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Caution

Read these instructions completely before beginning the installation. The anr modules are finely tuned & require that installation be performed strictly in accordance with this manual. Deviations from the instructions contained herein will result in a system malfunction. Purchaser assumes all risks arising from an improper installation.

This product is intended for “self” installation into your headset and requires reasonable skill in the use of a soldering tool but a minimal understanding of electronics. If you question your ability to perform the installation, you are advised to take this unit & your headset to the nearest electronic technician, or ship them to HEADSETS, INC. for a factory installation. Any competent radio/tv technician or avionics technician should be able to install the modules in approximately 1 hour.

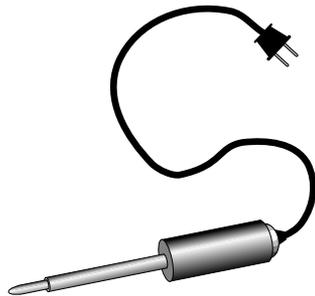
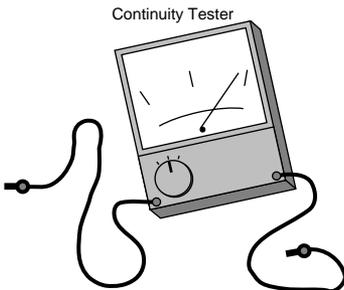
Parts List

Check to see you have received all materials

- 1 pair modules** (2 modules) - marked R & L. Each module contains an anr speaker, audio speaker, microphone and circuit board.
- 1 battery case** - Sliding door permits easy access to the 9v battery.
- 1 power cable** - 60 inch, 2 conductor (red = 9v+ black or white = ground-).
- 1 crossover cable** - a 4 conductor cable, 33" length.
- 1 zip-loc bag of installation materials:** solder, 28ga wire, shrink-wrap, tie-wraps, 2 fabric pads (black/white oval), one small zip-loc bag containing a spot of silicone grease.
- 1 pair of Peltor earmuffs**

Tools Needed

1. Fine tip soldering tool (20 watt or less)
2. Small wire cutters
3. Small screwdriver set
4. Damp sponge- to clean solder tip
5. Butane lighter-to heat shrink wrap
6. Continuity Tester (optional)-very helpful to confirm & identify wire leads



Installation Overview

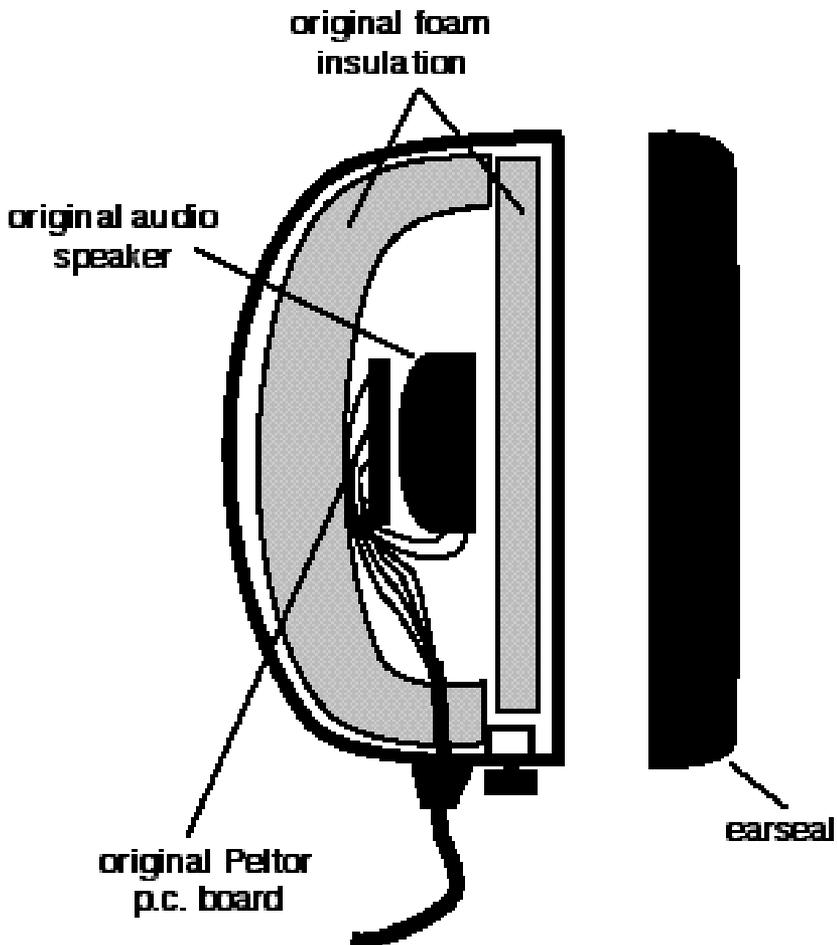
Peltor headsets have rigid earseals which snap into the earcup. The anr modules for Peltor headsets have a yellow confor foam gasket attached. This gasket provides an air tight seal between the module and the earcup.

