

RAINING ALARM
CODE 904

LEVEL 1

This raining alarm circuit is low cost and very useful by connecting sensor PC-board with across lines to "S" point and placing on the raining area. When raining, the circuit will alarm and LED will be lighted on.

Technical specifications:

- power supply : 9VDC.
- consumption : 150mA max.
- PCB dimensions : 2.17 x 1.23 inches.

How to works:

Connecting TR1 and TR2 as frequency generator. This frequency is getting from speaker feedback to the base of TR1. R 1K2 and C 0.047uF are frequency generator. Normally it should be voltage at the base of TR1, if not, frequency generator cannot work. Connecting the base to "S" point to sensor board, whenever sensor meets water, voltage will flow R 10K through wet sensor to the base of TR1, then frequency generator is start working and LED is displaying.

PCB assembly:

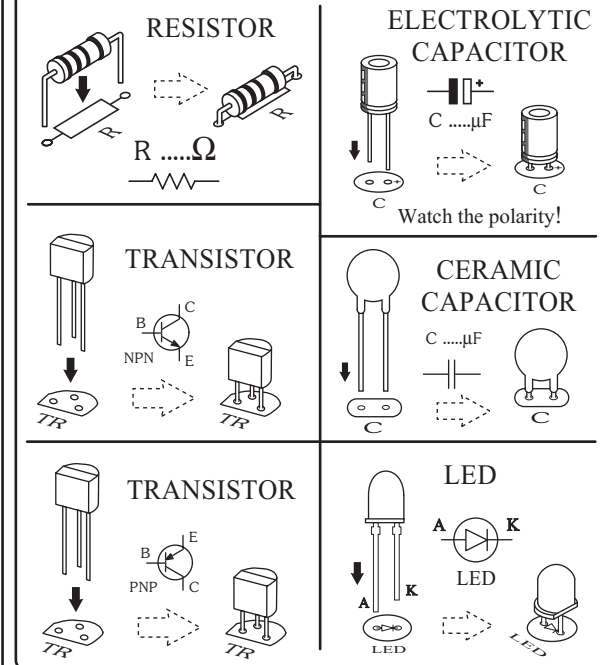
Shown in Figure 3 is the assembled PCB. Starting with the lowest height components first, taking care not to short any tracks or touch the edge connector with solder. Some tracks run under components, and care should be taken not to short out these tracks. If the pins will not enter the holes with ease, 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:

Following figure 3, LED does not display. Putting water on sensor board, LED will display and sound on at speaker.

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.

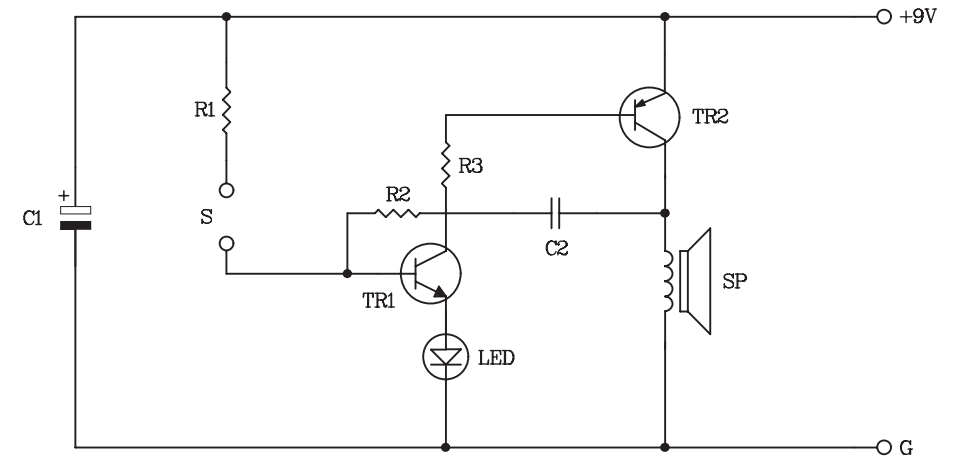


Figure 2. The raining alarm circuit

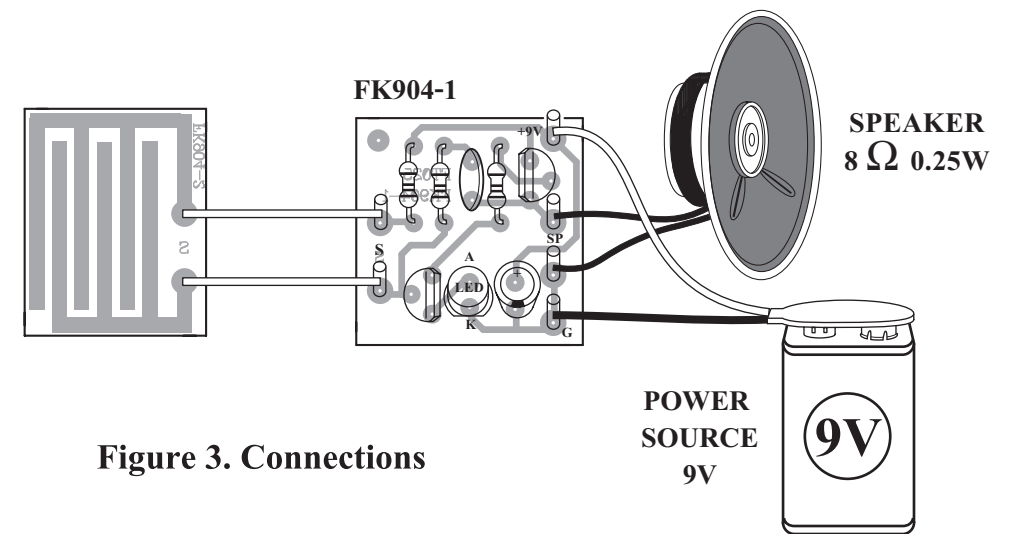
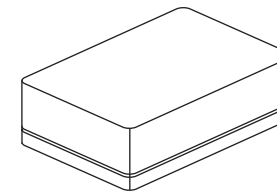


Figure 3. Connections



NOTE:

FUTURE BOX FB03 is suitable for this kit.

NEW KIT SET

CODE FK	DESCRIPTION	POWER
168	NO SMOKING FLASHER 46 LED	9-12VDC.
169	DANCING ROBOT FLASHER 33 LED	9-12VDC.
170	DANGER FLASHER 42 LED	9-12VDC.
171	TWO LAMP FLASHER	3VDC.
172	THREE STEP FLASHER 19 LED	9-12VDC.
173	HALLOWEEN PUMPKIN FLASHER 23 LED	9-12VDC.
174	5x7 ANIMATED LED SIGNBOARD	3-5VDC.
816	VARIABLE REGULATOR 0-50V. 3A.	50VDC.
817	TRANSFORMERLESS POWER SUPPLY 6-9-12V 50mA	220-240VAC.