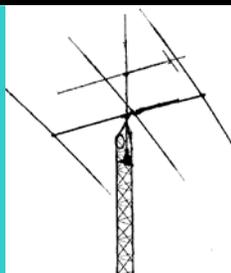


The AARC Beacon



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

Volume 2008, No. 11



November 2008

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Meeting Notice

The next regular AARC meeting will be held on **November 11 at 7:30 PM at the NRAO building on the UVA Grounds. The program will be the start of a series of mini-presentations on how GPS works, and how to get on the air with Digital HF.**

It should be very interesting. See you there!!

The President's Letter

Dave, K4DND

Greetings --- I am going to keep my comments this month shorter than usual. Are those sighs of relief I hear? There should be plenty of material in this Beacon from the last AARC meeting, which was the annual business meeting. Some annual committee reports are still not received. If you are a club director, and you are in this category, please get your annual report in as soon as possible.

It has been a busy month with all the repeater work going on; unfortunately there is more to do. We found out recently that we were above the height at which we were authorized to have the 146.895 antenna at Buck's Elbow. That antenna will have to be moved down. I don't think that it will greatly degrade the performance for stations further out, but I do anticipate it may affect service in close to the mountain, including in and around parts of Charlottesville. But that is the way it is and we will just have to live with the constraints that are placed on being able to occupy that site. Gordon and I were up at the Buck's Elbow site today (10/30) and were disappointed to find that both antennas installed at the site have been broken and will need to be replaced. The contractor working at the site responsible for the damage should be covering the cost of the replacements, but it will require another full day of work get the broken antennas down and the new replacements up.

We recently learned that the tower at the 146.760 site will be coming down in the spring. We have a little time, but another site must be secured as soon as possible.

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If you have any ideas or suggestions, please contact Gordon WW4GW as Director in charge of the Technical Committee.

I would like to take this opportunity to recognize the entire group of Volunteer Examiners that we have in this area, both AARC members and non-members.

One reason for doing this is that **Gordon WW4GW has indicated that he would like to pass on the responsibility of being the AARC VE Liaison.** If anyone would like to take on this important position, please let me know. As you can see from the table below, we have a number of VEs who have contributed to advancement of the Amateur Radio hobby by performing this important service, and will support a new AARC VE Liaison. **If you are interested in becoming a part of the VE team, please contact Harry W2HD.** If you are a certified VE and not on this list, please accept my apology and let me know, so I can include you on this list.

AARC Members		AARC Members (cont)		Non-AARC members	
Call Sign	# of sessions	Call Sign	# of sessions	Call Sign	# of sessions
W2HD	43	K4IB	4	KO4WQ	22
K4DU	30	N4CV	5	K4BDR	6
W6UZ	28	W4PRT	3	AG4DN	4
K4CGY	21	N4UVA	2	W4XN	3
W4RQ	14	K9MBQ	1		
K4DND	14	WD4LT	0		
WW4GW	7				

I especially want to thank Bob Dorsey W4RQ who has gotten this issue of the Beacon out despite the enormous extra effort that is required in the midst of his chemo treatments. Thanks Bob - I don't know how you do it. I come all unglued when I even get a cold and find getting much done is beyond me.

I hope to see you all at the next AARC meeting on November 11 at the NRAO Auditorium.

73 de K4DND

Veep Peeps

Mike, K14RIX

Dear Friends --- As I write this, I am knee-deep in PCB layout for my capstone electrical engineering class. For those of you who have done it before, you know what it joy

it can be. For those who don't know what it is...try it some time. It's exciting. I promise.

In other, more relevant news, we held our annual elections at the last club meeting. I'd like to congratulate all who were elected at the last meeting, and especially thank Jim Crosby, K4JEC, for offering to take the position of Vice President.

For our November meeting, we will have a presentation on how GPS works, and in December, a presentation on steerable antennas. Both of these presentations should be very good, so don't miss out.

I look forward to seeing everyone at the next meeting. Now, why on earth did I put that capacitor ***there***...

Best regards,

Mike Benonis K14RIX

Club Business

Submitted by: Alan Swinger K9MBQ, Secretary

AARC Board Minutes – October 14, 2008

Dave Damon opened the meeting to discuss content of Committee reports, including the annual summary reports, to be given at the general meeting, motions for funding for the BoD and for the general meeting, and to agree on the agenda for the meeting. The BoD was held at the NRAO building on Tuesday, 9 September.

BoD members present: Dave - K4DND (Pres), Alan – K9MBQ (Secy), Don – N4UVA (Treasurer), Gordon – WW4GW (Dir), and Dennis – K4THE (Dir).

Key discussion items were as follows:

- The treasurer's report presented by Don indicates that the club is solvent with a current balance of \$3670.94 in the bank. Also, a check for \$200 was received from the Greater Eastern Endurance Run organization for club efforts in supporting their annual event.
- The Secretary noted that a proposed change to the By-Laws had been received which proposed adding an Estate Committee (proposal attached). In accordance with current By-Laws, the proposal must be published in the next Beacon so members can review and be prepared to discuss and vote on its acceptance at the next AARC meeting. Alan will take the action to forward to the Beacon editor and will read the proposed change at the general meeting.

