

**TWO WAY LED CHASING LIGHT 35 DOT**  
**CODE 151** **LEVEL 1**

This circuit is the chasing light circuit. This circuit consist of 26 LEDs (dot matrix display). Idea as light-shows for model construction etc.

**Technical specifications:**

- power supply: 9-12VDC.
- consumption: 40-70mA max.
- PCB dimensions : 1.67 x 3.06 inch.

**How to works:**

TR2, TR3 and TR6 is configured as frequency generator. TR2, TR3 and TR6 will step operation 3 steps. The frequency generate is depending on R 10KΩ and C 47 μF which configured as speed of chasing light. TR5, TR4 and TR1 are invert the frequency and drive LEDs. R 330Ω is voltage drop for each LED.

**PCB assembly:**

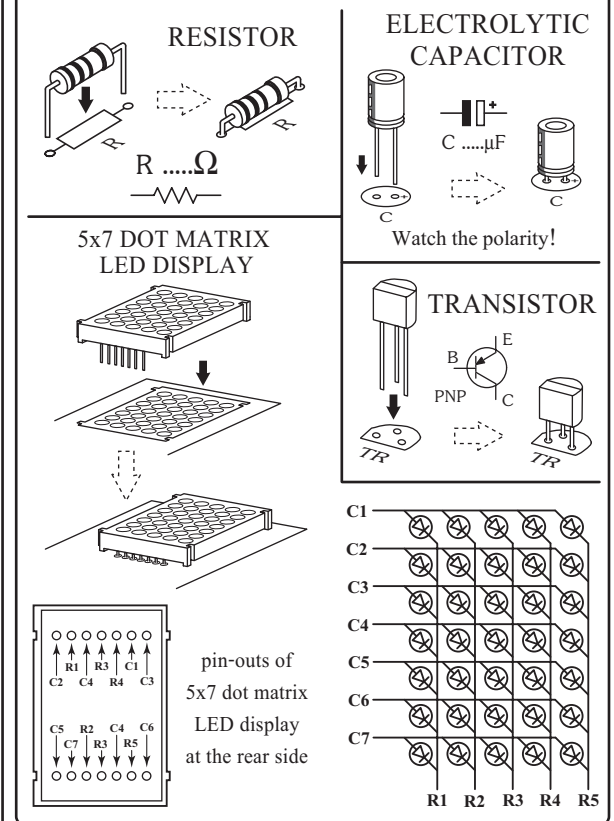
Shown in Figure 3 is the assembled PCB. Starting with the lowest height components first, taking care not to short any tracks or touch the edge connector with solder. Some tracks run under components, and care should be taken not to short out these tracks. All components with axial leads should be carefully 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. Now check that you really did mount them all the right way round!

**Testing:**

The board should be given a final inspection before power is applied. After connect the battery 9V to the circuit. With the positive pole is connected to "+" point and the negative pole is connected to "-" point. All LEDs is chasing to the column. Step 1, LEDs is light on at the middle columns, Step2, the column 2nd and the column 4th of DISPLAY are light on and than step3, the

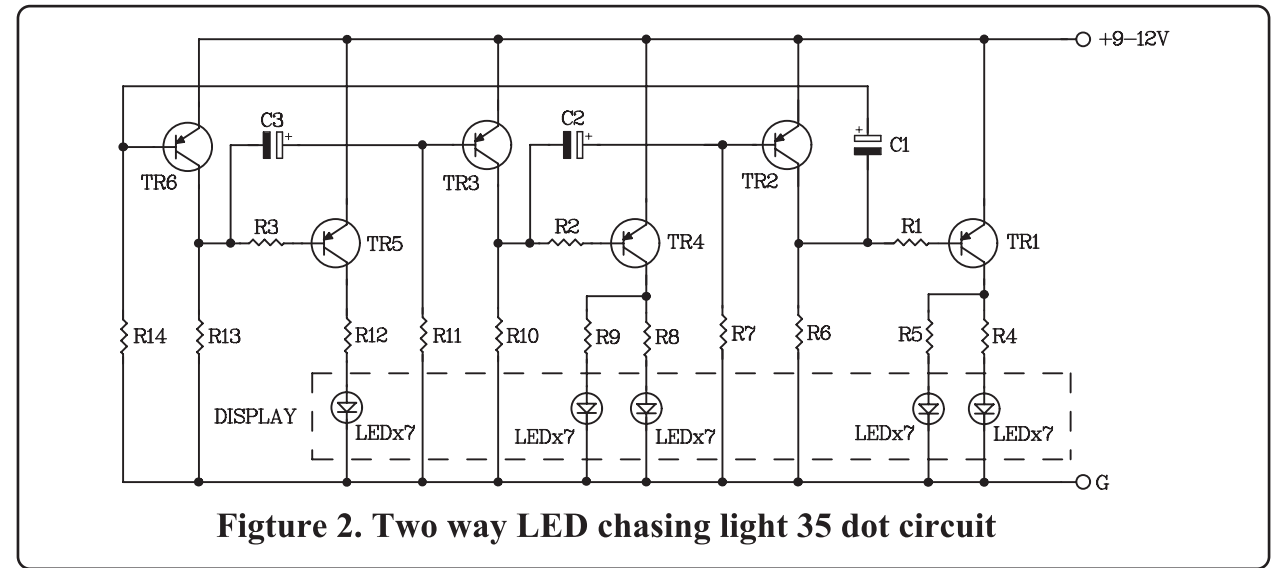
column 1st and the column 5th of DISPLAY are light on. If you want to increase or decrease the speed of chasing can be adjusted by altering the value of C 47 μF.

