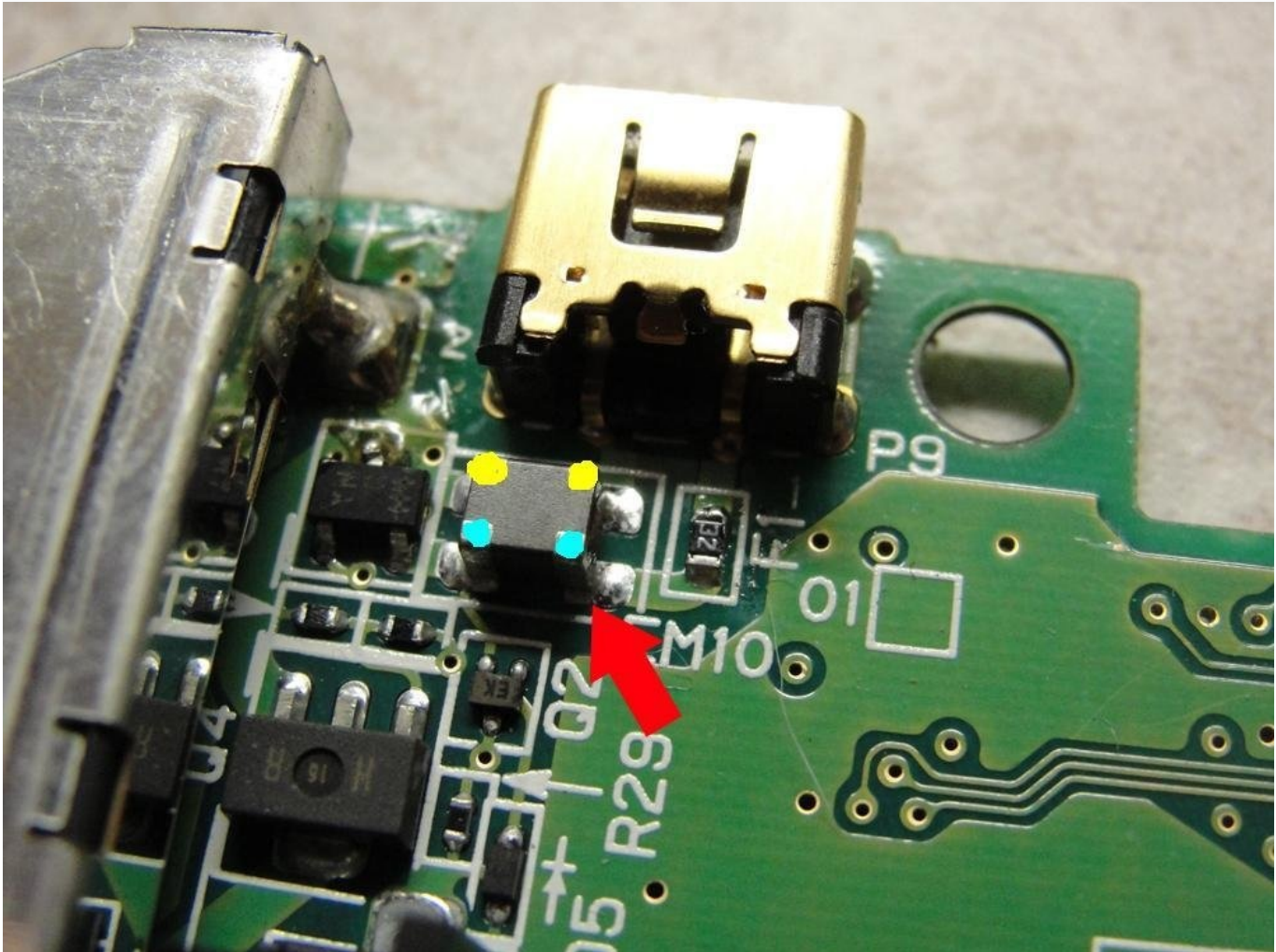




# Repairing a Nintendo DS that is not charging

If you have NO charge light on the DSL and the...

Written By: Knut



# INTRODUCTION

If you have NO charge light on the DSL and the battery doesn't charge, the EM10 power supply filter on the motherboard may be faulty.

