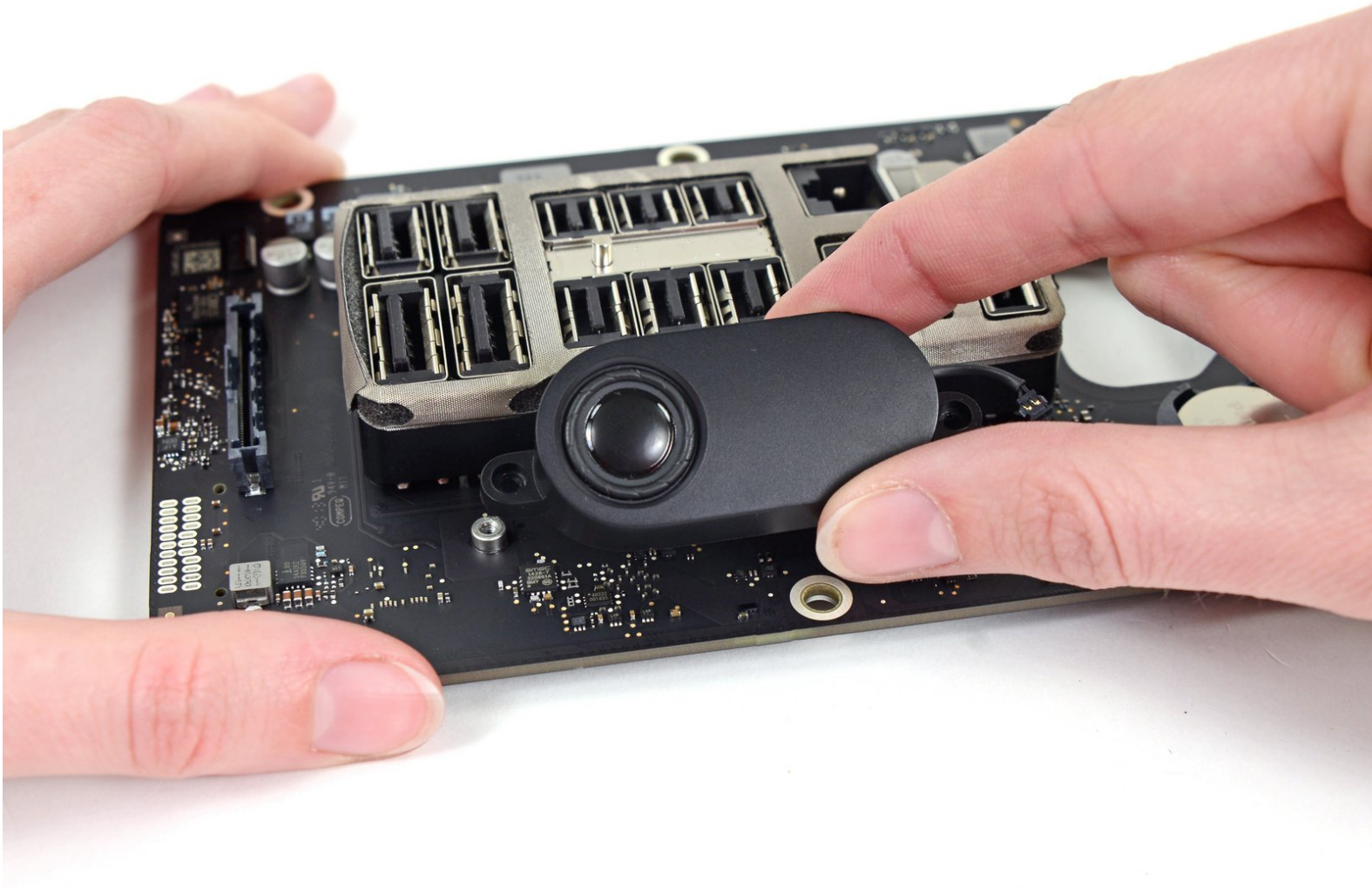




# Mac Pro Late 2013 Speaker Replacement

Replace the Speaker in your Mac Pro Late 2013.

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## INTRODUCTION

The Mac Pro includes a small speaker on the IO board. Use this guide to remove and replace this speaker.

**Before beginning any work on your Mac Pro:** Unplug the computer and press and hold the power button for ten seconds to discharge the power supply's capacitors.

**Be very careful** not to touch the capacitor leads or any exposed solder joints on the back of the power supply. Only handle the board by the edges.



### TOOLS:

- [T4 Torx Screwdriver](#) (1)
  - [Spudger](#) (1)
  - [TR10 Torx Security Screwdriver](#) (1)
  - [TR7 Torx Security Screwdriver](#) (1)
  - [Tweezers](#) (1)
  - [T5 Torx Screwdriver](#) (1)
  - [TR8 Torx Security Screwdriver](#) (1)
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## Step 1 — Outer Case



- Slide the lock switch to the right, to the unlocked position.

## Step 2



- Lift the outer case straight up off the Mac Pro.

**i** It may help to push down on the center of the fan while lifting the case up.

## Step 3 — Fan Assembly



- Remove five 5.1 mm T10 Torx screws from around the outer perimeter of the fan assembly.

## Step 4



**i** The fan assembly is attached to the rest of the computer by two cables on the IO board side.

- Tilt the assembly up away from the IO board.

