ACARC

Azalea Coast Amateur Radio Club

September 2016 Edition

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ACARC

President
Julian Bradberry
(WD4FTR)

Vice President
Linwood Todd
(NT4F)

Secretary
Norman Clemmons
(KI4YSY)

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Allen Pellnat
(KX2H)

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From The Vice President

The next meeting of the ACARC is 7:00 PM, Tuesday, September 20, 2016 in the McKeithan Center, Room 339, North Campus Cape Fear Community College, 4500 Blue Clay Road. Talk-in on 147.180 +600khz. with a tone of 88.5hz

The program this month will be a video presentation on HF multiband antenna comparison between the G5RV, ZS6BKW, a Fan Dipole the DX-CC and a Trap Dipole. Very informative, you won't want to miss it.

Start planning for the ACARC December 2016. "EATEN-MEETIN" on the 6th of December at 6pm at the Olive Garden on Market street. Fine food and great conversation!!!

Thanks again Joe, W2KJ for setting this up for the club.

Linwood, NT4F
VP ACARC

Upcoming Important Events

Sep 20th	Monthly club meeting 7:00pm CFCC North Campus
Sep 24th	Freegate 2016 Hamfest Greensboro, NC
Oct 25th	Monthly club meeting 7:00pm CFCC North Campus

BB-55 Visiting Operator

On Sunday, September 11th Bruce Perry (N4STG) visited the USS North Carolina and operated as a guest operator. Bruce toured above decks looking at the antennas, visited Radio 2 where Allan (KX2H) explained the workings of the main transmitter room and then moved to Radio Central to operate. Band conditions were tough on 20 meters but Bruce managed to make 20 contacts before leaving. He emailed me a few days later and I will share that with you:

Gentlemen,
I'd like to thank you again for your efforts and hospitality in letting me work from the North Carolina. I appreciate both of you taking the time to make another ham happy and bring me closer to my goal of working as many museum ships as possible.

Allan I also want to thank you for your detailed explanation of the workings of the original radios the boat used. It was very entertaining and enlightening for me and I have already been able to share the knowledge (well, as much of it as I retained!) with several of my elmers.

Same goes for you, Jeff, on your detailed coverage of the antennas on the boat, both current and original.

I have posted after-action reports on several of my favorite forums, and I suspect you will get a few more guest operators banging on your doors at some point.

I also received a call from a Martin today, thanking me for the donation to the boat's fund. I mentioned how impressed I was with you fine folk.

I will take a particular interest in trying to work Showboat during the next museum ships event from here in Georgia and I hope to find one of you on the mic and hope a few seconds to remind you of last weekend won't annoy you during the pile-up.

73
Bruce (N4STG)

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Wishing Good Health To Everyone

K4UWH (Charlie) was hospitalized on Monday, September 12th for Pneumonia. He is better now, but won't be coming home. His doctor is trying to get him in a Rehab Center. I will let everyone know via the email reflector when he can have a visitor or is transferred to the Rehab Center.

KQ4TG (Jake) is still at Silver Stream Rehab Center. I visited him there and took him a Club Card with his Call Letters and Name to display on his bedside table. He said that this was the second stroke that he has suffered and that Drs. told him that he may no longer be able to walk. He would appreciate some visitors, but call in advance of a visit to make sure he is not in a Therapy session.

A Get Well Card from the Club was sent to K6RM (Barry). Barry had Cataract surgery and is home and doing well.

Please let me know if any club member or member's family is not well.

August Birthdays
27th - NT4F (Linwood)

September Birthdays
2nd _ KK4KMQ (Mary)
5th _ KK4QNA (Tammy)
18th - KM4DSI (George)

ACARC sent New Style Birthday Cards to K1KS (AL) and WD4OIN (Jack) in July

73,
George
km4dsi@arrl. Net

Newsletter Editor

George Morse (KM4DSI) will be temporarily taking over as newsletter editor as Jeff (W4BIX) is moving to South Carolina. The club is still looking for a permanent editor and would appreciate it if someone could volunteer their time as editor.

American Legion Special Event

American Legion Legionnaires will honor their fellow veterans in a special on-the-air amateur radio tribute on Veterans Day, Friday, Nov. 11, 2016. Members of The American Legion Amateur Radio Club (TALARC) will operate on the short wave bands starting at 9 a.m. Through 4:30 p.m. EST [1400 - 2130Z], using the call sign K9TAL. Any ham radio operators who contact the station are eligible to receive an attractive full-color commemorative certificate. After working K9TAL, send a 9X12 inch self-addressed stamped envelope to The American Legion Amateur Radio Club, 700 N. Pennsylvania Street, Indianapolis, IN 46204.

