

kitsch-bent > cap_kits

ver. DMG.1

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kitsch-bent.com

before we begin...

tips

- be patient! rushing through this tutorial will only result in careless mistakes.
- be confident!
- be willing to ask for help! you may of course e-mail us at kitsch-bent for direct help, but also remember there are several online communities where you can generally find very supportive and wonderful people. these include: chipmusic.org and chipcoalition.com

*** For this tutorial, DMG-CPU-06 and DMG-LCD-06 were used. This kit has been tested with the following:

- DMG-CPU: 02, 03, 04, 05, 06, 07, and 08
- DMG-LCD: 05 and 06

All headphone PCBs for the DMG models contain the same capacitors.

The power supply PCBs may differ greatly. This kit includes all possible capacitors needed for the different revisions.

supplies

- tri-wing and phillips screwdrivers. note: some cases are not held together with tri-wing screws. please check your case. the majority use this type of screw, however
- tweezers (optional, for removing old capacitor's legs)
- wire cutters (for removing legs from new capacitors)
- desoldering braid or desoldering gun (for removing old solder from thru-holes on PCB)
- cap_kit for DMG
- soldering iron and solder
- a DMG-01 model gameboy (the 'classic')

how to solder

this guide isn't meant to explain how to solder and desolder parts. for information on this, please check out the following links which contains wonderful resources for these things:

http://store.curiousinventor.com/guides/How_to_Solder

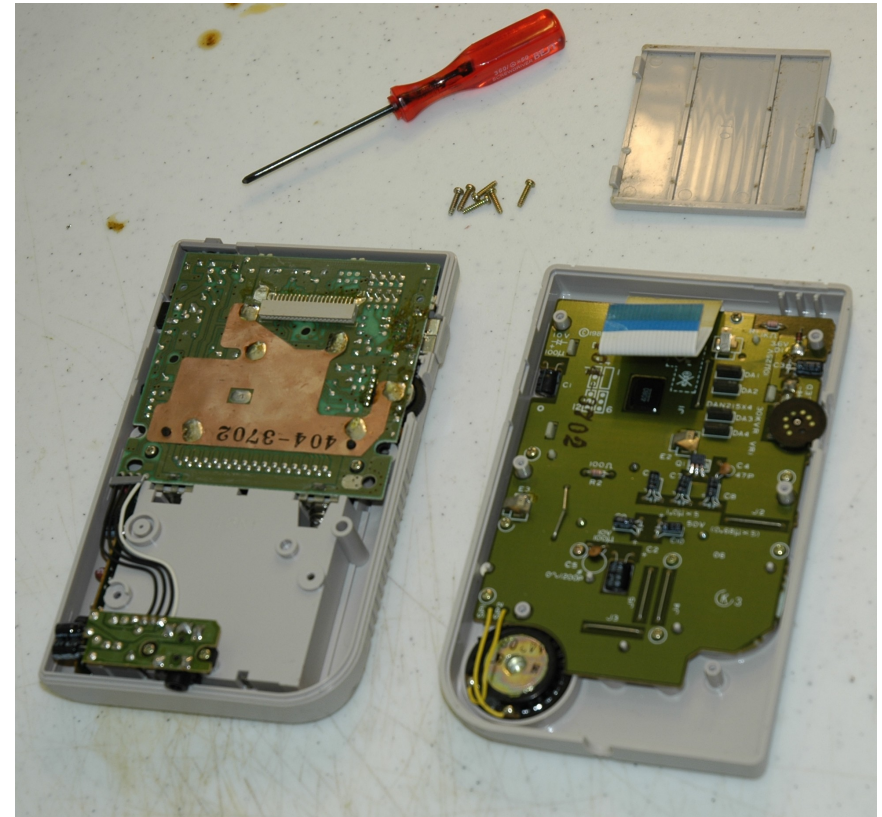
(soldering and desoldering)

<http://www.sparkfun.com/tutorials/213>

(soldering)

step one

- take all six screws out which hold the case together, and separate the two halves of the case
- the ribbon cable will come out with a gentle pull downwards
- set the screws and the bottom half of the case aside. you will use these later. don't lose the screws.



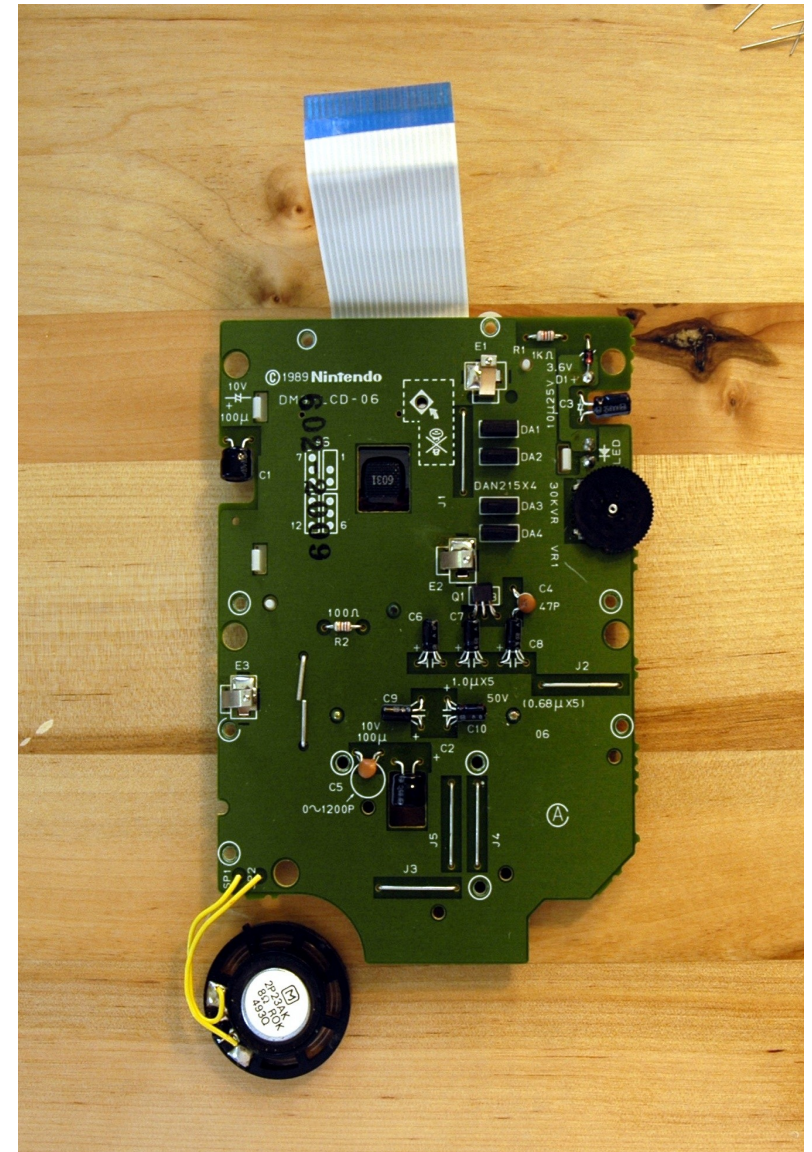
step two

- take the circuit board off the front half of the case. set these screws and the front half of the case aside and do not lose them
- you may find there is an adhesive tape holding the LCD screen to the case. if it is stuck, you can take the plastic screen protector off the case and push the LCD screen out this way

