

ACARC

Azalea Coast Amateur Radio Club

February 2017
Edition

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ACARC

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Julian Bradberry
(WD4FTR)

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Newsletter

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**Azalea Coast
Amateur Radio Club**

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www.ac4rc.org

From The President

We had a very good meeting last month. It was well attended and very productive. All kinds of ideas were put out for us to consider to make our club stronger and more attractive. Some of the ideas were: offer new amateurs an Elmer to help them become more proficient with the hobby such as making and installing antennas, following up with new amateurs after they pass their exams, have a tailgate sale including a lunch.

If anyone has any more ideas or suggestions for making the ACARC more successful, please let me know. As I have said before "This is your Club and it's success depends on you".

Thanks again go out to all the 2017 ACARC Officers for taking on their very important Club responsibilities. I also want to thank the many volunteers who give their time for Club activities. I know from experience that no one person can do or be responsible for everything.

The next club meeting will be held at 7:00 pm on Tuesday, February 21st, 2017 in the McKeithan Center, Room 339, North Campus Cape Fear Community College, 4500 Blue Clay Road

Julian Bradberry, WD4FTR
President

From The VE

The next license testing will be conducted on Saturday, February 11, 2017 at 10 AM in the McKeithan Center, Room 339, North Campus Cape Fear Community College

A picture ID and \$15 cash is required. Also, if you have a license, you must have a copy with you.

Steve Wilder, AJ4JJ
VE Tester

From The Battleship Liaison

Carolina QSO Parties-USS NC NI4BK

At our January monthly meeting, the ACARC voted to participate in both the North Carolina and South Carolina QSO Parties on February 25 and 26.

***These events would be excellent training opportunities for newly licensed or upgraded operators.** Saturday February 25th will be the SC QSO Party where NI4BK will be operating in the "Search and Pounce" mode to contact as many SC stations as possible. The NC QSO Party will be On Sunday February 26th. We will be operating NI4BK in our usual mode, where we spot ourselves on a specific frequency and the rest of the world using Seek and Pounce techniques vies to contact us as an NC Bonus Point station. We expect to be in Radio Central and Radio 2 from 9:00AM until dusk each day.*

We typically operate two to three stations at the same time from three different rooms using SSB, CW and Digital modes, while continuously spotting our operations on the DX clusters. Our intention is to be able to get the newbies feet wet with HF multi-mode operation under the watchful eye of an experienced contest operator.

Remember, each station on the air typically needs two Operators, one actually on the air and one to handle logging, so I am inviting all club members to come over to the Battleship and get involved

Allan Pellnat, KX2H
Battleship Liaison

American Legion Post 10 FISH FRY **Brad (WD4FTR)**

American Legion Post 10 supports many community efforts which include the following: an oratorical contest for area schools that develops a deeper appreciation for the U.S. Constitution by students. Veterans who need help financially, Battleship USSNC and Post 10's Baseball team, which has been very successful in the past.

One of the ways they gain financial ability to complete these efforts is by having a Lunch/Dinner Every first Friday of the month. I volunteer my time to Post 10 and I am the member that is responsible for this event. I also am one of the cooks.

Even though this get together is called "Fish Fry", the offerings are: 3 fish (whiting), ½ Chicken , combination of fish and crab, or crab all with boiled potatoes and cold slaw. The cost is eight dollars and includes tea, water or coffee.

Come on out for Dinner and join other hams who come to support the Veterans and enjoy the meal.

Post 10 is located at 702 Piner Road (next to the golf course) and meal hours are 11am till 7pm



Jack (W4DIN)

How I got Interested

I worked with Southern Bell Telephone Company and we had a number of hams that worked for us at that time. They were always talking about their contacts and antennas, so I thought I should check into this hobby.

First Licensed

*In June of 1987 I received my General Class License and didn't really know what to do. Randy Davis, WB4KQP became my Elmer. Randy came over, loaned me a HW 40, a single band transceiver for 40 meters, helped me put up my first 40 meter dipole antenna and I make several contacts. **I was Hooked!***

Areas of Interest to me

I worked 40 meters only for the first year and then got a new to me Drake TR-4 transceiver and started working DX.

I worked DX a number of years until new contacts were getting very slow so I started looking for a new field to branch out in and came up with county hunting.

When a new DX expedition comes on, I still get in the hunt but most of my time the last 16 years has been county hunting. Trying to work all 3077 counties! I have worked them all 3 times and working on the 4th. A big day for me was May, 2015 when I finished running them all on CW for the first time. Today I still work a lot of State QSO Parties using SSB, Digital and CW.