**!** Do not try to remove the fan assembly yet, as it is still attached by two cables.



## Step 5



- While supporting the fan assembly with one hand, loosen the two T8 captive screws in the fan cable bracket.

**⚠** These screws are captive in the Mac Pro. Do not try to remove these screws from your Mac Pro.

## Step 6



- Use a pair of tweezers to pull the fan cable bracket away from the fan assembly.

## Step 7



- Use the flat end of a spudger to disconnect the fan assembly ribbon cable from the IO board.

## Step 8



- Disconnect the fan assembly antenna cable from the IO board.
- Remove the fan assembly from the Mac Pro.

## Step 9 — Lower Case



 Flip the Mac Pro upside down, 180 degrees.

- Remove five 5.1 mm T10 Torx screws from the outer perimeter of the lower case.

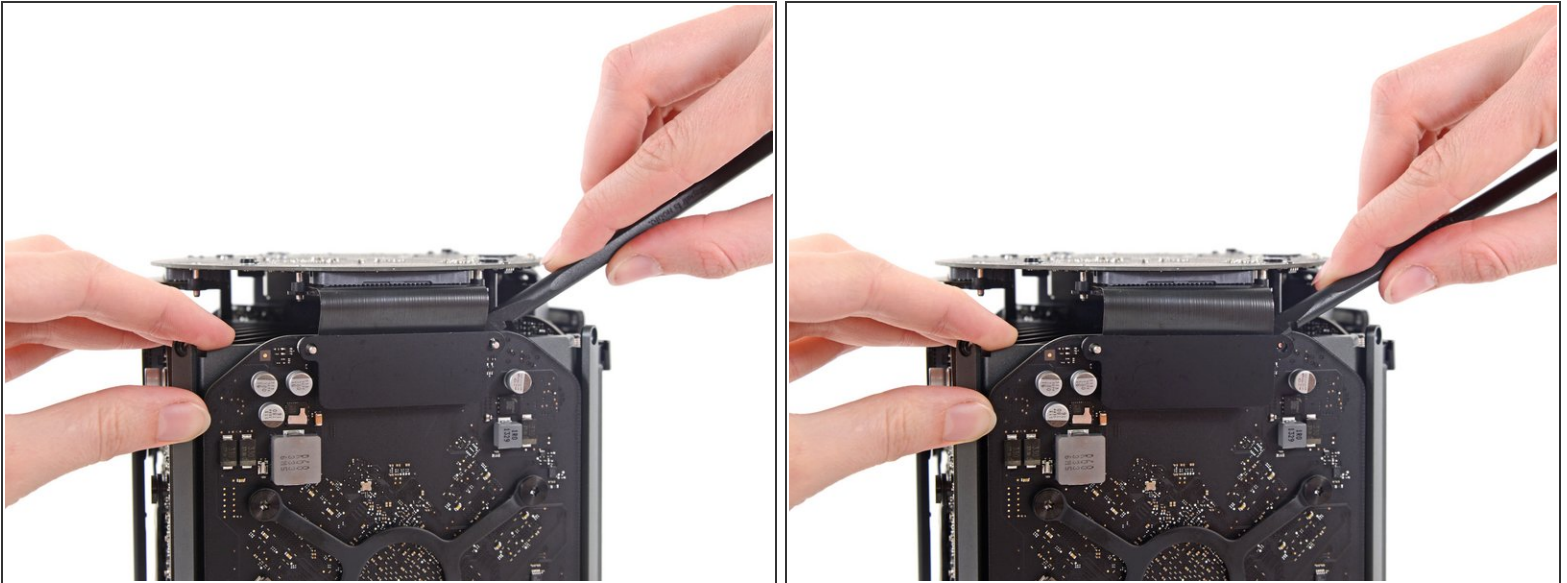
## Step 10



- Carefully lift the lower case up and remove it from the Mac Pro.

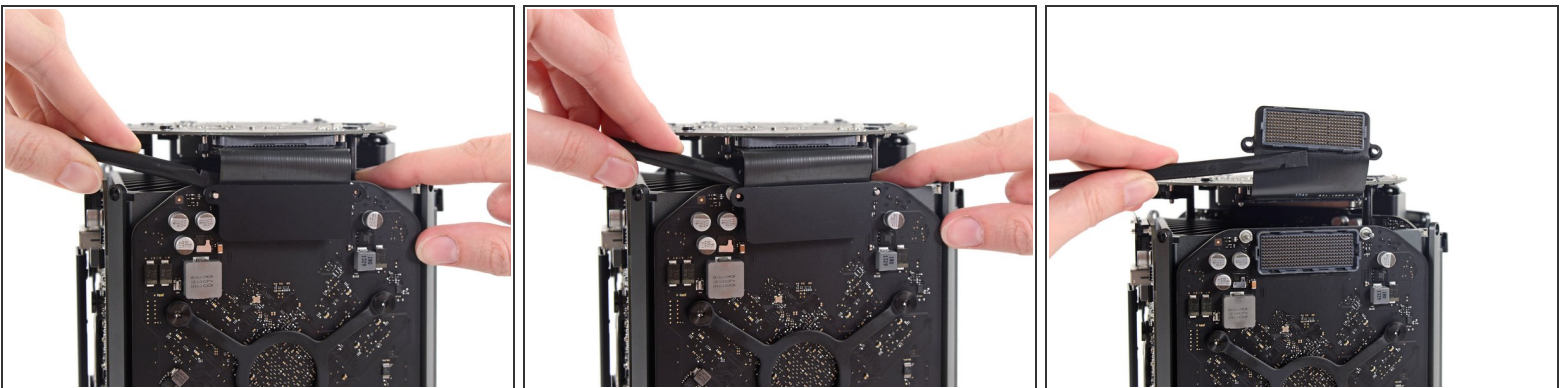


## Step 11 — Interconnect Board



- Use the flat end of a spudger and a twisting motion to gently separate one side of the graphics card data connection.

