



# Nintendo Game Boy Teardown

Have a look inside the original Nintendo Game Boy in this detailed and light-hearted teardown.

Written By: Craig Lloyd



# INTRODUCTION

Before there was the Switch, the Nintendo Game Boy line of handheld game consoles was the king of the streets. 30 years later, the original model still holds a special place in the hearts of on-the-go gamers. In honor of its 30th anniversary, we decided to travel back in time to see what made the original Game Boy tick.

Want more teardowns? Follow us on [Instagram](#), [Twitter](#), and [Facebook](#) for all the latest teardown and repair news. For news delivered, sign up for our [newsletter](#).



## TOOLS:

- [Phillips #1 Screwdriver](#) (1)
- [Y1 Tri-point Screwdriver](#) (1)
- [iFixit Opening Tool](#) (1)

## Step 1 — Nintendo Game Boy Teardown



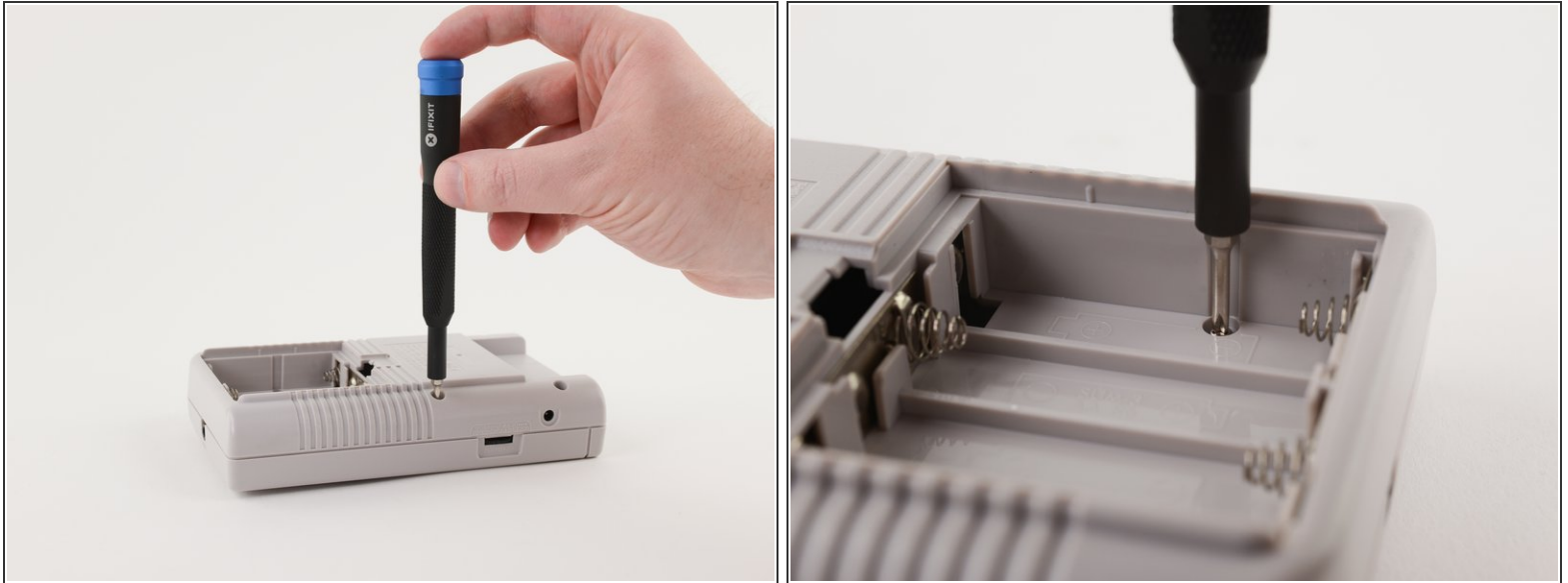
- While it wasn't the first handheld game console to hit the market, the Game Boy popularized the category and kickstarted the portable gaming industry.
- Tech Specs:
  - 4.19 MHz 8-bit processor
  - 8 KB of RAM
  - 2.6" 160x144 STN LCD display
- ① Fun fact: the LCD display was only capable of displaying *four* colors. Of course, those colors were just varying shades of green.