Exciting Times/ My Years of Ham Radio

I was working the Museum Ships Weekend in 2000 when the battleship asked me if we would be interested in getting the old transmitters working. Carl, KC8BQT, and myself started working on the project. The project has continued over the years with the club's support. This project has been a highlight in my Ham Radio Career.

See you on the bands!

Jack is an Extra Class Licensed Ham Operator. He is also the Webmaster for the Azalea Coast Ham Club Website **AC4RC.org**. Go to the Website and click on Battleship and you can see info on all Battleship Radio Projects that he and others worked on.

Go to URL <https://youtu.be/ZY6haEeNPOg> and take a Battleship tour with Jack



**Jack in a USS NC Radio Room working on one of the many Battleship projects
This is the TBM-4**

The Lunch Bunch at Henry's Restaurant



Larry (N4NXX) presented an Elmer Plaque to Linwood (NT4F)

From Arrl

Elmering or mentoring has long been the backbone of Amateur Radio. While technology constantly evolves, the human interaction between hams will not be replaced and will always remain one of the hobby's strongest traditions.

As licensed hams we are all ambassadors of Amateur Radio and we should always be looking at ways in which we can welcome newly licensed hams and project a positive image that will attract others to ham radio.

The term "Elmer"--meaning someone who provides personal guidance and assistance to would-be hams--first appeared in QST in a March 1971

If you desire to give an Elmer award to a fellow ham go to the following link to submit:

<http://www.arrl.org/elmeraward>



Larry presented the award to Linwood at the January 2017 ACARC Club Meeting

Diamond Radio Receiver

This Article was written at Harvard University
It was submitted to the ACARC Newsletter by

Jim (K3DEP)

Researchers at Harvard University have created the world's smallest radio receiver – and it's made from diamonds. The radio is based on nano-sized flaws in the pink diamond, with functional building blocks the size of only two atoms

While the sound quality of the receiver may not receive any awards, the world's smallest radio receiver works perfectly for playing music on a local radio station. It's a device built on a micro-scale unheard of when human-created radio transmissions were first invented in the late 19th century.

In addition to its Lilliputian dimensions, the pink diamond basis of the receiver means that this piece of nanotechnology is highly resistant to external conditions, making future versions of the device ideal for use in space or other extreme environments. The technology at the core of the receiver might also be used in quantum computing, potentially pushing future computer processing power forward by leaps and bounds.

A normal radio has five components, including its receiver: a power source, a transducer (which converts the high-frequency electromagnetic signal in the air to a low-frequency electric current), some sort of speaker to translate that current into sound, and a tuner to isolate and amplify the specific EM wave the listener wishes to access. According to a Harvard statement, the receiver in this device is based on imperfections in the pink diamonds called nitrogen-vacancy (NV) centers. These NV centers are tiny, only the width of two atoms.

Since diamonds are made of pure carbon, the researchers were able to take advantage of the uniform structure to create useful flaws in the diamonds, in the form of these NV centers.

The scientists could remove one carbon atom in the diamond and replace it with a nitrogen atom. Next to the nitrogen atom, the scientists removed another carbon atom, creating an atomic-scale system consisting of a nitrogen atom with a hole next to it (thus, "nitrogen-vacancy"). These NV centers were each able to emit single photons and detect magnetic fields.

The researchers then pumped green laser light into the diamond, exciting the electrons in the NV centers. Once excited, these electrons are able to detect electromagnetic fields, including radio waves, and convert these signals into red light. From there, a photodiode could read the red light and convert it into a current, which was then translated into sound. A strong magnetic field around the diamonds allowed scientists to tune the device by changing the receiving frequency of the NV centers.

This atomic-scale radio receiver is capable of being tuned over 300 MHz. For context, FM radio usually falls between 87.5 MHz and 108 MHz, so this receiver, despite its size, is fully usable by usual standards

While researchers used billions of NV centers to boost the signal, the receiver technically works with just one, though since only one photon is emitted at a time instead of a constant stream of red light, it is harder to detect. But the NV centers' ability to transmit information in the form of photons on an atomic scale makes it a promising candidate for quantum computation, which could one day use quantum physics to overcome the limitations of traditional binary computers. But for now, there are already plenty of potential uses for a nano-scale radio receiver embedded in diamond, one of the strongest materials in the world.

2017 North Carolina Azalea Festival Special Event

WHEN:

Special Event Operational Dates: April 7th Starting at 0000Z (2000L on the 6th) thru the 9th at 2359Z (1959L), 2017

WHERE:

Station location: Individual Azalea Coast Amateur Radio club members home stations.

