

**NO SMOKING FLASHER 46 LED**  
**CODE 168** **LEVEL 1**

The no smoking flasher circuit is a small and flashing circuit. It circuit is designed a no smoking signs. The display can be divided into two sections; The prohiption symbol LEDs is blinking and cigarett LEDs is light on but smoke of cigarett will be slowly light on andlight off. Ideal as light-shows for model construction etc.

**Technical specifications:**

- power supply : 9-12VDC.
- consumption : 80mA max. @ 9VDC.
- PCB dimensions : 3.54 x 3.50 inches.

**How to works:**

The circuit can be divied into two sections. The simplest section consists of 37 red LEDs forming the outline of the prohiption symbol to be blinking by astable-multivibrator circuit (TR1 and TR2). TR1 and TR2 is working one by one. When TR2 is working, LED10 to LED41 is light on. But if TR1 is working, LED10 to LED41 is light off. The rest section of the circuit is used to control the smoking LEDs by TR3, TR4 and TR5. If TR3 is working, LED1 is light on but if TR3 isn't working, LED1 is light off and TR4 is working, causing LED2 to LED9 is light on. LED42 to LED46 is light on continuously.

**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.

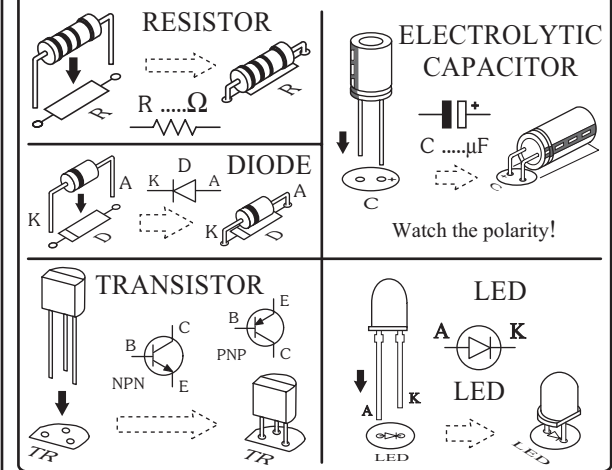
Make sure that the electrolytic capacitors are inserted the correct way around. The LED has a flat spot on the body which lines up with the line on the overlay. Now check that you really did mount them all the right way round!

For the prohiption symbol and cigarett are used 5 mm. red LEDs and smoking is used 3 mm. yellow LEDs.

**Testing:**

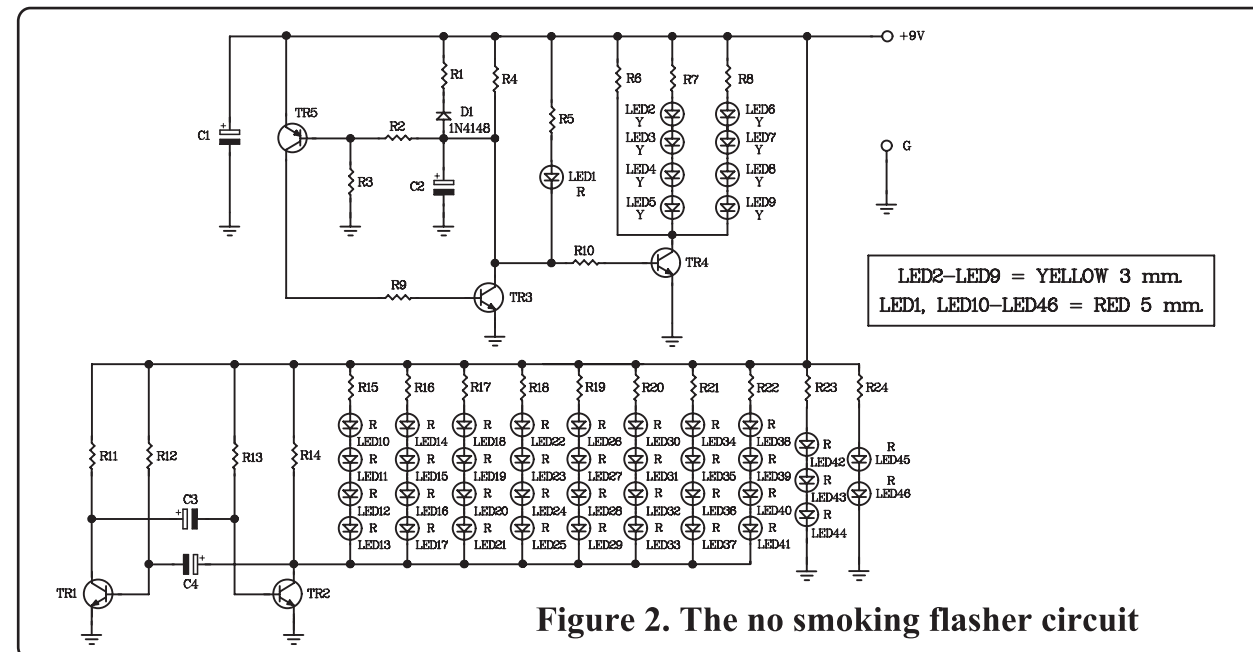
Connect the power supply 9 to 12VDC to circuit. The prohiption symbol LEDs is blinking and cigarett LEDs is light on. At the end of cigarett LED will be blinking alternate smoking LEDs.

