

# Linear Electronics II Project

## **Problem:**

Investigate, design, and construct a linear electronic circuit using linear integrated circuits.

You may work individually or with one other class member. Select an application of interest to you from the textbook or another resource. Investigate the circuit operation.

## **Teamwork:**

Use *teamwork* to attain a complete understanding of circuit operation. Some suggestions:

- Discuss with classmates.
- Discuss with instructor.
- Discuss with industrial contacts.

## **Project's Final Product**

To produce the final product, all of the following *technologies* will be used: Electronics Workbench, Microsoft Word and/or Microsoft PowerPoint, and Lotus Notes (Bell Atlantic only). The final product will consist of all of the following:

1. Electronics Workbench circuit simulation to be demonstrated to the class.
2. An oral presentation (is not required to be a PowerPoint presentation). The oral presentation must discuss all of the following:
  - (a) Circuit Application – describe what the circuit does or is used for.
  - (b) Circuit Operation – discuss the theoretical operation of the circuit, how and why the circuit operates the way it does.
  - (c) Circuit Simulation – demonstrate circuit operation with EWB.
3. Written Report  
You must document everything from the oral presentation in formal report form. The instructor must receive the written report in advance (details will follow). You must also submit the EWB circuit file. This advance deadline will not be flexible due to the *service I deliver* to you. I will collate your reports and distribute them to the class on presentation day.

In producing the final product, *focus* on the *customer* ... your fellow student/worker. Your work should teach your customer about the product. Also consider the *quality* of this report. It should be clear, complete, and interesting!

## **Assessment**

The project is worth 7.5% of your final grade to be allocated as shown below. IT IS STRONGLY ENCOURAGED THAT YOU CONSTRUCT AT LEAST A PORTION OF THE CIRCUIT. The highest grade a student can receive on the project is a 80/100 if an actual circuit has not been constructed and tested.

0.5% EWB circuit simulation	2.0% real circuit demonstration	2.5% oral report	2.5% written report
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For two people working on one circuit, it is expected that the speaking roles be proportioned evenly. If you do not speak during the oral presentation, you start with a zero for that portion of the grade.

## **Final Note:**

Please consider the competencies highlighted in the above. (Are any missing?)