



**Western
Tidewater
Radio
Association**

"HAMTOWN WAVE"

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PO Box 323 Smithfield, VA 23431-0323 <http://www.wt4ra.org>



WTRA QUARTERLY MEETING

COWLING'S RESTAURANT

1278 SMITHFIELD PLAZA

6:30 PM, NOVEMBER 12TH

SPOUSES & OTHER GUESTS WELCOME

BRING A FRIEND

Our Speaker for the evening will be WTRA long-time member, Jarvis Hearn, W4VWH. Jarvis is a retired minister who will tell us about his experiences as a missionary. Having been in Amateur Radio for over a half-century, he is sure to have had many interesting experiences he will tell us about.

We will meet at 6:30 pm and order from the menu, as usual. There will be individual checks with a 15% gratuity added to each bill.

Presidents Corner:

October has brought a number of momentous events for the WTRA, not the least of which is crossing the 50 member milestone! The club continues to grow and flourish we are quite happy about that. Welcome aboard to Lee KB8UD, Casey KI4RUG and Frank K1QM – we are glad to have you aboard and look forward to seeing you at club events soon!

Fred KG4BKI finished the second installment of the Technician Class licensing class. He had two students and we are pleased to welcome Chas Hornbaker to the ranks of amateur radio. Mom Kim is not far behind him either! Welcome to both Kim and Chas. The VE Team also completed another test session in October and we are pleased to report we have 2 new Technicians one new General and one upgraded General as a result of that session. Last but not least in October, we held the first of hopefully many WTRA Technical Workshops. This one was titled Antennas 101 and we spent about 3 hours learning about basic antenna theory and practices, and then moved outside and hoisted and tested 3 wire antennas. Each was checked with the MFJ and Autek antenna analyzers, and one was even put on the air for a QSO in the Pennsylvania QSO party. It was a very good workshop and please don't be shy about letting us know what other topics you would like to see covered in technical workshops.

As I sit composing this on Sunday morning, I am awaiting sunrise in Portland, OR, for a friend of mine to show up on the air with his brand new HF setup. If you happen to run across James KE7JIJ on the air, please give him a special welcome.

It is contest season and many fine HF contests are coming up. November brings my favorite – ARRL November Sweepstakes. Whatever your favorite activity, get on the air and have some fun! See you at our next club meeting Monday, November 14, 2007 at Cowlings in Smithfield.

**73 for now & see you on the air!
Chris – N4KIT**

The Exam Room:

REMINDER: The NCVEC Question pool committee has released the regularly scheduled revision of the General class question pool. The new pool consists of 486 questions and one figure and was released in early January. The new pool is effective on July 1st, 2007. Copies of the new pool and the figure graphic may be obtained from <http://www.w5yi.org/page.php?id=24> . If you are working on your General upgrade, be sure to keep this in mind, as new exams are now in effect!

Upcoming VE sessions:

None scheduled at press time

RECEIVING ANTENNAS

One old saying is that you can't work'em if you can't hear'em. That is axiomatic, of course, but the question is: How can you improve your chances of hearing stations that are now down in the noise level? What you need is an antenna that picks up more signal than it does noise.

On the higher HF bands, having a good beam antenna at the optimum height is about as good as it gets, but down on 80 and 160 meters, where weak signals are the norm anyway, there are receive-only antennas that can give you an edge.

For as long as I can remember and until recently, the Beverage antenna has been the only non-reciprocal antenna design available. That is, it is not used for both transmitting and receiving. The Beverage antenna was invented by Harold Beverage back in the twenties. In its simplest form, it is a long (several hundred feet) single wire only a few feet above the ground. Its popularity is obviously limited by the large amount of real estate required.

More recently, other designs have been introduced, notably the Ewe and the K9AY loop. One of the things they have in common is that they all are terminated by a low-wattage resistor connected to ground. Another is that they pick up less noise. However, they also pick up a lot less signal, so an outboard pre-amplifier is usually required. Having tried all of these receiving antennas with varying results, I will tell you how they turned out.