This guide will allow you to locate, test and replace the filter.

You will find replacement EM10 Filter's on the internet for a few dollars each.

Removing the EM10 and bypassing it may leave the motherboard unprotected against power supply noise. Remove and bypass at own risk!



## TOOLS:

[Phillips #00 Screwdriver](#) (1)  
[iFixit Opening Tool](#) (1)  
[Push Pin](#) (1)  
[Lead-Free Solder](#) (1)  
[Soldering Iron](#) (1)  
[Spudger](#) (1)  
[Tri-point Y1 Screwdriver](#) (1)  
[Tweezers](#) (1)

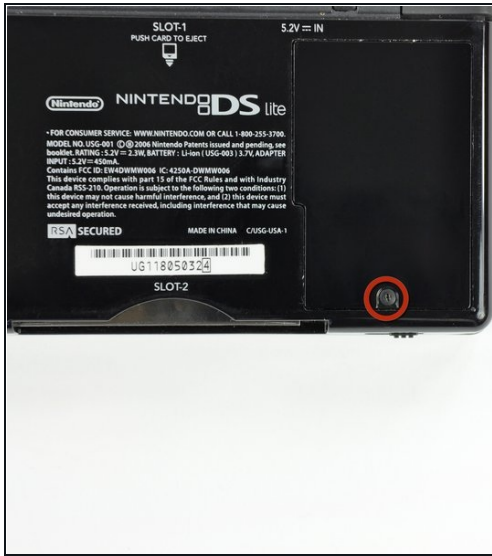


## PARTS:

[EM10 filter](#) (1)

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## Step 1 — Battery



- Unscrew the Phillips screw securing the battery cover to the lower case.
- ① The screw remains captive to the battery cover.
- Pry the battery cover upward with a spudger or fingernail, and lift out of the lower case.

## Step 2



- Wedge the edge of a spudger in between the side of the battery and the lower case housing and pry upward to dislodge the battery.
- Remove the battery from the DS Lite.

## Step 3 — Lower Case



- Use the tip of a spudger to pry both rubber feet off the DS Lite.

## Step 4



- Remove the following screws securing the lower case to the body of the DS Lite:
  - Two 4.3 mm gold Phillips screws
  - One 3.9 mm black Tri-Wing screw
  - One 3.3 mm silver Phillips screw
  - Three 5.5 mm silver Tri-Wing screws



## Step 5



① Remove the cover from the Game Pak slot before continuing.

- Insert the edge of a spudger in between the lower and upper case near the top right corner of the DS Lite.
- Carefully run the spudger along the right edge of the DS Lite, creating an opening in the process.
- Continue running the spudger along the backside of the DS Lite until the majority of the lower case has been separated from the upper case.

## Step 6

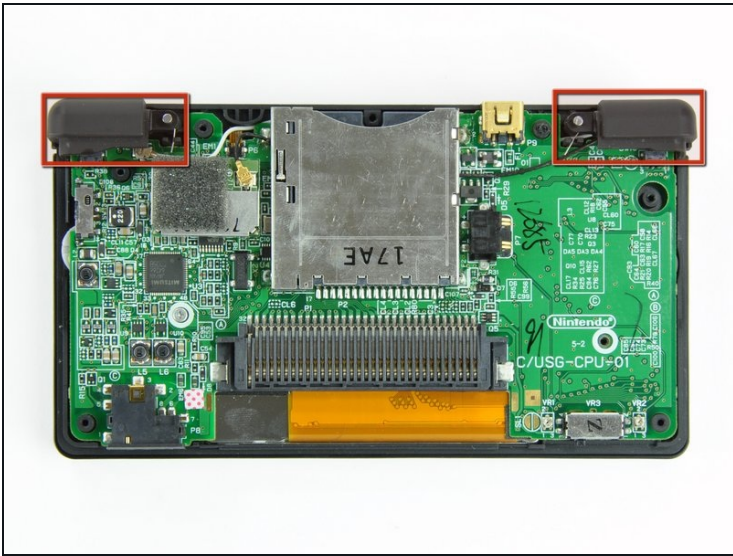


- Lift the lower case away from the rest of the DS Lite.

⚠ Pull carefully. Some units are sealed with adhesive, and pulling too hard can damage the power switch.