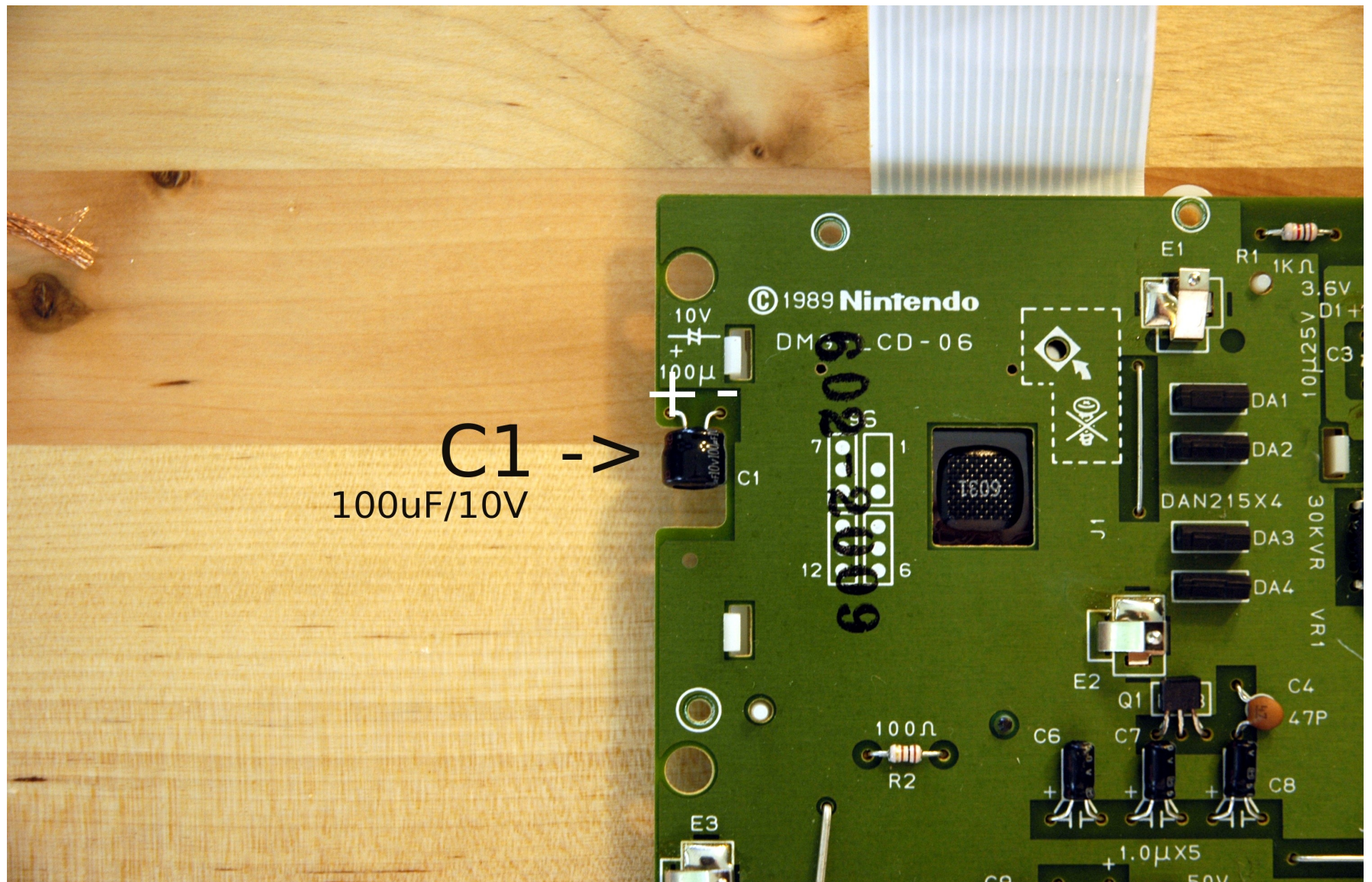


step three

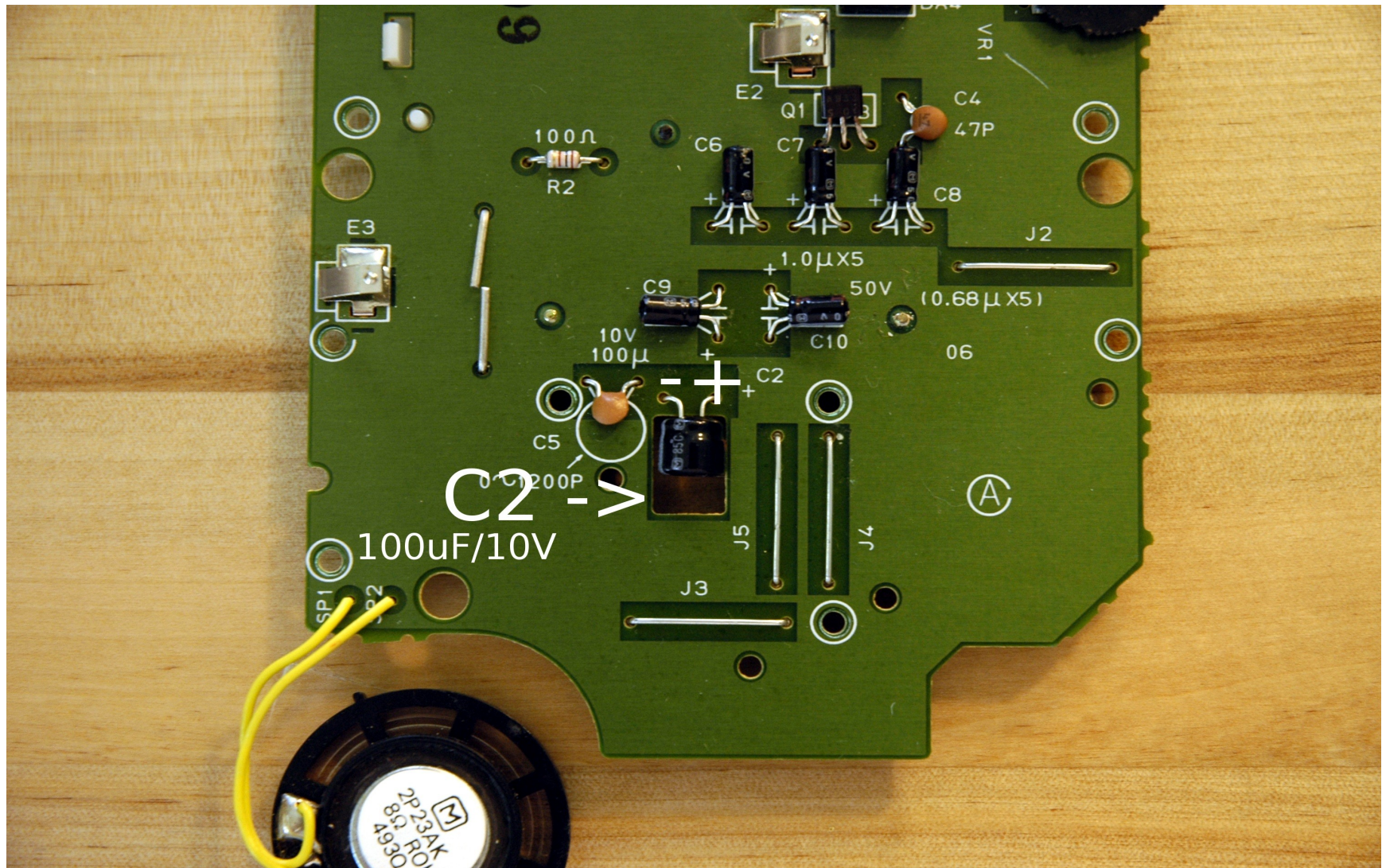
- first, we will exchange the capacitors from the LCD's PCB.
- briefly, these circuit boards, called DMG-LCD-xx, contain 8 capacitors:
 - C1: 100uF/10V
 - C2: 100uF/10V
 - C3: 10uF/25V
 - C6: 1uF/50V
 - C7: 1uF/50V
 - C8: 1uF/50V
 - C9: 1uF/50V
 - C10: 1uF/50V
- the following pages will each have a picture showing the location of these capacitors, its value, as well as the + and – legs of the capacitor
- “step eight” illustrates how to get access to the legs of capacitors 6 through 10. I use the end of a screwdriver to hold the LCD up so I can remove these old legs. this is just a suggestion, if you find a more comfortable method please use it.



