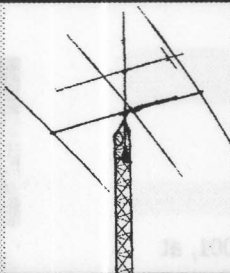


The AARC Beacon



*Amateur Radio News For
Charlottesville and
Albemarle County,
Virginia*

Volume 2001, No. 9

September 2001

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Meeting Notice

The next regular AARC meeting will be held on September 11 at 7:30 PM at the NRAO building at UVA. Joe, W2PVY will give a presentation of an AM receiver he built that has unusual characteristics. Elmer, KF4UCI will tell of his quid pro quo deal with NWS to get the weather alert radios for the area schools. Then Greg, N4PGS, on behalf of Kaye Hardin, will describe the radios.

It is almost NOMINATIONS time. The president will appoint a nominating committee at this meeting. See you there!!

The President Speaks

Stan, K2SSB

I hope that all of you had a pleasant and relaxing summer, and that you're ready to pitch into the fall season. Sheila and I returned to our native New England for a week of intensive singing at the choral festival where we met six years ago. From there, we headed to my family's summer retreat on Lake Winnepesaukee in New Hampshire for two weeks. We visited one of my college classmates, and one of Sheila's prep school classmates (KD6PCE, it turned out!) from California came to visit us. (Actually, the classmate's brother lives only an hour's drive north of the summer cottage; she was staying with him.) Following several days of genealogical research and visits by family members, we returned home four weeks after we left.

As I mentioned couple of months ago, the Bylaws of the Club require that I appoint a Nominating Committee at the September meeting. Although I have several people in mind to ask to serve, I would be pleased to hear from volunteers. After all, the Club belongs to all of you, and not only to the officers and members of the Board. My telephone number is in the Directory. If you'd be willing to serve, please give me a call.

See you at the September meeting!

Veep Peeps

Vic, N3DFS. "Photos by Vickery"

The Annual AARC Picnic

The annual AARC picnic transpired on August 14, 2001, at McIntire Park. It was only sparsely attended, but I hope those who did attend enjoyed themselves. There was plenty to eat and sodas galore. It was a pleasant evening, and the winged and crawly pests were thankfully absent.

There was no formal program. The only speech I made, as acting president, was "Let's Eat!" (I believe in brevity.) Enjoying ourselves in good Ham companionship and eating good food were the main menu items.

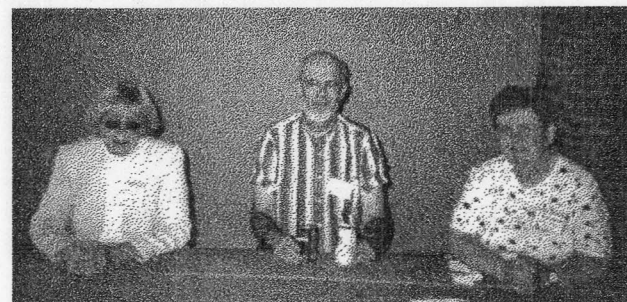
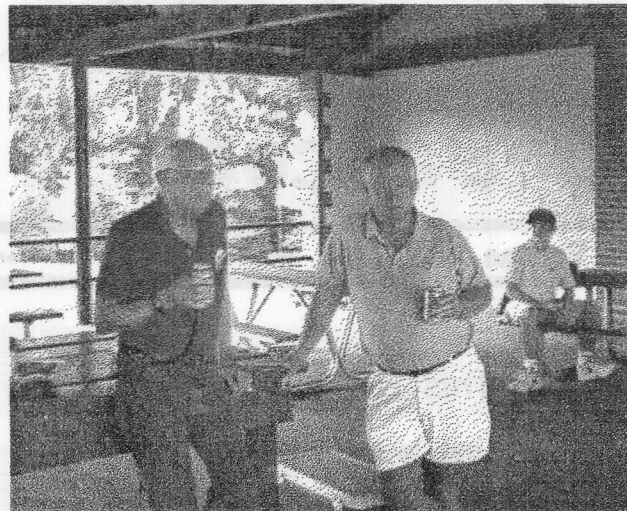
KG4FQW, Betty (my good XYL) and I met quite a few hams and family members or friends. There were quite a few young Hams in attendance, and by outward appearances, they made it a fun time. Steve, KF4ZGD brought a home-brew 440 beam, and that was a curiosity for the other youths (and some of the more ancient ones as well). His younger sister, Emily, now KG4OXY, was also in attendance. CONGRATULATIONS, Emily.

