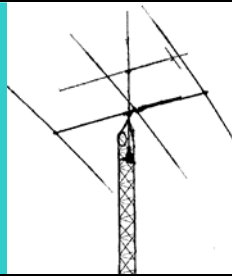


# The AARC Beacon



**Serving radio enthusiasts  
and communities in  
Central Virginia –  
The Radio Club for  
Central Virginia**

Volume 2009, No. 10



October 2009

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## Meeting Notice

The next AARC meeting will be held on **October 13 at 7:30 PM at the NRAO Building on the UVA Grounds. There will be no program, as the election of officers and bylaws changes will be covered.**

Sounds interesting – see you there!

## The President's Letter

*Dave, K4DND*

Hello to all members of the Albemarle Amateur Radio Club. I hope that you will make a special effort to attend the **October AARC meeting Tuesday, October 13**. This is the annual business meeting with **election of officers for the coming year**, as well as a vote on a number of changes to the AARC Bylaws. All this is important and needs your participation, so please do whatever you can to attend. There won't be a program following our business meeting, so any time we have after the meeting will be a good opportunity for eyeball ragchews.

Many thanks to the Nominating Committee for their efforts in getting a slate of officers lined up. This year we pressed our life members into service as members of the Nominating Committee. Just to review, our AARC life members participating were Harry W2HD (Chairman), Joe W2PVY, Ron K4RKA, Bud KB4JNI, and John W6UZ. Our other life member, who hasn't been heard from in some time, is Morris NM4R. A couple of years ago, Morris and his wife moved to South Carolina to a retirement facility near their daughter. If anyone has any current contact information for Morris, please let me know.

**The weekend of September 26-27 was a busy one for some of the AARC.** Greg N4PGS helped out with the weekend long **MS-150 Bike Tour** in Buchanan VA. This is a much smaller tour than the spring event that takes place in Albemarle County, but I am sure that his help was greatly appreciated over the entire 2 day tour. Others helped out with the **GEER (Great Eastern Endurance Run)** on Saturday, September 26. This is a remarkable event, over 150 mountain trail runners competed in one of three

courses, a 13.5 mile half marathon, a 50 km or a 100 km run. We were very fortunate to have the assistance of Claude N3RXO from the Pittsburg area for the entire day. Claude's wife was running the 100 km course, and he was there with his HT and ready to work. I had taken along a couple of mag-mount antennas, and SMA-SO239 adapters, and Claude used one of them from his location at one of the crucial Aid Stations. It was a great pleasure to work with Claude; he seamlessly fit into our style of operation and was a great asset. AARC members who went above and beyond the call for the entire event were Kenneth KJ4KIH, Linda KI5LLB and Dale KD4EAP. The 50 and 100 km runners started out in the dark at 0600 and the lead 100 km runner crossed the finish line in 10 hr, 1 min and 40 seconds. The rest of the 100 km field straggled in over the next 8.5 hours. This made an assignment of almost 20 hours for each of our intrepid AARC members. I was so impressed by our volunteers for this event. There were no complaints, no suggestions that the volunteer needed to be home by a certain time, and despite the chill and the persistent rain, our volunteers were every bit as dedicated as the runners competing in this event. Thanks Kenneth, Linda and Dale, you guys did an absolutely first class job, and made a significant impression on the event organizers. Also, thanks to the Waynesboro Repeater Association for the use of the 147.075 W4PNT repeater in supporting this effort.

I realize that most of our activities are public service and not everyone is either interested or able to participate. **So how about we try a new and different activity for the AARC. November is the ARRL Sweepstakes.** The first full weekend of November 7-9 is the ARRL CW Sweepstakes, and the third weekend, November 21-23 is the Phone Sweepstakes. Both contests run from 2100 UTC Saturday through 0300 UTC Monday. Check the ARRL website for detailed rules (see: <http://www.arrl.org/contests/rules/2009/novss.html>). How about working both and submitting your logs for own call sign and also for the AARC? **Anyone interested in making at least 5 CW contacts for the CW Sweepstakes? If you do and submit your log to me as well as to the ARRL, a special club certificate will be awarded.** Haven't worked CW in a while or not at all? Try it; you don't need to be a great CW operator to make a few contacts. **Certificates will be awarded for the Phone Sweepstakes as well.** Let's see how many AARC members can get into this fun activity and give some recognition both for your call sign and for the AARC. You can find easy to operate logging software at: <http://www.n3fjp.com>. This is virtually the same software we used for Field Day, and can be used to log 30 contacts without registering. Registration is only \$6.00 if you think you are going to work more than 30 stations. This software will automatically generate the Cabrillo file format for submission that can be emailed to ARRL. What could be easier?

