

CONTINUITY METER
CODE 909

LEVEL 1

Continuity meter circuit is an electronic circuit that uses for measuring 1 ohm to 500 kilohm of electrical home appliances and sending sound output to speaker. If the electrical home appliance has low ohm, it will be high volume and frequency sound. If that appliance has high resistance, it will be low volume and frequency sound.

Technical specifications:

- power supply : 9VDC.
- consumption : 150mA max.
- PCB dimensions : 1.16 x 1.36 inches.

How to works:

Both transistor is connected as a frequency generator. The frequency is depending on R and C. Which signal from speaker. It is feedback pass R and C to generate sound frequency which is controlled by the base of TR NPN. If R has low value, it will conduct high voltage and get high frequency. If R has high value, it will conduct low voltage and low frequency accordingly.

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!

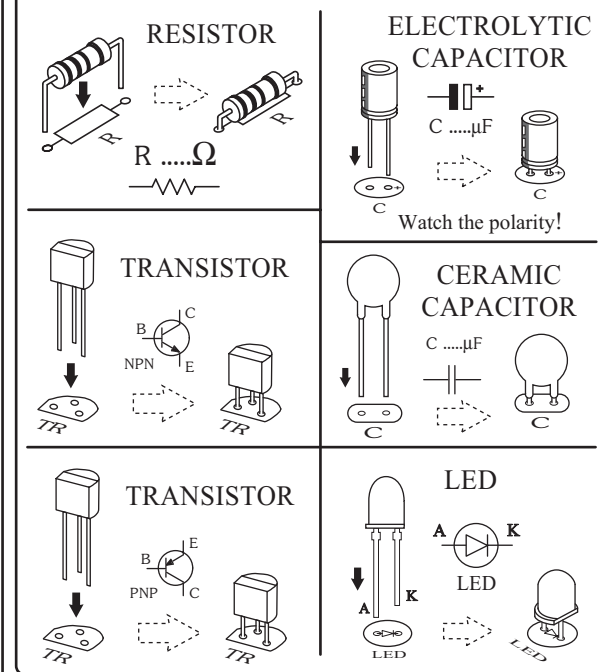
Testing:

Following the figure, LED remains display, Connecting P together, sound will be created at speaker.

Application:

At point P for measuring required home appliance which has 0 ohm to 500 kilohm resistance. If R has low resistance, it will be high frequency. If high resistance, it will be low frequency. None or too much resistance will create soundless.

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.

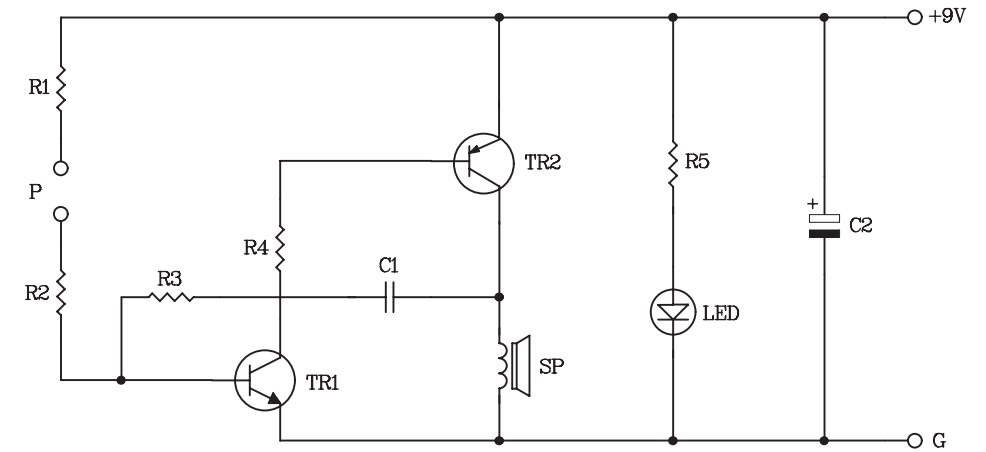
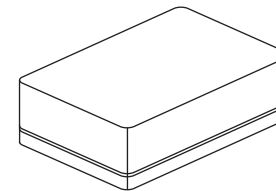
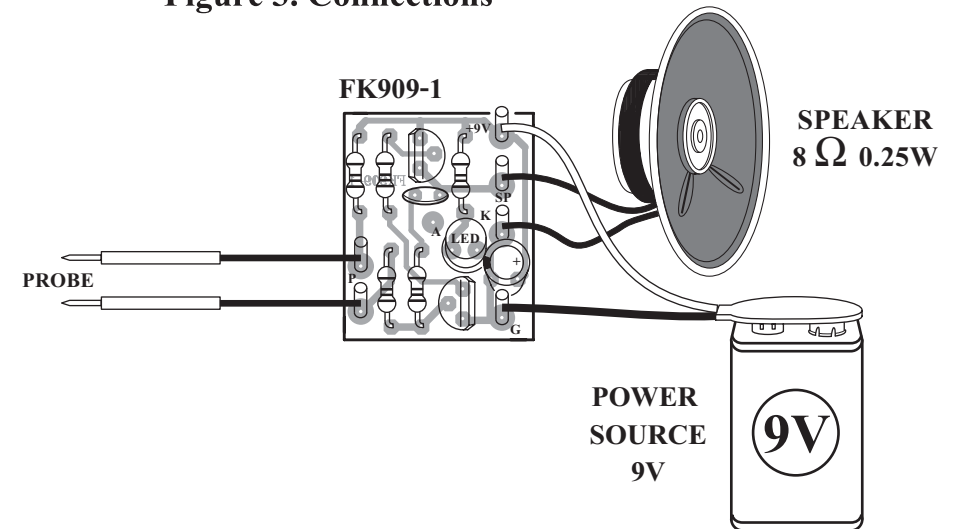


Figure 2. The continuity meter circuit

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.