- The BoD approved reimbursement to Dave K4DND for the ARCOM controller at Buck's Elbow – invoice to be submitted.
- Club insurance level has been agreed to with the insurance company, and an approximate \$100 refund of premiums paid is expected.
- The club has run a paid AD in World Radio magazine for a number of years at the cost of \$70/yr. The BoD agreed that AARC would not renew since there is little payoff from the AD.
- Dave brought example Nametags that could be adopted for the membership and bought by members. All agreed to present the examples and the proposition of having standard AARC nametags at the General Meeting.
- Members discussed Goals for the coming year which will be presented to the General Membership for review and comment, to include:

Public Awareness and PR – e.g. continued support to events

Increased membership

Member and outside education

Outreach to other groups (e.g. Boy scouts)

Ride-share for members who cannot drive

Hold elections of club officers and directors at the General Meeting

There being no further business, the meeting adjourned.

Alan Swinger – K9MBQ. Secretary

September 30, 2008

The proposed Bylaws changes listed below are to be submitted, as required by the existing Bylaws, to the AARC Secretary in writing. These proposed changes are to be read at the next regular meeting. All members are to be notified of these proposed changes, in order for them to be acted on at the next regular meeting following their publication.

Proposed changes to the Albemarle Amateur Radio Club (AARC) Bylaws

1. The current Bylaws **Article VI: Committees - Section 6: Other Committees** will be renumbered as **Article VI: Committees - Section 7: Other Committees**.
2. A new **Article VI: Committees - Section 6: Estate Committee** will be included as follows:

Section 6: Estate Committee

An Estate Committee composed of a Chairperson, a Director, the ARRC Treasurer, and at least two other members shall be appointed by the Board at the January meeting. This

Committee shall act upon notification that an AARC member or local area non-member amateur becomes a Silent Key. The charge to the committee is to assist the family of the Silent Key (with permission of the family or estate executor) in disposing of any amateur radio or related equipment to the best benefit of the family of the Silent Key. If this activity is undertaken by the Estate Committee, a complete inventory of such equipment should be made, with fair current market values assigned, and a subsequent full accounting made to the family or estate, following any action taken with respect to disposal of the inventory. The Committees written report of yearly activity shall be submitted to the Club for its approval at the regular meeting in October.

Regular Meeting – October 14, 2008

The General meeting The October 2008 AARC monthly meeting was convened at 7:30PM 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). Christopher Green, a prospective Ham, was present and joined AARC.

Election of Officers and Directors was conducted at the end of the General Meeting with results as follows:

Officers elected are as follows:

Dave Damon K4DND	– President
Jim Crosby K4JEC	– Vice President
Don Eason N4UVA	– Treasurer
Alan Swinger K9MBQ	– Secretary

Directors elected are as follows:

Linda Beard	KI5LLB
Dennis Mennerich	K4THE
Bill Phillips	AD6JV
Jeffrey Seay	N4LFJ
Greg Faust	N4PGS

The General meeting commenced with Dave K4DND addressing the following:

- The minutes of the September 2008 meetings were approved as they appear in the October issue of the Beacon without discussion or change.
- Don (N4UVA) presented the club Treasurer's report indicating a current balance on hand of \$3670.94. Also. A check for \$200 was received from the Greater Eastern Endurance Run (GEER) organization for club efforts in supporting their annual event.

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- The Secretary noted that a proposed change to the By-Laws had been received which proposes adding an Estate Committee. In accordance with club By-Laws, the proposal will be published in the Beacon for members to review and will be discussed and voted on at the November General membership Meeting. Proposed change wording is as follows:

Proposed changes to the Albemarle Amateur Radio Club (AARC) Bylaws

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An Estate Committee composed of a Chairperson, a Director, the ARRC Treasurer, and at least two other members shall be appointed by the Board at the January meeting. This Committee shall act upon notification that an AARC member or local area non-member amateur becomes a Silent Key. The charge to the committee is to assist the family of the Silent Key (with permission of the family or estate executor) in disposing of any amateur radio or related equipment to the best benefit of the family of the Silent Key. If this activity is undertaken by the Estate Committee, a complete inventory of such equipment should be made, with fair current market values assigned, and a subsequent full accounting made to the family or estate, following any action taken with respect to disposal of the inventory. The Committees written report of yearly activity shall be submitted to the Club for its approval at the regular meeting in October.

Dave's President's report included the following:

- Dave noted that club membership was at 97. With the addition of Chris Greene, we are up to 98.
- During repeater work at Marshall Manor, Dave noted that Mrs. Kluge, property owner, visited the site and advised that the tower on which the 76 repeater is mounted would be dismantled in the spring. That said, AARC could be asked to vacate the site at any time and will need to rely on the 895 repeater until another 76 site is found.
- Letters of appreciation were received from the Blue Ridge Extreme bike-athon co-directors for AARC member support and from GEER for Dave's efforts and that of the club along with a \$200 check. Dave passed out certificates of recognition to participants present.
- The BoD approved reimbursement to Dave K4DND for the ARCOM controller at Buck's Elbow – invoice to be submitted.