Again, please try to make the October Annual Business Meeting on Tuesday the 13<sup>th</sup>. The meeting is at our usual location, the NRAO auditorium, 7:30PM. I hope to see you there.

## Veep Peeps

Jim, K4JEC

The **October meeting, scheduled for October 13**, is designated in the Bylaws as the Annual Meeting at which the club elects its leadership for the coming year. The business scheduled for the October Meeting dictates that no program be planned to maintain a reasonable time frame for the evening

The meeting will also be the **second and final presentation of the Proposed Amendments to the Bylaws** to bring them in line with present procedures and economic times. The proposal does not contain any major changes in policies or operating procedures with the single exception of increasing the board to six members from five. This proposal was brought to the board by our president who pointed out that we have six standing committees and only five directors. He requests that we add a sixth director in order to have one director represent each of the standing committees. The Bylaws Committee decided that this was a reasonable and practical amendment and approved its addition to the Proposed Amendments as previously approved by the committee and recommended the addition to the board that also approved the move. The Proposed Amendments to the Bylaws incorporating the changes approved at the September Meeting and last distributed to the membership following the September Meeting will be voted upon at the October Meeting. As always, **this meeting will require a quorum** so let's plan a BIG turnout, not only for that but also for the annual election of officers.

Our club is alive with activities and events and keeping up with all that is going on, members need to read the newsletter and check the website frequently at <albemarleradio.org> for the best and latest information available. The club website is currently under revision and reconstruction to serve you even better. We are really fortunate to have the expertise of Kenneth (KJ4KIH) working on our site for us.

The board approved moving forward with the **Virginia Ham Radio Cruise-In**. Your response has been overwhelmingly favorable and we now have a commitment from the board to take on the project. If you have not responded to the many emails discussing this project, please do so and especially if you are willing to join the effort. This could be yet another feather in the club's cap for innovative projects. The summary is: "Join the cruise to Charlottesville (centrally located within the state) and pick up a "Certificate of Participation" just for showing up – no mobile rig is required. Come to meet and greet, show off your rig, see others rigs and share in the fun and camaraderie – a favorite activity for all hams. Certificates would be presented to the most innovative mobile rig present in a car, a truck, an RV, a motorcycle and a bicycle. We could also present a certificate for the ham traveling the longest distance to attend. The target date, and time, at this point, is May 1, 2010, Saturday, 10 a.m. till 4 p.m. All details have yet to be worked out and

that's where each member can play a role by contributing our own unique talents and knowledge.

This could double as a public event where Ham Radio is showcased as the communications system that takes over when all others fail. Virginia ARES section leadership has indicated full support for the event to showcase the ham community's investment in time, money and resources in providing the state with a superior emergency communications system. I believe this to be a win-win situation for all hams and one we should pursue with all our resources. What an opportunity this represents for our club.

## Club Business

*Submitted by: Alan Swinger K9MBQ, Secretary*

### AARC Board Minutes – September 8, 2009

Dave Damon (Pres) opened the meeting with the purpose to agree on required actions and to agree on the General Meeting agenda. The BoD was held at the NRAO building on Tuesday, 8 September 2009. BoD members present: Dave - K4DND (Pres), Jim – K4JEC (VP), Alan – K9MBQ (Secy), Don (Treas) – N4UVA, Patsy -K4PMC (Dir), Linda – KI5LLB (Dir), Dennis (K4THE) and Greg – N4PGS (Dir).

**Key discussion items** were as follows:

- The treasurer's report presented by Don (N4UVA) indicates that the club is solvent with an end of August balance of \$3736.94 in the bank. The Picnic generated \$398 for AARC.
- Jim (K4JEC) noted that the By-Laws committee revised By-Laws were sent to the membership by e-mail for review and were ready for the General Membership Meeting comments. Suggested changes made to the committee's product were discussed and included:
  - Joe Giovanelli's (W2PVY) suggestion that where reference to the Annual Meeting appears that the month of "October" be inserted to add specificity. The BoD approved this change.
  - Dave Damon's (K4DND) suggestion that a Sixth Director be added to match the 6 Committees that are in place – thus, each committee will have a Director assigned. The BoD agreed with this change.
- Jim (K4JEC) will incorporate these changes and other associated items that are affected. The BoD approved a motion that reading of the New By-Laws with the foregoing changes made at the BoD meeting at the subsequent General Membership Meeting on 9/12/09 will satisfy the by-laws requirement of sufficient notice to the General Membership for such changes.
- Jim also raised the following items for discussion:
  - Recommended reserving the Darden Park pavilion for the 2010 picnic, which the BoD approved. Jim will take the action.
  - Recommended reserving the Elk's Lodge for the 12 Jan 2010 Annual AARC Dinner meeting. The

BoD approved and Alan (K9MBQ) will take the action.