## Step 2



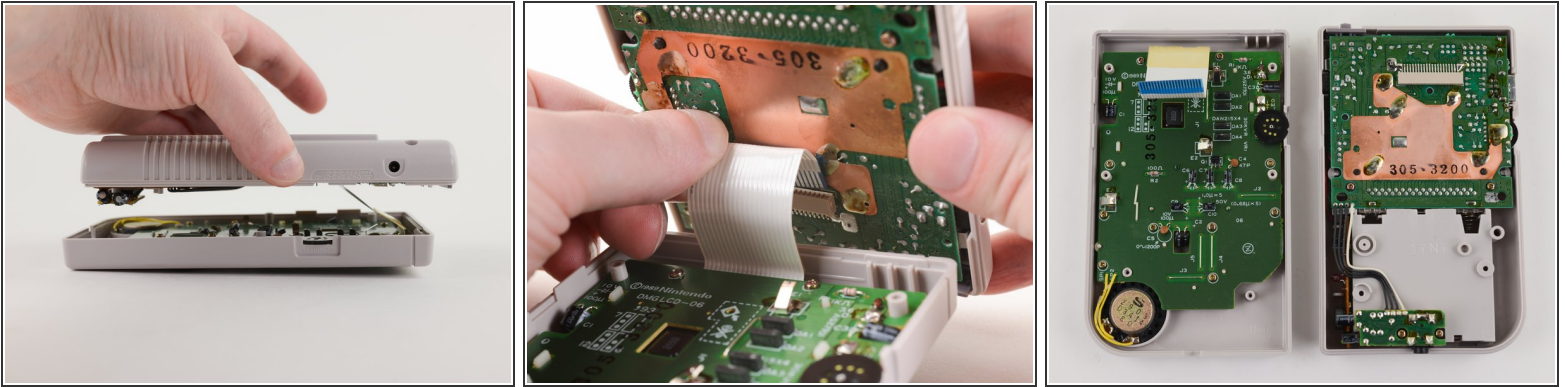
- Denoted by model number DMG-01 (which stands for Dot Matrix Game), the Game Boy can be powered by either four AA batteries or an AC power adapter, the latter of which has unsurprisingly disappeared into the clutter abyss.
- ❗ Despite the one model number, the Game Boy came in a handful of different models over the years, with subtle differences to the circuitry.
- If you're wondering, that 800 number does still call Nintendo's support line, just in case you ever need some help with your retro handheld.

## Step 3



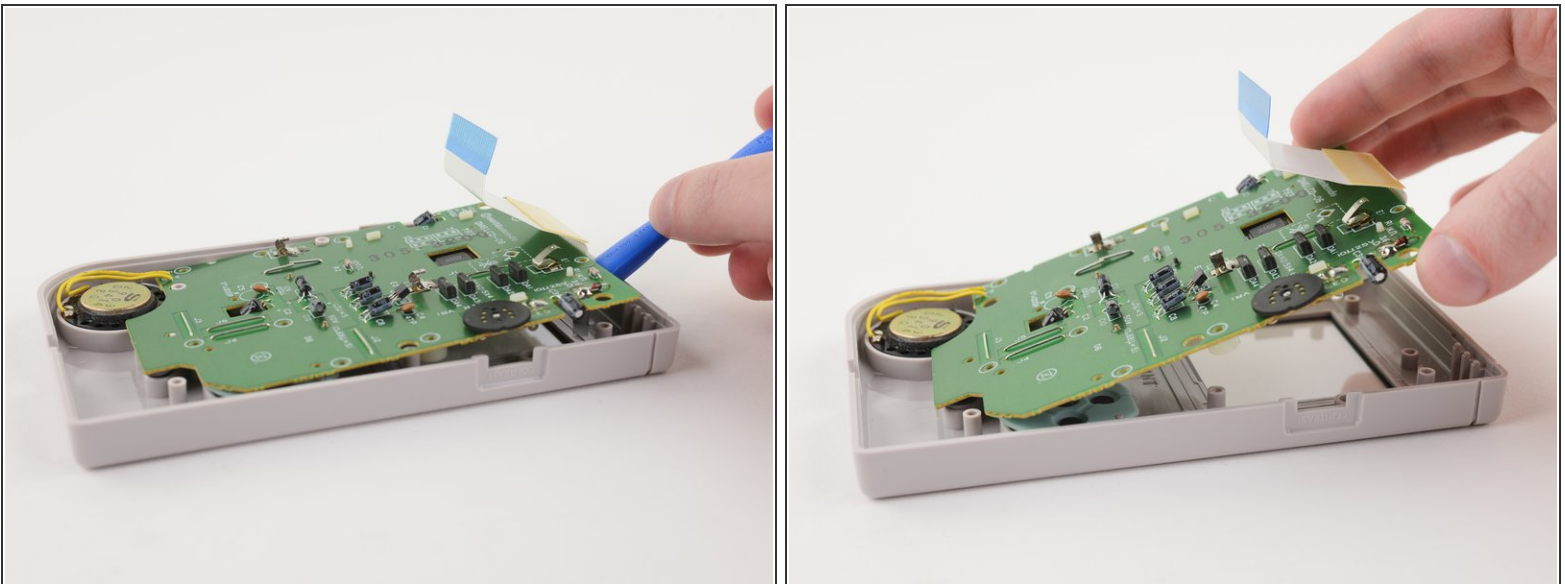
- The case is held together by six tri-point Y1 screws. Even back in 1989, Nintendo thought traditional screws might be too easy for us tinkerers. Fortunately, our [Mako Driver Kit](#) comes with the necessary bit.
- Nintendo was at least nice enough to include an indentation for our driver to nicely fit into within the battery compartment.