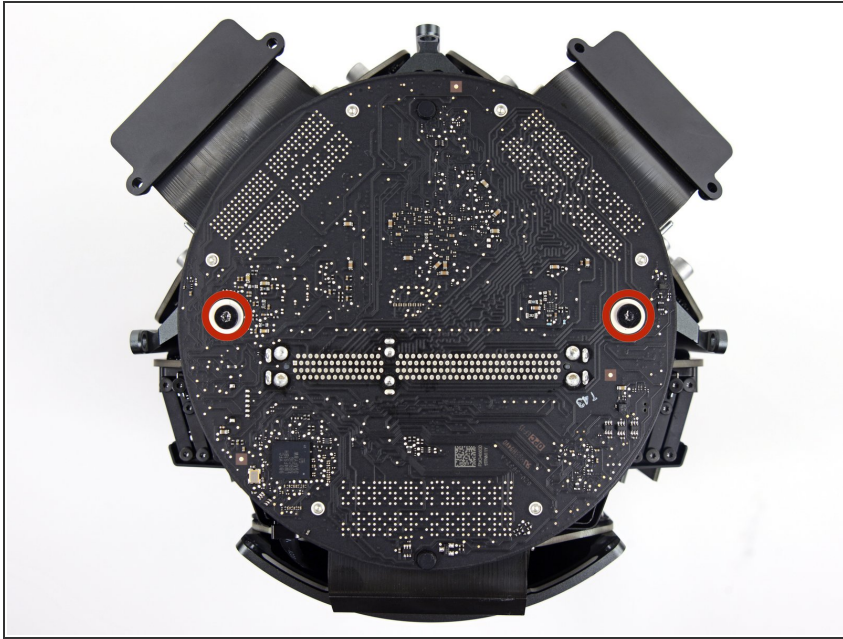
## Step 12



- Gently separate the other side as well.
- Flip the connector up and out of the way of the graphics card.
- ⓘ Repeat this procedure on the other graphics card.



## Step 13




- Remove the two 6.0 mm T8 Torx screws securing the interconnect board to the heat sink.

## Step 14

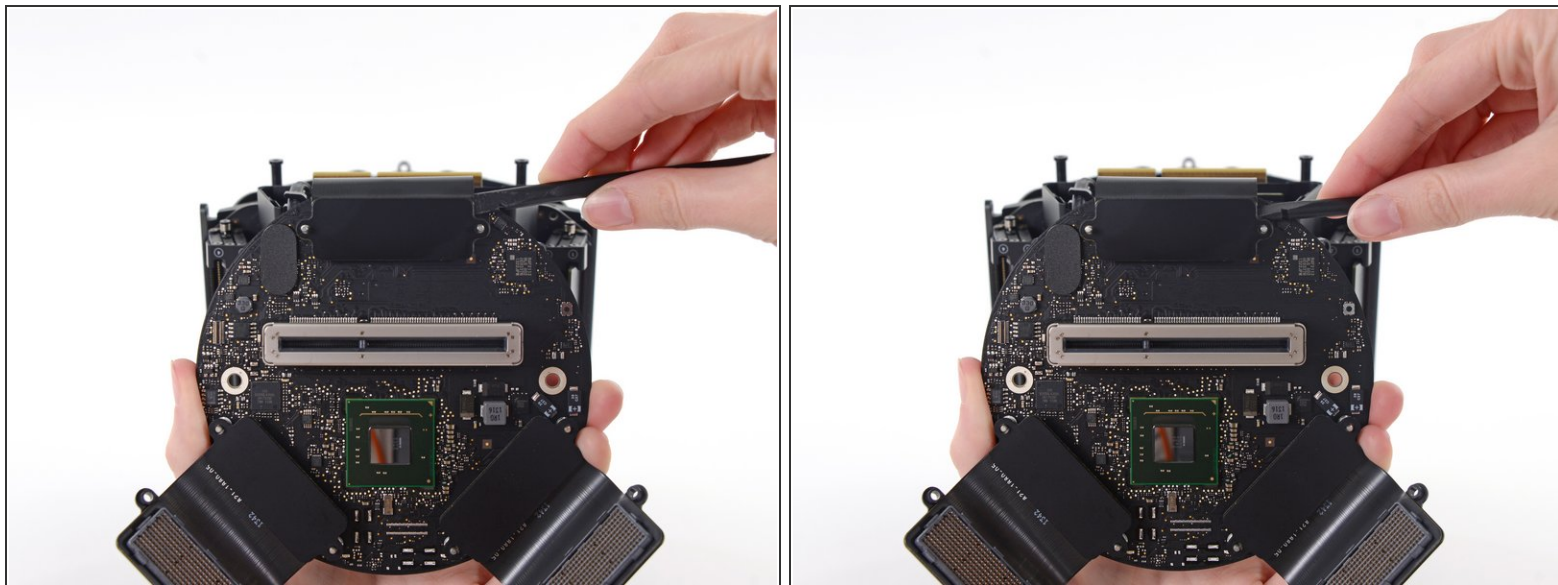


- Gently walk the interconnect board straight up off the logic board's slot connection.