- Club insurance level has been agreed to with the insurance company, and an approximate \$100 refund of premiums paid is expected.
- The club has run a paid AD in World Radio magazine for a number of years at the cost of \$70/yr. The BoD agreed that AARC would not renew since there is little payoff from the AD.
- Dave brought example Nametags that could be adopted for the membership and bought by members. Members expressed interest and it was agreed that a graphic of the nametag would be published in the Beacon for member review and discussion at the November meeting.
- Dave presented Goals for the coming year which for General Membership consideration and comment, to include:
 - Public Awareness and PR – e.g. continued support to events
 - Increased membership – responsibility of all members
 - Member and outside education
 - Outreach to other groups (e.g. Boy scouts)
 - Ride-share for members who cannot drive – volunteers solicited
 - Web Site expertise – need a new webmaster – volunteer(s) solicited
 - VE Coordinator relief for Gordon

Committee Reports follow. These summarize what AARC has accomplished in the past year. Well done to all for great work and dedication. Note that due to its length, the Education Committee report will be issued separately and accompanies these minutes in the forwarding e-mail.

Fundraising – Dave presented in the absence of Linda (K15LLB): the most important issue is to obtain Tax-Exempt status for the club; this is in work.

Activities – Dave presented in the absence of Jay (K4AZV):

The **Military History show** was supported by the club on 4-5 Oct. Jay (K4AZV) set up an HF station on the grounds of the County building and had available numerous info brochures on Amateur Radio provided by AARC's CIO, Jeffrey (N4LFJ).

Planned activities for the coming year include:

- Jefferson Bike Race
- MS150
- NRAO Open House
- BRE and GEER

- Field Day at the Earlysville Firehouse
- Contests – ideas/help needed to determine which ones and who/where the club will conduct.

Publications – Jeffrey (N4LFJ) presented: The radio and television PSAs were pulled from the air effective October 1 in order to change the contact information and format of the commercials. I expect to have new PSAs out in the next few months. No community calendar bulletins were posted due to the fact that the October meeting would strictly be a business meeting.

Education – Dennis (K4THE) presented: issued separately.

Technical – Gordon (WW4GW) presented the committee Annual Report. The AARC technical committee did establish several goals for itself and the AARC at the beginning of this year. These goals were:

- To have DOUs signed between the AARC and the owners of the various repeater sites no later than the February scheduled meeting. DOUs were completed and signed on schedule for Martha Jefferson Hospital, Williams Pipeline and the Kluge Estate. Since acquiring the new site at Buck's Elbow, a DOU has been signed for that location also.
- To install a weather alert system for the club's repeaters no later than June, 2008. This was accomplished on schedule and the 146.760 and 444.000 will broadcast weather alerts for Charlottesville and Albemarle County, the 146.925 and 224.760 for Nelson County and the newly acquired 146.895 for Greene and Orange Counties.
- To provide to the officers of the AARC evaluations of all the club's repeater sites. This is being provided today as an attachment to this report.
- To determine the best distribution and/or placement of the AARC's repeater systems to provide the best coverage possible for all the club's members. We took into account the varying topography of this region, and the very real possibility of losing the 146.760 site. Therefore, when the opportunity to acquire the Buck's Elbow site presented itself, the TC made a strong recommendation to the club that this acquisition be made. The TC also considered what effect statewide ARES/RACES activation would have on our repeater systems.
- To provide the best service possible to keep the clubs repeaters operating. Within the constraints that were placed on the TC members due to scheduling arrangements with the property owners, the TC committee did respond in as timely a fashion as possible to:
 - Repair the 440 repeater and remote base at Martha Jefferson Hospital. There were issues with receive sensitivity, remote base audio clarity, and the power supply. A commercial grade (Motorola) power supply was located and installed, the 440 receiver was repaired, and the remote base audio was improved.
 - Repaired the Icom repeater at Heard's Mountain site. There were recurring issues with the receive sensitivity that appear to have been resolved by the installation of a better RF transistor (FET).
 - Resolved grounding and power supply problems at the Heard's Mountain site. The power supply had some type of internal buzzing noise that was heard in the repeater audio. A commercial grade (Motorola) power supply was installed in the repeater and the entire site was properly bonded to ground.
 - Installed the new 440 antenna on the tower at the Kluge Estate site.
 - Replaced the 2M antenna at the Kluge Estate and relocated the antenna to the west side of the tower at a higher elevation. This move did introduce an intermittent problem into the system – and it was decided to replace the entire antenna feed system. A new 7/8 heliax has been installed with all new connectors and required jumpers.
 - Evaluated and corrected electrical grounding and bonding concerns at the 146.760 site.
 - Replaced the power supply at the 146.760 site as the existing power supply had 60Hz hum. A commercial grade (GE) power supply was installed – one that has an internal battery charger and power loss sensing circuit.
 - Installed the new 440 repeater at the Kluge Estate site – this is the first step towards the final goal of allowing the repeater sites to be linked together on command.
 - Replaced the antenna at the Buck's Elbow site with a 2m/440 dual band antenna including new 7/8 heliax.
 - Installed the packet digipeater at the Buck's Elbow site along with a new antenna and ½ heliax.