When an article by Floyd Koontz on the Ewe antenna was published in QST several years ago, I tried one with significant results. In contests, many European stations were worked on eighty meters that were not readable using the transmitting antenna, which, incidentally, was a four-element wire beam. The Ewe has the shape of an inverted U and is small enough to be erected on most any city lot. It is terminated by a non-inductive resistor at the far end (away from the transmitting station), which is typical of wave antennas. None of the more recent Ewe antennas I have tried have worked that well. In general, wave antennas are fussy about ground conductivity in their vicinity, so results are quite unpredictable.

A 500 foot long Beverage was erected at the present QTH, hoping that it would help my eighty meter receiving situation where I desperately need a few more zones for the Five-Band Worked-All-Zones Award. It was a wonderful antenna for 160 meters with a front-to-back ratio of several S-units. However, it didn't work any better on eighty meters than my half-square transmitting antenna. Suspecting that it may be excessively long for eighty meters and wishing to cover both the long and short paths to Asia, I cut it in half, resulting in two separate Beverages. Again, the results were very poor, but now poor on both eighty and one-sixty. That antenna has now been abandoned for the time being.

My present project is a dual-loop system, invented by Gary Breed, K9AY. It has been the most labor intensive receiving system yet. It consists of two wire loops, each with about 85 ft of ordinary wire in the shape of a diamond and suspended from, in my case, a tree. My spud-gun made getting a line over the tree a fairly simple matter. The time consuming part was building the control system for switching directions of the array. Two relays in a weather-tight box at the base of the antenna connect the feedline to one loop or the other and reconnect the terminating resistor in the desired leg of that loop. The resistor must be non-inductive with a value of from 200 to 1000 ohms. A slick way to see if it is non-inductive is to connect it to an antenna analyzer as if it were an antenna. A 1000 ohm carbon potentiometer makes it easy to experiment with the value of the terminating resistor.

In the shack, the coax from the antenna goes to a four-position switch-box housing a clever system for operating the relays through the center conductor of the coax. The four compass directions require the following relay combinations: both de-energized, one energized, other energized, both energized. The corresponding voltage on the center conductor are: no voltage, positive voltage, negative voltage, and, for the fourth direction, AC

voltage. Silicon diodes in both of the boxes take care of steering the selected voltage to the desired relay or relays. Most of the system was home-brewed with parts from the junk box.

How does it work? So far, it has not lived up to expectations. It does have an extremely large front-to back-ratio on broadcast-band stations, but it does not receive any better on eighty meters than my half-square transmitting antenna. I have not experimented with the value of the terminating resistor yet, so there is still hope that this antenna will do the job for me.

The time for low-band DX is right now, when sunspot activity is at a minimum. High sunspot activity is well-known for what it does for the higher HF bands, but what is lesser understood, is that higher ionization levels increase absorption that makes weak signals even weaker by the time they arrive here at W4PRO.

Jim Wise

BEWARE OF EAVESDROPPERS (Provided by Janet Wielinga)

Last Summer I discussed, over a local repeater, my plans for a trip to Florida with my family. When we returned, our home had been burglarized. VCR, tape deck, coins, silverware, etc. were gone, and of course my Ham radio equipment was missing. I did have my SSN and call sign on most of the rigs.

Two weeks later, the police recovered a stolen car in the next state. The trunk was filled with stolen property. On the front seat was a scanner programmed full of local repeaters and a 1992 Call Book with over 100 calls checked in a three state area.

Beware of the EAVESDROPPERS; do not give out personal information over the air waves.

"Too Embarrassed To Sign"

NEWSLETTER EXTRA

12-07-1941, Pearl Harbor Attack Turn your speakers on, hold down CTRL and click here: <http://oldbluejacket.com/12-07-1941.htm>

Officers and Committee Reports

Treasurer's Report / Membership / Repeater Report (Dick Harrell):

Treasurer's Report (by W4RBH):

Main Account Balance as of 10/20/2007	\$ 1071.57
Cash waiting deposit	\$ 31.00
Remaining budgeted expenses for 2007	\$ 102.25
Recent expenses:	
SERA Dues	\$ 20.00
Domain Name Renewal	\$ 9.15
Stamps and Postcards	\$ 15.85
VE Program Account Balance as of 10/20/2007	\$ 118.03

Membership Report (by W4RBH): Currently there are 50 members on roll. Everyone please welcome our newest member, Lee Poe, KB8UD. Lee's QTH is Smithfield, VA. There is currently one additional application pending.

