

# WAVES

Chattanooga Amateur Radio Club P.O Box 23121 Chattanooga Tn. 37421

May 2010  
Volume XXII Issue 5

I would like to acknowledge the progress on our radio room project. We have painted the room carpeted the room and started on the desk (dads saw broke). We can put our radios on the air now if needed. We still need to complete the desk assembly, touch up the paint, put up our maps, set the lock and Get On The Air. I would like to thank all that have contributed time, thoughts, supplies or money to the cause. I am sorry I do not have a complete list of the best darn crew to put a room in order and it still needs a few more little things done to complete.

We went to Walden's Ridge area Saturday to take down the three radio towers and antennas. We were successful in getting the antennas and two towers. We had to overcome several obstacles but the crew took on each one in stride. We will need to attack the last tower and the remaining crank assembly left to take down. I would like to thank Shayne Rose (future ham ?), Robert Berman (tool man and provider of transportation for the equipment we acquired of the day), Jim Knight (technical interpreter) , Rick Curtis (tower climber extraordinaire),Charlie Wheaton (best escort to a very hard to find site).

We still need to talk to the city planning commission for permission to erect towers on the Red Cross site or try to put up what we have with poles and single section towers on top of the building. Then with all our acquisitions,we will have a better antenna array than our current one.

In the grand scheme of things we never know when we may be needed to pass traffic for the good of the community. It is good to know our station will be an asset to the cause when we are done and on the air.

Thank all of you for your interest and I hope to talk to you soon. Mark, Pres.

## Weekly Nets

Sunday	CARC Weekly Net	146.790 minus offset
Monday	M.T.E.A.R.S.	443.125 plus offset tone 103.5hz
Tuesday	TAG Skywarn	146.610 minus offset tone 107.2hz
Thursday	Emergency Services	146.790 minus offset

Chattanooga Amateur Radio Club  
April 1, 2010 Minutes for the Regular club Meeting

Officers Present: Mark Rose, Rick Curtis, Jim Knight, Susan Miller

Directors Present: Tom Cash, Bill Dobbs, Susan Miller

The meeting was started at 7:00 with a program on APRS, by Shawn Stoddard with the help of Rick Curtis. Thanks for a very good presentation.

A short meeting followed.

The minutes were accepted as printed in the March Waves.

Jim Knight gave a treasurers report.

The money in the P.O. account of \$135.09 has been returned to us and deposited in the General Account.

There is \$9503.91 checking Account

9604.07 Hamfest Account

\$19107.98 total

Report was accepted as read

There are 81 members that have renewed their dues.

The Ham room at the Red Cross is almost finished. A few finishing touches will be needed.

Jack Green is checking on where the Red Cross wants to put their radios.

April 24<sup>th</sup> there are 2 events that the club is participating in, the Boy Scouts of America 100<sup>th</sup> anniversary at Coolidge Park and The Special Olympics at McCallie School.

Please contact Mark Rose or Gail Boots for more information or if you can help in either event.

Ben Timmerman needs volunteers for tour De Cure on May 15. The start is at the Tennessee Pavilion this year. Last year we had 20 people helping. This year we have 12 confirmed and need 8 more. Please contact Ben if you can help.

The financial committee will be discussing our donation to the Red Cross association and will present their recommendations to the Board of Directors. Board of directors meets the third Wednesday of every month at Ryan's on Hixson Pike. April's BOD meeting will be on April 21. May's BOD will be on May 19<sup>th</sup>.

Ben emails the Waves out before the meetings. It is also available on the website. If you are not getting your email copy of the Waves please let Ben know.

The next regular monthly meeting will be on Thursday, May 6, 2010 at the Red Cross Bldg on McCallie @ Palmetto. This is your club, please join us!

Respectfully Submitted

V. Susan Miller

KI4RZJ

Recording Secretary

**Abbott and Costello....real hams!**

You have to be old enough to remember Abbott and Costello, and too old to REALLY understand computers, to fully appreciate this. For those of us who sometimes get flustered by our computers, please read on...

