

# Nacogdoches Amateur Radio Club

## 2013 CLUB OFFICERS

Pres: Mike Brown - KF5KEY

VP: John Cechin - W5FWR

Sec/Treas: Army Curtis - AE5P

Visit our web site at

<http://w5nac.com/>

## MISSION STATEMENT

The Mission of the Nacogdoches Amateur Radio Club is to support and promote Amateur Radio by public service, offering training to unlicensed interested parties and licensed Amateurs, mutual support of other Amateurs, engaging events that promote Amateur radio to the general public and other Amateur radio operators, and continuing fellowship by regularly scheduled organized meetings and events.



## OCTOBER MINUTES

The October meeting of the Nacogdoches Amateur Radio Club (NARC) was held as scheduled on October 2nd. **President Mike KF5KEY**, opened the meeting at 7:00 p.m. in the Parish Hall of Christ Episcopal Church. Seventeen members and three guests were present. Each person present introduced themselves. Minutes of the previous meeting were approved as corrected. The Treasurer's report was read.

Several stations reported on their operation in the Texas QSO Party. All

reported having a good time.

Bill WK5F reported that he roved to EM11 and surrounding grids for the September VHF contest.

Coming up this next weekend (October 5<sup>th</sup>) will be the Piney Woods Purgatory bike race, Belton swap meet, and the 6 meter Barbeque in Austin. Several members expect to participate in one or more of these events.

The club Christmas Party/meeting will be held on the first Wednesday, December 4<sup>th</sup> in the Parish Hall beginning at 6:00. Note the earlier starting time to accommodate eating. More details to follow.

President Mike KF5KEY appointed a Nominating Committee to come up with a slate of candidates for 2014 club officers. The committee includes Army AE5P, Tom W5TV and Bill KA5OOZ. They will report back at the next meeting when club elections will be held.

Meeting adjourned at 7:15 p.m.

**Program: Marshall K5QE** presented a program on their recent trip to Grid Square EL84, which is located west of Key West Florida. Operation on 6 and 2 meters was done from a large fishing boat. Marshall reported they made over 1400 contacts during the operation.

## FROM THE PRESIDENT

It's finally time for cool weather, and I, for one, am absolutely thrilled. I come from a long line of fat folks. My maternal grandmother was Cherokee Indian and at five feet, two inches, yes 5'2", she

weighed in at a dainty 453 pounds. The only place that she could weigh in Shreveport was at the railroad station using the cotton scales. Anyway, we folks who are challenged weight-wise have a tendency to enjoy cool weather over hot. My XYL, conversely, is very thin, and has been known to wrap up in a blanket at any temperature below eighty degrees. This disparity in what constitutes the ideal temperature has led to a constant fight over the setting of the thermostat on the central air/heat unit. One of the main inventions which probably saved our marriage was the dual temperature controls in cars. My side has frost spots on the dash and seat while her side could be used to pop popcorn.... but I digress, so....

As a relatively new ham, I am constantly being introduced to new facets in our hobby. I have gotten to the point that I really enjoy some of the contests, especially the

state QSO parties. For the first couple of years, I tried to log all the contest contacts using pen and paper. This works fine up until about the first 20 or so contacts, and then you begin to have problems with scanning all the call signs and trying to avoid any repeat contacts. When I became involved in my very first Field Day a couple of years back, I saw the hams using a logging program which I thought was very well thought out. It would let you log in the call sign, RST, county/state/province/country, would check for duplicate entries, would plot a map of all contacts whether within the state, within the nation or around the world, would keep up with the frequency of contacts made hourly or within the last 20 minutes, would plot a graph of the contact frequency, and on and on. I was very impressed with this program but did not know enough to ask about where to acquire this program, cost, etc., etc. When I was working the Texas QSO party at Army

Curtis' place a few weeks back, he was using this same program and gave me the information about how to get it. I know that probably the majority of you hams out there have been using some type of contest logging program for years, but for those neophytes to the hobby, you might want to check out

<http://n3fjp.com/> This fellow ham has put together an extremely comprehensive logging / contesting program that will cover just about any logging needs that you might have. The program will fit any type of contest and will automatically calculate the overall score, including multipliers and the like, as you enter each contact. This saves a world of time and allows you to make many more contacts than would have been possible without it. The cost is a one-time \$49.95 and is good for life. He constantly updates all the needs of various contests, and they are instantly available to you on line by simply logging on and typing in the

code for that particular contest. If you don't currently have such an animal, I highly recommend this one, and no, I don't get a kickback for sales promo....