Frequencies: Up from the bottom of general portion of the CW and Phone bands and the digital frequencies

W.A.R.C. Bands not encouraged

WHO:

Who can participate? **Azalea Coast Amateur Radio Club members only**

CONTACT RULES:

Stations may work (contact) Azalea Coast Amateur Radio stations on as many bands and modes as they like. 160, 80, 40, 20, 15, and 10 meters.

Also: CW, Digital, Phone, would count as three contacts. Contacts with a different Azalea Coast station on the same band would count as a separate contact, so they could work NT4F in all three modes on 20 meters then work WD4OIN on all three modes for an additional three contacts. Total of six contacts.

CONFIRMATION:

Club has purchased generic QSL cards for use during this event.

Club will produce color certificates.

All contacts will be logged using N3FJP Contest Software or other software that the data can be exported in ADIF format to one central log for checking contact data

Contacts confirmed via LOTW "FREE"

Contacts confirmed via QSL card require a "SASE"

Contacts confirmed via certificate require "\$4" for postage and handling.

"NO" EQSL's

Encourage each station to send only one QSL card with multiple contacts listed.

At the end of the event all logs will be consolidated into one data base (date to be determined). As QSL request are received a team of members, Allan, KX2H and several other volunteers will verify the contacts and send out the conformation.

Example of Contact:

On phone: "CQ CQ CQ AC4RC the North Carolina Azalea Festival Special Event, Celebrating the 70th Annual Festival of the Azalea Flower"

On CW: CQ CQ CQ AC4RC NCAF

Spotting on DX cluster will be the responsibility of each individual station

Azalea Coast Radio Club members who would like to participate please contact Linwood, NT4F at NT4F@arrl.net, so we can get an idea how many station would be on the air for this event.

Member stations should be familiar with Festival activities and why it's called Azalea Festival.

- Airlie Luncheon Garden Party
- Art Unveiling
- Azalea 5K/10K/Fun Walk
- Azalea Sweep
- Boxing
- Brigade Boys & Girls Club Community Visit
- Cape Fear Garden Club Azalea Garden Tour
- Celebrity Reception
- Chase Rice with Kane Brown
- Children's Art Contest
- Children's Tea
- City Rock Fest Tour
- Coin Show
- Concerts
- Fireworks
- Historic Home Tour
- Juried Art Show
- Parade
- Patrons' Party Gala
- Queen's Coronation:
- Scholarship Pageant
- School Visit
- Street Fair
- Street Fair Children's Area
- Street Fair Multicultural Stage
- Special guest performances
- Visiting Ships

NOTE: Must have enough members on the air during the time frame for stations to work multiple Azalea Coast Amateur Radio club member's stations.

If at all possible (Highly Encouraged) when operating, monitor 147.180 + 600, 88.5hz for coordinating what bands and modes that are in use at that time, so we won't all be on the same band and mode simultaneously .

Ham Radio Log Software

Jack (WD4OIN)

If you are looking for a good, free ham radio logging program give Log4om a try. The program can be found on the internet by googling log4om. It has a lot of nice features,

You can search for calls, upload and download to EQSL , LOTW and other programs, It has a built in gray line program, spotting program, several dz clusters and an automatic back-up each time you close the program if you want it. You can connect to QRZ and other services. You can customize fields.

Follow the set-up instructions which might scare you but it's not that bad. If you have any problem with the basic program give me a call. I have not tried the CAT functions so I can't help you with that. The only trouble I have found is the upload to LOTW. I have to make the aid file and then upload it with the TQSL program. Takes me one extra step.

It's a lot of nice features for free that is updated regularly.

73

From The Newsletter Editor

This is your Newsletter. If you have anything that you would like to share with other Club Members, please send it to me at ACARCnews@gmail.com Let members know about your special on the air experiences or other events that you would like to share. Also It would be nice to have pictures of your station setups. If everyone sent me a station picture, it would be enough for two stations per month for over a year YEA! If you have any questions about what or how to send, email me at the above address.

Azalea Coast Member Spotlight

The next Member Spotlight will feature Allan (KX2H).

I would like to have a new one each newsletter

The Spotlight is written with these categories:

Members Name, How did I get interested in Ham Radio, First Licensed, Areas of Interest to me and some of the most exciting times in my tears of Ham Radio

If you have any questions or need any assistance in putting one together, email me at ACARCnews@gmail.com

Have a great Valentines Day on February 14th