

# The Monitor

Published jointly by the Valley Amateur Radio Association and the Massanutten Amateur Radio Association,  
in Virginia's Beautiful Shenandoah Valley



## VARA Meeting Date Change: January 8!

Due to the New Years Holiday, the VARA club meeting will be held on the second Tuesday, instead of the normal first Tuesday. The meeting will still be held at Shoney's Restaurant in Staun-

ton, on Route 250 at the I-81 interchange. The meal starts at 6:00 pm and the business meeting starts at 7:30 pm. Tell the hostess you are with the ham radio club, and she will seat you.

## MARA Meeting Date — Not Changed, Still January 3

The MARA club will hold its regular meeting on the first Thursday, January 3rd, at Ever's Restaurant in Harrisonburg. Meal starts around 6:30

pm, business meeting begins at 7:30 pm. Tell the hostess you are with the radio club, and she'll point you in the right direction.



Mark Your Calendar!

## VE Testing Schedule for 2002

The testing sessions for 2002 will be held on Saturdays at the Woodmen of the World building on State Route 42 in Dayton, Virginia. The dates of the sessions are: **February 2, April 13, June 8,**

**August 10, October 12, and December 14.** The rule is that tests will be held on the second Saturday of the even numbered months, with February being the exception. Cost is \$10.

## Renew Your Membership

Don't wait until the last minute. Renew your membership right now, while it's on your mind.

Use the handy renewal form on the last page of this newsletter.



## FrostFest Date Change

The Richmond FrostFest, usually held in January, is being postponed to February due to construction on the facility site. This year, the Frostfest

will be held on February 10. More information is Available at the Frostfest web site, to be found at [www.frostfest.org](http://www.frostfest.org).

## Comments Sought on Monitor Format

What is your opinion of the new Monitor format? Do you find it easier to read? Harder to read? More informative? Or are you like most members and you read only the headlines? Do you want more clipart or less clipart? Larger type? Longer headings? Cute and funny stuff? Let the editor know; he needs your input to keep the Monitor the best it can be.



## 420-440 Band May Be History...

The 425-435 MHz amateur band may become unusable if an FCC proposal is approved. The FCC is seriously considering allowing unlicensed wireless data devices to operate in this segment, mainly around 433 MHz. The proposed devices put out almost continuous signals for inventory control, signaling, control purposes, etc. These are unlicensed devices, and supposedly should not interfere with ham communication. However, by their sheer numbers, the noise floor on UHF will undoubtedly increase. Further, since the devices are unlicensed, it may be impossible to locate the source of a signal which does end up interfering with ham communication. Hams are being urged to contact the FCC with their comments on ET Docket 01-278 during the comment window, which lasts until February 12. More info is available at : <http://www.arrl.org/news/stories/2001/10/19/1/290a11.html>

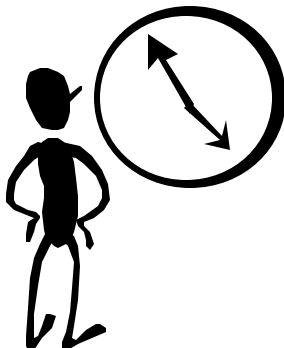


## FCC Warning: Listen in All Directions Before Transmitting

It is incumbent upon any ham to listen carefully – in all directions – before transmitting, to avoid interference with communications already in progress. In a strong warning to K3NM in Pennsylvania after a contest operation, the FCC acknowledged that K3NM might not have been able to hear signals off the back of his beam. But that did not mitigate the fact that the contest station came on a frequency already in use, and because of the high power used, obliterated a conversation already in progress. The FCC is clear. Make sure your frequency is clear before you start transmitting, and relinquish the frequency when you are informed that you are interfering with communication already in progress. – ARRL Letter

## FCC: Good Operating Practice is the Law

In another enforcement action, the FCC has sent letters to several net control operators of Skywarn nets, Emergency Service nets, Traffic nets, and groups of ragchewers who were arguing over certain 75-meter frequencies. The FCC reminded the recipients that no ham or group of hams – not even a public service net – owns a frequency. But the FCC was very clear that “it is not good operating practice to use a specified frequency where and when a regularly scheduled net has routinely convened.” The letter reminded hams that the rules “require licensees to observe good operating practice”, and that future such disputes might result in severe enforcement action.