And speaking of contests, I just checked the QST magazine and see that this weekend, the 19th of October, they are having some eleven different contests. Something for everyone with Phone, CW and Digital, so if you're so minded, hit the airways this weekend and see just how many more contacts you can make with a good logging/contest program. Now if I'd only gotten this in to Army before Friday, this information might have been timely....oh well.

73 to all and enjoy the nice weather!

73 to all....

KF5KEY - Mike

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[michaelleebrown@hotmail.com](mailto:michaelleebrown@hotmail.com)

## MY 2 CENTS FOX WILLY ROGER

**November:** this is the days before the time to send in our columns to ARMY for the newsletter, it seems that our sec/tres is going to be playing hookey for the next club meeting, what is this world coming to?

You slackers missed a great program, Marshall, K5QE, gave a talk about his last DX outing and what it took to do it, just thinking about being on the boat for any time at all, well let's just say that I would be doing the trip by rail. Thanks to Army for operating the projector, all in all it was a great program.

For November, N5YA is collection his pic's on the planting, growing and caring for an antenna farms, this will be the farms Bill has done. In the past, and next month, this club has had some fantastic programs given and you know with every program I seem to pick up a little something, if I

don't know what it is, I do later. Remember programs are a way our knowledge is passed on, a type of ELMER if you will. So don't keep that gray matter, set it free, no one person knows it all, I certainly don't.

I don't know for sure but I have heard that the sky is falling as told to me by a little chicken, this chicken came running down my street yelling "the sky is falling - the sky is falling. Well to my surprise he was talking about finding officer's for the 2014 club year. According to chicken, Poo, Eore, tigger too, was approached. Among others were Sally, Button, Alex, and Mom "you will have to read Jack Taldi's book to find about this group". What are we to do?

Next meeting will be the installation of the 2014 officers and a short business meeting and then the X-MAS pot luck and White Elephant, I will be at the meeting but I don't think I will be at the after doings.

I haven't had any feedback on the American vs. Metric, so all of you are standing with one foot on either side of a great divide, "WAKE UP AMERICA".

Well I re-checked the hat again and found that no one had given W5TV some help with his quest, I'm sorry Tom. I guess you will have to sell your little car to get err done.

When I retired I told myself that I would work on some important things. That was I had announced last month, and the same is true this month, why does the Alphabet start with "A" why not "Z" or "B". Why is it set up that way? Why do we take something from way back and mangle it, why can't we come up with something our self and mangle it? How come?

And another thing what about time? Our money is based on tens, ten penny's to a dime, ten dimes to a dollar, ten dollars to a, well you get the idea, except for that darn nickel, I am

still working on that One. It seems to me that time is an invention of man so everything can be measured by it. But why? Sixty seconds = one minute, sixty minutes = one hour, twenty four hours makes one day, but it doesn't, does it math guys. How does someone measure or move around with sixty as the standard? I am sure that you math guys will say it's easy, well is it?

Remember time is an invention of man; it really does not exist, what then?

The soap box is for rent, make checks out to W5TV.

Remember; keep your powder dry and your head below the horizon.

Happy Trails

73 Enjoy

What do you think, let me know?

73,

John Cechin W5FWR

[Carrots4ever2u@suddenlink.net](mailto:Carrots4ever2u@suddenlink.net)

## CONGRATULATIONS

To **Wesley KF5JAI**, on his upgrade to Extra.

## VE TESTING

Our next VE testing is scheduled for Wednesday, November 20th at 7:00 p.m. in the Parish Hall of Christ Episcopal Church. Applicants should bring a picture ID, the original and a copy of their current Amateur license, the original of any CSCE's and \$15 to cover the cost of the exam(s). Correct change is always very much appreciated. 73 de AE5P  
email: [ae5p@arrl.net](mailto:ae5p@arrl.net)

## CLUB NETS

Remember to join us each week for the 2-meter nets sponsored by NARC. Each **MONDAY** is the **NARC ARES/RACES** net, at 8:00 p.m. on the club's

146.84 repeater (PL 141.3). Second, on **THURSDAY** evenings at 8:00 p.m. is the **Deep East Texas Skywarn Emergency Weather Net** on the 147.32 repeater (PL 141.3). Please join us for one or both. We are always looking for folks who would like to become net control operators. If you are interested, please contact any of the existing net controls. We will be pleased to help you in any way we can.

