

Soldering Tips

With Chet, AB4XK

A Little Theory

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Interestingly enough, the alloy melts at a lower temperature than the melting point of either metal.

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A 60/40 ratio of Tin to Lead will melt at a lower temperature of 370 degrees.

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Flux is a chemical agent used to not only help clean the metal, but shield it from oxygen by forming a protective coating.

Solder Flux

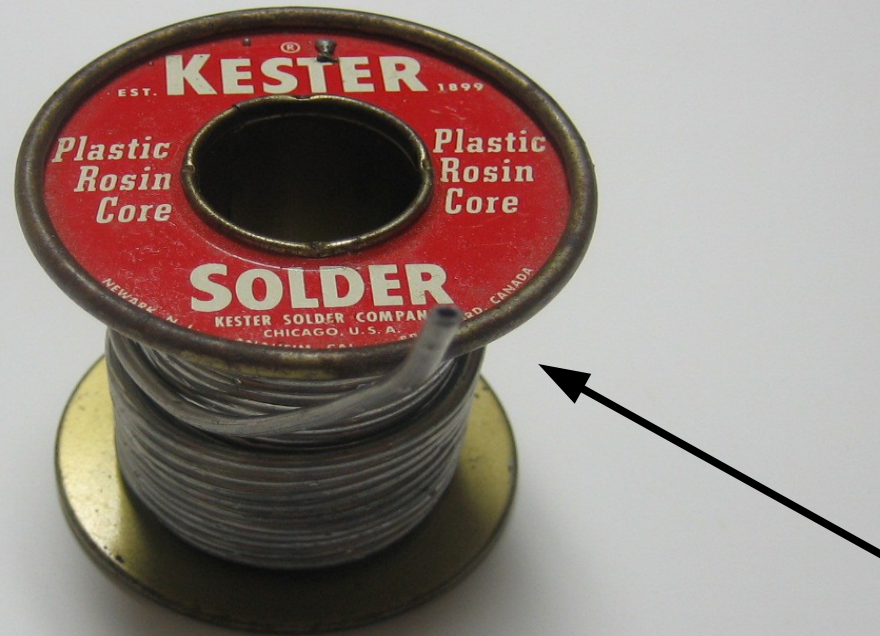
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“Rosin Core” solder has a flux inside the solder and works quite well to maintain a clean joint.

Rosin Core



Look closely and you can see the hollow core of the solder, which is filled with flux.

