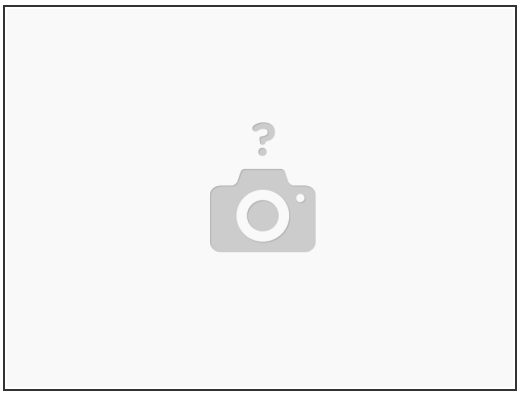
Panda CD-500 Disassembly

Disassembly to assess water damage

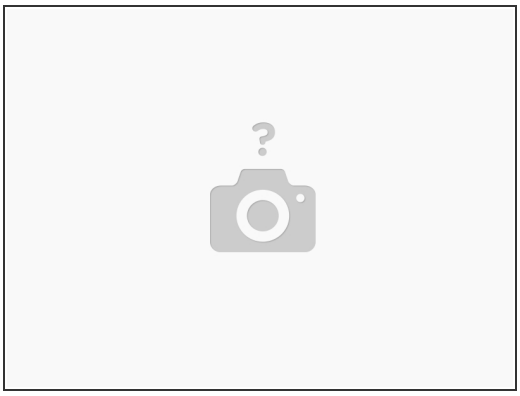
Written By: Xavier Jiang

Step 1 — Panda CD-500 Disassembly



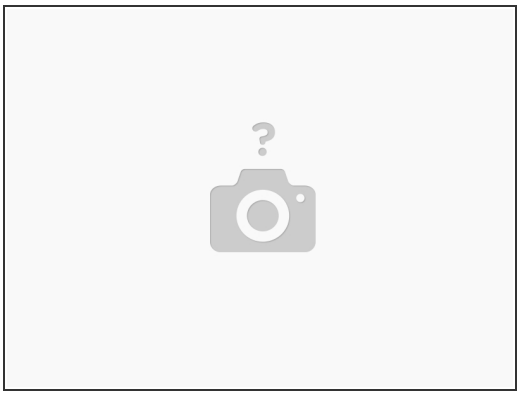
- Insert wisdom here.
- ...
- Let's open it up.

Step 2



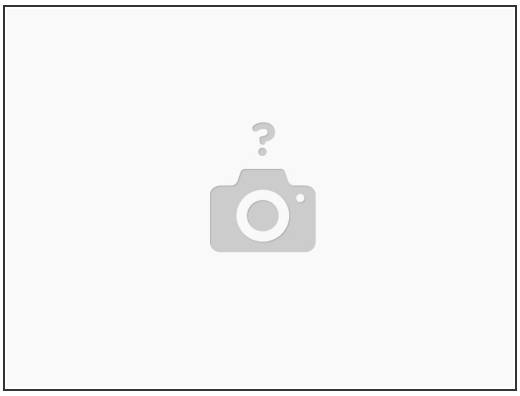
- This is quite large.
- I hope the glass top of the studio desk don't get in the way of viewing the pictures.
- Anyhow.

Step 3



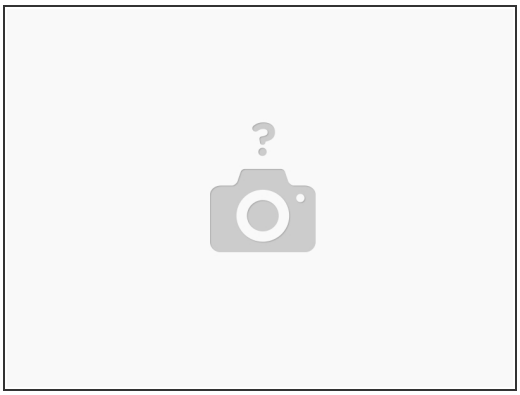
- To open up the radio, you need to .. well, twirl away some screws.
- Two screws are under the handle, four are on the back.
- And a additional bunch on the (oof!) wet bottom.

