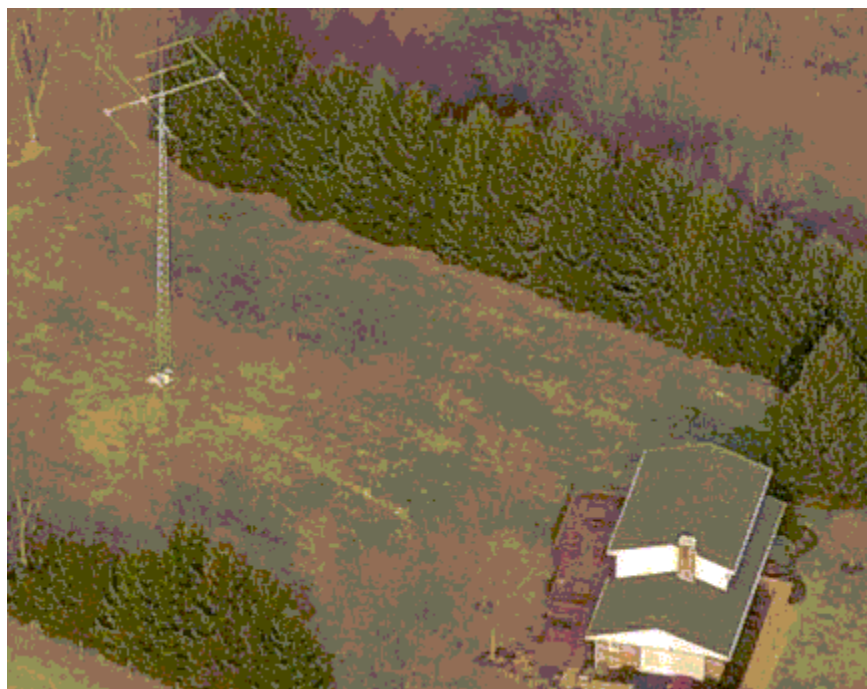


May 2008 Vol 62 No 05

The

Modulator

Newsletter of The Baltimore Amateur Radio Club, Inc



Inside: Baltimore County Tower Legislation!

Next Month: Dayton Report

Plan to work Field Day—see calendar

The Modulator

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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 *Wittich* at *Comcast.net*

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

444.625/449.625 107.2

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

Greetings,

When I joined BARC I knew this was the best club in this area. The members welcomed me with enthusiasm and shared their knowledge and experiences with me. As a Technician Class operator, with interest in Satellite and Digital communication, I immediately found other HAMs willing to help me pursue my interest. It also opened the door to other facets of HAM radio and now as a General Class I enjoy this hobby even more. Begin your HAM fellowship at BARC.



Spring brings warmer weather and our thoughts turn to outside activities. Many members have been preparing all winter to begin their outside projects. Ask your friends here at BARC if you need help—many are willing to help and many have a wealth of knowledge to share with you. If we work together great things will happen.

Soon we will be gearing up for Field Day June 2008 and your Field Day coordinator is looking for members to help. This is a fantastic opportunity to learn more about radios, antennas and operating from remote locations. This is a family event with opportunities for all. Consider bringing a friend or family member so they can see first-hand the world of amateur radio. Please attend the next regularly scheduled meeting to learn more.

Many of us will be attending local hambores and related events. Dayton is just around the corner so keep us in mind when you go. Bring your experience back to BARC by sharing your pictures and stories at the next regularly scheduled meeting. Please support your HAM friends and their clubs by attending as many of these events as possible. Invite them to the GBH&C next year too.

BARC is looking for members willing to join the Executive Board and committees. If you are interested in the club activities or have interest in knowing how to run a great club like BARC then I would like to hear from you. Contact me after any regularly scheduled meeting.

Our regularly scheduled meeting occurs on Wednesday evening. Check the BARC calendar to the next meeting and I hope to see you there. 73

Marty **KB3MXM**

AMENDMENTS TO BALTI-MORE COUNTY ZONING

Members of the Baltimore Amateur Radio Club are working to pass amendments to Section 426a, the Baltimore County zoning regulation for amateur radio antennas. It is vague and difficult to administer. Zoning officials said as much more than once during W3LL's ordeal. At this writing, amendments have been drafted and councilmen have been asked to co-sponsor them.