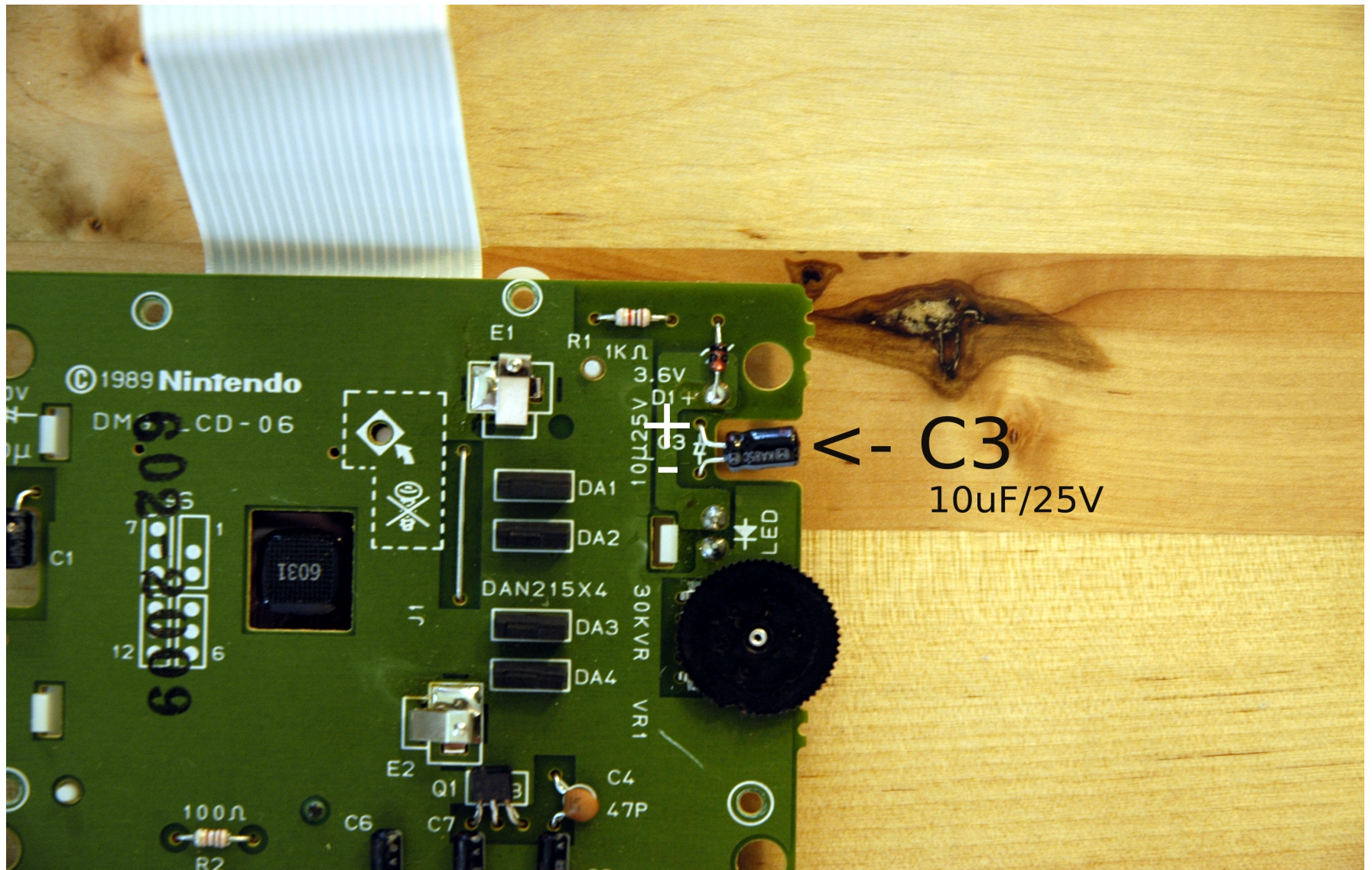
step four



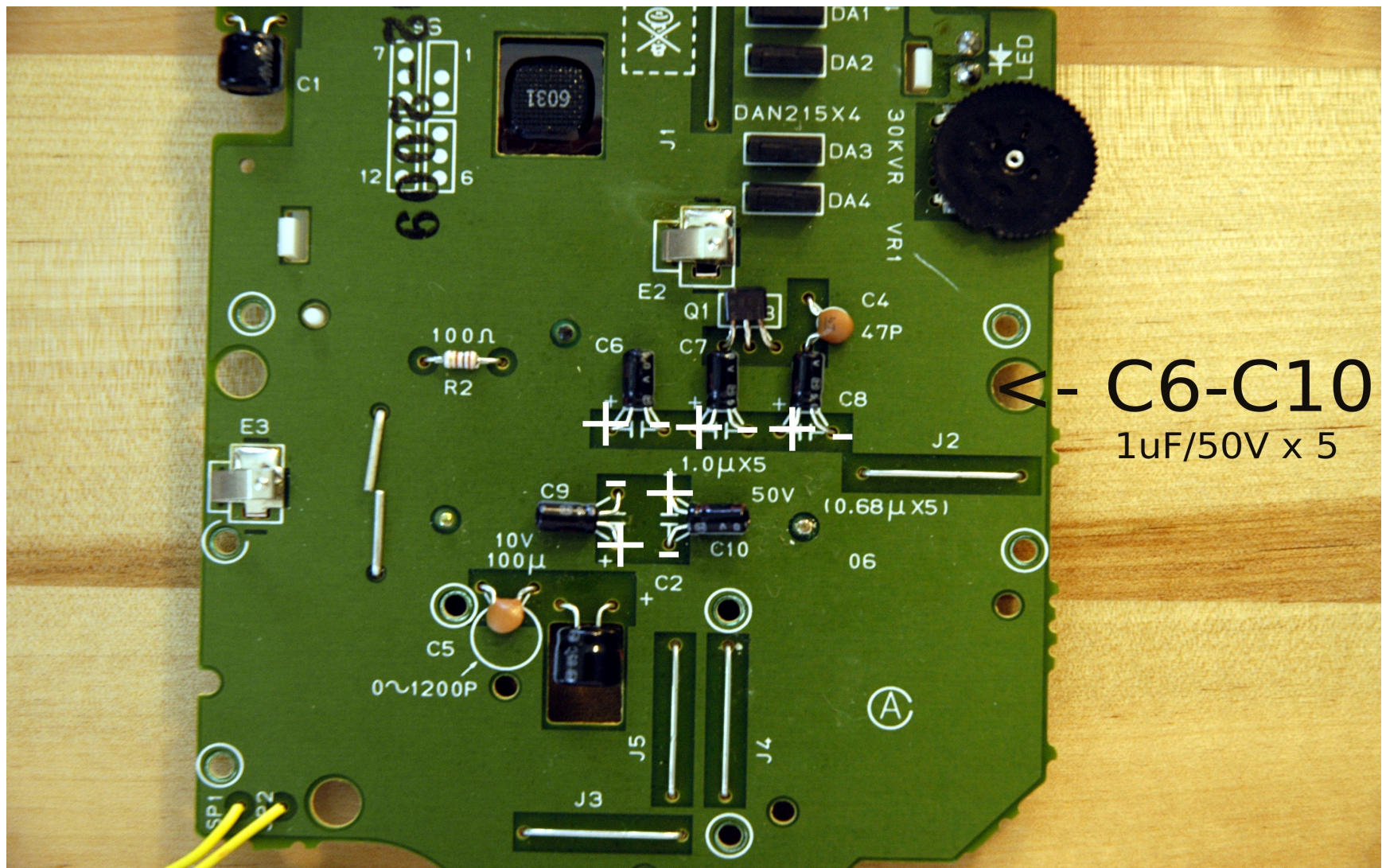
step five



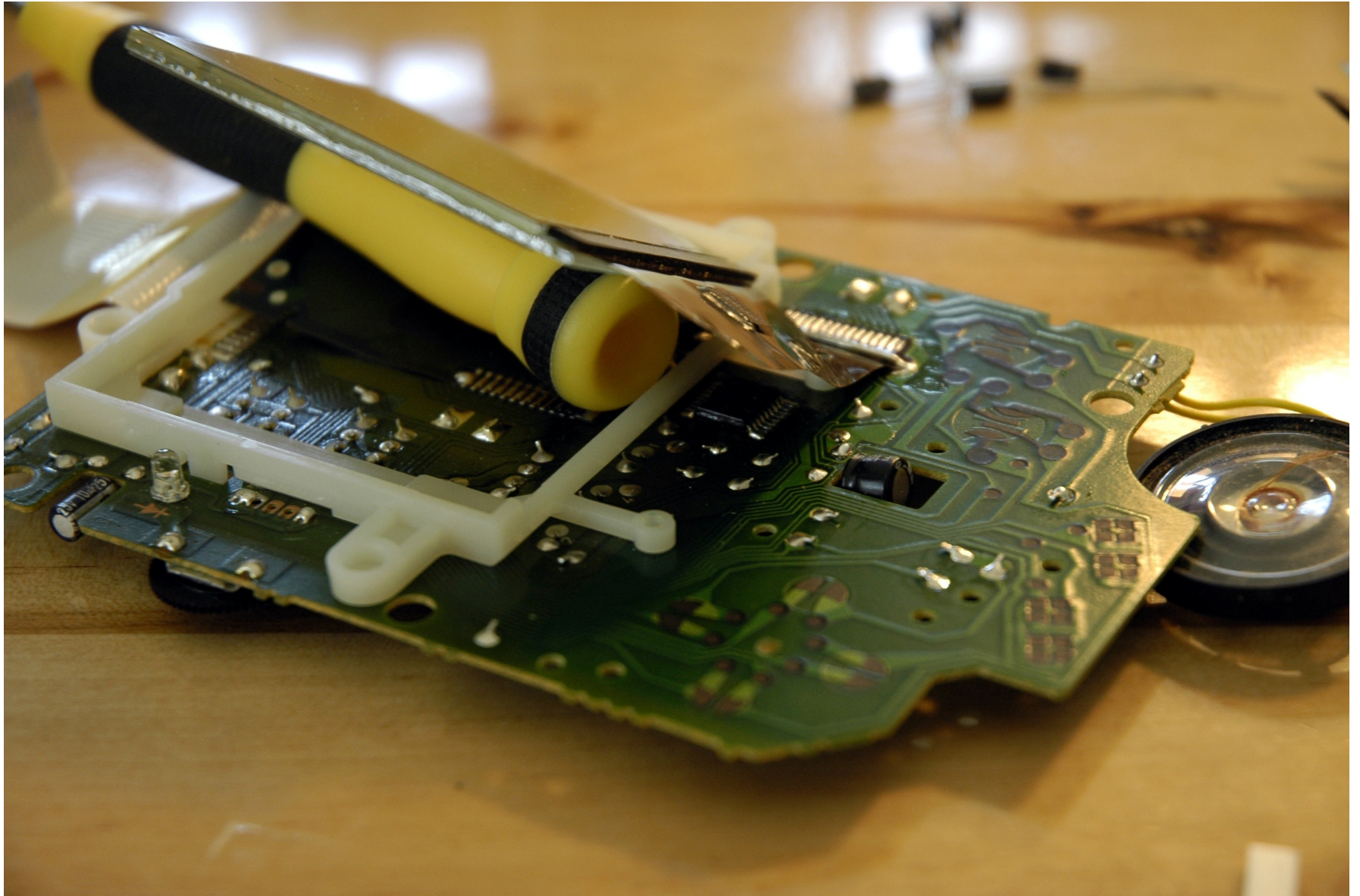
step six



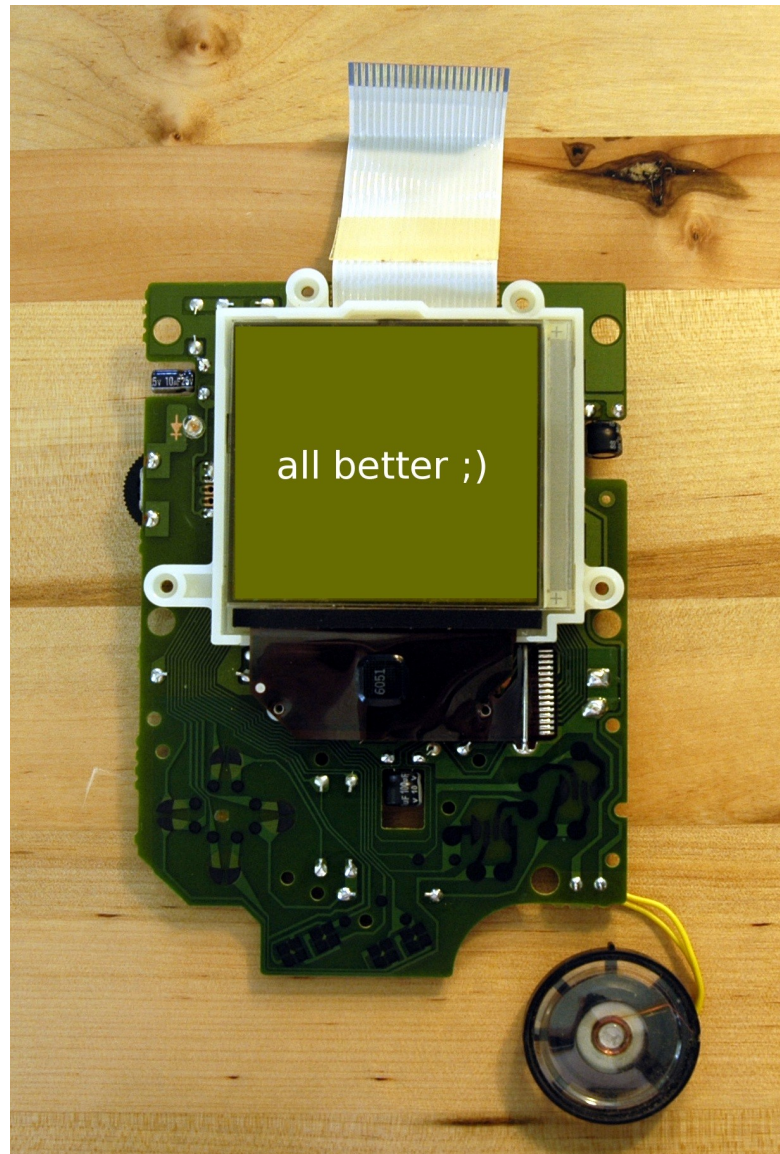
step seven



step eight

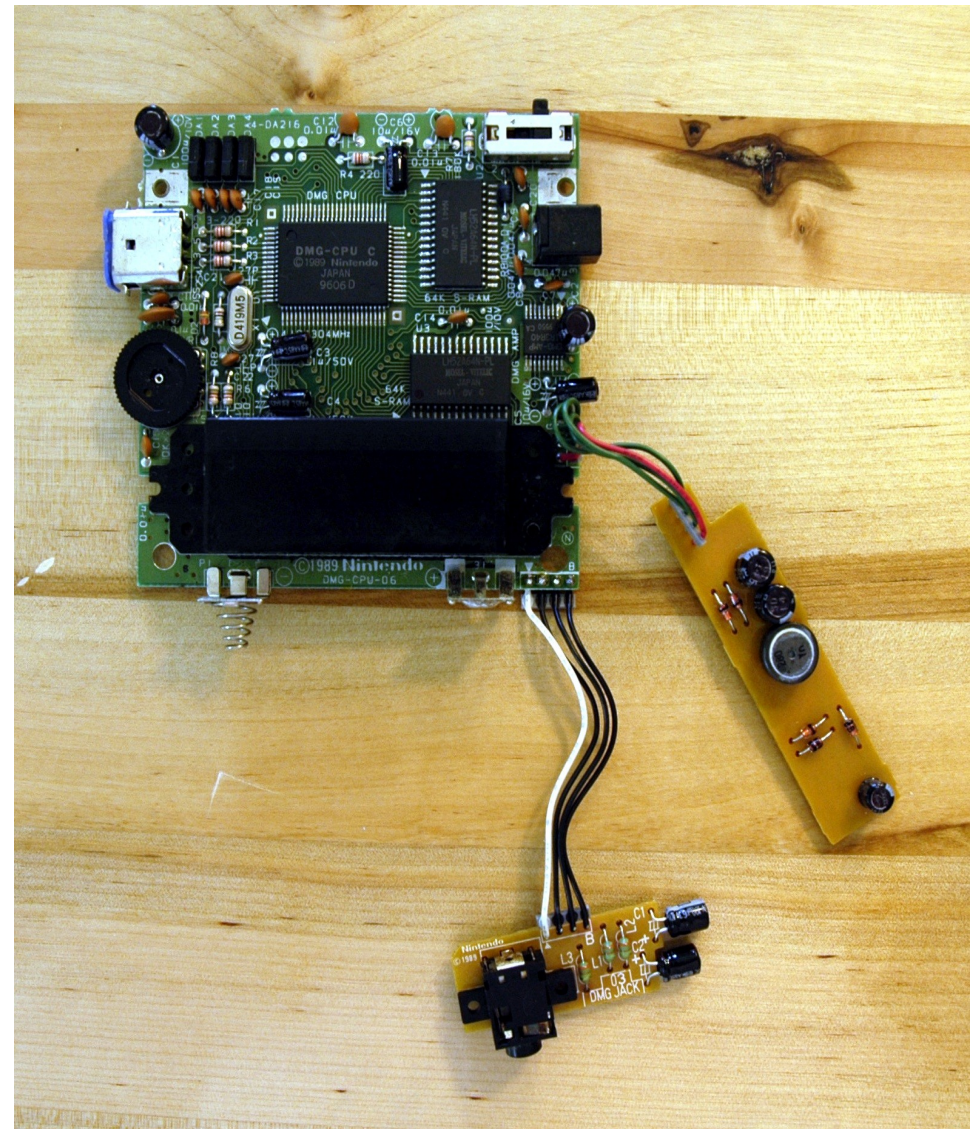


step nine

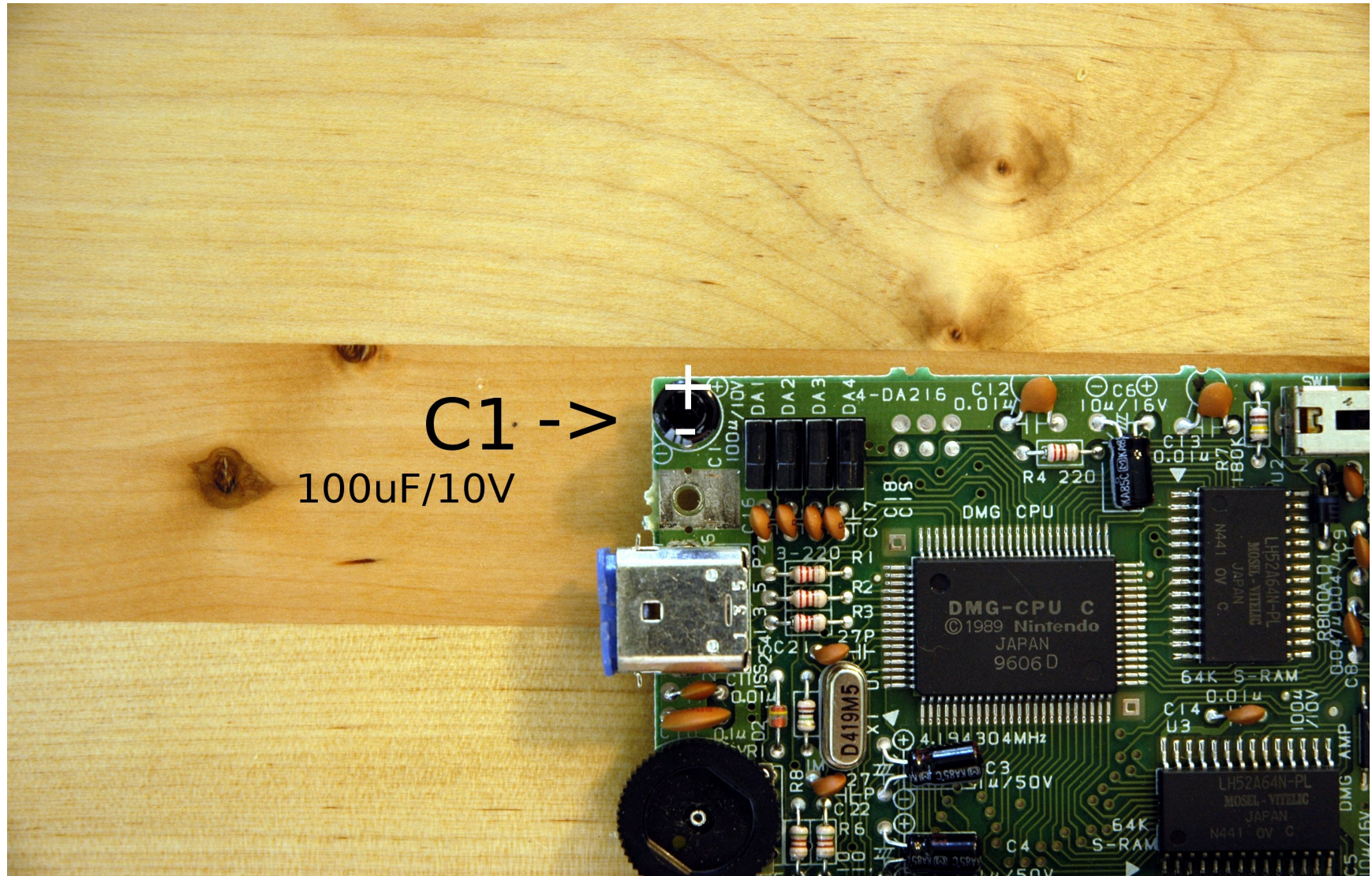


step ten

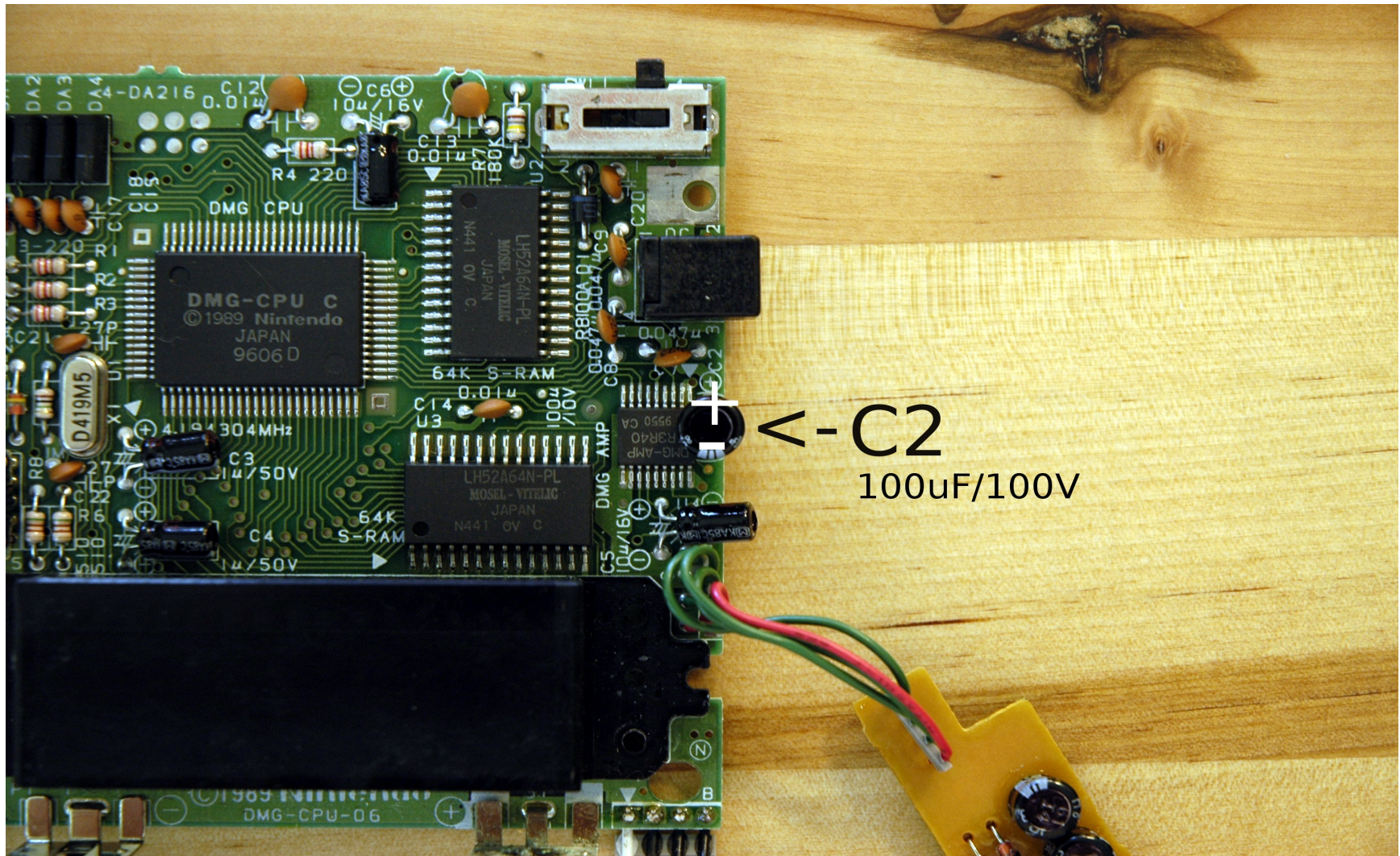
- next we will replace the capacitors from the main PCB, called DMG-CPU-xx, the headphone PCB and power supply PCB
- the next series of pictures will contain the capacitors from the main PCB, the headphone PCB, and the power supply PCB – in that order
- the power supply PCB can have from one to three capacitors, depending on which revision your gameboy contains. enough capacitors have been included in your kit to handle any revision you may have. The polarity (+/-) of the capacitors isn't marked on these PCBs, so be careful to pay attention how they are oriented when you remove them!
- the headphone PCB contains two capacitors, both rated 100uF/6.3V.
- the main PCB contains the following:
 - C1: 100uF/10V
 - C2: 100uF/10V
 - C3: 1uF/50V
 - C4: 1uF/50V
 - C5: 10uF/16V
 - C6: 10uF/16V



