August 2013 **Volume 08-2013**

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.

AUGUST MINUTES

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

Army AE5P reported on the status of the club's Winlink iGate repeater on the roof of the Fredonia Hotel. Thanks to Tim KE5PQJ it is back in service and available for service 24/7.

Army AE5P also reported that the VUAC on which he served as the West Gulf Division representative has been disbanded.

Austin Summerfest on August 2-3 was attended by AE5P, KF5KEY, W5TV and WD5RAH. See the President's column below for details of the trip.

Tim KE5PQJ and **Robert KD5FEE** are planning to experiment with HSMM mesh networking. If you

are interested in participating in this, please contact Tim or Robert.

Tim KE5PQJ is also thinking about doing a web cam from the roof of the Fredonia Hotel.

Meeting adjourned at 7:29 p.m.

Program: Marshall K5QE gave a talk on his recent grid expedition to EL84. They operated from a chartered fishing boat out of Key West Florida and made 1400 contacts on 6 meters.

FROM THE PRESIDENT

Well, it has finally happened. All of the doomsayers who forecast the end of the world may finally have it right.

It all started with a normal, run-of-the-mill trip to a hamfest. This one happened to be the Austin Summerfest 2013 located in the beautiful Crowne Plaza hotel. It started at Army's (AE5P) house and included Tom (W5TV), Ralph (WD5RAH), and yours truly, KF5KEY. After a pleasant journey to the outskirts of Austin, we were all flabbergasted at the impossible amount of growth and construction that has plagued Austin. If you haven't been there in three or four month, be prepared...it's unbelievable the amount of growth that has taken place there in such a short period of time. No more the little sleepy hill country town...more like Houston's kid brother. Anyway, after making our way to the Crowne Plaza and finding it almost impossible to find a parking spot, we made a quick run through the sales area and actually left without buying anything! But many of the venders had not yet set up, and there was always tomorrow. After a good meal, we made our way to our hotel and a good night's sleep.

Up early the next morning and after a quick breakfast at the hotel, we made our way back to the Summerfest. Once again, it was almost impossible to find a parking spot, but we persevered and made our way to the tailgate and the indoor sales events. After a preliminary pass-through, only Ralph purchased anything. The other three of us did not. Imagine, four hams at a hamfest with piles of merchandise and they did not buy one thing! It may be true...the world may be coming to an end. It could also be some horrible malady going around, and Ralph was the only one who had been inoculated...really hard to believe....

In addition, there were several presentations to attend. One of the most interesting presented had to do with the policing of the ham bands. As any of you who frequent the bands know, there seems to be a rise in the occurrence of idiocy, foul language and poor manners and procedures being used by some hams. The number of on-air

arguments, disputes and just plain cuss fights is on the increase, and while some effort is being made to control this, there is really only one way to do this. Just ignore these idiots. There are a lot of frequencies out there, and if you respond to these guys, it gives them just what they want... attention. If enough people would completely ignore them, the reasons for their continuing to be abusive would disappear. Only by getting someone to respond to them do they win. As one of the guest speakers stated, "You can't fix stupid." Let's help these guys to disappear... ignore them completely. I don't think that any ham wants to see his hobby fall into the horrible state currently happening on the Citizen's Band. It's amazing what you can accomplish with just a little courtesy.

I'm looking forward September's NARC meeting. If everything goes as planned, there will be a demonstration of the FLEX 6700 transceiver by AE5P. This is arguably the most advanced radio of its type on the market today, and I for one am really looking forward to seeing it in use. Hope to see you all there on September the 4th.

Well, I guess that I'll close for now. It is hard to believe that Fall is almost upon us, but I for one am looking forward to some cool weather. Take care of yourselves.

73 to all....

KF5KEY – Mike
Email: michaelleebrown@hotmail.com

MY 2 CENTS

FOX WILLY ROGER

August: communications that tells it all about our hobby, to communicate to tell the other person on the other end 5/9 or a grid square or zone or county/state and a 73, or just a good old rag chew, communications is our hobby. A number of things happened for this meetings program, I didn't keep after or the program giver didn't keep trying to communicate the equipment requirements to the equipment manager. The results were a round table report on the latest grid squire expedition, and good times that was had by all.

