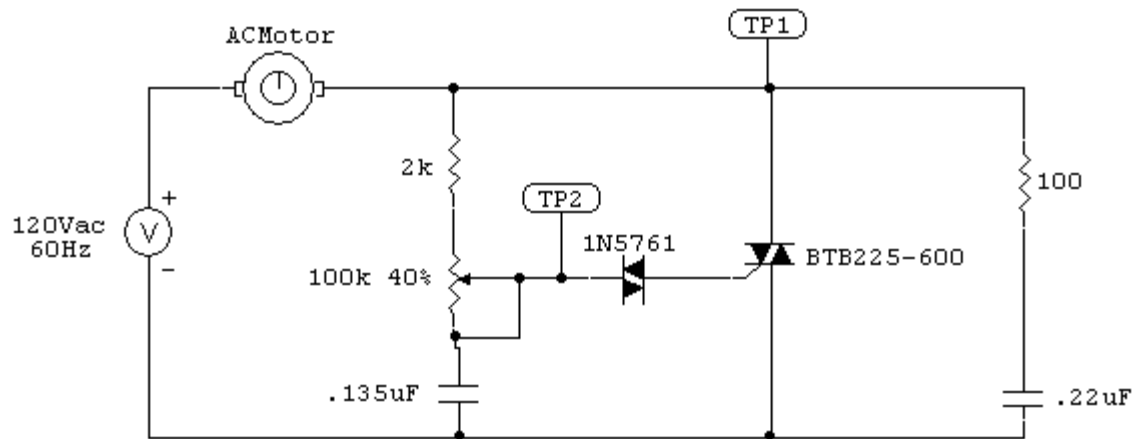


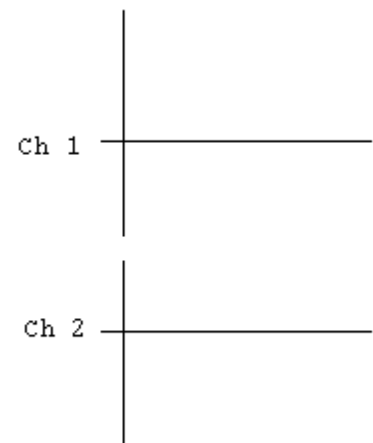
ET 350
Lab 9
Triac Phase Control

Assemble the circuit below. **Remember; do not use the ground lead of the oscilloscope probe in A.C.**

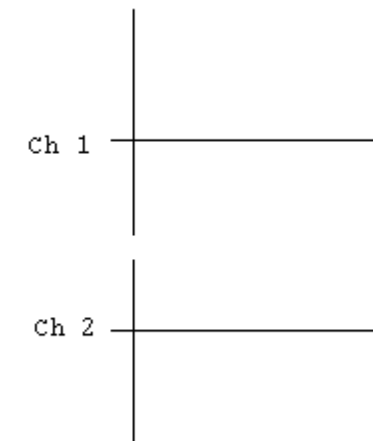


1. Connect channel 1 of the oscilloscope to TP1 and channel 2 to TP2.

2. Move the potentiometer so that the motor spins the fastest (or the light is the brightest.) Sketch the two traces.



3. Move the potentiometer so that the motor moves the slowest (or the light is the dimmest.) Again sketch the two traces.



5. With the motor(or light) at the maximum, measure the voltage at TP2 with respect to the neutral wire. This is the voltage necessary for the diac to conduct. This value should be low because this device is in fact a bi-directional switch and conducts at a lower level than a diac.

6. What is the voltage at TP1 if the motor (or light) is completely off?

7. What is the voltage at TP1 if the motor (or light) is on the maximum?