Solder the following parts to the PC board.

- ☐ Battery Snap (see Figure A)
- ☐ C5 - 0.02µF or 0.022µF Discap
- ☐ C6 - 100µF Electrolytic (Lytic) (see Figure B)
- ☐ IC1 - 555 or 1455 Timer (see Figure C)
- ☐ VR1 - 200Ω Potentiometer (see Figure D)
- ☐ R9 - 10kΩ 5% ¼W Resistor (brown-black-orange-gold) (see Figure E)
- ☐ R8 - 10kΩ 5% ¼W Resistor (brown-black-orange-gold) (see Figure E)
- ☐ Jumper Wire (see Figure F)
- ☐ R7 - 470Ω 5% ¼W Resistor (yellow-violet-brown-gold) (see Figure E)
- ☐ R6 - 22kΩ 5% ¼W Resistor (red-red-orange-gold) (see Figure E)
- ☐ C3 - 10µF Electrolytic (Lytic) (see Figure B)

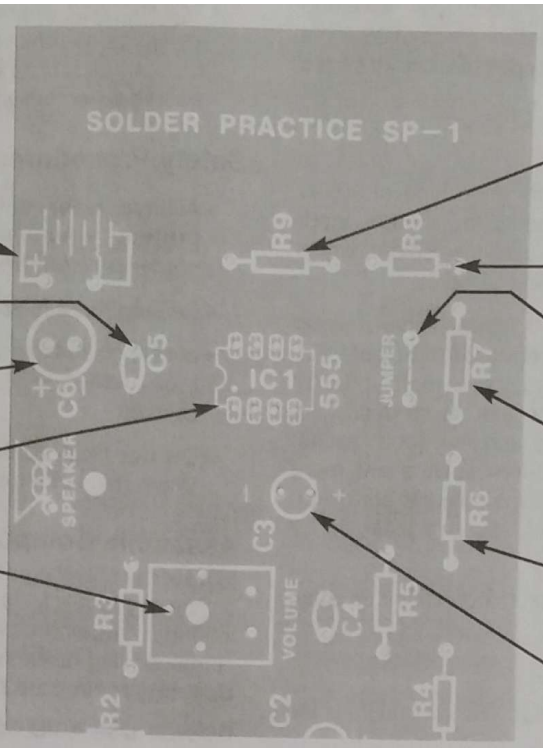


Figure A

Solder the Red Positive (+) lead of the battery snap to the hole marked (+) on the PC board. Solder the Black Negative (–) lead to the hole marked (–) on the PC board. Cut off the excess leads.

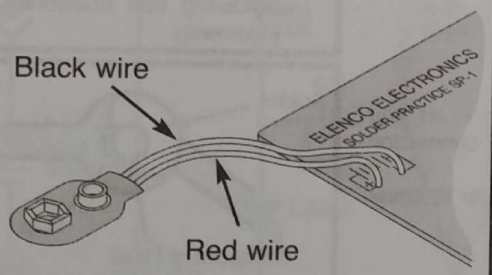


Figure B

Electrolytic capacitors have polarity. Be sure to mount them with the negative (–) lead (marked on side) in the correct hole.

Warning: If the capacitor is connected with incorrect polarity, it may heat up and either leak or cause the capacitor to explode.

Figure C

Mount IC1 in the location shown below onto the PC board. Be sure that the notch or dot on the IC is in the same direction as the marking on the PC board (see drawing below). Solder and cut off the excess leads.

NOTE: Do not keep the soldering iron on the IC leads for extended periods of time. You run the risk of overheating the IC, thus damaging it.

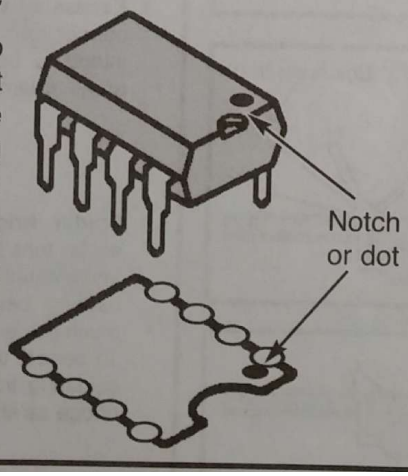


Figure D

Mount VR1 into the three holes in the PC board as shown below. Note that the other two holes are not used. Solder and cut off the excess leads.