A Can Of Flux



Irons, gun, and torch



More Tools For Soldering

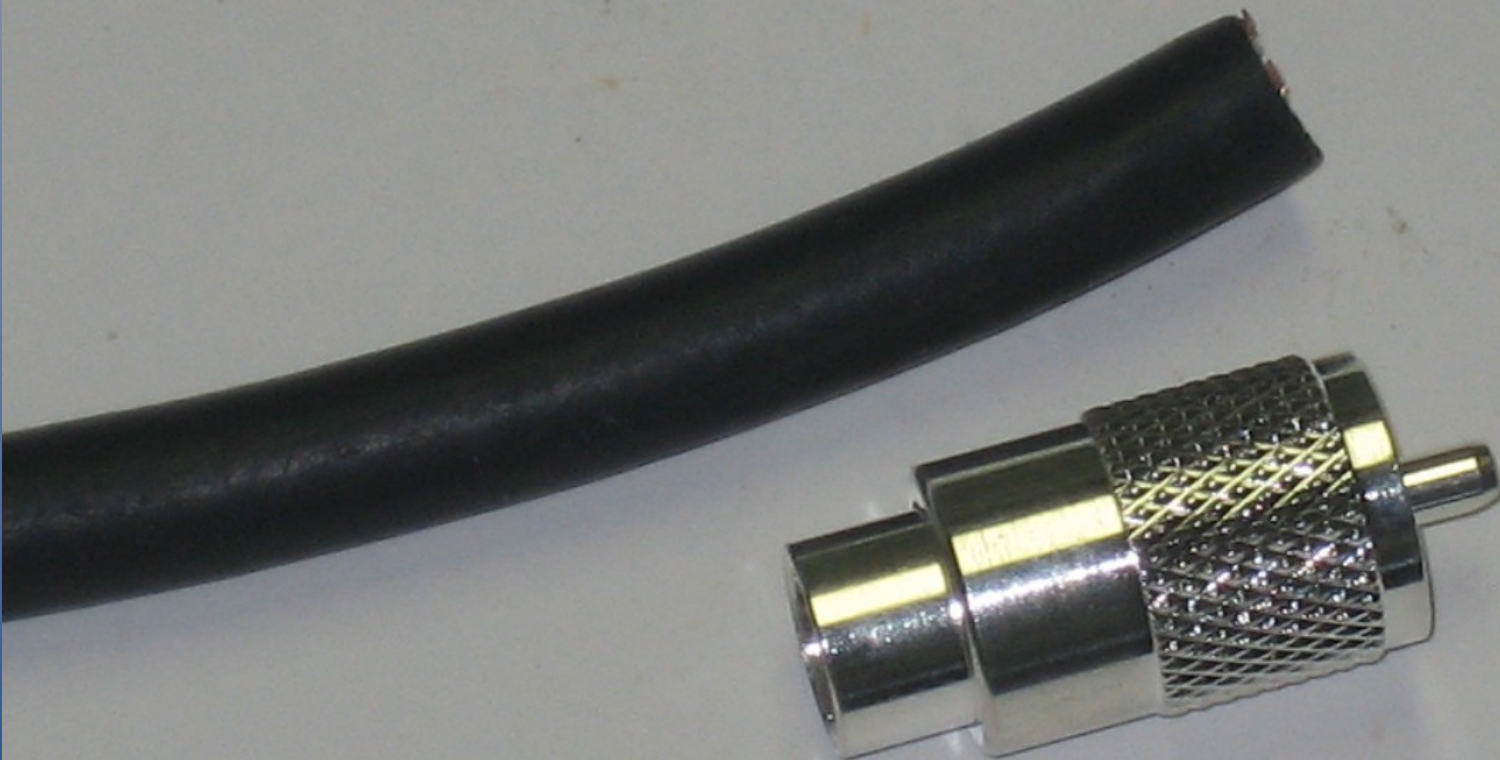


More Soldering Essentials

A damp sponge or a damp cloth is essential to keep the soldering iron or gun tip clean.



