

HARMONICS



THE VOICE OF THE ROWAN AMATEUR RADIO SOCIETY

October 2007 - Issue 258



SM Report - August

NC AMATEUR ANTENNA BILL EFFECTIVE OCTOBER 1

The North Carolina Amateur Radio Antenna Bill goes into effect on October 1.

The bill requires county and city governments to "reasonably accommodate"

amateur radio communications in their zoning ordinances. Note that local governments can still regulate our antennas, but it should be the "minimum practicable regulation necessary to accomplish the purpose of the city

or county." We need hams in each community to work with their local governments to make sure their area is "ham friendly" and that local regulations don't conflict with the new state law. I've posted several reference documents at www.ncarrl.org, including a copy of the bill and some personal comments on its application. The introductory document includes a list of ARRL's Volunteer Counsels in North Carolina who have volunteered to help hams with antenna and RFI issues. I've also posted a copy of a Power Point presentation describing the trials and tribulations of my own tower construction project in Mooresville. The ARRL's Antenna Restrictions web site has some excellent information:

<http://www.arrl.org/FandES/field/regulations/antenna-restrictions.html>.

Please send me information about your antenna ordinance efforts so we can track our progress.

STATEWIDE SET

Our Section Emergency Coordinator, Bernie Nobles, WA4MOK, is making plans for a statewide Simulated Emergency Test. He's looking for some good ideas on test scenari-

os, especially if we can integrate our statewide test with local ARES efforts. Share your ideas with Bernie at wa4mok@arrl.net.

NATO REPORT ON BPL

If you watch the ARRL web site, you've already read about the NATO report on the interference potential of broadband over power line (BPL).

The paper's introductory section includes an excellent summary of the capability of HF radio and its importance in military communications. These sections of the report might be helpful to use when explaining HF capability to your local emergency management officials. Our served agencies are relying increasingly on satellite communications for their disaster communications.

Satellite solutions are useful, but have their own limitations and vulnerabilities. It's important that disaster relief groups have HF radio ready to provide another layer of capability, and no one is better at HF communications than radio amateurs!

PUBLIC SERVICE WEB SITES

North Carolina has a couple of helpful resources for those of us

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who enjoy public service communications.

Carolina Helping Hams (www.hampublicservice.org) was founded seven years ago to serve as a clearing house for non-public safety related service events. Bill Cole, KG4CXY and Eric Christensen, W4OTN, maintain a calendar of NC public service events and also help coordinate some of the events on their calendar.

To have your public service event posted to their web site, select the "Contact Us" link on the web site. Bill and Eric will then publish the information you need and setup a volunteer page for the event. There's no better practice for a real disaster than working a public service event.

Bill Cole noted that "There's nothing like operating out of the front seat of your car for a couple days, or on battery power in all weather, to really build one's emergency communications skills. The range and unpredictability of experiences you find working a PS event are unmatched - short of the real thing."

Another great public service web site is maintained by Elena Scott, KS4OX. The site www.ridemaps.com started with a focus on Multiple Sclerosis bike rides, but now includes information on other public service events in the Charlotte area. By the way, Elena's interest in ham radio started when she met the hams working a public service event!

Be sure to take brochures, banners, signs and such to your next public service event so that everyone knows about the contribution of amateur radio. Also consider issuing a press release to publicize your club's activities.

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Did anyone see the following?

Hams On TV

The Southern Appalachian Radio Museum in Asheville, NC will be featured on UNC public television's "Our State" program on Thursday, October 4 at 8:00pm. You'll see Tommy Queen, K4BNP, demonstrate morse code on an old "clicker". Dave Anderson, K4SV, will talk about DX and ham radio and you'll get a short video tour of the museum!

If you're interested in visiting, the Southern Appalacian Radio Museum is located on the campus of Asheville-Buncombe Technical Community College. It is open Friday's from 1-3pm, but tours can be arranged at other times. For more information, go to www.saradiomuseum.org.