- Installed new ARCOM programmable controllers at the Kluge Estate site and the Buck's Elbow site. This also is a step towards the linking project.
- Repaired the 2M receiver at the Buck's Elbow site as it had receive sensitivity issues. The T/R relay contacts were intermittent and there was an open .01 mfd bypass capacitor in the IF circuit.

As you can see, it has been a very busy and productive year for the TC so far. By repairing existing problems within the repeater systems, we now have a firm base to start building our linked system from. The committee has had discussions about how to link the systems together, and is now prepared to proceed forward with that project.

Gordon also presented an evaluation of club repeater sites as follows: All AARC repeater sites have been visited regularly as part of a preventative maintenance schedule. During these visits each transmitter and receiver are checked to verify their proper operation. If any discrepancies are detected, the failing component was then removed, repaired and placed back into service. As of this report, all AARC repeater systems are operating according to published factory specifications for new equipment.

- **Martha Jefferson Hospital** – houses the AARC 444.250 repeater with the remote base. The TC expects to lose this site within the next 2-3 years, and therefore gives it a 5% level of permanence. While the management of M-J has indicated that plans are being made to allow the AARC access to the new facility, the coverage from that site has yet to be determined. It remains unclear as to whether or not we will be allowed to stay at the existing site. By receiving a further understanding of coverage areas and facility plans for both locations, the level of permanence for this site can be greatly improved. Coverage from this site is mostly within the Charlottesville area. Site service visits are scheduled thru their facilities management, and are best performed M-F during daylight hours.
- **Kluge Estate** – houses the AARC 146.760 and 444.000 repeater systems. This repeater has long been the "workhorse" for the AARC, but it is apparent that this site will require us to vacate in the near future. Therefore, this site is given a permanence rating of 0%. Members of the TC are looking into future possible locations for this system. This site provides excellent coverage of Albemarle County and areas to the south, west and north. The use of this site may be curtailed during ARES/RACES activations since the VADEM utilizes the 146.760 repeater in Williamsburg as a communications link throughout the Tidewater area. Site service visits are scheduled thru the estate's

security manager, and are not always allowed due to the conditions of the grounds (wet, muddy, etc).

- **Heard's Mountain** – houses the AARC 146.925 and 224.760 repeater systems. This site is easily accessed and appears to be available for our use as long as we desire and gets a permanence rating of 99%. Coverage from this site extends into Nelson County, the Shenandoah Valley, and other areas a great distance from the site. We do have some constraints pertaining to antenna height(s), and because of that the TC is considering some antenna testing to see if areas closer to the site can receive better coverage. Due to the high gain factor of the current antennas, we feel that most of the signal is being radiated outward rather than down into the areas that would be best served by the signal. This site has no access issues and can be visited by TC members at any time without having to provide any notification to others.
- **Buck's Elbow** – this site houses the newly acquired 146.895 repeater system and the packet mode digipeater. This site also receives a 99% permanence rating. Coverage from this site extends into Richmond, Fredericksburg, Lynchburg, and the Shenandoah Valley. This site will most likely become the AARC "workhorse" due to our having to vacate the Kluge site. Service visits must be scheduled thru the Albemarle County EOC, and no problems or issues have arisen concerning visits. There are some concerns about coordination of this site, and the TC is addressing these concerns through SERA.

There being no further business, the meeting was adjourned. The next meeting will be held on Tuesday, November 11.

Alan Swinger – K9MBC. Secretary

AARC EdCom Report

Dennis, K4THE

The **Education Committee** members for 2008 were:

K4BAV	Jim Wilson
K4THE	Dennis Mennerich (Chairman)
KB4JNI	Bud Beazell
KG4OVD	Cayman Brownfield

Dennis began soliciting volunteers for the committee in December. Getting volunteers to work on this committee was quite difficult, given the general apathy of the membership at the time (Nov - Dec 2007). I had the same problem when running the nominating committee in 2006 & 2007. I finally managed to get the above to agree to work with me. As

there had been no EdCom for at least the previous five years, we were starting from scratch.

Dave K4DND gave a presentation about ham radio to the Boy Scout roundtable meeting In January.

After a number of phone conversations and emails, the committee had its first meeting Feb 6th. After getting to know each other better and discussing our goals, we decided to start with only a few items. Dennis would build an education web page; Cayman would be the Boy Scout liaison and make further contacts there; Bud would assemble a list of potential Elmers and think about kit building projects and Jim would investigate Morse code training. We decided not to attempt conducting formal classes given the difficulties involved and the lack of resources. The last time the club sponsored a 10 week class was in 2003 (given by Ben N4CV and Steve KG4ZGD). Tom W4RAE was planning a weekend course a couple of years ago but it was cancelled.

Members indicating interest in being an Elmer were AD6JV, K4AZV, K4DND & K4THE. **Members showing interest in working with the Boy Scouts** were AA3BB, AD6JV, AG4DN, K4AZV & K4MSR.

