



Installing Mac mini Model A1176 Fan

Tools used in this guide

- [1.5" Thin Putty Knife](#)
- [Phillips #00 Screwdriver](#)
- [Spudger](#)
- [Tweezers](#)



Step 1 - Top Housing

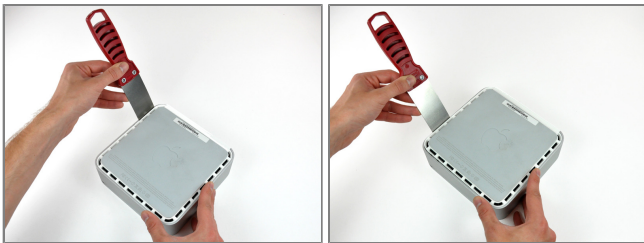
- You can skip this step if you bought your [putty knife from iFixit](#). Putty knives purchased from iFixit come with pre-ground edges.
- You'll need a putty knife in order to open the case. A 1.5 inch thin putty knife will work well, but you'll want to grind the edge down. Rub the putty knife's short edge back and forth on a sheet of all purpose rough grit sandpaper (100 grit will work fine) until it attains a beveled edge.





Step 2

- Carefully insert a putty knife into the crevice in between the top cover and bottom housing. Start on the left side first. Push the blade down until you meet firm resistance (roughly 3/8 of an inch).
- Gently enlarge the existing crevice by prying the handle of the putty knife downward and away from the mini.
- It helps to start in the middle, then work along the edge until the bottom housing pops up slightly.



Step 3

- Next insert the putty knife into the crevice on the optical drive slot side of the computer.
- Pry the putty knife downward while working along the edge of the mini until the bottom housing further separates from the top housing.



Step 4

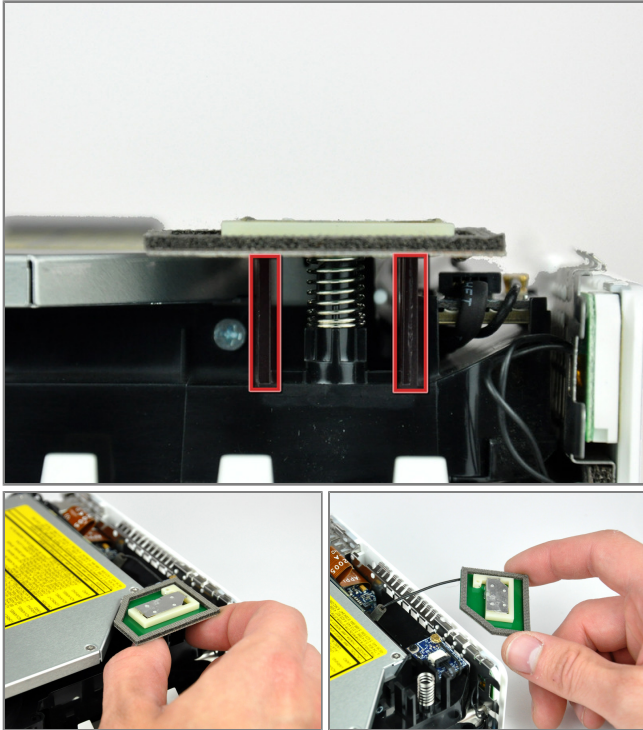
- Repeat the same procedure as the past few steps for the right side of the mini.
- At this point, there should be a noticeable gap between the bottom and top housing around the perimeter of the mini.
- Turn the mini over.



Step 5

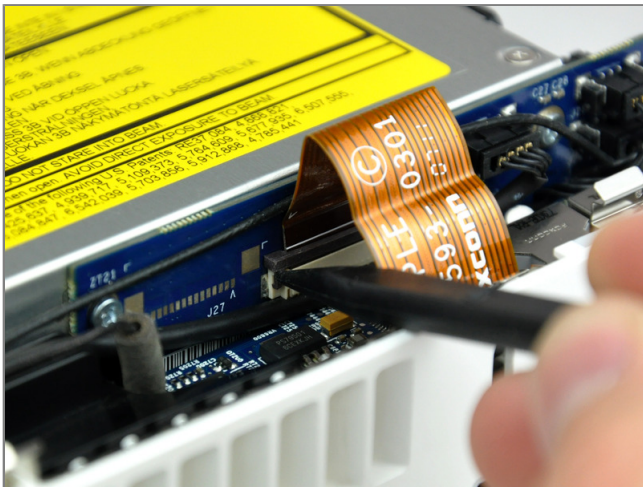
- Gently lift the top housing straight up off the mini and set it aside.
- It may be necessary to wiggle the top housing while lifting it off the bottom housing. If any of the tabs get stuck on the top housing, use the putty knife to free them.





