ENEE 417 - Fall2004
Weeks #3-#4
Design #1: Curve Tracer

a. If Laboratory Projects 3, 4, 11 & 12 have not been run do those first.
No report is needed for weeks 1 & 2 but be sure to have gained working knowledge of the tools.

b. In this experiment for weeks 3 & 4 an op-amp curve tracer will be designed, constructed, and tested.

1. Review use of a) the Tektronix 577-177-D1 commercial curve tracer and b) curve tracing in PSpice (or Spice).
2. Design an op-amp curve tracer following the circuit shown below and discussed in class. Test this on resistors and diodes and compare with the results from the commercial curve tracer. Using the commercial curve tracer as a signal generator for your op-amp curve tracer, obtain transistor curves and obtain an hard copy for future design use.
3. Use LabView to computer control the oscilloscope and record a file on disk of the curves.
4. Use the DAQ card to acquire data and display on a virtual oscilloscope and devise a means to save CMOS transistor curves to a file.
5. Write a one to two page report summarizing your results (for this op-amp curve tracer).
6. (as soon as possible) make a parts list from your final choice of circuit and paper and give this to the laboratory technicians; verify that they will be able to obtain the parts needed.