MARA Annual Meeting: Wood Grill at 6:30 pm, Thursday October 2

The Massanutten Amateur Radio Association will hold its annual membership meeting at the Wood Grill Buffet Restaurant on Reservoir Street in Harrisonburg on Thursday evening, October 2.

Dinner starts at 6:30 pm, with the business part of the meeting starting at 7:30 pm.

This meeting is especially important because it features the election of officers for the coming year.

All MARA members are urged to come out and take part in your corporation.

VARA Meeting: Shoney’s at 6:00 pm, Tuesday October 7

The Valley Amateur Radio Association will meet at the Shoney’s Restaurant for the October 7 meeting. The dinner begins at 6:00 pm. The business meeting begins at 7:00 pm.

Report of the MARA Nominating Committee

The MARA nominating committee worked hard to come up with a slate of candidates willing to serve as officers of the corporation for the coming year. Each of these individuals has been contacted and has agreed to serve a one-year term of office.

Note that these are not the club officers: they are only candidates. Additional nominations are solicited from the membership, and will be requested at the October 2 Annual Meeting prior to the vote. The names below are simply the result of the nominating committee’s efforts:

- Proposed President: David Fordham, KD9LA
- Proposed Vice-President: Gerry Brunk, K4RBZ
- Proposed Secretary: Sheryl Tonini, KJ4DOC
- Proposed Treasurer: Sandy Mullins, K4PZC
- Proposed Board Member at Large, term expiring 2010: Bryan Daniels, K4RMY
**VE Testing Session — October 11**

Our next testing session will be October 11. If you are thinking about upgrading, you have about two more weeks to prepare! Pass the word!

As always, the application process begins at 9:00 am, and the tests begin as soon as the paperwork is done.

Gayle Shull, KU4XN

---

**Rockingham County ARES Net Controls**

September 29: EC Showalter KG4KUR
October 6 (*simplex*): James McDowell IV NN4JM
October 13: Gerald Nauman KN4FM
October 20: Gayle Shull KU4XN
October 27: Bryan Daniels K4RMY

November 3 (*simplex*): Ray Ritchie K4NRA
November 10: David Fordham KD9LA
November 17: Vic Alger K4XTT
November 24: Hugh Pettis K3EC

This net meets Mondays at 8:00 pm local time. Simplex nets are on 146.550. Other Mondays, the net meets on the 147.225 repeater, which requires a plus offset (+0.600 MHz), and a PL tone of 131.8 Hz.

---

**Rotor, Controller, & Cable for Sale**

Richard Smith has a Ham II rotor for sale, with the CD-44 Control System made by Cornell Dubilier.

It is in excellent condition, and working great.

He is including the original owner’s manual, along with 50-60 feet of 8-conductor control cable.

What’s more, he’ll throw in a tower mounting plate (which he purchased separately) at no extra charge.

The entire package will go for only $75, quite a steal.
Call Richard at 540-943-1684. He lives on Gwynne Avenue in Waynesboro.

---

**Wanted to Buy: Roller Inductors**

James McDowell, NN4JM, is looking for roller inductors, all sizes, all kinds. He is working on some projects and needs an assortment of these devices.

The best part: He is willing to pay for them!

So if you’ve got some lying around the workbench or in old inoperative equipment, call James at 540-234-9488, or email jmcdIV@msn.com

---

**2009 FrostFest — February 7**

Mark your calendars. Richmond’s FrostFest hamfest this year will be on February 7th. Like last year, the event will be at the Richmond Raceway Complex on the east side of town. More information can be found at: www.frostfest.com
VARA President’s Message

Greetings hamsters and can you believe it? It is fall. And do you know what that means?

Fall means it is time to get ready for the Shenandoah Fall Foliage Bike Festival to be held on October 18th and 19th. Aside from Field Day, this is my favorite event. Good fellowship, beautiful fall colors and good weather (I hope).

The club will need your help, so please be prepared to sign up at our next meeting on October 7th at Shoney’s. This year the course has changed and that is a good thing for the event, however, it means we must put on our thinking caps and not run on automatic pilot.

I want to thank Scott KI4QQZ for filling in for me last month. Scott will make a great president in 2009. And I want to thank Scott and his wife Gail for all the work they did in preparing for our picnic at Gypsy Hill Park. It was a great success, and I am getting hungry just thinking about next year’s picnic.

We have several things to discuss at the next meeting. One of the items is club apparel. We need to decide on shirts, hats, jackets or whatever. It would be great to have them before the bike event, but that may be stretching it a bit.

Then there is the task of the nominating committee whose responsibility it is to canvas the club and find folks willing to serve as the club’s officers next year. Sometimes getting people to serve is like pulling teeth. If you have held an office, why not give it a try. If I can do it, anyone can!

This month’s president’s report is short and sweet. See you all at the next V.A.R.A. meeting.

73,
Greg,
W4GRC

MARA Board to Consider Changes to By-Laws

In accordance with a membership resolution passed at the September 4 MARA meeting, the MARA Board of Directors will meet to consider a proposal to change the By-laws, specifically those provisions defining a quorum for an annual membership meeting.

The By-Laws presently specify a quorum at the annual membership meeting of at least 50% of the members in good standing.

In the last four years, there has not been an annual meeting where 50% of the membership was in attendance. This required the questionable practice of soliciting the membership via email and U.S. mail to vote for officers. This practice, while technically not prohibited by, or in violation of, the bylaws, is not technically in accordance with the By-Laws either. Rather than continue with a practice not specifically stated in the by-laws for such an important meeting, it was proposed to amend the By-law specification of a quorum.

Investigation with both the State Corporation Commission and the IRS has shown that such a change has no effect on either the corporate standing or the IRS status. Further, such a quorum definition change in the by-laws will have no effect on the articles of incorporation or the corporate charter.

The present By-Laws call for by-law amendments to be made by the Board of Directors at a Board Meeting where a majority of the Board is present.

A non-binding resolution was passed unanimously by the members at the September monthly meeting, asking the Board to change the definition of a Quorum. The resolution recommends the lesser of 50% of the membership or 20 members. This is seen as a reasonable, and practically attainable, attendance figure, without introducing undue risk that a tiny minority of rogue members might “hijack” the annual membership meeting.

Accordingly, the Board will meet on October 2 before the MARA Annual Membership Meeting to consider this proposal.
Public Service Report: 10th Annual Shenandoah 100 Mountain Bike Race

Can you imagine riding a bicycle for 100 miles on rugged mountain trails!