Repeater Report (by W4RBH): The WT4RA repeater (147.195+) and remote base system continues to function normally. Output power from the repeater amplifier remains at 130 watts. Members are encouraged to check-in to the weekly net sessions each Thursday at 7:30 PM.

I'm sure that all WTRA members are familiar with the use of the repeater auto patch and speed dial features, but I haven't recently heard anyone using the reverse auto patch, so maybe it's time for a discussion of this feature.

The reverse auto patch allows anyone to call WTRA members via the repeater phone line; however, it is actually the licensed station being called that maintains control of the patch.

Here is how it works.

1. A person wishing to reach you via the repeater patch should first listen to the repeater to verify that it is not in use. This step may be skipped, but you run the risk of possibly interfering with a QSO or net, so all users of the reverse patch are encouraged to listen to the repeater first.

2. Dial the repeater phone number and wait for the repeater controller to answer. The controller will answer with a single beep.
3. Enter the 4-digit reverse phone patch access code followed by the last two digits of the speed dial number for the member being called.
4. The repeater will key up and announce “Call for [member’s call sign]” several times.
5. If the member being called is monitoring he (or she) is now aware that there is a call waiting and it is only necessary for the called member to enter the reverse auto patch answer code to place the calling party on the air. The remainder of the call acts like a normal auto patch, with the “#” being used to conclude the call.
6. Following the calls completion, the called member should identify with his call sign and advise that he is finished with the patch.

The repeater phone number, reverse patch activation and reverse patch answer codes are included in the information packet provided to all WTRA members.

Virginia Air and Space Center Amateur Radio Group, VASC ARG Report (by W4RBH): On October 16, 2007, I e-mailed a report to WTRA members covering the fall VASC ARG Directors Meeting. However, with all of the recent new members now may be a good time for a quick update on the VASC ARG.

The VASC ARG operates a the second floor of the Virginia Space Center in Hampton. The consists of one cabinet of to demonstrate HF SSB, HF and UHF FM, and Satellite satellite station is the focus of and is capable of automatic with the message store and satellites. Communication is possible directly with the International Space Station and the Space Shuttle. The second cabinet provides some equipment displays and slide and video shows. The final



display on Air and display equipment PSK31, VHF Radio. The the display operation forward also

cabinet has a really good display of vintage radio equipment. The satellite model hanging over the display is a quarter scale model of AO-40.

The display is manned by volunteers from the sponsoring clubs and serves to show off amateur radio to visitors and school groups.

The following local clubs currently sponsor the display:

CARS	Chesapeake Amateur Radio Services
DXCC	DX Century Club
VASC ARG	VASC Amateur Radio Group
MPARC	Middle Peninsula Amateur Radio Club
PARC	Peninsula Amateur Radio Club
PHARC	Portsmouth Amateur Radio Club
QCWA	Quarter Century Wireless Assoc – Tidewater Chapter 119
SPARK	Southern Peninsula Amateur Radio Club
TRCI	Tidewater Radio Conventions
VBARC	Virginia Beach Amateur Radio Club
WTRA	Western Tidewater Radio Association

All WTRA members are invited to visit the Virginia Air and Space Center and to spend some time at the display. Anyone wishing to volunteer some time as a station operator should contact me at w4rbh@wt4ra.org .



The Dirty Balun and 3 Wire Installed in Attic of the Harvey Villa



Emails Received

Sounds like an interesting meeting. I am looking forward to it.
Anne (w4ajh)

Please submit items you would like to be in the WTRA Newsletter to w4rrh@wt4ra.net no later than the 20th of the month. WHEN YOU SEND ANYTHING, PLEASE SEND IT TO w4rrh@wt4ra.org DO NOT SEND IT TO wt4ra@wtr4ra.org OR USE THE REFLECTOR AS THAT MAKES IT AVAILABLE TO CLUB MEMBERS BEFORE w4rrh USES IT. Thanks.