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JOTA Set-up

Good Afternoon Everyone, Tommie N4YZ and I met with the Ranger at Camp Bernhardt reference the Jamboree On The Air scheduled for October 20, 2007. Tommie and I are planning on putting up the G5RV antenna on Friday October 19 before the scouts arrive on Saturday. One thing we really need is a golf cart to use on Saturday Oct. 20. The parking area will be between 1/4 and 1/2 mile away from the building we will be set up in. If anyone has a golf cart or can borrow one, we can use Tommie's trailer to get it to the Camp and back. This

The Rowan Amateur Radio Society
P. O. Box 593
Salisbury, NC 28145

The Rowan amateur Radio Society exists to secure for its members the pleasures and benefits of associating with persons commonly interested in amateur radio in any and all its facets. Its purpose is to facilitate the exchange of information, radio knowledge, fraternalism and individual operating efficiency among members. Society programs and activities are intended to advance the general interest and welfare of amateur radio in the general community.

The Society is a nonprofit organization and seeks no payment for services it provides the community's agencies.

Membership

Membership in the Society is open to all applicants who express a willingness to abide by the Society's Constitution and By-laws. Persons may apply at regular meetings and are considered elected when approved by two-thirds of those members present

Meetings

Regular meetings are held on the second Monday night of the month at 7:00 PM at the Rufty-Holmes senior Center at 1120 S. Boundary Street

2007 Officers

President - Grey Smith,
KI4CKR, 704-857-2570
ki4ckr@ags2.com

Vice-Pres. -
Secretary - Patti Sibert,
KI4GUN, 704-209-5249
ki4gun@carolina.rr.com

Treasurer - Ralph Brown,
WB4AQK, 704-636-5902
rkbrown5902@bellsouth.net

Harmonics, the club newsletter is published mostly monthly. Submit articles, complaints, corrections, or comments to the club Editor. Material may be reprinted provided proper credit is given.

Editor - Ralph Brown, WB4AQK
On the web
www.RowanARS.org

would be a very long walk for some of our members who would like to come down. We are planning on setting up around 7:30 Saturday morning. If we get a golf cart we will have 2 meter radios and can transport members to and from the parking area. If you are planning on coming to the Jamboree Saturday please let Tommie know the approximate times etc. Tommie's Email is N4YZ@arrl.net and home phone is 704-637-0024...

Thank you
73
Billy WA4PVI

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Contributions from NM7M

Last month I published a letter concerning N4UH's death from Bob Brown, NM7M.

I told you that Henry had prevailed upon him to write some items for me to publish. To me that was fantastic. Here is why.

At that time, 1994, Bob Brown was writing the propagation column for *World Radio*. He was a Professor Emeritus from Berkley CA where he specialized in ionospheric studies. In 1992 he had spent 365 days continuously studying the long path propagation from his location in Washington State. He then published a booklet "Long Path Propagation" which everyone says is a classic on the subject.

The series of articles, written tongue in cheek, were primarily for DXers but are of interest to

anyone concerned with propagation and the sun spot cycles.

I looked at the '94 roster and found that of our present 50 or so members about 10 were around then. Also since we are now at about the same spot in the sun spot cycle as then, I thought it would be nice to review those articles. Here is the first.

The Conspiracy Theory of Poor Propagation

By Bob Brown, NM7M

As one who writes about HF propagation, I get my share of mail. Generally the largest part of the mail says nice things, but far more about the ionosphere than any of my writing, and what's left is a mixed-bag, sort of negative and covering the same subject.

As for complaints about the ionosphere, they seem to range from calling it benign or capricious, at best, to callous, downright malevolent, even discriminatory. In this day and age, the last item is a pretty serious charge, but I don't know of any Federal Agency that could handle that sort of complaint against an inanimate object, especially when no private organization or public agency is in charge or has the responsibility to supervise it.

As for me, complaints run from my being dull or quite simplistic in what I write to remarks about my dealing in trivia, on one hand, or utter esoterica, on the other. Responding to that range of complaints is a hopeless task and I advise the correspondents accordingly. In any event, until the other day that seemed to be

the full dynamic range of my mail. But then I heard from Fred.

