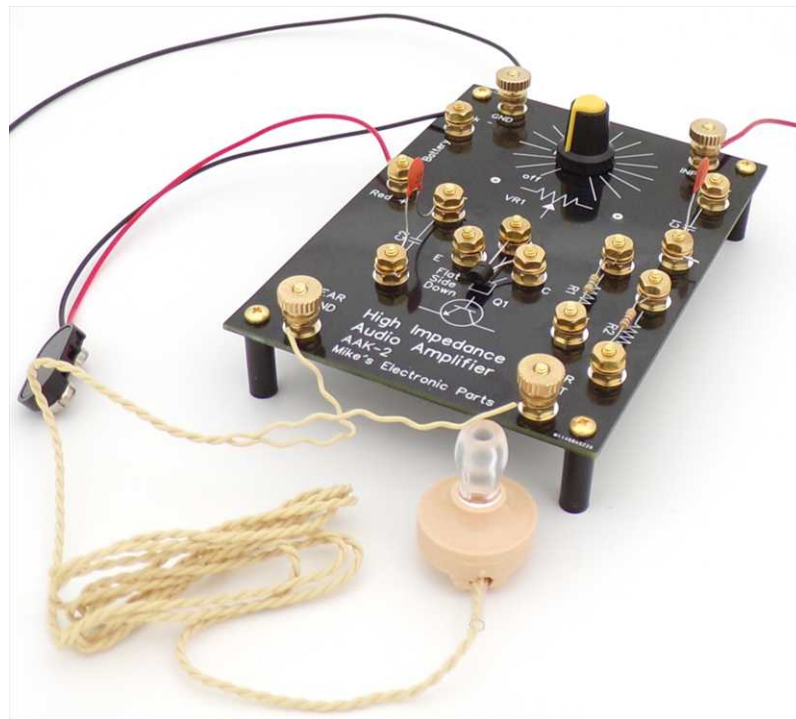
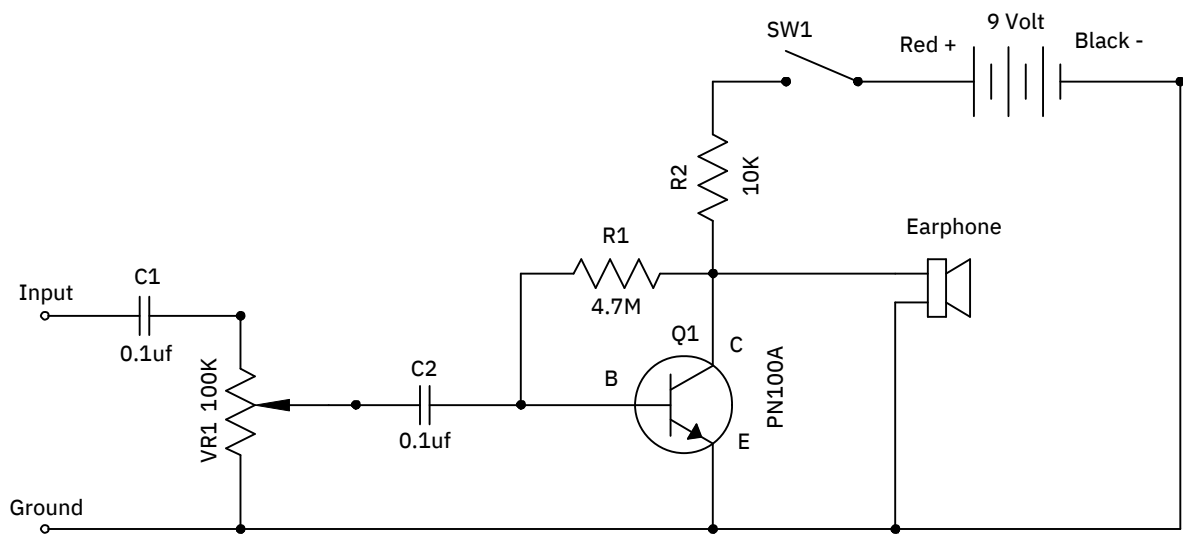


Audio Amplifier Kit 2

Mike's Electronic Parts, LLC.



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Parts List

- 1 - Circuit Board
 - 1 - 100K Variable Resistor Pre-soldered To Circuit Board
- 1 - Q1 PN100A Transistor
- 2 - C1 C2 .1uf Capacitors (marked 104)
- 1 - R1 4.7M Resistor (yellow violet green gold)
- 1 - R2 10K Resistor (brown black orange gold)
- 4 - 1/2" #4 Screws
- 17 - 3/8" #4 Screws
- 17 - #4 Washers
- 30 - #4 Nuts
- 4 - Thumb Nuts
- 1 - Ceramic Earphone
- 1 - 9 Volt Battery Clip
- 1 - Knob
- 4 - Nylon Feet
- 2 - ~6 inch wire
- 1 - Philips Screwdriver
- 1 - 1/4" Wrench

Audio Amplifier Kit 2 is a fun and simple project for both beginners and expert builders alike. Everything needed to build a fully functional audio amplifier is included in the kit. Easy to assemble with no soldering required. Audio Amplifier Kit 2 is a great project to build with your child or grandchild, boy scout groups and schools.