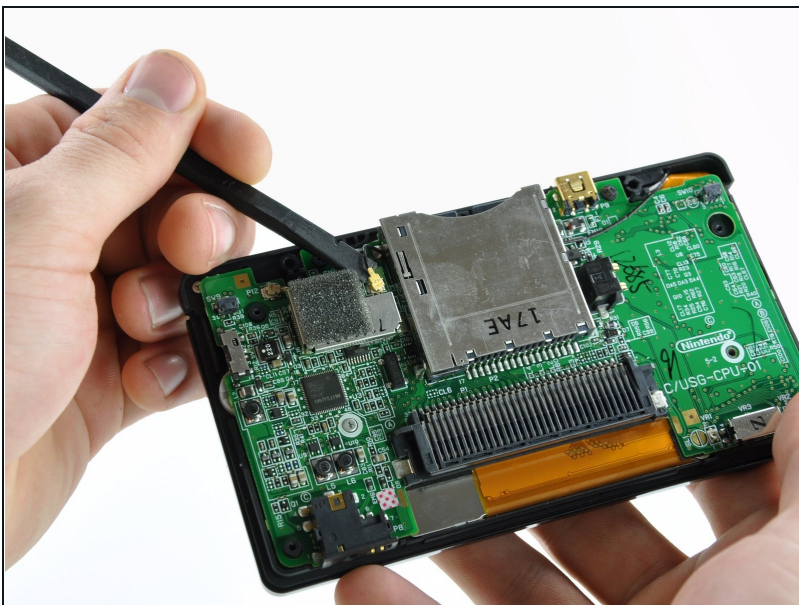
⚠ When re-assembling, make sure that power switch and volume sliders are properly aligned with the switches on the motherboard.

## Step 7 — Trigger Buttons



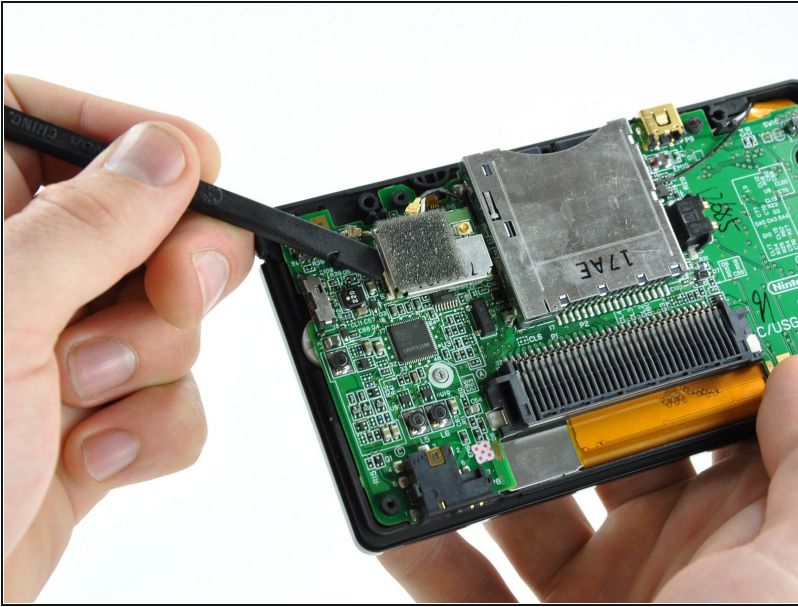
- Lift both trigger buttons out of the DS Lite.
- ☑ The trigger buttons are held in very loosely by small metal pegs and springs. Don't lose track of these pieces.
- ⓘ The second picture shows the correct configuration of the trigger assembly for reassembly purposes.

