

# Nacogdoches Amateur Radio Club

## 2013 CLUB OFFICERS

Pres: Mike Brown - KF5KEY

VP: John Cechin - W5FWR

Sec/Treas: Army Curtis - AE5P

## 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.



## APRIL MINUTES

The April meeting of the Nacogdoches Amateur Radio Club (NARC) was held as scheduled on April 3rd. **President Mike KF5KEY**, opened the meeting at 7:00 p.m. in the Parish Hall of Christ Episcopal Church. Eleven members and three guests were present. Each person present introduced themselves. Minutes of the previous meeting were approved as published. The Treasurer's report was not available.

**John W5FWR** gave a report on this year's Special Event Station QSL effort. To date, John has

answered a total of 188 QSL requests.

**Army AE5P** gave a report on his efforts in the CQWPX SSB contest.

There will be a tail gate swap meet in Longview this coming Saturday. Several NARC members plan to attend.

**Army AE5P** gave a report on repeater status. More work is planned.

**Bob K5ME** asked about proposed FCC rule changes that will affect Amateur Radio. It was suggested that everyone send their comments to the FCC. It helps to make your opinion known.

**Steve KB8QWN** gave an update on the Neches River Rendezvous coming up June 1. Additional hams

are needed to help provide communications for this event. If you can help, please contact Steve.

Meeting adjourned at 8:10 p.m.

#### Program:

Tom W5TV presented a program on the effects of SWR, and what it really costs you in additional losses.

### FROM THE PRESIDENT

Greetings to one and all. Another month has slipped away from us once again, and I get to subject all of you to more of my poor writing.

I had a very enjoyable trip to the Ham Expo at Belton recently. The trip there was wonderful...Texas was outfitted in all its finery. There were fields and fields of wildflowers in bloom, with the majority being Indian Paintbrush and Bluebonnets...acres and acres and absolutely

beautiful. A great time to travel.

As for Belton itself, it was great, as usual. Army and I arrived there Friday afternoon, and after browsing through all the tailgate sales items, (much treasure and even more junk....uh, very well used equipment) we were able to enter the exposition hall and find our table. We were able to set up quickly, and then we went around looking at the goodies that the other early arrivals had for sale. We left for the hotel about 4:30 PM and after settling in there, went and had barbeque and beer. Gotta love Texas.

The next morning, VERY early, we left out to get breakfast. And let me inform you folks, if you ever travel with Army and he says that he knows a good place to eat, believe him. He said that he knew this little place where all the old farmers and ranchers hung out for breakfast, and that they really put on a good feed. We arrived at this

establishment with the fascinating name of "Restaurant." Really catchy, huh? Anyway, sure enough, all the old guys were there, and after getting seated, the waitress let us know that the day's breakfast special was steak, eggs, home fries and toast for less than \$6.00. The food was great. Army knows how to pick 'em.

We proceeded to the Expo center and all was in full swing. The place was really filling up quickly, and after setting up our sales items, once again we traded off, one minding the store and the other out looking for more things to buy. We had a great show, and sold quite a few of the items we brought. We actually came home with less than we started with, something of an accomplishment when a ham goes to a hamfest. Anyway, a very pleasant and enjoyable trip. Belton is a good show.

As for things coming up, the Hamcom will be in

Plano again on June 7 and 8. This is also a great gathering with a large number of sales tables and exhibits as well as quite a few ham-related presentations. I know that some of us are going, and if you can make it, you won't regret it.

Also, please bear in mind that the Neches River Rendezvous is only a month away, and there are still positions needed to be filled. If you have the time and inclination, please try to volunteer for one of these open positions.

As for the world of HF, the solar storms and flares have played havoc with most bands above 17 meters. It is possible to make contacts occasionally, but they are few and far between, at least at my QTH. Hope you had better luck.

Anyway, I guess that I'll close for now. Hope to see you all at the NARC meeting this coming Wednesday, and the best to you and yours.

73 to all....

KF5KEY - Mike

Email:

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

### MY 2 CENTS FOX WILLY ROGER

April has passed us by along with rain, cold, wind, and pollen.

April also signaled, at least for me, the start of grass cutting, and as soon as I can clean out the stuff caught in my mower blades I will play catch-up.