**Figure 1. Installing the componants**

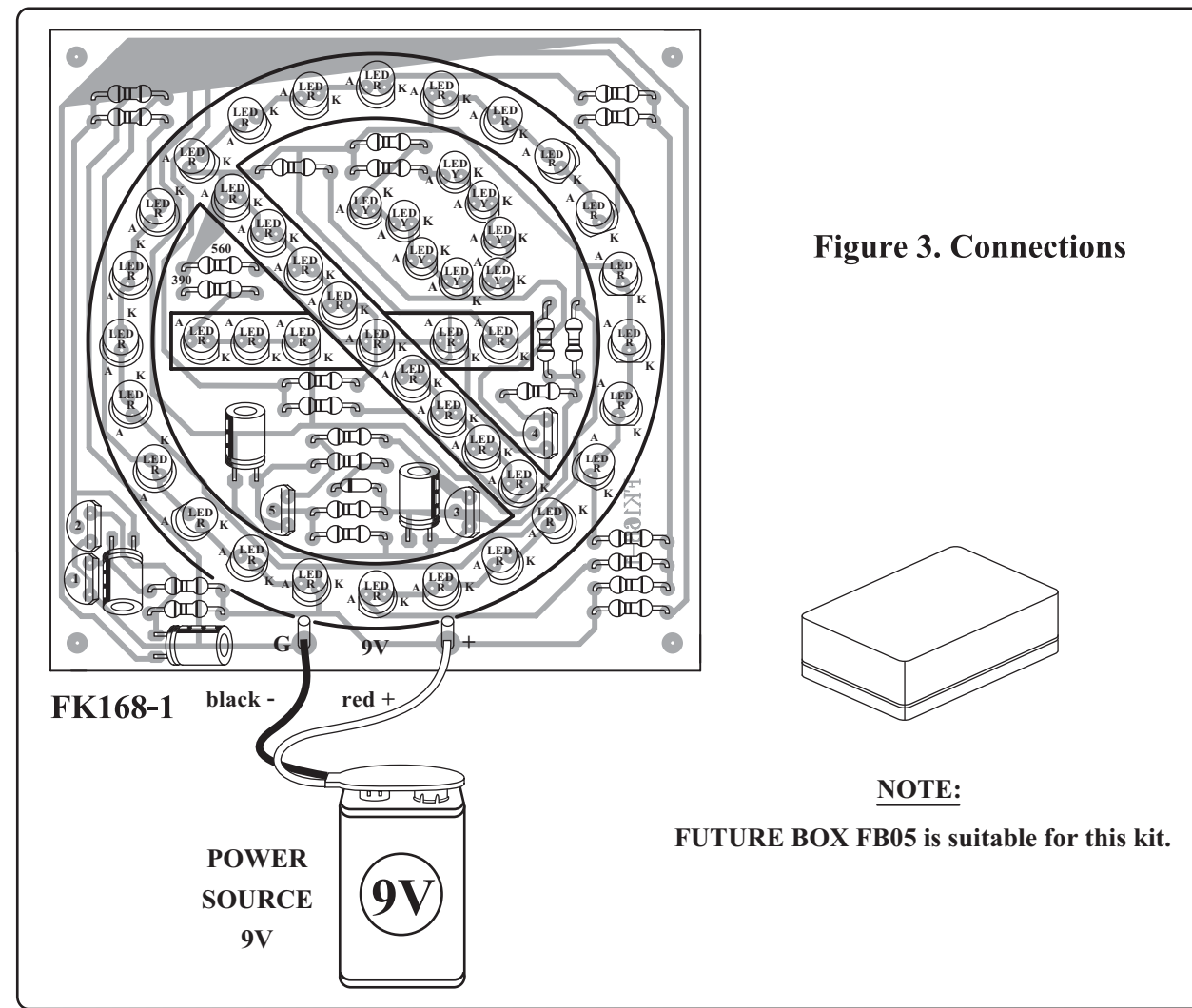


**Troubleshooting:**

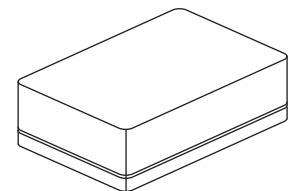
The most problem like the fault soldering. Check all the soldering joint suspicious. If you discover the short track or the short soldering joint, re-solder at that point and check other the soldering joint. Check the position of all component on the PCB. See that there are no components missing or inserted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



**Figure 2. The no smoking flasher circuit**



**Figure 3. Connections**



**NOTE:**

FUTURE BOX FB05 is suitable for this kit.