

The M.A.R.A./V.A.R.A. Monitor

Published monthly by the Massanutten Amateur Radio Association, Inc., of Harrisonburg, Virginia for radio amateurs in the Shenandoah Valley.

The Valley At A Glance

MARA Has A New President

(Gerald Nauman, KN4FM)

VARA may consider changing their Meeting Night

(see VARA President's message on page 2, and VARA Minutes page 9)

Christmas Banquet Dates Set

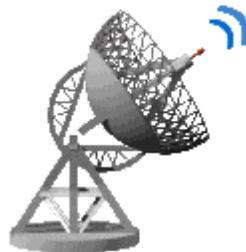
(MARA on December 2nd, VARA for December 9th)

N9AHQ Wins Award

Elliotts Knob holds the new ARES BBS

W4QDC Helps Franklin Recover from Hurricane Floyd

Ham Radio Featured at Local Emergency Preparedness Fair



VARA President's Message

Greetings fellow hams! I have been battling with a severe attack of procrastination. I almost made an entry in last months edition but missed it by 2 days. I've been informed tonight that I'll just make it "under the wire" if I submit this by Tuesday at NOON. I'll admit I've considered waiting until 11 a.m. tomorrow but why tempt fate?

I promised a special thanks to the hams that showed up to the September meeting. I'd like to do that now: Thank you KE4HVR, W2ZVM, KF4CZL, KE4PHP, KD4FKT.

The October meeting showed improved attendance. We had 14 ham, including Adam, KG4EWG, who just received his ticket a few days prior to the club meeting and is considering joining our club – Congratulations Adam! (his e-mail address is aburgh@intelos.net)

I'd like to offer a special "thank you" to Nancy - KE4PHP, for making arrangements with the Buckhorn Inn for the VARA Christmas dinner. We'd like to invite all hams and their significant others to come out on Dec. 9th (Thursday). See the note in the Secretary's report. Please contact Nancy - KE4PHP or Dan - KE4JSX if you plan to attend so we can make the necessary arrangements.

Bike VA is just around the corner. Hope all those who participate have/had a great time! Our help is greatly appreciated by the folks at Bike Virginia.

IF you have any interest in changing our meeting night, show up to the November meeting. We will be discussing our alternatives and possibly make a formal proposal for the club to consider. I've spoken with Mark @ Gavid's. He said that Tuesday night has potential and he will work with us IF we decide to change.

As 1999 comes to a close, we need to consider a new slate of officers for the year 2000. Our club is in need of your support. We might decide to nominate whoever doesn't show up as the new leadership so come on out and help us keep our club going!

Clint - KB4OLM and Jeff - W4PJW, will be doing a "hands on" demonstration of digital communications at the November meeting.

73

Dan Beidler - KE4JSX

MARA Ex-President's Message

Hello fellow club members! As most of you know now, we have elected a new President(of the club, anyway!), Gerald KN4FM. I hope all of you will support him in his new position, and give him all the help you can to make the club better. It was a pleasure to serve as President for the last 3 years. It has flown by. Has it really been that long? I hope my tenure was as enjoyable to everyone else as it was to me. I tried to have programs that would interest most members, and also several technical ones to show what could be done to save money while getting the most bang for the(free) buck(e.g. the program on free CATV hardline). As always, if you have an idea for a program, or you have something that you think the other fellows would enjoy listening to, please let Gerald know.

*David Tanks AD4TJ
(Ex)MARA President*

MARA New President Message

When I was approached about filling the opening for club president, I was reluctant to accept the job. After thinking about it, however, I realized that if we are to have a successful club, each of us must take an active part in club functions. There are many places where we can become involved, either as serving as a club officer, helping with the communication events the club sponsors, or even presenting a program at one of the club meeting. Remember, this is your club, so get involved.

Many thanks to Dave, AD4TJ, for a job well done. He has served as club president for the past couple of years, and has set some high standards which I will try to maintain. We all own him a big THANK YOU!

