

February 2008 Vol 62 No 02

*The*

# Modulator

Newsletter of The Baltimore Amateur Radio Club, Inc



The Hamboree Is Coming!

What are YOU doing to  
Help??

Come to the meetings Every Wednesday this Month.

Membership Feb 6 and 20, Hamboree Committee WITH YOUR  
HELP on Feb 13 and Feb 27

# The Modulator

Published by *The Baltimore Amateur Radio Club, Inc.*

P.O. Box 120

Reisterstown, MD 21136-0120

For Information, call **410-526-4263**

Club Web Site: <http://www.baltarc.com>

Hamboree Web Site: <http://www.gbhc.org>

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Vice President—Vacant \*

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Members at Large Hale Adams N3NYC +

Phil Hebert N3CDY \*

Norm Lorenzen KB3KZG +

\* Term Expires Sept 30, 2008. + Sept 30, 2009

## **COMMITTEE CHAIRMEN**

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Items for *The Modulator* should be sent by the 5th of the previous month, to:

*The Modulator*, 3607 Klausmier Rd  
Baltimore, MD 21236

or email to [modulator@baltarc.com](mailto:modulator@baltarc.com).

EMAIL is preferred for submissions

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## CLUB MEETINGS

The club meets at 7:30 pm. the first and third Wednesday of every month in the club facility at 12360 Owings Mills Blvd., 3/10 mile south of Bond Ave. See ADC map page 16-D8. Complete directions web page <http://www.baltarc.com/directions.htm> or call the Club Facility at 410-526-4263.

## UPCOMING AGENDAS

The meeting during the first week of the month is generally a business meeting. The meeting on the third Wednesday of the month is generally a program meeting.

**November 7th** Business Meeting

**November 14th** (Moved from third Wednesday due to Thanksgiving Holiday)

Tentative Speaker on exciting operating possibilities and techniques

**December 5th** Business Meeting

**December 19th** Program TBD

**January 2nd** Business Meeting

**January 23rd** (4th Wednesday) BARC Minifest at Timonium Fairgrounds

## EDITORIAL POLICY

It is our policy to use original works as much as possible. We prefer not to reprint material that is readily available in other sources, unless it is critical to have the widest dissemination possible.

We will be happy to print a link along with your comments to help make people aware of other readings you have found.

We will edit your submission to correct spelling and significant grammar errors that affect the readability of your submission.

FOR SALES are accepted free, for publication for two months at a time.

### BARC REPEATERS AND NETS

The Baltimore Amateur Radio Club Repeater System **W3FT**

#### Frequency(In/Out) PL

146.07/146.67      107.2

222.64/224.24      107.2

44.625/449.625      107.2

**simplex:** 146.55

#### Nets:

NTS Net (Baltimore Traffic Net) W3FT at 6:30 PM Daily  
Skywarn hosted on BRATS 147.03+ As Needed

## PRESIDENT'S QSO

Welcome to our most important month of the year. Our successfully Minifest is over and now we must focus all attention on the GBH&C Hamboree featuring our Fines Art and Anime exhibition. Your committee chairpersons are working long hours to make our single major fund raiser a success. Your help is also needed. Please attend as many club meetings and Hamboree meetings this month as possible. Each Wednesday night in February there will be food and refreshment for you as we organize for the Hamboree.



The hamboree committee meeting on February 13th is especially important. We need volunteers to get some phone numbers to call, to try to sign up some vendors! The hamboree also thrives on volunteers at the event itself. We need people most especially for:

- Watching doors from 5 to 11 PM on Friday, and from 5 AM to 8 AM on Saturday. This helps keep the vendors' displays safe while they set up, so that unauthorized people cannot enter.
- We also need ticket sellers from 5 30 AM forward on Saturday and Sunday. We especially need ticket sellers until 12 noon.
- We also need a few hardy souls on Saturday and Sunday morning, around 10 AM, to check tailgating to be sure everyone using a space has their tickets.

