



iPod Shuffle 2nd Generation Teardown

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INTRODUCTION

How to take apart the 2nd Generation Shuffle.

TOOLS:

- [Phillips #00 Screwdriver](#) (1)
 - [Spudger](#) (1)
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Step 1 — Teardown



- Packaging is virtually identical to the iPod Nano G2 packaging.
- Included: Shuffle, color manual, USB 2 dock, and earbuds (plus spare earbud covers).
- ⓘ There are LEDs on top and bottom of the shuffle. You can't see both at once and they both flash the same messages.

Step 2



- ⓘ The back of the Shuffle says: Model No.:A1204 EMC No.: 2125 5V 1A.
- Let's take it apart!
- The top and bottom of the shuffle have white plastic caps held on by mild adhesive. Heat the caps with a hair dryer and gently pry them both up. Make sure you don't pry the metal beneath the caps up at the same time.

Step 3



- Remove the shuffle / loop switch and the power switch.
- The shuffle / loop switch is actually a metal arm about .5" long that extends along the bottom to a switch on the logic board in the center of the shuffle.

Step 4



- Beneath each cap is a metal retaining bracket.
- Remove the two Phillips #00 screws on the top of the Shuffle and another two on the bottom.

Step 5



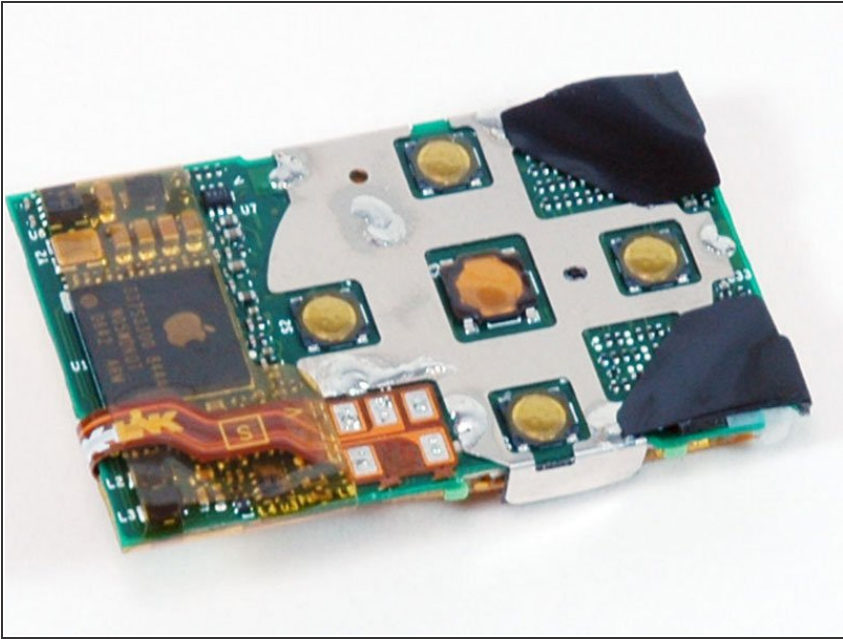
- Use a spudger to lift out the metal retaining brackets on either side of the Shuffle. The hinge side contains a tiny extension that supports the casing, so start from the other side (as shown).
- ⓘ Apple includes a 'flash guide' with ten different codes. The LEDs flash green, amber, and red.

Step 6



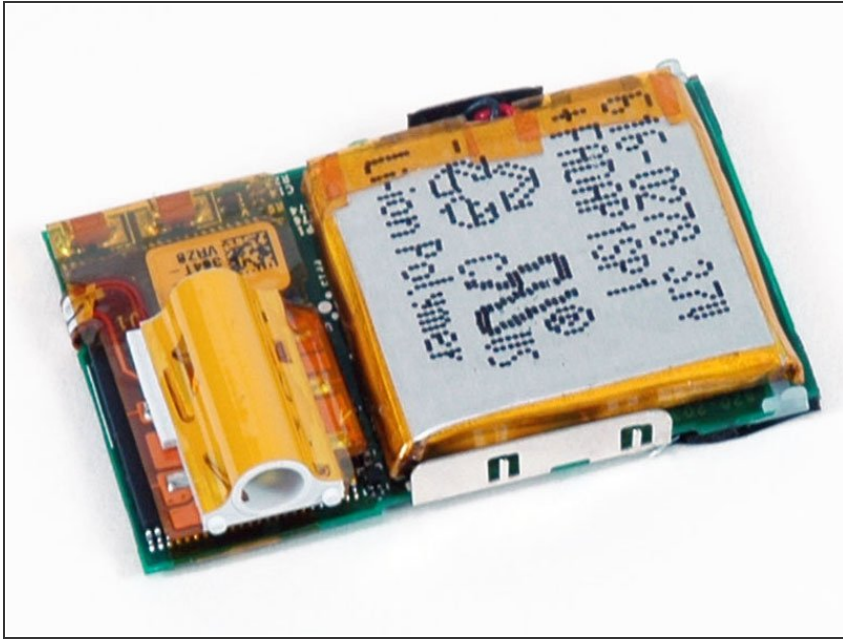
- Use a spudger to push the logic board through the case and out of the Shuffle.