Victor, KE4LKQ, had a very informative presentation at the October meeting. He had a lot of material to cover (five digital modes if I counted them correctly) and very little time to cover such a large subject. Now we should all know about these modes that are common, or becoming common, on the HF bands. They also work on VHF, so give them a try there too. Victor also had a few words about receiving and decoding weather satellite images. Thanks Vic, job well done.

Plans for the November meeting have not been finalized. Come to Ever's Restaurant on November 4 at 6:30 pm for the meal or 7:30 for the meeting.

December is the Christmas Banquet. Everyone come to Ever's at 6:30 pm on Thursday, December 2. You may have the regular buffet for \$9.61, or you may have Oysters and the buffet for \$12.01 per person.

Gerald Nauman, President of MARA

Local Ham Wins Award

N9AHQ Cited by Goshen College

The alumni board of Goshen College (Indiana) has named Howard Zehr of Broadway as the 1999 Culture for Service award winner. Howard is active on the local ham bands as N9AHQ, and is widely known as a homebrew artist and avid DX'er. He received the award at GC's alumni weekend on October 2, 1999. In addition to his ham pursuits, Howard is professor of sociology at EMU, a post he has held since 1996. He has attended not only Goshen College, but also Morehouse College in Atlanta and Bethel College in Kansas, and received a Masters degree from the University of Chicago and a doctorate from Rutgers University. Howard also is a first-class free-lance photographer, taking assignments in over 20 countries around the world. He specializes in documentary work exploring the human experience through photographic images. He is internationally famous for his work in proposing reforms for the U.S. criminal justice systems, and has worked at reconciliation between victims and offenders in a field called restorative justice. He is considered one of the foremost authorities in the field. We are proud to count such a distinguished gentleman in the ranks of the Valley amateur radio operators. Congratulations to Howard for all his many accomplishments.



FOR SALE

Cushcraft - Tri Bander (covers 10,15,20 meter bands) - 4 element beam w/ 30m or 40m kit. --- Contact Herb, AA2BF 943-9847

Shure 444-D microphone - will trade for antenna(s) of comparable value (2m or 440 base or mobile) or offer \$\$ --- Contact Dan, KE4JSX 942-2557

Two-meter handheld: From the estate of Vernon Schmidt W4CND-- Small 2 Meter Handheld with Rubber Duck and Charger - Brand unknown, no manual - asking \$75. --- Contact Mrs. Vernon Schmidt at 574-4639

ARES BBS Operational on Elliotts Knob

Several hams are working on an ARES BBS to help facilitate emergency communication in the Valley.

At the present time the BBS is in the testing stages. The frequency is 145.730. To access it use HBRGBB, also the node is HBRGND. We will have training classes as soon as it's fully operational. Right now the forwarding is not activated, but the functions work fine for local use. All hams with packet capability are invited to connect and register so we'll have some idea of how many users we're serving.

Also I plan on being at the W4RBC club station every Monday night to help out anyone who is interested. This station is located in the old observatory building on Eastern Mennonite University's campus, right next to the college radio station.. It's up on the hill behind the main campus buildings. Stop by some Monday evening and we'll "show you the ropes" on the new ARES BBS. Or, you can tune in the frequency and check in on the board. Give it a try: the yops are Victor KE4LKQ, John WA4KQX and yours truly, Claude, N4QLV.

*Information provided by
Claude Philippy, N4QLV*

Spotlight on Public Service

Big Mountain Repeater Used for MS 150 Support Communications

Below is a letter received October 20:

To Mr. Robert Niemeyer, W3MMC:

Dear Bob, On behalf of the National Multiple Sclerosis Society and the Shenandoah Valley Radio Club (Winchester) we extend a huge "Thank You" for allowing us the use of the Big Mountain repeater during the weekend of the MS-150 Bike Tour, October 9-10. The use of the repeater enabled the ham radio volunteers to provide solid communications when we were on the south end of the bike route. We also want to thank you for your personal help with directions and other pertinent information during the event. Please find enclosed a Tee Shirt from the NMSS for the volunteers who donated their time and equipment to help support this needy event.

