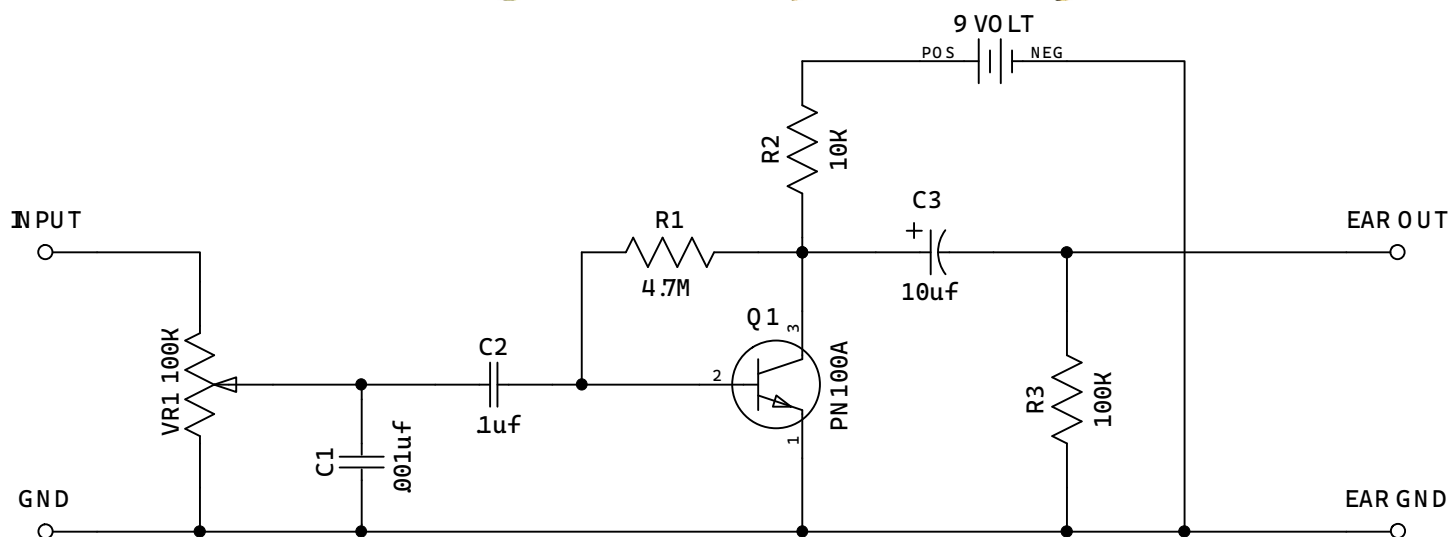
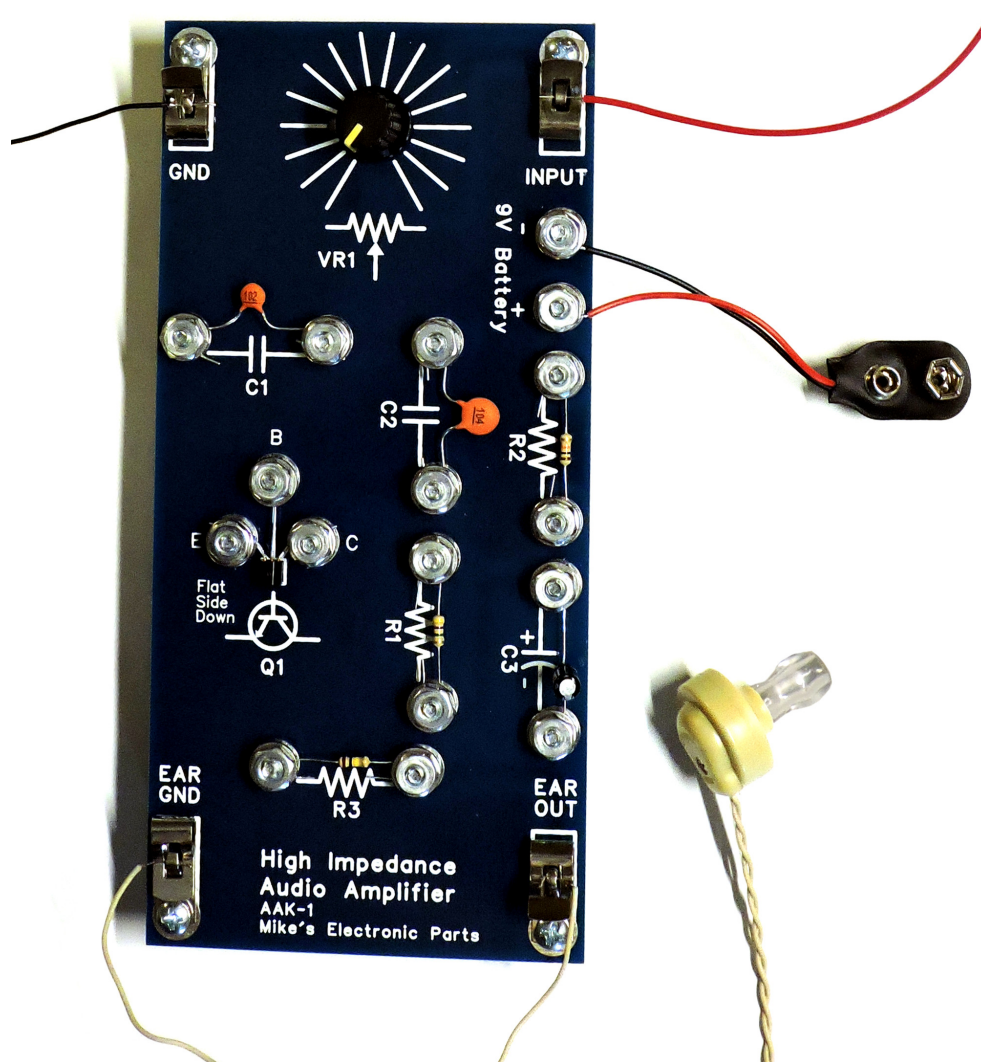
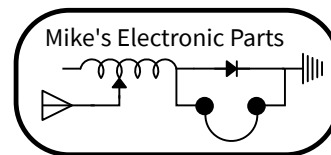


