July 2011 Volume 07-2011

Nacogdoches Amateur Radio Club

2011 CLUB OFFICERS

Pres: Rusty Sanders – KD5GEN

VP: Clarence Riddle – KC5UBP

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.

JULY MINUTES

The July meeting of the Nacogdoches Amateur Radio Club (NARC) was held as scheduled on July 6th. **President Rusty, KD5GEN**, opened the meeting at 7:00 p.m. in the Parish Hall of Christ Episcopal Church. Thirteen members and five guests were present. Each person present introduced himself. Minutes of the previous meeting have not yet been published. The Treasurer's report was read.

Jim – KM5RY and **Sarah – KF5BWX** announced they will be moving soon to the Idaho / Eastern Washington area and wanted to tell everyone goodbye.

Army – AE5P gave a report on the NARC Field Day operation.

UPCOMING EVENTS:

Texas City Hamfest July 9.

CQ VHF Contest July 16-17.

CSVHFS Conference – Dallas July 29-30.

Meeting adjourned at 7:25.

NEWEST HAMS

At our July 20th VE test session, Jared Wolf passed his Tech test and is now KF5MCG. Congratulations Jared.

OSCILLATIONS FROM THE CHAIR

Hello to everyone from Xtal Beach, Texas. For those of you not really radio savy, that is called Crystal Beach by most folks. As I write this article, my family is enjoying a few days on the beach.

If many of you have not been relaxing on a beach lately, I must say that one can see an interesting assortment of folks up and down the shoreline. By doing some people watching, I thought about the subject of this article, "You must be a ham if".

You must be a ham if……

While driving down the road, you tend to drive out of your lane looking at an antenna system.

While driving down the road, you see a garage sale and wonder if they are selling any old radios.

While going through a flea market, you see some old tubes for sale and you look through them to see if you need any even though all your radios are transistorized.

Advertisements for estate sales catch your eye and you look to see if any antique radios are in the sale.

When some piece of electronics break down at home, you take it apart to see if you can repair it.

When an old TV goes on the blink, you start taking it apart to get resistors and capacitors for your junk drawer.

When planning a vacation, your look up the repeater frequencies for the towns you will be passing through.

You have difficulty throwing away a piece of wire.

Your neighbors ask you to look at some kitchen appliance that does not work.

And finally, when making reservations or purchasing something via telephone, you automatically use phonetic spelling to make sure the order clerk gets the information correct.

I am sure that you may think of some other humorous situations and I would love to hear of them.

Hope to see you at the next meeting.

KD5GEN- Rusty

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rusty.sanders@att.net

VP's CORNER

Yep, its that time again and all I can think about is fishing.

Lots of interesting articles in QST. Didn't see much.

73 de Clarence KC5UBP

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clarence404@hotmail.com

VE TESTING

Our next VE testing is scheduled for Wednesday, August 17th 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 August 3rd** 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. A special program is planned. Hope to see all of you there.

RADIO GIVEAWAY

If you are a current member of the Nacogdoches Amateur Radio Club, and upgrade your ham license to General or Extra during the calendar year 2011, you will receive one or more tickets for a special drawing to be held at the club's annual Christmas party / meeting on December 7th, 2011. Members upgrading from Tech to General will receive one ticket. Members upgrading from General to Extra will receive two tickets. Members upgrading from Tech to Extra will receive three tickets.

Each winner of the drawing will receive at minimum an Amateur Radio HF transceiver complete with power supply and microphone. Depending on donations, there may be more equipment added to this.

At this time, there are at least three complete HF radios available for the drawing:

1. Drake TR-5 transceiver
2. Kenwood TS-140 transceiver
3. Kenwood TS-130 transceiver

The drawing will be administered and conducted by the Club Secretary/Treasurer.

Winners of this equipment are asked to donate their equipment back to the club if they no longer have a need for

it, so the program can be continued in future years.

If you would like to donate equipment to be used for this program, please contact **AE5P**.

CSVHFS

The annual Central States VHF Society Conference was held this weekend in Dallas. Well, actually it was in Irving, but it all is Dallas to me ;o)

CSVHFS is considered by many to be the premier organization in the country promoting VHF/UHF/Microwave operations on the Amateur Radio bands. There are several similar organizations in the US, but CSVHFS is arguably the largest and most active.

Several NARC members attended, including AE5P, W5TV, K5QE, N5YA, and Kay Simpson. The event was held at the DFW Weston Hotel in Irving. Numerous speakers made presentations on Friday and Saturday, an antenna testing range was available Friday morning, some very high dollar test equipment was available Friday to test preamps or other equipment for gain and noise figure. Several vendors were in attendance. A flea market was held Friday evening. Saturday a very nice banquet was held followed by a very nice door prize drawing with prizes for everyone in attendance. Grand prize was a new Yaesu FT-857D.

Next year the conference will be held in Cedar Rapids, Iowa. More information is available on their web site http://www.csvhfs.org/

BASIC ANTENNAS

PART 34

by

Thomas Atchison W5TV

If you want to work some stations using amateur satellites in Mode A, B, or J, then an inexpensive antenna that can be easily constructed is the turnstile antenna. A turnstile antenna is a set of two dipole antennas aligned at right angles to each other and fed 90 degrees out-of-phase. This antenna looks like a turnstile when it is mounted horizontally, consequently, it is referred to as a turnstile antenna. If we use a reflector under the turnstile we get improved upward directivity. The ARRL Antenna Handbook has a good discussion of such antennas, however, we will consider them briefly here.

