



## Texas Instruments Electronic Online Challenge 2018

We have chosen a Sony DVP- NS57P DVD/CD player because i always wanted to what was in there and how it worked. When i was taking apart the DVD/CD player i found:

- One digital display
- 7 outlets
- 2 motors
- 4 buttons
- 14 Resistors
- 1 Diodes
- 43 Capacitors
- 1 Transistor
- 30 Integrated circuit
- 5 Inductor
- 1 power PCB

A *resistor* is a component that resists the flow of current. It's one of the most basic components used in electronic circuits.

A motor is a machine, especially one powered by electricity or internal combustion, that supplies motive power for a vehicle or for some other device with moving parts.

A *capacitor* is a device that can temporarily store an electric charge.

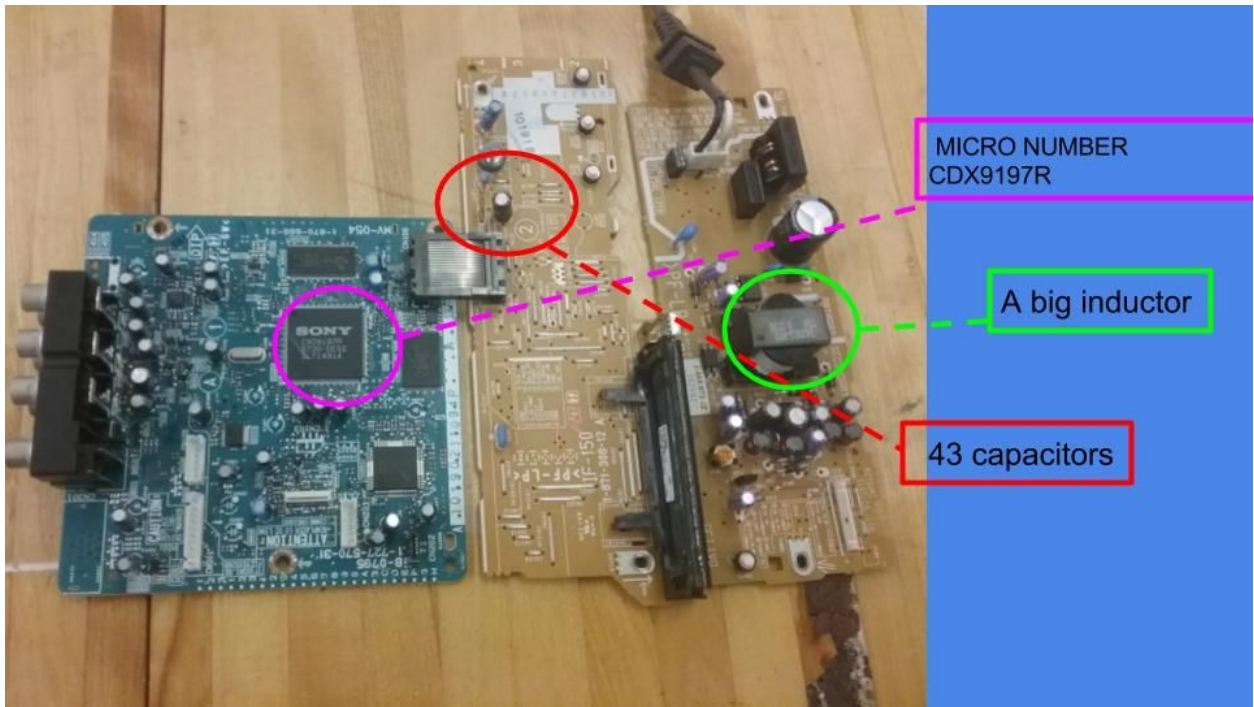
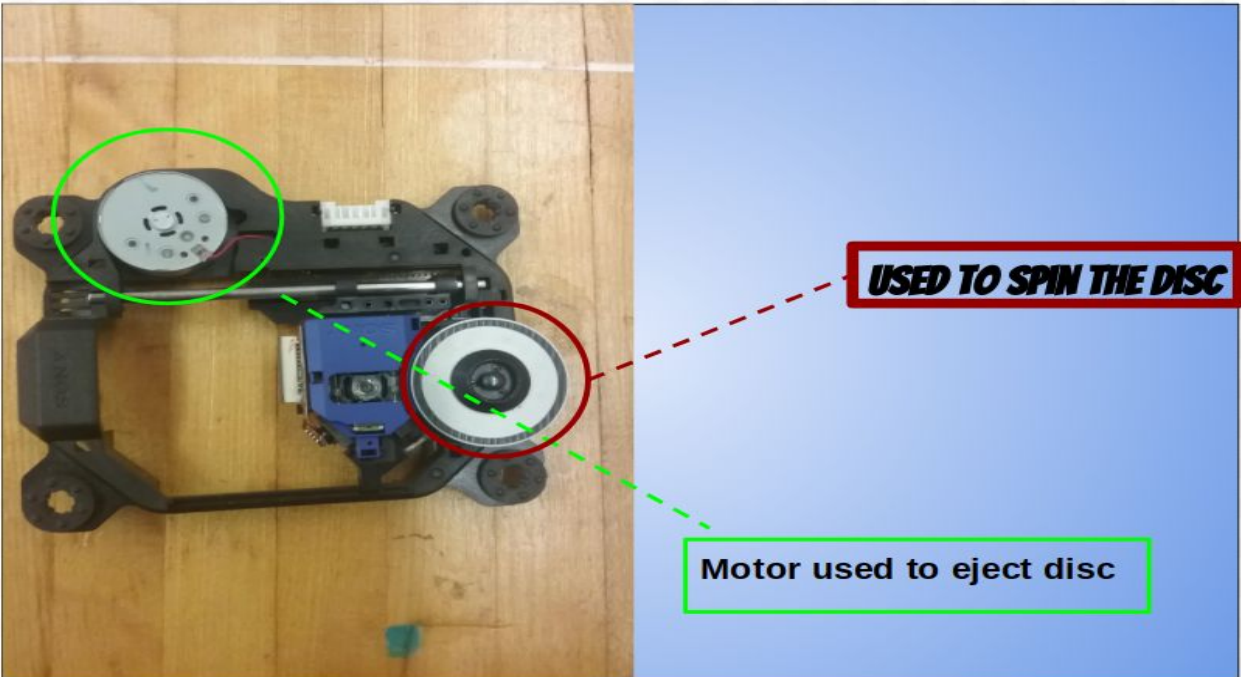
A *diode* is a device that lets current flow in only one direction. A diode has two terminals, called the *anode* and the *cathode*. Current will flow through the diode only when positive voltage is applied to the anode and negative voltage to the cathode. If these voltages are reversed, current will not flow.

