FUTURE KIT

HIGH QUALITY ELECTRONIC KITS

STAR FLASHER 11 LED
CODE 147

LEVEL 1

This star flasher circuit is flasher circuit. The shape of 5 point star is outlined by a parallels of red LEDs with LEDs alternately blinking.

Technical specifications:

- power supply: 3VDC.
- consumption: 260mA max.
- adjustable speed with potentiometer.
- PCB dimensions : 1.43 x 2.22 inch.

How to works:

Multi-vibrator (TR1 and TR2) is configured as frequency generator. TR1 and TR2 will alternately one by one. If TR1 works, LED1 will light on and LED2 to LED11 will light off. But if TR2 works, LED1 will light off and LED2 to LED11 will light on. Speed of LED blinking is depending on VR10K, R2, R3, C1 and C2. VR1 is used to adjust the speed of LED blinking. R1, R6 to R15 are voltage drop for each LED.
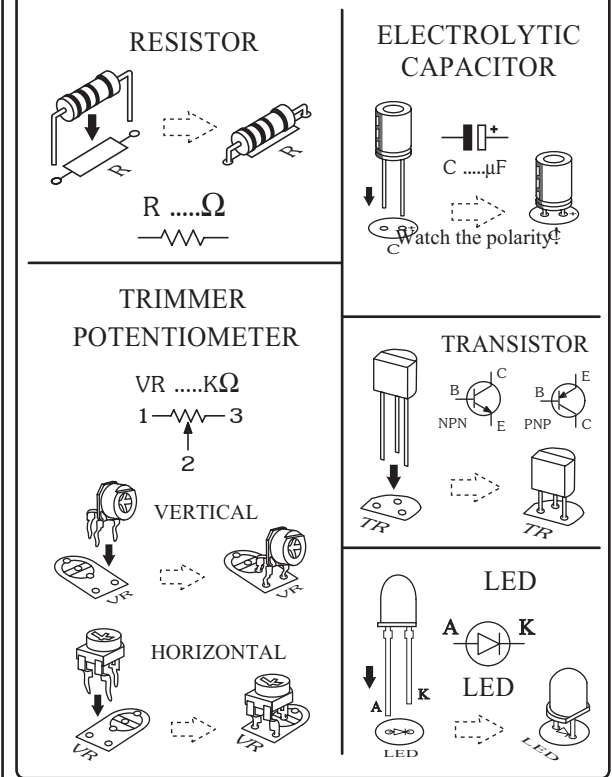
PCB assembly:

Shown in Figture 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 3 volts battery to circuit. With the positive pole is connected to "+" point and the negative pole is connected to "-" point. All LED will display alternately. Adjusting variable resistance VR1. All LED will display according to adjusted speed. If you want to increase or decrease of blinking LEDs can be adjusted by VR1.

Figure 1. Installing the componants

RESISTOR

R .....Ω

ELECTROLYTIC CAPACITOR

C .....µF

Watch the polarity!

TRIMMER POTENTIOMETER

VR .....KΩ

VERTICAL

HORIZONTAL

TRANSISTOR

LED

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.
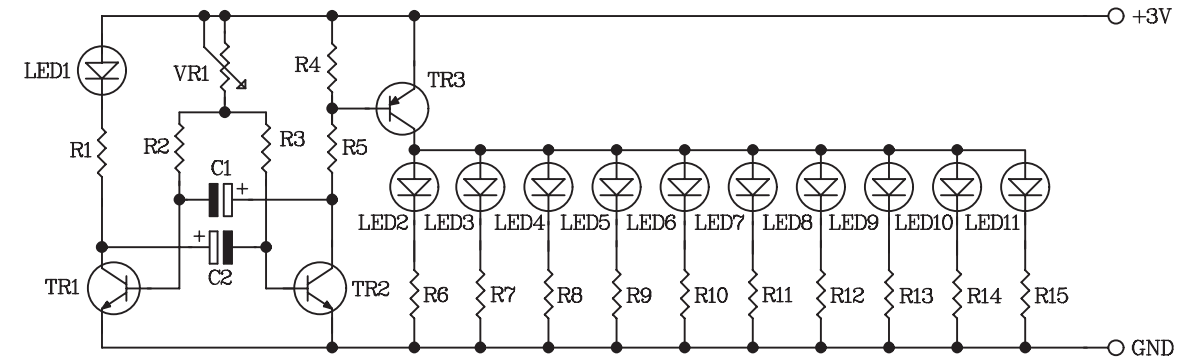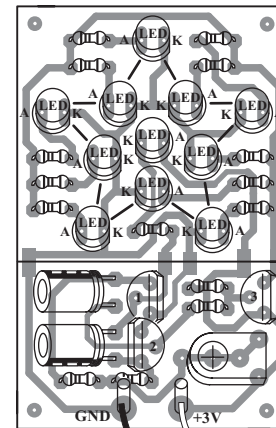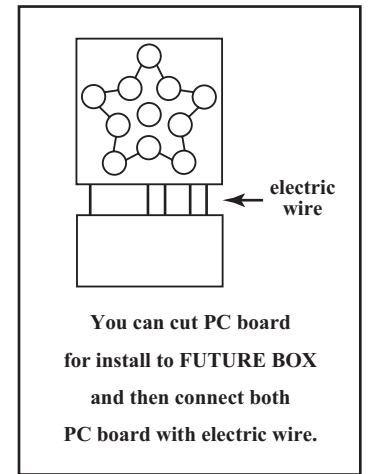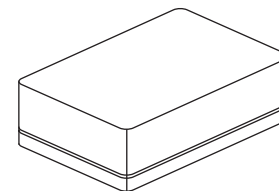

Figture 2. LED FLASHER 2 DOT circuit

FK147-1

BATTERY 1.5V x 2 SIZE AA

red +

black -

You can cut PC board for install to FUTURE BOX and then connect both PC board with electric wire.

electric wire

Figture 3. Connections

NEW KIT SET *NEW*

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