I. Remove earseals and existing speakers

See Figure 1. First, remove both earseals from the earcups. Reach in and pull the earseals out with your fingers. Remove the top piece of foam insulation and set aside for reuse. Next you will find a small audio speaker encased in plastic. Remove the two screws holding each speaker in place and remove the speakers. Clip the two wires attached to each speaker. There is no need to pry open the speaker cases and disconnect from the speaker itself. The speaker cases were mounted on a black plastic platform which also must be removed from each side by removing the small screws holding each in place. On the left side a small printed circuit board is attached to the back of the black plastic platform. Detach the p.c. board from the platform and leave the p.c. board in place. The deepest piece of foam insulation should be left in place. The top piece of foam insulation will be installed after the wiring is complete.

Fig. 1

Original audio speaker and insulation



II. Study existing p.c. board in L earcup

See Figure 2. Observe the small printed circuit board in the Peltor left earcup. This p.c. board has no components and acts only as a junction board. It will remain in place, and the existing leads on this board will be used to wire in the system. By attaching only to existing leads you are able to avoid soldering directly to the board. A cleaner installation will be made with this method.

Study Fig. 2 to determine the following:

1. Where to attach the 9v (-) lead from the power cable to form a common ground with audio(-). **Explained in step IV.**
2. How to connect the 9v(+) R & L leads. **Explained in step IV.**
3. Which leads are the audio(+) R & L leads, and where to attach them. **Explained in step VI.**

Before you begin to solder any wires you should install the new power cable and crossover cable as described steps III and IV.

