Mount Vernon Amateur Radio Club
Serving Greater Knox County, Ohio

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)

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President's View

Sitting here on this cold January morning with a warm cup of coffee to motivate me, I would like to welcome everyone to a new year and I hope everyone had a wonderful holiday season. I know the holidays can be a busy time, and mine were certainly no exception. Seems every year there are more things to do and by the time it is all over you are left wondering where the year went. Looking forward to this year we have some established events that I hope all of our members will try to attend and participate in, these include, (but are not limited to):

Winter Field Day, January 25-26

NVIS, April 25

Field Day, June 27-28

Ohio State Parks on the Air, September 12

And for your reference, here are some of the large Hamfests this year:

Hamvention, May 15-16

Columbus Hamfest, August 1

DXE Hamfest, August 8

The club will be hosting a Technician study class this year. We are going to try something new and hold the class on Saturdays starting Saturday, February 15th running 3 more weeks, and then we will hold a testing session Saturday, March 14th.

Here is to a new year with new challenges and new opportunities.

-73

-Louie, NT8I

New Technician Class

We will start a NEW Technician Class in February at
10:00 a.m. - 2:00 p.m. on the following dates:

February 15
February 22
February 29
March 7

Test session for all Licenses will be:

March 14 at 10:00 a.m.

For more info, please contact Michael Jacobs at info@mvarc.net

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Visit us on Facebook:

Mount Vernon Amateur Radio Club

Visit our new website:

https://mvarc.net

Please email for inquires and information at:

info@mvarc.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.

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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/

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

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

December Meeting Minutes
December 8, 2019

Frank, KC8EVS called the Christmas dinner meeting to order at 6:05 pm.

Normal meeting tabled until January 2020; Scott, N8SY and Larry, AC8YE made the motion.

New Business:

2020 Officer Election – All nominees elected:

President - Louie Wilkinson, NT8I

Vice-president - Greg Short, W8DOH

Secretary - Michael Jacobs, KE8HGE

Treasurer - Terry Windsor, KI8N

Directors:

    Greg Short, W8DOH

    Don Russell, W8PEN

    Emery Bennett, W8TW

    Bill Stroud, KD8WHQ

Adjournment

Meeting adjourned at 6:15 pm; Scott, N8SY and Emery, W8TW made the motion.

Terry Windsor, KI8N
MVARC Secretary/Treasurer

By Don Russell, W8PEN

Happy New Year everyone! I am wishing all club members great success in whatever radio activity they pursue for the coming year.

Ham radio is just a great hobby. I like to think of ham radio as one of those great TV shows (NCIS comes to mind) that has endless spin offs. Antennas, Computers, SSB, CW, digital, experimenting, contesting, rag chewing. These are just a few spin offs of ham radio. I am sure we could come up with a big list.

I would also like to thank Frank Counts KC8EVS for his dedication in serving the club as president for the past four years. During Franks tenure, membership has grown as well as club activities. Compared to many other radio clubs in the area, ours is one of the more active clubs.

A big welcome to Louie Wilkinson NT8I, our incoming president, and the rest of the newly elected officers.

Now, on with the show!

Repeater status

The clubs two repeaters are up and running and doing well. Despite a bunch of problems with the 2 meter repeater in November and December.

The 2 meter repeater is performing flawlessly since the duplexer tune up. We also changed some cables out that may have been causing some problems. Thanks to Matt Mitchell, KB8UVN for doing the tune up and making up the cables.

Hopefully, I can go back to being the "Maytag Repair Man" as far as our repeater goes.

Local Mesh Network

The clubs local mesh network is working fantastically! We are expanding this system at a very fast pace. We now have a node on the tower atop the Parking Garage on the Public Square. This has 2.4 GHz and a 5 GHz nodes installed. In addition, there is a 5 GHz node pointed at Johnstown as a backup gateway to Johnstown. Our main gateway is from the water tower on Wooster Road to Johnstown.

Currently, our mesh node reaches out to Johnstown, Delaware, Galena (Alum Creek), Sunbury, and Gahanna. We also have a North link to Fredericktown.

We will be busy in the Spring. Thanks to Shawn Bleiler, KD0DMJ we have opportunities to put up nodes on water towers in Fredericktown and Centerburg. I am also hoping to approach Martinsburg (with Shawn's help) about installing a node on their water tower.

If we are successful in installing nodes on these three water towers, we will be one step closer to Shawn's goal of covering all of Knox County with the mesh network. Our biggest problem going forward will be out East. But we have possibilities there as well.

We are also planning a small node at Foundation Park. While our Rastin Tower project was turned down, we were offered the use of other buildings on which to put a node on. I think it is a good idea to accept this so we have good coverage at Foundation Park. Perhaps if we have success in providing a service to the park, we can eventually revisit Rastin Tower.

I am very pleased at where we are and where we are heading with this Local Mesh Network.