**If Bud Abbott and Lou Costello were alive today, their infamous sketch, 'Who's on First?' might have turned out something like this:**

**COSTELLO CALLS TO BUY A COMPUTER FROM ABBOTT**

**ABBOTT: Super Duper computer store. Can I help you?**

**COSTELLO: Thanks I'm setting up an office in my den and I'm thinking about buying a computer.**

**ABBOTT: Mac?**

**COSTELLO: No, the name's Lou.**

**ABBOTT: Your computer?**

**COSTELLO: I don't own a computer. I want to buy one.**

**ABBOTT: Mac?**

**COSTELLO: I told you, my name's Lou.**

**ABBOTT: What about Windows?**

**COSTELLO: Why? Will it get stuffy in here?**

**ABBOTT: Do you want a computer with Windows?**

**COSTELLO: I don't know. What will I see when I look at the windows?**

**ABBOTT: Wallpaper.**

**COSTELLO: Never mind the windows.. I need a computer and software.**

**ABBOTT: Software for Windows?**

**COSTELLO: No. On the computer! I need something I can use to write proposals, track expenses and run my business. What do you have?**

**ABBOTT: Office.**

**COSTELLO: Yeah, for my office. Can you recommend anything?**

**ABBOTT: I just did.**

**COSTELLO: You just did what?**

**ABBOTT: Recommend something.**

**COSTELLO: You recommended something?**

**ABBOTT: Yes.**

**COSTELLO: For my office?**

**ABBOTT: Yes.**

**COSTELLO: OK, what did you recommend for my office?**

**ABBOTT: Office.**

**COSTELLO: Yes, for my office!**

**ABBOTT: I recommend Office with Windows..**

**COSTELLO:** *I already have an office with windows! OK, let's just say I'm sitting at my computer and I want to type a proposal. What do I need?*

**ABBOTT:** *Word.*

**COSTELLO:** *What word?*

**ABBOTT:** *Word in Office.*

**COSTELLO:** *The only word in office is office.*

**ABBOTT:** *The Word in Office for Windows.*

**COSTELLO:** *Which word in office for windows?*

**ABBOTT:** *The Word you get when you click the blue 'W'.*

**COSTELLO:** *I'm going to click your blue 'w' if you don't start with some straight answers. What about financial bookkeeping? You have anything I can track my money with?*

**ABBOTT:** *Money.*

**COSTELLO:** *That's right. What do you have?*

**ABBOTT:** *Money.*

**COSTELLO:** *I need money to track my money?*

**ABBOTT:** *It comes bundled with your computer.*

**COSTELLO:** *What's bundled with my computer?*

**ABBOTT:** *Money.*

**COSTELLO:** *Money comes with my computer?*

**ABBOTT:** *Yes. No extra charge.*

**COSTELLO:** *I get a bundle of money with my computer? How much?*

**ABBOTT:** *One copy.*

**COSTELLO:** *Isn't it illegal to copy money?*

**ABBOTT:** *Microsoft gave us a license to copy Money.*

**COSTELLO:** *They can give you a license to copy money?*

**ABBOTT:** *Why not? THEY OWN IT!*

*(A few days later)*

**ABBOTT:** *Super Duper computer store. Can I help you?*

**COSTELLO:** *How do I turn my computer off?*

**ABBOTT:** *Click on 'START'.....*

*(Author unknown)*



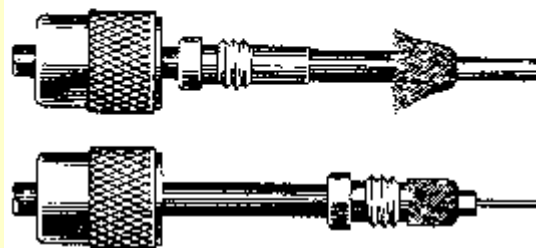
### A better way to install PL-259 connectors on RG-8X type coax

Dan Richardson, K6MHE

When installing small coax such as RG-8X in a PL-259 using an reducer have you ever wondered if you were really going to get a good solid connection to the outer braid when you looked the holes in the PL-259 and saw only one or two flimsy little strands of the shield? Well, here is an unauthorized solution to that problem.