The principal problem lies with Section E., which states:

A radio operator antenna may not be higher than the lesser of 100 feet or the horizontal distance to the nearest property line above grade level.

Eventually, the authorities in W3LL's case gave up trying to figure it out and went to the regulation for commercial antennas. Since no precedent or "case law" was created during this litigation, other Baltimore County amateurs could repeat W3LL's costly, unpleasant experience. He and I examined the ordinances used in nearby large jurisdictions. We decided that it would be easier and just as good to see if we could get my councilman, Vince Gardina, an engineer with a strong interest in land use matters, to sponsor an amendment along these lines (new language in caps, deletions in brackets):

A SUPPORTING STRUCTURE PLUS ATTACHMENTS
FOR A radio operator antenna may not be higher than the lesser
of 100 feet or the horizontal distance FROM THE BASE OF
THE STRUCTURE to the nearest property line [above] AT
grade level.

Careful reading of Section D (below) makes it look like an amateur would need a variance to run a wire from back yard to the tree in the front yard.

A radio operator antenna may not extend closer than the front building line to any street on which the lot fronts.

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May 2008

Sun	Mon	Tue	Wed	Th
Upcoming: Field day, June 28-29 Testing, June 7				1
4	5	6	7 Club Mtg	8
11 Mothers Day	12	13	14 Hamboree Meeting 7:30 PM	15 Dayton Hamven
18 Dayton Hamvention	19	20	21 Club Mtg	22
25	26	27	28	29 Roches Atl Di Conv

3

	Fri	Sat
	2	3
	9	10
tion	16 Dayton Hamvention	17 Dayton Hamvention
	23	24
ter v	30 Rochester Atl Div Conv	31 Rochester Atl Div Conv

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It seems very likely that whoever drafted Section D intended to keep structures out of front yards; it is possible that they wished to keep elements of large arrays from overhanging the front wall; but very unlikely that they expected a ham to get a zoning variance before attaching a wire to a tree. That was probably a drafting error in 1998. Today, it's another opportunity for a neighbor to harass an amateur. The classic wire from a tree, tall fence post, etc. in the back yard to the tree in the front yard of the amateur or a cooperating neighbor, with the feedline going into a back bedroom window, is an easy way for a beginner to get on the air. When we mentioned the problem to the councilman, he asked about the wire size, so we referenced the electrical code. In Table 810.52, the NEC specifies AWG from 10 to 14, depending on whether the wire is more or less than 150 feet and whether it is made from copper or copperclad steel. This was the result:

A radio operator antenna, UNLESS MADE OF WIRE NO LARGER THAN THE SMALLEST SIZE SPECIFIED FOR THE PURPOSE IN THE ELECTRICAL CODE, may not extend closer than the front building line to any street on which the lot fronts.

Note that it more likely that we will use wire that is smaller than specified than larger. It seems unlikely that an unfriendly neighbor will blow the whistle because our wire is too small.

These changes do not achieve perfection,

(Continued on page 9)

PUBLIC LAW 103-408

This joint resolution of the U.S. Congress was passed in 1994. It may appear similar to the many resolutions honoring parsnip growers, tire retreaders, fly fishermen, etc., that the Congress passes each year, but I am told that courts have reacted approvingly to the final clauses:

“Reasonable accommodation should be made for the effective operation of amateur radio from residences, private vehicles and public areas, and . . . regulation at all levels of government should facilitate and encourage amateur radio as a public benefit.”

You can see the whole thing by Googling on “P.L. 103-408” and selecting the link to arrl.org.

Generally, I find it worthwhile to point out that the benefits of amateur radio to the state and nation over the past century merit this congressional endorsement. Anyone who expresses doubt should be asked politely to explain why our communities need any protection at all from amateur radio.

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but they do remove some potential time bombs. In theory, minimal changes are more easily passed, although we should recall Yogi Berra's remark, "In theory, theory and practice are the same, but in practice they're different."



