

# Why Apple's AirPower Wireless Charger Is Taking So Long to Make

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Engineers hoped for June launch; company aims for September

When [Apple Inc.](#) introduced AirPods earbuds in 2016, chief designer Jony Ive hailed the beginning of a new "wireless future." The company's devices would connect and charge without fiddly white cords and unsightly plugs and sockets.

The next step was wireless charging for the iPhone, the ability to drop Apple's flagship product on a charging mat and juice it up via a process known as induction. This accessory is taking longer to make due to a series of technical hurdles, slowing the company's wireless strategy and highlighting supply-chain challenges that have hampered product launches in recent years.



Phil Schiller announces the new AirPower charger in September 2017.

Apple said in September that the iPhone X and iPhone 8 could be charged wirelessly. It recommended charging hubs from Mophie and Belkin, an unusual move for the consumer-hardware specialist. Apple also announced its own AirPower charger, but said it wouldn't be released until 2018.

Since then, AirPower hasn't been publicly discussed by Apple. Company engineers have been toiling away to address problems. One challenge is making sure the charger doesn't overheat. Another is the complexity of the circuitry, according to people familiar with the device's development.

An Apple spokeswoman declined to comment. Unlike wireless chargers on the market today, the AirPower is designed to charge three devices simultaneously: an iPhone, Apple Watch, and AirPods with a still-to-be-released wireless charging case.



An AirPower charger

Apple also wants users to be able to place any of their devices anywhere on the charging mat to begin a charge. That ambitious goal requires the company to pack the AirPower with multiple charging sensors, a process that has proven difficult, the people said. The charger is based on custom charging technology, which it intends to

integrate with the Qi charging standard, the company said last year.

An executive at an Apple partner that manufactures third-party wireless chargers for iPhones, who asked not to be identified, said that the multi-device charging mechanism is challenging to build because it likely requires different sized charging components for the three types of devices, which would all overlap across the mat.

The AirPower charger is also more advanced than the current competition because it includes a custom Apple chip running a stripped down version of the iOS mobile operating system to conduct on-device power management and pairing with devices. Apple engineers have also been working to squash bugs related to the on-board firmware, according to the people familiar. They asked not to be identified discussing a product that hasn't been released yet.

The company plans to produce the charger with [Pegatron Corp.](#), which also builds some iPhones, according to a person familiar with the arrangement.

Apple didn't say when in 2018 it would release AirPower, but engineers hoped to launch the charger by June. The aim now is to put it on sale before or in September, according to one of the people. In recent months, some

Apple engineers have ramped up testing of the device by using it as their charger at the office, another person said.

“Hopefully, Apple learns a lesson to only announce products that are for sure shipping soon or immediately after announcing,” said Ben Bajarin, an analyst at research firm Creative Strategies. Still, he sees little impact in the long-term because the AirPower product is part of a much larger strategy that will develop over years, not months or quarters.

Apple designers eventually hope to remove most of the external ports and buttons on the iPhone, including the charger, according to people familiar with the company’s work. During the development of the iPhone X, Apple weighed removing the wired charging system entirely. That wasn’t feasible at the time because wireless charging was still slower than traditional methods. Including a wireless charger with new iPhones would also significantly raise the price of the phones.

Wireless accessories have become a key way for Apple to differentiate its products. The wireless synchronization of AirPods and the Watch with Apple’s other devices are compelling features. And the pricey accessories are only truly compatible with Apple devices, giving consumers more reasons to stick with iPhones and iPads over competing smartphones and tablets.



The first major new accessory to the iPhone launched under Cook was the Apple Watch. Announced in 2014, it was marketed to go on sale in early 2015. It ended up initially going on sale at the end of April in limited quantities, with more models being subsequently released in stores in May and June. When the wireless Apple Pencil came out in 2015, it was difficult to find in retail stores for several weeks.



The Apple Pencil

In 2016, when Apple launched AirPods, the company planned to release the accessory in October. The earbuds came out close to the December holiday season.

All of these accessories are part of Apple's Other Products business, which has been growing rapidly.

The AirPower charger should bolster this business -- when it finally arrives. The wait is another indication that Apple continues to struggle with last-minute engineering and manufacturing issues, particularly for first-generation accessories.

Chief Executive Officer Tim Cook has overseen the shipment of hundreds of millions of major devices since taking over as Apple's top executive in 2011 -- and for many years prior as chief operating officer. But nearly every significant new Apple accessory has faced delays in recent years.

A year later, the HomePod was announced in June 2017 for release in December of that year. It ended up going on sale this February.