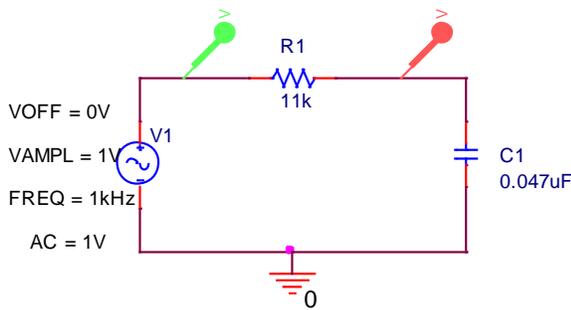


Signature Checklist-Checklist

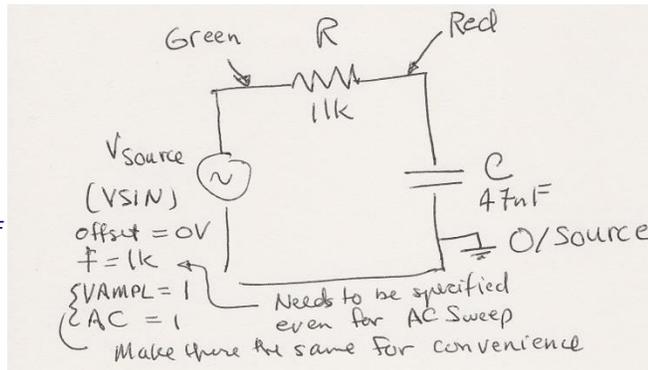
Tasks: Be Sure You Have Completed All Required Items Before Requesting a Signature

- Describe the Task(s) to be Completed Showing the Diagram(s) from the Experiment Write-Up and Predict What the Outcome Should Be
- Hand Drawn Circuit Diagram
- Fully Annotated Plots [in Word or Other Document]
- Output Plots ‘Live’ in PSpice or Analog Discovery [Simulation or Exp is Running]
- Using the Info in the Plots, Explain Why They Make Sense [Compare with Prediction]
- Compare with any Relevant Results from Previous Experiments
- Do a Dry Run with Partner(s) [Everyone Should be Able to Answer the Questions]
- [Optional] What Does the Task Contribute to the Big Picture for the Experiment?
- [Optional] What Went Wrong & How Did You Fix It?
- [Optional] What Clever Approaches/Ideas Did You Incorporate in this Task?

Elaboration/Discussion of Tasks



PSpice Circuit Diagram



Hand-Drawn Circuit Diagram

(Note the information added to get PSpice to run)



PSpice Output Plot (Annotated)

(Note that the input and output voltages are labeled, the corner frequency is identified and then name/function of the circuit is also provided to help the reader know what this represents.)

The ‘Live’ version of the plot provided by Analog Discovery will look a little different than the PSpice plot (or vice versa) and can be modified with the help of the TA/Instructor to show the information better. Ask for ideas if you think there is room for improvement.

To be completed before you ask for a signature:

1. Hand-drawn circuit diagram for any simulation or physical experiment – This diagram should be drawn up in a form most useful for your team. It should be complete and also include information that helps you to work with the circuit successfully. Examples:
 - a. It should indicate how to physically connect to any experimental circuits (e.g. colors of wires on connectors, ID codes for resistors and other components, channels used on the Analog Discovery, Waveforms setup, etc.).
 - b. For PSpice, it should indicate any information not included in the circuit (e.g. characteristics only included in device spreadsheets, simulation profiles, etc.)
2. Dry run with partner – The partner primarily responsible for a task (e.g. PSpice simulation, hardware experiment, etc.) should go through the four items to be discussed with the TA or instructor so that either partner can address the key points for the questions. This reflection activity is a critical part of any engineering project. Before you go public with your results, your team should always reflect on what you have done and whether or not your customer will be happy with your results.

To be addressed when you are meeting with the TA or instructor:

1. What *specific tasks* are to be completed?
2. What do you expect the outcome to be for the task? ***What do you predict should happen?***
3. What output (plots, circuits built, etc.) did you produce? ***All results fully annotated.***
4. ***How do you know you have completed the tasks?*** How do you know your results make sense? Are they what you expected? Use your annotated results to demonstrate. Your ***simulation or experiment must be running*** and you must be ready to change a parameter or two and explain why the changes in output are what you expect.
5. How does your result ***compare to other results*** in this and previous experiments?

You should also be prepared to address the following items from the required report:

1. What does the task contribute to the key point or points for the experiment?
2. What, if anything, went wrong or what clever steps did you apply to complete this task?

These last two items may not be included in your discussions, but you should still be prepared because they are part of the required report.