 It is recommended to lift one side and then the other.

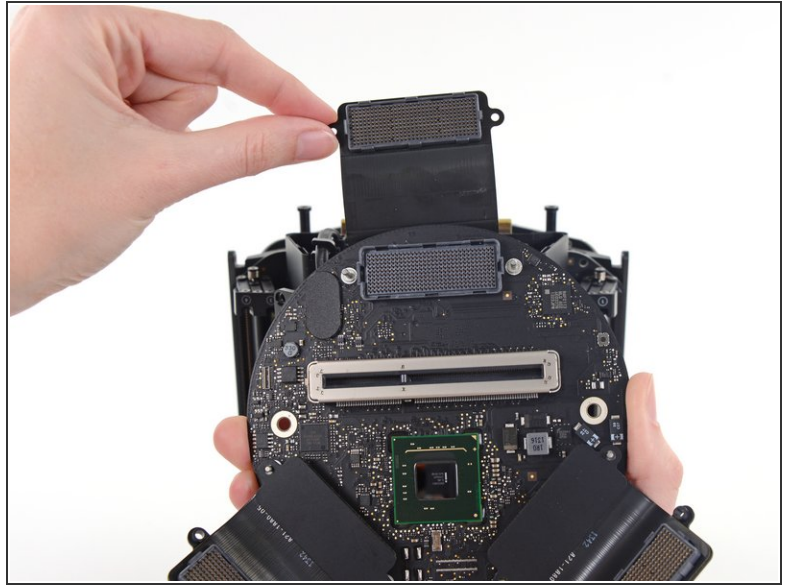
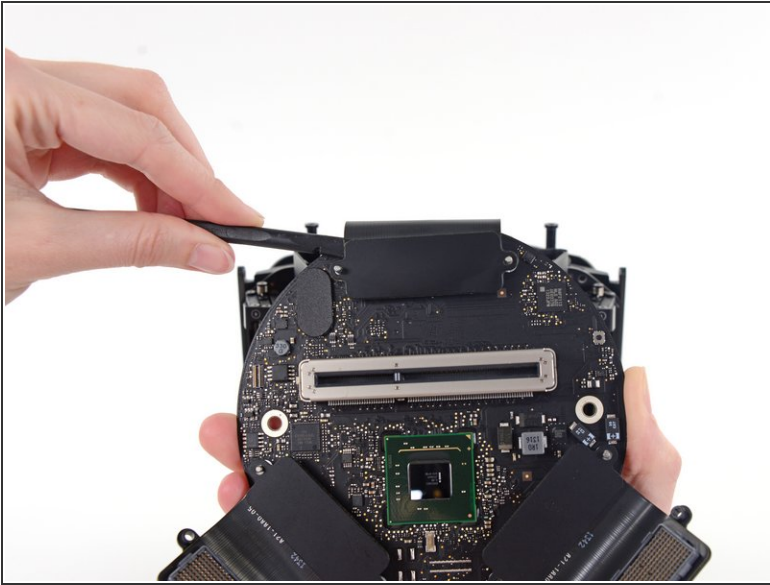
 Do not try to remove the interconnect board from the Mac Pro yet, as it is still connected to the IO board.

## Step 15



- Flip the interconnect board up and over, exposing the IO board data cable.
- Use the same sort of twisting and spreading motion with the flat end of a spudger to separate one side of the IO board data cable.

## Step 16



- Use the flat end of a spudger to separate the other side of the IO board data cable.
- Bend the cable out of the way and remove the interconnect board from the Mac Pro.

## Step 17 — Power Supply Assembly



- Flip the Mac Pro back over and set it gently on a flat surface.
- ⓘ We recommend laying the Mac Pro on the corner of the heat sink and the two standoff screw posts that attach to the interconnect board.



## Step 18



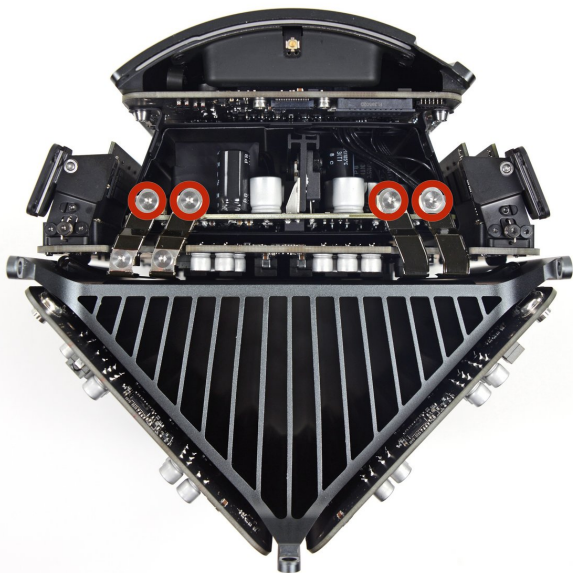
- Remove the two 3.6 mm T5 Torx screws from the sides of the power supply cage (one on each side).

