

## Mosquito Repellent Model GSK-918

This circuit generates a frequency 10-30 kHz that creates a sonic zone disturbing to mosquitoes. A piezo board creates the frequency equal to the frequency generated by the mosquito during flight causing the mosquito to believe he/she is flying into a trap.

### Technical Specifications

- Power Source: 3 VDC
- Power consumption: 20 mA max.
- PCB dimensions: 1.60 x 1.39 inches

### Operating Principles

Transistor 1 and 2 control low frequency 10 kHz, while transistors 3 and 4 control high frequency 30 kHz. This circuit is designed to alternate the frequency and transmit the sound through the piezo board.

### PCB Assembly

Please refer to Figures 1, 2, and 3 for aid in component placement. It is recommended to start with lower components i.e. diodes, resistors, electrolyte capacitors, and transistors. Be careful to check polarity with Figure 3 before soldering. Take extra precaution to ensure electrolytic capacitors are inserted correctly. If a problem is detected it is best too use a desoldering pump or desoldering braids to remove component. This will minimize potential damage to the printed circuit board.

### Testing

Connect the piezo board at "PZ" point on PCB. Apply power source and turn potentiometer "VR1," a sharp sound should be omitted from the piezo board.

### Troubleshooting

The main cause of problems will come from misplaced components or faulty soldering. Utilize figure 2 and 3 to ensure proper placement, polarity and then check solder points for connectivity.

### Accessories

Use GSB-03 (sold separately) to house the PCB and batteries.