## FCC: Digital Mode Users Must Remember to ID

The FCC has noted that many users of PSK31, AMTOR, PACTOR, and even some packet and APRS users are not properly identifying their station in accordance with rule 97.119. All hams are reminded of the need to properly identify at least once every ten minutes, as well as at the end of every transmission. Transmissions involving foreign stations have additional identification requirements. The FCC invites all hams to report ID violations on digital modes (and voice, TV, and all other modes, too) to the Special Enforcement Counsel for Amateur Radio Riley Hollingsworth at [rholling@fcc.gov](mailto:rholling@fcc.gov). It would be helpful to have recordings of the transmissions but these are not required.

## You Probably Have an FRN Number ... You Just Don't Know It.

Anyone filing an Amateur Radio application now will be asked to supply a 10-digit FCC Registration Number (FRN) issued by the FCC's new Commission Registration System, or CORES. The requirement applies to FCC applications filed on-line or on paper. The FCC also has supplanted Universal Licensing System (ULS) registration with "CORES/Call Sign" registration, so applicants no longer need to register separately in both systems.

Most, if not all, hams who registered previously with the ULS already have an FRN, although they may not know it yet. The FCC just completed another cross-registration to include those already on the ULS books within the CORES "entity registration" database, and another is scheduled. Amateurs can learn their FRNs by doing a license search on the FCC's Universal Licensing System page <<http://wireless.fcc.gov/uls/>>. FRNs also are displayed via the ARRL call sign server on ARRLWeb <<http://www.arrl.org>>.

The FCC has updated its ULS page <<http://wireless.fcc.gov/uls/>> to reflect the new reality and to make the page a bit less confusing. Amateurs not yet registered in CORES who click "CORES/Call Sign" registration will be redirected to the CORES site to complete that process. Amateurs who click "Online Filing" are advised to proceed to CORES to register if they do not already have an FRN, then return to ULS for filing.

Those filing on-line applications now are asked to supply either an FRN or a Taxpayer Identification Number (TIN--a Social Security Number for an individual) plus a password, typically the same for both CORES and ULS.

The process is a bit more daunting for new club station applicants, who now will be asked to register in CORES as business entities. Such applicants also may file with a Club Station Call Sign Administrator using Form NCVFC 605 and simply leave the FRN field blank. ARRL VEC Manager Bart Jahnke, W9JJ, says that in those cases, the Club Station Call Sign Administrator (CSCSA), such as ARRL, will register the club station entity in CORES on the applicant's behalf.

The FCC also now only accept FCC Form 159 (Remittance Advice) dated February 2000 or later, which requires providing an FRN. A copy of the acceptable version is available on the FCC Web site <<http://www.fcc.gov/fees>>. At the left side of the page, click on "Form 159".

For more information about the Commission Registration System or on obtaining an FRN, contact the CORES Help Desk, 877-480-3201, [cores@fcc.gov](mailto:cores@fcc.gov).

## FCC: Fix Now Available for Internet Explorer

Several hams in the valley attempted to transact business with the FCC, but discovered that the FCC's web-site was designed to work with Netscape Navigator, and not Microsoft's Internet Explorer. The FCC has now released a fix for IE users which will enable them to more easily make electronic filings.

The FCC says those users may need to run a Java Applet IE plug-in to correct the problem.

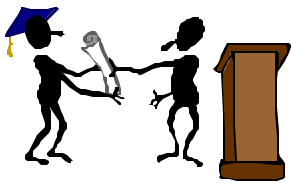
The applet is available from the FCC at [https://wtbjag1w.fcc.gov/ieplugin/j2re-1\\_3\\_0\\_02-win.exe](https://wtbjag1w.fcc.gov/ieplugin/j2re-1_3_0_02-win.exe).

When a "File Download" dialog box appears, click on "Run" or "Open" (depending on your version of IE), and the plug-in will download and install automatically. If a "Security Warning" box appears, click "Yes."

As mentioned above, and in many places in the ham literature, amateurs also must now supply a 10-digit Commission Registration System-issued FCC Registration Number (FRN) when filing FCC applications on-line or on paper. It is a sad fact that many hams in the valley have procrastinated and have not obtained their numbers. This is very likely to cause problems and delays when you need to modify or renew your license or change your address.

For help initiating an on-line filing using Internet Explorer, contact FCC Tech Support, weekdays, for assistance, [ulscomm@fcc.gov](mailto:ulscomm@fcc.gov) or 202-414-1250.