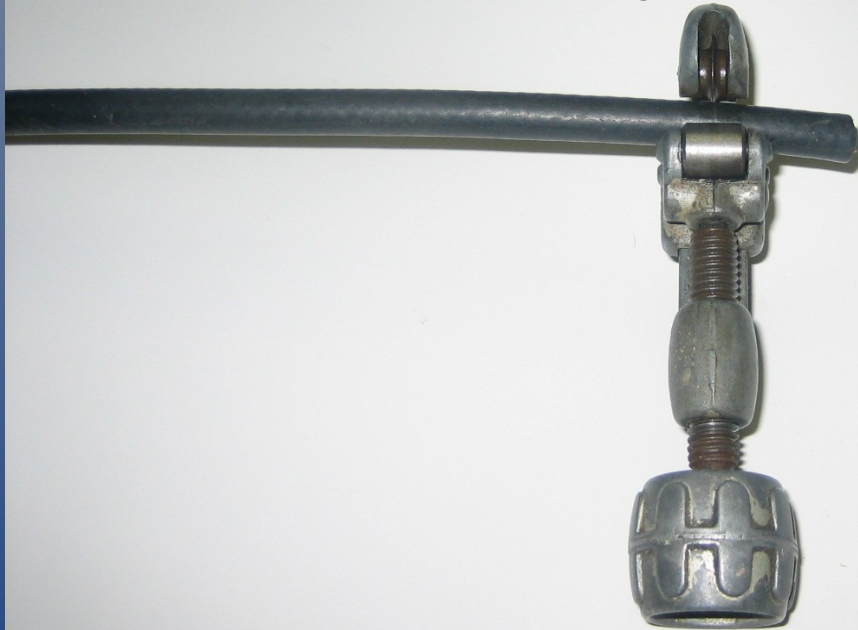
Installing a PL-259 Connector



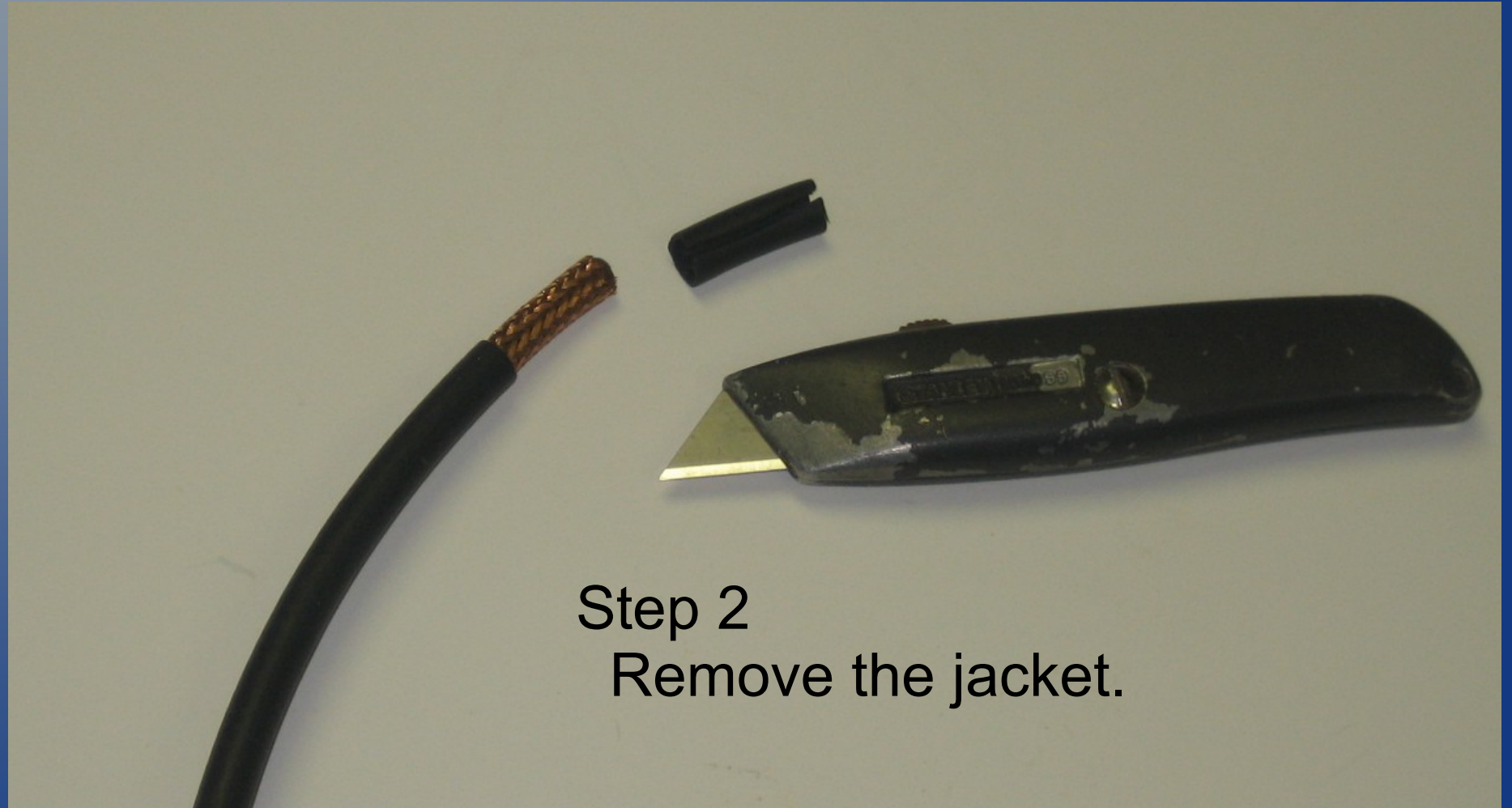
Yes, that's a tubing cutter!

Step 1

Measure back 1.25 inches and
Cut the outer jacket only.

