

How to fix a Sennheiser \$150 ME2 or ME4 microphone for about 50¢

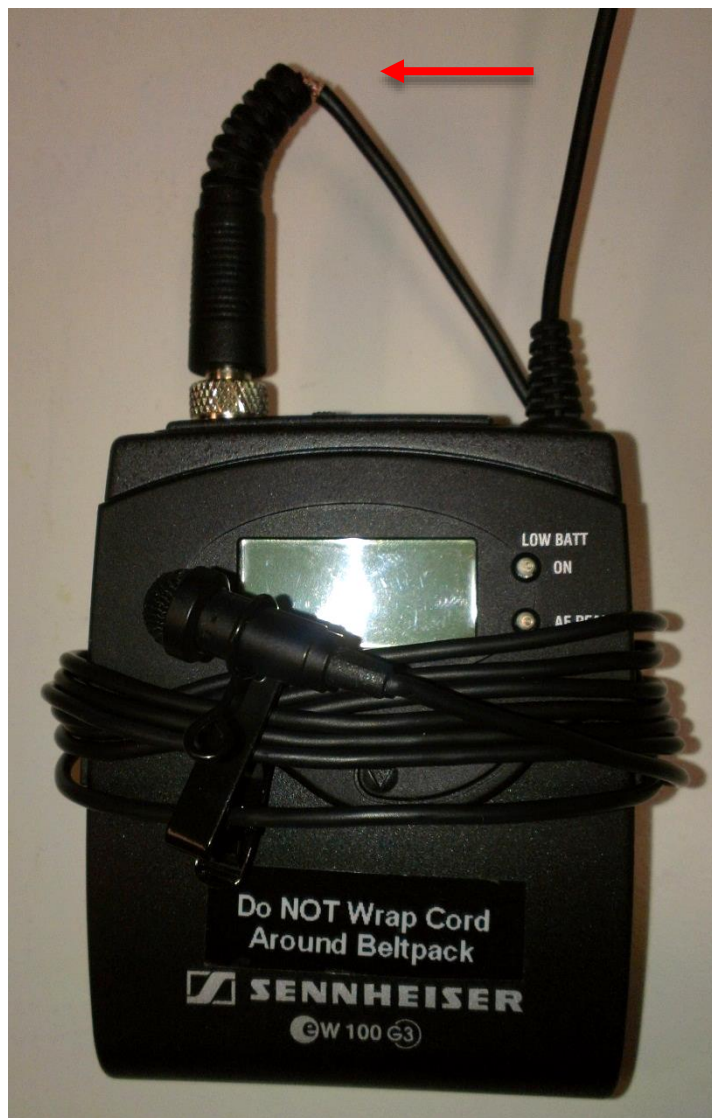
By: Dave Wemmie, Jr. – Rosemont AV Services and Studio

I work at a conference center with multiple classrooms and I am a media volunteer at my church. Both places use Sennheiser wireless lavalier microphones. Invariably someone will try to be helpful by wrapping the mic cable tightly around the body of the transmitter, which over time breaks the cable – usually at the strain relief. The first time this happened I just ordered a new one at \$150. Shortly after, 2 more were broken and this time I decided to try to fix them – after all, what did I have to lose? Now years later, and many re-solder jobs later, I thought I'd do this tutorial.

To accomplish this you will need the following:

- A. General soldering skills
- B. Knife
- C. Solder iron – preferably with adjustable heat.
- D. Solder
- E. Solder wick or suction tool
- F. Wire strippers / nippers
- G. Solder extraction tool or solder braid
- H. Vise
- I. Shrink tube in multiple sizes – this is available for about \$10 at Radio Shack and other stores
 - 1. 1.0 at 1/8 inch - Optional
 - 2. 1.0 at 1/4 inch
 - 3. 2.0 at 1/2 inch
 - 4. 3.0 at 2 inches
 - 5. 4.5 at 1.5 inches
 - 6. 6.0 at 1 inch
 - 7. 9.0 at 1/2 inch - Optional
- J. Scissors to cut the heat shrink
- K. A heat source (heat gun or hair drier)
- L. Safety goggles
- M. 30-45 minutes