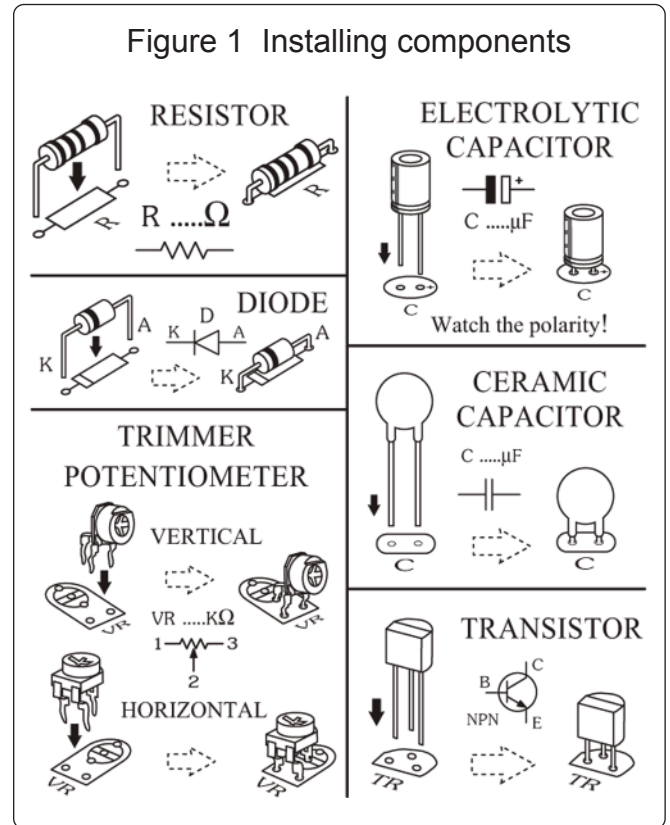


Figure 2 Mosquito Repellent Circuit

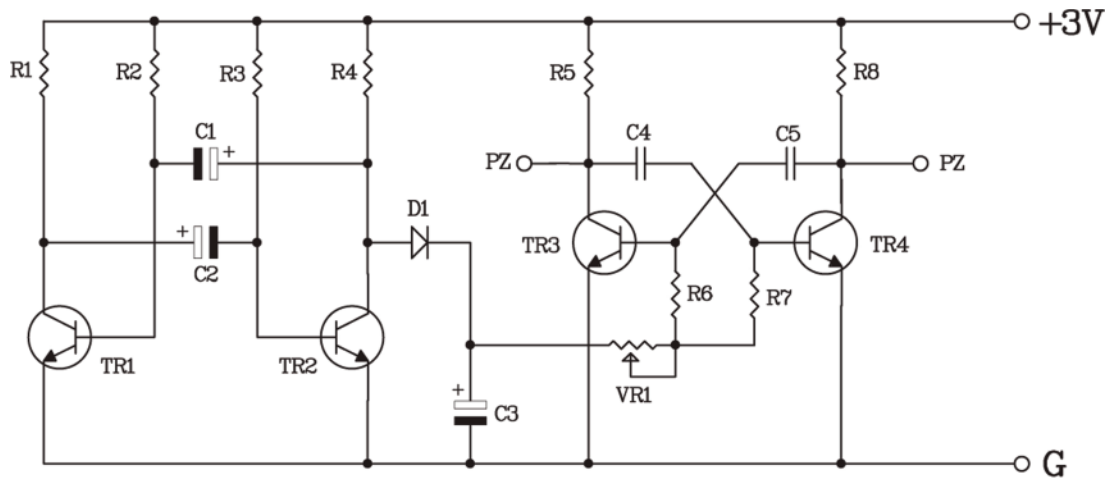
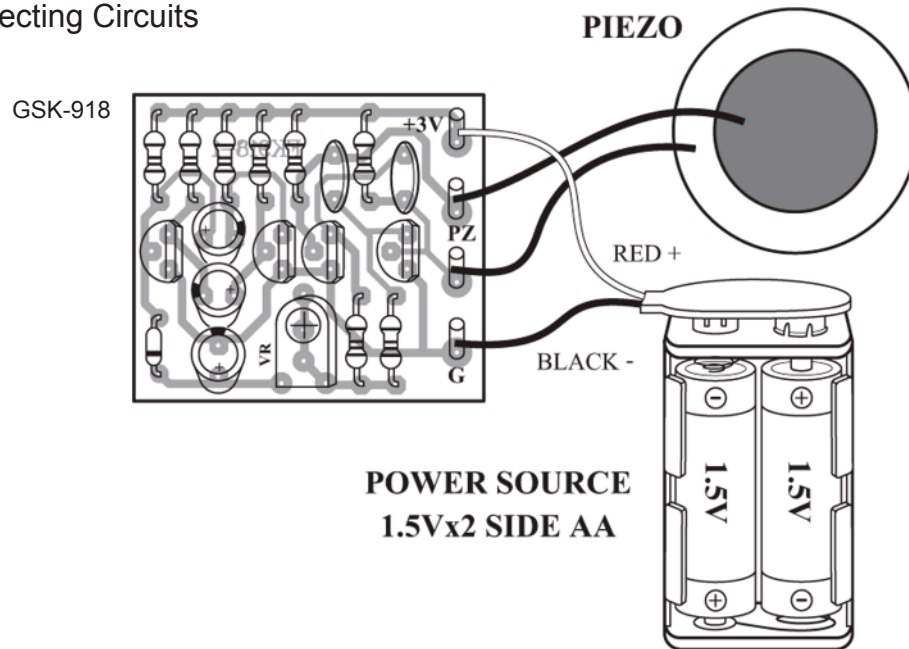


Figure 3 Connecting Circuits



Resistors

R1, R4	100 $\Omega$	brown – black – brown – gold
R2, R3	12 k $\Omega$	brown – red – orange – gold
R5, R8	330 $\Omega$	orange – orange – brown – gold
R6, R7	3.9 k $\Omega$	orange – white – red – gold

Potentiometer

VR1	-	14 or 103 or 10 k $\Omega$
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Electrolytic Capacitors

C1, C2	-	33 $\mu$ F
C3	-	10 $\mu$ F

Ceramic Capacitors

C4, C5	-	103 or 0.01 $\mu$ F
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Transistors

TR1 – TR4	-	C458, C828, C945, C1815
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Diode

D1	-	1N4148
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