



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>February Meeting Minutes</i>	3-4
<i>Radio Activity</i>	5-6-7
<i>March / April 2020 Calendar</i>	8

**President's View
Louie Wilkinson**



As of writing this, we have now completed 3 weeks of our technician training class, with one more training session on March 7th, and the open testing session on March 14th. In the three sessions we have completed we have managed to get through all the material, which leaves our last session for review, hands on with radios and components, as well as practice tests.

I have been very pleased with our new Saturday class format and think we will use this format again. Both for our next tech class and a possible general upgrade course in late summer or fall of this year. Michael, KE8HGE has been leading the class, having prepared all the slides and material for presentation and has done a wonderful job. In addition to myself, Greg, W8DOH has been in attendance to assist with answering questions our students have, as well as providing additional explanation and real world experience.

We have had two students in attendance, both of which we expect to pass the technician exam without any issues. One of our students has additionally been studying for the general test as well, and expects to pass that without issue. From what they have told me they are also reviewing the extra material, so wish them good luck with all three exams come the 14th. If you wish to support our students and exam team all are welcome to the testing session, which will start at 10am on the 14th at the Red Cross training center.

-73's
-Louie, NT8I

New Technician Class

We will finish the NEW Technician Class in March from
10:00 a.m. - 2:00 p.m. on the following date:

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

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.

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>

**The Mount Vernon Amateur
Radio Club Officers****President:**

Louie Wilkinson, NT8I

Vice President:

Greg Short, W8DOH

Secretary

Michael Jacobs, KE8HGE

Treasurer:

Terry Windsor, KI8N

Club Call Trustee:

Don Russell, W8PEN

Equipment Trustee:

Barry Butz, N8PPF

Directors:

Chairman: Frank Counts, KC8EVS

Greg Short, W8DOH

Michael Jacobs, KE8HGE

Don Russell, W8PEN

Barry Butz, N8PPF

Emery Bennett, W8TW

Bill Stroud, KD8WHQ

**Newsletter Editor &
Facebook Editor:**

Bill Bradley, KC8BB

February 6, 2020
Michael Jacobs, KE8HGE



Opening

The meeting was called to order by Club President Louie Wilkinson, NT8I at 7:00 PM with 22 members present.

The minutes of the previous meeting were accepted as presented in the MVARC Newsletter after the following issues were addressed:

An objection to the detail of the Treasurer's Report being made public: after discussion, future minutes will note that the report was given and that copies will be available for members to review upon request. The discussion included the "scraping" of our club website for information and the scamming email that members have already received using that information, and a concern that the information we make public about ourselves may continue to be used against us.

a missing entry on the calendar of events was clarified

Reports - Treasurer Terry Windsor KI8N, for January 2020

The report for the month of January, 2020, was read and accepted as presented without objection. He then presented an overview of the total income and a breakdown of our expenses from 2019. Copies of the monthly report and his 2019 overview are available from the Treasurer upon request.

Repeaters

Don Russell, W8PEN reports that both repeaters are working well.

MESH

Don Russell, W8PEN reports that it is doing great.

Club Station

Don Russell, W8PEN said that the club station has been upgraded so that CW and SSB are now possible. There is a UHF/VHF rig also upstairs. Additional upgrades that will allow various digital modes to be used (through Fldigi and Ham Radio Deluxe software) should be in place by Friday. A lock box for CW keys, microphones, etc. has been placed in the club station to keep that equipment safe from non-hams that might be in that area. Written instructions on use of the new equipment will be forthcoming. The possibility of having a Saturday a month set aside for those interested in using the club station to come by was mentioned.

ARES - Bill Stroud, KD8WHQ

Annual ARES Conference is April 4, 2020, at Marion Technical College. It starts at 8:30am and is an all-day event (with a break for lunch). Mark Maxwell, Knox County EMA has a county exercise schedule for March 17. The scenario for the exercise has not been announced. The Radio Station at the EOC needs documentation on the use of the station that is there; Bill Stroud, KD8WHQ will take care of that. There will be a presentation on ARES at the next meeting. He is hoping that Stan Broadway, N8BHL, Ohio Section Emergency Coordinator, will be making that presentation; otherwise Bill will be making it.