Audio Amplifier Kit 2 was designed to compliment our Crystal Radio Kits. The amplifier was tested and designed for use with our crystal radio and radio IC kits. The amplifier should work well with other home built crystal radios but was not designed as a general purpose amplifier for mp3 players, phones and the like. There should be a resistor and capacitor across the earphone output of a crystal radio used with this kit. The kit was designed for use with piezo-electric earphones and headphones. The kit has been tested with all the headphones and earphones available on our site. Not recommended for use with magnetic headphones or earphones.

The kit contains small parts that may be a choking hazard. Adult supervision is always advised while building the kit.

Assembly

1. Locate and familiarize yourself with all the parts in the parts list.
2. Assemble the legs.
Items used: 4 - 3/8" #4 Screws, 4 Nylon Feet.
The holes located in each corner without the metal pad are for the feet. Insert a 3/8" #4 screw through the top side of the board. Thread the feet onto the screw from the underside the board.
Repeat for all four legs.
3. Assemble the posts.
Items used: 4 - 1/2" #4 Screws, 4 #4 Nuts.
GND, INPUT, EAR GND and EAR OUT use 1/2" screws. Push a 1/2" #4 screw through the circuit board from the bottom. Use a #4 nut from the top to fasten the screw to the circuit board.
Repeat for GND, INPUT, EAR GND and EAR OUT.

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4. Assemble the posts.

Items used: 13 - 3/8" #4 Screws, 13 #4 Nuts.

All the remaining holes use 3/8" screws. Push a 3/8" #4 screw through the circuit board from the bottom. Use a #4 nut from the top to fasten the screw to the circuit board.

Repeat for the remaining holes in the circuit board. The board should now look like the photo below.



5. Assemble the transistor.

Items used: 1 - PN100A Transistor, 3 - #4 Washers, 3 - #4 Nuts.

Locate the Q1 transistor location on the circuit board. Gently bend the outer transistor pins to the side. When the transistor is in position, the side pins should touch the posts of the circuit board. It is very important to mount the transistor flat side down. Place a #4 washer and #4 nut on top of the transistor pins. Tighten the nut to secure the transistor.



6. Assemble the Capacitors and Resistors

Items used: 2 - .1uf Capacitors, 1 - 4.7M Resistor, 1 - 10K Resistor, 8 - #4 Washers, 8 - #4 Nuts.

Use the schematic and photographs to match parts to their location on the circuit board. For each part, place the part across the nuts. Bend each end of the wire around the screw. Place a #4 washer and #4 nut on top of the wire. Tighten the nut to secure part.

Be careful that the wire from each part is only contacting one post from the circuit board.



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7. Attach the 9 Volt Battery Clip.
Items used: 1 - 9 Volt Battery Clip, 2 - #4 Washers, 2 - #4 Nuts.
Locate the 9V Battery location on the circuit board. Attach the black wire to the negative (minus) post and the red wire to the positive (plus) post. Place a washer and a nut over the wire. Tighten the nut.

8. Attach the knob.
Items used: 1 - Knob.
Turn the variable resistor shaft full left. Press the knob onto the shaft of the variable resistor (VR1) aligning the marking of the knob with the off marking of the circuit board. The knob will fit tight and require a good amount of pressure to attach. Do not push the knob tight to the board. There needs to be some space between the knob and the board to allow the knob to turn. If the knob feels too stiff, try to raised the knob slightly.

9. Attach the earphone.
Items used: 1 - Ceramic Earphone, 2 - #4 Washers, 2 - #4 Thumb Nuts.
Locate the EAR GND and EAR OUT on the board. Place the ends of the earphone wires on top of each nut. Place a washer and a thumb nut over the wire. Tighten lightly to secure.
Note: Do not clip the wire by the plastic coating. The bare metal portion of the wire must be clamped by the thumb nut.

10. Input thumb nuts.
Items used: 2 - #4 Washers, 2 - #4 Thumb Nuts.
Locate the GND and INPUT on the board. Place a washer and a thumb nut on the screws. These do not need to be tightened until hooked to your radio.

Operation

Turn the variable resistor to the off position.
Attach the audio amplifier to your radio. Attach the GND to the ground output of your radio. Attach the INPUT to the output side of your radio.
Insert a 9 volt battery into the battery clip.
Use the variable resistor to adjust the volume.
The variable resistor turns off the radio when turned full left.