The Treasurer, Ralph, K4CFE, had paid the fee for use of Shelter Number 1, and Ron, K4RKA volunteered to supply drinks and Josh, KG4NGV the utensils, paper plates, napkins and cups. Others brought lots of good food.

It is important that PEOPLE come together in venues or situations other than where they work or, in our case, where we attend formal meetings. Whether swapping DX "war stories", exchanging technical information, or talking about our kids or grandkids, it is important to get to know each other better. Knowing each other better is an important key to cooperation. Cooperation, especially in emergency communications, is just as important as in the workplace or ham radio as on the gridiron.

Some photos from the picnic follow...

73, Vic





The Case for Belonging

Harry, W2HD

It was almost fifty years ago when the American Radio Relay League (ARRL) President, Goodwin L. Dosland, W0TSN, visited Radio Amateurs on Long Island. This was a very special occasion! Imagine, the League's highest official was going to meet with us and we would hear his words first hand! I was there in the high school auditorium selected for the meeting and it was a packed house. We anxiously awaited the words.

The President first asked a question, "How many of you subscribe to 'QST'?" and hands went up throughout the room... mine almost went to the ceiling. His next words brought forth a resounding groan from the audience, "I don't!" How could this be? Perhaps the President received his QST as a special. However, W0TSN's next words set the record straight as he said, "I am a member of the League and QST is the official journal of my organization!" That difference between subscriber and member was forever recorded in my memory. Through the years of my ARRL Presidency, the occasion presented itself many times to use the same words that President Dosland taught us so well.

It is that difference that will be highlighted in this month's column. QST is truly a great Amateur Radio publication. Let's take a look at the latest issue. The table of contents lists: Technical, News and Features, QST Workbench and Operating. Under the title of Departments we find such subjects as: Amateur Satellites, Contest Corral, New Books, New Products, Public Service, Silent Keys, Washington Mailbox, We're at Your Service and the World Above 50 MHz, to name a few. In these sections you will find the latest equipment reviews, stories about domestic and foreign activities, minutes of a recent Board of Directors meeting, Happenings which includes topics of interest occurring in Amateur Radio and building projects. Your "dues" (not subscription) dollars buy one tremendous source of monthly information for an entire year. Each one of the topics listed under the titles above could be expanded into very valuable

news for each of us regardless of our particular specialty interest... something for everyone!

It's interesting to note that a large majority of the costs involved in the publishing of QST are covered by advertising income. It's possible that you may wonder then, where do my dues go? Well, there is the Production Department responsible for QST and all of the other publications on the League's bookshelf. The graphic designers and illustrators fall into this workforce, too.

So, OK, you say, my dues are paying some salaries. Yes, indeed, but take a look at what you receive in return. These services will not be placed in any priority order, but they are all very important in the League's service to members (notice, that's members, not the word subscribers.) There's W1AW with its code practice and bulletin transmissions which thousands and thousands of Hams and newcomers have used over the years. There's your Washington (D.C.) office staffed with folks who keep their fingers on the pulse of any legislation that may affect our bands and don't forget towers and antennas, too. They also keep an eye on international conferences, their agenda and our participation. There's the QSL Bureau helping to keep your costs reasonable as you pursue various awards. This program is scheduled for some interesting up-grading in years ahead. Is this all? Maybe we can scan some more of the latest QST and find a few more items covered by your membership dues. Frankly, that's easy to do. No mention has been made of training for licenses, emergency communications, the field organization, the technical service info, the awards program and media relations. And that's really not all your dues cover. There is a staff of over one hundred employees in a beautifully-equipped headquarters establishment in Newington, Connecticut. W1AW is co-located at the same site.