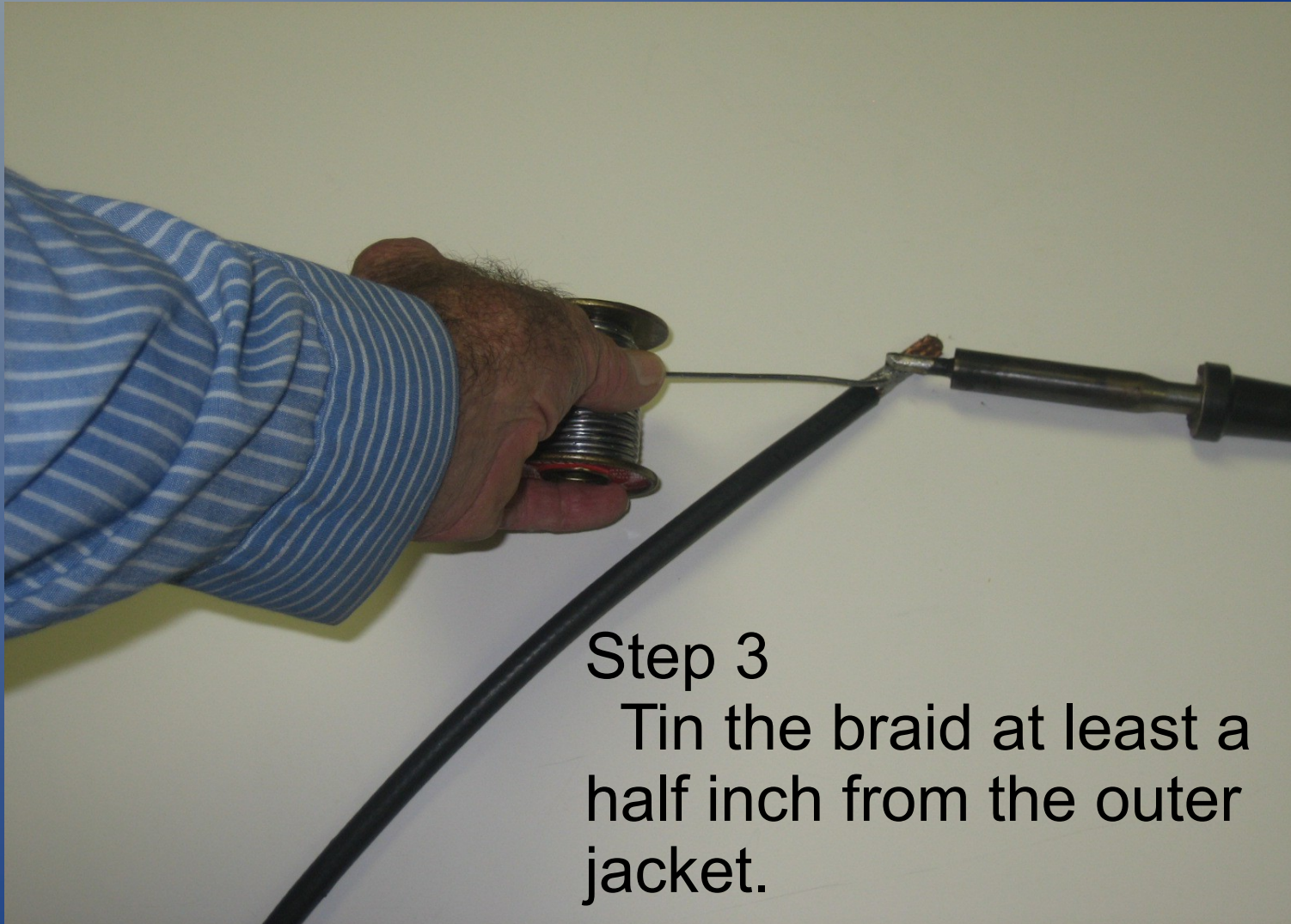


Remove The Jacket



Step 2
Remove the jacket.