- Recommended approval of the proposed 1 May 2010 Virginia Ham Radio Cruise-In. The BoD approved the event and recommended a committee be formed – Jim to chair – to develop details.
- Dave (K4DND) mentioned the following:
  - Membership up to 111.
  - The Devils Backbone event support was accomplished on 29 Aug, and some funds are expected for the Club's efforts.
  - Upcoming events were posted to the board for consideration:
    - Sep 12-13: Virginia Beach Hamfest
    - Sep 16: Charlottesville Emergency Exercise (Evac of Scott Stadium)
    - Sep 26: Great Eastern Endurance Run (GEER)
    - Oct 11: NRAO Open House – Need ideas for AARC booth
  - An AARC Equipment storage site is needed. BoD agreed to solicit ideas at the General Meeting.
  - Dave appointed the following members to the Nominating Committee for the purpose of generating a new slate of officers and Directors to stand for election at the October meeting:
    - Harry W2HD
    - Joe W2PVY
    - Bud KB4JN1
    - Ron K4RKA
    - John W6UZ

### Committee Reports:

- **Activities** – Vacant; Dave announced the activities noted above.
- **Education** – Dennis: continuing liaison with the CERT group.
- **Fund Raising** – Linda: Emblematic items ordered are available for pickup at the General Meeting. She also announced that several local businesses are potential AARC donors
- **Technical** – Greg: Nothing to report.
- **Publications** – Patsy: No report.
- **Estate** – Linda: Items from the estate of Gary Brasky (AG4B) have been turned over to AARC for disposition. It was agreed by the BoD to consider an auction of these items at the January 12 annual dinner or other appropriate future meeting.
- Old Business – None
- New Business – Alan (K9MBQ) noted that he was in receipt of a notice from the E-QSL organization that they have in excess of 100 e-qsls for WA4TFZ. He suggested that the membership be polled re interest in handling the e-qsl account for AARC.

## October 2009

There being no further business, the meeting adjourned.

*Alan Swinger – K9MBQ, Secretary*

### Regular Meeting – September 8, 2009

The September 2009 AARC monthly meeting was convened at 7:30 PM by Dave Damon (K4DND), club President, at the NRAO building in Charlottesville, VA. All members' present made brief introductions, and two life members were present – Harry (W2HD) and Joe (W2PVY). A new member, Joe Flamini (W4BXG), was approved for membership bringing total membership to 112.

The General meeting proceeded as follows:

- The minutes of the July 2009 meeting were approved as they appear in the September 2009 issue of the Beacon with changes regarding expenditures for 501c3 legal fees and liability insurance renewal that were approved by the General Membership and are reflected in the record copy of the minutes.
- Treasurer's report: Don (N4UVA) indicates that the club is solvent with an end of June balance of \$3736.94 in the bank. The picnic generated \$398 for AARC.
- VP Report: Jim (K4JEC) noted that the By-Laws committee revised By-Laws were sent to the membership by e-mail for review and were ready for the General Membership Meeting comments. Suggested changes made to the committee's product were discussed and included:
  - Joe Giovanelli's (W2PVY) suggestion that where reference to the Annual Meeting appears that the month of "October" be inserted to add specificity. The BoD approved this change.
  - Dave Damon's (K4DND) suggestion that a Sixth Director be added to match the 6 Committees that are in place – thus, each committee will have a Director assigned. The BoD agreed with this change.
- Jim (K4JEC) will incorporate these changes and other associated items that are affected. The BoD approved a motion that reading of the New By-Laws with the foregoing changes made at the BoD meeting at the subsequent General Membership Meeting on 9/12/09 will satisfy the by-laws requirement of sufficient notice to the General Membership for such changes.
- Jim also announced that the board had approved proceeding with the Virginia Ham Radio Cruise-In event on May 1, 2010.
- Dave (K4DND) mentioned the following:
  - Membership up to 111.
  - The Devils Backbone event support was accomplished on 29 Aug, and some funds are expected for the Club's efforts.
  - Upcoming events were posted to the board for consideration:
    - Sep 12-13: Virginia Beach Hamfest

- Sep 16: Charlottesville Emergency Exercise (Evac of Scott Stadium)
- Sep 26: Great Eastern Endurance Run (GEER)
- Oct 11: NRAO Open House – Need ideas for AARC booth
- An AARC Equipment storage site is needed. BoD agreed to solicit ideas at the General Meeting.
- Dave appointed the following members to the Nominating Committee for the purpose of generating a new slate of officers and Directors to stand for election at the October meeting:
  - Harry W2HD
  - Joe W2PVY
  - Bud KB4JN1
  - Ron K4RKA
  - John W6UZ
  - John W6UZ