Step 4



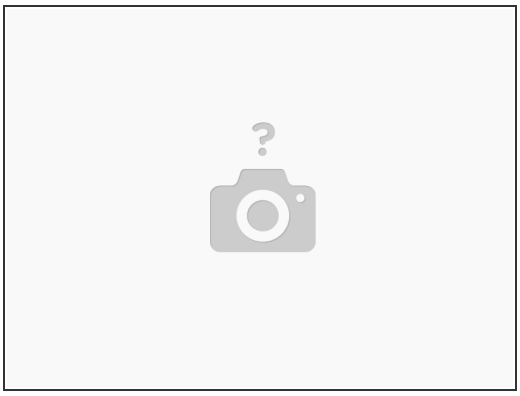
- .. and a VERY deeply hidden Philips screw.
- Break out your household mediumweight -- a long shaft Philips #1. You'll need it.

Step 5



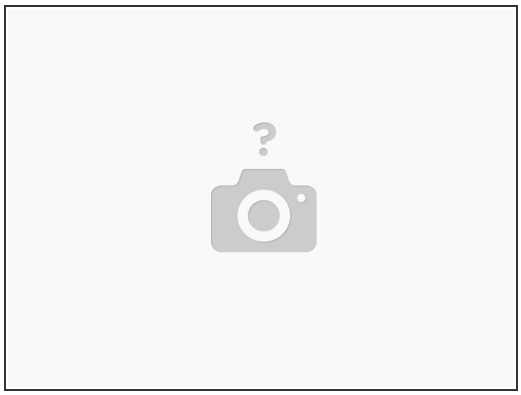
- With the case screw removed, you flip to the back of the .. thing.
- Then, holding the bottom half (the half under the two white piece), push the top half up and away.
- And ... it opens up, like a briefcase.

Step 6



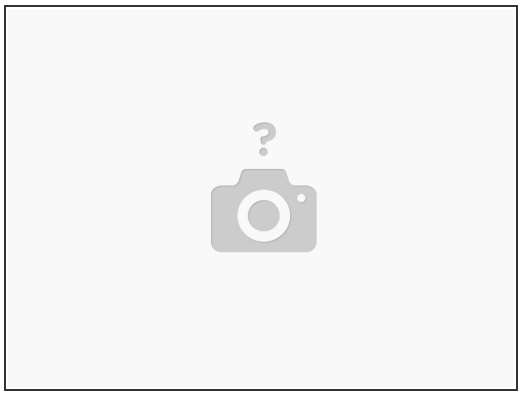
- Now with the device opened, we need to disconnect power.
- Disconnect the four plugs on the "power board". Each of them is of a unique size, so you can't mix them up.
- However, the two plugs (later three) on the "connector board" are practically identical, and are only different in the order of the wires connected.
- Don't mix those up.

Step 7



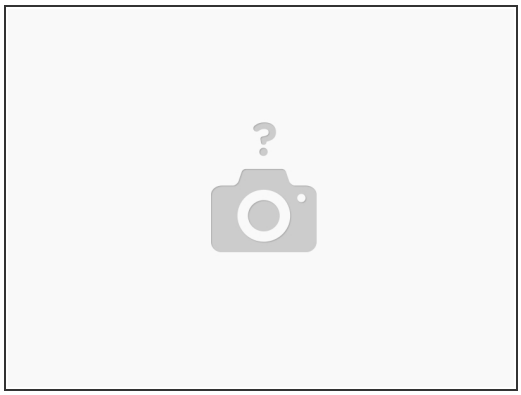
- The next step to separate the two halves involving disconnecting ~~tentacles and umbilical cords~~ the grounding line.
- Fun fact -- the device has the power supplied through a two-prong plug, meaning there is no "true" GrouND.
- This mystery is deepened by the fact that only the "CD board" have this "ground" cable at one of the screw posts.