## Step 4



- We slowly separate the two halves of the outer shell to reveal a ribbon cable booby trap! Luckily, this ribbon cable is way more robust than those you'll find in newer devices.
- A firm grab and pull of the ribbon cable is all that stands between complete front and back separation.

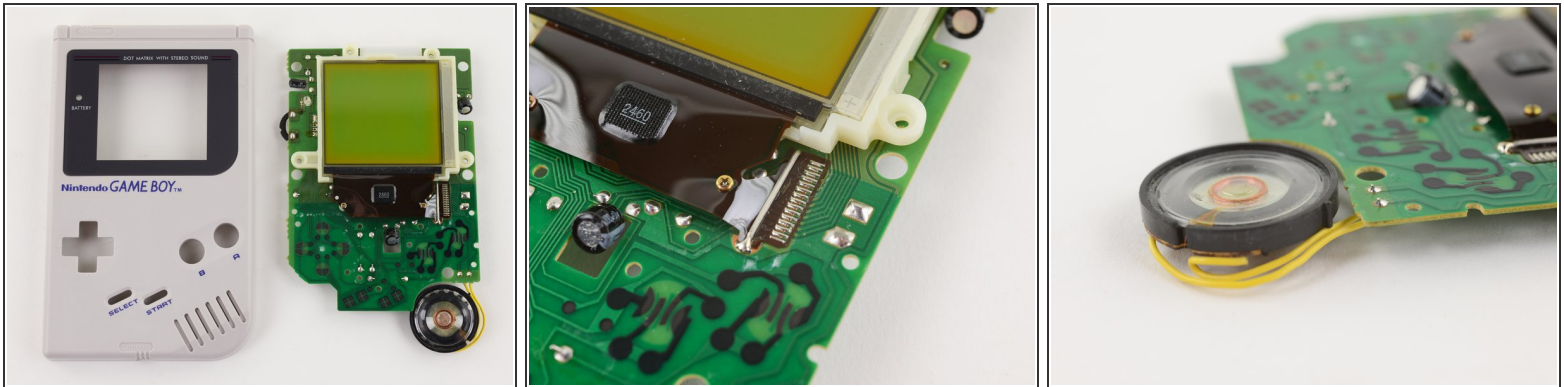
## Step 5



- Once we're inside, it's all standard Phillips screws from here on out. The display's circuit board is held down with ten of them.
- We slowly start prying from the top, as the display and circuit board are ever-so-slightly adhered to the case.