### Committee Reports:

- **Activities** – Vacant; Dave announced the activities noted above.
- **Education** – Dennis: continuing liaison with the CERT group.
- **Fund Raising** – Linda: Emblematic items ordered are available for pickup at the General Meeting. She also announced that several local businesses are potential AARC donors
- **Technical** – Greg: Nothing to report.
- **Publications** – Patsy: No report.
- **Estate** – Linda: Items from the estate of Gary Brasky (AG4B) have been turned over to AARC for disposition. It was agreed by the BoD to consider an auction of these items at the January 12 annual dinner or other appropriate future meeting.
- **Old Business** – None
- **New Business** – Alan (K9MBQ) noted that he was in receipt of a notice from the E-QSL organization that they have in excess of 100 e-QSLs for WA4TFZ. He suggested that the membership be polled re interest in handling the e-qsL account for AARC.
- Also, Rob (W3DX) noted that he received a recent Yemen QSL card that put him in the **DXCC Honor Roll top spot – all 338 DXCC entities worked and confirmed**. Congratulations to Rob for this significant accomplishment.

There being no further business the meeting adjourned.

**Two post-meeting presentations** were made:

- D-Star by Dave (K4DND)
- Weak Signal Propagation Reporter (WSPR) by Dennis (K4THE).

*Alan Swinger – K9MBQ, Secretary*

## For Sale and Wanted...

*Tnx Ron, K4RKA*

Please notify K4RKA when an item has been sold or pulled from availability and can be deleted from this list.

**Scanners for Sale** -- 2 Uniden 760 \$50.00 Each. 1 Radio Shack 95 Portable \$100.00. 1 Bearcat 240xt 40 channel \$25.00. 1 UHF-VHF Radio Shack 16 channel \$25.00. 1 Bearcat 240XL 20 channel 20.00. 1 Bearcat 200 16 channel \$15.00. 1 Uniden 100xt 100 channel 50.00. 1 Pro 2051 Radio Shack Desktop 1000 channel \$150.00. Thanks, Jerome, KI4DLA

**Old tube console radios.** Philco 620F (1937) - \$ 50. Call Carter Elliott, WD4AYS at 434 566 8767 or via email at celliott14@aol.com

**MFJ-4103 Power Supply** for FT-817. New, never used in original packaging. Call Bob W4RQ at (434) 990-2659 (home), (434) 980-7143 (office) or via email at [w4rq@yahoo.com](mailto:w4rq@yahoo.com).

**Coleman Series 54 Generator**; 4KW 120V/240V. Briggs & Stratton 8HP engine model 190432. Very clean and mounted on cart. Purchased about 1985 and used very little. Has new carburetor, plug, air filter, fuel lines, fuel filter & fuel cutoff valve. However I can't get it started. Has compression, fuel and I believe good spark. Maybe new carburetor just needs adjustment. I'm tired of pulling the rope! And anyway it won't run my heat pump. \$199.00 Jim K4CGY 434-296-3044

**WANTED:** I'm looking for a **2m mobile radio, preferably small** (comparable in size to modern mobile rigs). **Can be commercial VHF as long as it can tune down to 144.39 MHz.** Contact Mike Benonis KI4RIX.

**ITEMS FOR SALE:** With the purchase of my 2004 Hyundai Elantra GT, I will not be needing my mobile gear anymore. I do not have any intent of installing radio gear into the vehicle. Please follow the below link for the sale page on QRZ: <http://forums.qrz.com/showthread.php?p=1716639>. No worries, I still have the handheld unit for local communications. Jeffrey, N4LFJ, 76 Holly Ridge Court #3 Evington, VA 24550, (434) 382-9527 or [n4lfj@yahoo.com](mailto:n4lfj@yahoo.com).

## AARC Officer / Director Nominations for 2010

The Nominating Committee presents the following slate for consideration for 2010 officers and directors.

PRESIDENT	K4DND, DAVE DAMON
VICE PRESIDENT	K4JEC, JIM CROSBY
SECRETARY	K4PMC, PATSY CROSBY
TREASURER	N4UVA, DON EASON

DIRECTOR	AD6JV, BILL PHILLIPS
DIRECTOR	K4BAV, JIM WILSON
DIRECTOR	K4COY, JIM OWEN
DIRECTOR	K4DU, BOB PATTISON
DIRECTOR	K15LLB, LINDA BEARD
DIRECTOR	N4PGS, GREG FAUST

The above candidates are approved by the AARC Nominating Committee: W2HD (Chmn), W2PVY, W6UZ, K4RKA and KB4JNI.