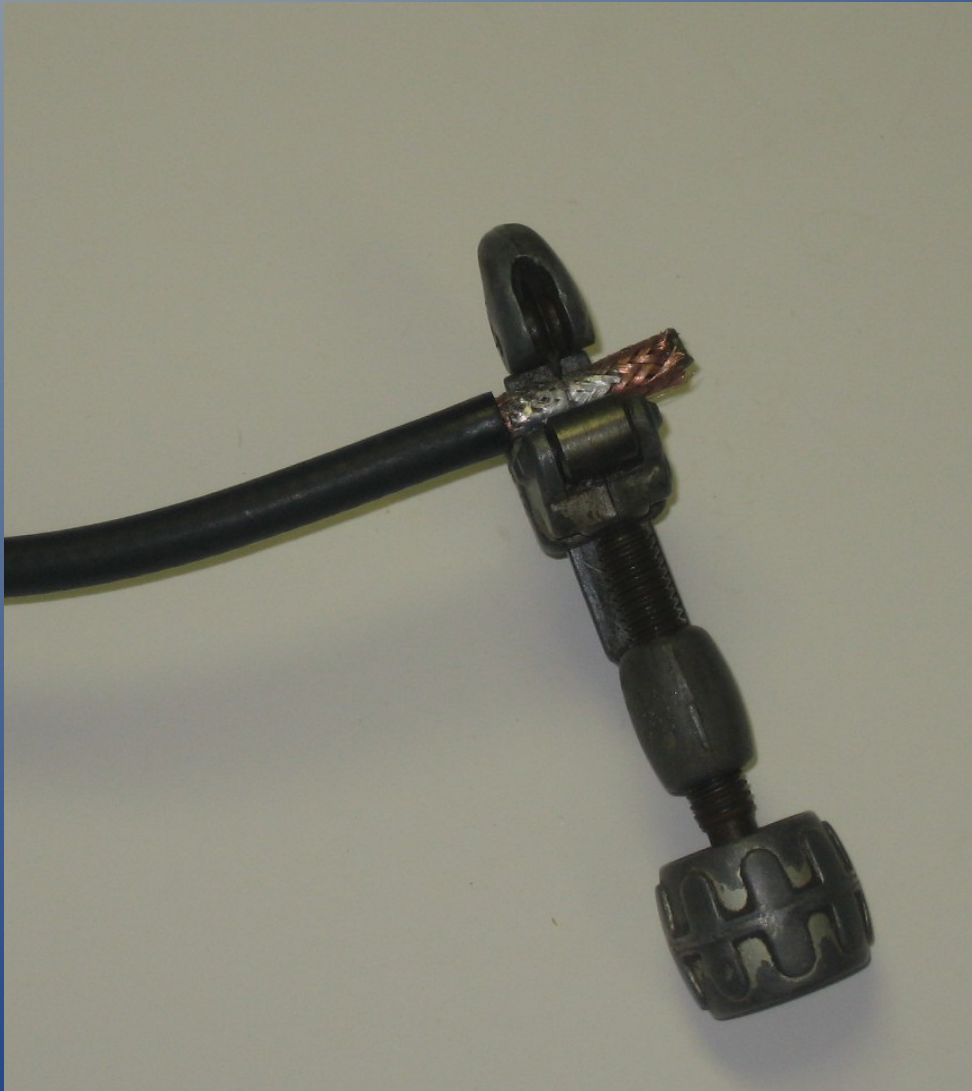
Tin The Braid



Step 3

Tin the braid at least a half inch from the outer jacket.

Score The Braid



Step 4

Cut almost through the braid, one half inch from the jacket with the tubing cutter, but do not cut into the insulation.

Remove Excess Braid



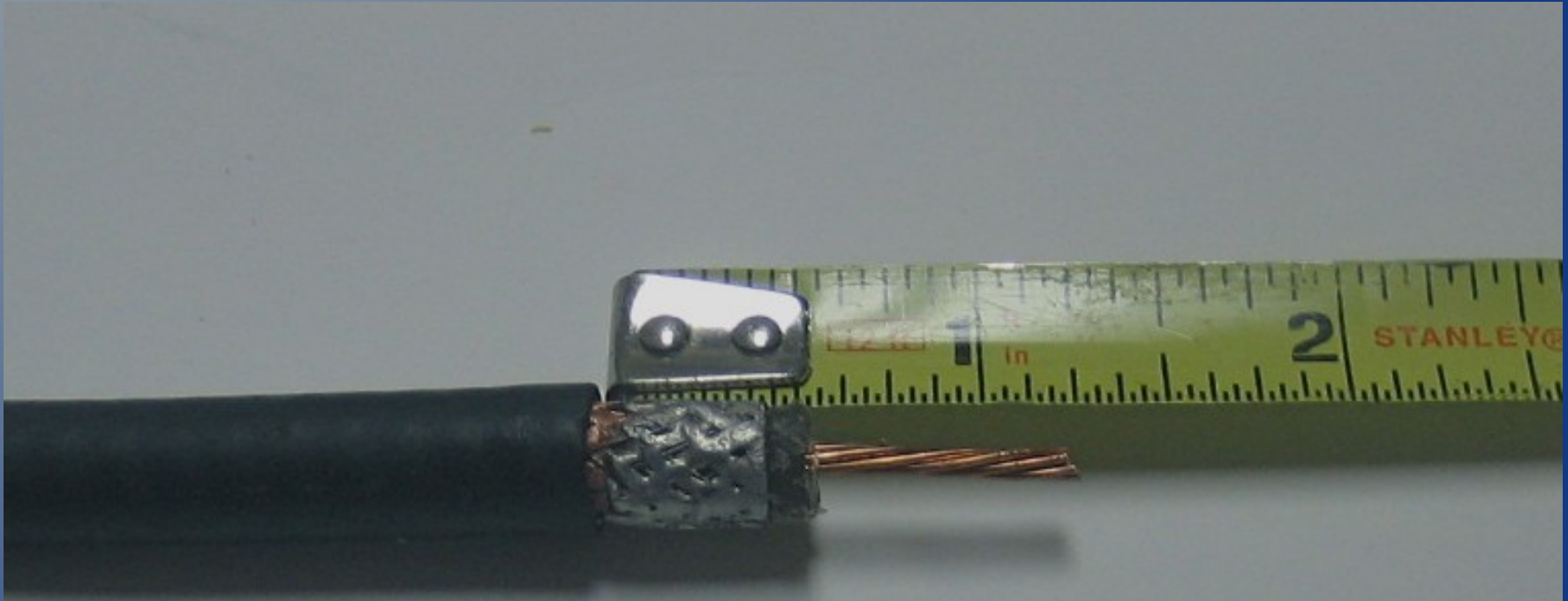
Step 5

Remove the excess
braid.

