

**The Mount Vernon Amateur Radio Club
PO Box 372, Mount Vernon, Ohio 43050**

January, 2017



**Meetings are held the 2nd Monday of each month at 7:00 pm
at the Knox County Chapter of the American Red Cross,
300 North Mulberry Street, Mount Vernon, Ohio**



**K8EEN Repeater: 146.790. MHz (600Khz with PL of 71.9 Hz)
K8EEN-R Echolink Node: 809800
K8EEN Repeater: 444.600 MHz (+5 MHz with PL of 71.9 Hz)**

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Presidents View

Merry Christmas and Happy New Year all! Hope everyone has had a great holiday. Looking back over the year we have accomplished a lot. I won't mention everything here, just check out the newsletters. We now have a club station, the mesh network is up and going, the new repeater on top of the hospital, we held a special event station Dan Emmett Days, and more. So, what is in store for this year...we need to get everyone familiar with the equipment in the club station, the go boxes and the new Technician classes are coming up this month. ARES will need more members so we can respond to a disaster here in the community, just to mention a few things that come to mind. So be thinking of how you would like to participate and let me know.

ARES VHF SIMPLEX CONTEST, January 14, from 10:00 am to 6:00 pm. I will bring to the meeting a copy of the rules, exchange etc. to the meeting (I can also email the PDF to you). Sounds like fun and this year they are expanding it to include 6 meters. So I hope to hear you on the air.

I look forward to seeing you Monday January 9, @ 7:00 pm at the Red Cross Training Building. I did not mention Don W8PEN, will be giving a presentation on the mesh network after our meeting so, come and learn more about the mesh network.

What's on your mind? What would you like to see the club do? I would like to know. I can be contacted: kc8evs@arrl.net, 740-358-9131 text or voice or attend one of the meetings.

Emergency Preparedness

**By Patrick Valentino, KD8PSM
Knox County ARES Emergency Coordinator**

**Ohio EMA to Begin
Accepting Safe Room
Applications**



The Ohio Safe Room Rebate Program is once again accepting applications, beginning January 9. The program provides a rebate for the purchase and construction/installation of tornado safe rooms for Ohio homeowners.

"The entire state of Ohio is at risk of an EF5 tornado, which produces 250 mile per hour winds capable of destroying most structures," said Steve Ferryman, Ohio EMA mitigation branch chief. "A safe room is built to withstand these winds and resulting airborne debris and provides near absolute protection for occupants."

A safe room is an extreme-wind shelter or space that provides protection to people during a tornado. It can be constructed/installed in one of several places in the home: in the basement, beneath a concrete slab-on-grade foundation or garage floor, or in an interior room on the first floor.

Emergency Preparedness, continues on page 2

A safe room may also be buried in the yard or be a stand-alone structure near your home.

Residents selected for the program are eligible for a rebate up to 75 percent of the cost to install or construct a safe room – up to a maximum of \$4,875. To apply for the Ohio Safe Room Rebate Program, homeowners have until 5 p.m. March 10, to register on the Ohio EMA website: <https://ohiosharpp.ema.state.oh.us/SafeRoom2017/>, beginning January 9.

The Ohio Safe Room Rebate Program will use a computerized random selection process to select applicants. A priority list of applicants will be created from the selected applicants. Chosen homeowners will be notified by e-mail of their position on the priority list on or after March 13. Ohio EMA anticipates grant funding will become available this year and having a list of participants who meet program requirements will expedite the rebate process.

Funding for the rebate program is through a partnership with the Federal Emergency Management Agency's (FEMA) Hazard Mitigation Assistance (HMA) grant programs. Ohio homeowners would be responsible for 25 percent of the construction costs and any additional costs over the 75 percent maximum rebate of \$4,875.

Safe rooms must meet FEMA requirements in FEMA publications 320 and 361, and cannot be constructed/installed prior to the rebate drawing and notification from Ohio EMA to proceed with construction. Ohio EMA plans to offer this rebate program on an annual basis. When and if HMA funding becomes available, the amount of funding will determine the number of rebates.

A Note from the Editor:

If you receive our Monthly Newsletter by mail and have a email address, please consider accessing our Newsletters online. Our mailing list has doubled in the last year, (which is great, our club is growing), but it also increases our ink, paper, envelopes and postage costs.

You can access our Newsletter from our MVARC Club website below:

<http://www.mvarc.net/LinkClick.aspx?fileticket=0cnb6dmJEeM%3d&tabid=57&mid=375>

You may print it from there if you wish and explore past issues of our Newsletters as well. If you don't have a computer or email account, we would be happy to send you each edition by mail.