## Contest Highlights - Upcoming

*Bob, W4RQ*

### ARRL-Sponsored Contests

Oct 10	<b>ARRL EME Contest</b>
Oct 19	<b>School Club Roundup</b>

Complete info, rules and log forms for these events can be found online at the ARRL Contest Calendar webpage.

### Other Contests of Interest

Oct 10	<b>Worked All Britain HF Contest</b>
Oct 10-11	<b>Pennsylvania QSO Party</b>
Oct 10-11	<b>Arizona QSO Party</b>
Oct 17	<b>Iowa QSO Party</b>
Oct 17-18	<b>New York QSO Party</b>
Oct 18-19	<b>Illinois QSO Party</b>

The [SM3CER Contest Service - Contest Calendars](#) has info and rules for these contests and just about every contest that exists.

*73, Bob W4RQ*

## ARRL Propagation de K7RA

*ARLP040 Propagation Bulletin de ARRL*

With the appearance of two sunspots, the past eleven days had some nice HF propagation. Combined with quiet geomagnetic conditions and month after month of quiet sun, it seems quite a dramatic relief. Sunspot 1026 has faded away, and sunspot 1027, which appeared later than 1026 but actually led it in the sun's rotation, has just rotated out of view, over the sun's western limb. You could see this early Friday morning by viewing the STEREO animation at <http://stereo.gsfc.nasa.gov/>.

Remember that the 0 degree meridian is facing us, and the two 90 degree longitudinal marks are at the sun's eastern

and western horizons. It seems odd, since we are accustomed to viewing an atlas with west on the left and east to the right, but when we say a sunspot is rotating over the western limb, it is moving to the right, from our point of view.

Early Friday morning (evening on the West Coast in North America) you could see that Northern Heliosphere bright spot just beyond the +90 degree mark. There is a bright spot in the Southern Heliosphere where I think sunspot 1026 was, but it doesn't appear as a sunspot to any of the observatories that track them. This can be puzzling, because if I look at a spot that bright via the STEREO animation that appears to the left, beyond the eastern limb past -90 degrees, I might assume that is a sunspot coming our way.

Perhaps someone is expecting a reappearance of either 1026 or 1027, because if we look at the October 1 forecast from the U.S. Air Force and NOAA at <http://www.swpc.noaa.gov/ftpmenu/forecasts/45DF.html>, it shows an expectation of a rising solar flux above 70 beginning October 17. It looks like a spot isn't expected any time soon, as they have the predicted solar flux for Friday (today) and Saturday, October 2-3 at 70, then down to 69 for October 4-8, 68 on October 9-14, then rising back to 70, then 72 for October 17-28. This forecast is likely to change, and is updated daily.

The same forecast projects very quiet geomagnetic conditions, with a planetary A index of five off into the indefinite future. Sunspot number on Thursday, October 1 was 11, same as Wednesday, and today's is likely to be zero.

The three-month moving average of sunspot numbers, which now includes data from September, is the same as last month's three month average, which was calculated from sunspot numbers for June through August. It seems that both June and September had identical average sunspot numbers, so for the latest reading, the June data was dropped, the September data added, and the same 3-month average of 4.0 is the result.

The monthly averages of daily sunspot numbers for January through September were 2.81, 2.54, 0.77, 1.27, 3.97, 6.6, 5.07, 0.39 and 6.6.

Our three-month moving average always is labeled with the middle month, so with the September data, we now have the August average, which is for July, August and September.

For October 2008 through August 2009, the moving average is 4.52, 4.39, 3.62, 2.19, 2.02, 1.49, 2.01, 4.23, 5.2, 4 and 4.

Dan Prebenda, K9DP of Richmond, Indiana is back on the air after 10 years QRT, and is frustrated trying to work fairly short skip on 30 and 40 meters CW around noon to 3:00 PM

local time (1600-1900z when local time is Eastern Daylight Time, which ends November 1 this year). He is experiencing a lot of fading, and the stations he is trying to work are about 300 to 700 miles away, mostly to the east and south of him. Dan wonders if 30 meters will get better for this path with higher sunspot counts?

I suggested he test some paths and seasonal variation using W6ELprop, which is free at <http://www.qsl.net/w6elprop/>. Using either zero or a smoothed sunspot number of 10, it looks like 40 meters is the best band, although 30 meters looks good 700 miles out to the southwest. I used 39.826 degrees north latitude, 84.896 degrees west longitude for Dan's location, based on the address in his FCC licensing record.