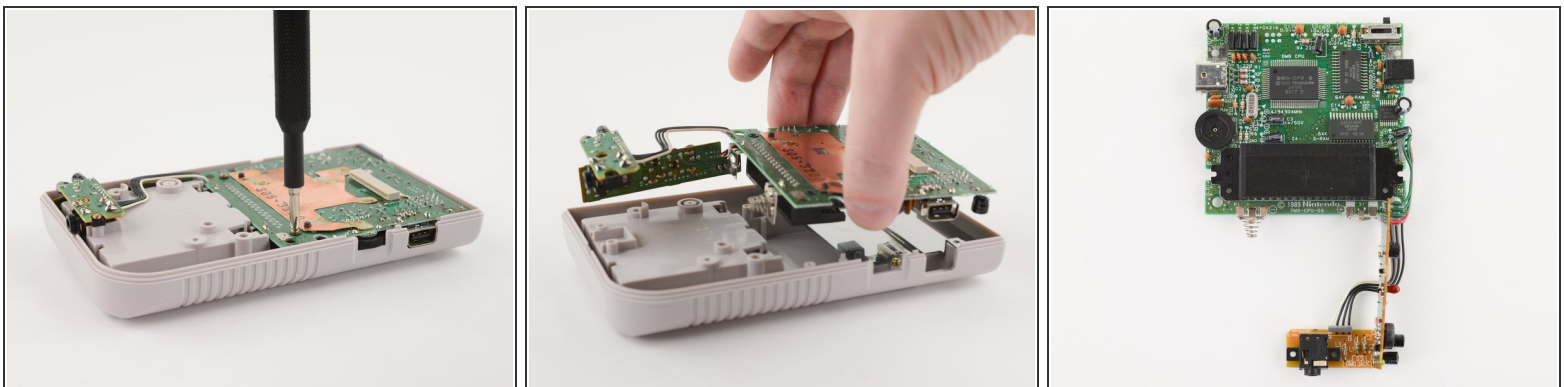


## Step 6



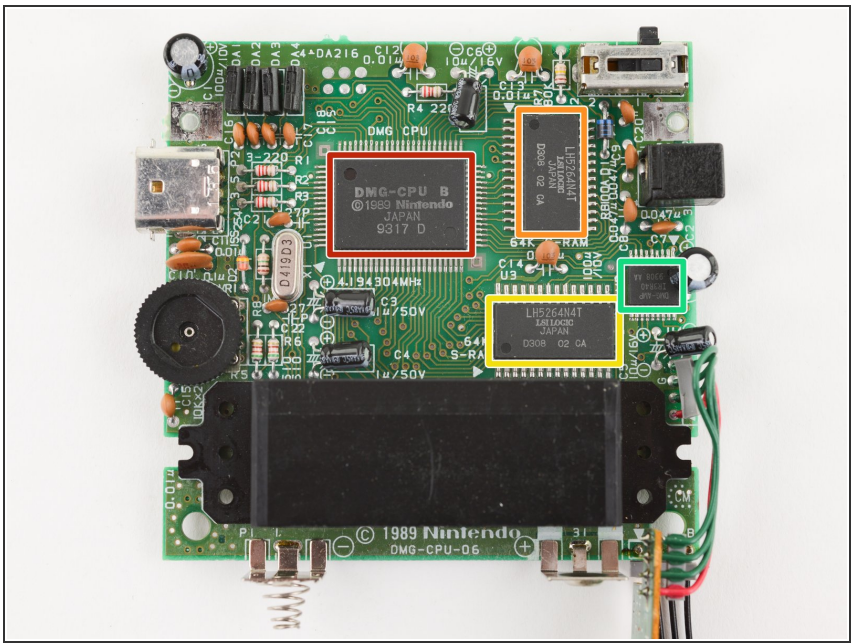
- The LCD display is attached to the circuit board with clips and a couple of screws. Unfortunately, the display's cable is soldered to the board, making display replacements a bit tricky.
- The speaker, which is typically a modular component in many devices today, is also soldered to the board. Fortunately, it's just two wires with simple solder points.

## Step 7



- The circuit boards inside the rear case are much easier to remove, with only four screws and no adhesive holding it down!
- ⓘ The mainboard, power board, and jack board are connected together and come out all at once.
- As with the display and speaker wires, the headphone jack and other ports are all soldered to the boards.

## Step 8



- Enhance! Here's what's on the main board of our specific model:
  - Sharp LR35902 4.19 Mhz CPU
  - LSI Logic LH5264N4T 8 KB VRAM
  - LSI Logic LH5264N4T 8 KB WRAM
  - Sharp IR3R40 amplifier

## Step 9



- We hope you enjoyed this trip down memory lane!
- Now if you'll excuse us, we're going to put this thing back together and enjoy some Super Mario Land 2.