# Audio Amplifier Kit 1

Mike's Electronic Parts, LLC



# Audio Amplifier Kit 1

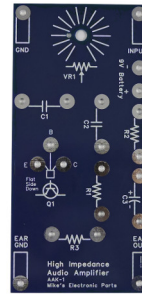
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## Parts List

- 1 - Circuit Board
- 1 - 100K Variable Resistor Pre-soldered To Circuit Board
- 1 - PN100A Transistor
- 1 - .001uf Capacitor (marked 102)
- 1 - .1uf Capacitor (marked 104)
- 1 - 10uf Capacitor
- 1 - 4.7M Resistor (yellow violet green gold)
- 1 - 10K Resistor (brown black orange gold)
- 1 - 100K Resistor (brown black yellow gold)
- 1 - Ceramic Earphone
- 1 - 9 Volt Battery Clip
- 4 - Fahnestock Clips
- 1 - Knob
- 17 - 3/8" #6 Screws
- 4 - 3/4" #6 Screws
- 38 - #6 Nuts
- 17 - #6 Washers
- 4 - Rubber Feet
- 2 - ~1 foot wire

## Tools Required

- Philips Screwdriver
- 5/16" Wrench



Circuit Board



100K Variable Resistor



9 Volt Battery Clip



PN100A



.001uf Capacitor



.1uf Capacitor



10uf Capacitor



Ceramic Earphone



4.7M Resistor



10K Resistor



100K Resistor



Wire



Knob



Fahnestock Clip



Rubber Foot



3/8" #6 Screw



3/4" #6 Screw



#6 Washer



#6 Nut

# Audio Amplifier Kit 1

## Mike's Electronic Parts, LLC

Audio Amplifier Kit 1 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 1 is a great project to build with your child or grandchild, boy scout groups and schools.

Audio Amplifier Kit 1 was designed to compliment our Crystal Radio Kit 4. 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 radios but was not designed as a general purpose amplifier for mp3 players, phones and the like. The kit was designed for use with a high impedance headphone or earphone with 2,000 ohm or higher impedance. The kit has been tested with all the headphones and earphones available on our site. Using headphones or earphones with less than 2,000 ohms impedance may work acceptably, however that was not the kits design so performance may suffer.

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 - 3/4" #6 Screws, 4 #6 Nuts, 4 - Fahnestock Clips, 4 - Rubber Feet.

Insert a 3/4" #6 screw through a Fahnestock Clip. Insert the screw with fahnestock clip through the circuit board. Attach a #6 nut from the bottom side of the circuit board.

Snug the nut, do not over tighten. Push a rubber foot over the bottom of the screw.

Lightly turn the rubber foot clockwise to ensure it is fully pushed into the screw.

Repeat for all four legs.

