeder 5	reeder.app	\$4.99	#176
DESKTOP PUBLISHING	 Affinity Publisher 2	affinity.serif.com	\$19.99	#206
NOTE-TAKING	 Notability 10	gingerlabs.com	\$8.99	#174
MIND-MAPPING	 MindNode 7	mindnode.com	\$14.99	#184
DOCUMENT SCANNER	 Genius Scan 6.0	thegrizzlylabs.com	Free (IAPs)	#182
CALENDAR	 Fantastical 3	flexibits.com	\$4.99/month	#198
FITNESS	 Gentler Streak	gentler.app	Free (IAPs)	#199
SHOPPING	 Grocery 3	smartgrocery.app	Free	#198
GRAPHICS	 Procreate for iPad	procreate.art	\$9.99	#196

> macOS APPS

CATEGORY	PRODUCT	WEB	PRICE	ISSUE
TO DO (PRODUCTIVITY)	 Things 3	culturedcode.com	\$49.99	#194
WRITING	 Scrivener	literatureandlatte.com	\$49	#200
EMAIL	 Spark	sparkmailapp.com	Free	#190
IMAGE EDITOR	 Pixelmator Pro 3	pixelmator.com	\$49.99	#208
VIDEO EDITOR	 Wondershare Filmora	wondershare.com	\$109.99	#202
SCREEN CAPTURE	 ScreenFlow 9	telestream.net	\$129.00	#164
MUSIC CREATION	 Logic Pro	apple.com	\$199.99	#141
PASSWORD MANAGER	 Secrets	outercorner.com	\$19.99	#188
DESKTOP PUBLISHING	 Adobe InDesign	adobe.com	\$20.99/month	#162
BACKUP	 Carbon Copy Cloner	bombich.com	\$39.99	#136
VIRTUALIZATION	 Parallels Desktop 18	parallels.com	From \$99.99	#201
SECURITY	 ESET Cyber Security 7	eset.com	\$39.99/year	#213
NOTE-TAKING	 Agenda	agenda.com	Free	#204
AUDIO AND VIDEO CONVERTER	 Wondershare UniConverter	wondershare.com	\$49.99/year	#203
VIRTUAL PRIVATE NETWORK	 NordVPN	nordvpn.com	\$11.95/month	#186

NEW!



next month

Bedroom

Bedroom

Unlabeled

Unlabeled

Shopping 38

Bread

Pasta

SECRETS OF SONOMA

There's more to your Mac than meets the eye – find out what you're missing with these secrets for the latest version of macOS



ALSO INSIDE...

The Ultimate Christmas Gift Guide

High-tech treats for any Apple fan – or why not spoil yourself!

Make the most of the TV app

Enjoy your favorite films and shows on your Mac, iPhone and iPad – we show you how

...and much more!

Contents subject to change

ISSUE 214
on sale
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Volume 17, Issue 12

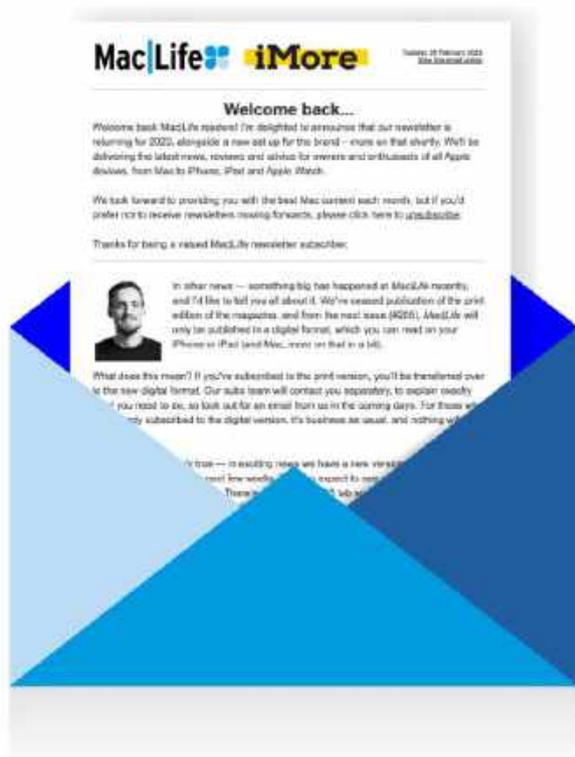
MACLIFE (ISSN 1835-4010) is published 13 times a year, monthly plus a Spring issue following the April issue, by Future US, LLC, 130 West 42nd Street, 7th Floor, New York, NY 10036, USA
Website: www.futureus.com.