So some of you missed the last meeting and doing so missed the test and the answer. If you want to find out the answers please contact the winners, K5ME and AE5P.

I now have a new all-in-one printer. My others went south. Don't know to run all of it yet but what the heck, it has lots of buttons. With that I am going to scan ALL of the clubs QSL's cards from

the different events the club has conducted. My house is small and full. I will place the QSL's on cd's and 86 the cards when finished with them or the club could sell them. I could use some help with this project!!!!!!!

Many radio things are coming up: June VHF contest, Field day, September VHF contest. Folks these events should be a club doings at the least. If you can't do the club thing, your QTH will work fine, so join in, glow some tubes, twist some knobs or look at the monitor and remember, HAM RADIO IS FUN.

Our Feb SES has come and gone for another year, and from about 800 contacts we received 190 QSL cards. Out of that the club received 2 replies remarking on how great the certificate was and thanking the club for remembering. I now want to take a moment to also thank all the fine folks that were involved in this project. THANKS

I just got back from a trip to my back yard. I have a word tree, and I go and harvest the words that I give to you. The tree had plenty of leaves but no words. I hope they return in time for the next newsletter. So I will close for now. Happy trails.

The club needs you.

What do you think, let me know?

73,  
John Cechin W5FWR  
[Carrots4ever2u@suddenlink.net](mailto:Carrots4ever2u@suddenlink.net)

### VE TESTING

Our next VE testing is scheduled for Wednesday, May 15th 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 May 1st** 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.

### NARC WEEKLY LUNCH

Please come join us for lunch each Wednesday beginning at 11:30 a.m. at Clear Springs Restaurant on Old Tyler Road.

## BASIC SIGNAL PROPAGATION

### PART 1

by

Thomas Atchison W5TV

Well, it seems to me that, after several articles about antennas, we should talk a little about how signals get from the transmitting antenna to a receiving antenna. This should come under the heading of signal propagation. As a main resource, I plan to use the ARRL Antenna Book, 19<sup>th</sup> Edition.

A transmitter generates an rf signal that consists of a current that is alternating at a particular frequency. This moving current generates an electric field and a magnetic field. These two fields make up a radio wave. Each of these fields alternates in magnitude because of the alternating current in the antenna. The fields will reverse direction every half cycle. The energy in a radio wave is divided equally between these two fields. Such a wave is called an electromagnetic wave.

Suppose we could have a point source of electromagnetic energy in free space. The energy would radiate from such a source in an ever-growing sphere centered on the source. This radiated energy would expand at the speed of light which is approximately 186,000 mile per second or 300,000,000 meters per second. If we consider an observer on the surface of this sphere at some distance from the source, it would appear that the wave is flat. Such a radio wave is called a *plane wave*. For the most part we will be discussing plane waves.

Consider a plane wave that consists of electric line of force and magnetic lines of force at right angles to one another as shown in Fig. 1.