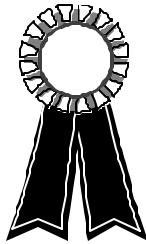




## December VE Testing Report

Thanks to the helpers at the December 1st testing session: Robert VanFossen K4DJG, Charles Vogan KD5KA, Gerald Nauman KN4FM, Howard Mullins (SANDY) N4PZC. We had five people show up for test, with three passing their test and one for paper work. If you can help with 2002 testing sessions, please call me so that I can ensure we have all sessions covered. Also, if you are interested in becoming a VE and helping others become ham radio operators, contact me, and I'll get you started on becoming an accredited VE. To all those who helped at any session this past year, I would like to wish you the best for the holiday season.

– Gayle Shull, KU4XN



## Two New Awards: Sure to Be a Hit with Valley Hams

The Shenandoah Valley has more than its share of QRP operators, and also a plethora of hiking and camping hams. The ARRL has just announced a new QRP DXCC award for working 100 countries on less than five (5) watts. Further, the Adventure Radio Society has started a SOTA – Summits on the Air – program for hams who transmit and receive from mountaintops. The SOTA award information can be found at: <http://www.qsl.net/ars-eu/> and the ARRL QRP DXCC information can be found on the ARRL site: <http://www.arrl.org/awards/dxcc/qrp/qrp-dxcc-rules.html>

## New Extra Class Question Pool Released



The new Extra Class Question Pool is now in the public domain. The question pool has been expanded by 20%, and now contains more than 860 questions. According to W5YI, the extra class exam has been “beefed up” and is now more difficult due to a heavier emphasis on technical knowledge, radio theory, circuits design, emissions, and operation. The new questions will be used for all extra class examinations held on or after July 1, 2002. The entire new extra question pool is available online at: <http://www.arrl.org/arrlvec/pools.html>

## The Old Dominion Emergency Net

Ray Colvin, KE4HVR, provides a schedule for the Old Dominion Emergency Net. The net provides excellent training, preparation, and practice for handling emergency traffic. Tune in on the first and third Mondays on 3947 khz at 1830 local time (6:30 pm), the last Wednesday of every month on 3947 khz at 20:45 local time (8:45 pm), and on the second Wednesday on 1900 khz at 2045 local time (8:45 pm).

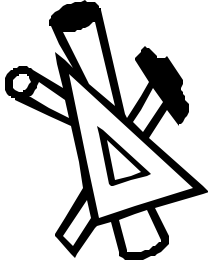


## Scholarship Money Available for Hams

If you are a ham and thinking about college, apply for one of the FAR scholarships. The Foundation for Amateur Radio serves as the clearinghouse for over 50 different financial aid grants and gifts used to pay for your college education. Info is at: <http://www.amateurradio-far.org/>

## New APRS Digipeaters on Laird's Knob, North Mountain

Two new APRS digipeaters are active covering Rockingham County. One is located on the top of North Mountain where US 33 crosses the Virginia-West Virginia state line. Powered by solar cells, this digipeater was installed by Matthew KD4UPL and Ronnie KN4U, and provides decent APRS coverage for the western part of the county. Another digi located on lower Laird's Knob was installed by Jason N4DSL and Jay W4QDC. This digi gives good coverage to the eastern as well as western parts of the county. APRS provides real-time tracking of GPS-equipped ham vehicles, and provides for simple digital messaging, too. Look for an article on local APRS activity in an upcoming Monitor issue.



## Useful Calculations and Conversions

Ray Colvin forwards us this website, which has a nice collection of very useful calculators and conversion programs. Using these programs keeps you from having to brush up on your trigonometry, calculus, and geometry when you want to calculate paint coverage, slope length and angles, R-value calculations, etc. Try it: <http://www.lowes.com/lkn?action=pg&p=Build/calculators.html>

## Wishing a Speedy Recovery for Jack Wine, KC4OVC

Ray Colvin reports that Jack Wine, KC4OVC, suffered a heart attack and underwent triple by-pass surgery. Jack is director of the Stokesville Astronomical Observatory, as well as being an active ham. Jack's mailing address is: PO Box 145, Verona, VA 24482. While recuperating, perhaps Jack could fire up the HT and dish out some exotic DX and tell us some Tales from the Verona Woods?

## AO-40 Shut Down Until Spring

The Phase III-D ham satellite, AO-40, will be turned off starting in late December, due to technical problems and an unfavorable sun angle. The satellite will be re-activated sometime in the Spring when the earth's orbit once again puts the bird in a favorable orientation.