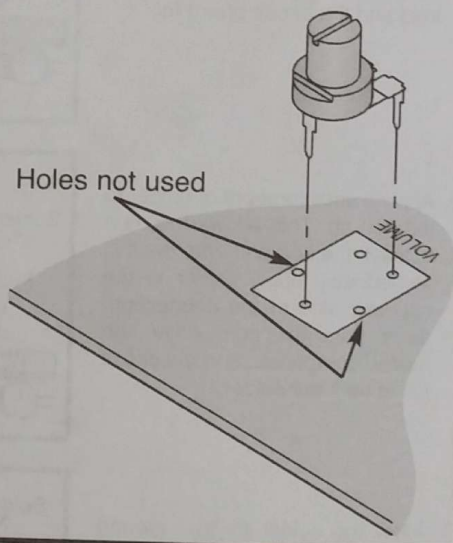
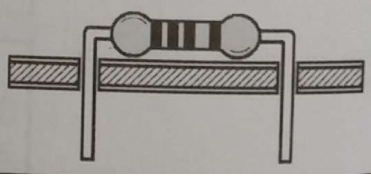


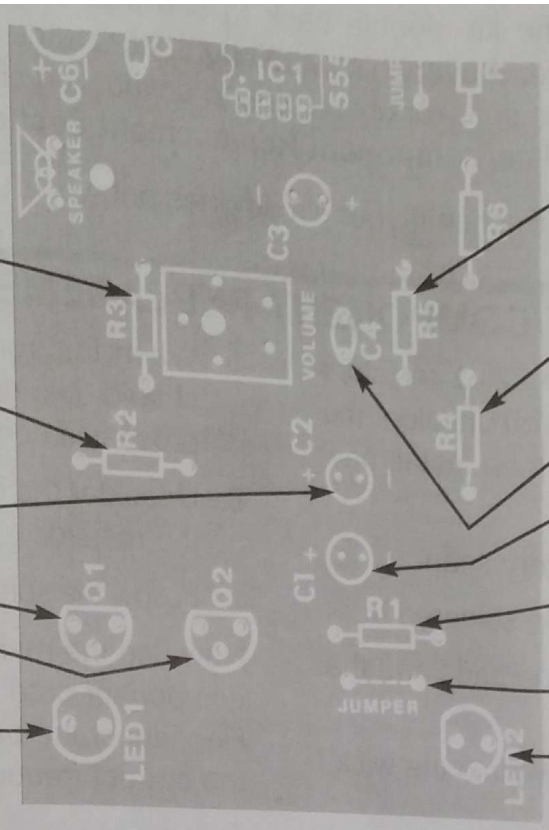
Figure E

Mount the resistor flat against the PC board as shown.



Solder the following parts to the PC board.

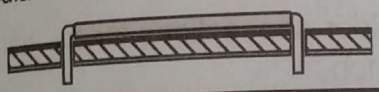
- ☐ R3 - 68Ω 5% ¼W Resistor (blue-gray-black-gold) (see Figure E)
- ☐ R2 - 1kΩ 5% ½W Resistor (brown-black-red-gold) (see Figure E)
- ☐ C2 - 10µF Electrolytic (Lytic) (see Figure B)
- ☐ Q1 - 2N3904 Transistor
  ☐ Q2 - 2N3904 Transistor (see Figure G)
- ☐ LED1 - Light Emitting Diode (see Figure H)



- ☐ R5 - 47kΩ 5% ¼W Resistor (yellow-violet-orange-gold) (see Figure E)
- ☐ R4 - 22kΩ 5% ¼W Resistor (red-red-orange-gold) (see Figure E)
- ☐ C4 - 0.02µF or 0.022µF Discap
- ☐ C1 - 10µF Electrolytic (Lytic) (see Figure B)
- ☐ R1 - 470Ω 5% ¼W Resistor (yellow-violet-brown-gold) (see Figure E)
- ☐ Jumper Wire (see Figure F)
- ☐ LED2 - Light Emitting Diode (see Figure H)

Figure F

Cut a 1" wire and strip 1/8" of insulation off of both ends.



☐ Cut two 6" wires and strip 1/8" of insulation off of both ends. Insert the speaker wire through the PC board as shown. Then, insert the wires into the speaker holes and solder. Solder the other end of the wires to the speaker.

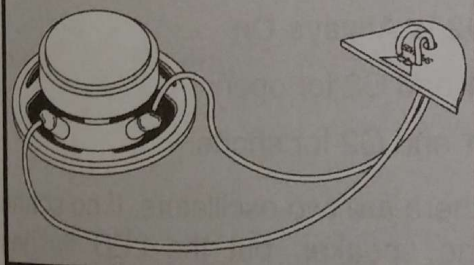


Figure G

Mount the transistor with the flat side in the same direction as marked on the PC board. Leave about 1/8" of space between the transistor and the PC board as shown below. Solder and cut off the excess leads.

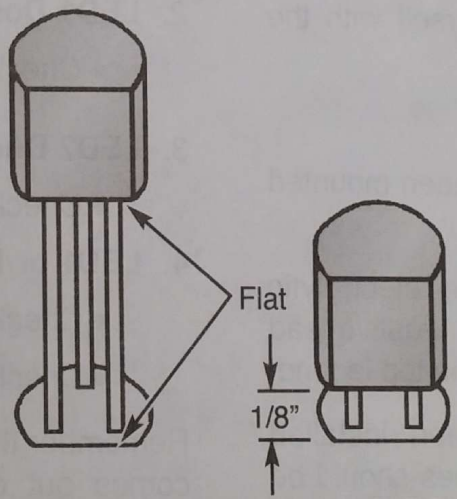


Figure H

Mount the LED onto the PC board with the flat side of the LED in the same direction as marked on the PC board. Be sure to mount the LED flush with the PC board as shown below.
Solder and cut off the excess leads.