

INTRODUCTION

We're all just kids at heart, so when we found out Nintendo was relaunching the NES as a nostalgia emulator, *only cuter*, we were pretty stoked. What will the insides of a 2016 refresh of a 1985 Nintendo Entertainment System look like? After a bit of gaming... we're tearing down to find out!

Keen on other consoles and teardowns? Follow us on [Facebook](#), [Twitter](#), and [Instagram](#) to stay up-to-date on all things repair!

🔧 TOOLS:

[Phillips #00 Screwdriver](#) (1)

[Tweezers](#) (1)

Step 1 — Nintendo Classic Mini NES Teardown



- More than 30 years after the release of the original [NES console](#), Nintendo delights us with a fun-sized version of this classic.
- This little emulator box comes along with:
 - 30 pre-installed games
 - HDMI output
 - USB port for power support
 - 1 game controller
- Just for fun we compared a classic cartridge to this Classic Edition—they're roughly the same size. How far computers have come!

Step 2



- It's playtime! We ignore the warnings about extended gaming and start opening this treasure up.
- We peel off some rubber feet and find standard, simple Phillips screws.
- Lifting off the lower case, we take a look into the lid and find—nothing.

Step 3



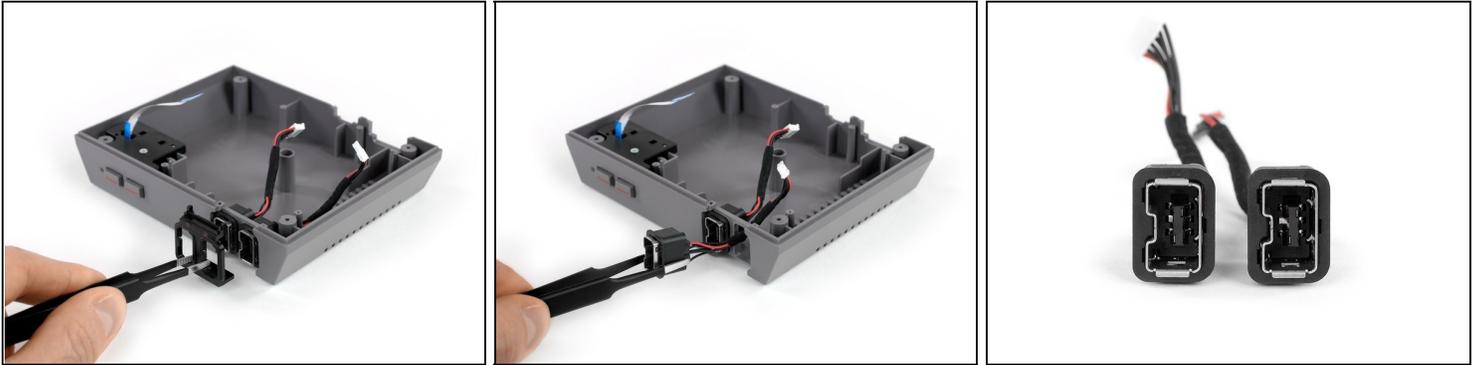
- Turns out everything is secured in the lower case, and "everything" isn't all that much.
- We immediately start punching through cables.
 - You heard that right, Mario may look like he's head bopping those blocks, but [it's actually his fist!](#)
- A grand total of three connectors (button board, controller 1, and 2) later: [Level 1 complete!](#)

Step 4



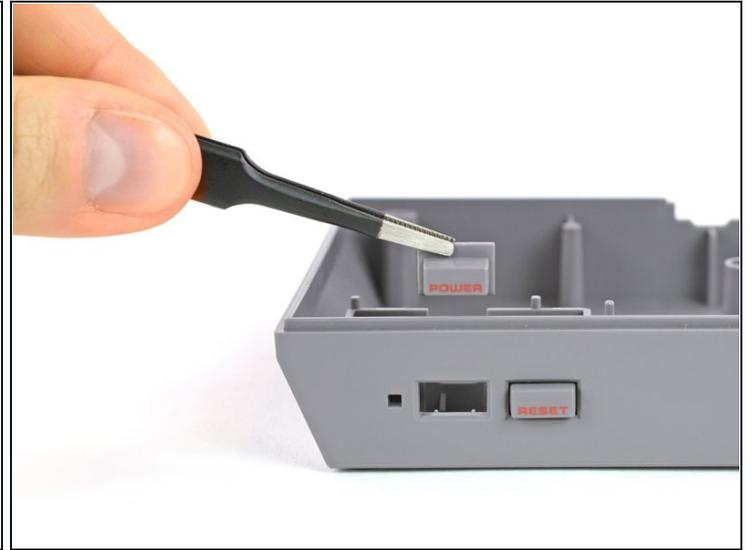
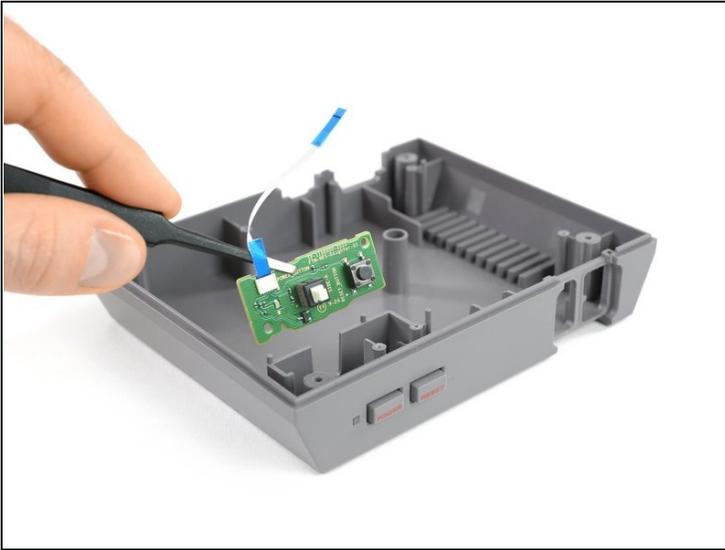
- The motherboard is secured under a nice metal shield, likely for heat dissipation and probably structural support.
- De-shielded we see the mighty fields of... wait these look like [chips we've seen before](#).
 - Allwinner R16 quad core ARM Cortex A7 processor with a Mali-400MP2 GPU core
 - 512 MB of Macronix [MX30LF4G18AC](#) 4 Gb NAND Flash memory (as opposed to the Spansion branded memory found in the SNES)
 - 256 MB of SK hynix 2 Gb DDR3 SDRAM (H5TQ2G63GFR-RDC)
 - X-Powers AXP223 Power Management IC
 - Richtek [RT7295A](#) 3.5 A synchronous step-down converter