Subscriptions do not include newsstand specials.
Future US, LLC, also publishes **Maximum PC** and **PC Gamer**.
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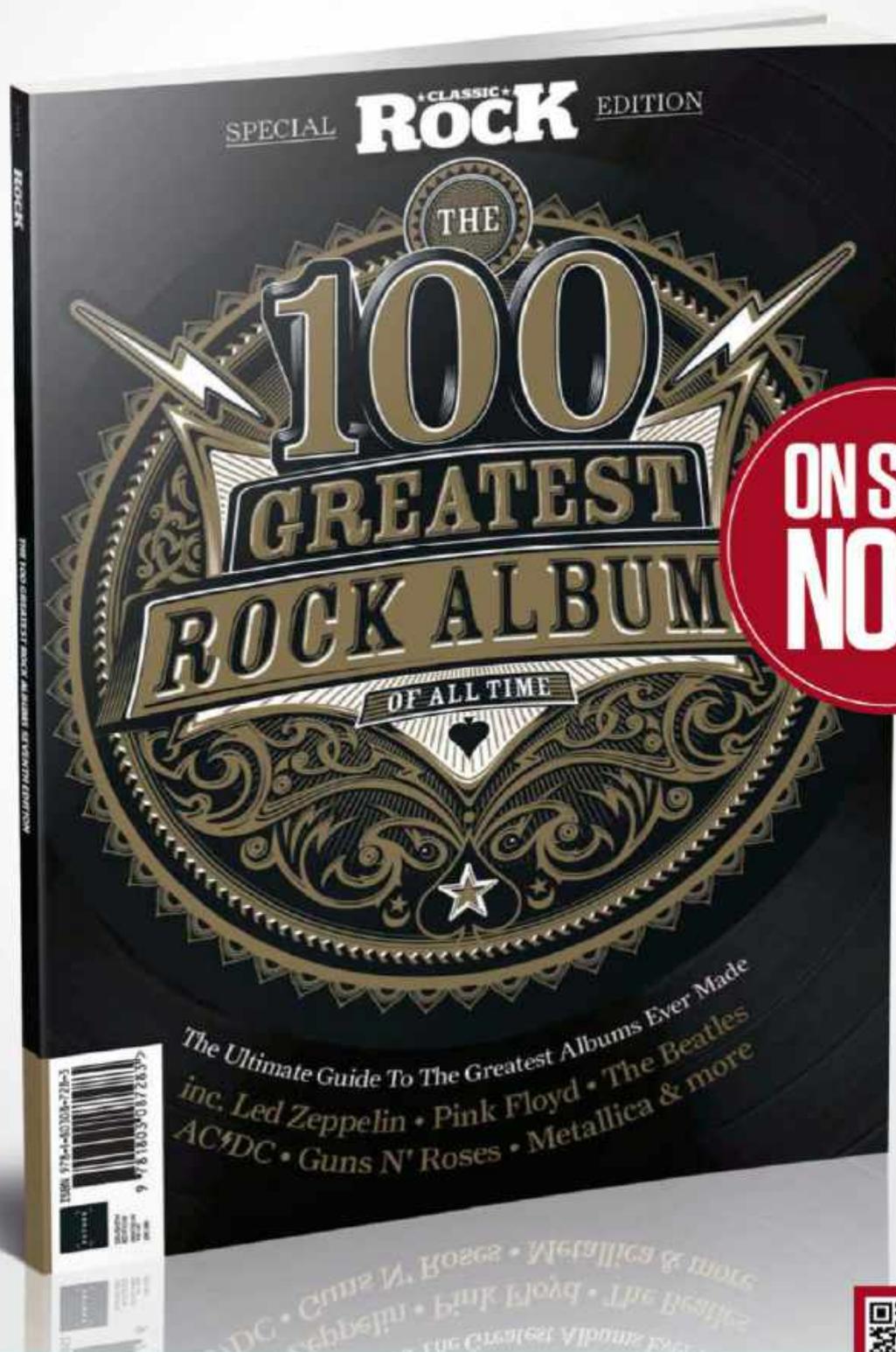
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