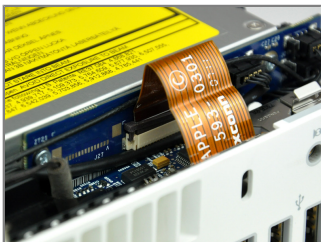
Step 6 - Internal Frame

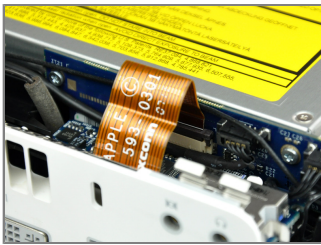
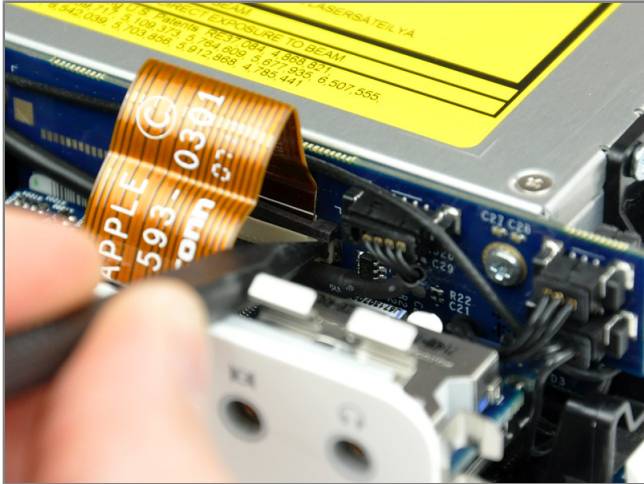
- Later in this guide you will remove several recessed Phillips screws. Bit drivers are generally too large to fit in the recesses, so be sure to have a thin shafted Phillips screwdriver on hand.
- First remove the AirPort antenna (the larger of the two), located near the power button.
- Slightly squeeze the two retaining arms toward each other and lift the AirPort antenna off its post.
- Squeezing the two posts excessively will surely break them off the internal frame. Work delicately.
- During reinstallation, you will have to slightly squeeze the two posts together so they fit into the openings on the AirPort antenna board.



Step 7

- Use the tip of a spudger to slightly lift the left side of the ZIF cable lock up from its socket.
- The ZIF cable lock will lift about 1 mm and stop. **Do not** try to completely remove the ZIF cable lock.





Step 8

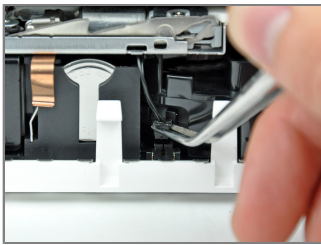
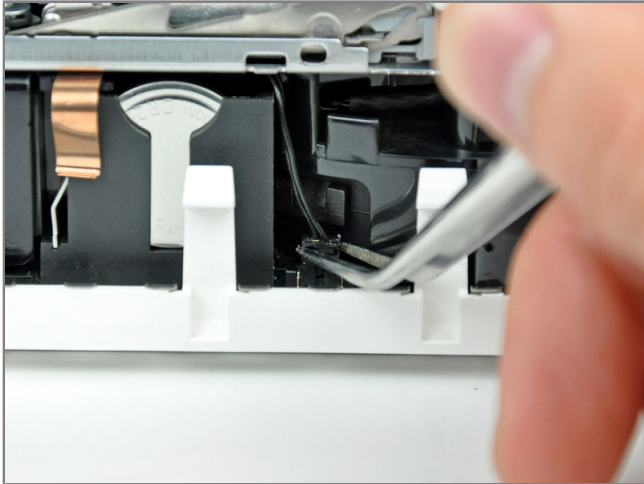
- Use the tip of a spudger to lift the right side of the ZIF cable lock away from its socket.
- Again, do not try to completely remove the ZIF cable lock.