Unfortunately the club webmaster Josh KG4NGV abruptly dropped out of sight so Cayman again became the webmaster - which took his time away from the EdCom - and then he left for the summer and college. He did post Dennis' education page.

A **questionnaire** was circulated at the January, February and March meetings to determine the members' education and training needs (attached). The results were used to prepare a list of books and other media (attached) that were given to the JMRL Library to supplement their existing ham radio related holdings. They were purchased with the money donated in memory of Steve Clements KD4HBX. The results were also given to Mike KI4RIX to use as a guide for presentations at meetings.

Dennis developed an education page for the club website (attached) which provided relevant links and guidance for individuals interested in a self-study program.

<http://www.albemarleradio.org/members/links.shtml>
Unfortunately, the access restrictions to change the club web page prevented further updating.

Jim set up a Morse code exhibit at the NRAO open house.

Recommendations for future actions:

- Recirculate the questionnaire to update the members' education and training needs (as the membership has grown) and obtain additional books / media for JMRL as needed.
- Expand the Edcom web page.

- The committee chairmen need to have easy access to their respective web pages for updates and changes. Perhaps we should switch to another service provider.
- Solicit new members for the committee interested in active participation.
- Attempt to get enough volunteers to teach a weekend review course.
- Try to develop a liaison with Boy Scouts and Civil Air Patrol.

Dennis N. Mennerich, K4THE = Chairman

EDUCATION REQUIREMENTS

This list was circulated at the Feb, Mar & Apr meetings. Most interest is in software, digital modes, building antennas and computers. Only a few are interested in upgrading. The results are as follows:

13	Software for hams
10	Antennas – Building your own – HF
10	Digital Modes – PSK31, RTTY, FSK, Clover, Hellschreiber, CHIP64, WinLink, etc.
8	Computers in the ham shack
8	Antennas – Building your own – VHF / UHF
5	Upgrade to Extra class
5	Home Brewed Equipment
5	AMSAT amateur radio satellite communications
4	QRP – building your own
4	Propagation – theory, forecasting, models
4	Learn Morse Code
4	ES – Emergency Services Training
4	Develop DX skills
3	Weather satellite reception
3	QRP low power equipment – use and capabilities
3	Performance Modeling – antennas, repeaters, wind loading, etc.
3	Building kits
3	Advance to General class
2	SWL short wave listening
2	FSTV – fast scan TV
2	ES – Emergency Services Equipment
1	SSTV – slow scan television
1	Radio Astronomy

- 1 R/C radio controlled models (6m)
- 1 PS – Public Service – What is involved in these events?
- 1 Learn contesting skills
- 1 Fox Hunting – RDF radio direction finding
- 0 NDB hunting – low frequency Non-Directional Beacons
- 0 Basic soldering techniques

MEDIA GIVEN TO JMRL IN MEMORY OF KD4HBX

FROM ARRL BOOKSTORE

- ARRL Antenna Handbook
- ARRL Extra Class License Manual (2 copies)
- ARRL General Class License Manual
- ARRL Handbook
- ARRL Operating Manual
- ARRL Technician Class License Manual
- FCC Rules and Regulations
- Getting Started with Ham Radio
- Ham University Extra and Code Edition
- HF Digital Handbook
- Low Profile Amateur Radio
- Radio Amateur's Satellite Handbook
- RFI Book
- Simple and Fun Antennas for Hams
- Understanding Basic Electronics
- Vertical Antenna Classics Volume 1 and 2
- VHF Digital Handbook
- VHF/UHF Antenna Classics
- Wire Antenna Classics Volume 1 and 2
- Yagi Antenna Classics -- Yagis, Quads, Loops

FROM W5YI

- Technician Class Audio CD Theory Course
- General Audio Theory Course
- Extra Class Audio Course

AARC Education Committee Webpage

These pages will provide information related to education and training for prospective and current hams. Please send your suggestions or requirements to k4the@arrl.net. (This is a work in progress - Updated 3-31-08)

THE AMATEUR RADIO RELAY LEAGUE has all the books and other training media you might need to meet various goals.

Help For Beginners

- [The ARRL Ham Radio License Manuals](#) and [other training media](#) are available.
- And many other educational, training and self-study resources are available at the [ARRL bookstore](#).
- The ARRL Certification and Continuing Education courses include an Emergency Communication series. The Technical Series include such topics as Antenna Modeling, Design & Construction; Propagation; Analog & Digital Electronics; RFI; Digital comms; Electronics, etc. See [this link](#) for more details

On-Line Exams / Training are available at

- [QRZ](#) (free) and [Ham Test Online](#) (not free) and reviews of their system are at [eHam](#) and also from the ARRL (linked above).
- There are many types of Ham Radio education, training and exam preparation resources. A listing of other materials and consumer reviews by fellow hams is available [here](#).
- The [W5YI Group](#) and Gordon West have a comprehensive listing of books and other training media. Their Primary Mission is to assist individuals in obtaining FCC-issued Amateur and Commercial Radio Operator licenses. You can find reviews of some of these products [here](#) and [here](#). Many of their products are similar to those available from the ARRL. Some prefer these and others prefer the ARRL guides, so read the reviews.
- You can download free the official Technician, General and Extra question pools from the [NCVEC](#) (National Conference of Volunteer Examiner Coordinators). Note that we do NOT recommend using these or any commercial equivalents- to just memorize answers. They could, however, be useful in reviewing the material after using conventional learning techniques or in final preparation for an exam. Note that some of the on-line testing sites or other computer trainers will keep score for you and repeat questions in areas of weakness, which these question pools will not do for you.