There are several amateur satellites that are currently operational, however, the status of a particular satellite's operation may change at any time. Two satellites that are currently active are SO-67 with an uplink of 145.875 and a downlink of 435.345 and AO-27 with an uplink of 145.85 and a downlink of 436.795. Many operational satellites are supported by web sites so you will need to do some searching to determine the status. Some other satellites in the VHF range are DO-64, VO-52, SO-50, SO-29, and ARISS.

The basic turnstile antenna consists of two resonant dipoles placed perpendicular to one another and phased with a quarter wave coax run to produce a 90 degree phase difference between the two dipoles. The diagram in Fig.1 below indicates how the phasing line can be connected for the turnstile antenna.

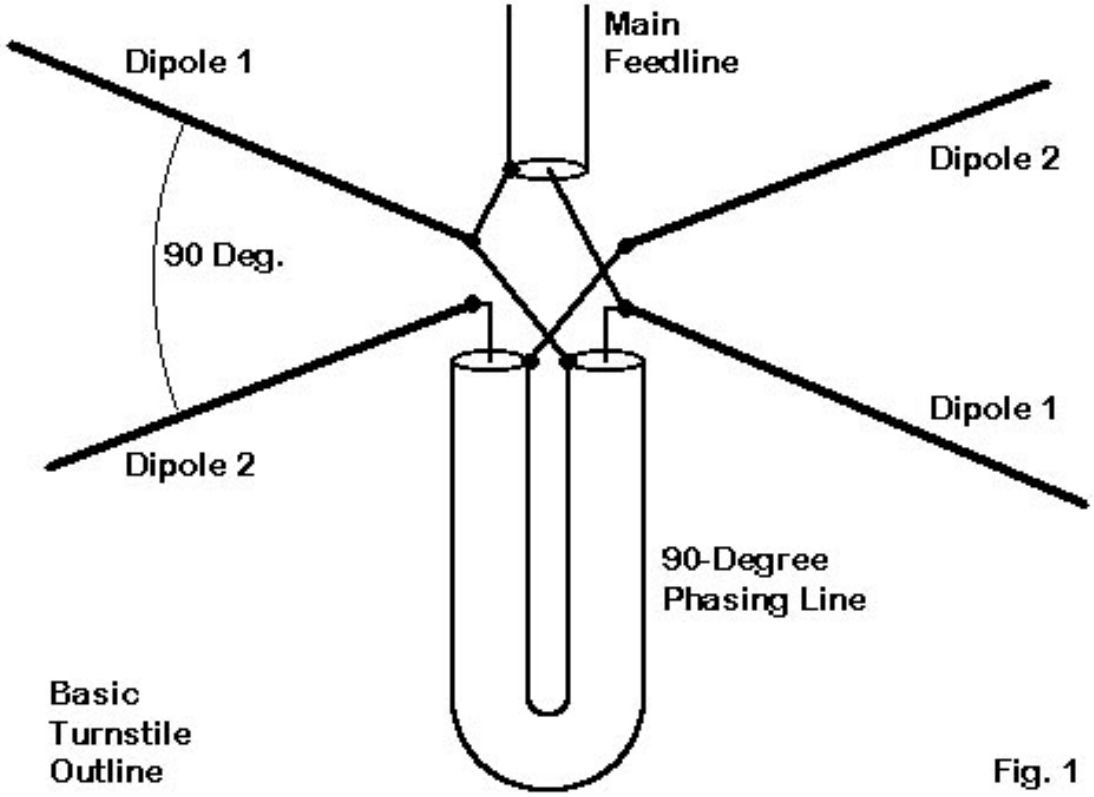

Fig. 1

Since the impedance of a center fed dipole is around 70 ohms, then the 90-degree phasing loop can be made from RG-59 coax and should be ¼ wavelength long. These dipoles are connected in parallel; therefore the impedances will combine like parallel resistances using the familiar formula

$$Z_T = \frac{Z_1 \, Z_2}{Z_1 + Z_2}$$

Where Z_1 is the impedance of one dipole, Z_2 is the impedance of the second dipole, and Z_T is the impedance of the turnstile. In this case $Z_T = 35$ ohms.

If the turnstile has a non-reactive load of 35 ohms and we use 52 ohm coax as a feed line to the transceiver then the SWR is given by

$$SWR = \frac{52}{35} = 1.49$$

.

That is, the SWR is about 1.5:1. This isn't too bad if the length of the transmission is not too long. If you find this SWR to be objectionable then a matching device can be placed at the main feed point to match 52 ohm line.

There is an excellent article in the August 2001 QST, pp 38-41, that describes a turnstile such as we have discussed and a pair of Moxon antennas placed at right angles and fed 90 degrees out of phase. The use of Moxon rectangular antennas gives slightly more complication to the construction; however, the crossed Moxon pair will provide a smoother pattern in the radiation dome of the antenna.

We can obtain a more vertical radiation pattern from the dipole turnstile system if we add a reflector below the turnstile. Such a reflector usually consists of a four foot square screen of something like poultry wire or mesh wire attached to a wooden frame. It is recommended that the reflector be placed between 1/3 and 3/8 of a wavelength below the turnstile elements. At 145 MHz, placement of the reflector about 30 inches below the turnstile has been suggested. Placement of the reflector will change the impedance of the turnstile at the feed point, therefore, I suggest that if you plan on adding a reflector, connect your feed line to an antenna analyzer and vary the placement of the reflector below the turnstile to obtain minimum SWR.

The information described in this article will apply to antennas in both the 145 MHz range and the 436 MHz range. An antenna system for satellite operation will require both. Many amateurs mount the transmitting and receiving antennas on a single horizontal bar. Pictures of such antennas are available on the web.