FUTURE KIT

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HIGH QUALITY ELECTRONIC KITS

HALLOWEEN PUMPKIN FLASHER 23 LED
CODE 173 — LEVEL 1

This circuit is the flasher light circuit. The shape is like the halloween pumpkin. Idea as light-shows for model construction etc.

Technical specifications:

- power supply : 9-12VDC.

- consumption : 45mA max.@ 9VDC.

- display : 23 LED's each 5 mm.

- dimensions of PCB : 2.83 x 3.96 inches

How to works:

TR1, TR2 and TR4 are configured as a frequency generator. With the both transistor is working together and the rest of the transistor is not working.

When TR2 is working, LED1 to LED12 will be light on. And if TR1 is working, LED13 to LED15 will be light on. For TR3 and TR4 are working alternately, causing LED16 to LED23 are light on and light off slowly.
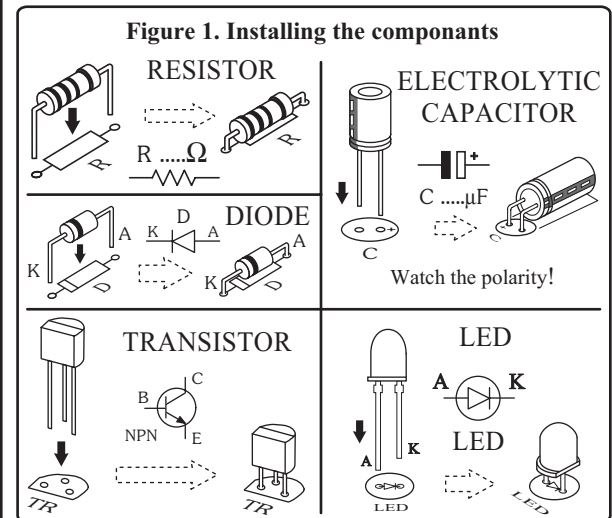
PCB assembly:

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. If the pins will not enter the holes with ease, use a small drill to slightly enlarge the opening. 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. Some components are particularly sensitive to heat (ie: Transistors, IC's, diodes etc.) extra care must be taken to only apply the iron for as little time as

possible, using a pair of pliers to grip the leads will help conduct heat away. Trim components leads with wire cutters to prevent excess lengths causing a short circuit. Now check that you really did mount them all the right way round!

Testing:

This kit has an operating voltage range of 9-12 VDC. Connect the power supply to the circuit. LED at mouth, nose and eyes are chasing light untill all LED is light on and then they is lighting off. For LED at eyes will be lighting off slowly.

Figure 1. Installing the componants

RESISTOR — R .....Ω — R ~~~

ELECTROLYTIC CAPACITOR — C .....µF — Watch the polarity!

DIODE — A K D A — K A — K

TRANSISTOR — B C / NPN E — TR

LED — A ▷|— K — 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.
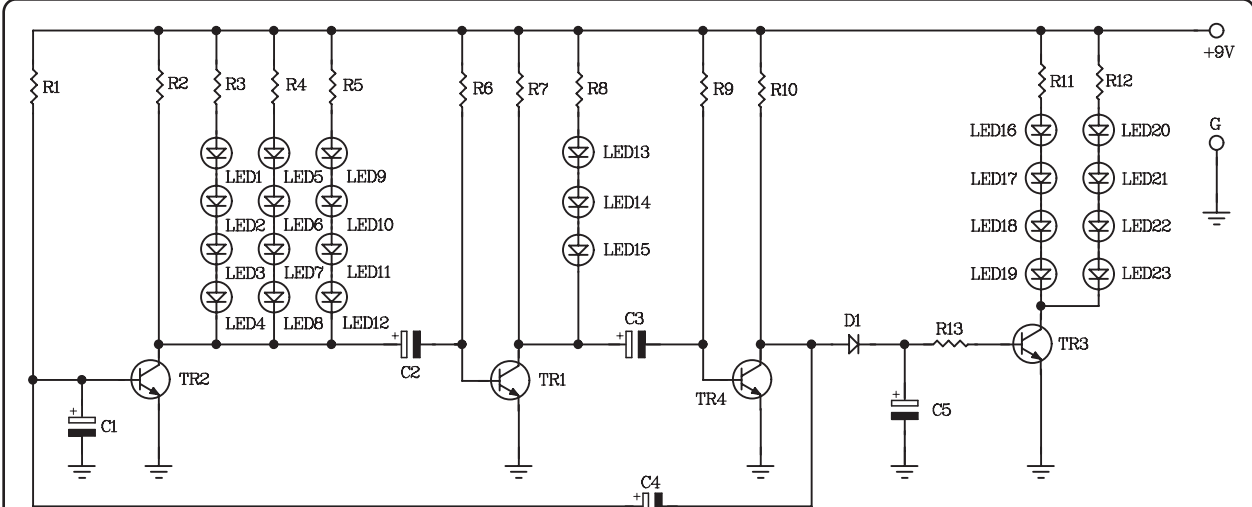
Figure 2. The halloween pumpkin flasher 23 LED circuit

Figure 3. Connections

FK173-1

NOTE:

FUTURE BOX FB05 is suitable for this kit.

red +

black -

9V

POWER SOURCE 9 VOLTS