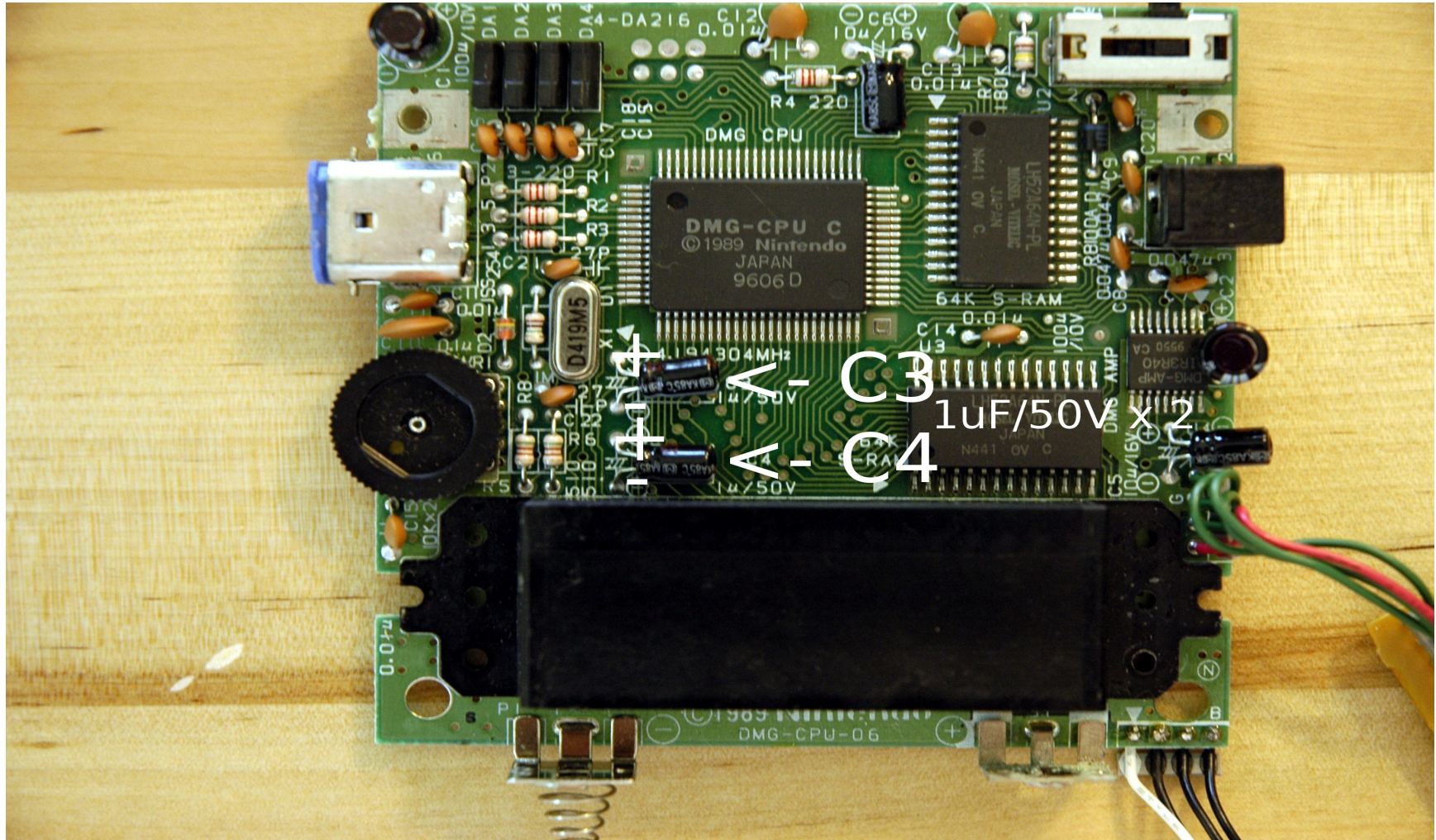
step eleven



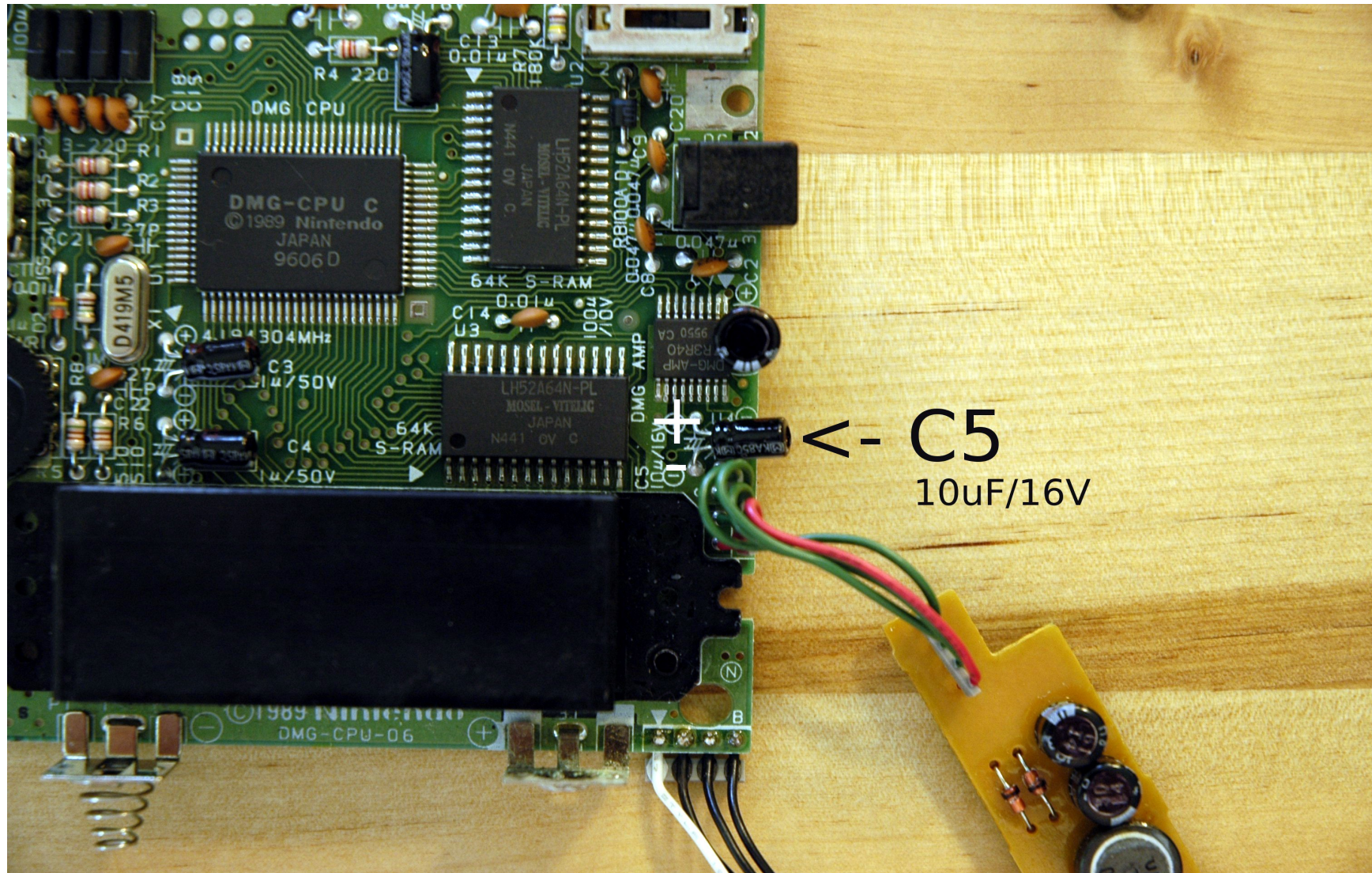
step twelve



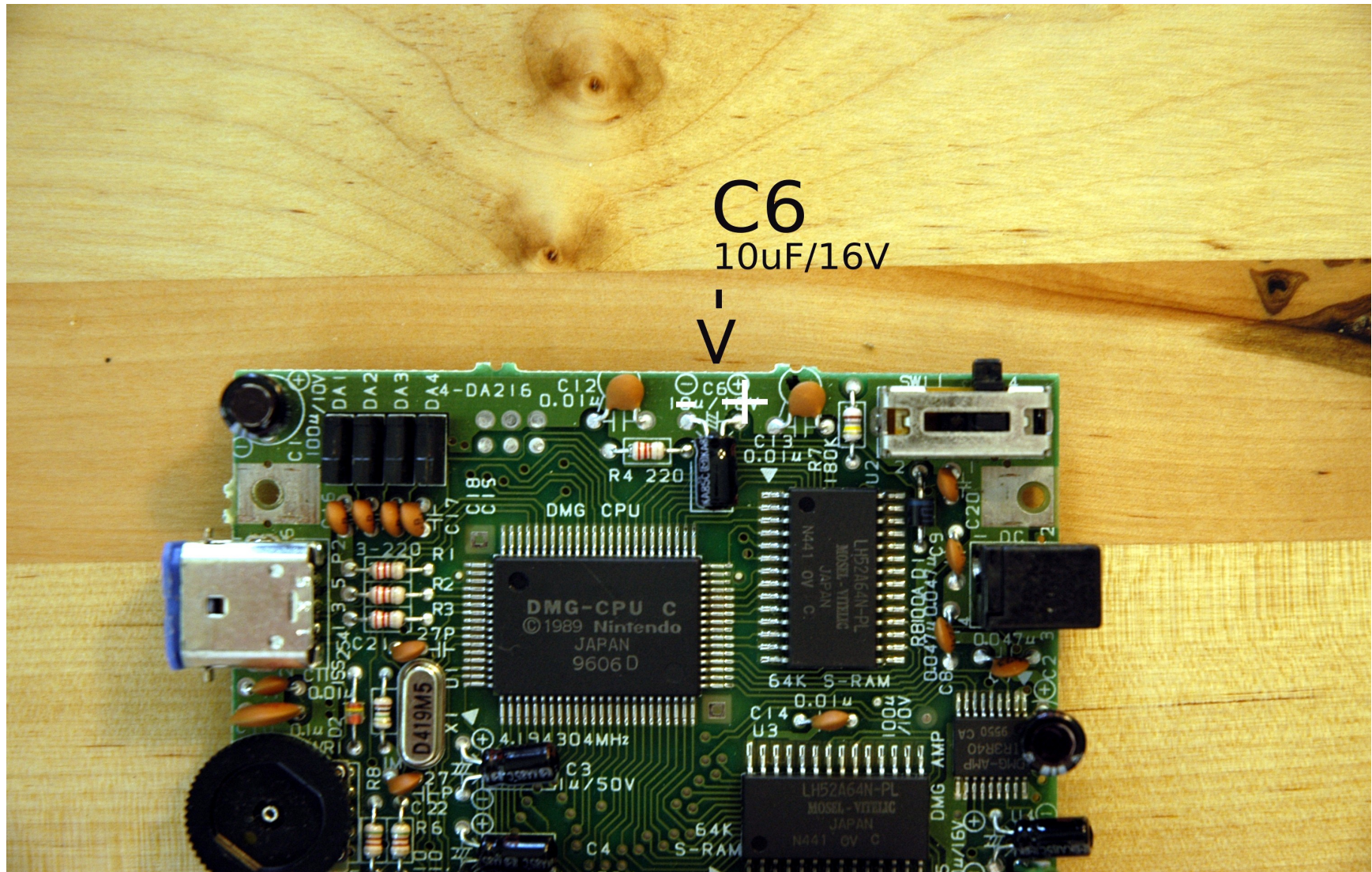
step thirteen



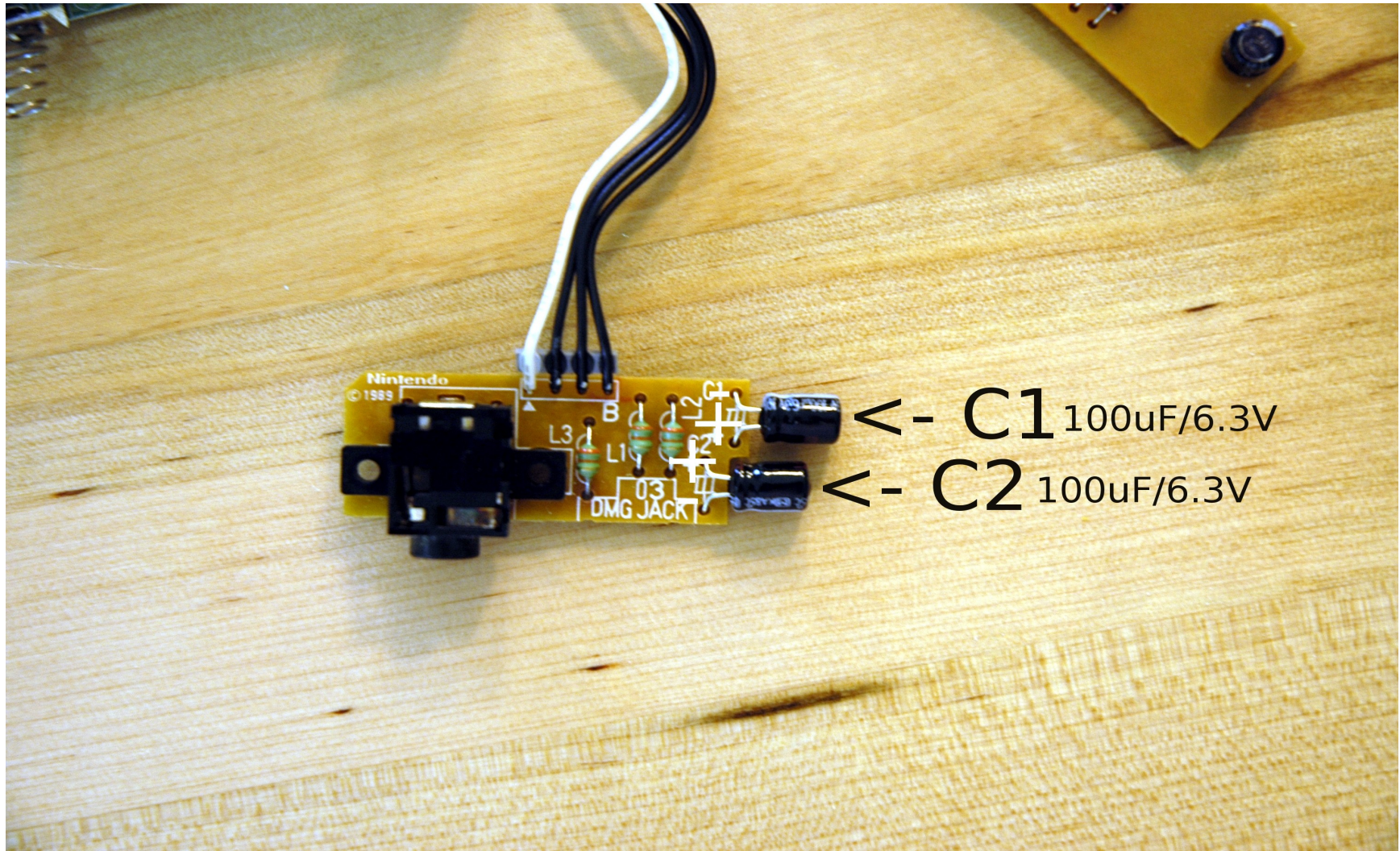
