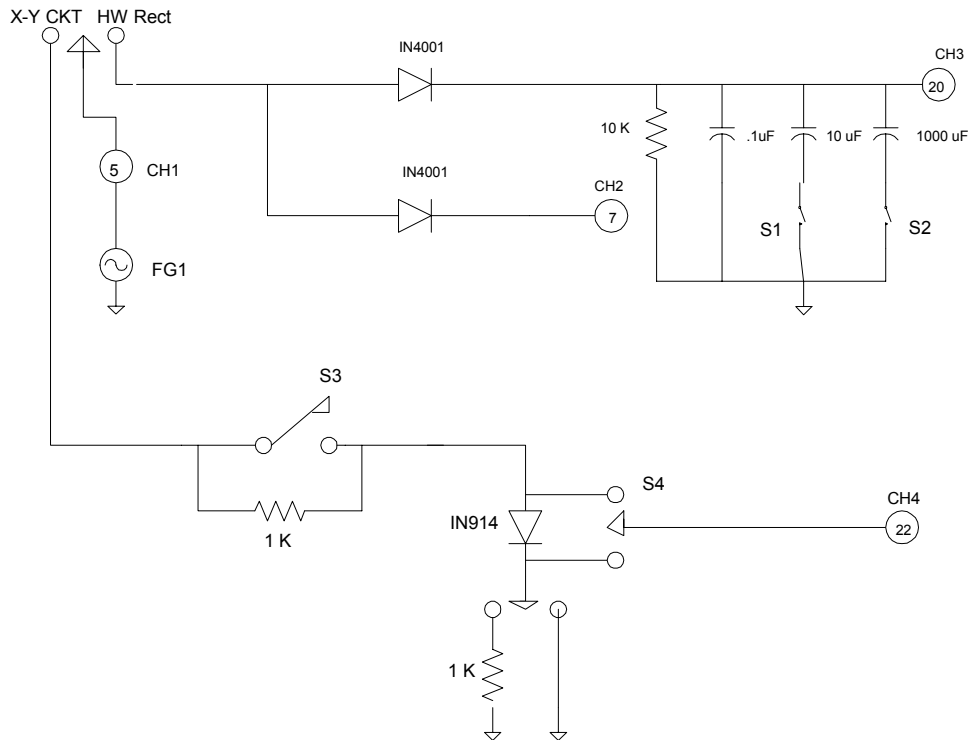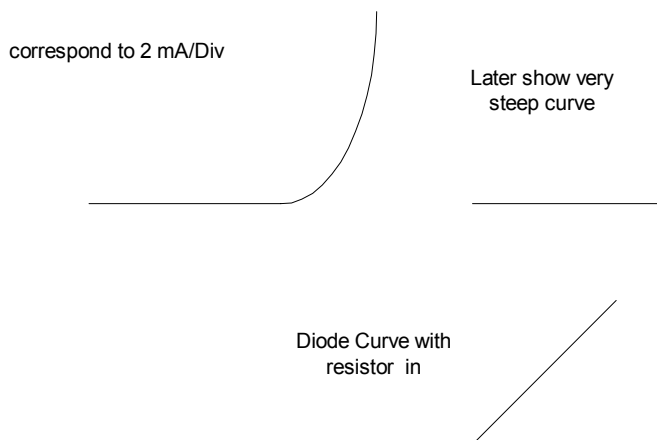# 6.002 demo#25
Diode Circuits and Characteristic   Prof. Lang Spring 2002

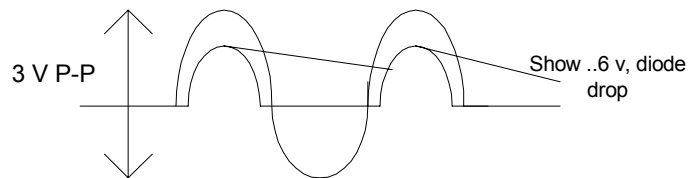**Steps: Load set up 6.002 Demo#25A**

Part 1: Show the Diode Characteristic curve and later show the Ideal diode curve by increasing the horizontal voltage to 20 volts   (Use MATH/FFT to change the Horizontal voltage) !
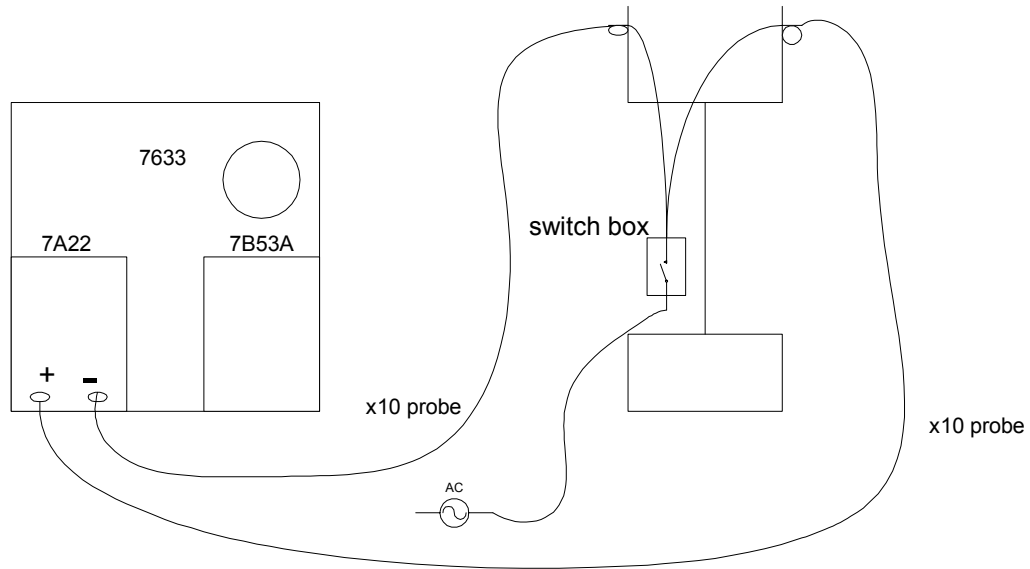FG1 Should be set at 16 v p-p for this demo Freq = 100 HZ Sine Wave

Part 2: Load set up 6.002 Demo#25

Show the input signal, the rectifier signal and filtered signal, first show just C1 and notice the ripple and later switch C2 in (10X bigger)and observe the ripple which will be almost gone but if you change the amplitude scales you would observed some ripple. Last switch C2 in (1000X bigger) and observe that the ripple will be completely gone.

FG1 should be set at 3 v p-p for this demo Freq = 100 HZ Sine Wave

3 V P-P

Show ..6 v, diode drop

AC Line Demo Set Up

7633

7A22

7B53A

+   −

switch box

x10 probe

AC

x10 probe

We use (2) X10 probes on differential amplifier 7A22 and using caution not to ground any points and the amplifier plug in should be set on AC not DC coupling set the voltage to 5 volts range.

Output shown with both sides clipped due to the large numbers of computers connected in AC power line NOT a perfect sine wave!