Philadelphia is about 500 miles almost directly east of him. At that distance, 30 meters doesn't look good until the smoothed sunspot number gets above 50, which is not where we are in the cycle. Same thing with Atlanta, at about 400 miles, almost due south. But Dallas at about 800 miles and 237 degrees looks a lot better, with strong signals on 30 meters, 1400-2300 UTC (10am to 7pm EDT) and a smoothed sunspot number of 2.

But 40 meters looks great for any of those paths, even with no sunspots, and he can test some assumptions using W6ELprop. He can look at any path on different dates, too, and should see seasonal variations.

Instead of solar flux, use sunspot number with W6ELprop. If the program isn't set for sunspot number in the options, just precede the number by the letter S. The program is designed to give a rough forecast using the predicted smoothed sunspot number for the month. It was 9 for September, 10 for October. The most recent prediction is in PRF1774 at <http://www.swpc.noaa.gov/weekly/> on page 8. There may be a new prediction next week in PRF1779. In the past couple of weeks, when we have actually had sunspots, I would average the three latest known sunspot numbers (a day's number is not available until the evening) from <http://www.swpc.noaa.gov/ftpd/indices/DSD.txt>.

The smoothed number changes for any month because it is based on actual sunspot numbers for the previous six months, and predicted sunspot numbers for about 6 months into the future. So the only smoothed sunspot numbers that we know for sure are at least six months old because they are all based on real sunspot data, with nothing predicted.

To use current numbers, on September 26 during the day the three latest known sunspot numbers were 31, 32 and 25, which averages to about 29.3. You can get the latest mid-latitude K index from WWV off the air, or at <http://www.swpc.noaa.gov/ftpd/latest/www.txt> or by calling 303-497-3235. It is updated every three hours.

Meyersdale, PA is about 300 miles due east of Dan, and for that short skip, 80 meters is the only realistic option, except for a dead period, 0230-1100 UTC. 40 meters is possible from 1600-1800 UTC, but the odds are against it on most days (this time of year). It looks better in the spring, 1600-2200 UTC, and a LOT better when we get some sunspots.

Von Weddige, W5COW of Hope, New Mexico (how did I guess his was a vanity callsign?) reported a surprising six meter opening on September 22. He made 19 contacts on SSB in 31 minutes, from 0022-0053z. Von is in gridsquare DM72, and he worked stations in EM53, EM54, EM57, EM63, EM68, EM73, EM75, EM79, EM81, EM86, EM89, EN50, EN70, and EN71.

In last week's bulletin, ARLP039, Ken Tata, K1KT talked about interesting conditions on two meters from his location in Rhode Island during a weeknight VHF sprint. Leo Halverson, WA2AMW commented in response, "These conditions aren't all that rare at this time of year, although I usually encountered them later at night. They often go undetected because most of these openings happen during work-nights, when most people are asleep. I worked the second shift for many years and encountered these conditions during the homeward-bound commute".

"I found that they were most common, of greater duration, and with longer-distance propagation during the first two weeks of October. I also noticed that they were much more likely to occur on nights when a (mostly low) ground-fog had risen and was very wide-spread and thick, but very clear above. It also seemed that the sky was very clear and with good visibility of stars and distant high-altitude aircraft. The stars even seemed to have an extra twinkle to them".

"One night we had a round-table going on one of the shore town Repeaters, with stations from Nova Scotia to Kitty Hawk, NC. One guy was on a Hand-held in his garage in Virginia Beach. I could copy all the stations on the input frequency on my mobile dual-band. The opening started fading out about 0330 hrs EST".

"I never did find out why the ground-fog was so indicative of these openings". "I'm glad to be working the day-shift, but I sure do miss those autumn midnight commutes".

Ken responded, "I don't have decades-long experience with fall tropo conditions, but Leo described the conditions to a 'T.' It was virtually dead calm. I also noticed the sky overhead was unusually clear. The stars did not twinkle and seemed a bit brighter than usual, perhaps because convection currents were minimal. We do get occasional ground fog here at this time of year but I didn't see any. As it cooled on my hilltop that evening the formerly clear conditions gave way to a soaking fog at about 9:30. I was

about 8 miles north of the beach and two miles west of Narragansett Bay".

"I think ground fog is not just an indicator. It's a medium with higher mass than the clear air above. It slows the lower part of the wavefront relative to the clear air above, tending to bend the wave along the surface of the earth. Leo's observation of a '... (mostly low) ground-fog had risen...' seems right on".

"As far as being not all that rare, well, I'll pay closer attention from now on. It was still a fun contest. And while I have experienced more extensive tropo propagation than that, I don't think I've ever heard so much widespread activity on two".