On another front, the legislature is in full swing. We again have pro-amateur radio bills on the docket. A hearing was recently held where BARC and amateurs were well represented. Jim Cross reports it well on page 5, please take a look. Your membership in ARRL is a lot more than QST. It provides the united front (See the report from Jim Cross) of MANY people: Voters, and now, after several years of effort by Tom Coates (N3IJ) and some others, we're finally being heard and being taken seriously. Even though you may not always agree with some things from the ARRL, these efforts alone are worth membership, as they look out for all of so we can continue this great hobby and service.

Once again, please participate in your club and participate in the Hamboree - it's lots of fun for all.

*Marty* KB3MXM

## ARRL SECTION REPORT

By Jim Cross, WI3N, Section Manager, MDC

We had a good hearing on SB 80 with the senate Judicial Proceedings committee January 24. (Background on SB80: [n3ij.home.comcast.net/maryland.html](http://n3ij.home.comcast.net/maryland.html)) When we started on this project three years ago, an experienced politician told us that persistence gets you respect with legislators. They want to see if ignoring you will make you disappear. When they find out -- and it may take several years -- that you aren't going away empty-handed, they become much more respectful. Then it's necessary to show that you speak for a large number, not just yourself. Even before our witnesses began to speak, we felt the atmosphere was more receptive. For one thing, we were first on the agenda instead of last as in past years.

I spoke on Amateur Radio in emergencies and the benefit to the new HOAs of having an established connection with the EOC. I also referred the senators to vivid written testimony from Jerry Herman, N3BDW, retired manager of the Hurricane Watch Net. (Jerry was unable to attend.) Rick Hambly, W2GPS, described how, at age 10, a chance encounter with a neighbor who had a big antenna led to an MSEE and a very satisfying engineering career. The father-son team of Bob and Johnathan Mayo, (KB3NVH and AB3FX) described how exciting it is to be a new ham with an Extra and how satisfying it is to help your son acquire the habit of life-long learning and a possible career interest. Bob said it's also reassuring to know the new ham will be exploring the world safely via amateur radio instead of the Internet. Tom Coates, N3IJ, discussed the public policy issues and reminded the senators that the both the U.S. Congress and the Maryland Senate had passed resolutions urging all levels of government to "encourage and facilitate amateur radio as a public benefit."

No opponents testified. This may be because in November, we met with a representative of the Community Associations Institute and explained how the new HOAs would be much safer with emergency communications in place next time a bad storm takes out the lights and blocks the streets. The Columbia Association sent us a statement saying they have no reason to take a position on the bill. In the previous sessions, both groups appeared to be potential opponents. Last summer, I secured from ARRL HQ a copy of the MDC Section's e-mail database coded with each ham's legislative district, so I no longer need to bother the entire MDC section when the time comes for a few dozen of you to contact a specific legislator. Now, when I ask you to communicate with a legislator, I can include all the information you'll need.

For about a quarter of us in MDC, the time mentioned above has come. At this point, nothing has more effect on the future of the bill than the amount of e-mail our senators on the committee receive from us. Sen. Klausmeier emphati-

*(Continued on page 6)*

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cally reminded us of this after the hearing. I'll send all the details soon to those of you with senators on the committee. Please take action when you receive it. Thank you.

73, de *Jim Cross*, WI3N, SM MDC

## **PUBLIC SERVICE REPORT**

We are all involved in the same hobby. Some have been in Amateur Radio for years, others are brand new. Some work code, while others voice. The reason for getting into Amateur Radio is as varied as each individual. Along with being an “ambassador” for the United States and Amateur Radio, one of the primary aspects of Amateur Radio is Public Service.

Public Service in Amateur Radio involves providing communications for virtually any public event, such as a marathon, or communications during a disaster. We all remember the tragedy of the World Trade Center in New York City. Amateur Radio played a vital role in the communication of information. Bob Hejl, W2IK, was one, if not the first Amateur Radio operator on the scene of the disaster. He began setting up networks and contacting other operators to provide the necessary communications. This is public service.