## Step 19



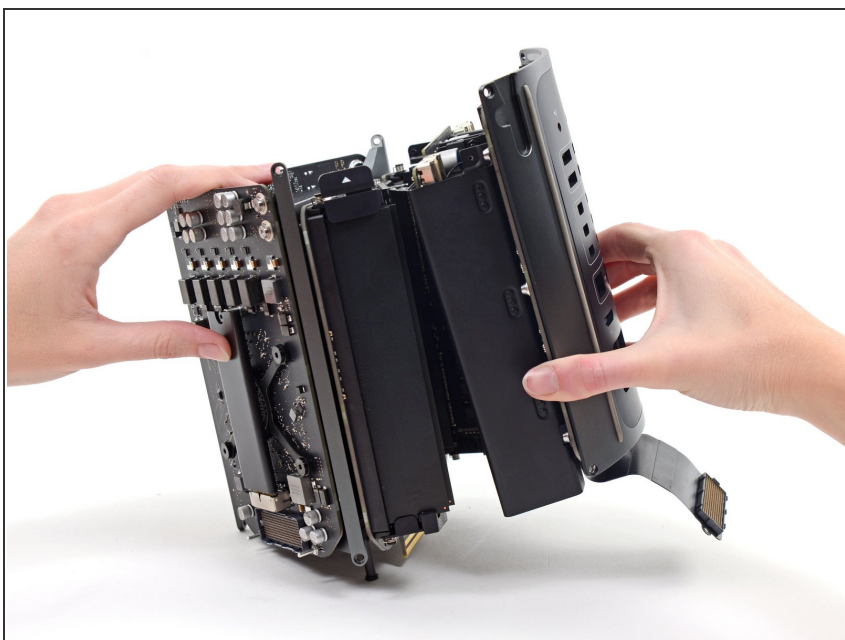
- Remove the power supply cage from the top of the power supply.
- ⚠ By removing this cage, you are exposing internal components of the power supply. Be very careful not to touch any of the power supply components or circuitry.
- ⓘ Be careful not to drop any screws or tools into the power supply, as this may damage the power supply.

## Step 20



- Remove the four 5.5 mm T8 Torx screws securing the power supply assembly to the Mac Pro.

## Step 21



- Remove the power supply assembly from the Mac Pro.

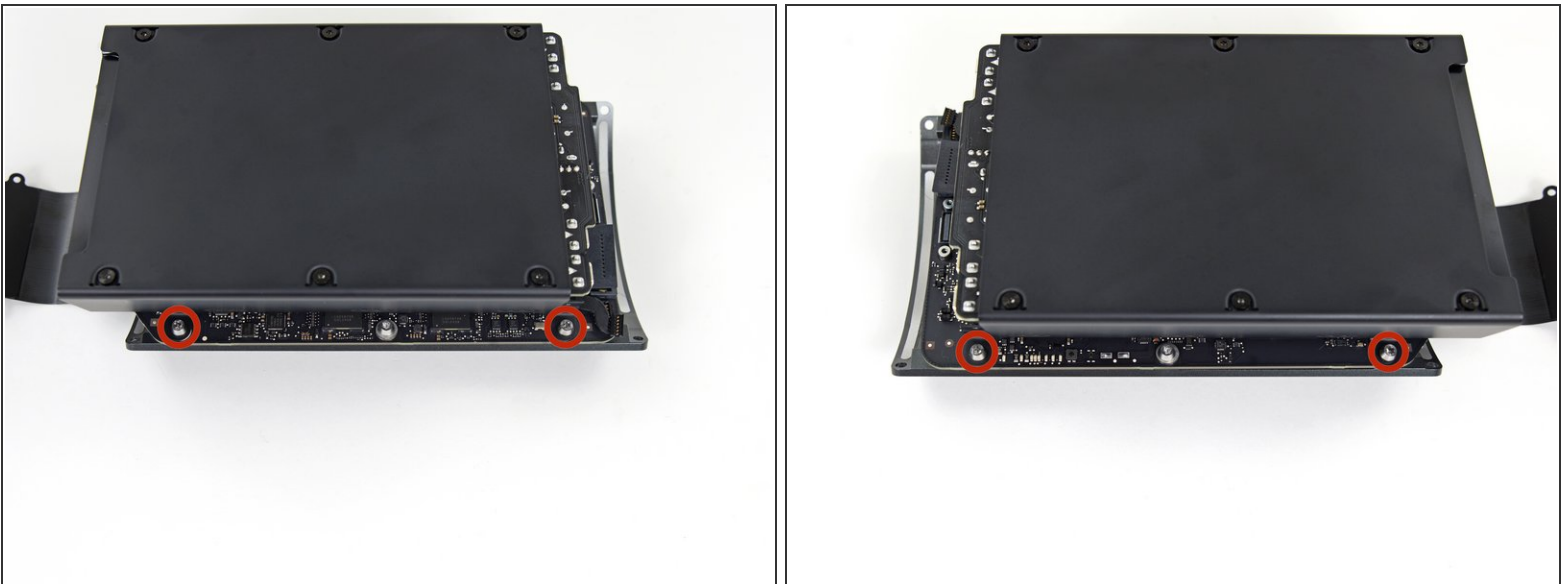
## Step 22 — Power Supply



- Use the flat end of a spudger to disconnect the power supply DC-Out connector from its socket on the IO board.
- Use the tip of a spudger to disconnect the power supply data cable from its socket on the IO board.

⚠ For both cables, make sure to pry straight up on the connector, and **not** the socket.