This race is held almost entirely in the George Washington National Forest. The route starts from the old Stokesville camp ground. There were over five hundred (yep, 500!) riders in this event!. That’s a lot of bicycles in the forest!

Although I missed the start of the race I was told they were led out of the grounds by a motor bike and started as one group at 6:30 a.m.

The radio coverage was to begin a couple of hours into the race, and end 8:30 p.m. Coverage was to include three radio communications stations activating at 10:00 a.m., with a fourth coming on the air at 12 noon.

As the race progressed a couple of situations arose which called for medical assistance. Luckily there was a medical doctor riding in the race. Thanks to the ham communication coverage, the doctor was tracked down, informed of the situation, and able to respond. The doc ended up stitching up some injuries right out there on the trail.

Two people were transported for further medical treatment on the doctor’s decision. The contacts with the doctor were made with a handheld ham radio. The communication was handled mostly by K4LXG Ellsworth. It was good we had multiple radio stations on the air to serve as relays, as some of the situations needed to be handled on simplex frequencies due to the ruggedness of the mountain terrain.

This was a good event, and we learned quite a bit about the difficulties of operating in such mountainous areas. As conditions changed we were forced to change repeaters and a station on a high elevation was essential as we needed to do quite a bit of simplex relaying.

The week before the event I had physically travelled to all the radio locations and tested for repeater access. I found the right spots for hitting the repeaters with a mobile station. But when the operators arrived on location, the sweet spots for radio propagation were already occupied by the vehicles of the race officials and race support. This caused problems for several stations, and essentially eliminated one station’s ability to access to our primary repeater.

Lucky for us, an outside station, Jeff W4PJW, was monitoring the operation. Although he hadn’t been able to volunteer for the event, he was able to deliver a gain antenna to the station that was having trouble, restoring the communications link. (Thanks, Jeff!)

Our upcoming public service events are going to be an even greater challenge. Get your “GO KIT” out now, and make sure it is complete, and all is in operating condition. You never know when such a situation will arise as a true emergency with little or no warning.

And don’t be afraid to put your name on a list as a volunteer for one of these events. You will enjoy these exercises to develop and use your ham skills.

A hearty “thanks” to the repeater owners of the 147.225 and 145.130 machines for letting us use their equipment as part of this exercise.

And special thanks to those who helped.

ELLSWORTH K4LXG
EC SHOWALTER KG4KUR
BRYAN DANIELS K4RMY
GERALD NAUMAN KN4FM
PAUL WYSE W4PFM

Gayle Shull, KU4XN
Public Service Event Report: Bike Shenandoah

Thanks to the Hams that helped with Bike Shenandoah on Saturday September 20. We had a total of 31 riders on the 30 mile ride, 20 on the 62 mile ride and 17 on the 100 mile ride.

When we closed our activities on Saturday evening there was one rider that was unaccounted for. A SAG later found him, he had taken a couple of wrong turns. Other than that it was the normal, uneventful day.

There were a couple of shorter rides that we were not involved with, I understand that there were about 140 total riders. The total amount of funds raised has not been determined because there are pledges to be collected, and I would assume that some of the riders are still trying to raise some additional funds.

Special thanks for those that helped:

Norman, KA4EEN
Gayle, KU4XN
Ellsworth, K4LXG
Bryan, K4RMY, and
Gerry, K4RBZ.

SkyWarn NWS Newsletter News

The National Weather Service’s Sterling Virginia offices are moving to new facilities.

The move started Sep 22 and will be finished by the Open House October 18-19. The address of the new facility is: 43858 Weather Service Road, Sterling, VA 20166. This is about a mile from the old offices.

The move was needed to accommodate an expansion of Dulles Airport. The new facility includes a new radar tower, and a new radiosonde preparation and refurbishing facility. The new NWS offices are larger than the old building.

The NWS will hold an open house at their new facility the weekend of October 17-18, and have a whole agenda of programs and presentations to the public at the new building on those dates.

After the move is completed, the general phone number of the forecast office will be changing, but the SKYWARN weather reporting phone number will stay the same.

The new public phone number is 703-996-2200.

The Skywarn Hotline is 1-800-253-7091.

The email for routine observations, snow accumulations, rain accumulation totals, etc., is also staying the same. It is LWX-Report@noaa.gov

More information is available from the Skywarn Fall newsletter, found on the web at:
On October 3, 4 and 5 valley hams have a unique opportunity to mobilize like we've never done before. This is a super opportunity for ARES and all other hams in Rockingham and Augusta Counties, Harrisonburg, Staunton, and Waynesboro, to come together and **really test their skills** in rough terrain along mountain ridges and shadowed valleys.

We are going to need some serious manpower to cover this event.

Traditionally, the largest training event in the activity for both clubs is the Fall Foliage Bike Ride **October 17 – 19, 2008**. There is perhaps an even larger challenge coming up the first weekend in October. Hopefully we can support this one equally well.

### CAMP STILL-MEADOWS HORSE RIDE
Rockingham ARES/MARA has traditionally sent about 5-7 hams to help with the Camp Still Meadows Horse ride for handicapped persons ([www.campstillmeadows.org/](http://www.campstillmeadows.org/)). This activity is on Sunday October 5th. We usually need about 5 hams to help with that and it will continue to be a priority activity. Contact Ray K4NRA (k4nra@verizon.net) to sign up to help. Plans as of now call for the communications during this event to use simplex. Ray reports that he has enough volunteers but can always use one more if this interests you.

### GRINDSTONE 100
This is an endurance running foot race scheduled for Friday night through Sunday morning which occurs almost totally in Augusta County ([more information can be found at: www.eco-xsports.com/grindstone.php](http://www.eco-xsports.com/grindstone.php)). It starts at the Boy Scout Camp west of Swoope and goes to Elliot Knob then north to West Augusta where it crosses U.S. 250 and continues along the ridge just east of Braley Pond – past Elkhorn Lake and Staunton Dam to Stokesville and then up to Reddish Knob – the runners turn around and return the same way. The event’s organizers have over 100 serious runners signed up already, many from around the world: Spain, Germany, Scotland, Mexico, you name it. These are professional-level runners.