Installing RG-58, 8X and their kin to PL-259 connectors can be a bit of a challenge. No matter how nice a book's assembly diagram (Figure 1) looks and how easy the installation instructions sound my results using those methods never seem to come out the same.

Figure 1 - A typical example illustrating how a reducer is to be installed. Looks easy enough doesn't it?

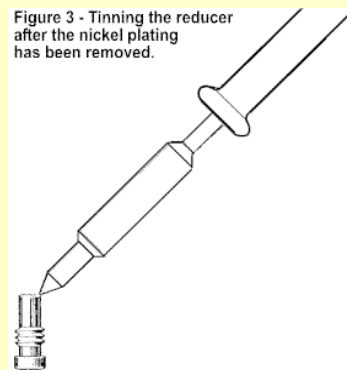
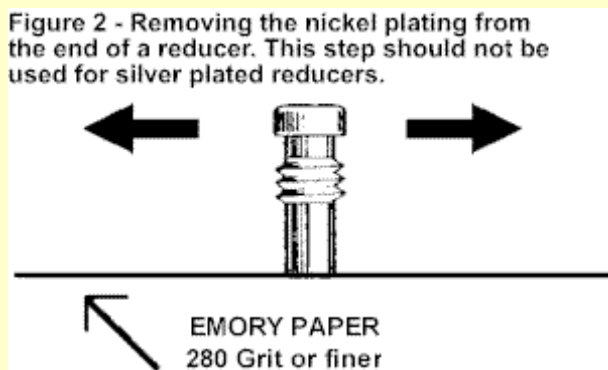


The problem for me is getting the shield portion folded back over the reducer. The shield loses its form very quickly when folded back over the larger diameter of the reducer. I tried several approaches to solve this problem such as combing, trimming and arranging the braid very carefully, but when screwed into the PL-259 body the results many times are that only a few strands of shield is visible through the holes of the connector body to solder.

### A GOOD THING TO KNOW

Several years ago I observed an amateur installing PL-259 connectors on RG-8X coax using a unique method that made me wonder why I hadn't thought of it myself. I have been using this procedure ever since obtaining good sound mechanical and electrical connections without ever experiencing a failure of any kind. A good thing should be passed along so here's how it's done.

**To begin**, let me state that I normally always use silver plated connectors and reducers. They are so much easier to solder to than the slightly less expensive nickel-plated connectors. However, if you are using a reducer that is not silver-plated you will need to tin the end of the reducer prior to installing the cable. To do this use a fine cut file or on a piece of fine emery paper to remove the plating on the end of the reducer (Figure 2) until you can see the bright brass exposed. Next using a large soldering iron tin the end



of the reducer where the plating had been removed (Figure 3). Apply just a light flash of solder on this surface. Don't pile it on as it may run down the inside of the reducer and make a mess of things.

Prepare the cable by removing the outer jacket and shield as shown in (Figure 4). (Note: The  $\frac{1}{4}$ " dimension shown for the shield's length is approximate. It can be longer as it will be trimmed later during the installation.)

Slip the prepared cable into the reducer so that the end of the outer jacket is even with the reducer's end. Next, fold the braid over the end of the reducer so that the strands are at a right angle ( $90^\circ$ ) or more (Figure 5).