Excess Removed



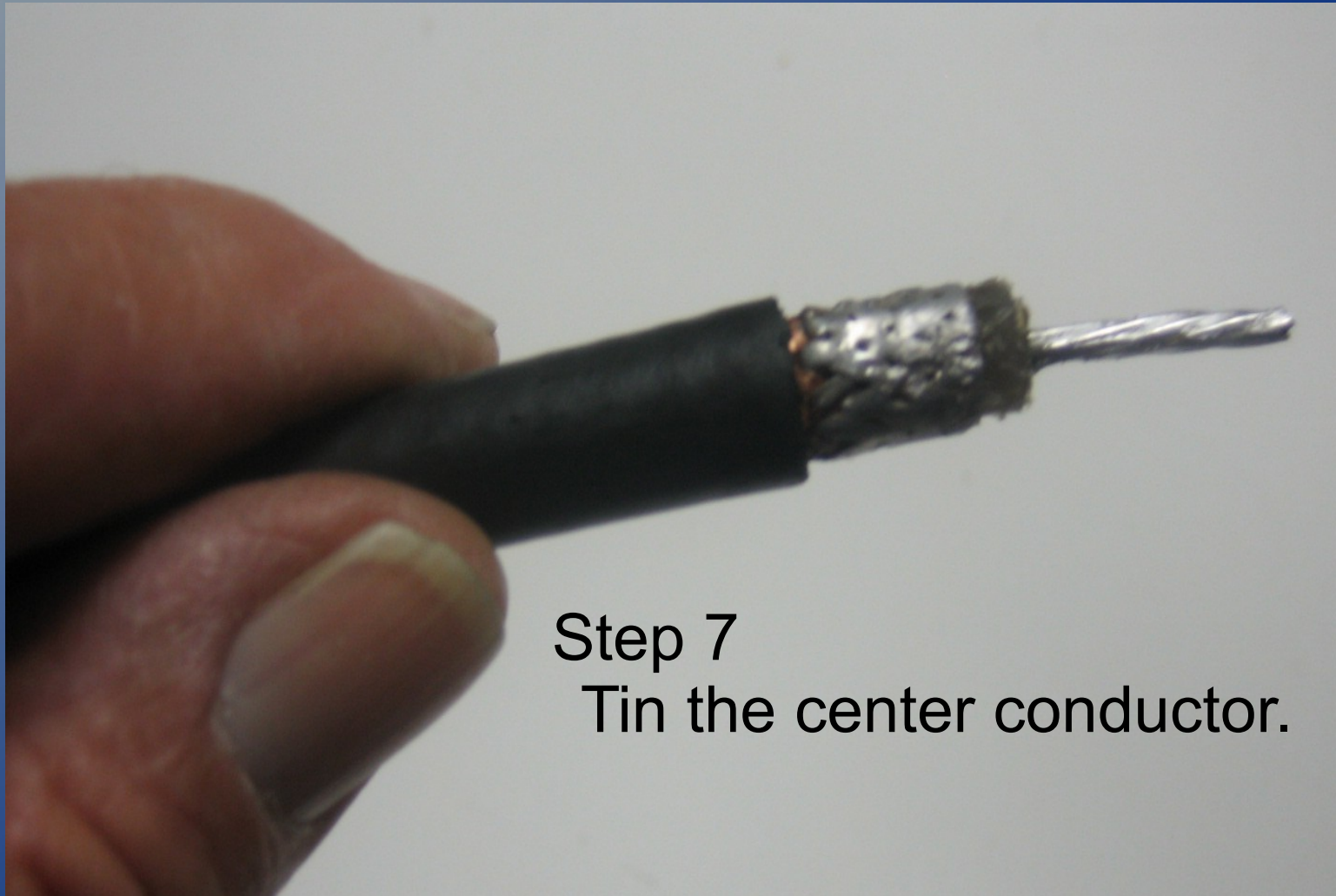
Remove Insulation



Step 6

Leave 1/8 inch of insulation and remove the rest from the center conductor.