**Figure 1. Installing the componants**

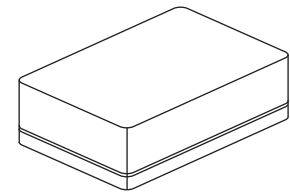
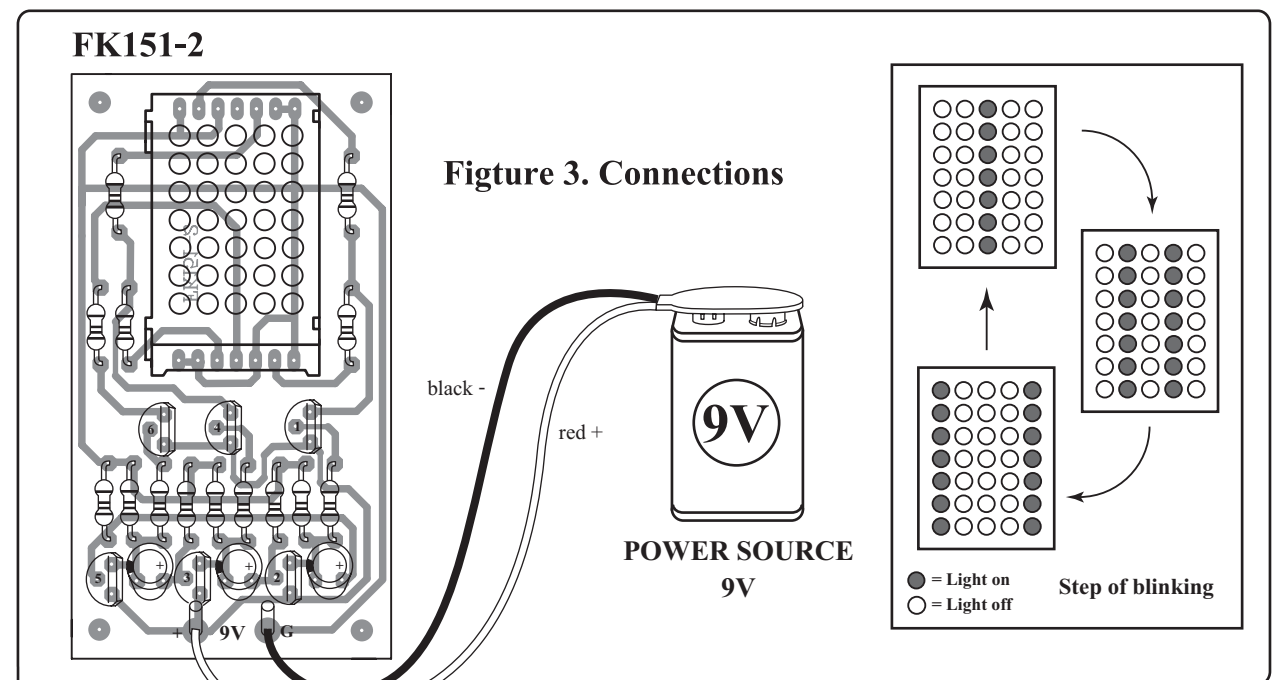


**Troubleshooting:**

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. Two way LED chasing light 35 dot circuit**



**NOTE:**

**FUTURE BOX FB03 is suitable for this kit.**

NEW KIT SET

CODE FK	DESCRIPTION	POWER
271	LIGHT ACTIVATE ALARM (COCK VOICE) WITH SPEAKER	3VDC
272	SPACE GUN 3 TONE WITH SPEAKER	9VDC