The August meeting will have AE5P with a show and tell on his newest SDR radio the Flex 6700. This is the radio that AE5P reached out almost a mile to talk to WD5RAH, see what a little money can do, a mile just think of it, before long he will be talking to Lufkin, just think of it, 25 miles.

On deck for September's program will be Marshall, K5QE, and Marshall's program will be "how to build a contest station on a shoe string budget, this will be a good program. As you all know K5QE has a world class contest station and am happy to be part of

the record setting January 2012 VHF contest.

Oh by the way, good show to WD5RAH for his upgrade, see what open book tests can do.

If anybody is worried that we are losing W5TV from our hobby, don't be, Dr. Tom is selling off all his equipment not because the XYL, Dr. Tom has contacted the SDR bug and is looking to purchase a 6700. The next time you see W5TV dig down into your pocket and get him closer to his goal , dig deep until it hurts, he will thank you by letting you come over and look at the radio when it gets here, Dr. Tom is even thinking of having, for a fee, signed photos of his station. If you want to give but don't want him to know that you were the person that gave, just give me the money and I will see that W5TV receives the money. Thank you.

ITS HOT, ITS HOT AS H, the H stands for heck and as our editor has reminded me, water the word tree and shall bring forth a wealth of bounty. I tried this but alas it was too late, the tree is still but it went on strike, something about not liking the taste of city water, what to do, what to do. That's when it hit me, I went to wally-world, you can find almost anything there, and wouldn't you know it, a sale was in process on words, a sort of grab-bag arrangement and this is how this bit of grandeur came to be. Just a thought, if wally-world keeps lowering prices, how come it ain't free yet?

SUMMERFEST has been here and gone, I wasn't able to go to this event, and my legs have spent too many years holding me up and now it time to give them a rest. But I am sure that if we ask the few that did go we can get a good report on all, or did that already happen, sometimes I think my mind is taking a break along with my legs.

The XMAS PARTY AND WHITE ELEPHANT SALE, here before you know it, so get out the wrapping paper, ribbon, and whatever, wrap up thoughts goodies and put them by the front door or in your car, and don't forget the food, most of all the food. I intend bringing my good look as well as my wit, my mother always said I was a wit but then she would add that she could be only half right. Anyways come one come all.

The soap box is for rent.

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

VE TESTING

Our next VE testing is scheduled for Wednesday, September 18th 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

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 September 4th** 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 5