Although this article is all about fixing the zoning code, it is important to recall that W3LL visited every neighbor before he applied for his building permits. The only ones who didn't get a chance to hear his explanation are the two who moved in after the permits were approved and later sued. This experience confirms the recommendation in K1VR's book, "Antenna Zoning for The Radio Amateur." He explains in full detail the importance of notifying the neighbors before you begin, and describes how to do it.

PRB-1, with its insistence on "minimal practicable regulation," has been helpful when a councilman wants to micro-regulate. So has a joint regulation of Congress, P.L. 103-408, which encourages "all levels of government to facilitate and encourage amateur radio as a public benefit." More on these expressions of policy appears in the sidebars. Before this appears in print, a recent club presentation and the briefing to the councilmen should be up on baltarc.com.

Tom Coates N3IJ

PRB-1 DECODED:

America's century-long uncritical enthusiasm for technology ended in the 1970s. In the early part of the decade, OSHA and EPA were created and Greenpeace was organized. Later in the decade the Unabomber, who believed technology would destroy civilization, sent his first mail bomb and local governments began restricting and prohibiting amateur radio antennas. ARRL reacted in mid-1984 to the antenna prohibitions by asking the FCC to issue a ruling delineating the limitations of state and local authority over amateur radio. In January, 1985, FCC issued the requested regulation in its final form. It was the first such regulation to come from the Private Radio Bureau, and became known as PRB-1.

(Continued on page 10)

SECTION 426A
Radio Operator Antennas
[Bill No. 30-1998]

- A. A radio operator antenna and related equipment, including any supporting structure, is considered an accessory structure or use and is permitted by right in any zone if the radio antenna and the related equipment meets the requirements of this section.
- B. A radio operator antenna shall be operated by an amateur radio operator who is licensed by the Federal Communications Commission and whose domicile is on the lot where the antenna and the related equipment is placed.
- C. A supporting structure for a radio operator antenna may not be located within 20 feet of any property line.
- D. A radio operator antenna may not extend closer than the front building line to any street on which the lot fronts.
- E. A radio operator antenna may not be higher than the lesser of 100 feet or the horizontal distance to the nearest property line above grade level.

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You can read the entire PRB-1 document and follow its evolution on the FCC website. Here's the important part, the final sentence of paragraph 25 of the 1985 version:

"... local regulations which involve placement, screening, or height of antennas based on health, safety, or aesthetic considerations must be crafted to accommodate reasonably amateur communications, and to represent the minimum practicable regulation to accomplish the local authority's legitimate purpose."

The author of that sentence said a lot in a few words. Regulation must have a "legitimate purpose," it must be the "minimum practicable," and it must "accommodate reasonably" amateur radio. Note that local and state governments can regulate for aesthetics, which is why some of them stipulate a height limit (usually in the 65-120 foot range) above which a variance is required. Selection of a particular limit is apparently a tradeoff between localities' need to regulate for aesthetics via zoning and the requirement for "minimum practicable regulation."

About half the states have incorporated PRB-1 into their statutes. Maryland will do so when it passes the antenna legislation that has been under consideration for the past several years.

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FCC revisited this matter in 1999, 2000, and 2001 when ARRL asked it to extend PRB-1 to include community associations. The FCC refused to extend PRB-1 to cover community associations without authorization from Congress. (Whether this would even be a good idea is addressed in one of the FAQs on the state legislation section of the BARC web-site.) At present, PRB-1 does not cover community associations.

VE REPORT

The April report was in the April Modulator.

SILENT KEY

We are sorry to hear about the passing of two members,

Warner Stortz, K3KQO
Pat O'Conner, N3QLN

INTERNET INTEREST

A note from Myles Carpeneto, K3VTT:

This new site gives a really good view of atmospheric ionization. It's a good interactive graphic for those learning to DX, but it is not real-time, so it is not something that will be used every day by DXers. It might also be useful for showing the effects of coronal mass ejections on our atmosphere.

NASA Science News for April 30, 2008

Today, NASA-funded researchers released to the general public a new "4D" live model of Earth's ionosphere. Without leaving home, anyone can now fly through the layer of ionized gas that encircles Earth at the edge of space itself. All that's required is a connection to the Internet.

FULL STORY at

http://science.nasa.gov/headlines/y2008/30apr_4dionosphere.htm?list19205

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