step fourteen



step fifteen



step sixteen

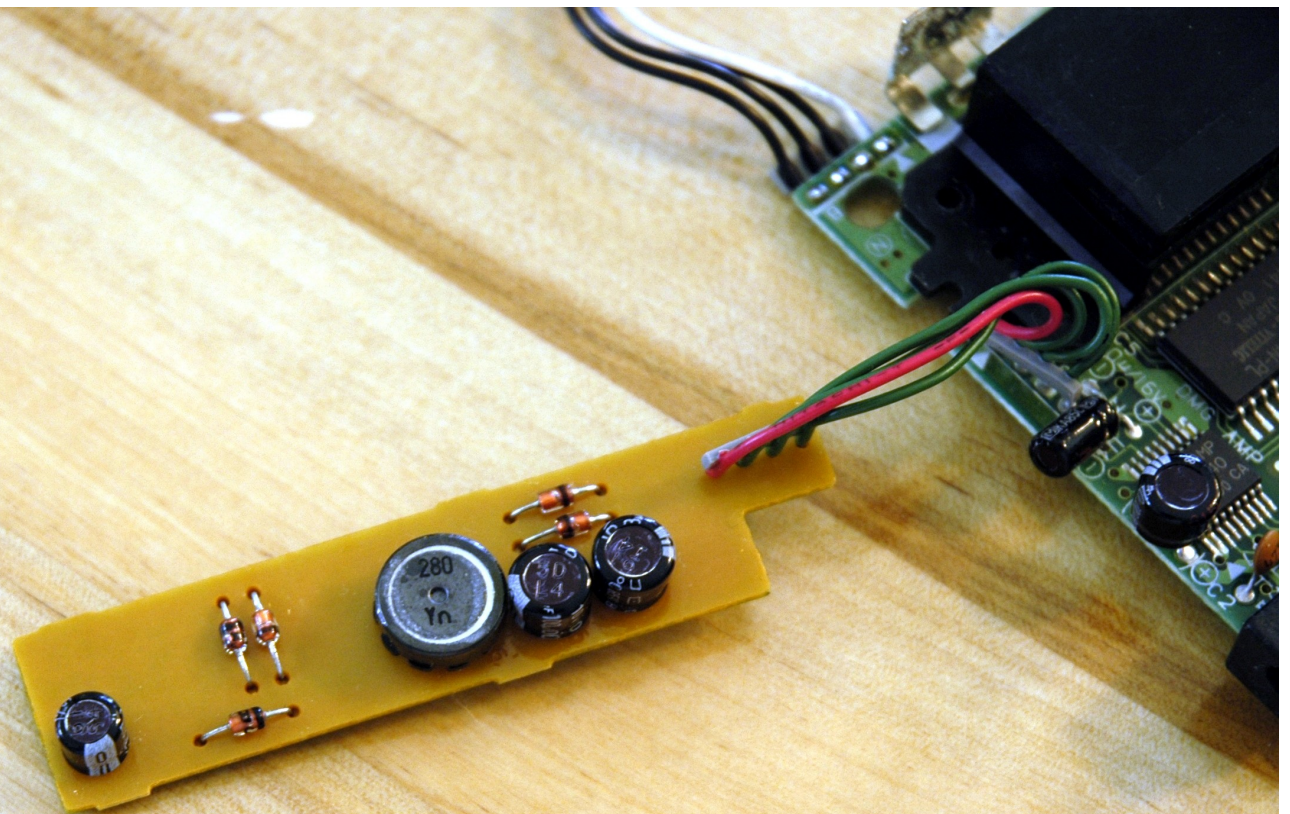


step seventeen

C1 33uF/25V

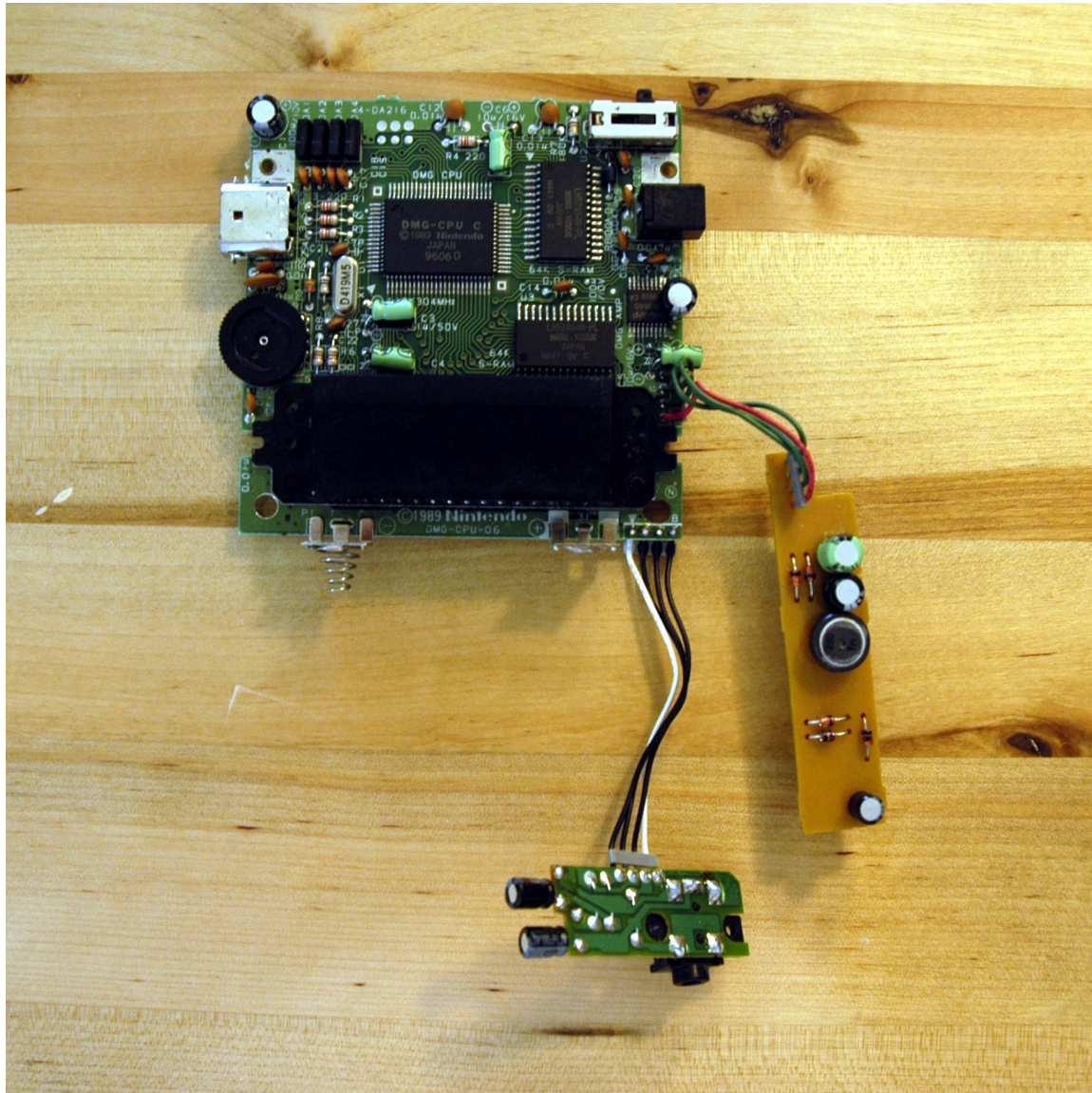
C2 100uF/10V*

C3 22uF/10V*



* not on all PCB revisions

step eighteen



congratulations!

you are finished :)

screw everything back together and enjoy your refreshed DMG!

if you have any questions, please do not hesitate to contact us.