The day-to-day affairs of the ARRL are handled by this staff. Policy is established by a Board of Directors with representation from all of the different divisions of the League. The Board elects a president, first vice president, additional vice presidents, a secretary, a treasurer, an executive vice president and other positions necessary to the operation of the ARRL in the World of Amateur Radio. Always remember, we do not enjoy our Ham Radio in a vacuum. We are a member of the International Amateur Radio Union and that membership gives us a seat as an observer at International Telecommunications Union meetings where our frequency assignments are determined.

Perhaps this is sufficient to permit you to say, "I'm an ARRL member and proud of that fact!" Oh, yes, by the way, "QST" is the official journal of the League. I receive that as my membership communications journal! 73... /s/ Harry, W2HD

73... /s/ Harry J. Dannals, W2HD

President Emeritus

ARRL President 1972-1982

FCC Invites Comments on ARRL 60-Meter Petition

Reprinted from ARRL Bulletin ARLB033, August 14, 2001

The FCC has begun accepting comments on the ARRL petition seeking the allocation of 5.250 to 5.400 MHz to the Amateur Service on a domestic (US-only), secondary basis. The Commission put the proposal on public notice this week and assigned a rulemaking number, RM-10209, to the proceeding.

Interested parties may comment on the proposal via the Internet or e-mail using the FCC's Electronic Comment Filing System (EFCS), information on which can be found at <http://www.fcc.gov/e-file/ecfs.html>. Those commenting should reference "RM-10209" in their postings. Even if the FCC eventually okays the petition, it's likely to be several years before the new band actually becomes available.

In its petition, the ARRL told the FCC that the new band would aid emergency communication activities by filling a 'propagation gap' between 80 and 40 meters, particularly for emergency communications during hurricanes and severe weather emergencies. The ARRL also said a new 150-kHz allocation at 5 MHz also could relieve substantial overcrowding that periodically occurs on 80 and 40.

The ARRL has proposed that General class and higher amateurs be permitted to operate CW, phone, data, image and RTTY on the new band running maximum authorized power. No mode-specific sub-bands were proposed. If allocated to the Amateur Service on a secondary basis, hams would have to avoid interfering with -- and accept interference from -- current occupants of the spectrum, as they already do on 30 meters.

The ARRL said that its successful WA2XSY experimental operation between 1999 and this year demonstrates that amateur stations can co-exist with current users and that the band is very suitable for US-to-Caribbean paths.

Virginia Beach Hamfest

Joe, KD4RWX via Ken, KF4OW

SET ASIDE **SEPTEMBER 22-23 (SAT/SUN)** FOR THE VIRGINIA BEACH HAMFEST!

Where? Virginia Beach Pavilion

There will be manufacturers, dealers, parts & accessories, used equipment and a big Flea Market.

Attend Informational Forums on both Saturday & Sunday. Youth and Family Activities are planned too.

Hear ARRL President Jim Haynie, W5JBP on the latest.

Attend the FCC Session with Steve Linn, N4CAK, from the FCC Licensing Branch.

Tickets are \$6.00, good both days and include free parking.

Watch for special late breaking announcements at the hamfest website at www.vahamfest.com.

EXAMS: Saturday at 2:30 PM. Reserve your seat by pre-registering via email to w4rtz@juno.com or call 757-898-8031

Bring the family and enjoy the ocean beaches in this fine fall weather!

CUL at the Hamfest!!!

Crossband Repeat - Clear as Mud?

Gary Pearce KN4AQ - reprinted from the SERA Repeater Journal, August, 2001 (Tnx to Dave, K4DND)

This quarter, I'm going to punish myself. I'm going to attempt to write an article that explains crossband repeating. I've seen other articles that tried to explain this evidently complex subject, and most of them were terrible. It doesn't seem that complex to me, so I expect to add to the "terrible article" pile before I'm done. But I'm going to try, because crossband repeat is so useful, especially during public service and emergency events when you need the convenience of your HT, but the power of your mobile, to reach a distant repeater or simplex station. It's going to be worth the effort.

Crossband repeat is a feature that began appearing in many dual band radios almost ten years ago. It's even in some handhelds. It is simply the ability of these radios to take whatever is being received on one band and automatically retransmit it on the other band.

OK, from the quizzical expression I see on your face, I can tell that

1. You have a dual-band radio, and
2. You don't understand what I'm talking about already. Don't fret. You're in good company. Most hams who now understand and use crossband repeat, including me, had a hard time getting a handle on it at first. Let's do it step by step.