## Step 23



- Remove the four 9.0 mm silver T10 Torx screws from the sides of the power supply.
- ⓘ The power supply overhangs these screws somewhat, so you'll need to use a fixed screwdriver at a bit of an angle.



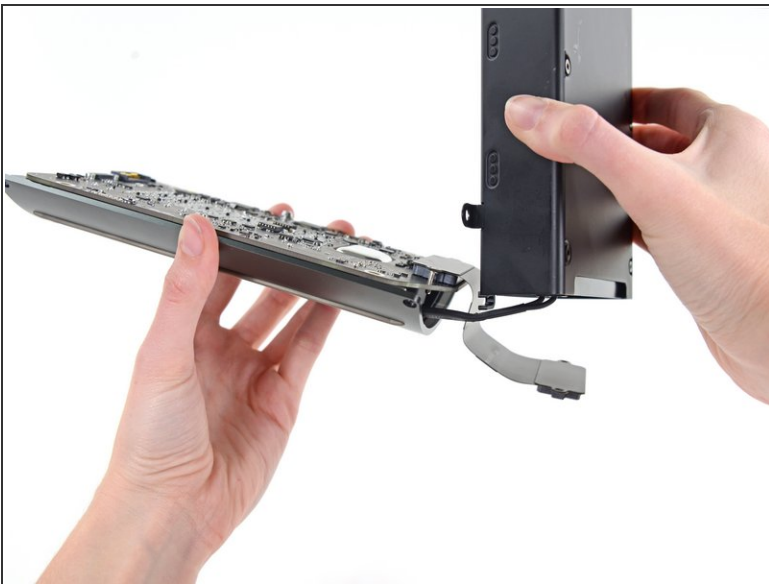
## Step 24



- Gently shift the power supply to free the AC power inlet cable out of its plastic clip.

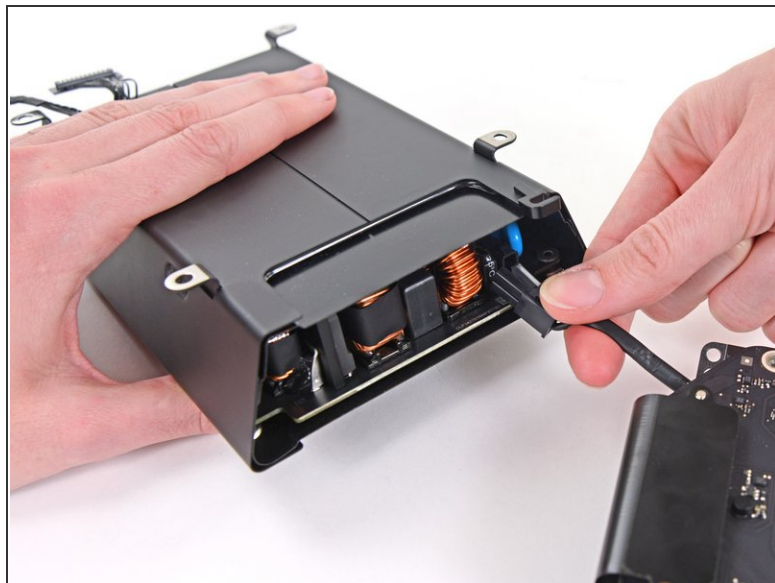
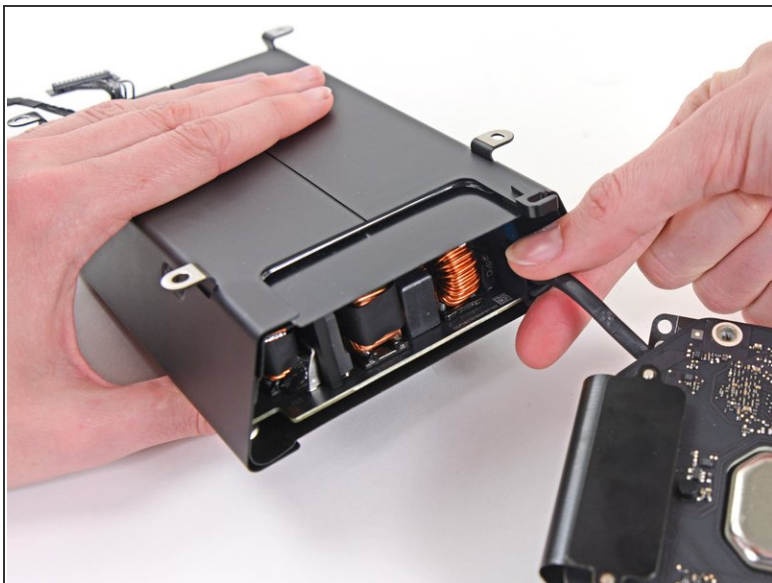
**⚠ Be careful not to try to separate the power supply from the IO board assembly just yet, as it is still connected by the AC power inlet cable.**

