

Apple reveals waterproof iPhone 7 with new camera ... and no headphone jack

New colours, faster processor and longer battery life for the smaller iPhone 7, and dual-cameras on the back for the iPhone 7 Plus - but as predicted, the headphone jack is no more

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Apple has unveiled the iPhone 7 and 7 Plus, its next generation smartphones, which have a similar aluminium look but now waterproof with new insides, new pressure-sensitive home button, new dual-camera features and no headphone socket.

Apple's senior vice president of worldwide marketing, Phil Schiller, took to the stage at the Bill Graham Civic Auditorium in San Francisco to announce the smartphone, the first to launch with the company's latest iOS 10 software for iPhone and iPad with improved notifications and messaging features.

The biggest change to the new iPhone, however, is the removal of the universal 3.5mm headphone jack, which used to be cut into the bottom of the smartphone and is common to almost all forms of audio-producing electronics. Instead, Apple hopes users will embrace the Lightning port, which is commonly used for power and file transfers, for audio, or wireless headphones such as those made by Apple's Beats headphones brand.

Lightning connector headphones and a Lightning-to-analogue adapter will be included with the new iPhone.

Schiller said: "Apple EarPods are the most popular headphones in the world. Now we're moving them to Lightning. Why? Because it provides digital audio, power, and many other advantages that are simply not possible over an analogue connection.

"The analogue headphone jack has been with us for a very long time. But the reason to move on is courage. The courage to move on and do something new that betters all of us."



Apple's new in-ear wireless earphones, AirPods. Photograph: Stephen Lam/Getty Images

Apple also announced a new set of its EarPod in-ear buds, this time without the cable, called AirPods, which it hopes will ease the transition from the headphones port.

Bluetooth headphones are widely available in a range of prices and capabilities, and have become popular in the past two years, but truly wireless in-ear buds have struggled to overcome the technological constraints of short battery life and weak connectivity. Several new models released this year from companies such as Motorola, Bragi and Samsung hope to solve those problems.

Phil Schiller, senior vice president of worldwide marketing, said: “Up until now no one has taken on the challenge of fixing the things that are difficult to do in the wireless experiences so we can all enjoy them. So that’s what we’re doing with the Apple AirPods.”

AirPods will cost \$170 and be available in late October. Apple’s headphone brand Beats will also release new wireless models.

Faster A10 Fusion chip

As with all previous iPhone updates, the iPhone 7 and 7 Plus have faster, more powerful processors - the Apple A10 Fusion replacing the A9 from last year’s iPhone 6S - with the outside of the new smartphones seeing subtle changes in design.

The new quad-core A10 Fusion processor will have 120 times the performance of the original iPhone and Apple says it will also extend battery life through improved power efficiencies.

Apple estimates that the iPhone 7 will deliver, on average, two more hours of battery life than the iPhone 6S.

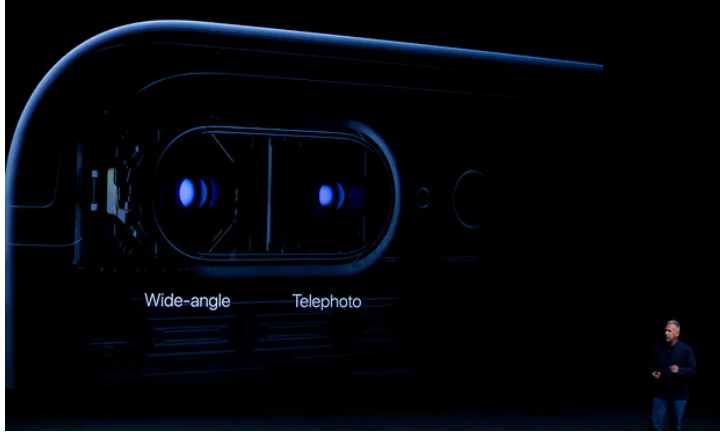
The iPhone 7 comes in a new gloss black colour and has hidden the previously visible antenna lines on the back marking a couple of small visual tweaks to the new phones over predecessors. The new iPhone is also now waterproof to IP67 standards, bringing it into line with rivals from Samsung and others.