Over the past year, Baltimore Amateur Radio Club has participated in numerous events, such as the Baltimore Marathon, the Northern Central Trail Marathon, Baltimore County Water-front Festival, North East Triathlon, American Diabetes Association Walk-A-Thon, and many other events. When we work one of these events, the served agency will usually give us a t-shirt and occasionally some other “thank you” item. Sometimes, food is provided. But this is not the real reason why we are doing these events. We do these events to give back to the community and to promote the club and Amateur Radio. The hours can be long, especially for late sleepers having to get up early, driving to the site of the event, working all day...but at the end of the day, when the event is over, and the representative from the served agency comes to you and says, “Hey, you all did a fantastic job. We couldn’t have done this without you.” American Diabetes Association Walk and the Northern Central Trail Marathon were just two such events. This is what it’s all about.

Working a parade, marathon or other such event is pretty straight forward. An assignment is given to an operator, the operator proceeds to the assigned location and reports relevant information to net control. Although, this type of communications is a much looser net compared to emergency communications, protocols are still followed.



*AA3SB and KB3NYW at the American Diabetes Association Walk-A-Thon*

Emergency communications require much stricter protocols to provide a more efficient transfer of information. The work of putting together a marathon is actually prior to the event when a person associated with the served agency is contacted and an agreement is worked out for providing communications for the event. Meetings are attended, emails are sent and volunteers are gathered for the big day. There is a lot of work involved by it's worth it in the end.

Or imagine what a parent would say when their child comes home from school and they ask what they did today and the child excitedly answers, "We spoke to one of the astronauts on the International Space Station." Or how about the expression on a child's face listening for the first time to a ham talking with someone on the other side of the

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# February 2

Sun	Mon	Tue	Wed	Th
Upcoming: Hamboree March 29-30 Setup is Friday, March 28				
3	4	5	6 Club Mtg 730pm	7
10	11	12	13 Hamboree Mtg	14
17	18	19	20 Club Mtg 7:30 PM	21
24	25	26	27 Hamboree Mtg	28

# 008

<b>u</b>	<b>Fri</b>	<b>Sat</b>
	<b>1</b>	<b>2</b>
	<b>8</b>	<b>9</b>
	<b>15</b>	<b>16</b>
	<b>22</b>	<b>23</b>
	<b>29</b>	

world. This is what it's all about.

Another part of Public Service is emergency communications. Amateur Radio has provided communications formally to Federal, State and Local governments during an emergency since 1935. The two primary organizations which provide these services are ARES (Amateur Radio Emergency Service) and RACES (Radio Amateur Civil Emergency Service). An emergency may be anything from a nuclear attack to severe weather.

American Radio Relay League offers courses in emergency communications. Most of these programs have continuing education credits. The Emergency Management Institute in Emmitsburg, Maryland offers National Incident Management System courses. These help the radio operator understand the chain of command which provides a more efficient method of information transfer.

OK, hopefully your appetite has been whet. A concerted effort is being made to expand the club's participation in Public Service. Here's a few of the things in the works. Setting up an amateur station at one of the malls to promote Amateur Radio, a pool of volunteers to help with public events, going to the Baltimore County and City Boards of Education to offer the chance for a school to communicate with the International Space Station, to work more closely with other clubs in the area during events and emergencies, and possibly a van which we can equip for Field Days, emergencies, net control at events, or take to a mall or school.

Some may view these as pretty lofty goals. Yes, maybe they are, But I think the Baltimore Amateur Radio Club is up to the task to the make these goals a reality. The 2008 event season is not too far away. Let's see if we can show our colors and participate in as many of these events as we can. There will be more information soon.

*Henry* KB3NYW

### **HT OPERATION TIPS**

We have noticed that the human body tends to block RF on the 2 meter band. When using an HT, the signal may be degraded if your body is between the receive site and the HT antenna. This has been observed on at least 3 different occasions. When deploying for public service events or emergencies, it is wise to know where your repeater receiver sites are located before you deploy so that you can optimize the HT to repeater signal levels.

*Joe Tracey* KB3LNM

# PROPAGATION WORKSHOP

This month I'd like to take the time to introduce myself and discuss what this series will cover in the coming months. I have been a licensed Ham since March of '95 and currently hold a General class license. I'm a member (although not as active as I'd like to be) of BARC and I live in Reisterstown.