Handicap

- The Courage HANDI-HAM System has been helping persons with disabilities for over 40 years. The Courage Handi-Ham System provides tools for people with disabilities to learn Amateur Radio and technology skills and to earn their Amateur Radio licenses. They teach technology to people with

physical disabilities and sensory impairments. Ham radio, computing and more can be learned at home through the use of cassette tape books, media on disc or at one of their residential camps. More info available at [their website](#)

Morse Code

- Real hams do Morse code, as many CW operators say. Even though it is not required for licensing anymore, it is a very useful skill for contesting, DX and getting through in emergencies when nothing else does. It is also an intellectual and enlightening challenge. The Koch and Farnsworth methods of learning are arguably the best. A highly rated freeware with extensive features by G4FON can be downloaded from [here](#) and is reviewed [here](#).

PEER INFORMATION

There are numerous hams that have many years of experience and/or knowledge in specialized areas who have constructed very informative web sites that can be used for assistance, research, self-study and just plain enjoyment. A few of them are listed here. Please feel free to give us your feedback and suggest other best-of-the-best links.

- [W8JI](#) An extremely popular site with info on many topics
- [W4RNL](#) The best antenna site ever - by a real expert
- [KOBG](#) Everything you need to know about mobile radio operation

AARC Technical Committee - Annual Report

Gordon, WW4GW

The AARC technical committee did establish several goals for itself and the AARC at the beginning of this year. These goals were:

- To have DOUs signed between the AARC and the owners of the various repeater sites no later than the February scheduled meeting. DOUs were completed and signed on schedule for Martha Jefferson Hospital, Williams Pipeline and the Kluge Estate. Since acquiring the new site at Buck's Elbow, a DOU has been signed for that location also.
- To install a weather alert system for the club's repeaters no later than June, 2008. This was accomplished on schedule and the 146.760 and 444.000 will broadcast weather alerts for Charlottesville and Albemarle County, the 146.925

and 224.760 for Nelson County and the newly acquired 146.895 for Greene and Orange Counties.

- To provide to the officers of the AARC evaluations of all the club's repeater sites. This is being provided today as an attachment to this report.
- To determine the best distribution and/or placement of the AARC repeater systems to provide the best coverage possible for all the club's members. We took into account the varying topography of this region, and the very real possibility of losing the 146.760 site. Therefore, when the opportunity to acquire the Buck's Elbow site presented itself, the TC made a strong recommendation to the club that this acquisition be made. The TC also considered what effect statewide ARES/RACES activation would have on our repeater systems.
- To provide the best service possible to keep the clubs repeaters operating. Within the constraints that were placed on the TC members due to scheduling arrangements with the property owners, the TC committee did respond in as timely a fashion as possible to:
 - Repair the 440 repeater and remote base at Martha Jefferson Hospital. There were issues with receive sensitivity, remote base audio clarity, and the power supply. A commercial grade (Motorola) power supply was located and installed, the 440 receiver was repaired, and the remote base audio was improved.
 - Repaired the Icom repeater at Heard's Mountain site. There were recurring issues with the receive sensitivity that appear to have been resolved by the installation of a better RF transistor (FET).
 - Resolved grounding and power supply problems at the Heard's Mountain site. The power supply had some type of internal buzzing noise that was heard in the repeater audio. A commercial grade (Motorola) power supply was installed in the repeater and the entire site was properly bonded to ground.
 - Installed the new 440 antenna on the tower at the Kluge Estate site.
 - Replaced the 2M antenna at the Kluge Estate and relocated the antenna to the west side of the tower at a higher elevation. This move did introduce an intermittent problem into the system – and it was decided to replace the entire antenna feed system. A new 7/8 heliax has

been installed with all new connectors and required jumpers.

- Evaluated and corrected electrical grounding and bonding concerns at the 146.760 site.
- Replaced the power supply at the 146.760 site as the existing power supply had 60Hz hum. A commercial grade (GE) power supply was installed – one that has an internal battery charger and power loss sensing circuit.
- Installed the new 440 repeater at the Kluge Estate site – this is the first step towards the final goal of allowing the repeater sites to be linked together on command.
- Replaced the antenna at the Buck's Elbow site with a 2m/440 dual band antenna including new 7/8 heliax.
- Installed the packet digipeater at the Buck's Elbow site along with a new antenna and ½ heliax.
- Installed new ARCOM programmable controllers at the Kluge Estate site and the Buck's Elbow site. This also is a step towards the linking project.
- Repaired the 2M receiver at the Buck's Elbow site as it had receive sensitivity issues. The T/R relay contacts were intermittent and there was an open .01 mfd bypass capacitor in the IF circuit.

