

**STROBOSCOPE 220V**  
**CODE 158**

**LEVEL 2**

This circuit is the flashing light circuit to trigger a high xenon flashtube using 220 to 240 VAC input from a power supply. The flashrate is fixed but you can change the value of capacitor later on. Idea as flashing light effects for discotheques etc.

**Technical specifications:**

- operating voltage: 220 to 240VAC.
- flash rate: 2 flashes/second
- dimensions of PCB : 1.68 x 2.50 inches

**How to works:**

The AC line 220-volt is fed to D1, R1, R2 and R3, and charged to electrolytic capacitors C1, section C2 will be charged the voltage through R4. When the voltage at C2 is higher than 88-volt, at the anode of ZD1 will have the voltage. This voltage is trigger the gate of SCR1, SCR1 will works. The voltage of C2 is fed to the ground. The on/off action of SCR1, caused by the pulsating signal applied to it, creates a rising and collapsing field in the primary winding of T1. That causes a pulsating signal, of opposite polarity, to be induced in T1's secondary winding. The pulsating DC output at the secondary winding of T1 is trigger to the xenon tube. The xenon tube will flashing.

**PCB assembly:**

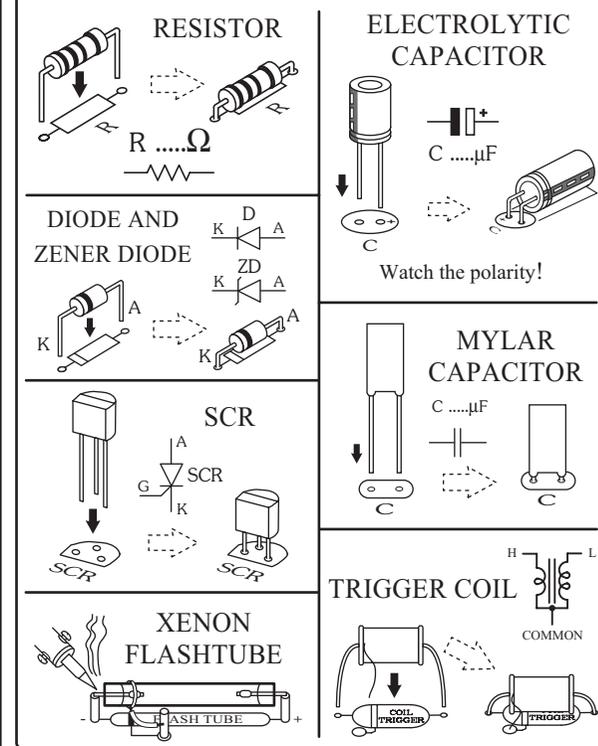
Shown in Figure 3 is the assembled PCB. Starting with the lowest height components first, taking care not to short any tracks or touch the edge connector with solder. Some tracks run under components, and care should be taken not to short out these tracks. All components with axial leads should be carefully bent to fit the position on the PCB and then soldered into place. Make sure that the electrolytic capacitors are inserted the correct way around. The LED has a flat spot on the body which lines up with the line on the overlay. Now check that you really did mount them all the right way round!

**Testing:**

Connect the voltage to the circuit. Xenon flashtube will be flashing, the flash rate is about 2 flashes per second. You can change the new flash rate by altering the value of capacitor C1.

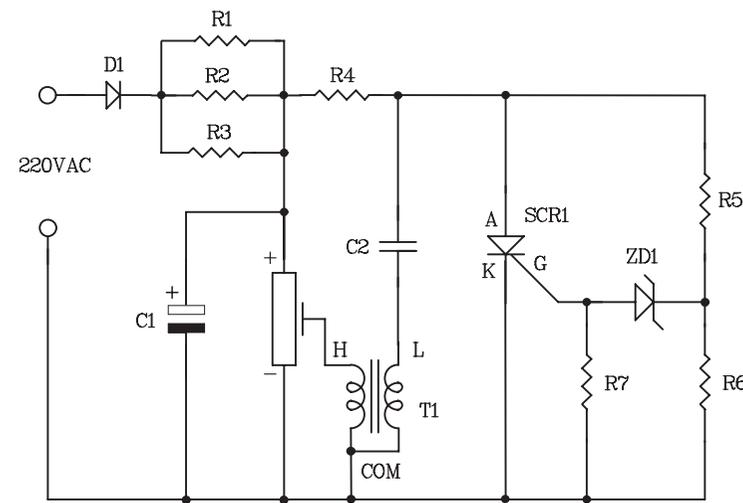
**WARNING:** Before handing this kit, please discharge capacitor C1. This could be charged to over 300V and will give you a nasty shock if you touch it. Discharge capacitor C1 by shorting it with a resistor.