What qualifies me as an expert on propagation you ask? **NOTHING!** I'm not an expert, that's the point of this, anyone can take advantage of the resources that are readily available if you take some time to understand what you're seeing, what tools there are to use and how to apply them to the hobby of amateur radio. These are the things I'd like to cover going forward.

## HF Propagation

Let's start by understanding the daily indices – I'm sure most of us have seen this "Sun Spots: 13, Flux: 80 A-Index 1, K-Index 0". What exactly does all that mean and how can I use it to improve my chances of making contacts on the HF bands?

What I don't want to do is overwhelm with too much scientific mumbo jumbo, first I'm not qualified and that's not my goal here but there are some things that will help to make sense of "the numbers".

The easiest way to use the numbers would be to plug them into a piece of prediction software that's readily available on the internet (I'll discuss that in a later issue), and let it do the work for you. Or you can use your own onboard computer to interpret the data.

## A and K indices

There are two indices that are used to indicate the level of geomagnetic activity that affects propagation, the "A" and "K". Because of several complicated and possibly boring factors the K index cannot be averaged to give a long term view of the earth's magnetic field so we also have the A index for the daily averages.

Table 1 below can be used as a guide to determine conditions. Numbers of 2 to 4 show unsettled and/or active magnetic conditions and possible degradation on the HF bands. Conditions worsen as we move up the scale. 5 would be a minor geomagnetic storm, 6 a larger storm and 7 thru 9 a major storm resulting in HF blackout conditions.

## Solar Flux

High solar flux is good, the higher the better for the HF bands and 6 meters, **if** it's maintained for several days. This gives the ionization in the correct atmospheric layer (F2) a chance to build up. A value of 150 will mean good HF conditions but 200 or more would indicate its peaking and the MUF or maximum usable frequency will rise.

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The higher levels of geomagnetic activity as reflected by the A and K indices, has a negative effect on the Maximum Useable Frequency (MUF).

Bottom line, for the best band conditions, look for a Solar Flux above 150 for several days with a K index below 2. When you see this, look for me on the Bands!!

As most of us know we are currently at the bottom of this eleven year solar cycle and two or three years from now hopefully we won't have to worry too much about the "numbers" and will be able to work the world on just a few watts.

That being said, don't think that just because the "numbers" don't look good means you can't make contacts, on the contrary, I make DX contacts daily all over the world on one band or another. It just means you'll need to maximize your equipment, listen harder, call more and try to time your attempts better. I hope this series will help some to that end.

I realize there is a great deal more information on this subject\* that has not been covered here. This is simply meant to help those new to HF getting a kick start.

Good luck and Good DXing,

*Todd* **N3VMD**

**TABLE 1**  
**A and K Values**

<u>A</u>	<u>K</u>	<u>Comments</u>
0	0	Quiet
2	1	Quiet
3	1	Quiet
4	1	Quiet to unsettled
7	2	Unsettled
15	3	Active
27	4	Active
48	5	Minor storm
80	6	Major storm
132	7	Severe storm
208	8	Very major storm
400	9	Very major storm

\*For an excellent full length article with considerably more detail you may want to read "Understanding Solar Indices" by **Ian Poole, G3YWX**  
<http://www.arri.org/tis/info/pdf/0209038.pdf>

## **SKYWARN IS OPEN TO ALL**

**From:** <http://www.erh.noaa.gov/lwx/skywarn/join-skywarn.html>

## **WHO IS ELIGIBLE TO BECOME A SKYWARN™ SPOTTER?**

1. You must be at least 14 years old
2. You must be able to observe the weather (though no instruments are required)
3. You must have access to a telephone to call in reports, though reports are accepted through e-mail and the amateur radio network.

## **HOW DO I BECOME A SKYWARN™ VOLUNTEER**

**SPOTTER?** You must take our SKYWARN™ "Basics I" class. This class is a 3-hour seminar that teaches you the basics of how SKYWARN™ operates, how to spot severe thunderstorms and tornadoes, what to report, how to report, and when to report it. At the end of the class, you are given a special SKY-WARN™ ID card with reporting instructions. There is **no cost** for the class. Most classes are held at the Forecast Office in Sterling, Virginia near Dulles Airport. The class includes a tour of our facility. Some classes are offered at "host locations" around the region. Other "optional" classes are provided for our spotters to learn more about hurricanes, winter storms, radar, and floods.

