Brother MFC-J4420DW Capacitor Replacement

The printer does not start on pressing the power button, even disconnecting and reconnecting the power results in an immediate shutdown of the device. Replacing one capacitor on the motherboard solves the problem.

Written By: Matthias Loikasek

This document was generated on 2020-11-14 02:39:02 PM (MST).

INTRODUCTION

I recently encountered the problem, that my Brother printer would not start or react at all when pressing the power button. Disconnecting the power cord, waiting for some seconds and reconnecting resulted in the startup of the printer, but it would immediately shut down with the message that all "All functions will be disabled". In the comments of a Youtube video I found a workaround (https://www.youtube.com/watch?v=Gi7cl588...) namely to remove the paper tray before reconnecting the power cord and reinserting it not until the printer asks for it. That workaround did work for, but that was not a permanent nor a convenient solution.

Since the warranty of the printer was not expired, Brother sent me a technician who replaced a capacitor. After two or three restarts of the printer, on which the printer still misbehaved, the printer started working normally again.

As with all guides, you do that at your own risk. You should know how to solder and be at experienced in disassembling and reassembling things.

TOOLS:

- Portable Soldering Iron (1)
- Wire cutters/side cutters (1)
- Philips Screw Driver (1)

PARTS:

- capacitor 5.5V 0.22F (1)

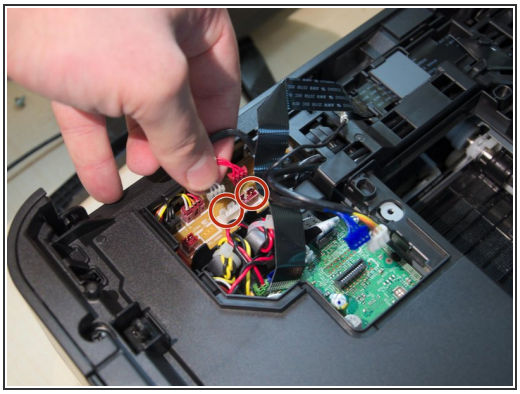
Step 1 — Removing hood holder

- Disconnect the power cord of the printer
- Open the printer as you would to access the USB port.
- Pull out the rear end of the hood holder (see picture two). After that you can remove the top part of the hood holder.
- Now remove the hood holder completely.

ⓘ It is quite useful to put the printer near something so that you can lean the top against something, for example a wall.

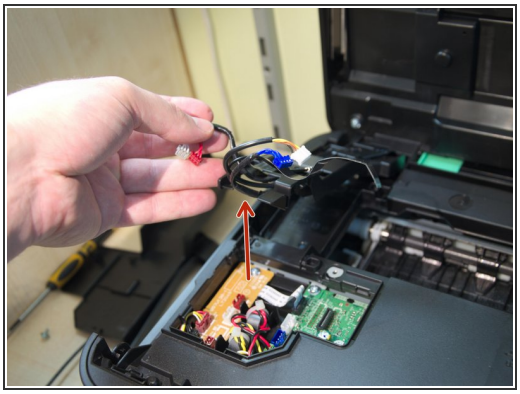
Step 2 — Removing cables connected to the top part of the printer





