Ph 623 — Early Lab Notebook Comments

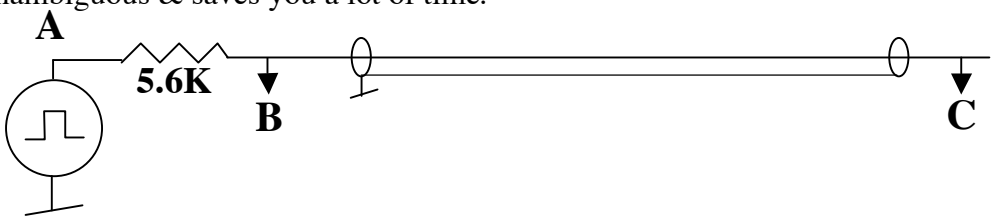
Grading system. Labs are graded on a 0-10 scale. Rough interpretation 8-1/2 is an "A", 7 a "B", and 5 a "C". You have to do something unusual to get a 10! Since the lab is half your grade, you can see that on this scale you *really* want to avoid getting zeroes. I know you have complicated schedules, so if you've missed a lab, makeups are freely arranged. Just see me. (It can be frustrating trying to do a lab by yourself, though, so come to the regular time when able.)

(Circled numbers in your notebook refer to the common comments below.)

0. ALWAYS have a circuit diagram in your notebook — with component values and pin numbers — *before* you start building the circuit.

1. Please put a one-short-sentence heading on each section — at least once per page — that tells what you are trying to accomplish here.

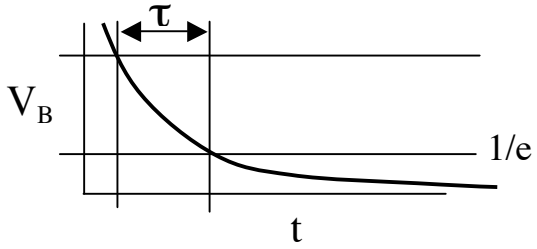
2. Scopes and meters are usually not shown on the schematic. Label points in the schematic with letters, then you can label measured values with the letter of the point where they were taken — entirely unambiguous & saves you a lot of time.



3. Don't draw "pictures" of components, instruments, signal sources, etc. Make a proper schematic diagram. Ask if you don't know the symbol. (In a pinch, you can define your own invention — just be sure to show the definition in your notebook.)

4. Significant figures. I'm not a stickler on this, but try not to put on more than two or three extra! Most important thing is to *think* about how much precision is a) required and b) justified here.

5. If you read a time (and sometimes a voltage) off the scope, make a sketch defining the quantity you measured.



6. Check your arithmetic! It's always a good idea to do a rough estimate in your head — just the exponents, perhaps — to see if you hit a seriously wrong key on your calculator.

7. Label stuff clearly.

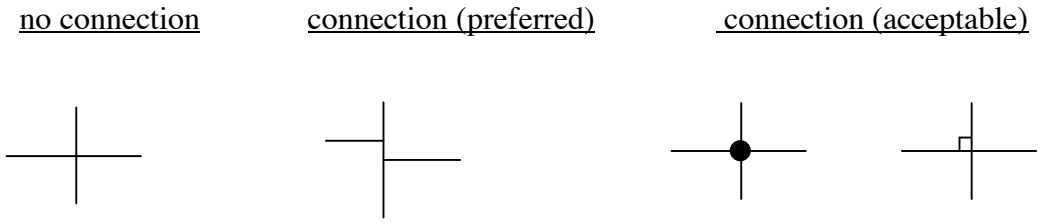
8. If (as often happens) you do a couple of pages worth of stuff and then find that you had the setup wrong or something, please go back and make a note at the beginning of the bad stuff, or if it's not useful at all, put a light "X" through it. You can have the explanation of what went wrong at then end, but people (including you in a few months) read your book from the front, and no one likes to spend a lot of time trying to figure something out, and then find that it's all garbage afterwards.

9. You lab notebook should be self-contained. If something in the lab handout (or any other material) is useful, cut and tape it in your book to save time, but have it in your book.

10. Please have a table of contents at the front of your notebook.

11. There should be no loose material in your book — tape or staple everything in before you leave. Don't layer anything — I'm only going to look at what's on top.

12. For schematics, the modern convention is:



(see also Appendix E in H&H — but dots at "T" connections aren't necessary, except in some schematic capture programs.)

13. Fewer words — more pictures (saves time)!