## **HOW DO I REGISTER FOR A CLASS?**

People are requested to pre-register for classes. Classes are announced on NOAA Weather Radio and here on our website. Call our office at 703-260-0205 select option 5 to register for a class. Or email [Nikole](mailto:Nikole) See the section on the Skywarn™ training class schedule for more details.

## **HOW CAN MY ORGANIZATION HOST A SKYWARN™ CLASS?**

Some classes are held in other cities when sponsored by the local county emergency management office, the local Red Cross, or a local amateur radio or RE-ACT club. Really, any group can host a class if -

*(Continued on page 14)*

*(Continued from page 13)*

1. they can promise at least 25 people in attendance
2. if less than 50 people, they will allow people from outside their group to attend
3. their facility will support holding the class and meets audio visual requirements which include a TV and VCR and a screen or white wall to project slides, overhead transparencies, or computer show onto.

To organize a class, contact us using the same methods described for [registering for a class](#).

## NATIONAL WEATHER SERVICE ACCEPTS SNOWFALL REPORTS

As part of our role as a Skywarn Spotter, we received this message:

Thanks to all of your snowfall reports. To see the latest list, you can check it out at <http://www.erh.noaa.gov/lwx/products/?prod=PNS>

Or, you can always navigate to it by going to our webpage <http://www.weather.gov/washington> <<http://www.weather.gov/washington>> and clicking on 'Public Info Stmtnt' on the blue left hand side list. The 11:15pm statement from last night will be updated later today with the final summary list (with some new reports).

Thanks again!

Chris Strong  
Warning Coordination Meteorologist  
National Weather Service  
Baltimore/Washington Forecast Office

## LISTEN TO NOAA WEATHER RADIO:

[Baltimore-Washington Forecast Office broadcasts over 6 transmitters](#)

Baltimore (Pikesville) MD -- KEC-83 on 162.400 MHz at 1000 Watts

Hagerstown (Clear Springs) MD -- WXM-42 on 162.475 MHz at 1000 Watts

Manassas (Independence Hill) VA -- KHB-36 on 162.55 MHz at 1000 Watts

Moorefield WV -- WXM-73 on 162.400 MHz at 500 Watts

Frostburg MD -- WXM-43 on 162.425 MHz at 300 Watts

Charlottesville (Covesville) VA -- KZZ-28 on 162.450 MHz at 1000 Watts

Washington DC -- WNG-736 on 162.450 MHz at 300 Watts-**not yet commissioned**

From <http://n3wke-ve.home.comcast.net/>

## **VE Report - January 2008 - Happy New Year**

A Laurel ARC Volunteer Examiner Coordinator ([LARC VEC](#)) affiliated testing session was held at the [BARC](#) Meeting and Training Facility in Reisters-town, MD, on Sunday, January 6. Four people took exams for either their initial ham license or to upgrade their license.

The examinees achieved the following:

### **Became new Technician Class licensee**

Geoffrey Gilbert **KB3QEX**  
Dott Schisler **KB3QEV**  
Stephen Wissow **KB3QEW**

### **Became new General Class licensee**

Norman Lindenberg **KB3QEU**

### **Overall, five tests were passed out of five administered:**

Element 2 (Technician Written): 100%  
Element 3 (General Written): 100%  
Element 4 (Extra Written): N/A

### **Thanks to the Volunteer Examiners who made the session possible:**

Hale Adams N3NYC, Bill Dobson N3WD, Don Friedmann W3QYL, Russ Kaufman N3YI, Ed Kriston K3CAV, John Lynch WA3G, Jerry Matthews N3XWT, Robin Schaefer AA3SB, Rusty Schaefer N3WKE, Doug Wittich N3VEJ.

Next testing session at the BARC facility is Saturday, February 2, 2008. Registration opens at 1:30 PM and testing starts at 2:00 PM. For information about the next exam session, please send email to [n3wke-ve at comcast.net](mailto:n3wke-ve@comcast.net).

73, Rusty N3WKE  
VE Team Leader

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