Thank you for your time,

-Bill, KC8BB -Newsletter Editor

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MINUTES OF THE DECEMBER 12TH, 2016 MVARC MEETING

Meeting called to order by President KC8EVS at 23:27 UTC.

Motion to approve November 14th minutes made by KE8ANY, 2nd KE8ANS. Approved.

Motion to approve December 12th Treasurers report made by N8PPF, 2nd KE8ANS. Approved.

Motion to approve the presented slate of officers for the year 2017 made by N8RDH, 2nd by W8PEN. Approved.

The following slate of officers will begin their terms of office January 1st, 2017:

FRANK COUNTS-KC8EVS-PRESIDENT

TERRY WINDSOR-KE8ANS-VICE PRESIDENT

JIM WILLIAMS-N8IBR-SECRETARY-TREASURER

BILL BRADLEY-KC8BB-BOARD OF DIRECTORS

It was announced that the KD8EVR UHF repeater will become a digital repeater in the near future.

It was announced that the installation of the K8EEN UHF repeater was planned for Friday, December 16th.

KC8EVS then tabled any remaining 2016 business until the January 9th, 2017 meeting.

A motion to adjourn the December 2016 meeting was made by N8PPF, 2nd by K8AEC.

Approved at 23:50 UTC.

A series of drawings were made for donated door prizes. Thanks to those that made the donations.

We had 20 members and 7 guests present.

Respectfully submitted,

N8IBR-SECRETARY MVARC

Now Recruiting New Members

The Amateur Radio Emergency Service Needs You!

Amateur Radio or “Ham” License required

Help communicate during local and national disasters

Use your skills to assist during public service events such as bike races, marathons, and parades.

Become an official “Weather Spotter”

Join the Amateur Radio Emergency Service (ARES) and become trained in emergency response.

Enjoy talking to hams all over the world via radio

Ham Radio Classes are now forming. Upon passing this course you will be able to talk to local hams and Amateur Radio Operators around the world using voice, digital, and Morse Code. **Morse Code is not needed to earn your license and requires extra study.**

Date: Classes begin Thursday, January 12, 2017 from 7:00 PM to 9:00 PM and will be held every Thursday through February 23, 2017.

Exams will be held Saturday, February 25, 2017 starting at 9:00 AM.

An optional two part course will be offered March 2nd and March 9th from 7:00 PM to 9:00 PM on how to set up your ham radio station, program your radio, and conduct “on the air” contacts.

Location: Classes will be held at the Knox County Chapter of the American Red Cross, 300 North Mulberry Street, Mt. Vernon, Ohio. We will be using the Training Center which is in back of the main building.

Cost: This course is sponsored by the Mt. Vernon Amateur Radio Club. **The course and course material are provided free of charge. There is a testing fee of \$15.00 at the time of the exam.** This fee goes to the testing organization and the club does not retain any of the testing fees. The club offers a one year free membership to those taking the course and passing the exam.

For more information about Amateur Radio and the Amateur Radio Emergency Service, please visit these websites:

<http://www.arrl.org>

<http://www.mvarc.net>

<http://www.arrl-ohio.org>

For more information or to sign up for the course contact:

Don Russell, W8PEN, Phone: 740-397-0249, Email: w8pen@arrl.net

Radio Activity

By Don Russell, W8PEN



The propagation gods are mad at us

Welcome to 2017. Hopefully band conditions will be better this year than they were last year. Unfortunately, the forecast is not looking good. As we approach the Sunspot minimum, band conditions on 20, 15, and 10 meters will become progressively worse. F layer skip will become less likely on 15 and 10 meters, and present only during daylight hours on 20 meters. From what I have seen on the bands for the last couple of months, we may already be at sunspot minimum. We had about 30 Sun-Spotless days in 2016 and expecting more of the same for 2017.

Currently, we are in Sunspot Cycle 24. Sunspot Cycle 25 is supposed to start in 2020 and peak in 2025. And the peak is supposed to be less of a peak than the one during Cycle 24, which was very poor. Not good for DX'ers!

If there is any good news in this, it is that the 160, 80, and 40 meter bands are not effected much by the Sunspot Cycles and should continue to play well throughout all of this turmoil. In fact 40 meters, which was up and down last year, should settle down and once again become a local band during the day and a DX band during evening hours. That is indeed good news for me since my station is more effective on these bands than on the higher ones.

Look for 20 meters to continue to be the DX band of choice at least for the next 5 to 10 years. 15 meters should be usable during the day, at least part of the time. 10 meters will have to rely on **E skip** conditions which means mostly stateside contacts when the band is open.