*Sincerely,
Guy R. Avey, W3INT,
Winchester*

Ham New to Area

Advice Wanted

Scott W. Lowe is a new ham in the valley, and a MARA member. He has recently obtained a NorCal 40A QRP kit and David Rutledge's new book, "The Electronics of Radio". The textbook is based on the engineering and design for the NorCal 40A, and serves as a great self-study course in modern radio engineering. The book suggests use of various pieces of test equipment. Scott would like to contact some hams in the valley that have experience using test equipment such as an oscilloscope, function generator, and frequency counter. Are there any hams in the local area that may be knowledgeable about such test equipment that Scott could contact for advice? If so, contact Scott Lowe, WA0TPN, in Broadway at 540-896-2107, or email swlowe@rica.net.

More Public Service

Hurricane Recovery

Jay Suter, W4QDC was one of many hams who volunteered to help out the residents of Franklin, Virginia bail out from the damage from Hurricane Floyd. A full report will be available next month.

Still More Public Service

Hams Give Presentation at Emergency Preparedness Fair

David Fordham (KD9LA) and Dan Beidler (KE4JSX) were featured speakers at the Waynesboro Emergency Preparedness Fair held on Saturday, October 23. Dan actually brought his jump kit and set up his emergency station, which included HF, VHF, and UHF capability. A nice four-panel display explained radio and emergency communications principles to anyone who stopped by the booth. David conducted a 1-hour seminar on what ham radio is and how it differs from other radio services available to the general public. David's presentation also covered some of the many facets of ham radio being enjoyed in the valley, including GPS positioning and APRS locator fun, packet radio, DX'ing, contesting, ham TV, and even satellite and MIR/Shuttle operations. Thanks to these two hams for spending their Saturday spreading the word about the fun of ham radio.

Even More Public Service

Bike Virginia Hams Enjoy Beautiful Weather

As this newsletter is going to press, about 25 hams from the Valley are providing communication support for one of the biggest events of the year, the Bike Virginia Fall Foliage Bicycle Ride through the valley. Next month's issue will cover the fun enjoyed by those who donated a Saturday of their time to play radio, and possibly get a chance to help someone who might need assistance.

Public Service Everywhere

Johnny Appleseed, MS Walk, Hospital SET Drills

Although a report was not received in time for this month's issue, rest assured that Valley hams did indeed support this year's Johnny Appleseed horse ride in Timberville, and also the MS Walk at JMU in October. They also participated in the regional hospital Simulated Emergency Test drills. Amateur Radio operators in the valley should be proud that our brethren donate so much of their time and equipment to support such important causes.

*Thanks to all who make our Valley a better
place to Live, Work, and Play!*

A Real Valley Old-Timer

Ken Caswell, K4EJ

If you don't recognize the name, then you weren't around ham radio here in the valley 20 years ago.

Patsy, K4PJJ and I had the privilege of vacationing recently for a couple of weeks in the Rocky Mountains and high desert out west. While in Albuquerque, NM I called Ken on the phone and had a nice chat with him.

I called Ken the evening of September 29, which turned out to be his 86th birthday. Ken related to me that he had been living out west for the past 17 years but he stressed that his happiest ham radio days had been those 6 years he spent here in the Shenandoah Valley. He has fond memories of the years he spent as EC of Rockingham County, as DEC and 4th rep on the 75 meter traffic nets.

He said there was not much camaraderie on ham radio out west like we have here and he missed it. He has been a member of 2 radio clubs out there but over the years had basically lost interest. Recently however, he has been getting back on CW on 20 and 40 meters with some of his friends 3 or 4 times a week. He promised to slow down to 20 wpm or so for me if I found him on the bands sometime – said he'd slow down as far as necessary for any of his old friends back east.

Ken moved to New Mexico because of the problems he was having with asthma. He firmly believes that he wouldn't be alive if he hadn't followed the doctor's orders to move to a different climate.

Ken sends regards to all of his friends here, especially to W4XD and KE4FM.