1. To begin with, you will need to identify where the break in the wire is located.
 - A. Usually it will be right above the strain relief but not always.
 - B. With the sound system and mic turned on and the fader up, grasp the wire between the thumb and pointer finger of each hand and start wiggling the cable in short 1 inch sections.
 - C. Take your nippers and cut the wire about 1 inch above the break



2. Place the connector on a flat surface and cut through the black strain relief. – DON'T try to do it in your hand because you will cut your self – The Voice of Experience.



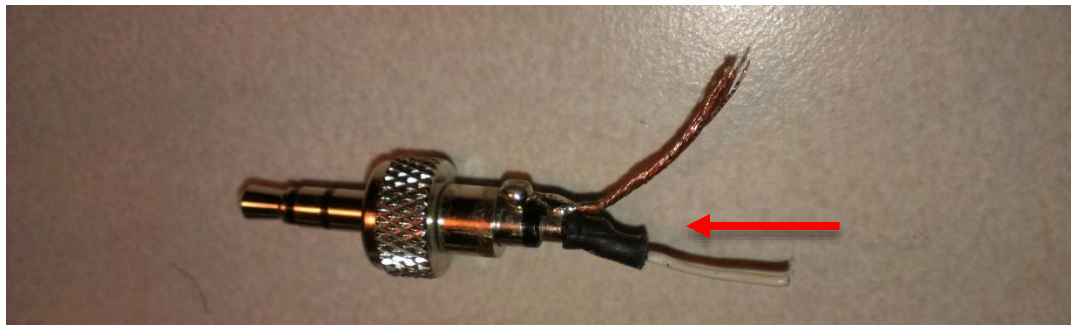
3. Pull the connector and wire out of the strain relief



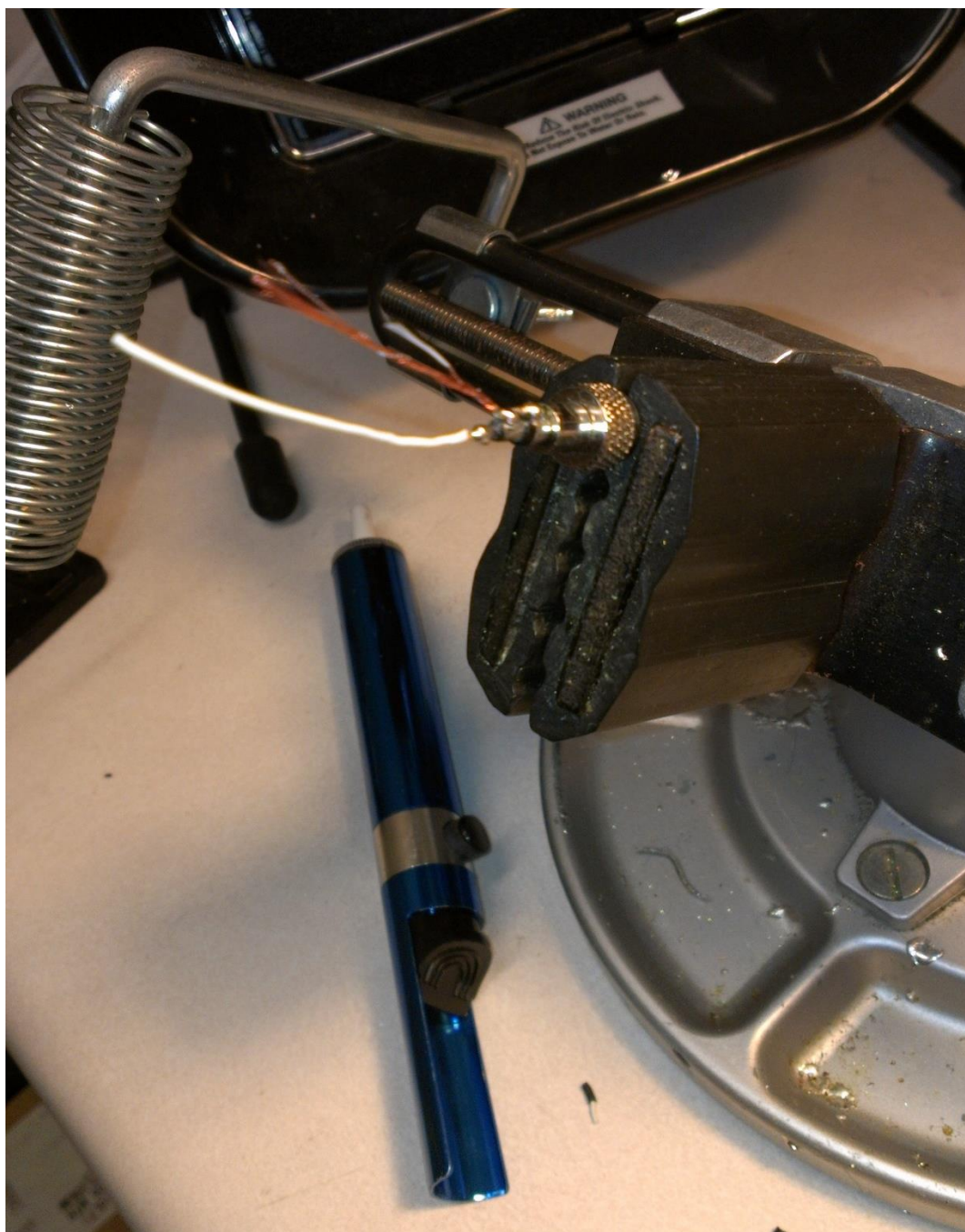
4. Cut through the white cable mold on both sides



