



**Meetings are held on the 2nd Monday of each month at 7:00 pm at the Knox County Chapter of the American Red Cross (Annex)
300 North Mulberry Street Mount Vernon, OH 43050**



**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)**



INSIDE THIS ISSUE

<i>President's View</i>	1
<i>Ham Radio News & Information</i>	2
<i>November Meeting Minutes</i>	3-4
<i>Radio Activity</i>	5-6
<i>December / January, 2020 Calendar</i>	7

President's View

This has been all too quick, it's December and I'm behind schedule already for the month. It has been a busy year here for me and for the club. Thanks to all that have helped this year with all the club activities. We did something new this year, Courthouses On the Air, which went well and we made a few contacts. It's not easy to set up a station in the middle of Mount Vernon. We also operated Parks on the Air from a new location in Mohican State Park, it was misfortune that lead us to this site but a great spot it turned out to be and we had a great time. This also may be a great spot to operate NVIS next spring. Thinking about next year here are some dates to set aside {that are posted (or not) on the web}:

Winter Field Day, January 25-26

NVIS (no date posted that I know of but usually towards the end of April.)

Hamvention, May 15-16

Field Day, June 27-28

Columbus Hamfest, August 1

DXE Hamfest, August 8 (this is new to me, but sounds like a great one in the making, Tallmadge, Ohio)

Ohio State Parks on the Air September 12

I'm sure that there will be more to come as the year progresses so be ready and think about how you can join in the fun.

Well, four years ago I became president for a year, this year I'm stepping down to give someone else a try. I'm not going anywhere just won't be up front at the meetings. The list of candidates have been mailed out and I look forward to working with them to make things happen this next year. We will be voting them in at the December meeting this weekend so if you think that you would like to run for one of the offices please let me know as we can write your name in on the ballot and make it an actual race :). December's meeting is on the 8th at Fiesta Mexicana Express on Coshocton Ave at 6p.

See you Sunday at the dinner, or Friday at 10a at the American Red Cross.

Frank, KC8EVS

The ARRL Ohio Section calendar lists many interesting events around Ohio. The webpage is shown below:

<https://arrl-ohio.org/g-calendar/default.html>

[Visit us on Facebook:](#)

[Mount Vernon Amateur Radio Club](#)

[Visit our new website:](#)

<https://mvarc.net/> or

<https://k8een.net>

Traffic Nets:

<http://www.ossbn.org/>

Ohio Single Side-band Net.org, our Ohio connection for what is going on in the Ohio Traffic System. The Net meets on 3.972.5 KHz at 10:30 a.m., 4:15 p.m. and 6:45 p.m. daily. Alternate Frequency for all sessions 3.968 KHz

<http://www.cotn.us/> The Central Ohio Traffic Net is a part of the Ohio Section of the National Traffic System. We meet daily to handle traffic; all licensed amateur radio operators are welcome to check in and to learn how to handle traffic. The Net meets daily at 7:15 p.m. local time.

Area Radio Clubs:

Delaware Amateur Radio Association: <http://k8es.org/>

Newark Amateur Radio Assoc: <https://www.n8ara.org/>

(Mansfield) InterCity Amateur Radio Club: <https://iarc.club/>

SDR:

<http://websdr.org/>

A WebSDR is a Software-Defined Radio receiver connected to the internet, allowing many listeners to listen and tune it simultaneously. Go to the chart in the middle of the page and select the **Band** you want, then **Region** (North America). This will bring up 18 listening stations in the United States and Canada. Pennsylvania, Alabama and Utah are favorites for this area. There is also a mobile application available for free.

The Mount Vernon Amateur Radio Club Officers

President:

Frank Counts, KC8EVS

Vice President:

Scott Fields, W8HK

Secretary / Treasurer:

Terry Windsor, K18N

Club Call Trustee / Director:

Don Russell, W8PEN

Equipment Trustee / Director:

Barry Butz, N8PPF

Directors:

Emery Bennett, W8TW

Greg Short, W8DOH

Bill Stroud, KD8WHQ

Louie Wilkinson, NT8I

Michael Jacobs, KE8HGE

Newsletter Editor &

Facebook Editor:

Bill Bradley, KC8BB

November Meeting Minutes November 11, 2019

Frank, KC8EVS called the meeting to order at 7:00 pm with 11 members present.

October Meeting Minutes accepted as noted.

Treasurers Report presented by Terry, KI8N; accepted as noted.



Repeaters:

Noted the 444.6 repeater is working.

The 146.79 repeater is experiencing signal fluctuations and noise. Don, W8PEN believes it may be the duplexer tuning and is working on getting it checked with a reliable service monitor.

Don is also concerned that it could be an antenna or feedline issue which will be investigated if tuning the duplexer does not fix the issues.

Mesh:

Mesh network is working and has been expanding.