*By Jeff Rinehart
W4PJW*

Floppy Disk should be Hard Disk

KD4WWF's Disk Problems

Pat Smiley, KD4WWF still under the weather with back problems. Latest word is that one of his spinal disks, which should be a hard disk, has turned into a floppy disk. As a result, Pat has trouble "booting up". We all wish Pat a speedy recovery.

December 9th

VARA sets

Christmas Banquet Menu

Planning for the VARA Christmas Party is in progress. You do not have to be a club member to attend and all hams and their families are welcome.

The Christmas Party will be held at Buckhorn Inn on Rt. 250 west of Churchville on Thursday December 9th. Arrival time 6:30pm and we will eat at 7:00pm. The meal will be Buffet Style.

Menu Selections

Meats Vegetables Salads Drinks

Turkey Mac/Cheese Salad Bar Tea
Country Style Steak/Gravy Green Beans Coffee
Chicken Dressing/Gravy
Seafood (\$2.00 Extra) Sweet Potatoes
Mashed Potatoes

The cost will be \$10.90 each including drinks, (tea or coffee) and tips. Soft drinks will be extra.

Please send your checks to Jeff Rinehart (Treasurer) by November 27th.

**Jeff Rinehart
1344 Hankey Mtn. Highway
Churchville, Va. 24421**

The bill will be presented to the Club Treasurer on this night.

We need to know how many we will have by November 27th.

You may call Ray Colvin KE4HVR or Nancy Colvin KE4PHP by phone at 540 886-1559 or call us on the 146.850 repeater.

Hope to see all of you there!

Ray & Nancy Colvin



KE4HVR

Help from a Battery

How to Operate a High Power Radio from an Itty-Bitty Power Supply

Okay, you just found the bargain of the century at the hamfest: a super-duper 100-watt all-band beauty. The problem: the specs say the rig needs 30 amps at 13-volts, and your only 13-volt power supply is a puny little brick-thing you scavenged from your old Radio Shack answering machine.

The circuit below, taken from an article in QST (March 1992, page 85) will allow you to float-charge a car battery with a small DC power supply. This will allow you to keep the battery fully charged at all times without fear of “boiling the battery dry” from the continual charging current. By using this circuit you can use a small 13.8 volt power supply to operate a large-current-drawing radio (such as a 100-watt HF rig) which otherwise would require a large (and expensive) high-current power supply.

But let's say you *do* have a good 30-amp power supply. What do you do when the power grid goes down? (Remember, things besides Y2K can interrupt your power!) Another use for the system is keep your station's lead-acid backup battery ready for emergency use at all times.

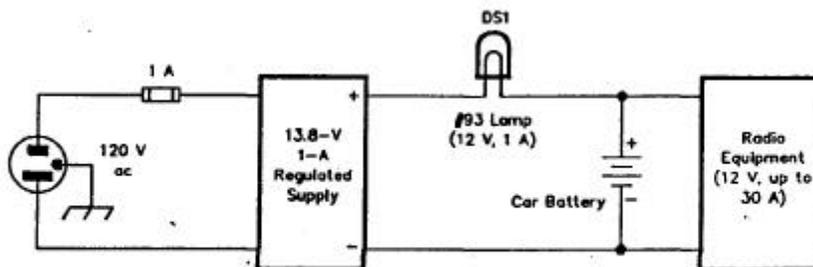
The #93 automobile lamp's resistance allows only 1 amp to be drawn from the small power supply, even when the radio is drawing 20 amps from the car battery. Also, this same

property lets you use this setup if your 30-amp power supply goes on the fritz. When the radio has sufficiently drained the battery down, the small power supply will charge it at a rate of 1 amp per hour. This will be indicated by the lamp glowing at full brightness. If the lamp doesn't light, then you know the battery is fully charged (unless the bulb has burned out!).

If you have a larger power supply, say a 4 or 5 amp supply, then you can add more bulbs, in parallel, with switches. As each one is switched in (switched on), then an additional amp of charging current becomes available, allowing a faster charge. NOTE: This setup may not charge a fully drained battery – use a standard battery charger to bring a fully-drained battery back up to full charge, then hook the battery back up into this circuit to keep it float-charged.