This course is really going to be challenging for us because of the mountainous terrain. It will probably involve a several repeaters and some simplex to maintain good coverage. There are 15 Aid Stations planned. Seven of these stations will have runners coming through twice, once out from the start and back to the start/finish in Swoope. This footrace begins at 6pm on Friday and goes through the night. It ends some time Sunday morning. This will be a challenge for us but may not be as bad as it appears – **if we have enough hams to volunteer.**

### SHENANDOAH 500K SUZUKI NATIONAL DUAL SPORT EVENT
This one may really be a challenge. It won’t be too bad if we have enough hams to send out. The success will all depend on how many are interested enough to help.

This will be an off-road motor bike ride with up to 200 riders in the mountains. These folks have done their homework and the ride is totally approved by the National Forest Service. ([www.nvtr.org/](http://www.nvtr.org/))

They have been doing this ride for 17 years and have tried all kinds of communications schemes but as we could have told them – nothing works in these mountains. They have their own sag vehicles but it has been a real nightmare for them to get help sent where it was needed – all because of lack of communication.

Their headquarters will be at Natural Chimneys Campground – the ride begins and ends there – **it is not a race**. This ride basically runs from Natural Chimneys up and across the mountain where we have our Field Day to a point north of U.S. 33. It includes such places as Sugar Grove, Franklin, Reddish Knob and Switzer Dam area.

Most of the ride is in areas not accessible even by 4 wheel drive vehicles. They need hams to go to designated spots, to help with the events sag vehicles, and just stand by for word that help is needed. We can put our radios in their trucks or just drive our own vehicles and follow their sag trucks around or maybe just set up some communication stations. These are issues that are still in the planning stages. They are hopeful that our communications skills won’t be called upon to summon EMS type help.

### NATIONAL SIMULATED EMERGENCY TEST
Although the National SET is this same weekend, we are considering the above three events to be just as good a test of ham radio capability.
What we have been thinking so far: Jeff W4PJW is planning to get his camper trailer to the top of Reddish Knob parking area and be there all night Friday through Sunday. This will be our headquarters station and net control so we can communicate with 147.045, 147.225, 147.180, 147.285 and also have a good location for simplex in areas where repeaters will not reach.

The NFS has granted us approval for this trailer to be on Reddish Knob for the duration of these two events. Since both the foot race and the motor bike ride go to Reddish Knob, we feel this would be a good central location for our main radio set-up.

The National Radio Astronomy Observatory’s interference office has already been contacted and informed about this event, and they have given us the green light to place transmitters on the mountains within the quiet zone specifically to support these events.

We would like to have someone go camping at Natural Chimneys that weekend so they can be there for the bike ride headquarters too.

We will need someone at the Boy Scout Camp also, to be at the foot race headquarters. We would place others at whatever Aid Stations seem appropriate and with whatever bike sag vehicles and locations we can cover. We are working on getting specific locations and times.

Many thanks to the hardworking committee working on the details of this event:
Bryan K4RMY, Brian N4IRT, Matthew KD4UPL, Bob K4DJG, James NN4JM, David AT4DJ, Jeff W4PJW, Dave K4DPF, Collin N4ZFQ, Jay KD4OXQ, Bob N1QEQ.

We still need volunteers. Please contact Bryan K4RMY EC for Rockingham County (k4rmy@arrl.net) or David AD4TJ RO for Augusta County. We will take help for whatever time period anyone is available. Even if you can only help for a couple hours, it will be beneficial. We don’t expect that anyone will be driving around a lot—it’ll hopefully be a situation where you will want to bring along a newspaper and a good book.

Check out the respective web sites for more info:
Horse Ride: www.campstillmeadows.org/
Bike Fest: www.shenandoahbike.org/
Foot Race: www.eco-xsports.com/grindstone.php
Motor Bikes: www.nvtr.org/

Fall Foliage Ride: October 18-19

Although no one thought to write an article publicizing the Shenandoah Fall Foliage Bike Festival, your newsletter editor thought it prudent to put something in about it.

While not as challenging as the Triple Play, this event historically has provided a good exercise for hams to discover the problems with their mobile and portable equipment.

Plus, it’s a whole lotta fun, too. If you are unable to help with the Triple Play, here’s a second chance to play radio! Put this on your calendar!

“*My wife made me get rid of Q. R. Mary and Q. R. Nancy!*”

MARA’s Schedule Webpage Updated and Streamlined

Thanks to KG4OON for noticing a typo on the MARA Schedule webpage.

BTW, that page has been updated to streamline the HTML code so it will download faster.

The schedule page contains links to the list of area Nets, and also has links to more information on most of the events listed on the calendar. Check it out:
http://mara.ws
Condolences to WD4ITN
The ham community extends its condolences to Jerry Moats WD4ITN of Monterey on the recent loss of his mother.

Condolences to N4KYM
Condolences are also offered to Fred Evans N4KYM, of Staunton, on the loss of his mother in early September.

Prayers for N4WIV’s Father
Local hams also want to remind Lonnie Czerniak N4WIV, that they are keeping her in mind during the medical difficulties being suffered by her father in Florida. Lonnie’s dad is in the hospital with pneumonia, heart failure, and a possible stroke.

Thoughts for N4XPW
Local hams also are thinking of Denny Morland, N4XPW and his wife Shirley, as Denny’s recuperation is taking much longer than anticipated.

Best Wishes for W3MMC
Best wishes for a speedy recovery are offered to Bob Neimeyer, W3MMC who suffered an Atrial Fibrillation heart attack. After a very unpleasant stay in the hospital, Bob is now recuperating at home, but unfortunately he is unable to drive. He reports that this is greatly crimping his style, as it is hard to get to the grocery store from Bob’s Knob if you can’t drive. Bob is hoping to be well enough to drive by the time of the MARA Christmas Banquet. If not, however, he would greatly appreciate the offer of a ride.

Best Wishes for W4POL
And best wishes for a speedy recovery are also offered to Jim Lehman, W4POL, a Harrisonburg ham who is undergoing aggressive chemotherapy. The treatment has suppressed Jim’s immune system, and his family reports that he would prefer not to have visitors because of the risk of infection. We are all thinking about you, Jim!

Big Mountain Repeater News
For fifteen years, Bob Niemeyer W3MMC, served as trustee of the 146.625 repeater, and as president (and primary mover and shaker) of the Big Mountain Repeater Association.

With his health failing, Bob has decided to “retire” once again, and has handed trustee-ship of the repeater over to Lewis Hensley, WA4NIC.