5. Notice the small piece of shrink tube the isolates the 2 wires



6. Unsolder the connection and clean up the connector by removing the excess solder (700F)



7. Cut the shrink tube to the sizes listed on page 1.



8. Put the following shrink tube pieces on the mic cable:

- A. 2.0 at .5 inch
- B. 3.0 at 2 inches
- C. 4.5 at 1.5 inches
- D. 6.0 at 1 inch

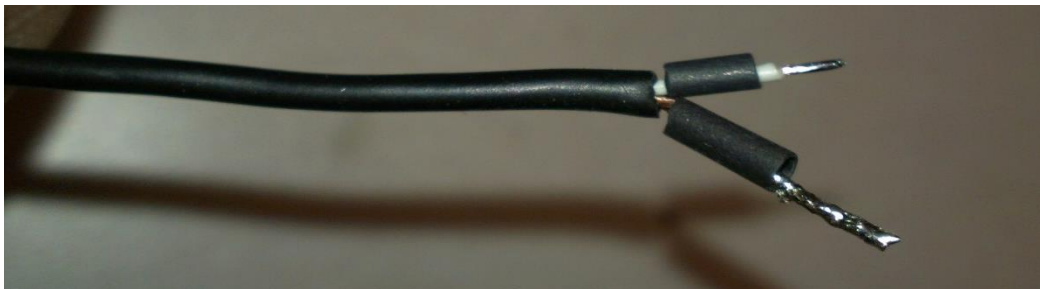


9. Strip about 3/4 inch of the outer jacket off the cable using 16 Gauge teeth

10. Twist the ground wire together tightly

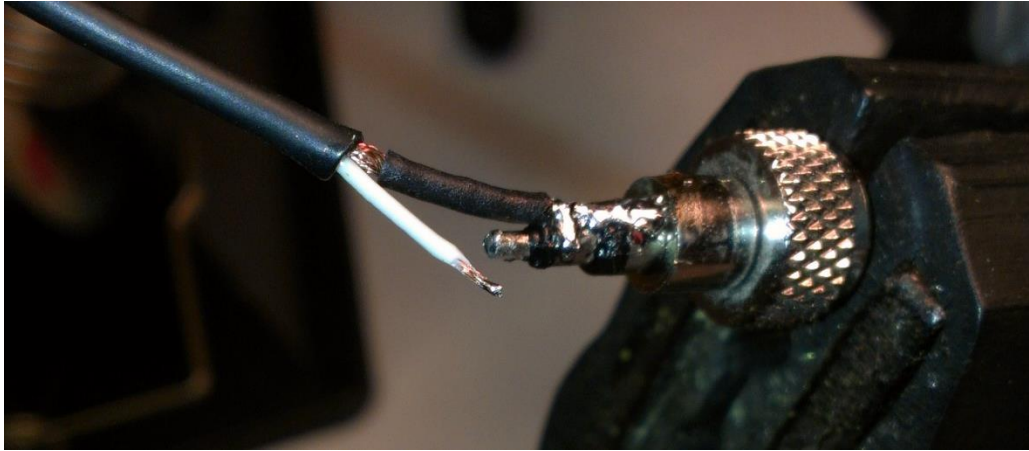
11. Lay the wire against the connector. The ground wire will be soldered to the Ring and Sleeve and the white wire will be soldered to the center tip. Cut the excess of the white wire and strip about 1/16th of an inch off the white wire using a 26 Gauge teeth.

12. Place the heat shrink on the ground wire and then tin the wire tips. (To tin the tips is to heat the wire and let the solder soak into the wires. This helps to keep the wires tight and helps to adhere them to the connector)



13. Dry fit the wire to the connector to double check your lengths and cut off any excess.