Another word of caution: If the house current goes out, then the small power supply should be disconnected or the bulb removed from its socket, to avoid draining the battery through the bulb.

Submitted by David Tanks, AD4TJ



A Ladder Line Primer

Ladder line (or parallel transmission line in any of its forms) is a very low loss transmission line. Hence, it is ideal (qualified by some other considerations) for very long runs, whether at HF, VHF, or UHF. In fact, the only version of coaxial cable that comes close to the *low loss levels* of ladder line are certain very expensive hardlines.

When using ladder line to connect your rig to the antenna, there are two things to keep in mind.

First, **Installation:** Do it by the book, maintaining the line balance by keeping it elevated, well spaced from any conductive surface, wire, etc., and sufficiently supported that it does not stress itself to breakage. Folks with non-critical short runs often get away with some short cuts, but for a long run, standard practice is best.

Second, **Matching:** Parallel line has been used in at least two ways:

1. Some installations with low antenna impedances will use a balun to raise the impedance at the antenna (or near it, depending on height) to the characteristic impedance of the line and then, at or near the rig, use another balun to bring the impedance back down to coax levels for the rig. This usually is done with long feed runs to monoband or triband beams and similar antennas that present the line with a low impedance of known value. The advantage is that the SWR along the parallel line is close to 1:1, and that reduces voltage and especially current peaks along the line, thus reducing losses even further.
2. Some installations involving multi-band antennas where the feedpoint impedance may change with each band simply accept the SWR condition on the parallel line and bring the line from the antenna feedpoint all the way to the station's antenna tuner. The very low loss inherent in the parallel line is not significantly raised by the SWR multiplier. Losses in good parallel line even with SWR levels up to 10:1 are still generally lower than losses with perfectly matched coax, even using some of the newer low loss lines. One has to go to hardline before losses become competitive.

So there are options even within the parallel line choice. But in general, for very long runs where installation can be free and clear, where no hazards of choking or tripping guests can occur, etc., parallel line would be the line of choice.

Lou B Cebik, W4RNL

The DieHard DX'er

5:00am - Fellow DXers arrive. Crawl out of nice warm bed
5:30am - Toss all gear into truck.
5:45am - Oooppss, Get gear out of neighbor's truck, and put in yours
6:00am - Get speeding ticket while hurrying to get to the mountain
7:15am - Get to "the site," near top of mountain
7:16am - Start unloading gear
7:20am - Get poked in eye with 20M vertical by fellow Dixer
7:50am - Arrive at hospital to get eye patched up
8:30am - Get another speeding ticket while heading back to site
8:45am - Arrive back at site. Unload antennas yourself this time
9:45am - Hike up to mountaintop. Pass out from exhaustion
9:50am - Wake up to smelling salt, and laughter from fellow Dixer
10:00am - Put up antennas, and set up rigs
10:15am - Fire up rig, call CQ for half an hour; no replies
10:46am - Hook up coax to rig....
10:48am - Realize that finals are wasted in main rig
10:50am - Hook up back-up rig, this time with coax
11:00am - Yell CQ, rare VP8 comes back; antenna falls down....
11:15am - Wake up to smelling salt, fellow DXers shaking heads.
11:30am - Guy antennas.
12:05pm - See long list of QSOs made by fellow DXers.
12:06pm - Notice rare VP8 in logbook of other Dixer
12:07pm - Beat fellow Dixer over head with logbook
12:09pm - Restrained by rest of DXpedition team....
12:30pm - Back to rig for another attempt.
12:35pm - Nearby lightning strike kills receiver. Notice wet pants...
12:36pm - Look for shelter.
12:38pm - Find cave!
12:41pm - Watch antenna get struck by lightning while hiding in cave
12:42pm - Wish it was fellow Dixer's antenna that was struck...
12:45pm - Realize you're not alone in cave
12:46pm - Pick up really big rock...
12:47pm - Mauled by large angry bear.
12:50pm - Get pulled out of cave by fellow Dixer
1:30pm - Arrive back at hospital.
1:55pm - Receive series of painful rabies shots, and multiple stitches
2:30pm - Get out of hospital and return home
2:35pm - "Explain" stitches and eye patch to wife
2:40 pm - Explain stitches and eye patch *again* to wife.
3:00pm - Realize gear is still up on mountain, with bear
3:01pm - Wish fellow DXers were still up on mountain, with bear...
3:03pm - Consider taking up golf. Or better yet, drinking.
7:00pm - Get phone call from Dixer buddies.
7:05pm - Agree to go on DXpedition again tomorrow...

