FUTURE KIT

HIGH QUALITY ELECTRONIC KITS

FUTURE KIT

ELECTRIC PIEZO SIREN 230V

CODE 253 LEVEL2

The electric piezo siren 230V is suitable for being used as warning device, alarm-systems, alarm-indoor etc.

Technical specifications:

- **power supply: 220 to 240VAC.**
- **output sound level: 100dB/m.**
- **dimensions: 2.75 x 1.79 inches**

How to works:

The AC line 220-volt is fed to resistor R1, R2 and AC/DC capacitor C1 to decrease the AC voltage. That voltage is then bridge rectifier by D1 to D4, and filtered by electrolytic capacitor C2. The DC voltage is fed to resistor R3 to R6, which are connected in parallel, and decrease the voltage with zener diode 9.1-volt to provide a suitable power source for the circuit. Q1 and Q2 are configured as a low frequency generator. Q3 and Q4 are configured as a high frequency generator. Q5, Q6 and Q7 are amplifier the signal for drive to a piezo-electric.

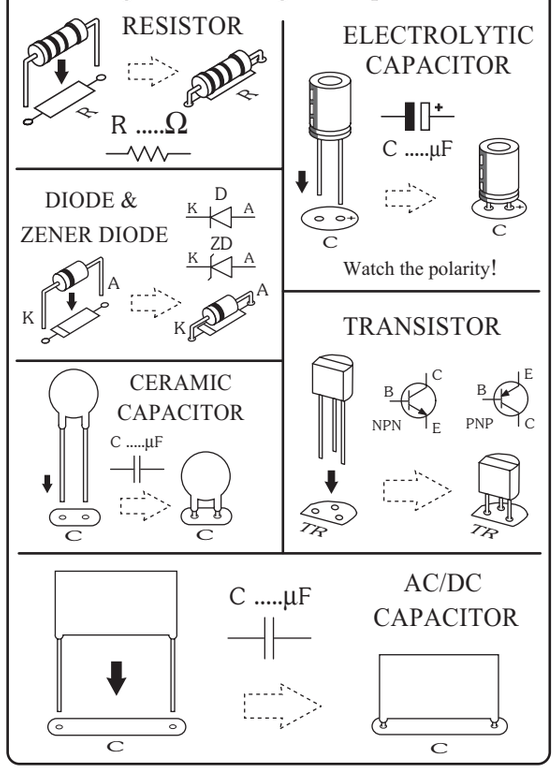
PCB assembly:

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. If the pins will not enter the holes with ease, use a small drill to slightly enlarge the opening. Use a soldering iron of about 25 watts with a clean tip, don't use sand paper to clean. Instead wipe with a cloth while the iron is at operating temperature. Trim component 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 220 to 240VAC. Turn on power supply. You will hear the siren sound from a piezo-electric.