Step 7



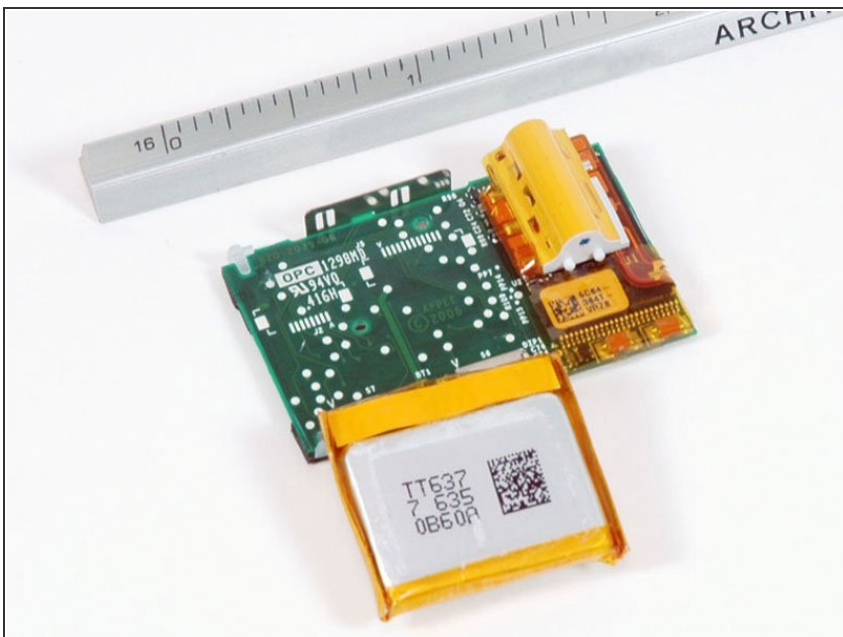
- The top of the logic board.
- You can see the five button sensors, Apple logo ARM chip, and data ribbon cable (this leads to the headphone / dock jack on the other side)
- The ARM chip has the numbers:
337S3300 844A N05WDK01 0642
ARM.
- ⓘ There's a smaller chip to the left of the Apple logo chip that simply says 'AAC.'

Step 8



- The bottom of the logic board.
 - Apple has done an impressive job of packing functionality into the headphone jack. The dock plug has three conductive strips, plus the ground post. It's safe to assume that the plug is multi-modal and switches between USB, analog audio, and possibly power modes. The separate power mode may not be necessary if they can get enough juice off a 4 conductor USB connection.
- ⓘ It should be easy for a third-party developer to make a small USB adapter that restores the memory-stick functionality of the Shuffle.

Step 9



- Battery flipped out
- Notable features: Li-ion polymer battery (this is soldered onto the logic board), headphone / dock / power jack, and memory chip (hidden beneath the headphone jack).

Step 10



- The disassembled shuffle.
- On the left, from top to bottom: shuffle / loop and power switches; bottom and top caps and metal brackets; four Phillips #00 retaining screws.
- On the right: battery and logic board; case with electronics removed.
- ⓘ The case appears to be one piece of molded Aluminum. It feels sturdy.

Step 11



- Shameless plug:
 - iFixit sells iPod parts. It's easy to fix an iPod yourself with our [iPod parts](#) and free [iPod repair guides](#).
 - We also sell [Mac laptop](#) parts. We've got virtually any part or upgrade for an iBook, PowerBook, MacBook, or MacBook Pro at very competitive prices.