Step 8



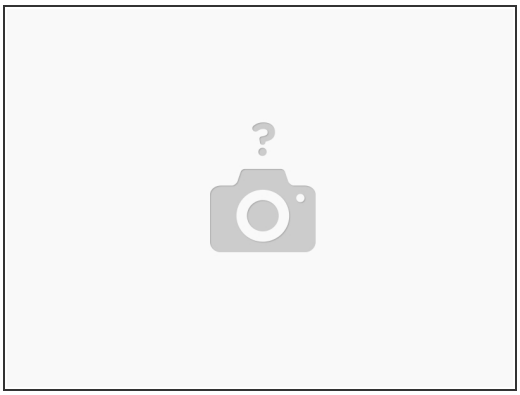
- .. so the bottom half slides away.
- Apparently the top half houses all the brain, since there are quite a few green PCBs and two large, dense boards.
- We can make our lives easier by *trying* to remove the two white piece.
- Apparently there is something holding them, since they refuse to move under slight tugs that aims to unseat them.
- And those come from ... behind the handle?
- So, how do you remove the handle?

Step 9



- Well, if you flip to the side, you can see the joint of the handle.
- And immediately next to the joint, is a "flap".
- And if you depress this flap, this creates a channel, through which the handle can be slide backwards (and out of the hinge)
- And THAT will give us access to this screw, which is required to remove the "white piece"s.

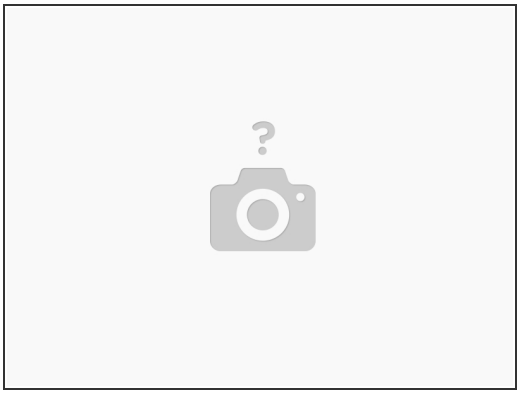
Step 10



Apparently all the "brain" is located on the top half. The boards are significantly more dense.

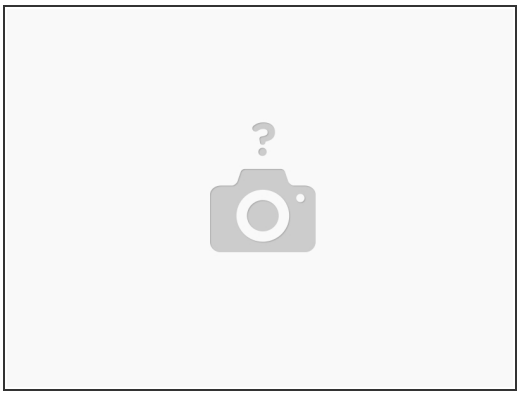
- Next up we remove the "CD board".
  - Why the CD board?
    - I don't know. It will be a good question to think about while we pop the connectors and remove the screws.
- Or wonder about what the ICs behind the heatsink/label actually do.
- I bet the one behind the label is a storage unit, like ones in a flash drive.

Step 11



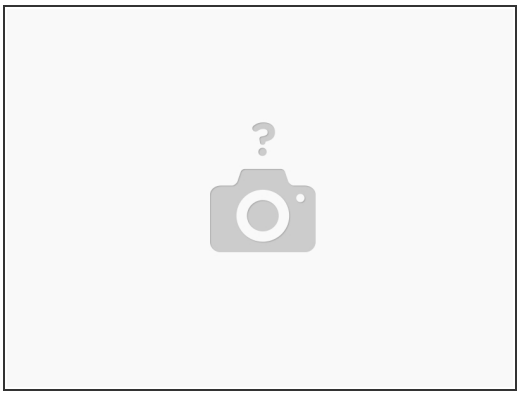
- Next up we remove this "board with a cord".
- But before we can do that, we need to disconnect THIS from the "main board".