As you can see, it has been a very busy and productive year for the TC so far. By repairing existing problems within the repeater systems, we now have a firm base to start building our linked system from. The committee has had discussions about how to link the systems together, and is now prepared to proceed forward with that project.

Evaluation of Repeater Sites - October 14, 2008

All AARC repeater sites have been visited regularly as part of a preventative maintenance schedule. During these visits each transmitter and receiver are checked to verify their proper operation. If any discrepancies were detected, the failing component was then removed, repaired and placed back into service. As of this report, all AARC repeater systems are operating according to published factory specifications for new equipment.

Martha Jefferson Hospital – houses the AARC 444.250 repeater with the remote base. The TC expects to lose this site within the next 2-3 years, and therefore gives it a 5% level of permanence. While the management of M-J has indicated that plans are being made to allow the AARC access to the new facility, the coverage from that site has yet to be determined. It remains unclear as to whether or not we will be allowed to stay at the existing site. By receiving a further understanding of coverage areas and facility plans for both locations, the level of permanence for this site can be greatly improved. Coverage from this site is mostly within the Charlottesville area. Site service visits are scheduled thru their facilities management, and are best performed M-F during daylight hours.

Kluge Estate – houses the AARC 146.760 and 444.000 repeater systems. This repeater has long been the “workhorse” for the AARC, but it is apparent that this site will require us to vacate in the near future. Therefore, this site is given a permanence rating of 0%. Members of the TC are looking into future possible locations for this system. This site provides excellent coverage of Albemarle County and areas to the south, west and north. The use of this site may be curtailed during ARES/RACES activations since the VADEM utilizes the 146.760 repeater in Williamsburg as a communications link throughout the Tidewater area. Site service visits are scheduled thru the estate's security manager, and are not always allowed due to the conditions of the grounds (wet, muddy, etc).

Heard's Mountain – houses the AARC 146.925 and 224.760 repeater systems. This site is easily accessed and appears to be available for our use as long as we desire and gets a permanence rating of 99%. Coverage from this site extends into Nelson County, the Shenandoah Valley, and other areas a great distance from the site. We do have some constraints pertaining to antenna height(s), and because of that the TC is considering some antenna testing to see if areas closer to the site can receive better coverage. Due to the high gain factor of the current antennas, we feel that most of the signal is being radiated outward rather than down into the areas that would be best served by the signal. This site has no access issues and can be visited by TC members at any time without having to provide any notification to others.

Buck's Elbow – this site houses the newly acquired 146.895 repeater system and the packet mode digipeater. This site also receives a 99% permanence rating. Coverage from this site extends into Richmond, Fredericksburg, Lynchburg, and the Shenandoah Valley. This site will most likely become the AARC “workhorse” due to our having to vacate the Kluge site. Service visits must be scheduled thru the Albemarle County EOC, and no problems or issues have arisen concerning visits. There are some concerns about coordination of this site, and the TC is addressing these concerns through SERA.

October Quiz Results

Ron K4RKA

The **FIRST response** was from K4EBL, Dick. The **SECOND response** was from AD6JV, Bill. Coming in **THIRD but the only one with ALL CORRECT answers** was our previous winner, **WB5BNT, Tom**. Congratulations to Tom - slow(er) but sure wins the day.

When I took the quiz, I missed the last one & until encouraging Dick to try again, I had not tried to figure out where my mistake was. Then Mr. Edison's invention hit and it was so obvious, I felt like kicking my self - it was easier than G, which I'll let Bill make another guess at before revealing the answers.

I hope you guys enjoyed this. A little more practical than last months and a lot easier (for me) than next month's will be. I had a friend who used to interview prospective technicians with a similar test and he claimed that the people who did best on trivia tests like this turned out to be his best workers - as long as he kept them motivated & challenged. If he put them in a mundane job they soon left. I found his "black box" tests particularly frustrating & I wish I had some to pass along but haven't run across any yet. I remember a friend who was hired at my previous place of employment who had a significant background in radio station & ham work, but they put him in a simple test job. One day I asked him what he was doing & his response was "testing my ohmmeter". He is also no longer there.

IF I find any examples of the "employment quizzes", I'll share them in some future newsletter.

73, Ron

Aluminum Towers CAN Fail!!!

Tnx Alan, K9MBQ

The attached photo shows one of two 89 ft Aluminum Crank-up/Tilt-over towers belonging to a friend of mine on the Eastern Shore. This one had his VHF/UHF stack and **failed in ~30kts of wind**. His twin to this with the HF stack (not a big one) failed last year. I am glad I stuck to a Steel tower! BTW, he had ARRL insurance and I understand they are refusing to cover the cost . . . I do not know the reasons. In any event, this might be a caution re Aluminum towers.



One of the aluminum towers with several VHF arrays...

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.

