

**TWO WAY CHASING LIGHT 12 LED**  
CODE 117 **LEVEL 1**

This circuit is best for decoration. It requires 12 LEDs, Ranking 2 rows, 6 LEDs per each row. 1st row is green and 2nd row is red, it can be used other color as well according to requirement.

**Technical specifications:**

- power supply: 6-12VDC.
- consumption: 12mA max.
- adjustable speed with potentiometer.
- PCB dimensions : 2.80 x 1.77 inch.

**How to works:**

This circuit requires 2 IC. IC1 will connect as frequency generator and is adjusted at VR10K. Output of IC1 will fed to pin14 of IC2 through R 100ohms. Output will move down one by one from 1st output, which is pin3, 2, 4, 7, 10, 1, 5, 6, 9 and 11. When reaching pin11, output will then move to pin3 and further as per IC1 connection. When output is moving to 6th position and return backward to upper row, so that LED can run back. Diode 1N4148 is for prevent current from output flew through the same LED output.

**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 power supply 6 to 12V to circuit. With the positive pole is connected to "+" point and the negative pole is connected to "-" point. LED will display twice a time and run forward and backward. It's running speed can be adjusted at VR10K.

**Figure 1. Installing the componants**

**RESISTOR**

R .....Ω

**ELECTROLYTIC CAPACITOR**

C .....μF

Watch the polarity!

**IC 555**

**JUMPER**

JUMPER OR J

**IC 4017**

Watch the position of the notch!

**LED**

A K

**TRIMMER POTENTIOMETER**

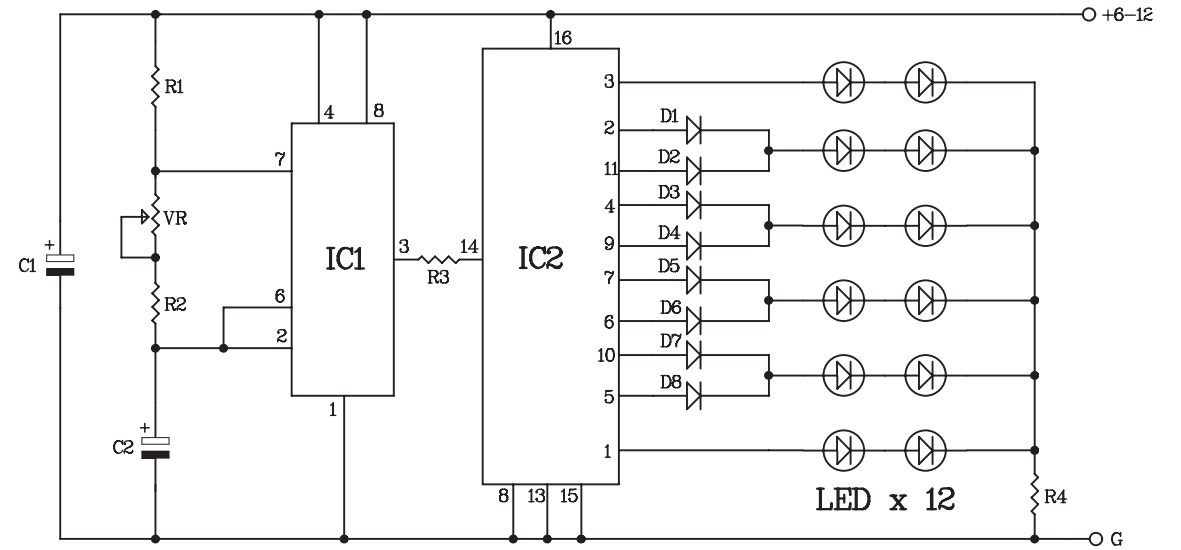
VR .....KΩ

1 2 3

VERTICAL HORIZONTAL

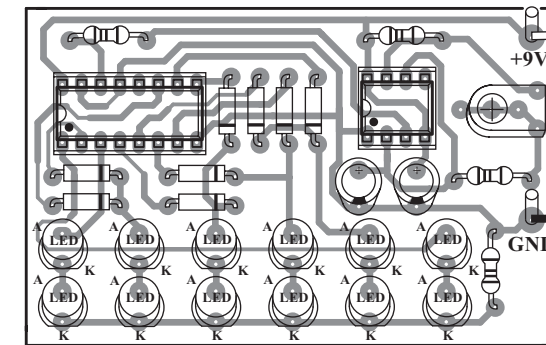
**Troubleshooting:**

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.

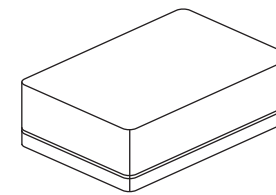
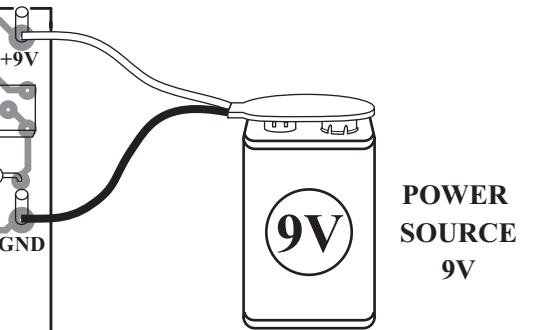


**Figure 2. The two way chasing light 12 LED circuit**

FK117-1



**Figure 3. Connections**



**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