A *transistor* is a three-terminal device in which a voltage applied to one of the terminals (called the *base*) can control current that flows across the other two terminals (called the *collector* and the *emitter*).

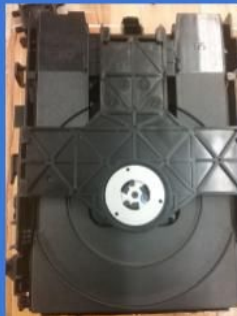
An *integrated circuit* is a special component that contains an entire electronic circuit, complete with transistors, diodes, and other elements, all photographically etched onto a tiny piece of silicon. Integrated circuits are the building blocks of modern electronic devices such as computers and cellphones.

An inductor typically consists of an electric conductor, such as a wire, that is wound into a coil around a core.

What me and my partner have learned during this online challenge is that it's not just pushing random buttons and your movie plays it's more complicated than i would even imagine. It was really hard to take it apart i almost cut my finger trying to take the top part of the dvd player. During this challenge i have fallen in love with engineering more than really have my past life.

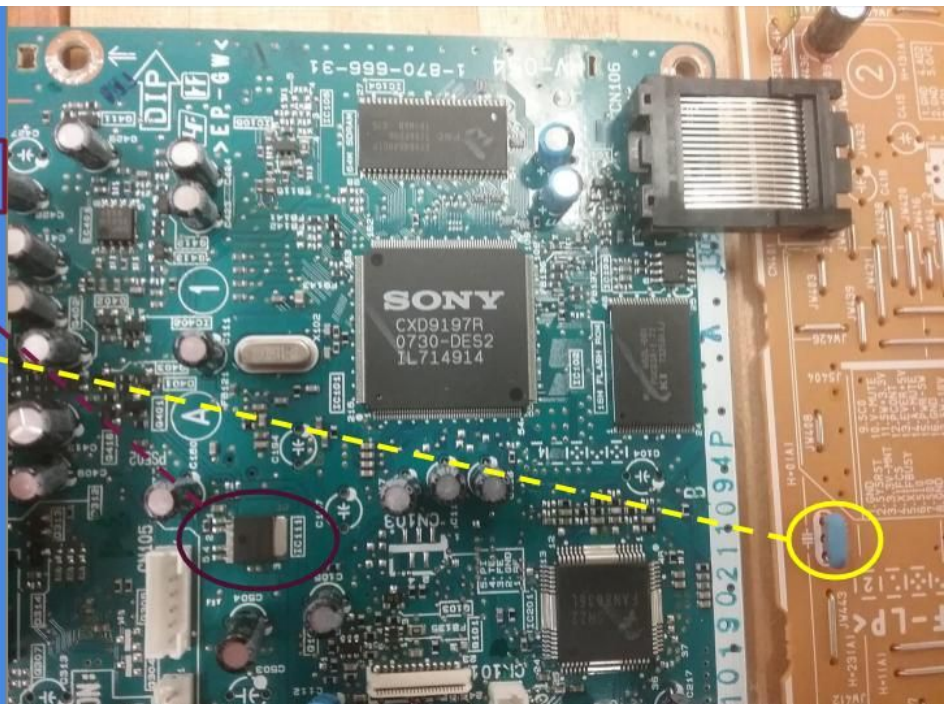


# SONY DVD PLAYER



**30 INTEGRATED CIRCUITS**

**CAPACTORS**



Resources:

<http://www.explainthatstuff.com/electronics.html>

<http://www.dummies.com/programming/electronics/basic-electronic-components-and-what-they-do/>

[http://encyclopedia.kids.net.au/page/el/Electronic\\_component](http://encyclopedia.kids.net.au/page/el/Electronic_component)