14. Put the connector in the vise and solder the ground wire to the Ring and Sleeve (600F)



15. Attach the 1/8 inch piece of shrink tube to the white wire – OPTIONAL (you will want to slide it over the white wire and connector tip once it is soldered)

16. Flip the connector over and Solder the white wire to the tip

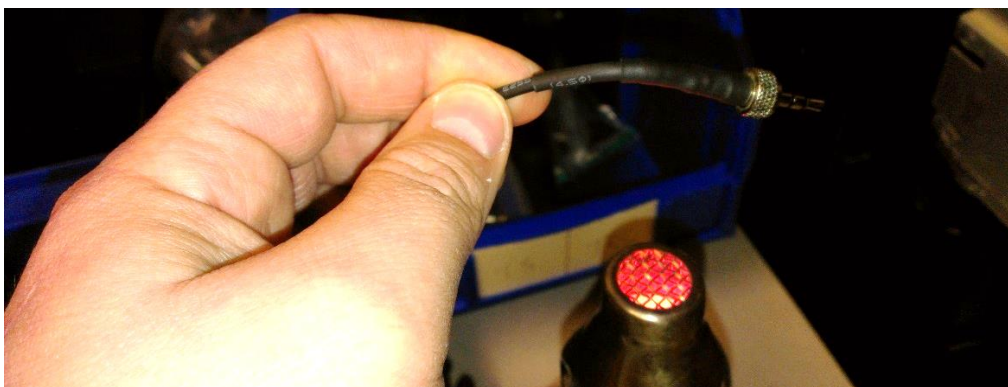


17. Test your connections to make sure it works –don't tug or wiggle the wire too hard near the solder points

18. Slide the 1/2 inch shrink tube over the wires and heat it until it shrinks



19. Continue with the 2 inch and heat shrink it



20. Continue with the 1.5 inch and heat shrink it
21. Continue with the 1 inch and heat shrink it
22. The final optional piece of heat shrink can be slip over the twist lock. I like to use it to stiffen the area around the solder points. Do not to put it too tightly against the twist lock otherwise it will make it difficult to tighten onto the transmitter.



23. Retest the wire.
24. Congratulations. You just saved \$150.

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