Lew has for many years served as the primary technical support guru behind the repeater, climbing the tower in the rain and snow, and keeping the machine in top shape, with the guidance and support of Bob.

The Big Mountain Repeater provides fairly good coverage of the valley, and is widely used by travelers up and down I-81. It is the primary SkyWarn repeater for Rockingham and Augusta counties, leaving the 147.225 and 145.130 repeaters available for ARES and RACES use in small-scale weather-related emergencies.

The Big Mountain repeater uses a PL tone of 131.8, and an input down 600 kHz from its output of 146.625 MHz. It is an open repeater, meaning any local ham is welcome and invited to use the machine.

Thanks to Mike Reno, KG4OON, for printing and distributing the Monitor each month.
A Gain Antenna You Can Make At Home On A Saturday Morning

A quick and easy J-Pole antenna can be built out of copper tubing and a spare SO-239 connector.

A handy calculator for any frequency can be found online at: http://snipurl.com/copperjpole

Enter any frequency, and the calculator returns the lengths for dimensions a, b, c, and d.

A is the length of the long radiating element; B is the length of the short stub element; C is the distance from the top of the horizontal element to the center of the SO-239’s connections to the two vertical elements. And D is the distance between the vertical elements.

Some approximate dimensions for popular frequencies are:

- 144 MHz: A = 58.75 inches  
  B = 19.50 inches  
  C = 1.92 inches  
  D = 1.83 inches

- 146 MHz A = 57.95 inches  
  B = 19.23 inches  
  C = 1.89 inches  
  D = 1.81 inches

- 148 MHz A = 57.16 inches  
  B = 18.97 inches  
  C = 1.86 inches  
  D = 1.78 inches

- 443 MHz A = 19.1 inches  
  B = 6.34 inches  
  C = 0.62 inches  
  D = 0.60 inches

Thanks to Ray KE4HVR for the link to this calculator.

OK, So What Exactly is Antenna “Gain”?

Some new hams have expressed curiosity about the term “gain”? What is Gain? Does using a gain antenna really give you more power out?

The answer is, not really, but in effect.

A plain, ordinary, dipole antenna, the kind most often associated with “basic antenna design”, radiates the radio’s power in all directions. Think of yourself shouting out in the middle of a big field.

A “gain” antenna does not provide any more signal power. But it does concentrate that power in one direction (or a couple of directions), by concentrating it, radiating less power in the other directions.

Gain can be provided at the transmitting antenna, and gain can also be provided at the receiving antenna.

Think of yourself shouting out in a field. Now think of yourself cupping your hands around your mouth to “aim” your voice at a particular listener. Your are providing transmitter gain. You are not shouting any louder, but the listener can hear you better.

Similarly, assume your listener cups his hands around his ears. He is providing “receiver gain”. Again, you are not shouting any louder, but he can hear you better.

A “gain antenna” does exactly the same thing. It aims or captures the signal from one direction better than others, thus making the receiver better able to “hear” your signal.

The antenna above concentrates the signal in a horizontal circle, like a doughnut. It gets the extra “punch” by taking signal strength away from the vertical direction. Whereas a dipole’s radiation pattern radiates fairly well all around, up and down to about 35-degrees above and below true horizontal, the above antenna will radiate better at the true horizontal, but will not radiate much above or below the 10-degree elevation.
# A Handy Chart of Wire Antenna Measurements