Business

NVIS Day: The Conversation Club in Centerburg is out as a location this year due to construction at that location. Because of weather concerns, the Red Cross Training Center was selected as our location. Don Russell W8PEN agreed to coordinate the event. One goal is to see about getting a loop antenna set up on the site for use during the event.

Tech Class Study Sessions: Starting this Saturday, from 10am to 2pm; and for the next 3 weeks. The 4th week following (March 14), will be an open testing session. Members interested in helping with the study sessions are encouraged to stop by.

Tom Evans, KD8HSA suggested that we maintain the Liability Insurance, given all the events that we do at other locations. The club's intent to maintain this insurance was reaffirmed.

Operating a Severe Weather Net when appropriate was discussed, given that severe weather season will be starting in the next month or so. The website membership page will contain the necessary information to properly tune the repeater for this, once password security for that the page has been finished.

Larry Howell, AC8YE said that the OSU Meteorology Club is hosting their annual Severe Weather Symposium this Friday (Feb 21). Arrive at 8:30am to register, (pre-registration available on their club website). The event runs from 9am to 5pm (with a lunch break).

Meeting Adjourned

A motion to adjourn was made by Bill Stroud, KD8WHQ, and seconded by Emory Bennett, W8TW. Without objection, the meeting was adjourned at 7:39 PM.

Respectfully submitted,

Don Russell, W8PEN



February was an interesting month at my QTH. There are a number of projects being worked on that may prove to be good information for club members. Lets get started.

Club Station

Last month I informed readers that I was working on getting the club station set up so it could start being used by members who wished to operate a bit on meeting nights, or any other night. Those that may benefit the most from this would be members that have little or no HF equipment, or cannot put up antennas at their location.

The station is more or less complete now, using a Kenwood TS-570D. It is capable of SSB, CW, and Digital modes. I have made at least one contact on each mode just to make sure everything is working. The digital software being used is Fldigi for the popular PSK31 and all the modes that this software supports and WSJT-X for those wishing to use modes like FT-8 and FT-4.

I installed free logging software on one of the clubs laptops, although this may change for technical reasons. The logging software is connected to the radio so that it tracks frequency and mode. To keep it simple, there is also a paper log on the table. Contacts from the paper log can be transcribed to the computer at a later date.

Members can also operate 2 meter or 70 cm FM using the Yaesu FD-100 located on the same table as the Kenwood TS-570D. I have the microphones for the two radios in a lockable box. Anybody wish to operate can get the code to open the box from me.

So far, the one thing lacking is documentation on how to operate the station. Even though operating is actually pretty simple, there are a few things that need to be done, especially when changing modes from CW or SSB to Digital.

I am considering making this station a remote station so that members can access the HF equipment via the internet. With permission, members would be able to operate the station from a computer at home. The station could be set up as receive only, or be able to transmit only on frequencies allowed by the member signed in (Tech, General, Extra).

My main concern about going remote is that the radio would need to be on all the time and connected to the antenna. Not sure I want to do that. My TS-590S can be turned off and on remotely. I will have to see if the TS-570D has the same option.

Radio Activity continues on page 6

My Solar Power Project

The last time my solar power project was mentioned, it was located out by my shed, which is about 120 feet from the shack. The only way this was working was by using a 12 volt DC to 117 volt AC power inverter. Then, using a 150 foot extension cord from the power inverter to the station, where I used stations AC power supply.

While this did work effectively, the drain on the batteries when running 100 watts from the radio was a bit too much in my opinion. Power inverters are supposed to be about 95 percent efficient these days. I was using an older power inverter which was drawing about 30 amps from the batteries during transmit.

I decided to move the solar panels closer to the station by mounting them on my back deck railing. This cut my power cable run to a more reasonable twenty feet. Even with large power cables, the voltage drop was almost a volt, making the radio see about 11.5 volts when transmitting. I was therefore limited to 50 watts of power. To solve this, I bought an MFJ-4416C Battery Booster to boost the voltage up to 13.8 volts at the radio. This was an expensive fix, but worked like a charm and solved all my problems. I am satisfied with powering my station completely off grid.

I am using two 100 watt solar panels, two six volt golf cart batteries (200 amp hour), and the battery booster. I believe I can run my station continuously for around twenty four hours. This Spring, I am hoping to add two more batteries for a total of 400 amp hours, and perhaps two more 100 watt solar panels.