## StarShine-3 Telemetry Reports Requested

StarShine-3 is an orbiting satellite carrying a ham transmitter on 145.825 MHz. It can be heard on a 2meter HT when it is within range. It is designated as OSCAR-43. The bird is basically a mirrored ball, like a "disco" ball, used to reflect sunlight. The small 24" diameter satellite is visible to the naked eye. The StarShine project is designed to get school children interested in satellite tracking and operation. Hams can decode the 145.825 MHz signal if you have a packet TNC capable of handling 9600 baud AX.25 packet transmission. (Most mid-range and high-end TNC's can receive and decode 9600 AX.25.) Information on the project is located at: <http://azinet.com/starshine/>

## "How Can I Tell If a Ham Satellite is in Range?"

If you don't have satellite tracking software, or just plain ol' don't want to bother with Kep elements and stuff, just point your web browser to <http://www.heavens-above.com/>. Enter your latitude and longitude, tell it which satellite you are interested in (there's a list to choose from), and bingo, you've got your passes, including times, angles, elevation, azimuth, and distances.



## "Can I Use Ham Radio to Contact the Space Station?"

Yes. The Space Station maintains a 24-hour packet station on 145.990 MHz, signing with the callsign NOCALL. Any ham with a standard 1200 baud TNC (the kind used for DX cluster or APRS work) can use the ISS digipeater to make contacts. However, it is essential that you read the instructions for using the ARISS packet system before attempting to send packets to the station.

When it is within range, and the astronauts have free time and decide to play with ham radio, they will downlink on 145.800 MHz FM voice. You can uplink and talk to them by transmitting on 144.490 MHz FM. Complete information on Amateur Radio aboard the International Space Station can be found on the ARISS web page: <http://ariss.gsfc.nasa.gov/>

To the left, Frank Culbertson, astronaut aboard the Space Station, holds the ham HT used in the crew's free time.

## MARA Secretary's Report: December 6 Christmas Dinner

Due to the fact that this meeting we had our traditional Christmas Dinner, we had a very brief business meeting. There were 37 folks in attendance, five of whom were guests. The meeting was called to order by our new president Ellsworth Neff. The reports were to be given at the January meeting. We had two applications for membership which were read by the President. They were the following: Carter Ritchie - KG4PRP and Bob Bancroft K4DJG They will be voted upon at the January meeting. Attention was brought to the club that our Field Day activities made our two clubs first in the Roanoke Division and 9<sup>th</sup> is the nation. Kudos to MARA and VARA clubs. Regarding RACES, RMH is working out an agreement which we as a club will sign after which we will have a station at the hospital. Last but not least, Club dues are due. They are \$12.00. Hopefully they will all be in by our next meeting.

*Sincerely, Phyllis Haxton, N4VZC, Secretary.*

## VARA Secretary's Report: December 6 Christmas Dinner

The VARA Christmas Party was held at the Texas Steak House in Staunton on December 4<sup>th</sup>. We had 29 members present and a great time of fellowship together. The meal was done a little different this year, we ordered from the menu when we got there. This way everyone could get the order of his choice rather than trying to pick a menu to please everyone.

We had three members with perfect attendance for the year 2001 who got certificates for their effort during the year. They were Greg Czerniak W4GRC, Kay Cook KF4CZL and Benny Cook N4BCC. Congratulations to them all.

Fred Evans N4KYM brought a few items for door prizes which we were not expecting. They were a Photo Printer won by Mike Reno KG4OON, an Alinco mini HT won by Dee Hale KE4GMI and a Set of Jewelry won by Martha Tanks, wife of David Tanks AD4TJ. THANKS....to Fred for his kind thoughts and sharing with us.

There were also some GAG GIFTS that showed up. Greg W4GRC, got a pair gloves fastened together with ribbon since he lost his motorcycle gloves after leaving them on the back seat of his motorcycle and driving off. They were white with black Pokka-dots, easy to see if he should lose them again. Ken KE4GKD, got a computer program on Mini-CD, a Redhead Locating Program, Redhead.EXE. Because he is always looking for Redheads. Ken also got a Mini-Chair with a Megaphone on the seat and a sign on the back that read "Kitchen Director". This was because he spends lots of time in the kitchen with his cooking and we thought he needed a chair to sit on while waiting for his timer to go off. The megaphone he could use to call Janice when dinner was ready.

Ray Pitsenbarger had a birthday on November 28<sup>th</sup> and tried to keep it quiet. Someone remembered this and all the Texas Steak House Gals brought him cake and ice cream and did their usual birthday song for him. Don't try that again Ray!!!