Matt Mitchell has connected to the water tower from Johnstown (19 miles) via a 5 GHz connection. And now we have nodes connected through Johnstown to Delaware. Another 5 GHz node from KCH is aimed at the water tower. Nodes at Rastin Tower and the downtown MTV parking garage are being checked on to expand the mesh network.

MVARC needs to determine how the mesh system will benefit and be used for ARES.

Anyone interested in adding a node contact either Don or Frank regarding equipment needs and configuring.

WiresX – Still on hold for internet connection at KCH.

ARES:

We have a requirement to validate and test ARES sites and shelters both with radio and mesh connections. Mark Maxwell, Knox County EMA has asked us to verify tornado siren tests by letting Bill, KD8WHQ know which sirens are working.

Old Business:

MVARC Webpage is live at the following addresses: MVARC.net and K8EEN.net.

Secure members area is working but will not be available until the content is posted. It was determined that all personnel contact information will be moved to the secure area to deter scammers from contacting members. Direct questions to Scott, N8SY or Louie, NT8I.

It is time to renew your MVARC Club membership dues before January 30, 2020.

Regular membership dues are \$20.00. Membership dues are \$15.00 for personnel who are retired, over 65 years of age, additional members in the same family, or who do not hold an active FCC Amateur License. A membership application was included in the November Newsletter.

The ARRL Ohio Section calendar lists events: <https://arrl-ohio.org/g-calendar/default.html>

New Business:

Directors working on nominations for officers for 2020 with election to occur at the Christmas dinner.

MVARC Christmas Dinner to be held at Fiesta Mexicana on December 8, 2019 at 6 pm. Location is 997 Coshocton Ave., Mount Vernon.

Shawn, KD0DMJ stated he is setting up an outdoor winter field day operation in Mohican State Park on January 25, 2020. He is having this event at the Fire Tower, if anyone from MVARC is interested in attending. There will also be license testing so MVARC members with a VEC qualification are invited to participate.

Adjournment:

Meeting adjourned at 7:45 pm; Louie, NT8I and Don, W8PEN made the motion.

50/50 Drawing won by Emery, W8TW and proceeds donated back to the club.

Equipment from Bill Waits, N8OGX (SK) estate was available to club members for a donation.

Terry Windsor, KI8N
MVARC Secretary/Treasurer

By Don Russell, W8PEN

It has been a busy November for yours truly. We had some repeater issues and made huge leaps with our local mesh node. Lets get started.

2 Meter Repeater

The 2 meter repeater was a real pain in November. Not entirely the fault of the repeater, I am embarrassed to say.

It started out with a few complaints that the coverage was way down. Indeed, when I checked coverage by going mobile, I was lucky to get 10 miles with 50 watts in the mobile. Now that is bad! Emery W8TW had the same experience. Going to Fredericktown on Routes 13 and 95, Emery could just barely get into the repeater. That is really bad considering I used to get into the repeater from the same spot with a handheld and rubber duckie antenna in the car.

So, the clubs favorite repeater technicians, Barry Butz N8PPF and myself made a visit to the water tower to check things out. After doing some SWR checks on the antenna and duplexer, we found that the duplexer receive port SWR was right at 3:1. That is not good and was presumed to be the loss in signal. This meant a tune up of the duplexer was in order. A reasonable conclusion since the duplexer was last tuned up in 2002!

Unfortunately, duplexer tuning was delayed by several weeks. In the mean time, I rechecked things to make sure that the duplexer was the actual problem. Thanks to the help from Steve Salyers, KD8TNT from Heath. I checked the received signal at the repeater antenna and compared it to the signal coming out of the duplexer. While the signal through the duplexer was a bit worse than directly through the repeater antenna, it was not that much worse. I began to worry that tuning the duplexer would not help us a great deal.

Matt Mitchell KB8UVN has been helping us with the mesh network. Matt volunteered to tune the duplexer for us. He has all the equipment necessary to do the job correctly. This involved pulling the duplexer from the repeater cabinet (not an easy task) and transporting it to Matt's shack in Johnstown. Unfortunately, the repeater was turned off during this time. But only for twenty four hours. This was the longest the repeater has been down since 2002!

After reinstalling the freshly tuned duplexer, Matt and I found the receive to be significantly improved, but still not up to where it should be. So, we started searching for other issues.

Just so happens that we were also changing out an antenna for the mesh network. We had to turn all the mesh equipment off. Checking the repeater with the mesh network down proved interesting. All the receive noise was gone. Again, with the help of KD8TNT, we checked signals. Steve could get into the repeater with as little as two watts!

Well smack my head against the wall! While the duplexer tune up indeed helped, the main culprit was the mesh network equipment. Obviously, the mesh network was turned off until we came up with a solution.

The solution came about a week later. Matt completely rebuilt our switching arrangement at the top of the tower. We also replaced our cat5 cable (which was not shielded) with shielded cat5 cable. Matt paid particular attention to making sure everything was properly grounded.