## Amateur Radio Antenna Length Chart

<table>
<thead>
<tr>
<th>FREQUENCY (Mhz)</th>
<th>1/4λ (Feet)</th>
<th>1/2λ (Feet)</th>
<th>λ (Feet)</th>
<th>1/2λ Inv Vee 90° (Feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.800</td>
<td>130' 0&quot;</td>
<td>260' 0&quot;</td>
<td>558' 4&quot;</td>
<td>257' 5&quot;</td>
</tr>
<tr>
<td>1.850</td>
<td>126' 6&quot;</td>
<td>253' 0&quot;</td>
<td>543' 3&quot;</td>
<td>250' 5&quot;</td>
</tr>
<tr>
<td>1.900</td>
<td>123' 2&quot;</td>
<td>246' 4&quot;</td>
<td>528' 11&quot;</td>
<td>243' 10&quot;</td>
</tr>
<tr>
<td>2.000</td>
<td>117' 0&quot;</td>
<td>234' 0&quot;</td>
<td>502' 6&quot;</td>
<td>231' 8&quot;</td>
</tr>
<tr>
<td>3.500</td>
<td>66' 10&quot;</td>
<td>133' 9&quot;</td>
<td>287' 2&quot;</td>
<td>132' 5&quot;</td>
</tr>
<tr>
<td>3.750</td>
<td>62' 5&quot;</td>
<td>124' 10&quot;</td>
<td>268' 0&quot;</td>
<td>123' 7&quot;</td>
</tr>
<tr>
<td>3.900</td>
<td>60' 0&quot;</td>
<td>120' 0&quot;</td>
<td>257' 8&quot;</td>
<td>118' 10&quot;</td>
</tr>
<tr>
<td>4.000</td>
<td>58' 6&quot;</td>
<td>117' 0&quot;</td>
<td>251' 3&quot;</td>
<td>115' 10&quot;</td>
</tr>
<tr>
<td>7.000</td>
<td>33' 5&quot;</td>
<td>66' 10&quot;</td>
<td>143' 7&quot;</td>
<td>66' 2&quot;</td>
</tr>
<tr>
<td>7.150</td>
<td>32' 9&quot;</td>
<td>65' 5&quot;</td>
<td>140' 7&quot;</td>
<td>64' 10&quot;</td>
</tr>
<tr>
<td>7.300</td>
<td>32' 1&quot;</td>
<td>64' 1&quot;</td>
<td>137' 8&quot;</td>
<td>63' 6&quot;</td>
</tr>
<tr>
<td>10.100</td>
<td>23' 2&quot;</td>
<td>46' 4&quot;</td>
<td>99' 6&quot;</td>
<td>45' 10&quot;</td>
</tr>
<tr>
<td>10.150</td>
<td>23' 1&quot;</td>
<td>46' 1&quot;</td>
<td>99' 0&quot;</td>
<td>45' 8&quot;</td>
</tr>
<tr>
<td>14.000</td>
<td>16' 9&quot;</td>
<td>33' 5&quot;</td>
<td>71' 9&quot;</td>
<td>33' 1&quot;</td>
</tr>
<tr>
<td>14.150</td>
<td>16' 6&quot;</td>
<td>33' 1&quot;</td>
<td>71' 0&quot;</td>
<td>32' 9&quot;</td>
</tr>
<tr>
<td>14.300</td>
<td>16' 4&quot;</td>
<td>32' 9&quot;</td>
<td>70' 3&quot;</td>
<td>32' 5&quot;</td>
</tr>
<tr>
<td>14.350</td>
<td>16' 4&quot;</td>
<td>32' 7&quot;</td>
<td>70' 0&quot;</td>
<td>32' 3&quot;</td>
</tr>
<tr>
<td>18.068</td>
<td>12' 11&quot;</td>
<td>25' 11&quot;</td>
<td>55' 7&quot;</td>
<td>25' 8&quot;</td>
</tr>
<tr>
<td>18.168</td>
<td>12' 11&quot;</td>
<td>25' 9&quot;</td>
<td>55' 4&quot;</td>
<td>25' 6&quot;</td>
</tr>
<tr>
<td>21.000</td>
<td>11' 2&quot;</td>
<td>22' 3&quot;</td>
<td>47' 10&quot;</td>
<td>22' 1&quot;</td>
</tr>
<tr>
<td>21.200</td>
<td>11' 0&quot;</td>
<td>22' 4&quot;</td>
<td>47' 5&quot;</td>
<td>21' 10&quot;</td>
</tr>
<tr>
<td>21.450</td>
<td>10' 11&quot;</td>
<td>21' 10&quot;</td>
<td>46' 10&quot;</td>
<td>21' 7&quot;</td>
</tr>
<tr>
<td>24.890</td>
<td>9' 5&quot;</td>
<td>18' 10&quot;</td>
<td>40' 5&quot;</td>
<td>18' 7&quot;</td>
</tr>
<tr>
<td>24.990</td>
<td>9' 4&quot;</td>
<td>18' 9&quot;</td>
<td>40' 3&quot;</td>
<td>18' 6&quot;</td>
</tr>
<tr>
<td>28.000</td>
<td>8' 4&quot;</td>
<td>16' 9&quot;</td>
<td>35' 11&quot;</td>
<td>16' 7&quot;</td>
</tr>
<tr>
<td>28.500</td>
<td>8' 3&quot;</td>
<td>16' 5&quot;</td>
<td>35' 3&quot;</td>
<td>16' 3&quot;</td>
</tr>
<tr>
<td>29.700</td>
<td>7' 11&quot;</td>
<td>15' 9&quot;</td>
<td>33' 10&quot;</td>
<td>15' 7&quot;</td>
</tr>
<tr>
<td>50.000</td>
<td>4' 8&quot;</td>
<td>9' 4&quot;</td>
<td>20' 4&quot;</td>
<td>9' 3&quot;</td>
</tr>
<tr>
<td>54.000</td>
<td>4' 4&quot;</td>
<td>8' 8&quot;</td>
<td>18' 7&quot;</td>
<td>8' 7&quot;</td>
</tr>
<tr>
<td>144.000</td>
<td>1' 8&quot;</td>
<td>3' 3&quot;</td>
<td>7' 0&quot;</td>
<td>3' 3&quot;</td>
</tr>
<tr>
<td>148.000</td>
<td>1' 7&quot;</td>
<td>3' 2&quot;</td>
<td>6' 9&quot;</td>
<td>3' 2&quot;</td>
</tr>
</tbody>
</table>

Antenna length calculations are based on the following formulas:

- 1/2 wave dipole (feet) = 468/frequency in MHz
- Full wave loop (feet) = 1060/frequency in MHz
- Inverted Vee with 90° degree included angle is 1/2 the length of 1/2 wave dipole

**Note:**
- Cut wire tightly to allow for connecting insulators and peening.
- Height above ground, nearby wires, trees, etc., will change tuning slightly.
**Seen Any Good Sunspots Lately?**

The answer is “yes”. A sunspot from Cycle 24 (with the new magnetic orientation) was seen for two days Sep 22 and 23. This is the second time a Cycle 24 spot has been “spotted”.

The sun is enjoying one of its quietest periods in recorded history. While some scientists claim the possibility of a prolonged “minimum” of activity, most solar specialists agree that it is way too early to reach that conclusion. The current period of inactivity, while the longest ever seen, is still within the reasonable range for a “normal” solar cycle.

Below is a prediction of Cycle 24’s projected progress. As you can see, we are still well within the window of a “normal” solar cycle. The dotted lines outline the potential for solar cycle activity, based on historic records. There is a 90% chance the actual solar activity will fall between the dotted lines for any given date.

From this chart, you can see that if we continue to have few or no sunspots through the middle of 2009, that would put us outside the 90th percentile, and then it would be reasonable to conclude that something unusual was afoot!
The Opinionated One: What’s In A Name?

Verman’s younger brother Spitz Krabbliess called me up the other day. “My radio’s not workin’ right. I’ve done been through the troubleshootin’ guide in the back of the manual, and it ain’t no help a-tall.”

“Never is,” I replied. “What’s the radio doin’?”

“Well, half the panel lights have gone out. The thing gets too hot to touch even on low power. No one can hear my signal, even across the yard on high power. And the receiver volume is way low. I’ve tried changing antennas, feedlines, everything. I’ve isolated the problem to the radio itself. It’s definitely the radio, nothing else.”

“How old is this radio?” I asked.

“Just over a year old. The warranty expired last month, just before all this trouble started. Do you think these problems are all related to each other?” Spitz asked.

“Yep, definitely,” I replied. “The good news is, it’s a relatively simple problem to fix, and won’t take too long. The bad news is, it might be kinda expensive.”


“Well, first, place the radio on a clean, flat surface with plenty of light. Next, get your magnifying glass out, and look carefully at the front panel. What you’re looking for is the word “Kenwood”. Do you see it?”

“Yup, yup, there it is.”

“Okay, here’s what you do. Take a good look at that name. Then, drop your radio into a trash can, and go buy a radio that doesn’t have that name on the front panel. In fact, make sure that name doesn’t appear anywhere else on the radio, or on the manual either, for that matter. Got it?”

After solving Spitz’s radio problem, it occurred to me that there’s a lot to a name.

I remember one time back a number of years ago when I lived in north Florida, my ham buddy “Cranky” Riley and I went together and bought a 20-year old used wood-and-canvas canoe to paddle around the Okefenokee Swamp, which was just a couple of miles from where we lived. Since a lot of other boat owners had painted names on their craft, Cranky suggested: “How ‘bout we name our canoe, too!”

