

Reverse Engineering Online Challenge:
Blu Ray DVD Player
Team: 4073A
Quartz Hill

By:

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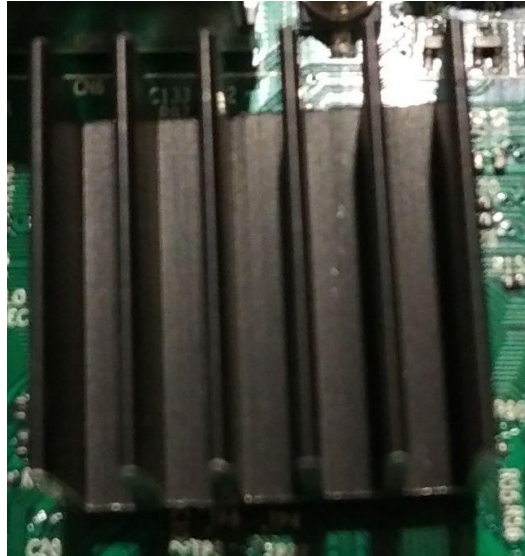
Aniyah Birl

For this online challenge we decided to take apart a Blu Ray DVD Player. By simply inserting a disk into the DVD Player a movie or show can be played for one's enjoyment so we decided to take one apart and find what are some of the components that allow this machine to work. We were able to identify 6 parts: the internal wifi network card, the heat sink, the optical laser pickup, the assembly deck, the DRAM memory chip, and the transformer.

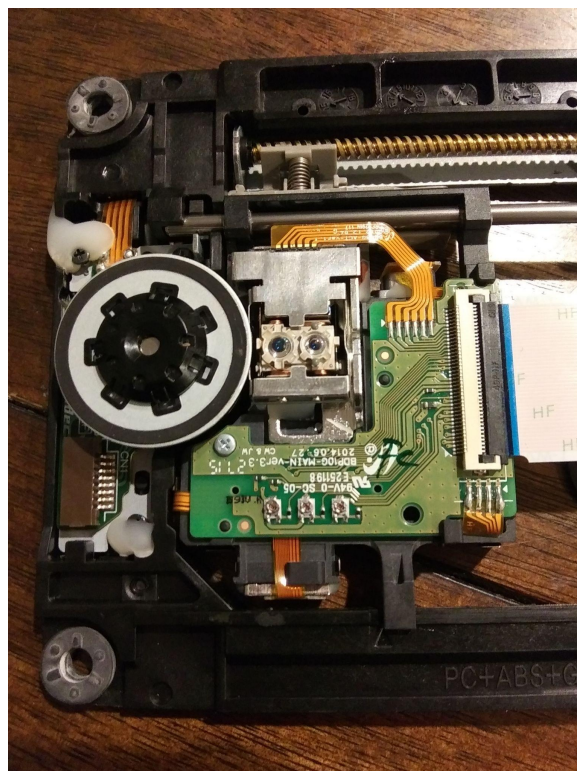
Internal Wifi Network Card: The Internal Wifi Network Card is a wireless terminal device that is used to enable internet connection through the wireless connection network under the coverage of a wireless local area network.



Heat sink: The Heat Sink is part of the main printed circuit board and its purpose is to direct the flow of heat away from a hot component so that it stays cool and does not overheat. Electronic components generate heat and will not work if it becomes too hot, which is why the heat sink is needed.



Optical Laser Pickup: Data is stored in Blu-Ray disks and this data is able to be recovered due to the optical laser pickup. On the bottom of a Blu-Ray disk are encoded pits. As the disk spins a blue laser with a wavelength of 405 nm is shined on the blu-ray disk and is reflected back at the optical laser pickup, which is able to read the data due to the encoded pits.



Assembly Deck: The Assembly Deck contains the main components of the DVD player. Some of these parts include the tray, disc drive motor and gears. The tray is a thin plastic disc holder that allows a CD, DVD, or Blu-ray disc to be inserted into the computer. The disc drive motor makes the gears spin, rotating the disc in the tray.



DRAM Memory Chip: DRAM stands for dynamic random-access memory. The DRAM Memory Chip stores short-term memory needed to play the movie or show a person wants to watch. This memory is erased when the blu-ray DVD player is turned off.



Transformer: The Transformer is a device that transfers electric energy from one alternating-current circuit to one or more other circuits. An alternating current circuit is an electrical current that regularly reverses direction and changes its value constantly with time.



In conclusion, inside of this electronic device are many small components that perform important tasks so that the blu-ray DVD player will function properly. For example, the optical laser pickup is needed to recover the information from the blu-ray disk inserted into the blu-ray DVD player.