Submitted by Dave Burgess

MARA SECRETARY'S REPORT

September 2, 1999 Meeting

The September meeting of the Massanutten Amateur Radio Association was called to order at Evers Restaurant in Mt. Crawford, Virginia at 7:30 p.m. by the president, David (AD4TJ). Introductions were made around the room and there were twenty-three members and guests present.

ARES matters were discussed. Net Controls are needed during the month. It was also announced that the Augusta County ARES net would be on Thursday on the 147.075 repeater. Victor (KE4LKQ) gave a brief description of digital communications and the PSK-31 computer program to handle this type of communication. There was a question as to whether registration is possible on ARRL on the Internet and no one had an answer.

NEW BUSINESS The announcement was made about the Christmas Banquet to be held on the regular meeting night at Evers. It will be the usual buffet. Hamfests were announced coming up in North Carolina and Virginia Beach. The vote was taken on two new members who were elected into membership. They are W. C. (Bud) Berryman of Harrisonburg (W5VEY) and Scott Lowe of Broadway (WA0TPN). We welcome them into the membership.

The Fifty/Fifty drawing was won by Doug (KF4YGO).

The business meeting was adjourned and the program followed given by John (WA4KQX).

*Respectfully submitted,
Wilton B. Thomas (KF4BFL)
MARA Secretary*

MARA SECRETARY'S REPORT

October 7, 1999 Meeting

The October meeting of Massanutten Amateur Radio Association was held at Evers Restaurant, Mt. Crawford, Virginia. David (AD4TJ) our president called the meeting to order and introductions were made around the room. There were thirty-three members and guests present.

ARES announcements were made by Norman (KA4EEN). He expressed thanks to all who helped with the Johnny Appleseed Horseback Rides and presented a certificate given to the club by the organization sponsoring the rides. Several more are needed to cover the MS walk to be held and net control persons are needed for November and December. It was announced that Dale (N4DAI) was the new Emergency Coordinator for Rockingham County and the assistants are Claude (N4QLV), John (WA4KQX), and Norman (KAREEN). Dale is updating the manuals. We were also reminded of the Bike Virginia rides coming up on October 30 and 31.

Announcements were again made of the Christmas Party and of contests and hamfests in the future. It was also announced that Colin (N4ZDQ) had the receipt for the power supply purchased by the club for the county digital station being established.

The election was held for the coming year. Gerald (KN4FM) was elected president, Sandy (K4PZC) again will be vice president. Wilton (KF4BFL) continues as secretary and Matthew (KD4UPL) as treasurer. David (KF4SVR) was elected as a board member.

The meeting was adjourned and then Victor (KE4LKQ) presented a most interesting program about digital communication, slow scan TV and other related subjects.

*Respectfully submitted,
Wilton B. Thomas (KF4BFL)
Secretary*

VARA SECRETARY'S REPORT

October 13, 1999 Meeting

The VARA meeting was called to order at 7:30 on Wednesday, Oct. 13. Dan, KE4JSX, brought up the fact that our Secretary, Daniel - KB2TBL, had resigned. It was decided to leave the position vacant until the new slate of officers is determined at the November meeting.

Adam, KG4EWG, just received his ticket and is looking forward to joining the club.

ARES report was given by David, AD4TJ. He talked about the area hospital exercise held on Saturday, Oct. 16. He also talked about Bike Va and asked for volunteers to sign up for Oct. 30-31.