## Step 8 — Wi-Fi Board



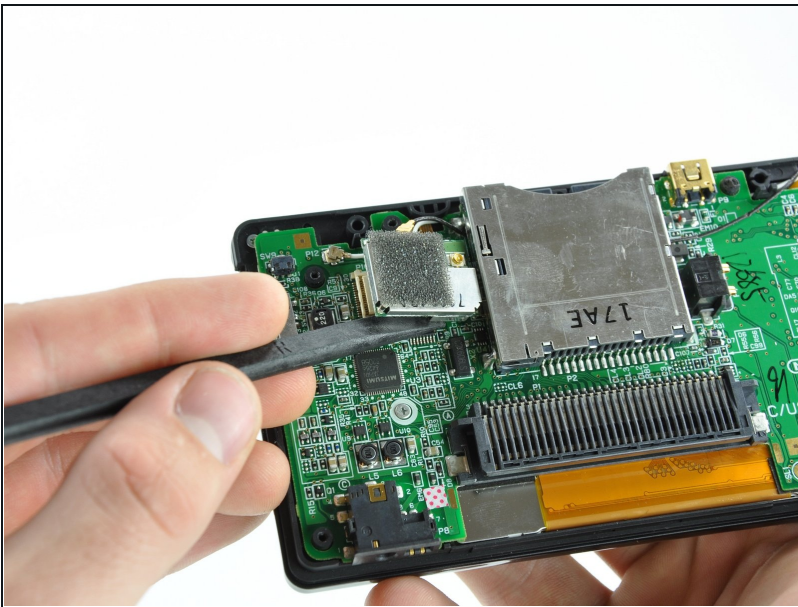
- Use the flat edge of a spudger to pry the Wi-Fi antenna connector straight up from its socket on the Wi-Fi board.

## Step 9



- Use the flat edge of a spudger to pry the Wi-Fi board connector straight up from its socket on the motherboard.

## Step 10



- Use the flat edge of a spudger to separate the right edge of the Wi-Fi board from the motherboard.
- ① The Wi-Fi board is secured to the motherboard with a layer of adhesive.
- Remove the Wi-Fi board from the DS Lite.



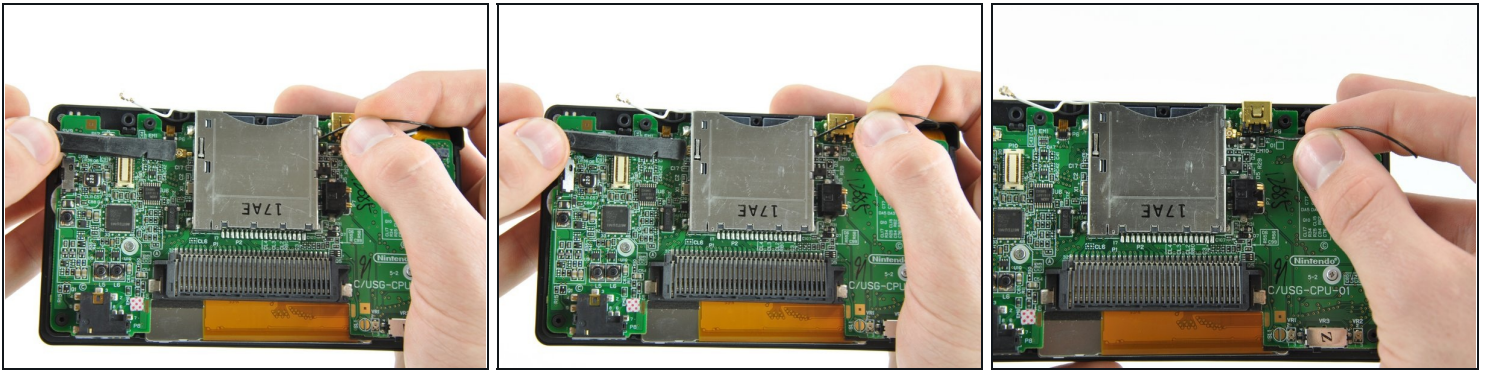
## Step 11 — Motherboard



- Use the flat edge of a spudger to pry the microphone connector straight up from its socket on the motherboard.



