

CRICKET VOICE (WITH BUZZER)

CODE 270

LEVEL 1

This circuit is the voice generator circuit. This voice has the same as a cricket voice. The circuit has trimmer for adjusting the high voice or the low voice.

Technical specifications:

- power supply: 9VDC.
- consumption: 30mA max.
- tone of voice: adjustable
- dimensions: 2.25 x 1.57 inches

How to works:

This circuit uses a IC. Which it is a quad op-amp, but it is used 3 op-amp only and C1, one opamp is normal closed.

IC1/1 is connected as frequency generator about 1.4 kHz to 15 kHz. The frequency is determined by VR1, R4 and C1, which as tone of the cricket voice.

IC1/2 is connected as frequency generator about 50 Hz. The frequency is determined by R8, C2. Which this frequency is fed to control the frequency of IC1/1 for as vibratory tone similar to the cricket voice.

IC1/3 is connected as low frequency about 2.2 Hz. The frequency is fed to control the frequency of IC1/1 for timing of the cricket voice.

The all frequency is fed out of C1/1 and fed via R5 to a transistor amplifier for feeding to the small speaker.

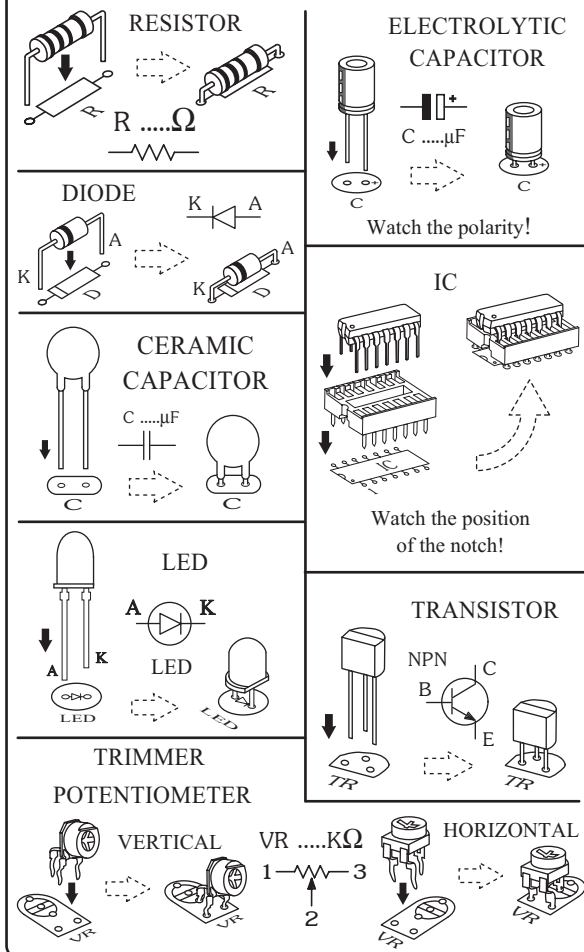
PCB assembly:

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:

This kit has an operating voltage range of 9 VDC. Apply power supply. LED will be flashing and sound comes out of speaker together. If you want to adjust the voice of cricket to high or low voice, you can adjust at VR.

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.

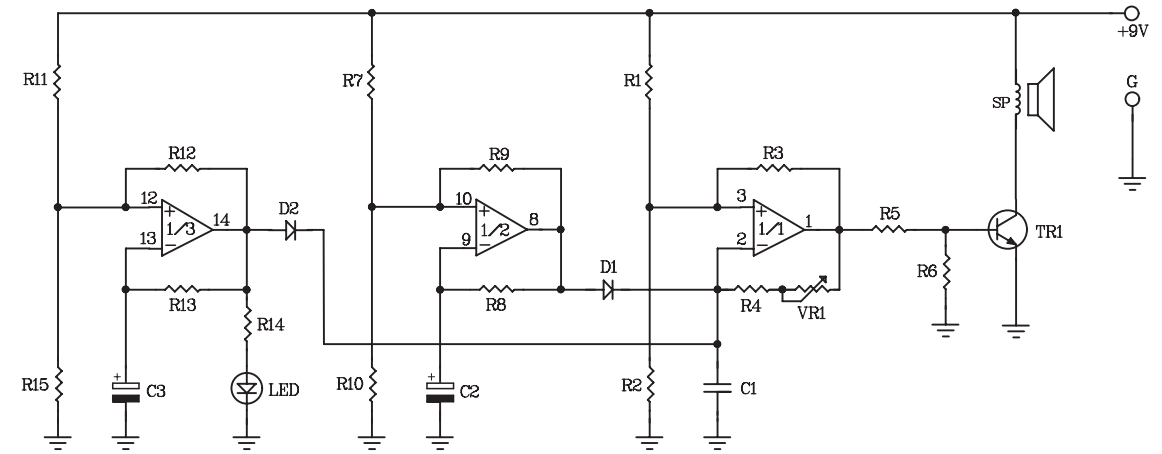
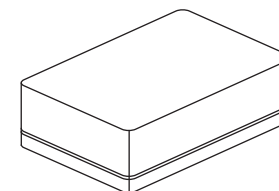
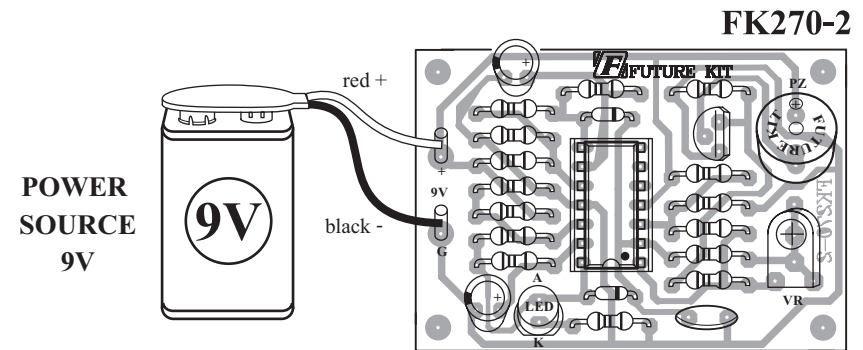


Figure 2. The cricket voice circuit

Figure 3. Connections



NOTE:

FUTURE BOX FB03 is suitable for this kit.

NEW KIT SET

CODE FK	DESCRIPTION	POWER
156	MINI TRAFFIC LIGHT 3 LED	9-12VDC
157	TWO WAY CHASING LIGHT TWO COLOUR 10 LED	9-12VDC
158	STROBOSCOPE 220V	220VAC
159	SHAKING DICE	9-12VDC
160	RANDOM NUMBER GAME 1 DIGIT	9-12VDC
273	MUSIC DOOR (WITH MAGNATIC SWITCH)	3VDC
274	MINI ORGAN 13 TONE (WITH MAGNATIC SWITCH)	9VDC
325	RINGING SIGNAL LIGHT 5 LED	NONE
672	MINI MEGAPHONE (WITH SPEAKER)	4.5-12VDC