

Instructions for Attaching an Amphenol (83-822) PL-259 connector - Teflon Insulator, Silver Plated Center Pin to Belden (8214) RG-8 Coax (Figure 1)
Shanon Lee Herron KA8SPW revised 2-1-1999

Step 1 - Figure 2

Make two cuts almost through the black insulation, one at 1" from the end and one 2" from the end. Cut almost through the black insulation lengthwise between the cuts and remove the insulation. Leaving the black piece on the end keeps the braid from spreading out.

Step 2 - Figure 3

Tin the braid from the 2" point back towards the 1" point, leaving the excess solder near the 1" point. Allow to cool to room temperature.

Step 3 - Figure 4

Score the tinned braid 5/16" from the 2" point. This is where the use of a sharp thin blade is required. The object here is to cut but not indent the braid WITHOUT cutting all the way through. Bend gently at the score point to break the braid without breaking the white insulation. Remove the black insulation on the end and the braid from the break point to end. You may need to use the knife or cutters to slice the piece of the braid you are removing that has solder on it.

Step 4 - Figure 4

Cut almost through the white insulation 1/16" from the braid. Gently bend at cut to finish breaking the white insulation. Pull insulation off. Twisting the insulation in the direction of the wire twist helps.

Step 5 - Figure 4

Tin the center conductor pulling the excess solder to the end. You may cut off excess center conductor but leave at least 1".

Step 6 - Figure 5

After sliding the shell on the cable. Screw on the connector body using a pair of gas pliers or channel locks. You will feel it seat on the foam. Give it about a 1/4 turn after it seats. This insures that the foam is tight into the Teflon insulation and prevents solder from flowing into the body when soldering the center conductor.

Step 7 - Figure 5

Cut the center lead as close as possible to the end of the center pin. File the sharp edges. Now solder the CENTER lead. With a paper towel wipe the flux off while hot but after the solder solidifies. The center lead MUST be soldered FIRST! If you solder the braid first the foam will expand filling the center pin and stopping you from soldering it!

Step 8 - Figure 5

Solder the braid through the holes in the connector, move the iron around to all the holes to let the solder flow. Expect some HOT solder to drop away, so protect the table, the floor and yourself from getting burned. Again while still hot but after the solder solidifies, wipe the flux off with a paper towel. After it cools to room temperature I clean the entire connector with a towel soaked with denatured alcohol. Now check with a meter for shorts and go have a beer!

Notes: This text was originally written to go with a demo I put on at the clubs in the area. It's much better when demonstrated, I hope to do a video soon. I use an Xacto knife with a number 11 blade for cutting. BE CAREFUL with this knife! It will cut a finger off and cut through clothes faster than you think! I use a Weller Soldering Station, model EC1002, with a large flat tip, model ETC, and set the temperature to around

800 degrees. This station is electro-static rated and has a variable temperature. Put one on your Christmas list and don't forget a nice assortment of tips. Do not use Ersin Multicore solder on Amphenol "Astro-Plated" connectors. It has a foaming type flux and will not stick. I use Kester "44" Rosen core.

