Proof of Concepts

You will have an entry with the following format for **each** of the required concepts.

# Concept name (i.e. Voltage Divider, etc.)

Circuit Schematic:

LTspice circuit schematic of the circuit you will use to prove the concept.

Clearly label all nodes in the you will reference, for example.

Description:

Short description of the concept you will prove and how you will prove it.

Specify which variables in the circuit will be analyzed.

## Analysis:

Equation and short description.

Clearly describe how you are applying the concept to your circuit. You should calculate specific values to compare to simulations and experiment.

## Simulation:

Screenshot of simulation and short description.

Clearly labeled simulation results with nodes and/or input/output that matches with schematic above. Any important portions of output are identified (i.e. the point at which a comparator switches is circles and/or point to with labeled arrow for easy identification).

## Measurement:

Screenshot of Waveforms output from circuit above and short description.

Remember to clearly show all axes in a measurement plot. Also identify any important portions of the output.

## Discussion (and answer related questions in Alpha Lab):

Comparison of Analysis, Simulation and Measurement results. Both a simple summary of results (like a numerical chart of values) and a simple description that details if the results are as you expect. Also include any speculation as to why they may be different from one another if they are different. What variation is too much for example…explore this.

Include a table that compares mathematical, simulation, and experimental results.

# Concept name (i.e. Ohm’s Law, etc.)

Building Block: Short description of which concept you are proving and a schematic

Clearly label all nodes in the you will reference, for example.

## Analysis:

Equation and short description.

Clearly describe how you are applying the concept to your circuit. You should calculate specific values to compare to simulations and experiment.

## Simulation:

Screenshot of simulation and short description.

Clearly labeled simulation results with nodes and/or input/output that matches with schematic above. Any important portions of output are identified (i.e. the point at which a comparator switches is circles and/or point to with labeled arrow for easy identification).

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