



iPod Touch 5th Generation 16 GB Teardown

iPod Touch 5th Generation 16 GB teardown on May 31, 2013.

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INTRODUCTION

Just in time for summer, Apple snuck a little surprise into their online stores on May 30, and 'little' is the operative word. Less storage, one less camera, and a full .06 ounces lighter. Join us to see the iPod Touch's new summer beach body!

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TOOLS:

- [Suction Handle](#) (1)
 - [Spudger](#) (1)
 - [iOpener](#) (1)
 - [Phillips #000 Screwdriver](#) (1)
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Step 1 — iPod Touch 5th Generation 16 GB Teardown



- Sneaky, sneaky Apple. Thought you could pull a fast one on us by releasing a new stripped down version of the current iPod Touch 5th Generation? Not on our watch. We've got one, and we're going in!
- Tech specs:
 - 4-inch (diagonal) widescreen Retina display with Multi-Touch IPS technology
 - 802.11a/b/g/n Wi-Fi (802.11n 2.4GHz and 5GHz) + Bluetooth 4.0
 - ~~5-megapixel iSight camera with LED flash and a $f/2.4$ aperture~~ FaceTime 1.2 MP HD camera capable of capturing HD video (720p) up to 30 fps
 - ~~New iPod touch loop~~
 - Three-axis gyro + accelerometer
 - ~~32 GB or 64 GB~~ 16 GB storage capacity

Step 2



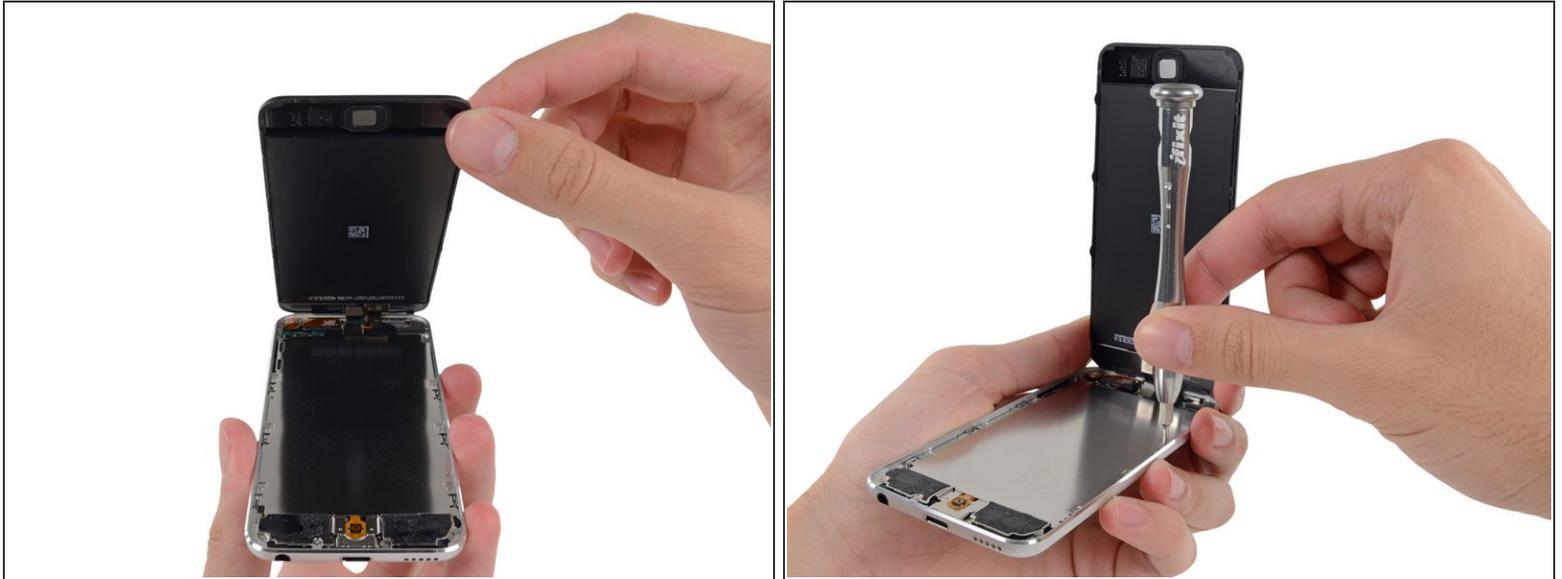
- The only visual difference between the new and newer iPod Touch is color—one is [#FFFFFF](#) and the other is [#000000](#).
- ⓘ Well, that and the absence of a rear camera and Touch Loop, of course.
- The exclusion of two main components has earned the iPod Touch 5th Generation 16 GB a new model number from its [32 and 64 GB brothers](#): A1509.
- The last major cosmetic change we found is the location of the microphone. The microphone has been shuffled over from its spot next to the camera up to the top of the rear case, adjacent to the power button.
- Otherwise they look exactly the [same](#).