Step 12



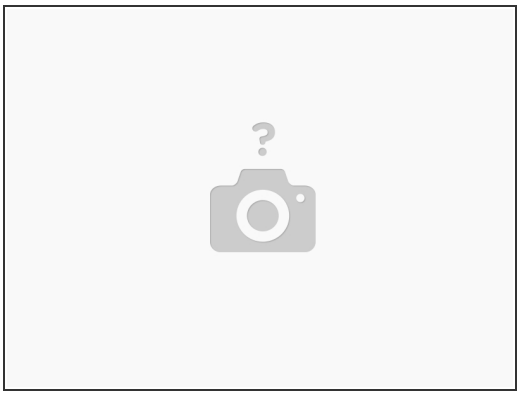
- Turns out the white-ish "string" going from the coil to the board is actually made up of copper wires.
- This is quite a rudimentary oscillator coil for the FM radio if you ask me.
- There is a screw inside the "coupler" for the radio knob, and on that screw is some glue.

Step 13



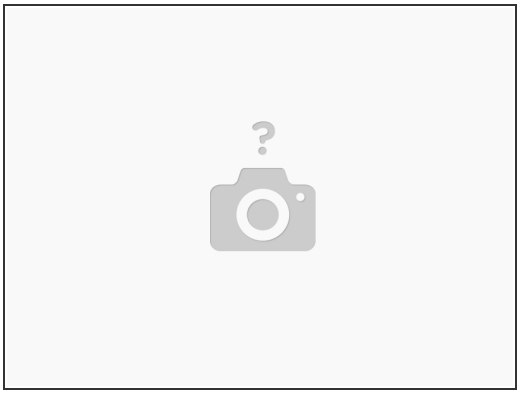
- Ah, because the USB port and the SD card adapter is blocked by it.
- So now we remove those two little things.

Step 14



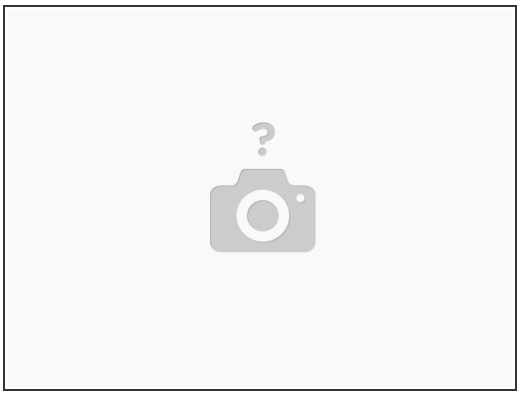
- Then we would remove the ...
- Huh?
- Apparently the main board is trapped under the "tape board", so by the norm we will remove the "tape board" ...

Step 15



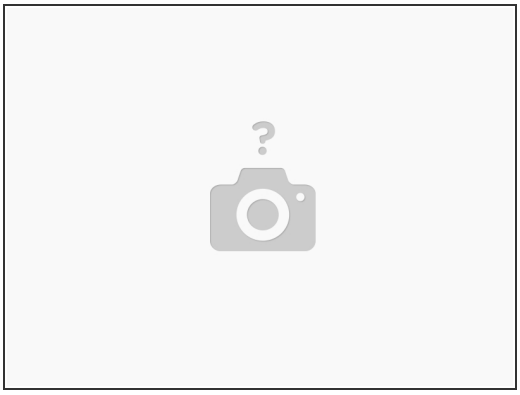
- Apparently we are doing it wrong here, and we should instead focus on removing the front section from the top section.
- So we will remove this L-bracket...
- and this L-bracket.
- And this screw on the first L-bracket.