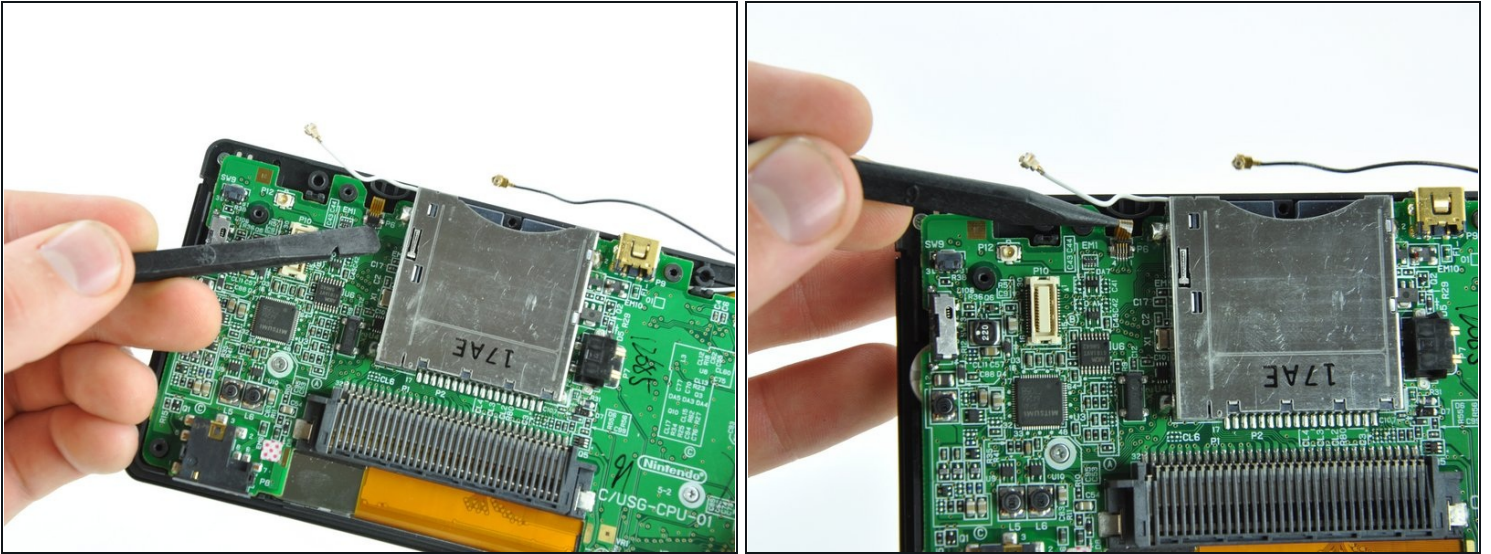
## Step 12



**⚠ In the following steps you must pull the antenna cable between the DS Lite game cartridge reader and motherboard. Pull slowly and stop when you feel resistance to avoid damaging the cable or motherboard.**

- Position the antenna cable with its connector facing up and away from the motherboard using a spudger to hold it down lightly in the gap between chips on the motherboard.
  - Slowly and carefully pull the antenna cable until the cable connector is under the DS Lite game cartridge reader.
  - Continue pulling the cable until the cable connector comes out from under the game cartridge reader on the right side.
- ☑ When reassembling and attempting to feed the antenna cable back under the game cartridge reader, the cable may kink or become difficult to feed through. If so, try feeding a piece of thread through first; then, tie the thread to one end of the cable connector and pull it through, guiding it past any obstructions.

## Step 13

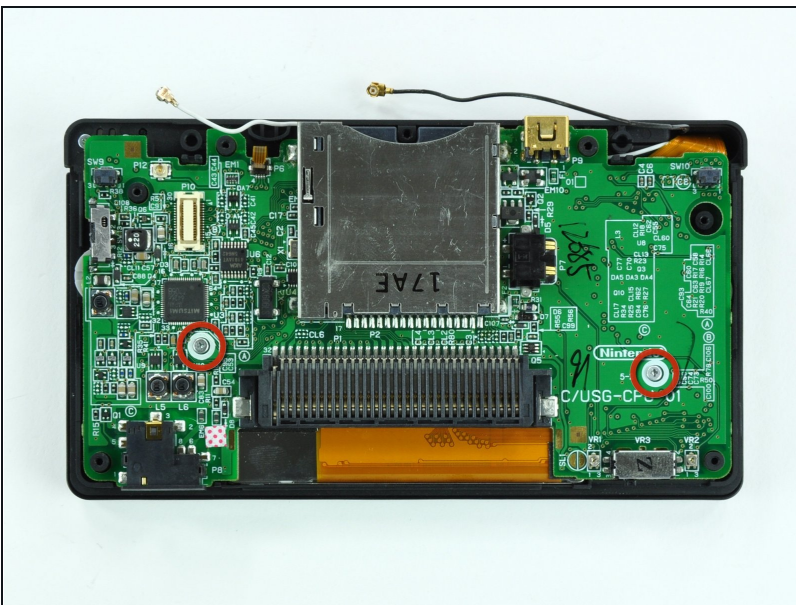


- Use your fingernail or the edge of a spudger to carefully flip up the touchscreen ribbon cable retaining flap.