Mesh Network Update:

Finally some good news for local Mesher's. Our network is expanding! Currently we have five RF nodes. Meaning that these nodes are using 2.4 GHz RF and not tunneling via the internet. These nodes are: W8PEN-MTV-SOUTH, N8PPF-1, KD8WSI-WEST, K8EEN-RED-CROSS, and K8EEN-EAST.

The one high profile node is the one on the KCH roof, K8EEN-EAST. This node covers the East, West, and North areas of Mt. Vernon. It does not do well to the South and South West due to a hill interfering with coverage. The other semi high profile node is the on at the Red Cross, K8EEN-RED-CROSS. While this node is only up 25 feet, it covers most of the North, West, and South areas of Mt. Vernon. Indeed this is a very good start. Still looking to get a high profile node up at the water tower on Wooster Road.

We have several nodes linked in via internet tunneling. The group is working hard to turn these nodes into RF nodes. I think we are close do doing so.

It looks like I will have three spare Mesh Nodes available for those wishing to run a node from their home. These are nodes I have built using used equipment and homebrew antennas. If you would like to host a node, please contact me.

The only requirement is that you live in Mt. Vernon and willing to keep the node on 24/7. You should also have a way of getting the node up at least 30 feet in the air. Either a TV tower or a single mast. Lacking a mast, you must have a high location "in the clear". The equipment is light weight, so it will not put much strain on even the lightest of masts.

Mesh Presentation:

I have been asked to do a Mesh presentation at the January meeting. If you are interested in installing your own node, or just curious about what a Mesh Network does, please join us.

440 MHz Repeater Update:

The new 440 MHz repeater was installed at the KCH hospital December 22, 2016. This repeater is the analog / digital Yaesu DR-1X repeater that the club purchased earlier in the year. It has seen some time at various locations, but KCH is looking like its permanent home. To access the repeater, program your radio to 444.600 MHz with a split of plus 5 MHz. The CTCSS frequency is 71.9 Hz, the same as our 2 meter repeater. At a minimum, you need to program the CTCSS to encode. This way the repeater will see your signals. If you do not wish to hear the annoying buzz of digital signals (when the repeater is being used in digital mode), then also set your CTCSS to Tone Squelch. I prefer to hear the digital signals myself. It lets me know that the repeater is busy. Of course, the more popular the digital mode becomes, the more annoying it will be for someone with analog FM.

We still have a few technical issues you work out with this repeater. The duplexer we bought is not working as well as it should. We are working on replacing it, or retuning it. This may take some time.

In the meantime, the repeater appears to have good coverage in the Mt. Vernon area. I have had success using the repeater in and around Mt. Vernon using only a hand held, including downtown. The weakness of the repeater appears to be South and South-West. There is a good sized hill in that direction which UHF signals have trouble getting over.

In fact, I cannot get into the repeater from my home with the hand held. I can bring it up, but I can't talk through it. I am hoping that once we get the technical issues resolved, coverage to the South and South-West will improve.

To help introduce the new repeater to local hams, I would like to suggest that we hold a short net Sunday night shortly after our regular Sunday night net concludes. Let's say approximately 9:30 PM every Sunday. Check in will be with analog FM. Those with digital equipment can switch to digital after this short net concludes. This will give us a good idea of how well the repeater is performing. Those outside of Knox County are welcome to join us if they can hit the repeater. Later, we can move this net to another day if it prove popular.

Antenna Results:

Last month I reported that I had raised my Windom antenna 15 to 20 feet on one end. I was hoping that this would help the antennas 20 meter performance. Well, it did not make much of a difference that I can see. I am still looking for the best 20 meter wire antenna out there.

I am actually running out of things to try. Could it be that the lack of sunspot activity as reported earlier in this article is really to blame? Since most of my contacts are stateside, I find that hard to believe. The sunspot minimum should affect the longer distance communications. Although, perhaps it would limit contacts to the far West. I am actually looking for an antenna that will shoot a contest signal into the high population areas on the East coast. The best antenna I have found for that was my homebrew tri-band dipole that I used many years ago. Perhaps I need to revisit that antenna.

Unfortunately, winter is not a good time for antenna projects, so I think any tower work will have to be put off until Spring. That is a wrap for this edition of "Radio Activity" and see you all at the meeting. I am looking forward to showing everyone how the Mesh Network actually works.