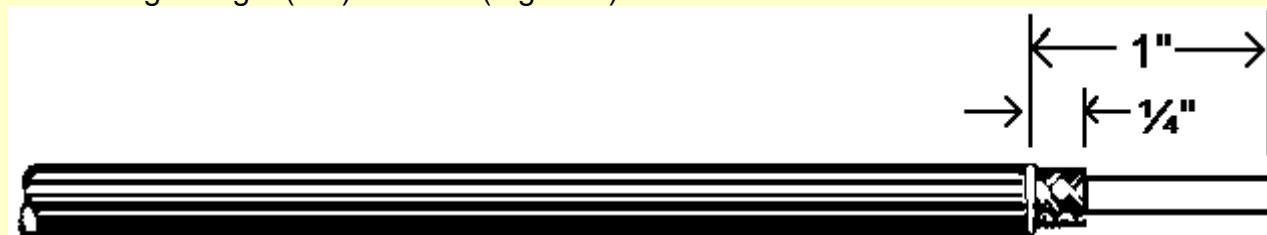


Figure 4 - Coax cable preparation. The  $\frac{1}{4}$ " braid length is approximate and can be longer - it will be trimmed later.

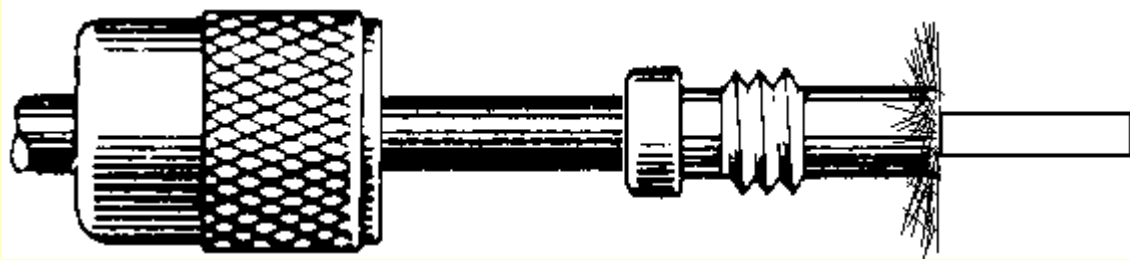


Figure 5 - Folding the shield braid strands over the end of the reducer.

#### AN ASIDE:

**Note it is very important** when soldering connectors onto coaxial cables to use a LARGE SOLDERING IRON - at least 100 -150 watts or better. If you use a small pencil type soldering iron or a soldering gun - even a high wattage type - there simply is not enough mass in the soldering tip to do the job correctly. The idea is to make the solder joint as fast as possible and get away from the connector quickly before the whole thing gets too hot and ruins the cable. You should not allow the soldering iron contact with the connector for more than 2-4 seconds. If your soldering iron is of sufficient size the short time will not be a problem. If you can not get the solder to flow in that length of time then that's an indication that the iron is not big enough for the job.

#### NOW BACK TO THE INSTALLATION

At this point I place the coax/reducer assembly into a small tabletop vise so that they are held firmly in a vertical position. Carefully place the tip of soldering iron on the braid (Figure 6). Be careful that you do not allow the tip of the soldering iron to touch and damage the cable's plastic dielectric. The trick is to keep the tip of the soldering iron about 1/8" away from the dielectric and let the solder wick up the braid and fuse to the reducer. Don't pile the solder on. It takes very little solder to make a sound connection. Also, don't try to solder the entire surface at once. I solder about 20-30% of the area, let things cool a bit and then solder another section repeating this until I have the completely bonded the braid to the reducer all the way around.

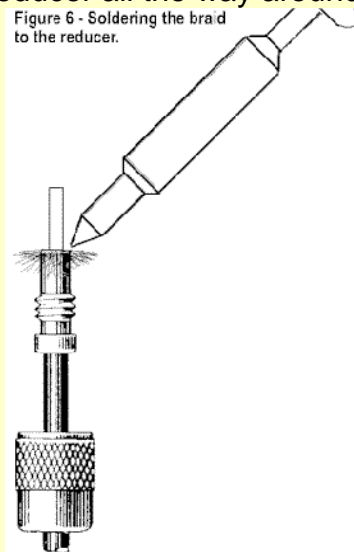


Figure 6 - Soldering the braid to the reducer.

