

EE380 Spring 2019

Class A multistage Amplifier

Design a multi stage BJT amplifier capable of driving an 8 ohm load. The amplifier should take a line level input (headphone output), and drive an 8 ohm speaker. The driver need only be mono output.

https://en.wikipedia.org/wiki/Line_level

Your amplifier should be able to produce 1 watt of output power to the 8 ohm speaker.

You must include a complete design schematic for the project in your documentation. Extra point consideration will be given for packaging, but is not necessary for the completion of the project.

Submit: Hardware schematic, Notebook, calculations, and documentation. Your documentation should include a verification sheet signed and dated by Mark Randall, or Dr. Mitchell.

Analog Multi Meter

Design and build an instrument that can measure:

Voltage

Current

Your Design should include multiple scales that allow the user to measure Voltages Ranging from:

0-1V

1 – 10V

10-100V

Your Design should include multiple scales that allow the user to measure Currents Ranging from:

0-10 mA

10 – 100ma

No micro can be used for this project only components found in the EE stockroom can be used.

Your Design will include an analog meter movement that can be found in the stockroom. Range selection should be accomplished using a multiple pole rotary switch. You must include a complete design schematic for the project in your documentation. Extra point consideration will be given for packaging, but is not necessary for the completion of the project.

Submit: Hardware schematic, Notebook, calculations, and documentation. Your documentation should include a verification sheet signed and dated by Mark Randall, or Dr. Mitchell.

Who's First (Game) Indicator

Design a circuit that will have input (push buttons) for up to 4 players. The circuit should turn on an LED for the person that hits his/her button first. The circuit should ignore all other button pushes for 30 seconds. The circuit should then reset and let the players play again. No micro can be used for this project only components found in the EE stockroom can be used.

You must include a complete design schematic for the project in your documentation. Extra point consideration will be given for packaging, but is not necessary for the completion of the project.

Submit: Hardware schematic, Notebook, calculations, and documentation. Your documentation should include a verification sheet signed and dated by Mark Randall, or Dr. Mitchell.