*Great Night of fun for everyone!!  
Ray Colvin KE4HVR*

## Ham Radio Calendar in the Valley...

December 29-30:	Original QRP Contest	January 19-20:	ARRL January VHF Sweepstakes
December 30:	Page County ARES Net	January 20:	Page County ARES Net
December 31:	Rockingham County ARES Net	January 21:	Rockingham County ARES Net
December 31:	Straight Key Night	January 25-27:	CQ WW 160-meter Contest
		January 27:	Page County ARES Net
		January 28:	Rockingham ARES Net
January 3:	MARA Meeting (Evers)	February 10:	FrostFest — Richmond Hamfest
January 5:	National Amateur Radio Kids Day	February 16-17:	International DX Contest CW
January 5-6:	ARRL Rtty Roundup	February 24:	Galax Hamfest
January 6:	Page County ARES Net	March 2-3:	International DX Contest Phone
January 7:	Rockingham County ARES Net (simplex)	March 3:	Vienna Hamfest
January 8:	VARA Meeting (Shoneys Staunton)	March 16:	Charleston (WV) Hamfest
January 10:	Augusta County ARES Net	April 14:	Raleigh (NC) Hamfest
January 11-13:	North American QSO Party	April 20:	Chesapeake (Norfolk) Hamfest
January 13:	Page County ARES Net	May 17-19:	Dayton Hamvention
January 14:	Rockingham County ARES Net	June 2:	Manassas Hamfest
		June 22-23:	ARRL Field Day

## Membership Renewal Form

NAME: \_\_\_\_\_ Call: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP CODE: \_\_\_\_\_

HOME PHONE: \_\_\_\_\_ WORK PHONE: \_\_\_\_\_

EMAIL ADDRESS: *(print legibly!!)* \_\_\_\_\_

MEMBER OF ARRL (y/n): \_\_\_\_ REGISTERED MEMBER OF VA -RACES (y/n): \_\_\_\_ RACES TRAINED (y/n): \_\_\_\_

SKYWARN ID *(if SkyWarn trained)* \_\_\_\_\_ Are you available for Workday Daytime Emergency Callup? (y/n) \_\_\_\_

**CURRENT ABILITIES & CAPABILITIES:** Do you have the technical ability, knowledge, experience, know-how, and the equipment to *reliably* operate the following modes or activities? Check all that apply.

- |   |   |   |
|---|---|---|
| <input type="checkbox"/> HF CW slow-speed                 | <input type="checkbox"/> 50 Mhz FM                | <input type="checkbox"/> APRS, base or repeating                  |
| <input type="checkbox"/> HF CW high-speed (15 wpm and up) | <input type="checkbox"/> 50 MHz — other modes     | <input type="checkbox"/> APRS, mobile transmitting                |
| <input type="checkbox"/> HF SSB                           | <input type="checkbox"/> 2m FM                    | <input type="checkbox"/> Simple GPRS positioning capability       |
| <input type="checkbox"/> HF Mobile from vehicle           | <input type="checkbox"/> 2m weak signal, AM, etc. | <input type="checkbox"/> EME or Meteor Scatter                    |
| <input type="checkbox"/> HF Portable or QRP               | <input type="checkbox"/> 220 FM                   | <input type="checkbox"/> Microwave (902 Mhz or higher)            |
| <input type="checkbox"/> NTS HF Message Handling ability  | <input type="checkbox"/> 220 other modes          | <input type="checkbox"/> Satellite Operations (analog modes)      |
| <input type="checkbox"/> HF Slow-Scan TV                  | <input type="checkbox"/> 440 FM                   | <input type="checkbox"/> Satellite Operations (digital modes)     |
| <input type="checkbox"/> Traditional RTTY                 | <input type="checkbox"/> 440 weak signal          | <input type="checkbox"/> RDF — Direction Finding                  |
| <input type="checkbox"/> PSK31                            | <input type="checkbox"/> 440 fast scan television | <input type="checkbox"/> Ham equipment diagnosing/light repairing |
| <input type="checkbox"/> Other HF digital modes           | <input type="checkbox"/> Simple Packet            | <input type="checkbox"/> Tower climbing/antenna installation      |
| <input type="checkbox"/> Weather Station & Monitoring     | <input type="checkbox"/> DX cluster and/or BBS    | <input type="checkbox"/> PIC programming & circuit design         |