**Allow the assembly to cool** and then inspect the dielectric to be sure there isn't any visible damage. If you see that you have accidentally melted or damaged the dielectric just stop at that point; remove the reducer and start over.

Using a sharp flush-cutting diagonal cutter (or heavy-duty cuticle scissors) cut off the remaining excess braid around the reducer (Figure 7).

After removing the excess braid I use a small fine cut file to do a final touch-up removing any jagged rough spots.

Next cut and remove the dielectric insulation leaving a portion that extends about 1/32" to 1/16" beyond the end of the reducer as shown in Figure 8. If the coax has a stranded center conductor it should be tinned at this time. Screw the reducer and cable assembly into the PL-259 and tighten well.

Continue by soldering the center conductor to the PL-259's pin in the conventional manner, trimming off the excess conductor and cleaning any flux residue from the pin. Finally, solder one of the holes in the connector body to assure that the reducer will stay put. I have found that without this important last step, in time, the reducer will loosen.

### Conclusion

Using this technique I have no doubt that I have a good electrical and mechanical connection as 100% of the braid is now soldered and bonded rather than just a few strands.

There is concern by some that soldering the braid to the reducer in this manner may damage the cable. While that possibility exists, this method allows you to visually inspect the dielectric for any possible damage prior to installing the reducer/coax assembly into the connector body - something you can't do using the conventional method. I have been using this method for a number of years and I have never had a problem or failure.

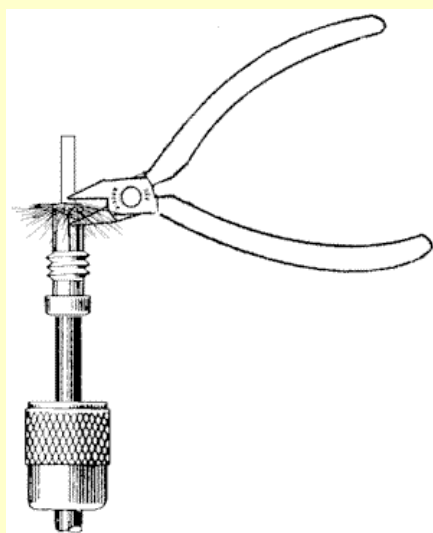
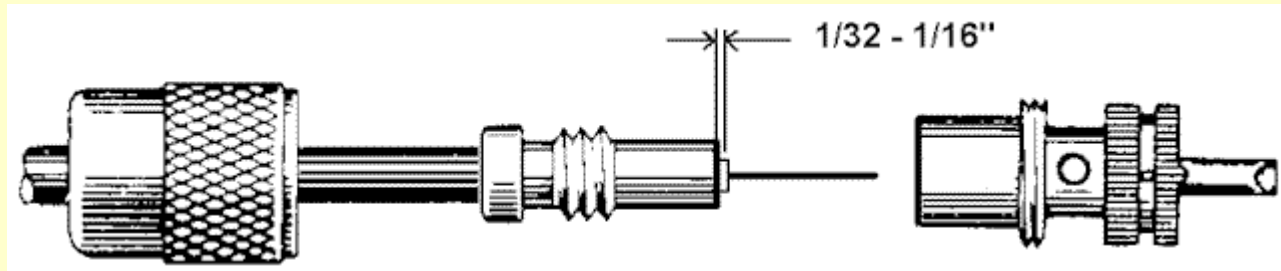


Figure 7 - Trimming off excess braid after soldering.



**Figure 8 - Coax and reducer ready for final assembly.**

Professional installers who have access to specialized tools such as industrial resistance-soldering stations may have better methods utilizing those tools, but for the average Joe Ham (me) who is using a knife, diagonal cutters and soldering iron (of the proper size) this procedure works very well. Try it yourself and see what you think.

CARC meeting Thursday May 6 7:00 pm at the American Red Cross building on McCallie Ave.