Tin The Center Conductor



Step 7

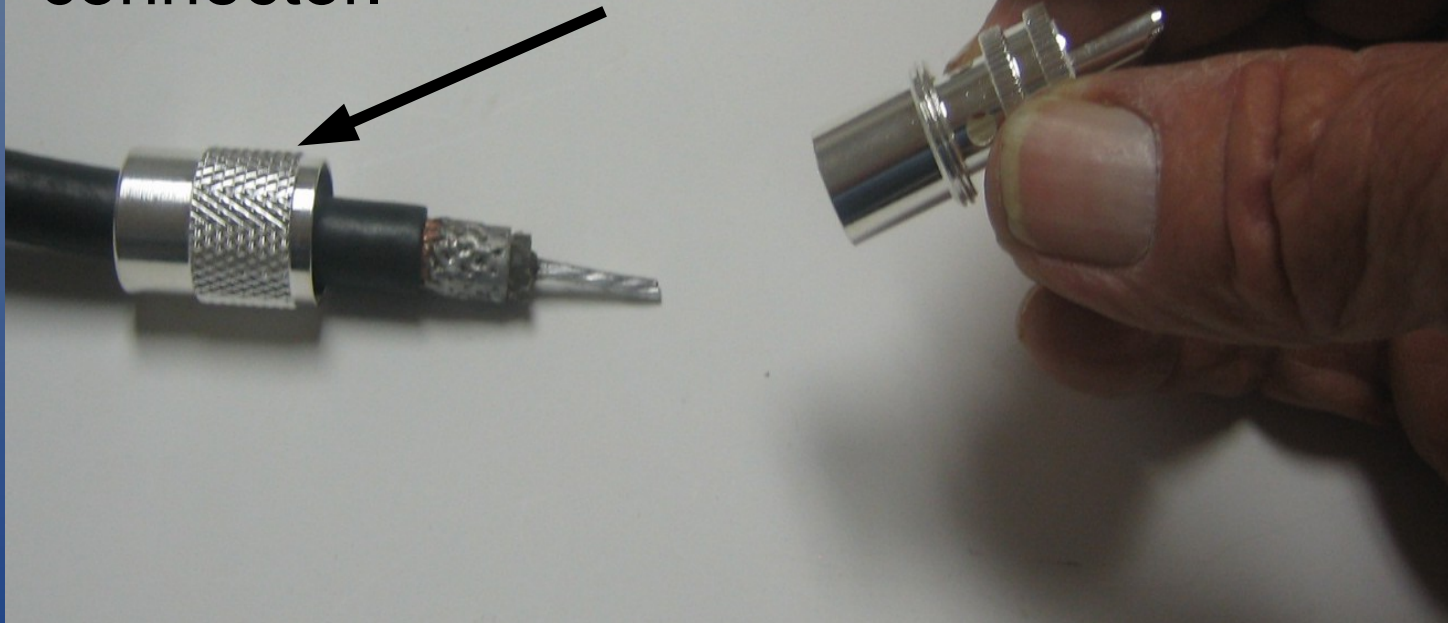
Tin the center conductor.

Install Shell Or Sleeve

Step 8

Most important!!

Install the shell or sleeve on the coax before the connector.



Install Connector



Step 9

The connector is slid over the center conductor, then it is screwed onto the outer jacket until it bottoms out.

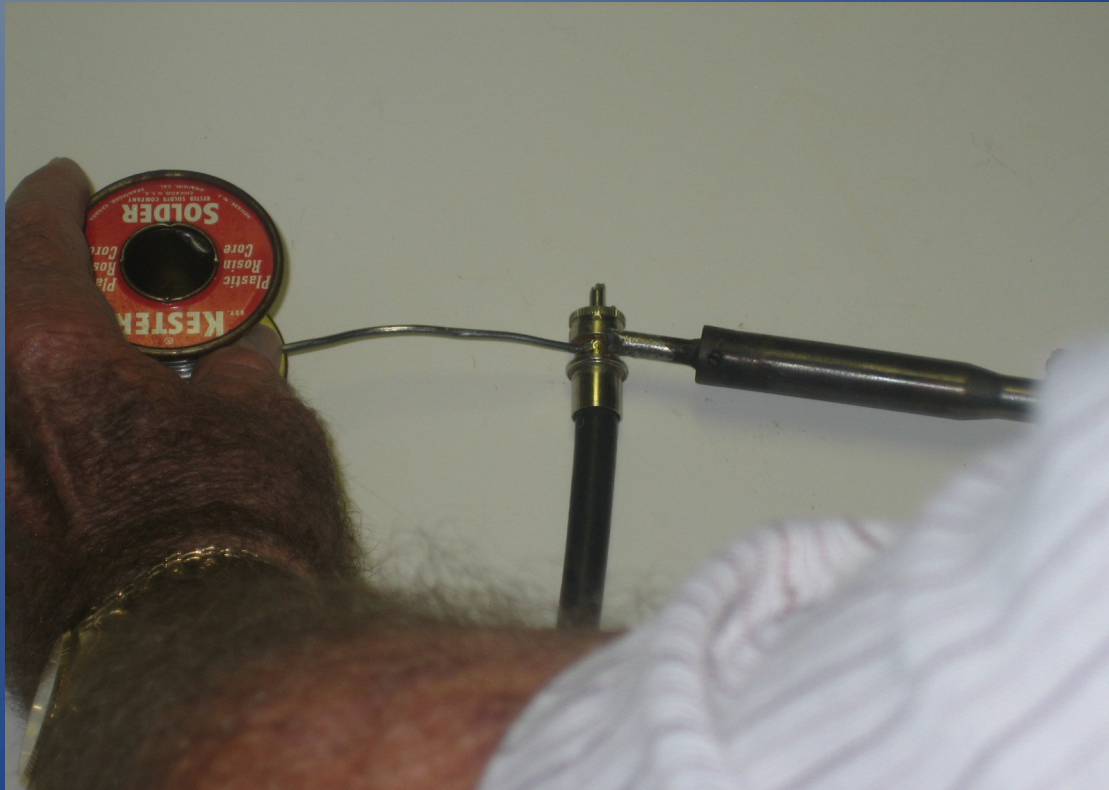
The center conductor should reach the end of the center pin.