Verman’s younger brother Spitz Krabbliess called me up the other day. “My radio’s not workin’ right. I’ve done been through the troubleshootin’ guide in the back of the manual, and it ain’t no help a-tall.”

“Never is,” I replied. “What’s the radio doin’?”

“Well, half the panel lights have gone out. The thing gets too hot to touch even on low power. No one can hear my signal, even across the yard on high power. And the receiver volume is way low. I’ve tried changing antennas, feedlines, everything. I’ve isolated the problem to the radio itself. It’s definitely the radio, nothing else.”

“How old is this radio?” I asked.

“Just over a year old. The warranty expired last month, just before all this trouble started. Do you think these problems are all related to each other?” Spitz asked.

“Yep, definitely,” I replied. “The good news is, it’s a relatively simple problem to fix, and won’t take too long. The bad news is, it might be kinda expensive.”


“Well, first, place the radio on a clean, flat surface with plenty of light. Next, get your magnifying glass out, and look carefully at the front panel. What you’re looking for is the word “Kenwood”. Do you see it?”

“Yup, yup, there it is.”

“Okay, here’s what you do. Take a good look at that name. Then, drop your radio into a trash can, and go buy a radio that doesn’t have that name on the front panel. In fact, make sure that name doesn’t appear anywhere else on the radio, or on the manual either, for that matter. Got it?”

After solving Spitz’s radio problem, it occurred to me that there’s a lot to a name.

I remember one time back a number of years ago when I lived in north Florida, my ham buddy “Cranky” Riley and I went together and bought a 20-year old used wood-and-canvas canoe to paddle around the Okefenokee Swamp, which was just a couple of miles from where we lived. Since a lot of other boat owners had painted names on their craft, Cranky suggested: “How ‘bout we name our canoe, too!”

Verman’s younger brother Spitz Krabbliess called me up the other day. “My radio’s not workin’ right. I’ve done been through the troubleshootin’ guide in the back of the manual, and it ain’t no help a-tall.”

“Never is,” I replied. “What’s the radio doin’?”

“Well, half the panel lights have gone out. The thing gets too hot to touch even on low power. No one can hear my signal, even across the yard on high power. And the receiver volume is way low. I’ve tried changing antennas, feedlines, everything. I’ve isolated the problem to the radio itself. It’s definitely the radio, nothing else.”

“How old is this radio?” I asked.

“Just over a year old. The warranty expired last month, just before all this trouble started. Do you think these problems are all related to each other?” Spitz asked.

“Yep, definitely,” I replied. “The good news is, it’s a relatively simple problem to fix, and won’t take too long. The bad news is, it might be kinda expensive.”


“Well, first, place the radio on a clean, flat surface with plenty of light. Next, get your magnifying glass out, and look carefully at the front panel. What you’re looking for is the word “Kenwood”. Do you see it?”

“Yup, yup, there it is.”

“Okay, here’s what you do. Take a good look at that name. Then, drop your radio into a trash can, and go buy a radio that doesn’t have that name on the front panel. In fact, make sure that name doesn’t appear anywhere else on the radio, or on the manual either, for that matter. Got it?”

After solving Spitz’s radio problem, it occurred to me that there’s a lot to a name.

I remember one time back a number of years ago when I lived in north Florida, my ham buddy “Cranky” Riley and I went together and bought a 20-year old used wood-and-canvas canoe to paddle around the Okefenokee Swamp, which was just a couple of miles from where we lived. Since a lot of other boat owners had painted names on their craft, Cranky suggested: “How ‘bout we name our canoe, too!”

After some discussion we decided to name the canoe “Miss Susan”, after our favorite science teacher back in Junior High School.

All through our college years we enjoyed our excursions deep into the Okefenokee. Cranky eventually got married, and sold me his half of our investment.

By this time, however, the old canoe began needing some serious maintenance. I took it to Dock Abrams, a local boat mechanic and owner of Dock’s Boat Works. Dock promised to look it over and get back with me.

About two weeks later, I hadn’t heard from him, when, on a Saturday morning, I went to the soda fountain at the Highlands Drug Store. The pharmacist, Mr. Tanner, was behind the drug counter, counting out some pills from a huge gallon container. He told me to have a seat, he’d be with me in a minute.

While I waited, in walks Dock Abrams. Mr. Tanner apparently didn’t know Dock, because he looked up, said, “I’ll be with you in one minute, sir.” and went back to counting pills.

“Hi, Dock,” I said. “How’s Susan doing?”

“I’ve got some bad news for you: Susan’s done for,” Dock began. “There’s nothing I can do. I worked on her for two weeks solid, and tried everything I can think of, but she was just too far gone. I’m sorry.”

“Oh, no. What am I gonna do without her?” I cried. “We’ve been together so long…”

Mr. Tanner looked over sympathetically and suggested. “Maybe you can use her parts to help somebody else. It’s about time I got myself a new one, anyway.”

More funny noises came from somewhere back in a rear aisle of the drug room.

“Listen, I gotta go. Don’t worry about the root beer float, Mr. Tanner,” I called out. “I’ll come back some other time. Say, Dock, do I owe you anything?” I offered.

“Why don’t you just keep her, Dock,” I suggested. “Maybe you can use her parts to help somebody else. It’s about time I got myself a new one, anyway.”

Dock Abrams continued, “And it wasn’t just that. Her entire insides were completely eaten up with all kinds of worms.”

Mr. Tanner’s eyes popped and he made a funny noise down in his throat, — but he didn’t look up from his pills this time.

“Oh, one more thing,” Dock continued. “I found a big deep scratch on her right side, like maybe she’d been dropped…”

“Well, Cranky and I did take her out last June, and when we were putting her in the back of Cranky’s pickup, we let her slip and she hit the pavement kinda hard. But that scratch probably came from one of those times when my Dad took her to Lake Folkston for one of those weekends with a dozen guys from his office, and they all…”

I was interrupted by Mr. Tanner choking and suffering a lengthy coughing fit.

“Poor Susan,” I shook my head after Mr. Tanner had calmed down. “I’m sure gonna miss her. I really enjoyed the hours Cranky and I spent paddling her…”

There was the hissing sound of five thousand little pills hitting the floor and bouncing around The empty gallon container rolled out from behind the drug counter. Mr. Tanner was nowhere to be seen.