CLASSIC CROSSBAND - Simplex to Simplex

For this example, you'll need a crossband capable mobile, a VHF handheld, a UHF handheld, and a friend. If you don't have a friend, perhaps you should check your personal hygiene. But you can complete the example by yourself with reduced effectiveness. And if I do a good enough job, you'll understand what I'm talking about even if you don't have a radio nearby.

Set your dual-band mobile up for simplex on both the VHF and UHF sides of the radio. For VHF, let's not pick 146.52, the national simplex channel. Pick something a little less likely to be occupied in your area - 146.55, 147.51 or something. And for UHF, pick a channel that's part of the SERA Band Plan for crossband repeaters. I'll give you details on that later in the article. For now, let's use 445.900 MHz. Make sure all repeater offsets are turned off, and for now, leave any tone encode/decode turned off as well. And put both sides of the mobile in low power. Finally, set the VHF and UHF handhelds for those same respective frequencies.

Put the mobile in crossband repeat mode.

Talk from one HT to the other, normally a difficult trick because they are on different bands, and.... Whoa, hold up there, wait a minute! We need to go back one step. Something about "put the mobile in crossband repeat mode..."? I'm hearing a chorus of SERA Associate Members and even a few Full Repeater Owner Members all saying "how do I do that?" Now I hear the flipping of manual pages, the checking of indexes, the stifled curses of "where the #\$% are the instructions!"

Alas, for many radios, the instructions are not in the manual! You may have to do some searching. The dealer you bought the radio from can probably help, or a friend, or a search on the Internet. I'll tell you one thing - you won't be able to guess. For most radios, it's a hidden function involving pressing two or more buttons at once, and maybe even cycling power off and on. I can help with a few models of Icom radios.

OK, let's assume that you've figured out how to get the radio in crossband repeat mode, and it's just sitting there, waiting. Some special icon on the display may be flashing to tell you you're in crossband repeat, and some radio models won't let you operate normal functions in this mode.

Key up the UHF handheld, and keep a sharp eye on the mobile radio. Each radio may show somewhat different symptoms, but generally you should be able to notice that the mobile is receiving your UHF signal, and that the VHF transmitter is on. Talk into the UHF handheld, and you should hear yourself coming out of the VHF handheld. Like I said, a pretty neat trick.

Let go of the UHF handheld's transmit button, and keep watching the mobile. The UHF receiver squelch should close, and the VHF transmitter should drop. On most radios, it will drop instantly, but some models let the transmitter hang on a half-second or so. And the signal on the VHF handheld will drop. Hey, that works kind of like a... repeater!

So what just happened? When you keyed up the UHF handheld, the mobile UHF receiver came alive. Just like in the big repeater downtown, the receiver triggered a circuit that told the VHF transmitter to switch on. Audio was routed from the receiver to the transmitter, and voila! - you have a communications path from the UHF handheld to the VHF

handheld. When you let go of the HT's transmit button, the mobile UHF receiver squelch closed, and the circuit told the VHF transmitter to turn off. The only thing missing that you hear on a real repeater was the hang-time that follows each transmission, and maybe a beep or an ID or something.

So let's turn things around and transmit on the VHF handheld. The same sequence of events occurs, but with the opposite bands in the mobile radio. The VHF squelch opens, causing the UHF transmitter to turn on, and audio passes from the VHF receiver to the UHF transmitter.

So now, you and your friend can talk between the two handheld radios, with the crossband mobile switching back and forth, repeating each one in turn. When the mobile is idle, it's waiting for a signal on either band, and when a signal is received, it will repeat out to the other band.

Now, each of you turn and face opposite direction, and start walking. Normally, you'd expect to be able to put about two or three miles between you before signals got too weak (well, OK, normally you wouldn't be able to talk at all, since the handhelds are on different bands, so work with me here...). But with that mobile between you, running a few more watts and using a bigger, higher gain antenna, you're going to get some exercise! Each of you will get at least three miles from the car, probably more. So if you went in exact opposite directions, we're talking six to ten miles. And as usual with VHF/UHF, park the car up on a hill and extend the range even farther.

