

# Phase Locked Loop Lab Worksheet

Note: Turn in at *beginning* of lab. If you have any questions about this exercise, please [see, call, email] the instructor well in advance of the lab.

A. Read section 13.13 (pp 955–974) in Horowitz and Hill.

B. In a few sentences, describe the operation of a type I phase detector.

C. In a few sentences, describe the operation of a type II phase detector.

D. Where should pin 5 of the MC14046B P.L.L. chip be connected? (This will require some detective work on the data sheet.)

E. Explain the difference between capture range and lock range for the input frequency.