“What do you want me to do with what’s left of her?” asked Dock Abrams.

“Why don’t you just keep her, Dock,” I suggested. “Maybe you can use her parts to help somebody else. It’s about time I got myself a new one, anyway.”

More funny noises came from somewhere back in a rear aisle of the drug room.

“Listen, I gotta go. Don’t worry about the root beer float, Mr. Tanner,” I called out. “I’ll come back some other time. Say, Dock, do I owe you anything?” I offered.

“Not a dime. Thanks for letting me have her. I’ll strip her down good and see what pieces I can use. I’ve already got a job in the back of Cranky’s pickup, we let her slip and she hit the pavement kinda hard. But that scratch probably came from one of those times when my Dad took her to Lake Folkston for one of those weekends with a dozen guys from his office, and they all…”

I was interrupted by Mr. Tanner choking and suffering a lengthy coughing fit.

“Poor Susan,” I shook my head after Mr. Tanner had calmed down. “I’m sure gonna miss her. I really enjoyed the hours Cranky and I spent paddling her…”

There was the hissing sound of five thousand little pills hitting the floor and bouncing around The empty gallon container rolled out from behind the drug counter. Mr. Tanner was nowhere to be seen.

“What do you want me to do with what’s left of her?” asked Dock Abrams.

“Why don’t you just keep her, Dock,” I suggested. “Maybe you can use her parts to help somebody else. It’s about time I got myself a new one, anyway.”

More funny noises came from somewhere back in a rear aisle of the drug room.

“Listen, I gotta go. Don’t worry about the root beer float, Mr. Tanner,” I called out. “I’ll come back some other time. Say, Dock, do I owe you anything?” I offered.

“Not a dime. Thanks for letting me have her. I’ll strip her down good and see what pieces I can use. I’ve already got a job in the mind where I can use her ribs…”

From that day on, Mr. Tanner always looked at me funny. It wasn’t until years later that I realized that it might have had something to do with the name of a canoe.
VARA Secretary's Report — September 2 Meeting

The VALLEY AMATEUR RADIO ASSOCIATION met at Shoney's in Staunton September 2, 2008. The Vice President, Scott Newlen K4QQZ, opened the meeting at 7:00pm. There were 31 members present and 1 guest, Colleen Pettis wife of Hugh Pettis K3EC. Thanks to Scott for taking over for our President, Greg W4GRC who had been sick a few days. 50/50 was won by Dave Metz KJ4JX, Dave returned his half to the club. Thanks Dave!

NEW MEMBER: Carl Williams KJ4EQY from Staunton was voted into the VARA. Welcome to the VARA Carl.

MEETING PLACE: We are still looking for a larger meeting place. The VARA October meeting will be at Shoney's in Staunton.

VARA PICNIC: Everyone had a great time at the picnic after we had to move to a new location in the park on the last day. If I counted right we had 26 members that came out for a day of fun, fellowship and FOOD. Greg W4GRC and Ray KE4HVR put signs up at 6:00am Saturday morning and were relieved by Darrell K4ALLA at 9:00am. We want to thank Scott KI4QQZ for purchasing meats and other supplies for the picnic. Also thanks to Scott and David AD4TJ for bringing their grills for cooking. Scott, David, Gordon and Scott's wife, Gail, did the cooking. Gail also did a lot of preparation before hand for the picnic, thanks again Gail.

CLUB APPAREL: We need to decide on which we want…shirt, hoodie or cap and pick a color that stand out in a crowd so our members can be recognized. Then Doug Tippett N8ESW can place the order. If anyone would like to order a personal item, talk to Doug about that also.

NOMINATING COMMITTEE: A nominating committee of three was elected to find officers for 2009. They are: David Tanks AD4TJ, John Bottemiller N4SYH and Gordon Batey WA4FJC. Lets all give the committee our support for the coming year. We need some new faces in the VARA for President, Vice President, Treasurer and Secretary in 2009. Please give this some serious thought when you are asked to fill one of these offices.

Augusta Co. ARES NET: David Tanks AD4TJ is looking for Net Controls for the Augusta County ARES Net. The Net will be held on the 146.850 repeater on the 2nd Thursday of the month at 8:00pm. This repeater has a minus offset and a tone of 131.8 when needed. The ARES Net will be run on simplex from time to time so listen on the repeater and watch for e-mails to this effect.

YOUR HELP IN NEEDED FOR THE FOLLOWING EVENTS

MILE POST “0” SPECIAL EVENT: This event will be held on Saturday and Sunday September 27 & 28. Last year we were set up in the upper parking area at the top of Afton Mountain. Operators and equipment are needed to run the station both days. There will be a sign up sheet at our September meeting.

GREAT EASTERN ENDURANCE RUN: This event will be held on Saturday September 27. This is a 5 & 100 km run. We need at least 6 operators to man the stations. We will have a signup sheet at the September meeting.

SHENANDOAH FALL FOLIAGE BIKE FESTIVAL: This event will be held on Saturday and Sunday October 18 & 19. There will be more information on this event at our September meeting.

PROGRAMS NEEDED: Al Bonck N3JB, our 2008 Program Chairman, is looking for anyone that would like to do a program for the club. Give him a call and set up a date to present it. It does not have to be HAM related. It could be anything you think the group would find interesting. Al's e-mail address is: margeal@ntelos.net

ON THE SICK LIST: Denny Morland N4XPW I talked with Denny’s wife on Saturday August 16th, she had just been to see Denny. He has been sick for some time now and is still on oxygen. Shirley said he didn’t feel like talking much so she didn’t stay long. Fred Evans N4KYM and his Sister Linda Evans, mother passed away September 1st. Fred Evans was in the hospital for two hours Wednesday September 17th because of a brown recluse spider bite. Lonnie’s (N4WIV) father has a problem with his foot healing again because of his sugar. Lonnie and Greg made an unscheduled trip to Florida to check on him the week of the 15th.

Let's keep Denny, Lonnie, Greg, Fred and Linda in our thoughts and prayers.

NOTE new contact person: SWAP SHOP This is for Ham related items only: You can send a list of items you have for sale, swap or something you would like to buy to fred at: p4kym@yahoo.com Also a picture of the item would help it sell. Go to the VARA Web Site at: http://www.qsl.net/w4xdi/ PLEASE notify Fred when your item sells so he can remove it from the list.