KLØS Shack Note #32
Soldering PL-259's

There are innumerable articles and videos describing how to install coax connectors but after several folks asked me how I do it I thought others might be interested in what I think is one of the best ways to solder PL-259's onto coax. Disclaimer – nowadays I'm mostly a crimp-on connector guy but there are times when soldering is either required or may prove to be an easier way (See Shack Note #30 - Coax Crimp Connectors). First of all, and probably most importantly, using silver type connectors is really a must as the old nickel-plated types are too hard to work with since they are very difficult to solder to; the old style may be cheaper but the extra you pay for silver is well worth it.

One of my great ham mentors taught me this method many years ago and the first time I saw it I was simply amazed at how well it worked. So lets get started.

Silver Type PL-259 and RG 213 Type Coax

Besides silver type connectors the other thing you'll need is a soldering iron that has a broad tip and that will generate and maintain the temperature level required to make connections quickly; soldering quickly minimizes the possibility of softening and deforming the dielectric that surrounds the inner conductor. Soldering guns surprisingly aren't very good at this because their tips lack sufficient surface area to transfer enough heat to the connector in a timely manner. On the other hand my workbench soldering station, a Weller WESD-51, with the proper tip fits the bill nicely.

Weller Soldering Tip

The first step is to remove the cable's outer jacket by carefully cutting through it and exposing a few inches of the braid; the trick is not to nick the braid as you're making your cut. A box cutter with a fresh blade is what I usually use although there are coax prep tools that will do this for you.

Exposing the Braid

Measuring How Much Dielectric to Expose

Once the braid is exposed I like to get an idea of approximately how much of the dielectric will have to be exposed. As you can see above I'll mark approximately where the top of the cut will meet the inner stop as the connector is screwed on over it; leave sufficient outer jacket to ensure the connector's inner threads will have a surface to bite into as you screw the connector on. Next add solder all around the braid to make it basically a solid tube; using solder flux makes the soldering much easier.

Solder Flux

Shield Prepared for Cutting

Shield Cut Completed

Once the soldering is done clean the flux residue off using a rag wetted with isopropyl alcohol (IPA). Measure and mark again the top cut line for the dielectric. Then use the blade to cut carefully cut through the soldered braid while now being VERY careful not to nick the inner conductor; a series of successive strokes around the circumference of the braid while slowly rolling the coax on the bench minimizes the possibility of damage…this may take a while; a small hobby type tubing cutter works well here too. Now we can test fit the connector on to the coax by pushing the center conductor through and screwing the connector body down around the braid/outer jacket until you reach the inner stop; don't go beyond this point or you will deform the outer jacket and potentially the braid and dielectric. The connector should now look like the picture below; you can see the soldered braid through one of the four holes in the connector's body – that's the surface area we're going to want to solder to by filling those holes with solder thus mating the connector to the braid securely.

Test Fitting the Connector Body

Gently unscrew the connector back off of the coax – and now before we forget slip the connector's shell over the coax (make sure you don't put it on backwards!). Now this is going to sound crazy – we're going to do some bad soldering but only temporarily. Add a little flux around the connector body and with your iron and a length of solder build up a ball of solder in and around each of the four holes, basically creating four cold solder joints – hang on there's a method to the madness! Screw the connector body back onto the coax again until it just reaches the stop point again.

"Bad Solder Job!"

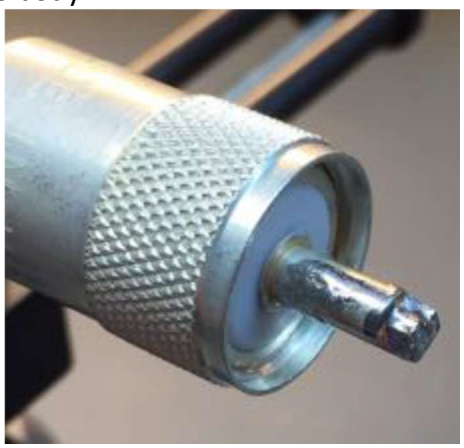
Almost There!

Apply heat now to the connector body by placing the flat side of your soldering iron tip in between two of the holes so you heat the entire connector – after a few moments when the temperature reaches the right point the solder balls will melt and be sucked down into the holes and the solder connection between the connector and the braid will be complete. You can then use your iron to smooth the solder around the inner circumference and add some additional solder if needed to fill in the holes. Once you're done the connector should look like this:

Solder "Sucked In"

After Touch Up & Cleaning with IPA

Clean up the soldered area with some IPA and everything should be nice and shiny. Now solder the center conductor to the tip; use enough solder to ensure a good connection that fills the tube but don't overdo it. You can trim or file off any sharp points that may remain at the end of the tip. Clean the tip with some IPA and if you applied a little too much solder along the body of the tip you can always use solder wick or a file to remove the excess. Finally, screw the connector's outer barrel onto the body.



Center Conductor Soldered

And that's it except for one final test – use your ohmmeter to double check for any short between the center conductor and the outer shell and if at all possible with the other end of the coax as well. Happy soldering!