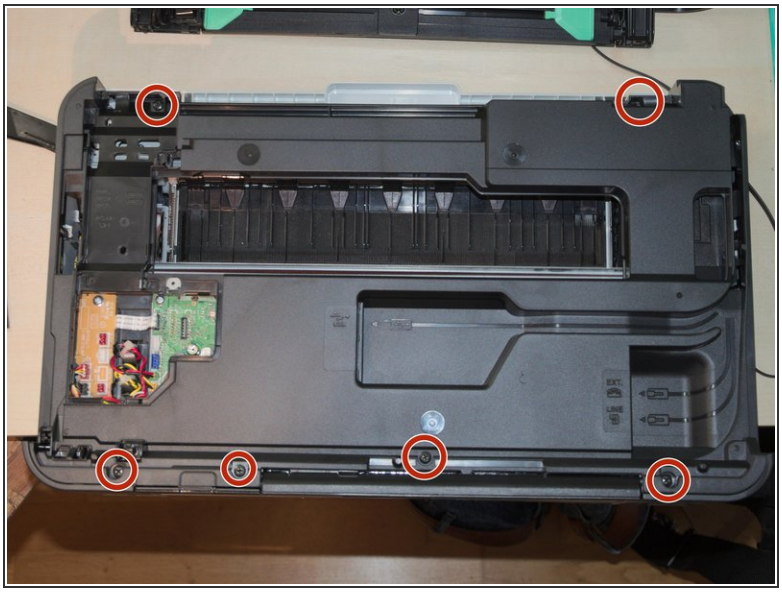
- Next remove the cover on the left side of the printer (lift the right side of the cover first).
- Unplug the black ribbon cable, the blue and the white plugs from its sockets and unscrew the cable which is attached with a screw (see second image)
- Remove the red and white plugs from its sockets as shown in picture three.

Step 3 — Remove the top part of the printer



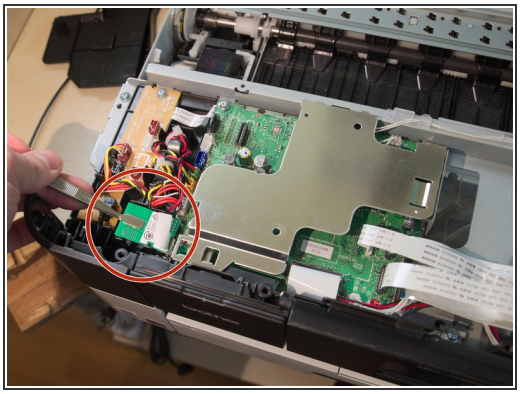
- Flip the plastic part shown in picture one up to the top part of the printer
- Now you can easily remove the top of the printer by pushing it away from the printer (not up).

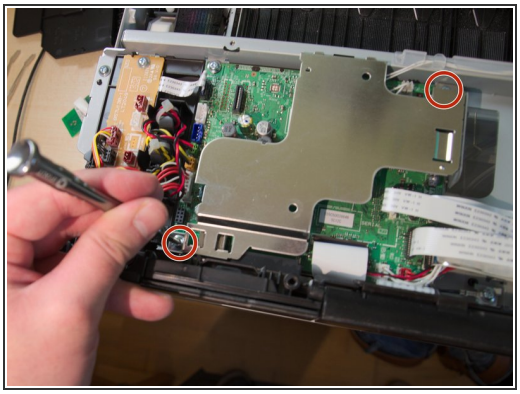
Step 4 — Remove cover

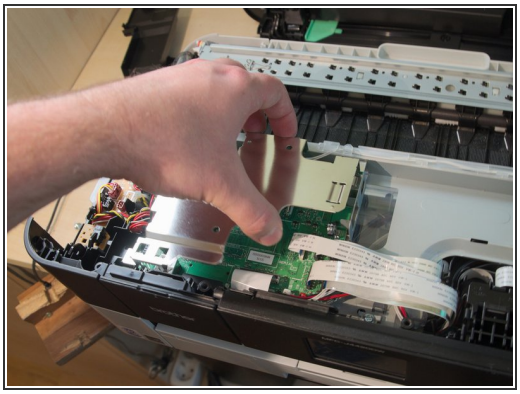


- Remove the screws connecting the black plastic cover to the printer (see image)
- Remove the cover