I would like to thank Shawn, KD0DMJ and Matt, KB8UVN for their support this project. I have become more or less the guy with the wish list with Shawn and Matt doing the majority of the work. Life is good.

I should have a mesh node to go kit ready to demonstrate by the February meeting. I am hoping this kit includes the mesh node for 2.4 GHz, IP phone, all in one printer, a 120 volt inverter for power, and a 10 – 15 foot mast to support the node. IP camera is another option to consider.

The biggest problem is providing power. I have decided that a power inverter that plugs into a vehicles 12 volt power socket would be ideal.

Yaesu DR1-X Backup Repeater

Scott Yonally, N8SY, suggested that we consider setting up the backup repeater as an emergency repeater we can put on or near a disaster site to provide coverage in the immediate area of a disaster. An emergency repeater would also be beneficial, if something took the clubs two repeaters offline. Like a huge lightening strike that takes out repeater, controller and duplexer. It could happen.

We have all the components to make this happen. We have an extra 70 cm duplexer, an extra 70 cm antenna, and of course the backup DR1-X. We also have a 30 ft steel push up mast. So, in the coming months I will be pursuing this.

I finally had success adding an external repeater controller to the DR1-X. If the 2 meter repeater breaks down, we will be able to use the DR1-X and keep our bells and whistles. That is, once I buy an external Ctcss encoder/decoder. I am working on that.

Solar Panels

Over the summer I bought two 100 watt solar panels and a charge controller. These were intended for the Rastin Tower project at Foundation Park. Since that fell through, I decided to set these panels up at home.

First thing to do was to build a frame to support my solar panels. I wanted it portable so that I could easily move it around the yard if needed. Also, I want to be able to use the panels for Field Day 2020. I have two deep cycle batteries that I hooked up parallel to provide a bit more power at 12 volts to run an inverter.

I was hoping to be able to run my mesh network 24/7 and run my HF rig occasionally. I still might be able to do this, but Winter is not the time for it. Not enough Sun. So for now, I will use it to occasionally work HF just because I can.

Since my batteries are two or three years old, I was looking for replacement batteries. Boy, are batteries expensive! I did finally find reasonably priced batteries thanks to a post on one of the QRZ forms. Sam's club sells 6 volt 200 Amp Hour golf cart batteries for about $84.00 each. Not sure if the includes the core charge, but even if you add $10.00 or so, these batteries are a good deal. Buy two to put in series and you have twelve volts at 200 AH for around $200.00. I plan on buying two now, and maybe another two in the Spring.

That is it from my end. See you all at the January meeting. Until then, be Radio Active. 73.

Everything should be made as simple as possible, but not simpler
By Dan Romanchik, KB6NU

"Everything should be made as simple as possible, but not simpler" is a quote attributed to Albert Einstein https://quotationcelebration.wordpress.com/2017/01/07/everything-should-be-made-as-simple-as-possible-but-not-simpler-albert-einstein/comment-page-1/. Here's one way to apply this principle in amateur radio, specifically to code practice oscillators.

A week ago, my friend, Paul emailed me:

> "I am planning on teaching a two-hour introduction to Morse code to 14 girls ages 8 to 9 *[[Paul's granddaughter is a Girl Scout.]]*. I plan on having the girls build a code practice device. I need your help in selecting a low cost buzzer and battery holder. Please take a look around and see would you can find. I would like to limit the power to one or two AA batteries."

I replied that I'd be happy to help him with the demonstration, and offered the following advice:

> "A while back, I built the QRPGuys' K7QO Code Practice Oscillator https://qrpguys.com/k7qo-code-practice-oscillator. It uses a CR2032 coin battery.

> "Unfortunately, they don't sell it anymore, but the assembly manual is still online https://qrpguys.com/wp-content/uploads/2017/03/cpo_assy_012616.pdf. The assembly manual doesn't call out specific parts, but here are some Amazon SKUs:

> > B00J4BK0NS, Black 3V Electromagnetic Type Piezo Buzzer, 20 pcs/$6.58
> > B06XF3K4NP, Coin Cell Button Battery Holder, 30 pcs/$9
> > B008SNZUYC, 3 Pin PCB Mount Female 3.5mm Stereo Jack, 10 pcs/$5.40
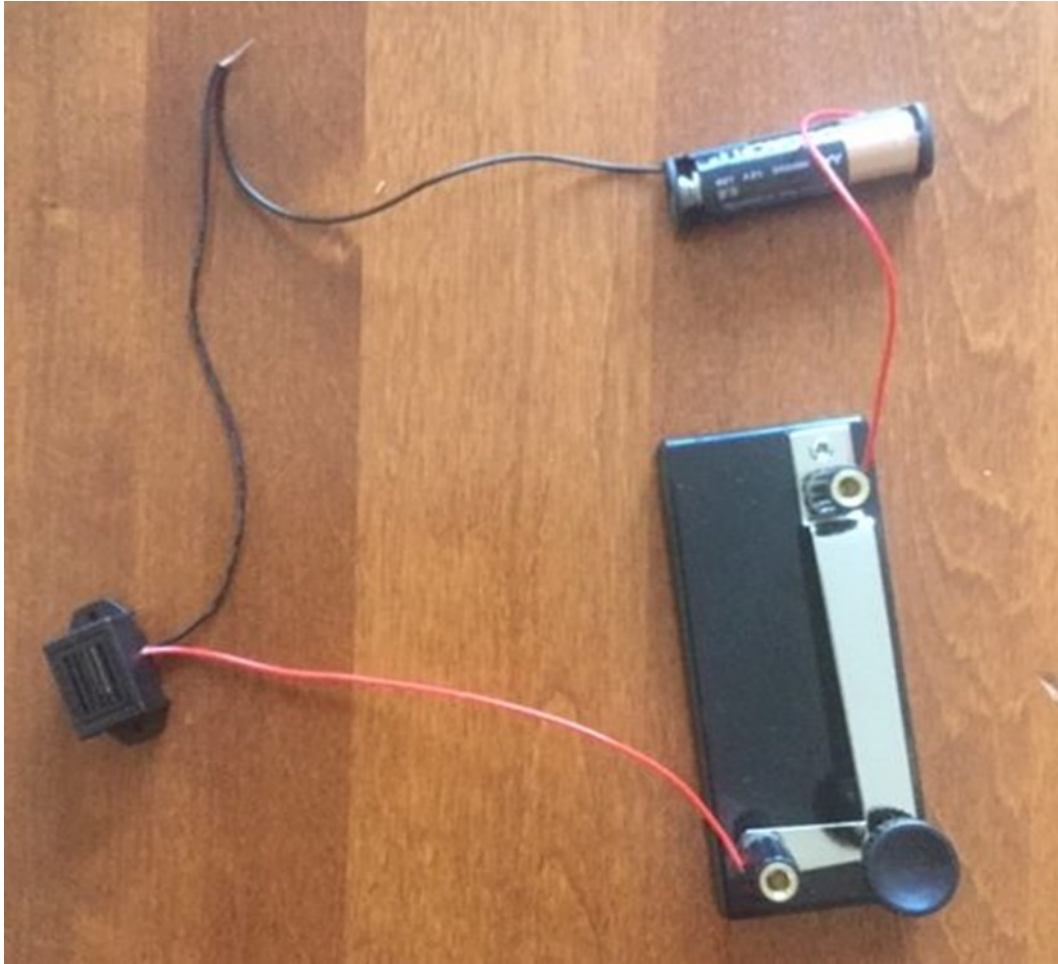> > B071RMD6FD, 1/8" 3.5mm Stereo Male Connector, 10 pcs/$7

> "Batteries are available at the dollar store for about 30 cents each. So, you could do the whole thing for less than $5 for sure, even with a printed circuit board, which I would suggest that we do. Heck, if you ask nicely, the QRPGuys might even give us the artwork, or even better, have some boards still in stock. Even if they have neither, you should be able to get the boards in plenty of time."

Later that day, Paul replied:

Thanks, Dan, for the information and making yourself available to help. I am just going to use a buzzer, key, and battery. The buzzer has a frequency of 400 Hz.

https://www.xump.com/science/Buzzer-Leads15V.cfm
https://www.xump.com/science/ContactKeySwitch.cfm
https://www.xump.com/science/Single-AA-Battery-Holder.cfm

And this morning, he sent me this photo, noting, "FYI. Also sounds great."

I think that this is as good an example of "Everything should be made as simple as possible, but not simpler" as there can be. I've volunteered to help Paul with his class. That will be fun, too.

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Dan Romanchik, KB6NU, is the author of the KB6NU amateur radio blog (KB6NU.Com), the "No Non-sense" amateur radio license study guides (KB6NU.Com/study-guides/), and often appears on the ICQPodcast (icqpodcast.com). When he's not trying to keep things as simple as possible, but not simpler, he likes to build stuff and operate CW on the HF bands.

January, 2020

Sun	Mon	Tue	Wed	Thu	Fri	Sat
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*
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**
19 *9:00 pm ARES Sunday Night Net on K8EEN* **KE8HGE, Michael**	**20**	**21**	**22** *5:00 pm Dinner at Southside Diner*	**23**	**24**	**25**
26 *9:00 pm ARES Sunday Night Net on K8EEN* **W8DOH, Greg**	**27**	**28**	**29** *5:00 pm Dinner at Southside Diner*	**30**	**31** *10:00 Breakfast at Club Meeting room*	**1** *February*
2 *9:00 pm ARES Sunday Night Net on K8EEN* **W8PEN, Don**	**3**	**4**	**5** *5:00 pm Dinner at Southside Diner*	**6**	**7** *10:00 am Breakfast at Club Meeting room*	**8** *10:00 am Breakfast at Barb's Diner Columbus Road*
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