OK, that wasn't too tough ... the concept is clear, you're all set, have a good time, enjoy, thanks for reading... oh, wait. It gets tougher when you want to use your crossbander to work through a conventional repeater. Maybe a lot tougher. Let's go on to part 2...

[To be continued next month... Ed].

Club Business

AARC Board Minutes August 7, 2001

Meeting held at the JAG School. Thanks to Mike, N4HRO. Presiding: Vic, N3DFS. Attending: Joe, KD4RWX, Ralph, K4CFE, Steven, KF4ZGD and Elmer, KF4UCI.

Ralph presented a paper copy of the **Treasurer's Report:**

Albemarle Amateur Radio Club

Comparative Income Statement

FY 2000 and FYTD July 31, 2001

Year	2000	2001
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Revenues

Dues	\$1,655.00	\$1,762.00
Donations	\$572.50	\$65.00
Fundraising	\$124.00	

Total Revenues	\$2,351.50	\$1,827.00
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Expenses

Publications	\$1,217.51	\$402.18
Activities	\$59.44	\$104.00
Meetings	\$231.08	\$80.04
Office	\$101.00	\$15.99
Fees	\$25.00	\$25.00
Repairs	\$242.90	\$267.42
Electricity	\$152.35	
Insurance		\$233.00

Total Expenses	\$2,029.28	\$1,127.63
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Excess Revenues	\$322.22	\$699.37
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Balances:

AARC Fund	\$1,501.25
Repeater Fund	\$1,093.73
Packet Radio	\$78.51

Total Balances	\$1,172.24
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Elmer reported that there were some repeater interference problems which will be looked into.

Ralph brought up the Education fund which needs to be applied to educational purposes. Joe indicated that he has asked Tom, W4RAE, the Educational Chair to check into it.

Ralph also pointed out that there was an Outreach program directed towards home schooled kids on Oct.1. He would like to see some of our members staff an information table.

Some discussion about September meeting's program. No decision.

Adjourned.

Regular Meeting August 14, 2001

The August meeting was the Annual Picnic. Yours truly was not able to attend and I have not been sent any word on how it went. I assume a good time was had by all.

Meeting was adjourned.

Submitted by Joseph D. Fritz, Secretary

AARC Classified Ads

All items must be related to amateur radio and must be surplus to the owners operation (i.e. no dealers or for profit). Price may be listed if desired. **Note:** Check also the WA4TFZ/AARC web page at <http://www.people.virginia.edu/~ejd4e/aarc/>. Please note that all small letters must be used for this address. New Ads may be placed directly to the Editor: 804 990-2659 or via E-mail to the Editor at k4uvt@yahoo.com Please **let K4RKA know when items can be deleted from this file.** Updated 4/01/01

7/22/01 FOR SALE: Yaesu FT-901DM HF Transceiver	For 160, 80, 40, 20, 15, 10 meters. All solid state except 6146B finals and driver - 100 watts. Digital & analog readout. Built-in keyer, split operation, etc. AC and 12 VDC power supplies built in. Includes mic and mobile mount (new in box) and maintenance manuals. Excellent condition. \$375 OBO. Prefer pick up rather than ship. Call John, KX4P at 804 975-4493 (Home) or 804 978-2452 (Office).
7/22/01 FOR SALE: Five-Foot Rack	Professionally finished rack with blank panels, rear locking door, side panels, louvered top, mounted on casters. Includes miscellaneous hardware - rails, screws, etc. \$135 OBO pick-up only. Call John, KX4P at 804 975-4493 (Home) or 804 978-2452 (Office).
8/9/01 FOR SALE: HF Cubical Quad	John, WA4IUN, offers a Lightning Bolt 2-element cubical quad antenna, 5 band, 10-20 meters. Call him at 296-9016
3/1/01 FOR SALE: Icom 228H 2M Mobile	Bob, K4UVT, has an Icom 228H 2M Mobile rig with mobile mounting bracket and DTMF microphone. Also still have the manual! This rig still works FB - it just doesn't fit anywhere in the new automobile! Call 804 990-2659.
8/2/01 WANTED: 2M/440 Transceiver	Ralph, K4CFE, is looking for a 2M/440 transceiver with DTMF & CTSS. Repeat function desired but not necessary. Call Ralph at 434 296-7418.
7/19/01 WANTED: CW QRP Rig/CW Key	Looking for 10 - 80 meter rig. For the right price an 80-meter only rig is OK. Also need good rugged straight key for CW. Mill, KG4JAO at 540 967 23401
8/16/01 WANTED: Dual Band Mobile Antenna	Josh, KG4NGV, is looking for a dual band 2m/440 mag mount antenna. Call him at 804/434 760-0417 (mobile phone)