**Figure 1. Installing the componants**

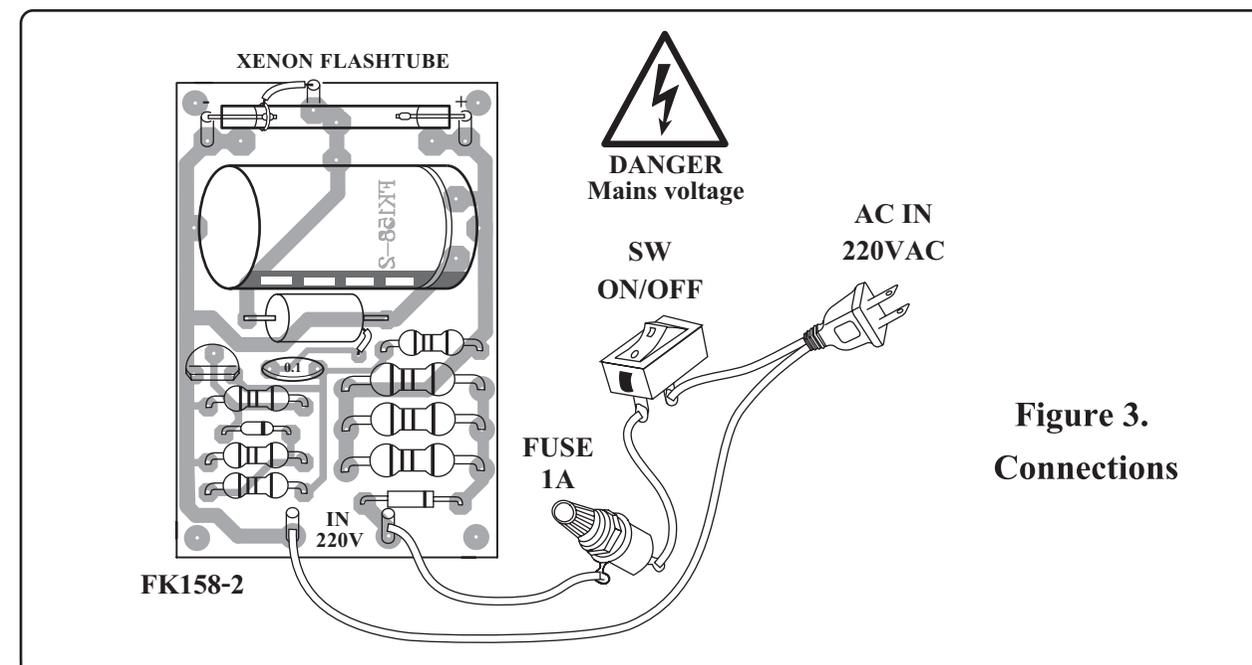


**Troubleshooting:**

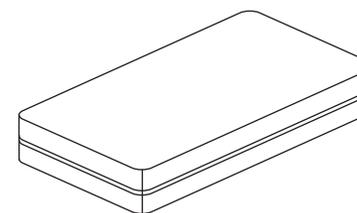
The most problem like the fault soldering. Check all the soldering joint suspicious. If you discover the short track or the short soldering joint, re-solder at that point and check other the soldering joint. Check the position of all component on the PCB. See that there are no components missing or inserted in the wrong places. Make sure that all the polarised components have been soldered the right way round.



**Figure 2.**  
**The Stroboscope 220V**



**Figure 3.**  
**Connections**



**NOTE:**  
**FUTURE BOX FB17 is suitable for this kit.**

**NEW KIT SET**

CODE FK	DESCRIPTION	POWER
170	DANGER FLASHER 42 LED	9-12VDC.
171	TWO LAMP FLASHER	3VDC.
172	THREE STEP FLASHER 19 LED	9-12VDC.
173	HALLOWEEN PUMPKIN FLASHER 23 LED	9-12VDC.
174	ANIMATED LED SIGNBOARD (5x7 DOT MATRIX)	3-5VDC.
327	DUAL STATION INTERCOM (TRANSISTOR)	4.5-6VDC.
512	DING/DONG DOOR CHIME (PIR SENSOR)	4.5-6VDC.
816	VARIABLE REGULATOR 0-50V. 3A.	50VDC.
817	TRANSFORMERLESS POWER SUPPLY 6-9-12V 50mA	220-240VAC.