We are now ready to solder.

Solder Connector

Step 10

Solder center pin and all four holes around shield.



Soldering Complete



Soldering Complete



Completed Installation



PL-259 Installation on smaller RG-8X

The RG-8X cable is smaller and requires an adaptor to fill the space between the cable and the connector. The adapter comes in two sizes so make sure you have the correct adapter to fit your size cable.

PL-259 Installation on smaller RG-8X

Step 1

Install the sleeve and the adaptor, then cut the jacket back 7/8 of an inch and remove. Fold the shield back over the jacket and remove foil shield if any.



PL-259 Installation on smaller RG-8X

Step 2

Slide the adapter up inside the braid and cut off excess braid, leaving about 3/8 inch. Leave 1/8 inch insulation and remove the rest; Tin the center conductor.



PL-259 Installation on smaller RG-8X

Step 3

Install the connector onto the adapter, keeping the center conductor tight into the center pin. The adapter should tighten up all the way into the connector. We are now ready for solder.



PL-259 Installation on smaller RG-8X

Step 4

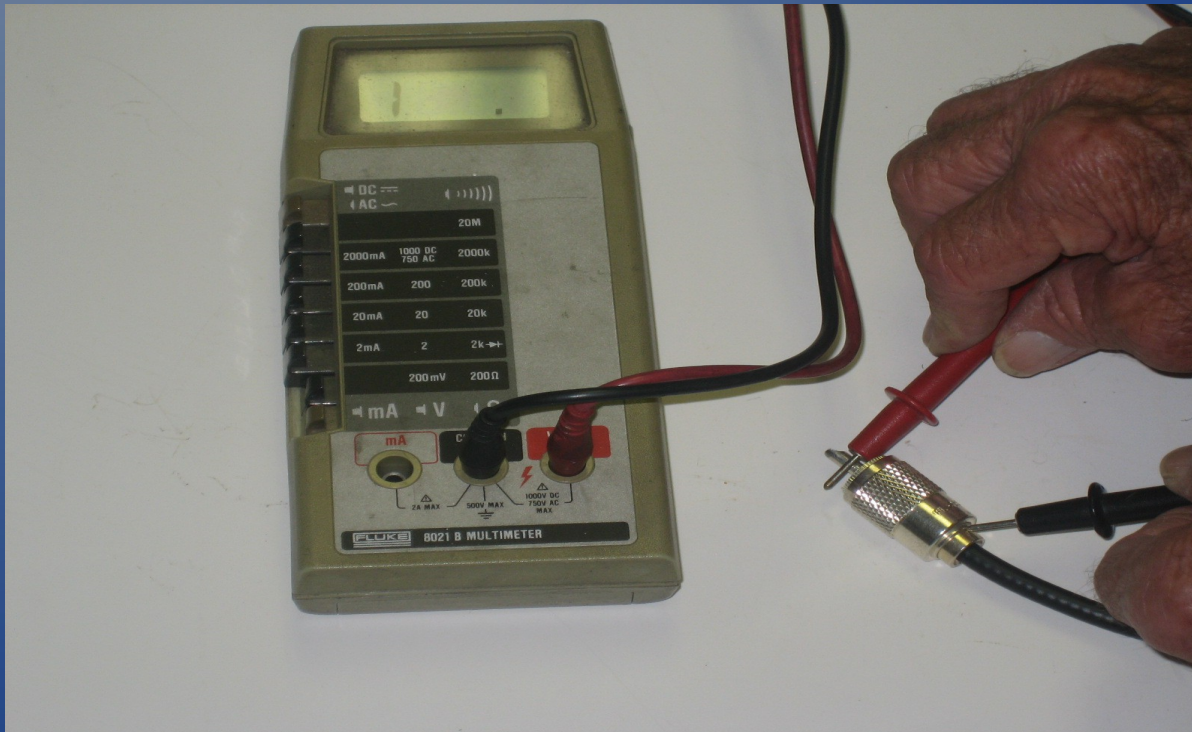
All soldered up--- just screw the shell onto the connector and installation is complete.



Final Test

Step 5

Always check a connector with an ohm meter to be sure no shorts occurred during soldering or assembly.



How to **NEVER** install a connector

November 2012 QST had an article showing a “NEW” way to install connectors..... this is a **Bloody Mess!!**

