Rachael Thompson
2367A Monkey Engineers
Texas Instruments Challenge

INTRODUCTION

For this online challenge, I took apart a Sony CD/DVD player (model number DVP-NS57P). I chose to take this apart because I wanted to see what components were inside and what powers this piece of technology. I also created a decision matrix*. Before I took anything apart, I did four things. The first thing I did was write a hypothesis. Here is what I thought I would find:

I think that I will find circuit boards, the tray that you insert the dvd into, a capacitor to store the electrical energy, some wiring to flow the energy, and some screws to hold everything in place.

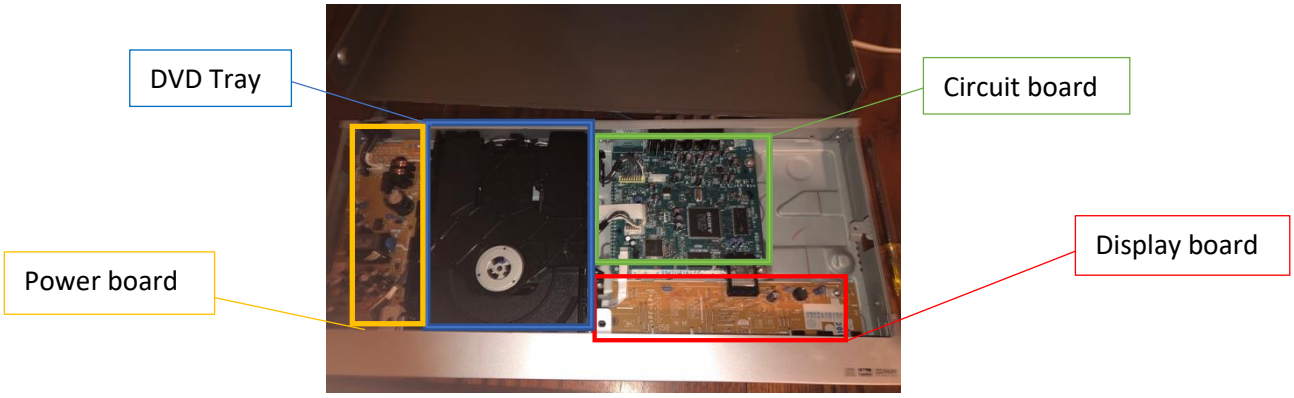
The second thing I did before taking anything apart was talking to my dad about anything I needed to be extra cautious of when taking the DVD player apart. He told me to wear safety equipment (goggles and gloves), use the right tools, make sure that the device is unplugged, do not have any food or drinks around, and not to touch anything that I don't need to touch to avoid getting shocked. My robotics coach also warned me about the capacitor and not to touch it.

The third thing I did was to get the proper tools ready (safety equipment, flathead screw driver, wrench, and a small screwdriver.)

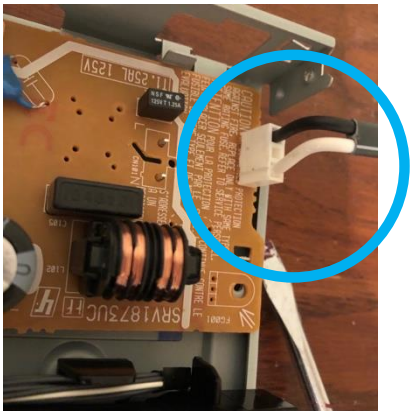
The final thing I did before taking it apart was to take a before picture. Here is the picture that I got of it:

Deconstruction

Step 1: Get the top off. I just unscrewed some screws for the bottom.

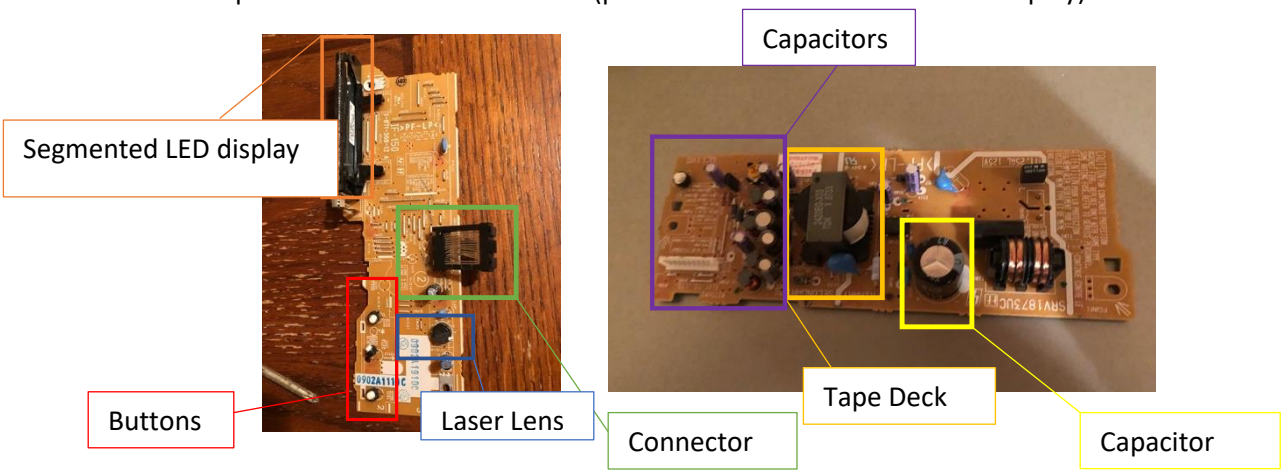


Step 2: Disconnect the power source.



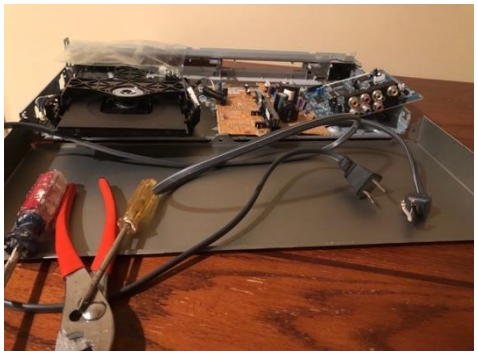
Step 3: Remove the circuit board.

Step 4: Remove the 2 tan boards (power and display)



Step 5: Remove the DVD tray.

Step 6: Final picture.



Parts List

Now that I have taken apart the DVD player, it is time to research my findings. I have created a chart with the parts and their function. I also labeled the parts on my pictures.

Part	Function	TI Part?
Screw	Holds the outside together, keeps boards in place	No
Segmented LED Display	Displays the time the movie has played.	No
Connector	Holds the display and circuit board together.	No
Buttons	Pauses, plays, rewinds the DVD.	No
Laser Lens	Focus light from laser beams.	No
Tape Deck	Plays back sounds from a DVD.	No
Capacitor	Stores electrical energy	No
DVD Tray	Holds the disk	No

Takeaways

Now that I have finished taking apart the DVD player, I now better understand how these parts work together to function. I will dispose of it the way I was told to. Overall, my hypothesis was accurate in a way, but I just needed more details.

*The matrix I used.

Technology	Creative	Fun	Easy	Total
DVD player	8	8	6	22
Roku	7	8	7	22
Ipod	3	6	7	16