## Step 25



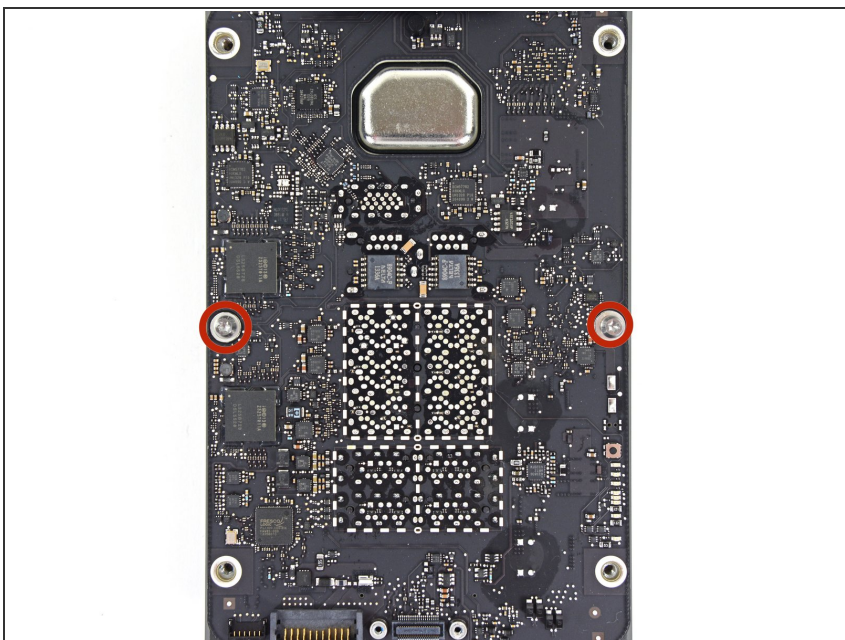
- Flip the power supply back to expose the AC power inlet cable.

## Step 26



- Squeeze the AC power inlet cable connector and pull it straight out of its socket in the power supply.

## Step 27 — IO Board



- Remove the two 9 mm silver T10 Torx screws securing the IO Board to the IO shield.



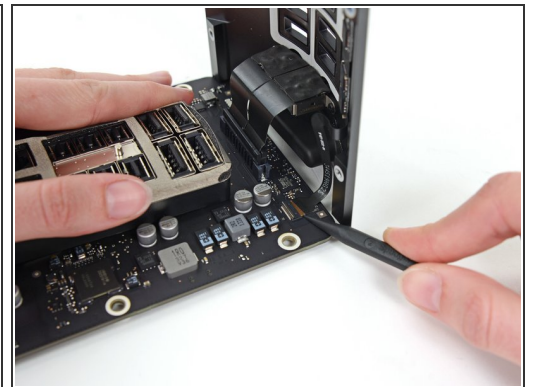
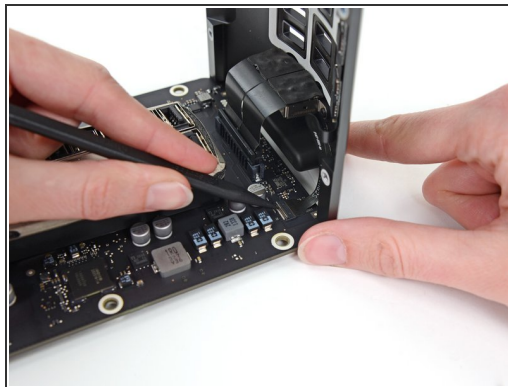
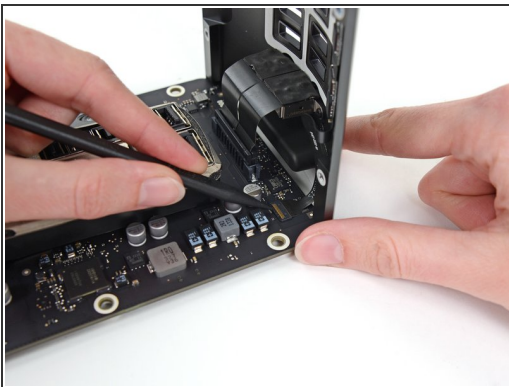
## Step 28



- Lift the IO board up from the IO shield from the end with the AC plug.

**⚠ Do not attempt to completely separate the IO board from the IO shield, as there are still two cables connecting the two components.**

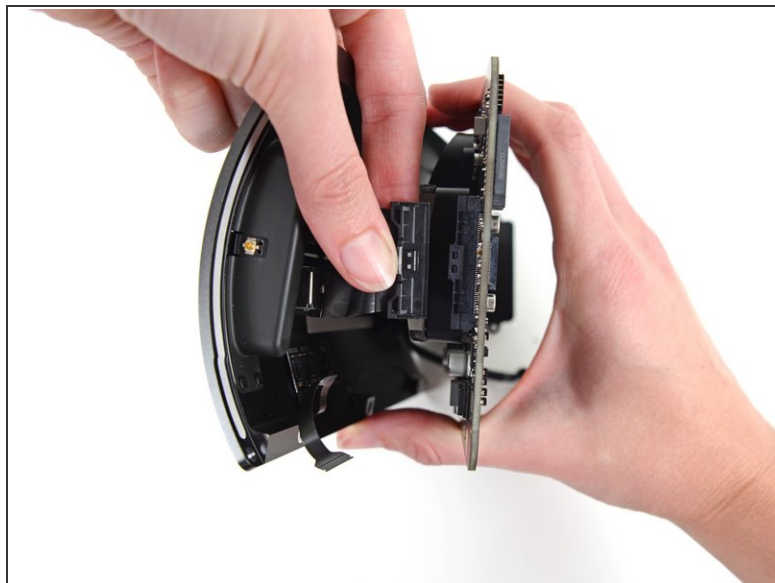
## Step 29



- ① Set the assembly down on a flat surface to access the connectors on the IO board.
- Use the tip of a spudger to flip the retaining flap on the IO shield ribbon cable ZIF connector.
- Disconnect the IO shield ribbon cable.