⚠ Make sure you are flipping up the retaining flap, **not** the socket itself.

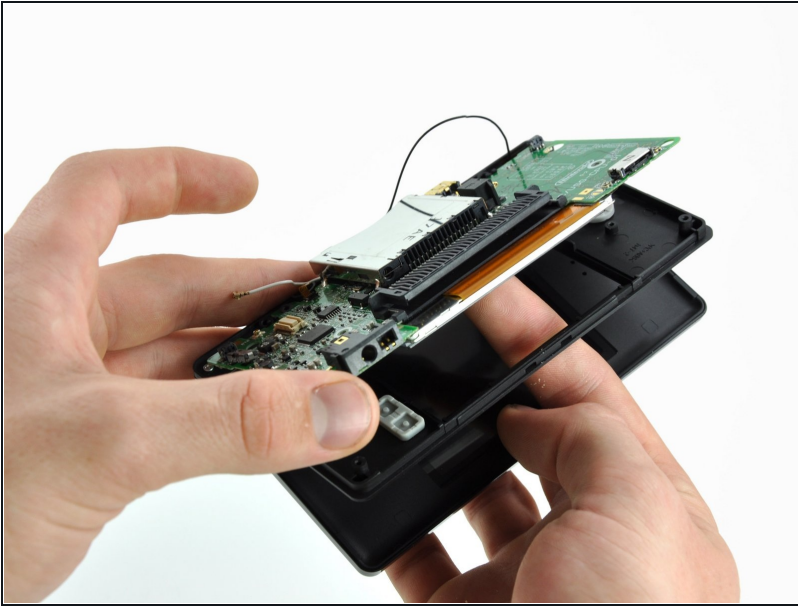
- Use the tip of a spudger to pull the touchscreen ribbon cable straight out of its socket.

## Step 14



- Remove the two 3.4 mm Phillips screws securing the motherboard to the upper case.