Walt commented, "I vaguely remember someone telling me (years ago) that he thought the ground-fog could be (but not always) an indication of a temperature inversion or some other atmospheric anomaly that created some kind of ducting which quite often ran parallel to the shore line. Thinking back, I did notice during those events that the propagation was no where near as long-distance east-west as it was north-south. I wonder if that extra twinkle I thought I noticed in the stars was also there because of some atmospheric thing going on?"

Tim Hickman, N3JON confirmed that his long-path contact with VK4MA, mentioned in last week's bulletin, was in fact on 20 meters.

Sunspot numbers for September 24 through 30 were 32, 25, 14, 11, 11, 14, and 11 with a mean of 16.9. 10.7 cm flux was 74.6, 72.4, 71.8, 72.3, 73.2, 72.3, and 72 with a mean of 72.7. Estimated planetary A indices were 1, 2, 3, 8, 8, 2 and 4 with a mean of 4. Estimated mid-latitude A indices were 1, 1, 3, 8, 6, 0 and 5 with a mean of 3.4.

## New ARRL Product Review Tests

*From the ARRL Letter*

When you peruse the October issue of QST, you may notice a few extra lines in the Product Review data. "Here at the ARRL Lab, we strive to make our test procedures relevant to current technology and to new features common on today's transceivers," said ARRL Test Engineer Bob Allison, WB1GCM. "We continue to research ways to improve our testing and to develop new tests that will benefit our members. I hope you will find these new measurements useful in evaluating and comparing transceivers."

### \* Receiver Sensitivity (MDS) at 137 and 505 kHz

Several countries now give amateurs permission to operate at and around 137 and 505 kHz. In the US, there is activity

on 495 to 510 kHz by more than 20 stations around the country operating under the ARRL sponsored WD2XSH experimental license. In addition, there are other Part 15 experimental licensees operating in this range. The WD2XSH stations are on the air regularly, gathering propagation data. They are always looking for signal reports.

Allison said that with many of today's transceivers and a suitable antenna, you can listen for these experimental stations and submit reception reports via the Web site: "The new Product Review tests will help identify transceivers suitable for use on these frequencies. With equipment built over the last 25 years ago or so, I've noticed a wide variety of available sensitivity, from terrible to quite good. Many receivers tune to 137 and 505 kHz; not all are proficient at receiving signals there. For you 'lowfers,' this measurement is for you."

#### \* Spectral Sensitivity

Spectral sensitivity is the weakest signal that can be "seen" on a visual display of spectrum above and below the operating frequency. Often called a spectrum scope or panadapter, this feature is included on many mid-range and high-end transceivers. "This data represents the level, in dBm, at which the operator can see a signal poke up out of the display noise floor," Allison explained. "Although the measurement is somewhat subjective, it works out to be about 3 dB above the noise floor at the bottom of the display when the scope is adjusted to show 100 kHz of spectrum. With software-defined receivers (SDRs), such as the FLEX-3000, the sample rate is set to the highest setting."

#### \* Audio Output THD at 1 V RMS

Allison said that one of the ARRL Technical Advisors posed the question, "Who ever listens to their receiver at full volume?" Allison explained that audio output power and THD (total harmonic distortion) at the specified load impedances as specified by the manufacturer have been tested and reported. "Generally, the specification is at or near the maximum audio output the receiver is capable of," he said. "If severe hearing loss isn't an issue, we normally listen with the volume control set to around the 9 o'clock to 11 o'clock position on most transceivers and not with the control cranked to maximum."

Allison explained that distortion at normal listening levels is an important factor, especially when you are listening for an extended period of time: "High levels of distortion can make signals more difficult to understand and add to fatigue. We'll continue to measure and report how audio output power and THD compare to manufacturers' specifications, but we have added a new test intended to show distortion at more typical volume levels."

After testing several radios for comfort, Allison picked 1 V RMS as an output level for the new test. "It's an easy figure

to remember," he said. "We will now also report THD at this level. Note that this test will appear with the next transceiver reviewed because the FLEX-3000 has only a low-level audio output and is dependent on external, user-supplied devices to amplify the audio to normal listening levels."

Look for these new tests beginning with October's QST Product Review featuring the FLEX-3000.