Step 5 — Remove metal cover

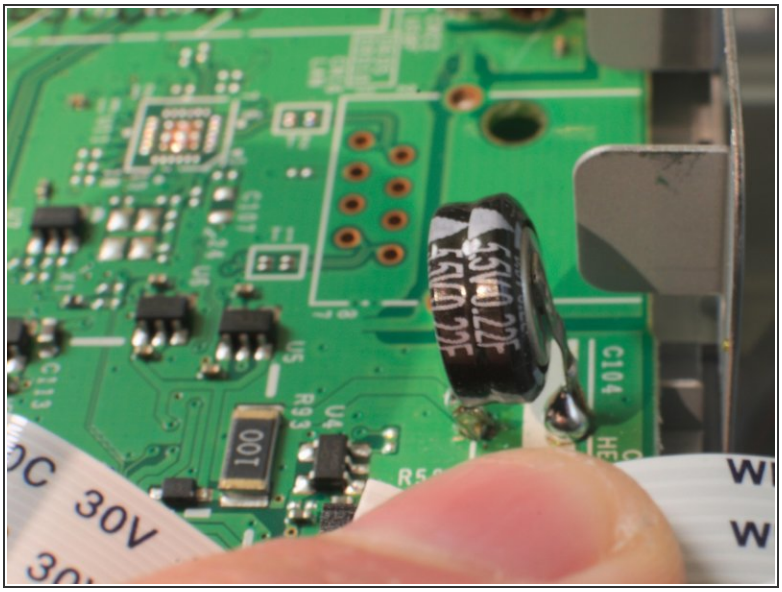






- Remove the little PCB as shown in image one by lifting it up. Be careful not to damage the pins connecting the PCB with the motherboard
- Unscrew the two screws fixing the metal cover to the motherboard as shown in picture two.
- Remove the metal cover to get full access to the motherboard

Step 6 — Replacing the capacitor



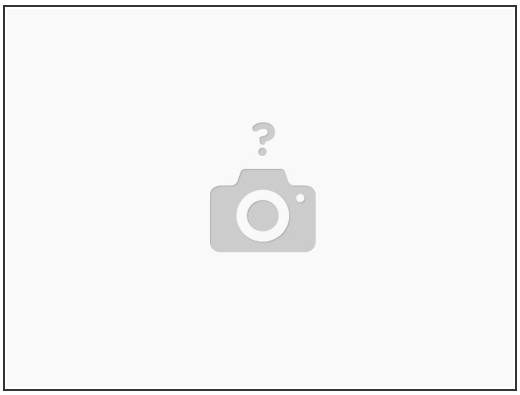
- On the right side of the motherboard there is a coin shaped capacitor. In picture two you can see a detailed view of the capacitor (5.5V 0.22F).
- Note which polarity of the capacitor is facing which side on a piece of paper.

  ⓘ You can find the + and - Symbols on the legs of the capacitor.
- Remove the capacitor.

  ⓘ The Brother technician used side cutters to remove the defect capacitor.

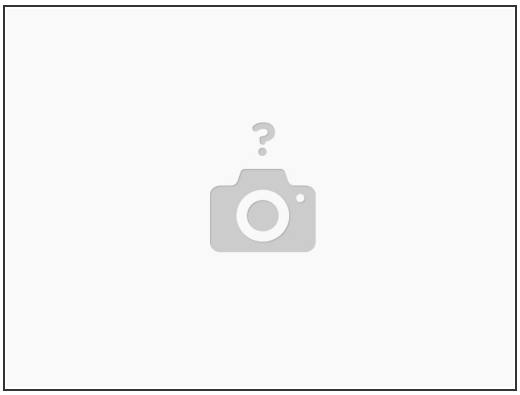
  ⚠ Be careful to LEAVE ENOUGH OF THE WIRE to be able to solder a new capacitor onto them.
- Looking at you piece of paper, solder the new capacitor in THE RIGHT DIRECTION (POLARITY) to the remaining wires from the removed capacitor.

Step 7 — Reassemble the printer



- Using the steps above in reverse, reassemble the printer.

Step 8 — Start up with hiccups



- After reassembling the printer, reconnect the power cord.
- The first few times you start you may encounter the same behaviour as before the repair. After two or three restarts my printer worked fine again.
- I hope this guide helps. Happy repairing. If something is unclear or you have suggestions how to phrase things better (engl. is not my mother tongue) please leave a comment.