Ten-Tec 6M Transverter. Provides 10W out and have used successfully w/ a TS-570. I have all documentation. Simple to use; tunes on the 20M band. Price - \$60. Happy to demo it for you. Contact info: Alan K9MBQ; 434-975-6237, email awswinger@earthlink.net

Scanners for Sale -- 2 Uniden 760 \$50.00 Each. 1 Radio Shack 95 Portable \$100.00. 1 Bearcat 240xlt 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

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\$15.00. 1 Uniden 100xt 100 channel 50.00. 1 Pro 2051 Radio Shack Desktop 1000 channel \$150.00. Thanks, Jerome, KI4DLA

Ameritron AL-800 linear amplifier. Bought new but never used. Provides 1200 watts PEP output from 160 to 15 meters using a 3CX800A7 tube. I am planning to move up to a heftier unit. If interested, call Bob W4RQ at (434) 990-2659 (home), (434) 980-7143 (office) or via email at w4rq@yahoo.com.

Rotator cable - 125 ft of 8-conductor rotor cable. Bought new -- discovered I had more than a 100 ft run to the antenna and would need heavier duty cable. Call Bob W4RQ at (434) 990-2659 (home), (434) 980-7143 (office) or via email at w4rq@yahoo.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.

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

Radio and Electronic Test Equipment - FOR SALE

All equipment is in good working condition, but not guaranteed John Green, KX4P. **SAMPLE LIST:**

- 1 ALD-22 Aerovox, Decade Inductor, 0 to 0.1 Hy - No manual -- \$10
- 1 ALD-32 Aerovox, Decade Inductor, 0 to 1.0 Hy - No manual \$10
- 1 ALD-42 Aerovox, Decade Inductor, 0 to 10 Hy - No manual \$10
- 1 10W-1000 Amplifier Research, Wideband Amplifier, 1 to 1000 MHz, 10 Watt - Yes manual - \$150
- 1 1309 AT&T Home Telephone Answering Machine Yes manual \$2

MANY MORE ITEMS - TO SEE COMPLETE LIST PLEASE GO TO

<http://www.albemarleradio.org/members/swapfest.shtml>

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 at mjb8h@virginia.edu or (703) 577-3788.

Contest Highlights - Upcoming

Bob, W4RQ

ARRL-Sponsored Contests

Nov 15-16	ARRL EME Contest
Nov 15-17	ARRL November Sweepstakes SSB

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

Other Contests of Interest

Nov 8-9	Kentucky QSO Party
Nov 15-16	RSGB 1.8 MHz Contest - CW

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

73, Bob W4RQ

Happy Thanksgiving!!



AARC Public Service Schedule

None Reported	
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Area Hamfests

Date	
Location	

FCC Database Updates

New Calls

None Reported	
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Upgrades

None Reported	
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Vanity Calls

None Reported	
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VE Session Schedule - 2008

Date	For exam sessions in Virginia outside the AARC area, check the ARRL Exam Session Search web page.
Location	
(ARRL VEC)	

For Sale Items

For Sale	Kenwood TS-520S SSB xvcr, with VFO, RIT and Calrad mike, DM-16-HL and DYMACT-50-HIGH-LOW. Realistic D-160 with SP-150 speaker. Tone box for code oscillator. Heathkit stereo headphones. GE H-14. Equipment being sold for widow of a SK. Call Jimmy, K4JMY at (434) 973-5589.
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AARC Club Officers

President	Dave Damon	K4DND	k4dnd@arrl.net (434) 973-5866
Vice President	Mike Benonis	KI4RIX	mjb8h@virginia.edu (703) 577-3788
Secretary	Alan Swinger	K9MBQ	awswinger@earthlink.net (434) 975-6237
Treasurer	Don Eason	N4UVA	deason@comcast.net (434) 973-9119
Director	Dennis Mennerich	K4THE	k4the@arrl.net (434) 973-5407
Director	Linda Beard	KI5LLB	lindaskyone@earthlink.net (434) 823-2107
Director	Jay Rostow	K4AZV	k4azv@turing.org 434-263-5795
Director	Bill Phillips	AD6JV	billp1048@earthlink.net 434 872-0686
Director	Jeffrey Seay	N4LFJ	n4lfj@yahoo.com

Contest Calendars

ARRL Contest Calendar 2008	ARRL sponsored contests
SM3CER Contest Service - Calendar 2008	Contests all over the world! Also has links to online rules for most contests
Contesting Online	Just about everything contests!

Albemarle Amateur Radio Club
 P.O. Box 6833
 Charlottesville, VA 22906
<http://www.albemarleradio.org/>



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ISSUE DEADLINE - 25th of each month

Contact Information
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 Ruckersville, VA 22968-0530
 (434) 990-2659
W4RQ@yahoo.com

Next Club Meeting : November 11 - 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
November 11	Regular Club Meeting
December 9	Regular Club Meeting

AARC - PUBLIC SERVICE SCHEDULE

DATE	EVENT
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There currently is no primary contact for Public Service events and Emergency Communications. Any volunteers?

Membership application available in PDF format at http://www.albemarleradio.org/members/AARC_member_application.pdf