## AARC Public Service Schedule

End of September	Great Eastern Endurance Run
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## Area Hamfests

September 12-13 Virginia Beach	<p>THE <b>VIRGINIA SECTION CONVENTION and VIRGINIA BEACH HAMFEST</b> will be held SEPT. 12 and 13 At Virginia Wesleyan College, <a href="#">1584 Wesleyan Drive</a> in Virginia Beach. The web site is at <a href="#">virginiabeachhamfest.com</a> .  <b>Talk-In:</b> 146.970</p> <p><b>Contact:</b> Carl Clements, W4CAC                  4500 Wake Forest Road                  Portsmouth, VA 23703                  Phone: 757-484-0569                  Fax: 757-673-7426                  Email: <a href="mailto:w4cac@arrl.org">w4cac@arrl.org</a></p> <p>Special guest speaker is BERNIE MCCLENNY, W3UR, who writes the <b>HOW'S DX</b> column in QST. He will be at the DX Forum and also at the DX Banquet Saturday evening --- 6:30 PM on at the Upton Buffet, 1050 N. Military Hwy, Norfolk, VA. For reservations and more info contact Charlie Chapman, w1wtg, at 757-681-4190 or <a href="mailto:w1wtg@arrl.net">w1wtg@arrl.net</a> .</p>
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## FCC Database Updates

New Calls	
KJ4OEV	Chris Bortz – new General!!
Upgrades	
None Reported	
Vanity Calls	
None Reported	

## VE Session Schedule - 2009

Date Location  (ARRL VEC)	For exam sessions in Virginia outside the AARC area, check the <a href="#">ARRL Exam Session Search</a> web page.
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## For Sale Items

For Sale	
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## AARC Club Officers

President	Dave Damon	K4DND	<a href="mailto:k4dnd@arrl.net">k4dnd@arrl.net</a> (434) 973-5866
Vice President	Jim Crosby	K4JEC	<a href="mailto:jecrosby@comcast.net">jecrosby@comcast.net</a> (434) 987-2006
Secretary	Alan Swinger	K9MBQ	<a href="mailto:awswinger@earthlink.net">awswinger@earthlink.net</a> (434) 975-6237
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Director	Dennis Mennerich	K4THE	<a href="mailto:k4the@arrl.net">k4the@arrl.net</a> (434) 973-5407
Director	Linda Beard	K15LLB	<a href="mailto:lindaskyone@earthlink.net">lindaskyone@earthlink.net</a> (434) 823-2107
Director	Greg Faust	N4PGS	<a href="mailto:n4pgs@arrl.net">n4pgs@arrl.net</a> (434) 978-1962
Director	Vacant		
Director	Patsy Crosby	K4PMC	<a href="mailto:patsycrosby@comcast.net">patsycrosby@comcast.net</a> † (434) 989-2362

## Contest Calendars

<a href="#">ARRL Contest Calendar 2009</a>	ARRL sponsored contests
<a href="#">SM3CER Contest Service - Calendar 2009</a>	Contests all over the world! Also has links to online rules for most contests
<a href="#">Contesting Online</a>	Just about everything contests!

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**ISSUE DEADLINE - 25th of each month**

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**Next Club Meeting : October 13 - 7:30 PM NRAO Bldg - UVA Grounds**

**CLUB MEETINGS and NETS**

**REGULAR Meeting:** Second Tuesday of each month at 7:30 PM  
**BOARD & TECHNICAL Meetings:** Prior to regular meeting at 6:30 PM  
Meetings are held at the NRAO building on Edgemont Road.  
**LUNCHEON:** Wednesdays -- Area hams gather at the **Wood Grill Buffet** on Rte 29 North from 11 AM – 1 PM  
**Monday Night Information Net –** Each Monday at 7:00 PM  
**Northern Piedmont Emergency Net:** Each Thursday at 8:00 PM  
**All Nets are held on the 146.760 repeater**

**AREA REPEATERS**

146.760 (-) 151.4 Hz Tone **WA4TFZ**  
146.925 (-) 151.4 Hz Tone **WA4TFZ**  
224.760 (-) No Tone **WA4TFZ**  
444.250 (+) 151.4 Hz Tone **WA4TFZ**  
**Other Area Repeaters**  
444.775 (+) 151.4 Hz Tone **KF4UCI**  
442.075 (+) 151.4 Hz Tone **KF4UCI**  
145.17 (-) 151.4 Hz Tone **W4FCO** (Fluvanna)  
146.79 (-) 110.9 Hz Tone **WW4GW** (Buckingham)  
145.450 (-) 151.4 Hz Tone **K4DND** (Martha Jefferson Hospital)  
224.600 (-) 151.4 Hz Tone **KG4HOT**

**AARC CALENDAR OF EVENTS**

DATE	EVENT
October 13	Regular Club Meeting
November 10	Regular Club Meeting
December 8	Regular Club Meeting

**AARC - PUBLIC SERVICE SCHEDULE**

DATE	EVENT
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Membership application available in PDF format at [http://www.albemarleradio.org/members/AARC\\_member\\_application.pdf](http://www.albemarleradio.org/members/AARC_member_application.pdf)