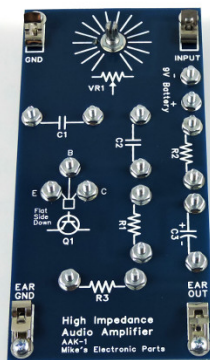


3. Assemble the posts.

Items used: 17 - 3/8" #6 Screws, 17 #6 Nuts.

Push a 3/8" #6 screw through the circuit board from the bottom. Use a #6 nut from the top to fasten the screw to the circuit board.

Repeat for the remaining holes in the circuit board.



# Audio Amplifier Kit 1

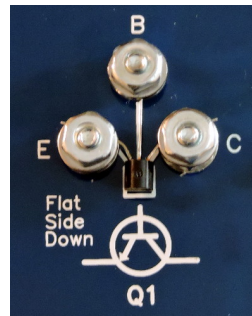
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## Assembly Continued

### 4. Assemble the transistor.

Items used: 1 - PN100A Transistor, 3 - #6 Washers, 3 - #6 Nuts.

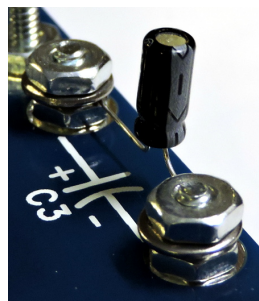
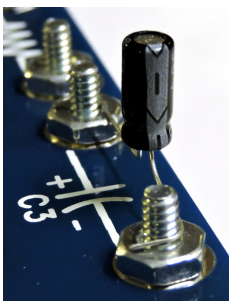
Locate the Q1 transistor location on the circuit board. Gently bend the outer transistor pins to the side. When the transistor is in position, the side pins should touch the posts of the circuit board (see photo below). It is very important to mount the transistor flat side down. Place a #6 washer and #6 nut on top of the transistor pins. Tighten the nut to secure the transistor.



### 5. Assemble the C3 10uf Capacitor

Items used: 1 - 10uf Capacitor, 2 - #6 Washers, 2 - #6 Nuts.

Locate the C3 10uf capacitor location on the circuit board. The 10uf capacitor has a positive and a negative side. The negative side is marked with a minus sign running down the side of the capacitor. Align the minus side of the 10uf capacitor with the minus sign on the circuit board. Place the capacitor across the nuts. Bend each end of the wire around the screw. Place a #6 washer and #6 nut on top of the wire. Tighten the nut to secure the capacitor.



### 6. Assemble the Capacitors and Resistors

Items used: 1 - .001uf Capacitor, 1 - .1uf Capacitor, 1 - 4.7M Resistor, 1 - 10K Resistor, 1 - 100K Resistor, 10 - #6 Washers, 10 - #6 Nuts.

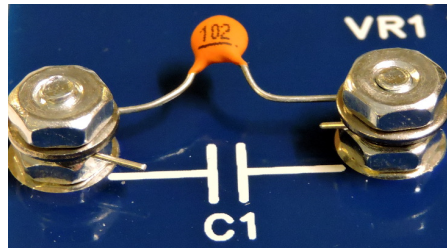
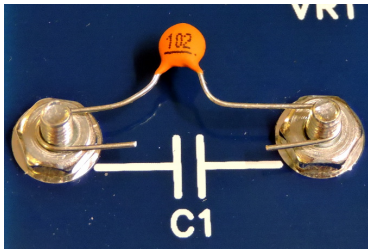
Use the schematic and photographs to match parts to their location on the circuit board. For each part, place the part across the nuts. Bend each end of the wire around the screw. Place a #6 washer and #6 nut on top of the wire. Tighten the nut to secure part.

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

# Audio Amplifier Kit 1

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## Assembly Continued



9. Attach the 9 Volt Battery Clip.

Items used: 1 - 9 Volt Battery Clip, 2 - #6 Washers, 2 - #6 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.

10. 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 left markings of the circuit board. The knob will fit tight and require a good amount of pressure to attach.

11. Attach the earphone.

Items used: 1 - Ceramic Earphone.

Locate the Fahnestock clips marked EAR. Push down on the fahnestock clip. Slide the end of the earphone wire through the opening. Release the fahnestock clip. Note: Do not clip the wire by the plastic coating. The bare metal portion of the wire must be clamped by the fahnestock clip.

## Operation

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.

Remove the battery from the clip to turn off.



# Audio Amplifier Kit 1

Mike's Electronic Parts, LLC

## Connected To Crystal Radio Kit 4