Area Hamfests

September 22-23
Virginia Beach, VA

******* VIRGINIA STATE CONVENTION *******

Sponsor: Tidewater Radio Conventions
Web site: <http://www.vahamfest.com>
Contact: Art Thieme, AA4AT, 2836 Greenwood Road, Chesapeake, VA 23321. Phone: 757 484-2857 or Email at thiemens@pinn.net

Birthdays This Month

Sep 2	N4HRO	Mike
Sep 10	K8EV	Richard
Sep 13	KF4UCI	Elmer
Sep 17	WD4HMW	Jim
Sep 21	KE4ZNO	Fred
Sep 23	AA4CN	Bruce
Sep 28	W4KSH	Bill

FCC Database Updates

New Calls

KG4OXY	Emily R. Traylor - TECHNICIAN
KG4OXX	Dean Shumard - TECHNICIAN
KG4OVD	Matthew C. Brownfield - TECHNICIAN

Upgrades

None reported

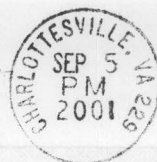
VE Session Schedule - 2001

September 23 Saturday	2:30 PM (Walk-ins allowed) Reserve your seat by pre-registering via email to w4rtz@juno.com or call 757-898-8031.
(ARRL VEC) *** AT VIRGINIA BEACH HAMFEST ***	*** See Virginia Beach Hamfest article earlier in this issue ***
September 30 Lynchburg	Charles L. Beard (804) 832-7651 1:30 PM (Walk-ins allowed) Central Virginia Comm. College Room 2504 - Amherst Bldg 3506 Wards Rd. Lynchburg, VA 24502
(ARRL VEC) AB4M	

Albemarle Amateur Radio Club
P.O. Box 6833

Charlottesville, VA 22906

<http://www.people.virginia.edu/~ejd4e/aarc/index.htm>



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THE AARC BEACON
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ISSUE DEADLINE - 23rd of each month

Contact Information

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KA4JJD G 2001

CURRENT MEMBER: 2001

Michael F. Rein
 109 Sturbridge Rd.
 Charlottesville VA 22901

***** Next Club Meeting *****

September 11 - 7:30 PM

UVA - NRAO

CLUB MEETINGS and NETS

REGULAR Meeting: Second Tuesday of each month at 7:30 PM

BOARD & TECHNICAL Meetings: First Tuesday of each month at 7:30 PM

Meetings are held at the National Radio Astronomy Observatory (NRAO) building on Edgemont Road (UVA)

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

YL Net: First Monday of each month at 8:30 PM

Northern Piedmont Emergency Net / Swap Net / Technical Session: Each Thursday at 8:00 PM

All Nets are held on the 146.760 repeater

AREA REPEATERS

WA4TFZ

INPUT/OUTPUT

146.160/146.760
 146.325/146.925
 223.160/224.760
 449.250/444.250
 145.030
 145.030

Tone Access (if needed)

88.5 Hz
 88.5 Hz (if enabled)
 No Tone
 151.4 Hz (if enabled)
 MACHO Node
 CHO Packet Bulletin Board

Other Area Repeaters

145.410 (-) 100 Hz Tone (if enabled) - **AF4CY (Madison)**
 442.075 (+) 151.4 Hz Tone - **KF4UCI**

AARC CALENDAR OF EVENTS

DATE	EVENT
September 11	Regular Club Meeting
October 9	Regular Club Meeting
November 13	Regular Club Meeting
December 11	Regular Club Meeting

AARC - PUBLIC SERVICE SCHEDULE

DATE	EVENT
Early September	Simulated Emergency Training Exercise
November 5	Montpelier Horse Races

Please sign up at meetings when the SIGN UP CLIPBOARD is passed around. You can also send an email to Greg (N4PGS) indicating your interest in working particular events.