Step 5



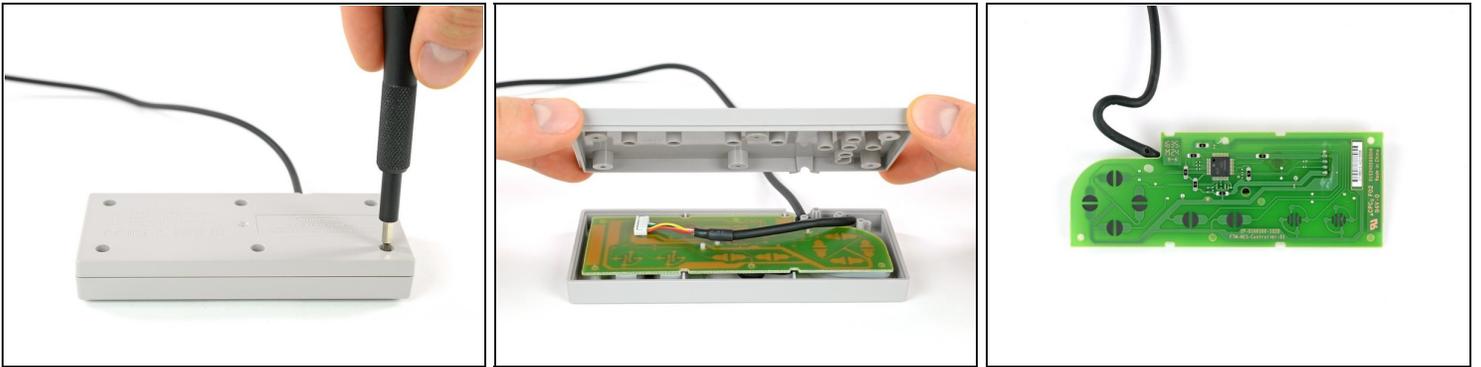
- While the console only comes with one controller, you've got the classic Player 2 option available. At least until we remove these ports!
- ① The ports are the same as the one on the Wii Remote. So you can connect your Wii Classic Controller to the NES Classic.
 - As you may have guessed, these ports are updated from the [controller ports of the original NES](#) and Famicom units.
- We know the standard "blow on it" fix doesn't always work, so we're happy to see modularity here. Unfortunately, the USB and HDMI ports were both soldered to the motherboard.

Step 6



- The final countdown brings us to: the button assembly!
 - This self-proclaimed daughterboard contains the (nicely labeled) power and reset button, as well as a status LED.
- ⓘ Notably missing from this console is the [expansion port](#) found in the original model. Since it never got used in the original consumer edition, probably safe to say we're not [missing out on much](#).

Step 7



- And now for the bonus level: controller teardown!
- The screws on this controller are readily visible, no rubber plugs here. Inside we find: a bare board with a single connector.
 - The cable is nicely threaded inside to allow some slack, to relieve stress on the connector.
- The front side of the board is almost as bare. A single chip, some passive components, and some contact patches for the buttons.
 - ① These buttons act just like many remote controls, when pressed, the button bridges the gap between the conductive paint, completing a circuit—making Mario do something cool!

Step 9 — Final Thoughts

REPAIRABILITY SCORE:



- Nintendo classic mini NES Repairability: **8 out of 10** (10 is easiest to repair).
- Only standard Phillips screws are used.
- No breakable plastic clips or strong adhesive is used.
- Many components are modular including the button board and controller ports.
- The NES Classic ships with solid state games, this reduces the wear on the device, but means upgrades are probably not an option.
- The HDMI and USB ports are soldered to the mainboard which makes for a more complicated repair.