E-MAIL ADDRESSES: Keep your e-mail address up to date. Please send them to: Greg Czerniak W4QRC gccjc@verizon.net, Doug Tippett N8ESW dtippett@ntelos.net, Ray Colvin KE4HVR colvingr@comcast.net and David Fordham KD9LA fordhadr@jmu.edu.

ALSO, keep QRZ updated when call signs and e-mail addresses are changed.

Tour of Duty: Scott Martin KI4MSJ will be leaving December 20th for a tour of duty in Iraq. Let’s all keep him in our prayers. He also plans to set up a ham radio station there and already has his Iraqi call sign Y9MSJ. His first cards were printed wrong…Y9MST. Hopefully some of us in the valley will be able to make a contact with him while he is there.

The meeting was adjourned at 8:01pm.

PROGRAM: Hugh Pettis K3EC gave a presentation on the receiver he and his wife, Colleen built while in Afghanistan.

Hugh wanted a receiver but couldn’t afford to buy a new one. He found an old ARRL Handbook and looked up a schematic he thought parts could be purchased at a price he could afford. After figuring out what parts he needed to build the receiver he ordered the parts. Finally the parts came in and with the help of Colleen being his vice he drilled for the tube sockets and other components. Then it was wiring time, tuning time and finally time for the smoke test. Hugh had a big grin on his face when the receiver came to life and was used during his stay in Afghanistan on 40 & 80 Meters. The receiver was shipped home and he used it later at his ham radio station at home. Later he built a converter for the 10 & 20 Meter bands.

Thanks for a great presentation Hugh!

Submitted by
VARA Secretary
Ray Colvin KE4HVR
MARA Secretary's Report — September 4 Meeting

Introductions made all around.

1. Reports:
   New Members: 2nd reading for: Jay KD4OXQ, Bob W4TMV, Tim KJ4FQK, Ann KA1LSK, and Don KI4TOQ
   All approved by acclamation

   a. Secretary's minutes as printed in the Monitor with corrections to KI4TOG's callsign. Approval moved, seconded, passed
   b. Treasurer's report - $1,938.70 Motion to accept, seconded, passed
   c. Groups
      ARES/RACES -
      VEC — October 9 will be the next session. Thanks to those who are helping with the VE sessions.

   d. Public Service-
      Short report on the bike ride: The trail bike ride of 100 miles on August 31
      Gayle Shull KU4XN: Made a very good impression, things went very well
      Triple Play Event: Discussion with updates on activities. We Need Volunteers!

2. Announcements: None

   Study Manuals for various classes of ham license are available from KU4XN.
   A Get Well-Card was circulated for James Lehman W4POL, who is hospitalized.
   The First Thursdays of 2009 have been reserved with the Wood Grill, but no meeting January 1 due to holiday.
   Christmas Party in December: We can't get the second room unless we have at least 60 people. Discussion of a musical group as entertainment and inviting VARA to our Christmas Banquet to help insure 60 people.
   The 146.895 repeater is now back on the air, under new management.
   The 146.625 repeater is in the process of changing ownership.
   K4LXG suggested a possible workshop dealing with setting deviation levels on FM radios as a service to local hams

3. Old Business — None.

4. New Business:
   Nominating Committee: We need nominations for officers. Nominating committee volunteers were solicited.
   Nominating committee formed consisting of Gayle KU4XN, Dave KD9LA, and Bryan K4RMY.
   Discussion of possible change to the bylaws defining a quorum. After discussion, a resolution was proposed asking that the Board of Directors make a change to the bylaws, changing the quorum from the current 50% of members, to the lesser of 50% of members or 20 paid members. Motion made, seconded, and passed unanimously. The Board will consider this resolution at its next Board meeting.
   Discussion of changes of Bylaws regarding membership approvals, changing from secret ballot to a vote of those present. No motion or resolution made. Board will consider the options at the next Board meeting.

   New Call or Upgrades: None

Motion to adjourn, seconded and approved. 50/50 Won by Nancy, KG4JAZ $13.00

Program by Ken Brunk, 5H3KB, on his trip to Africa, covering the route taken by Stanley in his search for Livingstone.

Submitted by Bryan Daniels K4RMY
September 27-28: CQ WW RTTY DX Contest
September 28: Page County ARES Net
September 29: Rockingham County ARES Net

October 1: MARA Club Meeting
October 3-5: Grindstone 100 Footrun Public Service Event 6
October 4-5: Suzuki National Public Service Event 7
October 5: Camp Still Meadows Horse Ride Service Event 5
October 7: VARA Club Meeting
October 11: VE Exams in Dayton VA
October 17-19: Shenandoah Fall Foliage Bike Festival Event
October 20-24: School Club Roundup
October 25-26: CQ WW DX Context Phone Weekend
October 25-26: 10-10 International Fall QSO Party

November 1-3: ARRL November Sweepstakes (CW)
November 4: VARA Club Meeting
November 6: MARA Club Meeting
November 15-17: ARRL November Sweepstakes (SSB)
November 27: Thanksgiving Holiday
November 29-30: CQ WW DX Contest CW Weekend

December 4: MARA Christmas Banquet at Wood Grill

Check into some of the many nets listed in the July issue of the Monitor.
MARA/VARA

Return Service Requested

MASSANUTTEN AMATEUR RADIO ASSOCIATION, Inc.

President: Eugene Rogers KG4JBC
Vice President: David Fordham KD9LA
Secretary: Bryan Daniels K4RMY
Treasurer: Sandy Mullins, K4PZC
Board (exp 08): Gayle Shull KU4XN
Board (exp 09): Ray Ritchie K4NRA

http://mara.ws

MARA meets the first Thursday of each month
at Wood Grill Buffet in Harrisonburg.

Dinner begins at 6:30 pm,
the business meeting begins 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: Greg Czerniak, W4GRC
Vice President: Scott Newlen, K4QQZ
Secretary: Ray Colvin, KE4HVR
Treasurer: Doug Tippett, N8ESW
Program Manager: Al Bonck N3JB

http://www.qsl.net/w4xd

VARA meets the first Tuesday of each month
The September meeting will be at Shoneys
in Staunton at I-81 and US 250.

Dinner begins at 6:00 pm,
the business meeting begins at 7:00 pm

Visitors are welcome.

Dues ($15 per year) should be mailed to:
Doug Tippett
2348 Mosley St.
Waynesboro VA 22980