FUTURE KIT

HIGH QUALITY ELECTRONIC KITS

FUTURE KIT

MINI SIREN 2 TONE

CODE 229

LEVEL1

The mini siren 2 tone circuit is easy application and low cost. It can be adjusted between two tone going throughout a loudspeaker. It is suitable for installing in playing car, alarm-systems, door bells etc.

Technical specifications:

- power supply: 9VDC.

- consumption: 40mA max.

- loudspeaker connection: 8 Ohm/0.25W

- dimensions: 2.14 x 1.19 inches

How to works:

There are two oscillated set in the circuit. One that generates frequency approximately at 1 Hz consists of TR1, TR2, R1 to R4, C1 and C2. The frequency from this one controls the other which consists of TR3, TR4, R5 to R8, C5 and C6 generating high frequency. High frequency controlled by low frequency is transmitted through the emitter of TR4 to the base of TR5 to be amplified. At the emitter of TR2, there are C3 and C4 that produce tail end of tone is chock because only C3 works. On the other hand, when the switch is at the base, the tail tone is longer because C3 and C4 are connected inparallel so the value ofC is higher resulting the tone to be longer.

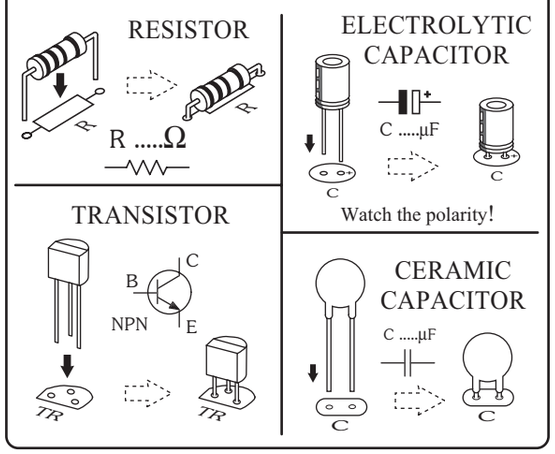
PCB assembly:

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 VDC. Apply power supply. You will hear the siren sound from the loudspeaker. If you slide SW to "A" or "B" point, the circuit is generate the different siren sound.

Figure 1. Installing the componants



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 mini siren 2 tone circuit

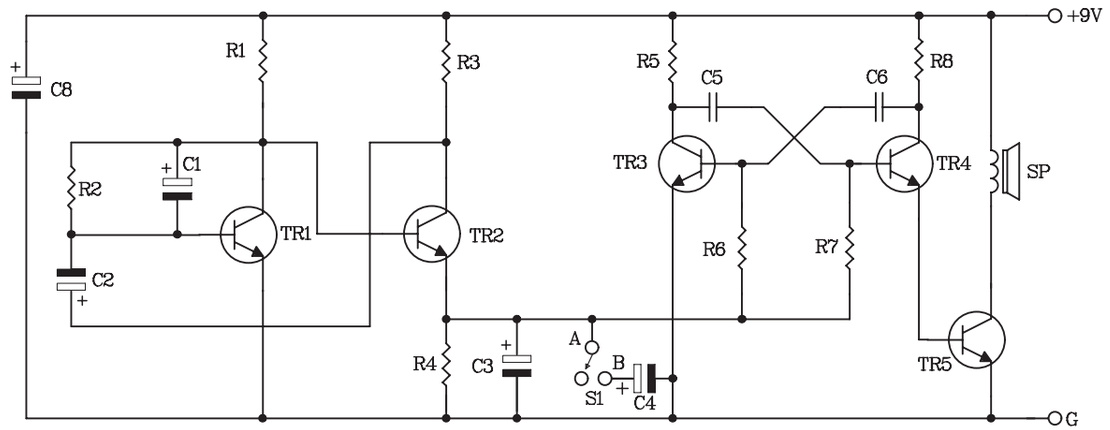
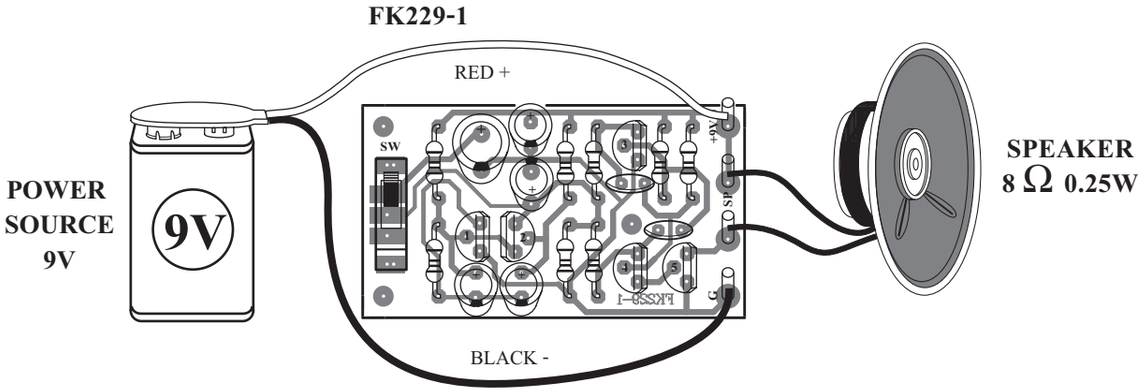
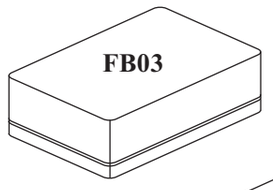
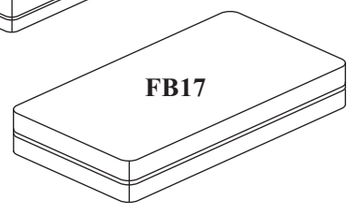


Figure 3. Connections







NOTE:

FUTURE BOX FB03 or FB17 are suitable for this kit.

NEW KIT SET NEW

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