There was no Skywarn Report.

Joe, W4LIG, won the 50/50 drawing. His share was \$10.

The Christmas Dinner was discussed. Nancy, KE4PHP, agreed to look into it. As of this moment, she has made arrangements with Buckhorn Inn for Thursday, Dec. 9th. Cost will be \$10.90 including coffee, tea and tip. Soft drinks extra. All amateurs (and spouses/friends) are invited. Please contact Nancy - KE4PHP or Dan - KE4JSX.

Pat, KD4WWF, is looking for a new home for the club gear. If you have space in your garage, basement or out building, please get in touch with him. The gear consists of 2 gin poles, 2 HF beams (12' long bundle), 2 spools of rope and a foot locker.

Discussion was raised about changing the club meeting night. It seems we have a few hams that have conflicting schedules on Wednesday night. Dan - KE4JSX, will contact the owners of Gavids to see what other night(s) are available. This will be formally presented for consideration at the November meeting.

The meeting adjourned at 8:10 p.m.

*Respectfully submitted,
Dan Beidler - KE4JSX*

Due to the Thanksgiving holidays, the deadline for the December issue of the Monitor is November 18th.

ARRL Publishes General Rules for Contests

The November issue of QST magazine contained an article on the General Rules for all ARRL contests. The article includes a sidebar on the Cabrillo File Format for submitting electronic logs for ARRL contests. The general rules cover all ARRL contests, both HF and VFH and above. See the November issue of QST, pages 101-106.

SkyWarn Basics II Class Nov. 22

There will be a SkyWarn Basics II course held on Monday, November 22, at 7 to 9 pm. Anyone who has completed the SkyWarn Basics I class and received a SkyWarn ID number is eligible to attend. Pre-registration is required, but the course is free. To register, email melody.paschetag@noaa.gov, or telephone 703-260-0107, ext. 226.

Check into the Page or Rockingham County ARES nets (every Sunday and Monday nights at 8:00 pm, on 146.625 or 145.130 respectively) for information on carpooling from the valley.

Calendar of Events

- Nov. 4:** MARA Club Meeting at Ever's
- Nov. 6-7: ARRL CW Sweepstakes
- Nov. 10:** VARA Club Meeting at Gavid's
- Nov. 18: Predicted Peak of Leonid Meteor Shower
- Nov. 19-22: Six Meter Annual Winter DX Contest
- Nov. 20-22: ARRL SSB Sweepstakes
- Nov. 22: SkyWarn Basics II class at Sterling
- Nov. 27-28: CQ WW CW DX Contest

- Dec. 2:** MARA Christmas Banquet at Evers
- Dec. 3-5: ARRL 160-meter Contest
- Dec. 9:** VARA Christmas Banquet at Buckhorn Inn
- Dec. 11-12: ARRL 10-meter Contest



Invite your Sweetheart to the Christmas Banquet!

MASSANUTTEN ARA

President: Gerald Nauman, KN4FM
Vice-President: Sandy Mullins, K4PZC
Secretary: Wilton Thomas, KF4BFL
Treasurer: Matthew Huffman, KD4UPL
Board (exp 00): Walt Lam, KF4BFB
Board (exp 01): David Hughes KF4SVR

<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/yr) should be mailed to the Treasurer,
Matthew Huffman, KD4UPL, 5166 Mt Clinton Pike,
Harrisonburg, VA 22802

THE VALLEY ARA

President: Dan Beidler, KE4JSX
Vice-President: Richard Huttering, KF4QZG
Secretary: vacant
Treasurer: Jeff Rinehart, W4PJW

<http://www.hamsnet.net/w4mus/>

VARA meets the second Wednesday of each month at Gavid's Restaurant on US Route 11 South in Staunton. The meal begins around 6:30 and the business meeting begins at 7:30.
Visitors are welcome.

Dues (\$15/yr) should be mailed to the Treasurer,
Jeff Rinehart, 1344 Hankey Mtn Hwy, Churchville, VA 24421

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