I can't identify Fred any further than just by name as no return address was given and the postmark was obliterated on the envelope. But it had a US stamp, that much I can say. So Fred could be a man, a woman, a person, a juvenile or whatever and be your neighbor or mine: who knows? With so little to go on, it's like CW, hard to size up a person or make any kind of ID from just a "fist" or, nowadays, from a letter written on a computer, complete with spelling checker, Thesaurus, and a laser printer. But I digress.

Fred didn't take kindly to either the ionosphere or me, and minced no words in saying it. As I struggled through the bombast, I wondered if Fred was just a wee bit kooky as I tried to see where he was coming from. Perhaps he was some sort of astrological school of thought when it came to the ionosphere and HF propagation. If memory serves me right, that was the case back in the early 50's when J. H. Nelson of RCA Communications wrote about ionospheric disturbances and planetary phenomena, saying that certain planetary configurations or conjunctions affected the radiation characteristics of the sun, thus degrading HF propagation. Myself, I find that a bit curious! You too?

Thinking Fred might be an astrologer, denying the truths and insights of physics over those of solar kinematics, I looked hard for clues along that line but Fred just didn't come across that way. So I had to read on, deeper and deeper into his diatribe, searching for the key to all that he wrote. In doing that, it slowly dawned on that Fred wasn't just griping about propagation disturbances, say from coronal holes or magnetic storms, that sneaked up on

him or were not predicted in timely way by folks at NOAA/SESC in their weekly Report. He was complaining bitterly, indeed with some passion, about the present poor level of HF propagation in general.

But as I read on, in some ways Fred sounded like someone who was unaware of solar cycles and all the intricacies there of. In short, Fred's complaints seemed to those of some quite uninitiated in the mysteries of my craft and a suitable candidate for salvation. But unless he picked my name out of thin air or heard it cursed in some barroom, he must have know what I was up to in my writing. So why did he write or, better yet, where'd that leave me? Confused to say the least, until I got to the last section of his letter. Then it all came out, just like shaking catsup from a bottle.

In a nutshell, Fred rally doesn't believe there's much of an ionosphere up there, at least not anymore. It seem that the world peeked out for Fred back in the late 50's know affectionately to you and me as the Solar Maximum Cycle 19. Thus, his letter went through all the "quarter-watt and wet-noodle" stories I've ever heard - glowing tales of 10 meters in those days. Then he descended to recounting in grisly detail, step by step, how it has all declined to the present sorry state. But curiously enough, Fred does not blame the sun.

I have to think that Fred knows about solar cycles but by the way he wrote, it's clear he thinks a more powerful, sinister force was at work, some sort of conspiracy here in the USA and possibly involving the Russians, that brought down HF propagation. For example, he points to the rapid decline in the use of ionosondes after the International Geophysical Year (IGY in '57 - '58).

Fred sees that as used in a way to keep people from knowing what's been happening to the ionosphere as the conspiracy progressed. And their demise happened allover the world, with American and Russians leading the way. Poof! Ionosonde operations were gone! Just like that.

And not much later, Fred pointed out, the world-famous Central Radio Propagation Laboratory (CRPL) in Boulder, CO was slowly, but surely phased out and the HF radio community was left without any real scientific talent or resources to call on. And all those various administrative structures that followed CRPL - ITSA, ESSA, now NOAA - just drifted away (or were they forced?) into quibbling about frequency allocations up in the UHF range. Fred mocks that by saying "Trivial Pursuit!"

Fred seemed to feel that if something isn't even mentioned any longer, particularly at the Federal level, folks will just forget that it ever existed. So there went not only the laboratory (CRPL) but the foF2 maps and all. Remember the baby and the bath water? Fred says it's the same thing! The ionosphere? What's that? Out of sight, out of mind Fred says there's more there than meets the eye.

So what did we get in their stead? Computer programs to predict HF propagation. Fred says "Thanks a lot!" Just to keep us confused he points out that the Feds came up with a variety of those beasts, IONCAP by NOAA and MINIMUF by the Navy, to name a few. But are they similar? No! Are they consistent? No! And to make mat-

ters worse, the folks in Bolder CO where IONCAP was developed now use MINIMUF, of all things, on their PBBs. Fred asks "What's going on? Who's in charge? Who's trying to confuse whom? Hmmm? Speak up, if you can!"