Step 3



- We use our trusty [iOpener](#) to loosen the adhesive securing the front panel to the rear case. We're getting used to this opening method, as it melts adhesive as fast as water melts the wicked witch, without risking screen warp.
- A suction cup helps us safely pull the front panel off.
 - We wonder how proud Orwell Needham would be to see that his [atmospheric knob](#) is being used to this day to open iPods.
- ⓘ We might have to explain to him what an iPod is first.

Step 4



- After enough careful heating and prying, we make our way into the device.
- [Déjà vu](#) begins to set in as we remove some internal screws from the midframe.

Step 5



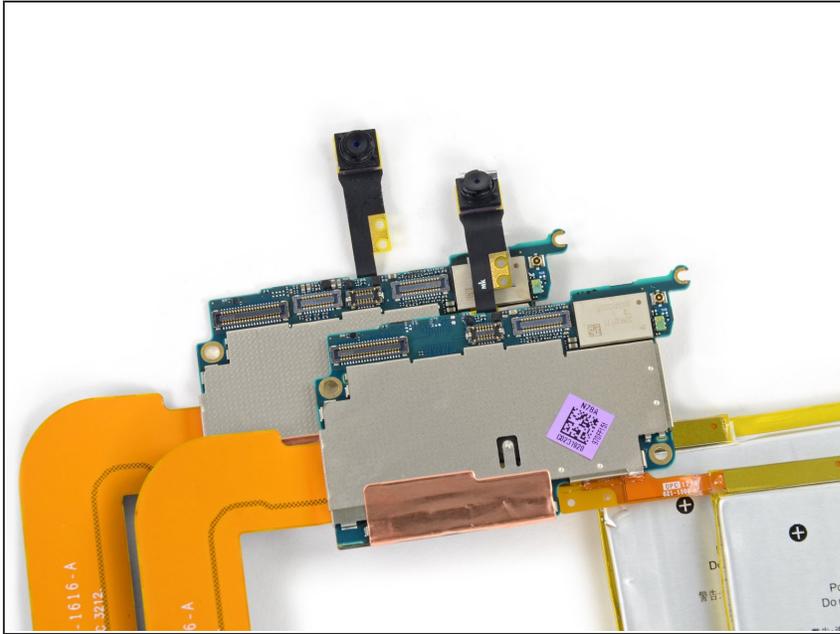
- The first obvious internal difference between the Touches is the lack of a wrist strap post inside the rear case. The speaker, originally curved to surround the post, remains unchanged.
 - We presume that Apple chose to stop including the wrist strap in an attempt to cut down on the cost of cutting a hole in the rear case, so be sure to hold on tight!
- The iPod Touch 5th Generation 16 GB retains the [same](#) battery performance as the 32 GB and 64 GB models. The battery is optimized to provide up to 40 hours of music and 8 hours of video when fully charged.
- Similarly, the display is, well...the same. Want some information about the display? Well, step [right up!](#)