The Before Spring Antenna Project

Mid summer last year, I took down my 160 meter Windom and installed some dipole antennas for 80 through 10 meters. I miss my Windom! After entering a few contests, I find that I no longer have the big signal I once had on 80 and 40 meters.

So, with a little break in the Winter weather in mid February, I decided to put a new windom antenna up. I had to cut up my 160 meter windom to get it out of the trees when taking it down. This meant I had to build a new windom. So I went on the internet looking for possibilities.

At first, I thought I would be happy with an 80 meter windom, which would be half the size of the 160 meter one. So, I put this 80 meter windom together and got it in the air. What I found was that this windom on 80 meters ran an SWR of 3:1 across the band. On all the other bands the SWR was 2:1 or less. This is good, but I wanted the SWR to be 2:1 or less on 80 meters so that I would not have to buy a KW antenna tuner to run my amplifier.

I reasoned that if the 80 meter windom had low SWR on 40 meters, then a 160 meter windom would have low SWR on 80 meters. Sounds like a plan

Rather than building another windom antenna from scratch, I decided to simply add enough wire to the 80 meter windom to make it work on 160 meters. This worked out very nicely and I now have a 160 meter windom. This antenna has an SWR of 3:1 on the 160 meter band. My amplifier will not work on 160 meters, so this is okay. The TS-590S's internal antenna tuner will easily handle this mismatch. The SWR on 80 meters has a high of 3:1, but on the frequency I operate the most, the SWR is 1.5:1, which works out perfect for my amplifier, which has a 2:1 SWR limit. SWR on 20-10 meters is mostly under 2:1, which is very nice indeed.

A windom goes together like a dipole antenna, except that it is not fed in the center. Also, a windom antenna uses a 4:1 balun to get a close match to the transmitter.

The formula I used for this windom antenna was as follows:

Total Length of antenna: 468 divided by the lowest frequency in Megahertz.

Long side length: .622 times the total length of the antennas

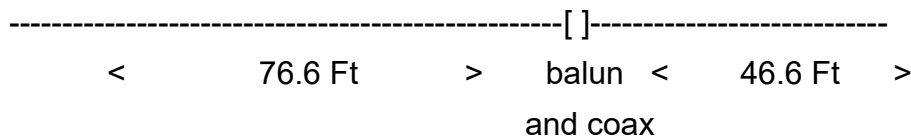
Short side length: .378 times the total length of the antennas

Example: 80 meter windom (3.8 MHz):

Total Length of antenna: $468 / 3.8 = 123.2$ feet

Long side length: $123.2 \times .622 = 76.6$ feet

Short side length: $123.2 \times .378 = 46.6$ feet



To keep RF from running down the outside of the coax, use a choke consisting of about 8 turns of coax 10 inches in diameter. This should be at the balun feed point and can be whatever coax being used in the feed line, such as RG-8X.

This antenna performs well on 80, 40, 20, 15, and 10 meters with low enough SWR that a radios internal antenna tuner will find an easy match.

That is it for this month. Hope you have been Radio-Active this Winter.

March, 2020

<i>Sun</i>	<i>Mon</i>	<i>Tue</i>	<i>Wed</i>	<i>Thu</i>	<i>Fri</i>	<i>Sat</i>
8 9:00 pm ARES Sunday Night Net on K8EEN NT8I, Louie	9 7:00 pm MVARC Monthly Meeting -Red Cross Annex	10	11 5:00 pm Dinner at Southside Diner	12	13 10:00 am Breakfast at Club Meeting room	14 10:00 am Test session for all class Licenses at Club Meeting room
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 Breakfast at Club Meeting room	21
22 9:00 pm ARES Sunday Night Net on K8EEN W8DOH, Greg	23	24	25 5:00 pm Dinner at Southside Diner	26	27 10:00 Breakfast at Club Meeting room	28
29 9:00 pm ARES Sunday Night Net on K8EEN NT8I, Louie	30	31	1 April 5:00 pm Dinner at Southside Diner	2	3 10:00 am 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
12 9:00 pm ARES Sunday Night Net on K8EEN NT8I, Louie	13 7:00 pm 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