Step 9

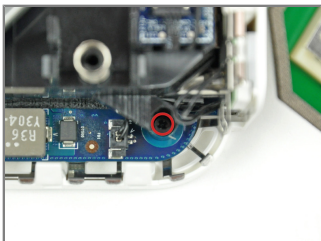
- Lift the audio board ribbon cable up out of its socket.
- If it refuses to lift from its socket, the ZIF cable lock is not fully released. Make sure it is evenly lifted about 1 mm from the socket on the interconnect board.





Step 10

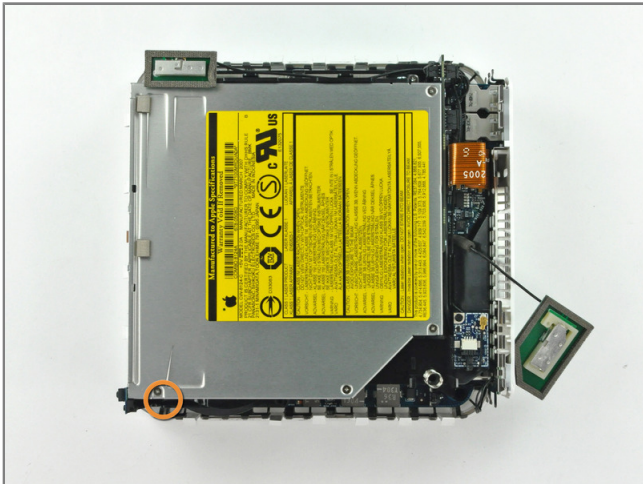
- Rotate the mini so that the SuperDrive slot loading mechanism is facing you.
- Use a pair of tweezers to lift the hard drive thermal sensor cable connector up off its socket on the logic board.
- Use tweezers to grab the connector (as seen in the picture), **not the wires**.
- The connector is located under the optical drive opening, next to the PRAM battery.



Step 11

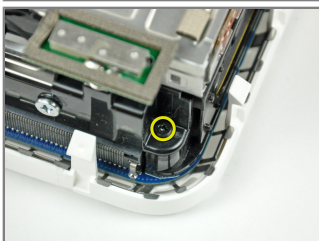
- In the next few steps, you will remove the four Phillips screws securing the internal frame to the bottom case. Included in each step is an overview picture showing the general location and a closeup showing the actual screw.
- Remove the recessed Phillips screw near the power button securing the internal frame to the bottom housing.





Step 12

- Remove the recessed Phillips screw near the sleep light securing the internal frame to the bottom housing.
- This screw is the longest of the four screws securing the internal frame to the bottom case.



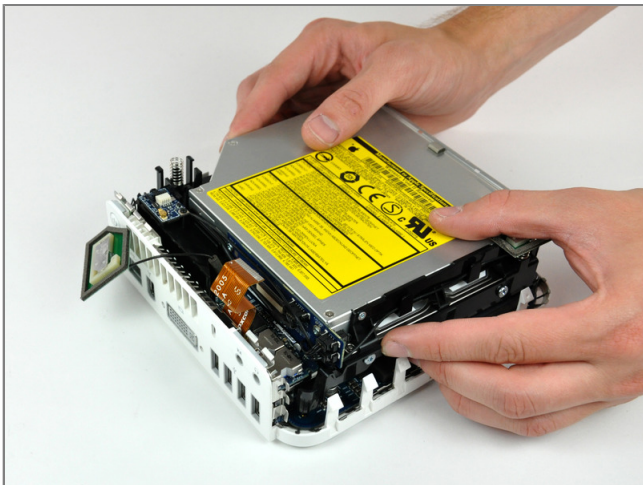
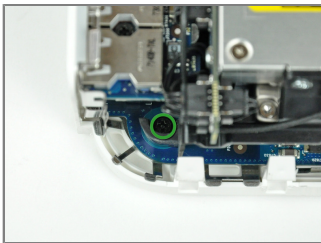
Step 13

- Remove the Phillips screw from the internal frame near the Bluetooth antenna.