## NEXT MEETING

The next meeting will be on **Wednesday November 6th** at 7:00 p.m. in the Parish Hall of Christ Episcopal Church. The church is at the corner of Starr and Mound Streets in Nacogdoches. Please come join us and bring a friend.

## BASIC SIGNAL PROPAGATION PART 6

by

Thomas Atchison W5TV

Propagation of radio signals over several thousand miles may consist of both hops and ducting. Either way, the signal must enter the ionosphere at some point. If you want to maximize your distance communication you should consider an antenna system that provides the lowest angle of radiation that is practical for the frequency used. As we said previously, you should utilize the highest frequency that will be reflected back to the earth in an effort to minimize losses in signal strength. Most of our long-distance communication is associated with the F region or F layer of the ionosphere. The maximum usable frequency (MUF) for F-layer propagation therefore becomes important. This is defined to be the highest frequency at which reliable communication can occur using signals reflected from the F-layer. The MUF will obviously vary depending on many factors, including the season of the year, the latitudes, the time of day and the state of the sun's activity.

Let's talk about some of the information regarding the state of the sun's activity. For example, for HF propagation it has been found that higher average number of sunspots on the sun's surface translate into more reliable communication over longer distances. The **relative sunspot number** (sometimes called the Wolf number) measures the number of sunspots and groups of sunspots present on the surface of the sun. This idea of computing sunspot numbers was originated by Rudolf Wolf in 1848. The combination of sunspots and their grouping is used because it compensates for variations in observing small sunspots. This number has been collected for over 150 years.

As you might suspect, the determination of the relative sunspot number might vary from one observer to another. Many observatories around the world cooperate in measuring solar activity. A weighted average of the data is used to determine the International Sunspot Number (ISN) for each day. These counts are recorded and monthly and yearly averages determined to see trends and observe patterns. The official international sunspot numbers are now compiled at the Sunspot Index Data Center in Bruxelles, Belgium.

Examination of the data shows that sunspot activity is cyclical. The duration of the cycles varies from 9.0 to 12.7 years. The average is approximately 11.1 years, therefore, we usually refer to this as the 11-year solar cycle. This 11-year sunspot cycle affects propagation conditions because there is a direct correlation between sunspot activity and ionization. Solar

activity is always changing, however, and a short-term burst of solar activity may trigger unusual propagation conditions for us here on earth.

We usually use **smoothed sunspot numbers** to remove the effects of short-term changes. A smoothed sunspot number is the average of 13 consecutive monthly means, centered on the month of concern. A monthly mean is the sum of the daily ISN values for a calendar month divided by the number of days in that month. The first and thirteenth months are given a weight of 0.5. Let's look at an example. The following table shows the monthly mean ISN values for 13 months beginning with December 2011 and ending with December 2012. This data comes from the Australian Government Bureau of Meteorology web site.

MONTH	YEAR	SUNSPOTS
December	2011	73
January	2012	58.3
February	2012	33.1
March	2012	64.2
April	2012	55.2
May	2012	69.0
June	2012	64.5
July	2012	66.5
August	2012	63.1
September	2012	61.5
October	2012	53.3
November	2012	61.4
December	2012	40.8

To calculate the smoothed sunspot number for July 2012 we consider the 6 months preceding July and the 6 months following July. We calculate one-half the sunspot number for the first month (Dec. 2011) and one-half the sunspot number for the last month (Dec. 2012). We add these two numbers to the sunspot numbers for the remaining months as follows:

$$\frac{73}{2} + 58.3 + 33.1 + 64.2 + 55.2 + 69.0 + 64.5 + 66.5 + 63.1 + 61.5 + 53.3 + 61.4 + \frac{40.8}{2} = 707$$

We divide this sum by 12 to obtain the smoothed sunspot number for July 2012, 58.9.

There is a lot of data on the web that provides information regarding observed sunspot numbers and estimated future sunspot numbers. If you go to [www.sidc.oma.be](http://www.sidc.oma.be) you will see a lot of information from the Belgium Center. We will deal with additional data that can be used to predict HF propagation in future articles.