Research for Car Stereo Unit to Functioning CD Player

This page of research will provide summaries of components and methods. Some of which will include an [**Application**] section. This section will explain how this was considered into the project!

Active VS Passive Speakers

Active:

- They have a built in amplifier (an amp increases the magnitude of a signal requiring external power, therefore an active speaker with an amp will have a power supply)
- Has power supply

Passive:

- Passive speakers do not have an amplifier or a power supply
- Requires an external amplifier to produce sound

Application

The car stereo already has an amplifier in its system thus, for a simple system, only a passive speaker would be needed. However I wanted to connect them to my Logitech speakers (which are active). This would mean that signals would get amplified twice, and face extreme distortion and noise. This brings us to the next component, the line output converter.

Line output converter (LOC)

- These are essentially the opposite of an amplifier. They take the speaker-level signal and notch it down to a line-level signal, ready to be amplified again by an active speaker.

Application

To counter the distortion and noise, the LOC was added between the speaker wires from the stereo and the speakers.

RCA ports

Stereo ports which carry analogue signals. An RCA port is a type of output port named after the Radio Corporation of America. It is still commonly used to this day due to its zero latency. RCA ports carry line-level signals.

Application

Had my car stereo had an RCA output jack, I would have not required a LOC as the RCA jack would have contained the line-level signal. However, as my stereo did not, a LOC was necessary.