Figure 1. Installing the componants



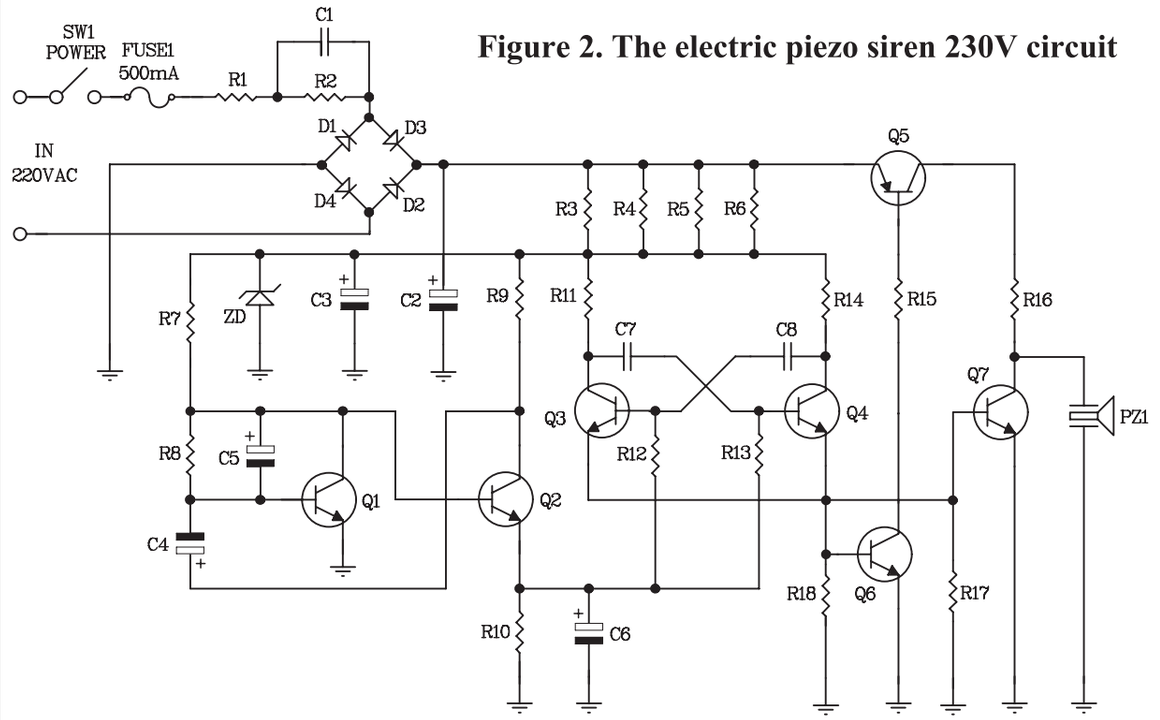
Troubleshooting:

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.

WARNING:-

Which is operated with the AC voltage 220-volt. Among others it has always strictly to be observed, that parts carrying voltage cannot be touched : In order of putting into operation such kind of devices, it is advisable to ask for an expert.

Figure 2. The electric piezo siren 230V circuit



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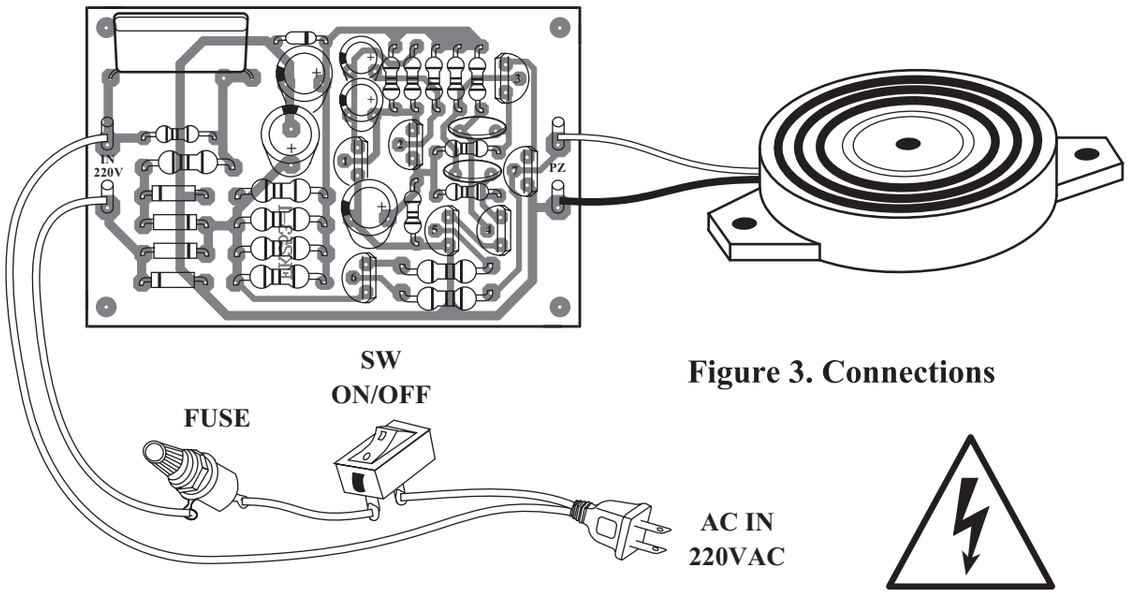

Figure 3. Connections

NOTE:

FUTURE BOX FB17 is suitable for this kit.

DANGER
Mains voltage