The home button has also been tweaked to use a similar pressure-sensitive technology as Apple’s MacBook trackpads and the 3D touch screen of the iPhone 6S, which simulate movement using a small vibrating sensation when pressed without actually depressing. The new button will allow further gesture control and could pave the way for the button to be removed entirely in subsequent version of the smartphone.

For many, the home button has been one of the weak points of the iPhone, requiring replacement which has proved tricky due to the fingerprint sensor and secure chip hidden

underneath.

Plus dual-camera



The iPhone 7 Plus will have two cameras on the back. Photograph: Monica Davey/EPA

The iPhone 7 will also have an improved camera system to keep up with rivals. The iPhone used to have the best camera in the business, but the iPhone 6S faced stiff competition from not only Samsung, but HTC, LG and rising star Chinese firm Huawei.

The camera now has a faster, larger 12-megapixel sensor, a faster f1.8 lens for better low-light photography and an enhanced true-tone flash. All versions of the iPhone will now have optical image stabilisation, not just the larger Plus models.

The update will see a new dual-camera fitted to the back of the larger iPhone 7 Plus - one 12-megapixel telephoto lens and one 12-megapixel wide-angle lens - similar to those fitted to LG's G5. Both Huawei and LG have released smartphones in the last year using two cameras on the back to varying degrees of success.

Apple allows optical zoom now up to 2x with both lenses, using digital zoom to go beyond. A free update will also allow users to blur the background using both lenses to judge distance and create a bokeh effect, similar to software effects produced by rivals.

Schiller said: "On a dSLR you can move lens elements to zoom with a large lens. But on a phone you can't do that. So we're using two cameras and two lenses to do the same. The quality of the zoom, even with software zoom, is so much better than before we decided to push it up to 10x."

The iPhone 7 will be available in four colours starting on 16 September at \$649 for 32GB of storage - increased from last year's 16GB base storage with 128GB and 256GB options. The iPhone 7 Plus will cost from \$769, again with 32GB of storage. The jet-black models will be 128GB and 256GB variants only.

Last year's iPhone 6S, 6S Plus and the iPhone SE will be still available, now starting with 32GB of storage. The iPhone upgrade programme will also be made available in the UK.

Tick, tock, tock?

Until now, Apple's smartphones have had a complete redesign every two years according to its traditional release schedule, with improved processors and a few new features every other year making up the "tock" in the cycle. Intel and others also use the tick, tock product cycle, traditionally displaying improved battery life on the tick.

The iPhone 6 was the tick, which means the iPhone 6S was the tock. The iPhone 7's use of the similar industrial design of previous iPhones plus new colours bucks the trend, meaning the new iPhone could be considered as a second-such tock. Whether improved specifications and a few new features, some of which will come to 2015's iPhone 6S through software updates, will be enough to continue to woo customers remains to be seen.

"Apple's biggest challenge is how to manage its large install base - the biggest in the industry - and convince them to replace their smartphones and spend more on services and in the company's ecosystem," said Francisco Jeronimo IDC's research director for European mobile devices. "As we approach 80-85% smartphone penetration, it's no longer about people buying their first smartphone but attracting customers from rivals."

In the UK, Apple is fighting a war with chief rival Samsung over the 20% of users that switch between operating systems. It scored the most switchers with the iPhone 6, which introduced new screen sizes, but now it must attempt to convince users to upgrade from previous iPhones.

Does Apple really think we're ready to ditch the headphone jack?

The Chinese are coming. Samsung is steady. Apple's iPhone 7 has to impress

Bose QC35 wireless headphones: simply unrivalled noise cancelling

Marshall Major II Bluetooth headphones: they last for ages and sound great too

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