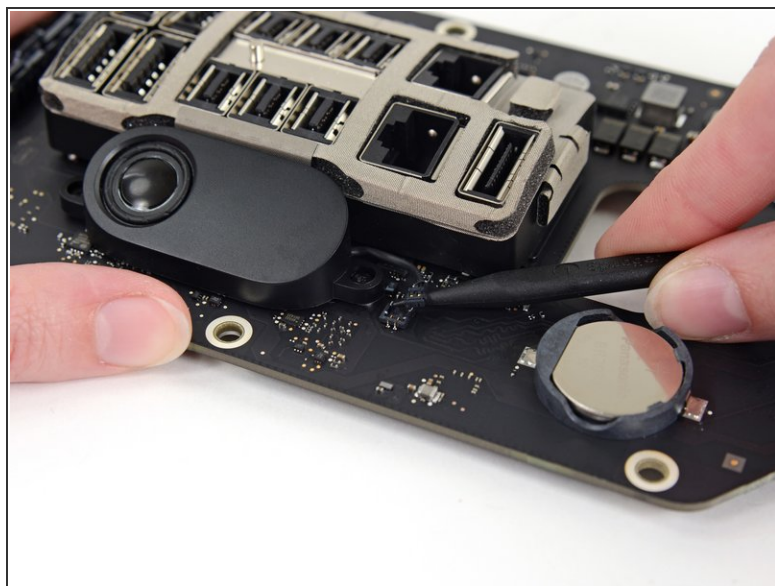
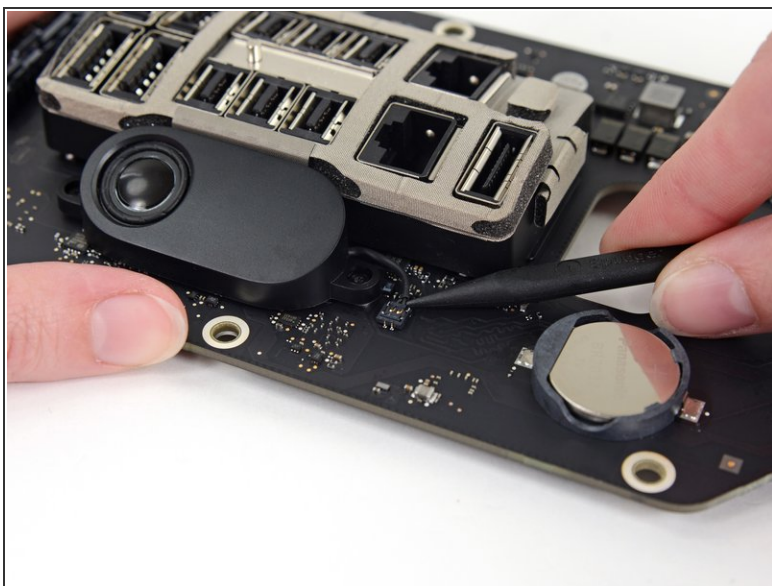


## Step 30



- Squeeze and pull the audio jack ribbon cable connector from the IO board.

## Step 31 — Speaker



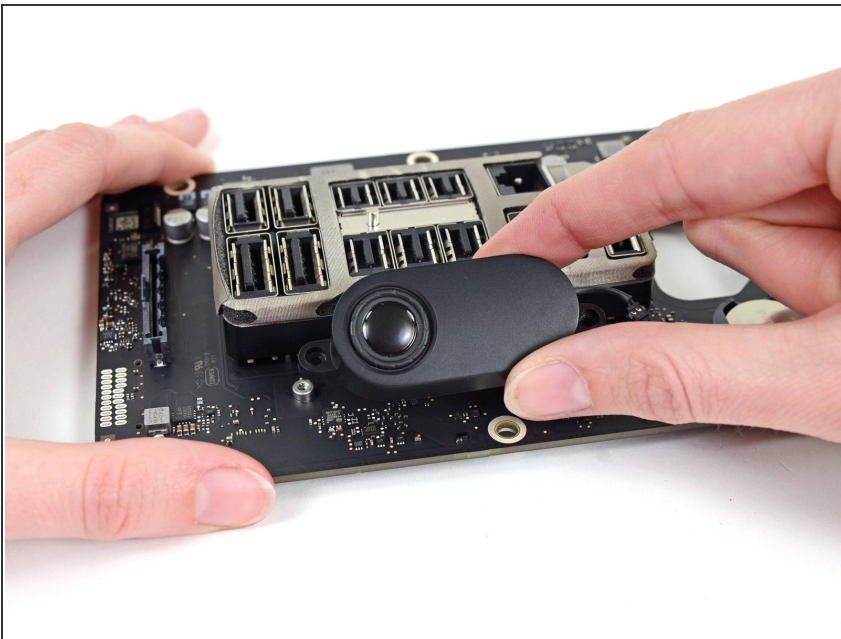
- Use the tip of a spudger to disconnect the speaker cable from its socket on the IO board.
- Be careful to pry up on the connector and not the socket.

## Step 32



- Remove the two 3.2 mm T4 Torx screws securing the speaker to the IO board.

## Step 33



- Remove the speaker from the IO board.

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