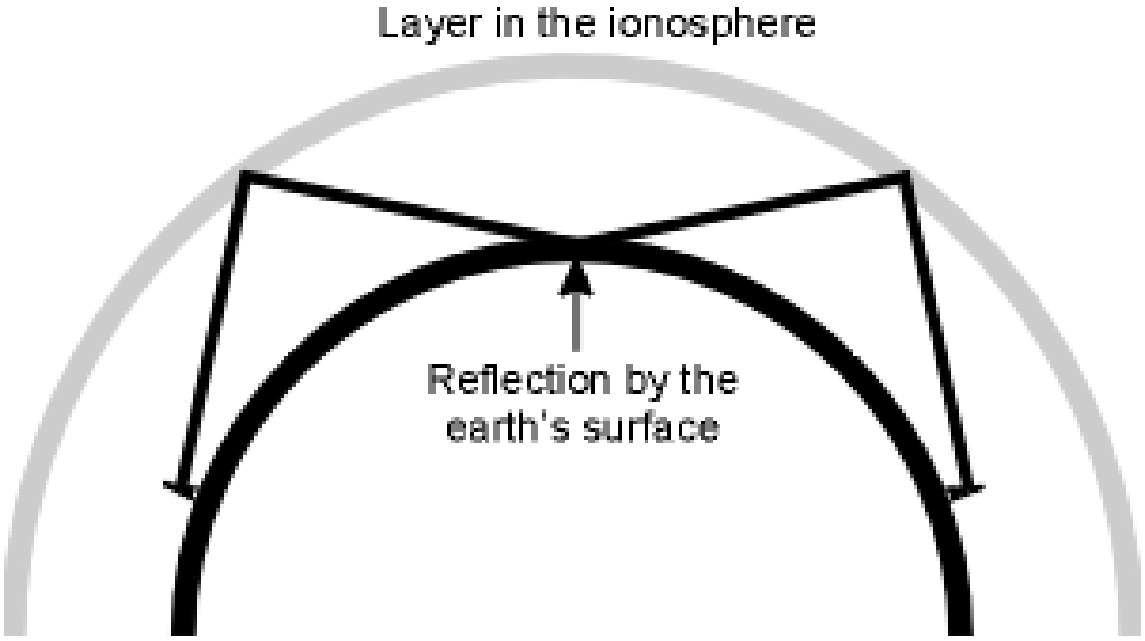
By

Thomas Atchison W5TV

In the last article we talked about signals being reflected back to Earth and how this would extend our communication distance, however, we still have the question of how do our radio signals go to the other side of the world? To answer this question we need to explore a phenomenon called **multiple hops**.

What are multiple hops?

While it is possible to reach considerable distances using the F region as already described, on its own this does not explain the fact that radio signals are regularly heard from opposite sides of the globe using HF propagation with the ionosphere. This occurs because the signals are able to undergo several "reflections". Once the signals are returned to earth from the ionosphere, they may be reflected back upwards by the earth's surface, and again they are able to undergo another "reflection" by the ionosphere. Naturally the signal is reduced in strength at each "reflection", and it is also found that different areas of the Earth reflect radio signals differently. As might be anticipated the surface of the ocean is a very good reflector, whereas desert areas are very poor. This means that signals that are "reflected" back to the ionosphere by the Pacific or Atlantic oceans will be stronger than those that use the Sahara desert.



Multiple reflections

As we have already stated, our radio signal decreases in strength as it propagates away from the transmitting antenna. Let's suppose that the frequency of the transmitted signal and ionospheric conditions are such that the transmitted signal passes through the D region and the E region and is reflected by the F region. As the signal passes through the D and E regions it loses energy. When the signal is reflected by the F region it again passes through the E and D regions, losing more energy and it finally returns to earth. For the multiple hop case the signal is reflected from the earth (losing more energy) and it passes through the same D and E regions twice, once ascending and once descending. That means that after two 'hops' the signal has weakened considerably. Therefore, to get the best signal strengths we need to have the minimum number of hops possible. This is generally achieved using frequencies close to the maximum usable frequency (MUF) that can support communications using ionospheric propagation, and thereby using the highest regions in the ionosphere. In addition, D region attenuation is less for higher frequencies. It has been found that if we double the frequency the level of attenuation by the D region is reduced by a factor of four. This means that a radio signal on 14 MHz will be stronger than one on 7 MHz if propagation can be supported at both frequencies.

Recall that we discussed both the D region and the E region and that they are sustained by radiation from the Sun. This means that levels of ionization in the D and E regions fall rapidly at dusk when the source of radiation is removed. This is why we often have more multi-hop communication shortly after dark. Such propagation may occasionally extend late into the evening on 14 MHz so we have world-wide DX.

Before we leave this discussion of multiple hops I would like to say a few words about 6 meters (50-54 MHz). Up to this point I have been focused on HF propagation with a little about VHF, however, there are occasions when the 6 meter band behaves like the HF bands. In fact, 6 meters offers nearly every kind of propagation known at different times. When the solar flux rises above 150, the F layer skip can provide worldwide contacts on 6. The most common propagation on 6 is sporadic-E. Sporadic-E (or E_s) is a method of propagation in which radio signals reflect off smaller clouds of unusually ionized atmospheric gas in the lower E regions. This type of propagation usually peaks in June and December, however, it can occur anytime. It can provide contacts from a few hundred miles to a thousand or so miles when double hops occur. For example, a station on the East coast may be able to communicate with a station in Texas with a single hop, but to get to the West coast that station would need to have a double hop. As another example, to reach from Texas to Alaska on 50 MHz we need a double hop. Maybe, some day?