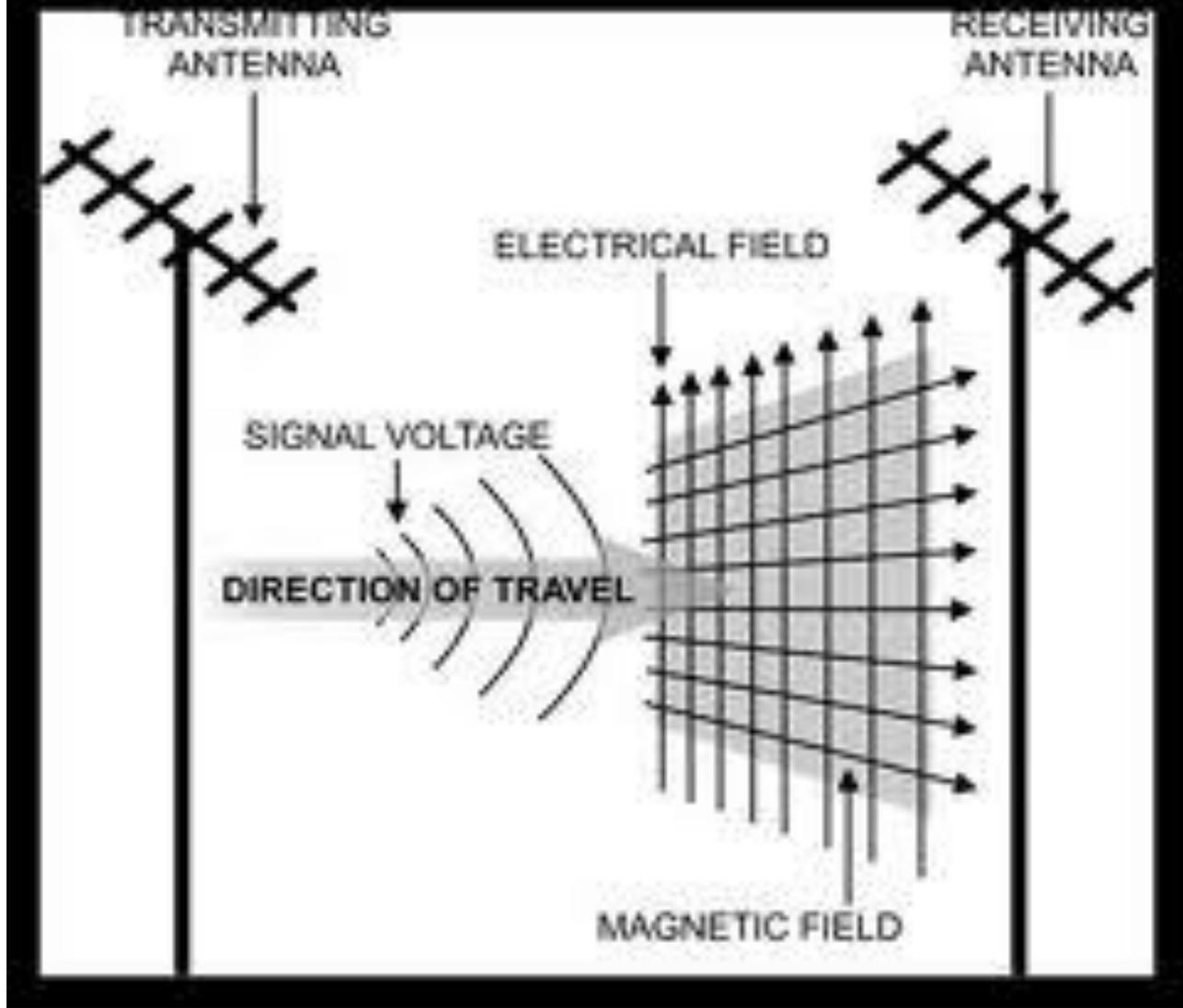


Fig. 1

Here the magnetic field lines are horizontal and the electrical field lines are vertical. The arrows indicate instantaneous directions of the fields. As we mentioned above, these fields reverse direction once each half cycle. The direction of travel is always perpendicular to the wave front.

Let's look at an example. Suppose we have a transmitter that produces an rf signal at 30 MHz. One cycle or period is completed in  $1/30,000,000$  second. Since the radiated wave is traveling at 300,000,000 meters per second, then the wave will move 10 meters during the time that the current is going through one complete period. That is, the electromagnetic field that is 10 meters away from the antenna was caused by the current that was flowing one period earlier in time. If each period of alternating current in the antenna is the same, then the fields generated by that current are

identical. As the fields move away from the source they are spread over a larger surface, therefore, their amplitudes decrease, however, they do not lose their identity with respect to the instant of the period at which they were generated. In short, the waves at any given instant are in phase.

At this point we can define the concept of wave front and wavelength. Suppose we are on a particular sphere. On every part of this surface, the wave is in the same phase. This is a wave front. The wavelength is the distance between two wave fronts having the same phase at any given instant. This is the distance from a wave front to the next wave front that has the same phase in the direction of propagation. This distance is measured along a ray originating at the source. Such a ray is the radius of the wave front sphere, so it is perpendicular to the wave fronts.

If  $\lambda$  represents wavelength then we can use the above information to connect the wavelength with the frequency of the transmitted signal. That connection is represented by the formula

$$\lambda(\text{meters}) = \frac{299.7925}{\text{frequency(MHz)}} .$$

We will continue this discussion in the next NARC Newsletter.