

TEARDOWN OF IPHONE 6 PLUS



Article and Images by Rebekah Greenberg

HISTORY OF THE IPHONE

Steve Jobs had a vision of having a touchscreen device and a tablet computer combined back in 2004. At the time Apple had about 1,000 employees, including Jonathan Ive, to get started on this project. Originally the plan was to make a tablet, but then diverted the work towards creating a phone.

The first iPhone was announced on January 9, 2007 at a Macworld Conference. It was not until June of that year when it was released to the public. It sold around 1 million phones by Labor Day.

It has been nine years since Steve Jobs has passed, and there have been thirteen different models released of the iPhone since then. He passed away around the release of the iPhone 4s. However, he had a hand in the production of the iPhone 5 and 6.

Since 2007, there have been 24 different iterations of the phone from the first iPhone up until iPhone 11 Pro Max. There have been many technological advancements in the past years. The first iPhone did not have a front facing

camera and the largest storage size was 16GB. Now, 2019, with the iPhone 11 Pro Max, there are three different cameras on the back of the phone: ultra wide camera, wide camera, and telephoto camera. It now has storage up to 512GB. Even the size of the phone has changed dramatically from the height of the first one being 4.5 inches (114.3 mm) to the newest one being 6.25 inches (158.75 mm).

Throughout the journey of the iPhone, both the operating systems and hardware have changed. It is said that the first generation iPhone was reported as a "game changer" for the mobile phone industry. Ever since the release of iPhone by Apple, it has been one of the most widely used smartphones around the world. As of November 2018, Apple has sold 2.2 billion iPhones worldwide and announced that they will no longer report iPhone sales figures.

IPHONE 6 PLUS SPECS

Released: September 19, 2014
Colors: Gold, Silver, and Space Gray
Storage: 16/64/128 GB
Market Price: \$499 (for 128 GB)
Materials Cost: \$230

Weight and Dimensions

Height: 158.1 mm
Width: 77.8 mm
Depth: 7.1 mm
Weight: 172 grams

New things about the iPhone 6 Plus:

- First screen to have Retina HD display
- Apple's A8 64 bit chip
- Apple Pay
- Wi-Fi Calling

Fun Fact: iPhone 6 plus cost \$100 more than the iPhone 6, but the material cost for the bigger phone was only about \$15 more.



Front and back of the iPhone 6 Plus

PIECES OF iPhone 6 PLUS



Built-in rechargeable lithium-ion battery

Charging via USB

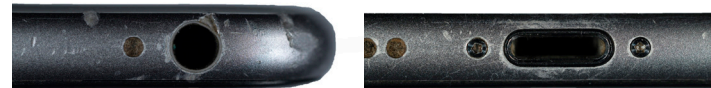
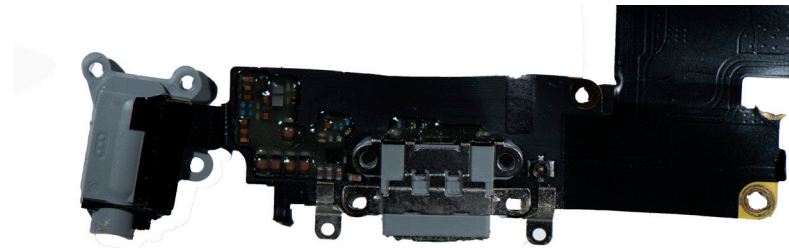
Talk time: up to 24 hours on 3G