Step 6



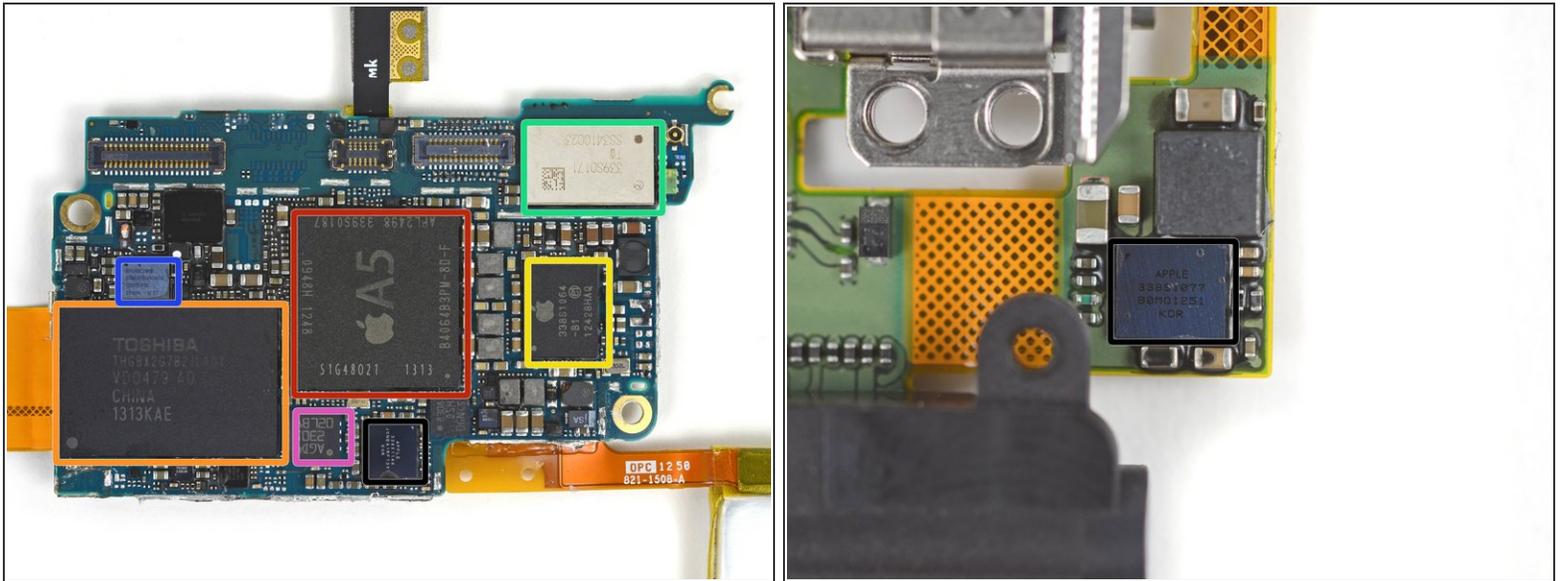
- Now you see me; now you don't! The iSight camera has been removed and the cables and brackets surrounding it have been slightly redesigned.
- In our opinion this is a welcome change, as we have finally been heard. iPods and iPads are not cameras. This is not a joke, and [Apple has seen the light](#).
- Major component overhaul seems like a good time to make small changes such as ribbon cable routing. We're interested to see if new 32 and 64 GB models use the [same](#) new volume and power button cable.

Step 7



- Spot the difference! Are these the [same](#)?
- Our preliminary look at the logic board reveals a small and expected change: the lack of a rear camera connector.
- Naturally, we will need to get in deeper to figure out if anything else changed—a task we have never once shied away from, and won't shy away from today!

Step 8



- With the exception of the flash memory, it appears that the ICs on the 16 GB model's logic board are the [same](#) as those found on the 32 and 64 GB models:
 - Apple A5 dual-core processor, with 4 Gb (512 MB) of Mobile DDR2 RAM.
 - Toshiba [THGBX2G7B2JLA01](#) 128 Gb (16 GB) NAND flash
 - Apple 3381064 dialog power management IC
 - Murata 339S0171 Wi-Fi module
 - Broadcom BCM5976 touchscreen controller
 - STMicroelectronics low-power, three-axis gyroscope (AGD4/2305/O2LBV)
- And again we find both the Apple [338S1116](#) and the Apple 338S1077 Cirrus Audio Codecs.

Step 9



- What is the most important thing in ~~real-estate~~ microphones? It's all about location, location, location.
 - New location, [same](#) microphone!
- Similar to the higher capacity versions of the Touch, the microphone, volume buttons, and power button are combined into a single assembly.
- The microphone is labeled S1055.

Step 10



- [No surprises here](#), the iPod Touch 5th Generation 16 GB Repairability: **3 out of 10** (10 is easiest to repair).
- While very difficult, opening the case and replacing components is not impossible.
- The battery is flanked by notches that make prying it out of the rear case fairly easy.
- Many components are soldered together, requiring either a very difficult or very expensive repair if any one part breaks.
- The Touch has no external screws. Instead, a combo of clips and adhesive makes it difficult to open the case.
- Cables connected to the logic board run over the top and connect on the bottom, making it difficult to remove the board or disconnect the cables.