Even then the results were a bit discouraging. Yes, the noise was reduced significantly. However, on the weaker signals there was still a trace. We were aiming at zero tolerance for noise here so we kept trying things.

Finally, switching to a different power supply for the mesh nodes eliminated the noise entirely. Kind of strange, because I thought the power supply we switched to generated more noise than the others. Just goes to show that you just never know.



On a side note, comparing the Yaesu DR1-X repeater to the Maggiore repeater, the Yaesu had a better receiver. I believe this is more due to the age of the Maggiore repeater. Matt has offered to realign the receiver on the Maggiore repeater. I am confident that this will improve the receiver enough so that we can switch back to the Maggiore repeater as our standard repeater and thus get the repeaters bells and whistles back. In the mean time, we will run the Yaesu repeater with its crude but workable built in controller.

For the life of me, I have not been able to make the Cat 1000 repeater controller work with the Yaesu DR1-X. The rumors are true, it is almost impossible. I am still playing with it. Once Matt gets the Maggiore repeater receiver back up to spec, I am planning on pulling the Yaesu repeater and hooking it up to a different external controller. I should be able to figure it out with everything on the bench that way. I am not out of ideas yet!

Local Mesh Network

We have made huge strides in establishing a viable ARES local mesh network. In November, we continued work on several nodes at the water tower on Wooster Road. We have also installed nodes on the tower at the parking garage off of Gay Street in Mt. Vernon.

The nodes at the parking garage provides very good coverage of downtown Mt. Vernon, as well as out West to the city limits. I was hoping that it would fill the void on Sandusky Street North, but that is not to be.

We are still hopeful at getting a node at Foundation Park, although it will not be on Rastin Tower like we were hoping. It will be a more modest node on top of one of the other buildings. Still, this will cover Foundation Park for any events the ARES may be involved in. Perhaps this node will provide the path on Sandusky Street I am looking for. This node probably won't happen until Spring.

We are hopeful to be putting a node on a water tower in Fredericktown. This would be nice. It would allow hams in Fredericktown to easily connect to our mesh. It would also provide a path to Mansfield as we go forward. Possibly this node will be installed soon. However, Spring is more likely. If at all.

Next month I will start a section on explaining how to use the mesh network as it now stands. One of the major advances is the Bulletin Board System that has been installed. You can self register and gain access to a bunch of information. You can also email other bulletin board users, including sending attached files to one another. I think this will be great for the ARES as we go forward with the mesh project.

Club Computers

Some time ago, Arlin KD8EVR donated two laptop computers to the club. These laptops have not seen much use because they were WinXP computers. I did do some work on them when the club first got them. Mainly adding memory to both and adding some ham related software to each. However, they were slow and sometimes frustrating.

I decided to try installing Windows 7 on these two computers. My reasoning was that the computers probably needed a fresh install of Windows to get them up to speed. Everyone knows these window computers tend to slow down after several years and it is best to reinstall the operating system every few years.

A fresh install of Windows 7 did wonders for these computers. No, they are not super fast, but they are much better than they were. Plus we can use actually use them on the internet, mesh, or anywhere we need them.

The battery in one of the computers is very good and lasts several hours. The battery in the other one needs replaced. It only lasts ten or fifteen minutes. I will look for a reasonably priced battery, or check into rebuilding the battery pack already in it.

That is it for this month. Don't forget the December Christmas Dinner announced elsewhere in this newsletter. Hope to see you all there. 73.

December, 2019

Sun	Mon	Tue	Wed	Thu	Fri	Sat
8 6:00 pm Christmas Party at Fiesta Mexicana 9:00 pm ARES Sunday Night Net on K8EEN NT8I, Louie	9	10	11 5:00 pm Dinner at Southside Diner	12	13 10:00 am Breakfast at Club Meeting room	14 10:00 am Breakfast at Barb's Diner Columbus Road
15 9:00 pm ARES Sunday Night Net on K8EEN KE8HGE, Michael	16	17	18 5:00 pm Dinner at Southside Diner	19	20 10:00 am Breakfast at Club Meeting room	21
22 9:00 pm ARES Sunday Night Net on K8EEN W8DOH, Greg	23	24	25 Christmas Day	26	27	28
29 9:00 pm ARES Sunday Night Net on K8EEN- Net Control TBD	30	31	1 January	2	3 10:00 Breakfast at Club Meeting room	4
5 9:00 pm ARES Sunday Night Net on K8EEN W8PEN, Don	6	7	8 5:00 pm Dinner at Southside Diner	9	10 10:00 am Breakfast at Club Meeting room	11 10:00 am Breakfast at Barb's Diner Columbus Road
12 9:00 pm ARES Sunday Night Net on K8EEN NT8I, Louie	13 7:00 p.m. MVARC Monthly Meeting -Red Cross Annex	14	15 5:00 pm Dinner at Southside Diner	16	17 10:00 am Breakfast at Club Meeting room	18