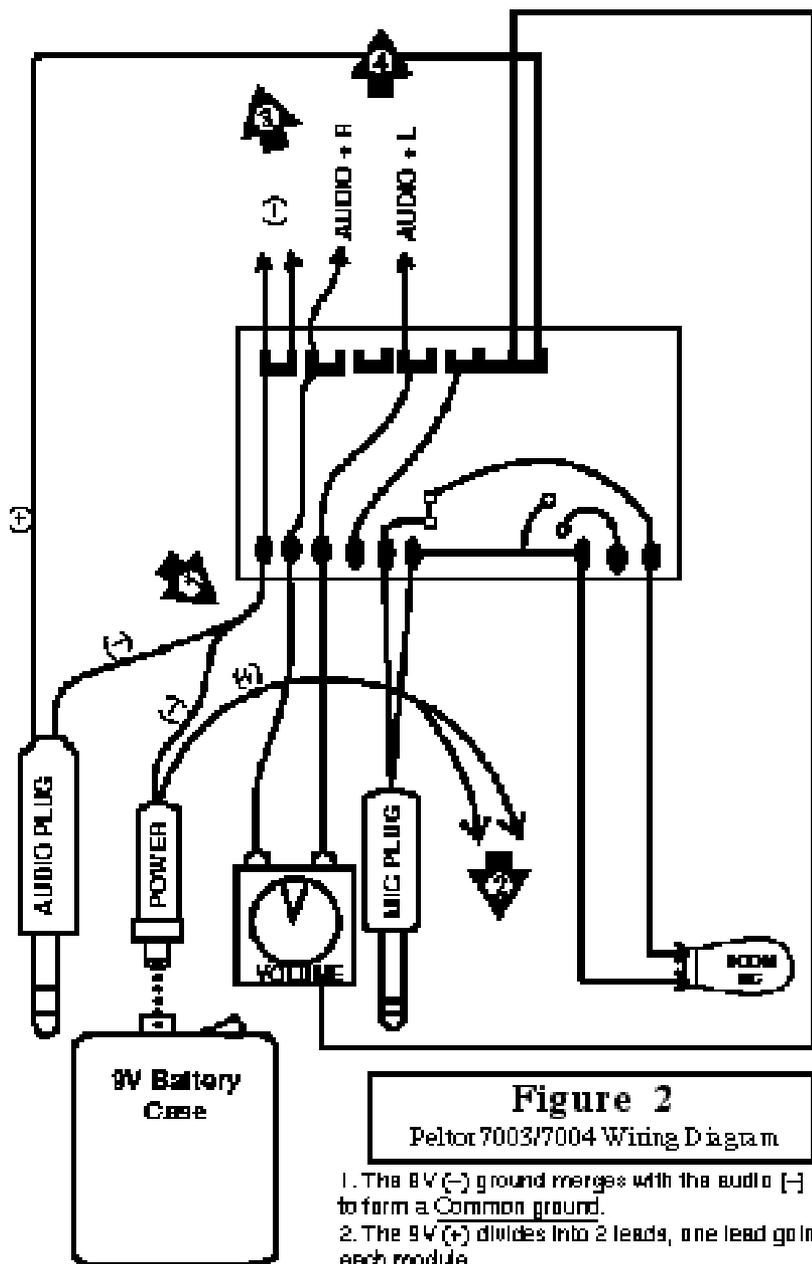


Figure 2
Peltor 7003/7004 Wiring Diagram

1. The 9V (-) ground merges with the audio (-) ground to form a Common ground.
2. The 9V (+) divides into 2 leads, one lead going to each module.
 - a. These are the 2 common grounds (-), one lead going to each module.
4. These are the 2 audio leads, one lead going to each module.

III. Install 4c crossover cable (most difficult part of installation)

To remove the old crossover cable, remove the metal crimps (at the grommets). Upon reassembly, there should be little need for a crimp here, but use one of the tie-wraps provided with your kit if necessary. Do not re-use the metal crimp.

Before removing the old cable from the headband, use it to pull the new cable through the headband. The only way to do this is to solder the new cable to the old cable and tape over the rough splice with one layer of electrician's tape. Then, you may need to lubricate the new cable with a very thin coating of silicone grease (provided) before carefully pulling the new cable through. Have an assistant help by pushing the cable on the opposite end.

After pulling the new crossover cable through the headband, you must pull the cable ends through their respective grommet and into the earcups. Getting the cable ends through the grommets and into the earcup will be difficult or impossible unless you lubricate the cable before it enters the grommet. Apply a very thin film of silicone grease (to each end of the cable).

IV. Install power cable

The power cable may be pulled through the same grommet where the main audio cable enters the earcup. First, remove the metal band found on the inside portion of this grommet, just as you did with the crossover cable. Next, leaving all wiring intact, carefully pull out the main cable until the cable casing exits the grommet. The individual cable wires remain attached and will still extend up through the grommet and up into the earcup. Next, lubricate the top 1 or 2 inches of both cables with the silicone grease provided. Place the 2 cables side by side and push/pull the 2 cables together into the earcup. Inside the earcup, place a tie wrap around both cables. Pull down on the cables until the tie-wrap stops on the grommet. The 9v+ lead is the red wire, the 9v- lead is the black wire.

Wire the power cable leads as follows: The 9v- lead merges with the audio(-) lead to form a common negative ground (see Figure 2- arrow #1). Use the black 28 ga. wire to make this splice. A cleaner installation is made if you avoid attaching the new wire leads directly to the Peltor p.c. board. Instead, attach to the wire leads already in place. Next, divide the 9v+ lead into 2 red leads by splicing 2 red wires to 9v+. The 9v+ lead is red (See Figure 2- arrow #2). One of the red 9v+ leads will attach to the nearside module's circuit board (see Figure 3), the other one will attach to the crossover cable (use the red wire) and goes to the far side module's circuit board.

