

DANCING ROBOT FLASHER 33 LED
CODE 169 **LEVEL 1**

This dancing robot flasher circuit is a basic circuit that is suitable for those who are interested in electronics. Easy application with low price. This circuit has LEDs flash alternately one by one.

Technical specifications:

- power supply : 9-12VDC.
- consumption : 60mA max. @ 9VDC.
- light indication : 33 LED's each 5 mm.
- PCB dimensions : 2.83 x 3.96 inches.

How to work:

Multi-vibrator (TR1 and TR2) is configured as frequency generator. TR1 and TR2 will alternate one by one. If TR1 works, LED1 to LED4 will light on and LED5 to LED8 will light off. But if TR2 works, LED1 to LED4 will light off and LED5 to LED8 will light on. Speed of LED blinking is depending on R3, R4, C1, C2. For R1, R2, R5 and R6 are voltage drop for LED1 to LED8. LED9 to LED33 will be light on continuous.

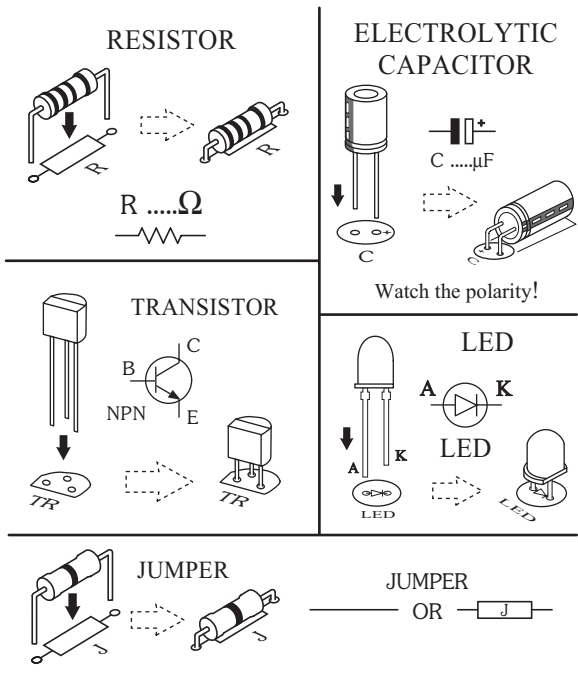
PCB assembly:

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 9 to 12V to circuit. With the positive pole is connected to "+" point and the negative pole is connected to "-" point. LED at hand and foot will display alternately. For rest LED will be light on continuous.

Figure 1. Installing the components



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.

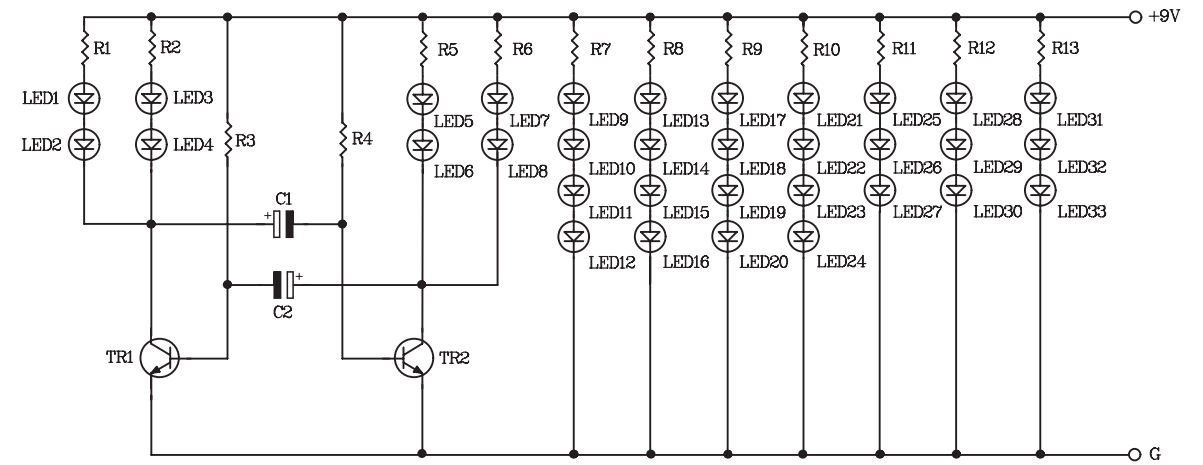
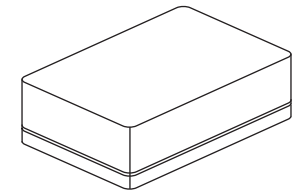
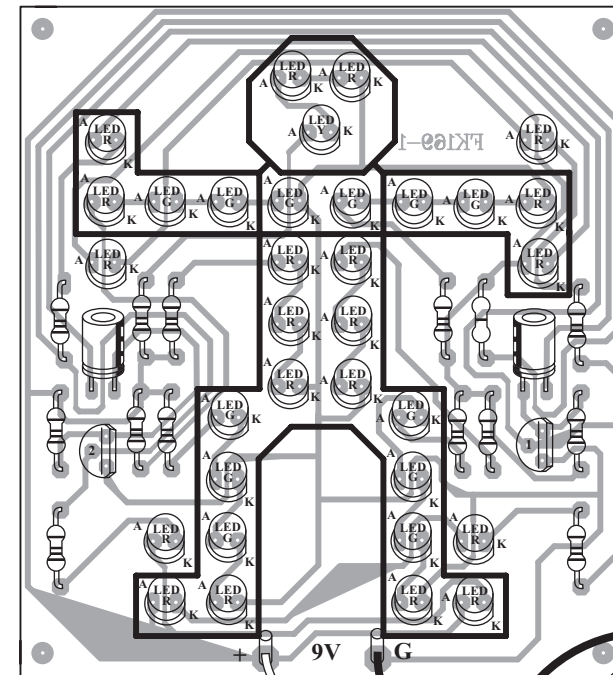


Figure 2. The dancing robot flasher 33 LED circuit

Figure 3. Connections

FK169-1



NOTE:
FUTURE BOX FB05 is suitable for this kit.



BATTERY
9V