That brings us to the question that Fred forced by his letter: "Just what was the conspiracy and when did it start?" Fred said it was to cover up the results of space flight and started with Sputnik and Vanguard. That's right; all those space craft that were sent up from here and in the USSR just swept up the tons of electrons out there in the ionosphere, sort of the environmental disaster that went with the quest for dominance in space. And both the disaster and its cover-up go on today, more and more space flights with the debris from all those ill-fated missions still left at ionospheric height, gobbling up our electrons and taking them "out of circulation", as it were. As the environmentalist say here on terra firma, "Every litter bit hurts." Fred says that's true of the "Space Age Litter", removed from our reach and denying us electrons for HF propagation.

That makes Fred an "accretion freak", swearing that space debris sweeps up ionospheric electrons as they go through their orbital motion, as destined by Newtonian mechanics. Now accretion is an acceptable term in astrophysical circles and even had a short, happy life in the field of solar physics back in the late '40s due to Fred Hoyle, the British astronomer. But those days are gone now and

I'm afraid our Fred's ideas must be in the same boat.

So where do we stand now? I have to think that the solar spectrum releases all those electrons that Fred worries about, just as soon as the sun rises on the debris, bit by bit and piece by piece. The real mechanism I'm thinking of is photo-detachment and is nothing spooky to people who deal with the ionosphere on any kind of serious basis. In short, it happens all the time. So Fred needs to find new friends who can guide him to the ways of truth, virtue, and a real understanding of the ionosphere, not those preying on the dark side of his personality. I'm here, ready to help, but Fred's letter troubles me. It's not just that I can't go to him with an explanation or discussion; rather, where ever he may be, I'm not sure that Fred is willing, even has a patience, to listen to a serious, time-consuming argument that lasts perhaps two minutes. After all, it has to be tough to accept new ideas that undercut one's fondest memories - Cycle 19 in Fred's case, especially if they go on too long. But I hope he can rise to the occasion. So hear my plea:

"Fred, where ever you are, all is not lost when it comes to HF propagation. The sun is still in charge and the conspiracy that seems to concern you was just an unhappy set of circumstances that came together quite by accident and in the name of "progress." TRUST ME! So hang in there, keeping a daily record of the 10.7 cm solar flux. Just as soon as the active regions that go with Cycle 23 show up, you'll be among the first to know that the new cycle is underway. After that, DXing is in

your hands again! Keep the faith.

"And Fred, please think kinder of me. I do my thing with the best of intentions and I mean no harm. Write again and let's talk about it. 73 de Bob, NM7M."

Editors Note:

Cycle 23 has come and gone and hopefully we are soon to enter cycle 24. The last prediction I saw was that it may be coming later than normal and will be better than cycle 23.

There is a good graph of sun spot activity over the years - cycle 1 through 23 at www.ucar.edu/news/releases/2006/sunspot.shtml

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Financial Report

Brought forward . \$4783.09

Expenses

HF advert. \$52.00

Refreshments . . . \$11.72

Memorials \$50.00

Total \$113.72

Balance \$4669.37

WD4KJZ fund \$4644.67

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October Meeting

October 8 - at 19:00 Hours

Possible program showing Dayton.

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Top Ten

From the March 1998 issue of "Key Klicks", the newsletter of the Green Mountain Wireless Society

Top ten signs you've over-modified your scanning receiver.

- 1 Houston Mission Control drowns out the local repeater.
2. Your radios glow in the dark ... Even when not plugged in.
3. The NSA calls to get copies of transmissions they missed.
4. Commercial airline pilots use your antenna array as a landmark.
5. Your wife says "Either that thing goes or I go. Over-."
6. Your rooftop, car trunk, and back yard are collectively referred to as the "antenna farm".
7. SETI calls you to confirm signals from Orion.
8. You dial in frequencies that Stephen Hawking says doesn't exist this side of a black hole.
9. You hear voices talking about invading the "third planet from the star".
10. Your "low battery" indicator glows constantly, even when you're operating on AC.