Noise floor report does not inspire confidence

By Dan Romanchik, KB6NU

Last June, the FCC's Technical Advisory Committee asked licensed and unlicensed users of the electromagnetic spectrum to answer some questions about the noise they were experiencing and whether or not it was affecting their services. Specifically, they asked:

- * Is there a noise floor problem?
- * Where does the problem exist? Spectrally? Spatially? Temporally?
- * Is there quantitative evidence of the overall increase in the total integrated noise floor across various segments of the radio frequency spectrum?
- * How should a noise study be performed?

Well, the results are in, and Radio World recently published a summary of the responses that the FCC received (<http://www.radioworld.com/business-and-law/0009/noise-floor-where-do-we-go-from-here/338242>). The FCC received 93 replies from 73 (great number, eh?) different people or organizations, including:

- * 23 companies/industry organizations
- * 39 RF professionals (broadcast and wireless)
- * 31 licensed radio amateurs
- * 9 responders did not reply to the questions asked

Respondents included the ARRL, the Society of Broadcast Engineers, the National Association of Broadcasters, the National Public Safety Telecommunications Council, ATT, and the National Electrical Manufacturers Association. I found especially interesting comments from the Society of Broadcast Engineers. They include:

- * Increased cooperation is needed between manufacturers of Part 15 devices and users of radio spectrum to identify noise sources and take appropriate remedial action.
- * Radiated emission limits below 30 MHz in the FCC Part 15 rules for unintentional emitters should be enacted. There are presently no radiated emission limits below 30 MHz for most unintentional emitters.
- * Reduced Part 15 limits for LED lights should be enacted to be harmonized with the Part 18 lower limits for fluorescent bulbs.
- * Better labeling on packaging for Part 18 fluorescent bulbs and ballasts to better inform consumers of potential interference to radio, TV and cellphone reception in the residential environment.
- * Specific radiated and/or conducted emission limits for incidental emitters, such as motors or power lines, should be enacted.
- * Conducted emission limits on pulse-width motor controllers used in appliances should be enacted.
- * Substantially increase the visibility of enforcement in power line interference cases.

Other organizations made similar comments.

While the report is encouraging, it won't mean a thing if no action is taken on these issues. Given that the FCC is cutting back on its field offices, and our president-elect has said that he plans to reduce the number of governmental regulations, I'm not optimistic that we'll see the noise situation get better before it gets worse. What do you all think?

When he's not battling the noise floor at his QTH, Dan blogs about amateur radio at KB6NU.Com, writes the "No Nonsense" amateur radio study guides and teaches ham classes. You can contact him by e-mailing cwgeek@kb6nu.com.

MEMBERSHIP FORM

Club dues run from January 1 to December 31st and are collected the last quarter of the year. You can mail in your dues to the address shown below, bring them to a meeting, or give them to any club officer. Visit our web page at: www.mvarc.net for further club information. Dues are \$12.00 regular membership. They are \$10.00 for those over 65 years of age, 2nd members in the same family, and for those living outside of Knox County.

The Mt Vernon Amateur Radio Club
P O Box 372
Mt Vernon, Ohio 43050

NAME _____ CALLSIGN _____

STREET OR P O BOX _____

CITY _____ STATE _____ ZIP _____

PHONE _____ LICENSE CLASS _____

ARRL MEMBER (Y/N) _____ E MAIL ADDRESS _____

DONATIONS (OPTIONAL) _____

SUGGESTIONS FOR POSSIBLE MEETING PROGRAMS:

January, 2017

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1 9:00 pm ARES Sunday Night Net on K8EEN KC8BB –Bill	2	3	4 5:00 pm Dinner at Southside Diner	5	6 10:00 am Breakfast at Hardee's	7
8 9:00 pm ARES Sunday Night Net on K8EEN W8PEN –Don	9 7:00 pm MVARC Monthly Meeting	10	11 5:00 pm Dinner at Southside Diner	12	13 10:00 am Breakfast at Hardee's	14 9:00 am Breakfast at Alli- son's Finer Diner ARES VHF Simplex Contest 10:00 am to 6:00 pm
15 9:00 pm ARES Sunday Night Net on K8EEN KE8ANS –Terry	16	17	18 5:00 pm Dinner at Southside Diner	19	20 10:00 am Breakfast at Hardee's	21
22 9:00 pm ARES Sunday Night Net on K8EEN KD8HSA –Tom	23	24	25 5:00 pm Dinner at Southside Diner	26	27 10:00 am Breakfast at Hardee's	28
29 9:00 pm ARES Sunday Night Net on K8EEN KC8BB –Bill	30	31	February 1 5:00 pm Dinner at Southside Diner	2	3 10:00 am Breakfast at Hardee's	4