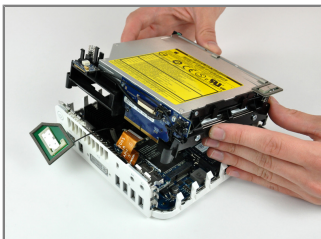
Step 14

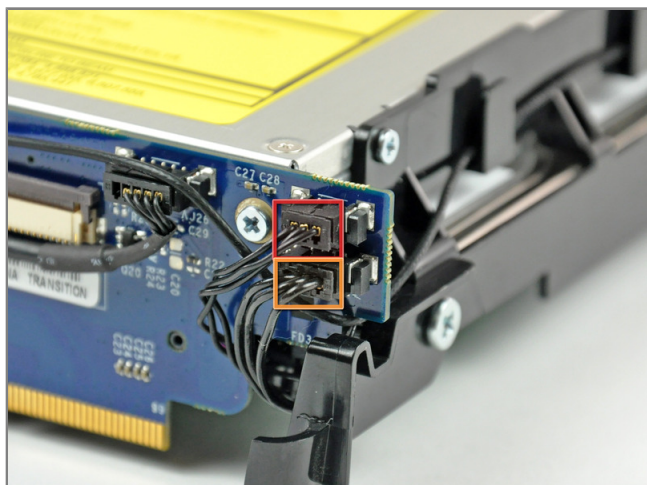
- Remove the Phillips screw near the audio ports securing the internal frame to the bottom case.



Step 15

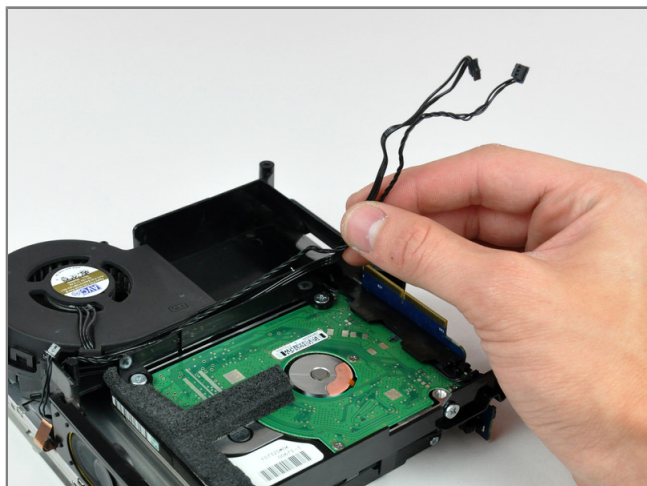
- Gently lift the internal frame up from the bottom housing, minding the AirPort antenna and any other cables that may get caught.
- It may be necessary to pull up near the interconnect board to separate it from the logic board.





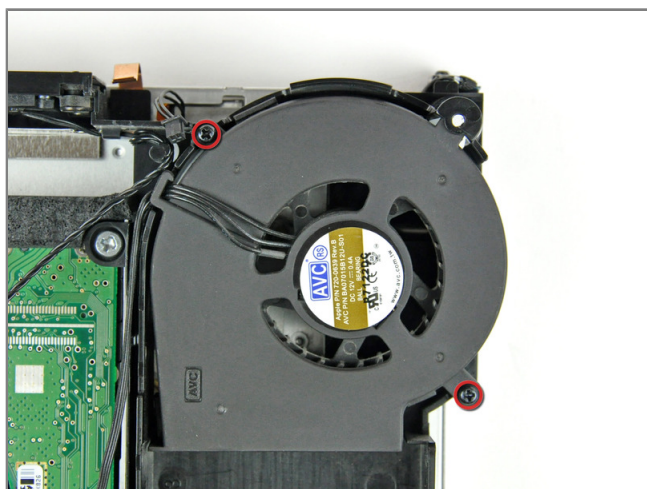
Step 16 - Fan

- Disconnect the following connectors from the interconnect board:
 - IR board cable.
 - Fan cable.
- Due to their small size, it is helpful to either use your fingernails or tweezers to grab the connectors and pull them away from the interconnect board.



Step 17

- De-route both the fan and IR board cables out of the channel in the internal frame.



Step 18

- Remove the two Phillips screws securing the fan to the internal frame.



Step 19

- Lift the fan out of the internal frame, minding any cables that may get caught.