Other abilities and capabilities: \_\_\_\_\_

**WHAT TOPICS WOULD YOU LIKE TO SEE ON THE CLUB MEETING PROGRAMS?** (check all that apply or add more.)

- |   |   |   |
|---|---|---|
| <input type="checkbox"/> HF operating and Etiquette         | <input type="checkbox"/> Weather Stations, Weather Monitoring & Reporting | <input type="checkbox"/> Innovative Mobile Rig Installations  |
| <input type="checkbox"/> HF DXing                           | <input type="checkbox"/> Skywarn: What's it all about?                    | <input type="checkbox"/> Microwaves (902 Mhz or higher)       |
| <input type="checkbox"/> Contesting Etiquette               | <input type="checkbox"/> Ultra-Simple Antenna Designs                     | <input type="checkbox"/> Satellite Operations (analog modes)  |
| <input type="checkbox"/> QSL'ing methods, hints, tips       | <input type="checkbox"/> 2m weak signals                                  | <input type="checkbox"/> Satellite Operations (digital modes) |
| <input type="checkbox"/> Comparisons of Logging Software    | <input type="checkbox"/> 220 or 440 operations                            | <input type="checkbox"/> RDF — Direction Finding              |
| <input type="checkbox"/> Mobile, Portable or QRP operations | <input type="checkbox"/> Fast scan television: How To...                  | <input type="checkbox"/> Emergency Response Kits              |
| <input type="checkbox"/> NTS HF Message Handling skill      | <input type="checkbox"/> Simple Packet: How To...                         | <input type="checkbox"/> Radio Operations in Emergencies      |
| <input type="checkbox"/> HF Slow-Scan TV: How To...         | <input type="checkbox"/> DX cluster and/or BBS                            | <input type="checkbox"/> Ham equipment diagnosing/repairing   |
| <input type="checkbox"/> Traditional RTTY: How To...        | <input type="checkbox"/> APRS: Getting Started                            | <input type="checkbox"/> Tower climbing/antenna installation  |
| <input type="checkbox"/> Other HF digital modes             | <input type="checkbox"/> Simple GPRS introduction                         | <input type="checkbox"/> PIC programming & circuit design     |
| <input type="checkbox"/> What's on 50 Mhz?                  | <input type="checkbox"/> EME or Meteor Scatter                            | <input type="checkbox"/> Traders Day, Homebrew Fair           |
| <input type="checkbox"/> CORES, FRN, ULS: What's it mean?   |   | <input type="checkbox"/> A modest Valley Hamfest              |

Other interesting subjects for meeting programs: \_\_\_\_\_

**VARA Renewals: mail with \$15 to Jeff Rinehart, 1344 Hankey Mtn Highway, Churchville VA 24421**

**MARA Renewals: mail with \$12 to MARA, PO Box 1882, Harrisonburg, VA 22801**

## MARA/VARA

c/o David Fordham  
131 Wayside Drive  
Weyers Cave, VA 24486  
Phone: 540-568-3024  
Email: fordhadr@jmu.edu

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### Return Service Requested

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VARA MEMBERS:  
Meeting Date Change: See Page 1

#### MASSANUTTEN AMATEUR RADIO ASSOCIATION, Inc.

President: Ellsworth Neff, K4LXG  
Vice President: Chuck Vogan, KD5KA  
Secretary: Phyllis Haxton, N4VZC  
Treasurer: Sandy Mullins, K4PZC  
Board (exp. 02): Bob Tennyson, KG4CHL  
Board (exp 03): Jason Armentrout, N4DSL

<http://cob.jmu.edu/fordhadr/MARA>

MARA meets the first Thursday of each month  
at Ever's Restaurant on U.S. 11 south of  
Harrisonburg. Meal starts at 6:30 pm.  
Business meeting starts at 7:30 pm.

**Visitors are welcome.**

Dues (\$12 per year) should be mailed to:  
MARA  
PO Box 1882  
Harrisonburg, VA 22801

#### VALLEY AMATEUR RADIO ASSOCIATION

President: Ken Harris, KE4GKD  
Vice President: Benny Cook, N4BCC  
Secretary: Ray Colvin, KE4HVR  
Treasurer: Jeff Rinehart, W4PJW  
Program Manager: Richard Huttinger, KF4QZG

VARA meets the first Tuesday of each month  
At Shoneys Restaurant on U.S. 250 east in  
Staunton. Meal starts at 6:30 pm.  
Business meeting starts at 7:30 pm.  
(January Meeting: January 8th!)

**Visitors are welcome.**

Dues (\$15 per year) should be mailed to:  
Jeff Rinehart, W4PJW  
1344 Hankey Mtn Hwy  
Churchville, VA 24421