Internet use: up to 12 hours on 3G/LTE/Wi-Fi

Audio playback: up to 80 hours

Standby time: up to 16 days

Headphone Jack and Lightning Connector



- 3.5-mm stereo headphone mini jack
- 6.7-mm by 1.5-mm lightning plug

Still intact iPhone without backing

PIECES OF iPhone 6 PLUS



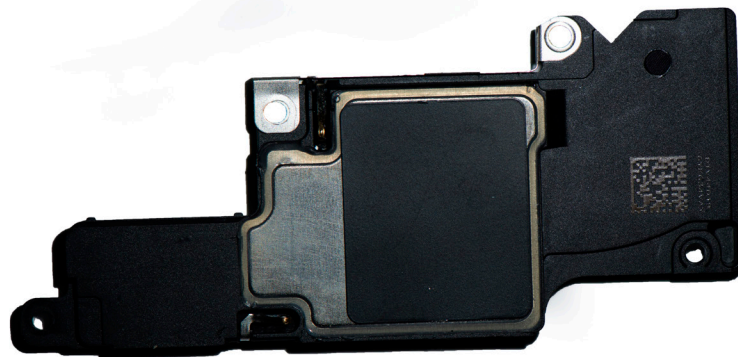
Cellular Antenna

Responsible for picking up the cellular signals



Motherboard

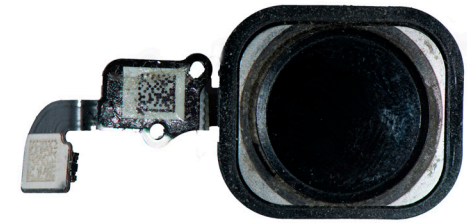
A8 application processor
339S0228 Wi-Fi chip
MDM9625M LTE Modem
16 GB flash memory



Loudspeaker

Used for music and phone calls on speaker

PIECES OF iPhone 6 PLUS



Rear Camera

8 Megapixels
 $f/2.2$ aperture
Optical image stabilization
Panorama
Face detection
Auto HDR for photos
True Tone flash

Front Camera

1.2 Megapixels
 $f/2.2$ aperture
Face detection
Burst mode
Backside illumination sensor
Timer Mode

Home Button

Touch ID
*Fingerprint identity sensor
built into the Home button*

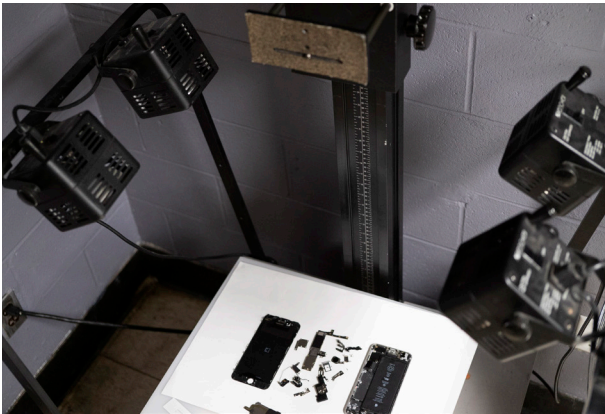
ABOUT THE PROCESS

The photographs were taken using a Nikon 810 with a 105mm Macro lens, Sony a7r with a 50mm Macro Lens, and a Stackshot Micro Rail. Using the light table (photo to the right), the iPhone 6s was photographed in various positions. The images taken with the Stackshot were put together in the program Helicon Focus.

The toolkit used to take apart the device is called Pro Tech Toolkit from IFIXIT.com.

The phone was provided by a classmate.

The images in this article are not to scale of the product.



RESOURCES

https://www.theiphonewiki.com/wiki/List_of_iPhones#iPhone

<https://www.wired.com/story/guide-iphone/>

<https://www.businessinsider.com/apple-reportedly-designed-the-iphone-5-before-death-of-steve-jobs-2013-4>

<https://economictimes.indiatimes.com/magazines/panache/new-apple-mac-pros-price-leaves-users-wide-eyed-can-cost-52000/articleshow/72476935.cms>

https://support.apple.com/kb/sp706?locale=en_US

<https://www.bloomberg.com/features/apple-iphone-guts/>

ABOUT THE AUTHOR

Rebekah Greenberg is a third year pursuing a BS degree in Photo Sciences with a concentration in Biomedical Photographic Communications at Rochester Institute of Technology, NY. Throughout her time at RIT, she has studied magnification photography, high speed photography, surgical photography, digital and print workflow.

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