## Step 15

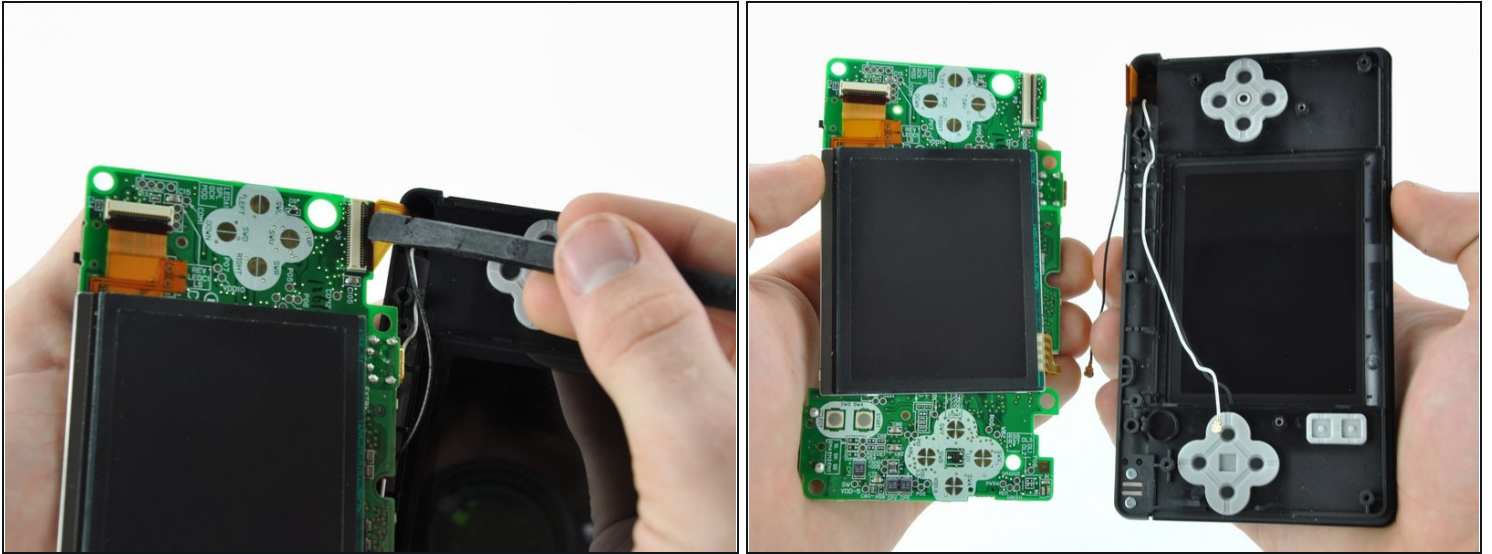


- Open the display enough to use your finger to push the front edge of the motherboard up and away from the upper case.

⚠ Do not try to remove the motherboard, as it is still connected to the upper display via the upper LCD ribbon cable.

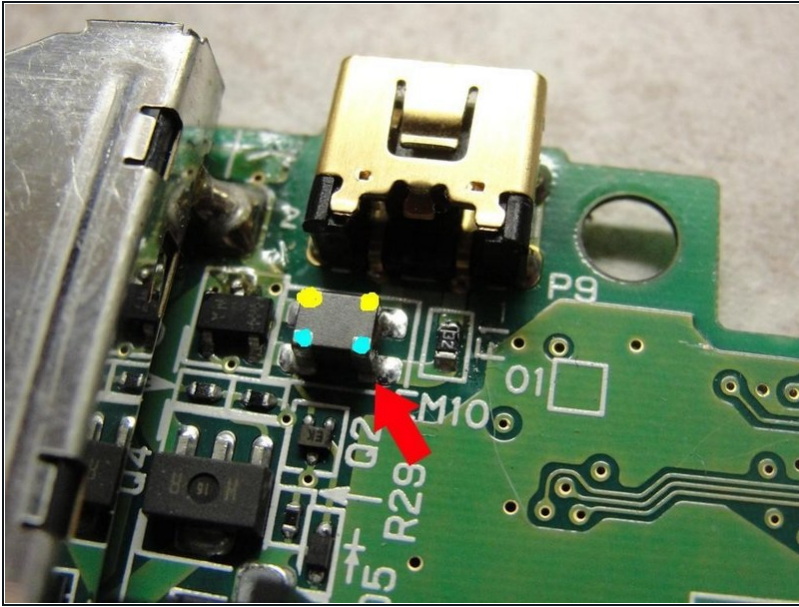


## Step 16



- Use your fingernail or the flat edge of a spudger to carefully flip up the upper LCD ribbon cable retaining flap.
- ⚠ Make sure you are flipping up the retaining flap, **not** the socket itself.
- Pull the motherboard away from the DS Lite to separate the upper LCD ribbon cable from its socket on the motherboard.
  - Remove the motherboard from the DS Lite.
  - Now you may open the retaining flap for the lower LCD screen in the same way and separate the lower LCD screen from the motherboard.

## Step 17 — Repairing a Nintendo DS that is not charging



- The EM10 charging filter is located next to the power connector on the motherboard.
- If the filter is missing or obviously broken, move on to STEP 18
- Use a multimeter to test the EM10 filter - measure the resistance between each of the yellow solder pads, and then between each of the cyan solder pads. If everything is OK you should have close to 0 Ohms between each set of pads. You should NOT have any connection between the cyan pads and yellow pads. If the filter fails either test it needs to be replaced.

## Step 18



- Remove the faulty EM10 filter. Use a soldering iron to melt the solder and gently lift off the filter with [tweezers](#) or pliers, being careful not to pull the copper tracks off the motherboard.
  - ① A replacement EM10 filter is available [HERE](#) (as at 01/01/12) no doubt other suppliers exist
  - Solder new EM10 filter into place, ensuring correct orientation. If required, check the new filter with a multimeter to confirm before installing.
- ⚠ Alternate method - Bridge the solder pads that correspond with each set of pads - yellow to yellow and cyan to cyan
- ① Bypassing the EM10 filter may affect the system performance and is not recommended

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To reassemble your device, follow these instructions in reverse order.