Step 16



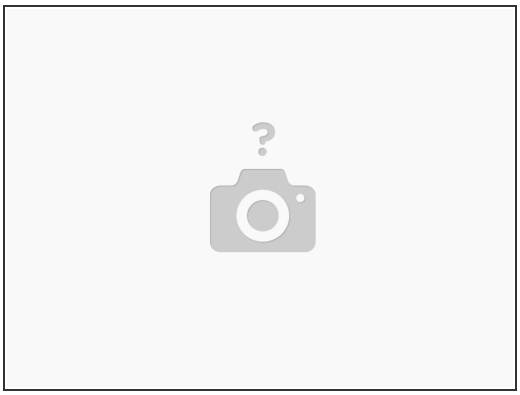
- And then we will have to remove this switch, for the other wire on the connector is soldered to the board.

Step 17



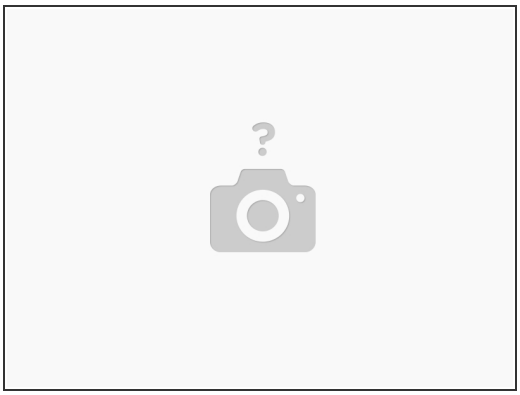
- The main board is now available for removal.
- But before the motherboard is free, we need to turn to the cable-with-a-ring and remove that first.
- Look at it. Water stains, oil stains, mineral deposits ...
- The backside is quite ok, though.

Step 18



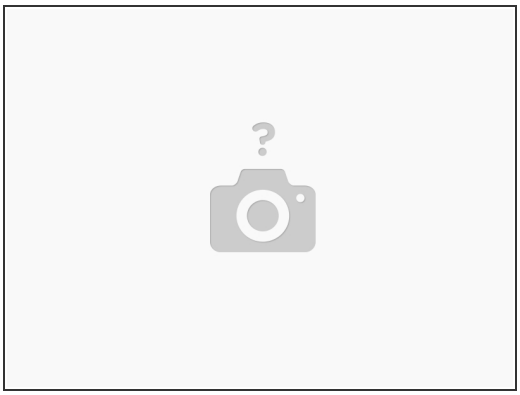
- Then we go remove that tape drive.

Step 19



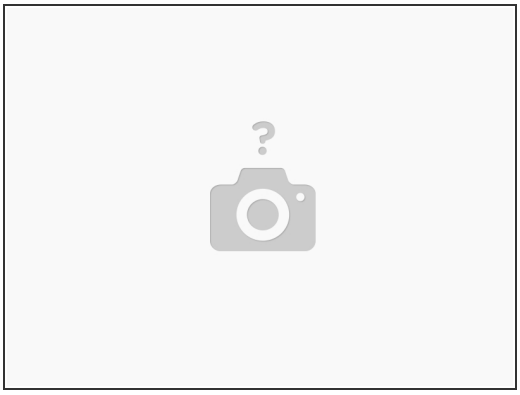
- Let's pause here and examine that tape drive.
- The buttons (fast forward, fast backward, play) control the location of the white gear.
- The white gear then move to engage with different gears, which drive the two spindle at different speeds.

Step 20



- So what is driving the white gear?
- On the back, you will find the wheels and belts that drive it.
- The white gear is attached to a armature that move into the different positions, while the elastic belt pick up any slack and accommodate for the length differences.

Step 21



- With the tape drive gone, we can now access the front control-display bar.
- Rid the ribbon cable, disconnect the connector and remove the button board.
- Then remove the display board.

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