FUTURE KIT

HIGH QUALITY ELECTRONIC KITS

FUTURE KIT

DOUBLE HEART FLASHER 46 LED

CODE 177 LEVEL 1

A two hearts shaped flasher circuit that used for light decoration. Blinking manner will start at the first heart shaped LEDs and then the second one, followed by the arrow shaped LEDs piercing at them.

Technical specifications:

- Power supply: 9-12VDC.
- Consumption: 25mA max. @ 12VDC.
- Adjust blinking speed with trimmer potentiometer.
- Display : 46 LEDs
- PCB dimensions : 4.60 x 3.29 in.

How to work:

This circuit is composed of two main parts, oscillator and decade counter. The oscillator consists of TR5 and TR4 that being connected in the form of multi-vibrator frequency circuit and its generated frequency will be adjusted by VR1. Then the frequency will be supplied to IC1 which acts as a decade counter. When IC1 starts counting, it will send out the voltage to the base of TR1 to TR3 for bias, one at a time. And when reaching pin 5 of IC1, the voltage will be reset for starting a new blinking process.

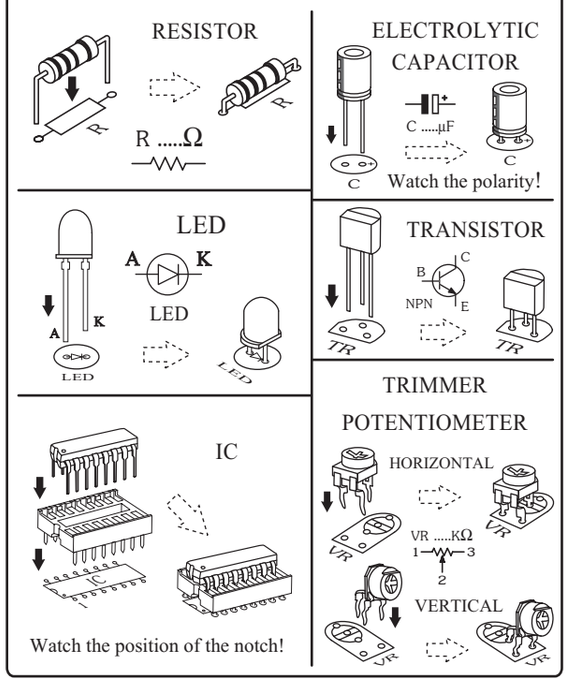
Circuit connecting:

External connecting and fitting of components are shown in figure 3. It is recommended to assemble the circuit starting with a less height component i.e. diodes, resistor, electrolite capacitors and transistors etc. Be careful while assembling and check for the matching of PCB poles and components before soldering as shown in Figure 1. Use a max. 40W. solder and soldering lead with a tin and lead ratio of 60/40 together with a joint solution inside. Recheck the assembled circuit for your own confidence. Better using a lead sucker or a lead wire absorber in case of misplacing component to protect PCB damage.

Testing:

Connect the power supply 9-12 volts to the circuit with the position pole connected to point "+12V" and the negative pole to point "G". The outmost heart LEDs will be lit on first and then the inner ones and followed by the arrowhead LEDs. When all LEDs are lighted on, then they will be off and repeat the same process again. In case of wanting to have a slow or fast blinking, adjust VR1. The above results will show that the circuit is workable.

Figure 1. Components installation



Troubleshooting:

As the circuit has only a few components, the main cause of troubles will come from misplacing component and defaulted soldering. When found out that the circuit does not work, check the placing component and various soldering points.

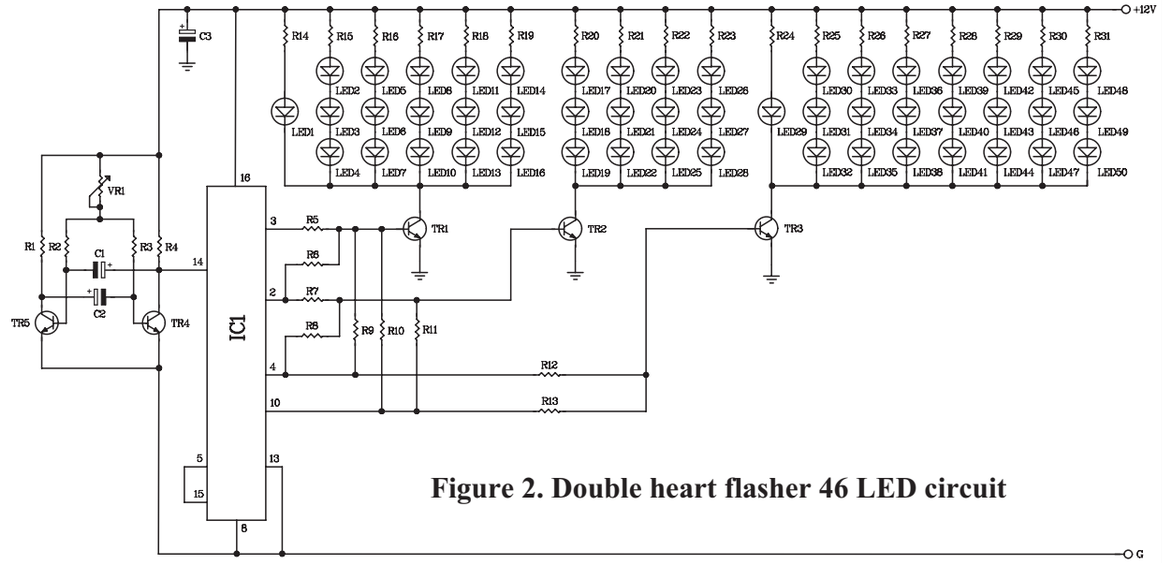


Figure 2. Double heart flasher 46 LED circuit

Figure 3. Circuit connecting

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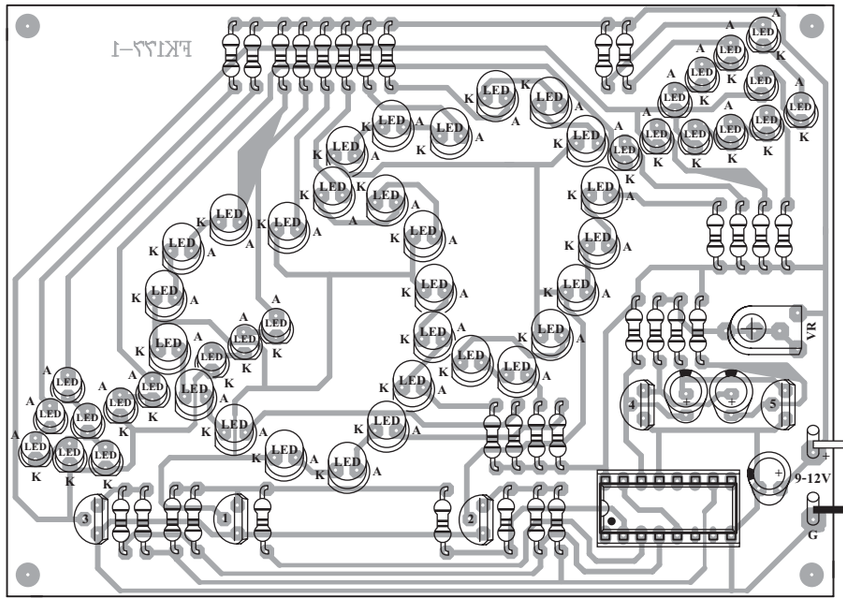

POWER SUPPLY 9-12VDC

NOTE: FUTURE BOX FB04 is suitable for this kit.