V. About soldering

If you are not experienced with a fine tip soldering tool, a few minutes of practice will greatly improve your proficiency. Spend enough time and care to insure that solder joints and splices are cleanly done.

When soldering 2 wires together, twist the bare wire strands and trim to leave only 1/8" bare wire exposed. Heat the bare wire ends with iron and "tin" wire ends by

melting solder into the wire until it is “wet” with solder. The rosin core of the solder acts to facilitate the wetting of the wire braid, so melt the solder directly into the wire to be tinned, and also to the tip of the (clean) tool. Clean the solder tool tip of excess solder& rosin by rubbing it on a damp sponge or towel.

Wire ends being soldered should each have only 1/8" to 1/4" exposed.

Cover the exposed splice with shrink wrap. Heat the shrink wrap for 1-2 seconds with a flame (butane lighter works best). Keep the flame away from the wires to avoid burning.

Use only electronic type solder (has no acid). A fine point soldering iron is available at most hardware stores for under \$10. Practice soldering. Re-work any splices if not pleased with initial work, or if you see that the wiring job can be improved.

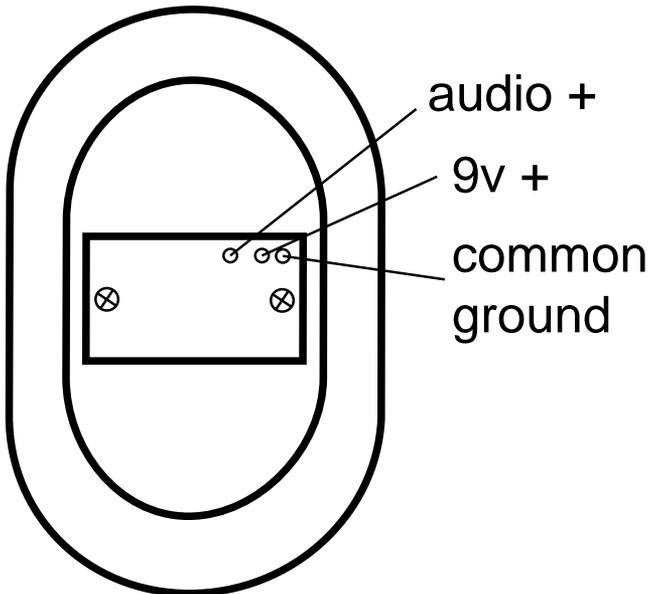
VI. Solder audio(+) circuit

See arrow #4 on Figure 2 where audio+ R and L are located. Audio L attaches directly to the circuit board on the near module. Audio R attaches to the crossover cable, which takes audio+ over to the opposite side. Use the green wire for this.

Before soldering any wires to the anr modules' circuit boards, check to make sure the module marked L is on the left side and the one marked R is on the right side.

Fig. 3

Wiring to modules



VII. Closing the headset

The final step is to reinstall the original insulation, anr module and earseal. In the left earcup the original p.c. board is to be sandwiched between the two original foam pieces. Do not use more than two pieces of the original foam insulation in each earcup. The anr module should then be placed in the earcup face up and centered. Place the Peltor earseal directly over the anr module and compress until the earseal aligns with the earcup. If there are no exposed wires, insulation, etc., the earseal may be snapped into place. The anr module is now suspended between the original foam insulation (behind the module) and the yellow confor foam gasket (between module and earseal). The position of the module maybe adjusted slightly so that the ear cavity and Peltor earseal are aligned side to side and top to bottom.

If you need to remove a module, you may reach in under the edge of the earseal and pop the earseal out. Also notice there is a very small notch on the edge of each earcup where it mates with the earseal. You may use very small screw driver to pry the earseal from the earcup.

Fig. 4

Assembly into Peltor earcup

