December, 2017

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

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:

President's View

Merry Christmas, I hope everyone had a great Thanksgiving; plenty of food, football and family. This was the second year that we traveled on Thanksgiving instead of having here on the farm. The jury is still out on if that is easier for us as Grammy still does a lot of the cooking. Just not her house or kitchen and I have to carry all this stuff to and fro.

Looking back over the year, I'd say that we had a good year and I'm looking forward to this coming year. Winter field day is coming the end of January and I look forward to participating in that as a club. Hope to see you there. We have also lost a couple of friends this year and our prayers go out to those families that are going through this holiday season without them.

Hope to see you on Sunday at the Christmas Dinner / meeting.

73,

Frank, KC8EVS

A visit to DX Engineering

by Barry Butz, N8PPF

While on the way to western New York I took a small detour to Tallmadge, Ohio on the east side of Akron to visit the DX Engineering store. It is located in it's own area in a rear corner of the huge Summit Racing store.

Approaching the entrance, the sparkling goodies will draw you near. Sales people are on hand to help you. Small accessories are displayed in glass cases.

Inside there are many, many radios set up and ready to try out. One ham was experimenting with a new Yaesu while his XYL sat happily knitting in another chair.

It was an enjoyable stop, even though I only bought some rope that I had ordered online to pick up at the service counter.

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Minutes of MVARC Meeting 11-14-17

Meeting was opened at 7:00 PM by president Frank Counts, KC8EVS.

Minutes of the October meeting were approved.

Due to the absence of the Secretary/Treasurer, no treasurer's report was given. A couple of checks were received and need to be deposited by Don, W8PEN.

Barry N8PPF reported that the K8EEN 146.79 repeater is under repair with a faulty transmitter section. The 444.60 repeater has been removed from service, reprogrammed for VHF and moved to the water tower site while repairs continue on the primary transmitter.

Don, W8PEN reported that the mesh network is working as it has been. He has made improvements that simplify the system computers.

No ARES news was reported. A meeting for ARES members is expected in January.

Emery W8TW has arranged to have the December annual club meeting/dinner at Fiesta Mexicana Express, 997 Coshocton Ave. on December 10 at 6:00 p.m. He needs to have an attendance count by December 1st. A reminder email will be sent. this week.

Barry, N8PPF reported for the nominating committee. Two additional attendees volunteered for posts. Nominees will be:

One year terms:

President -	Frank Counts KC8EVS
Vice President -	Scott Fields K8AEC
Secretary/Treasurer -	Terry Windsor KE8ANS

Two year terms:

Director -	Emery Bennett W8TW
Director -	Greg Short W8DOH
Director -	Bill Stroud KD8WHQ
Director -	Scott Magers KE8ANG
Director -	Don Russell W8PEN

Bill Bradley, KC8BB has one year remaining on his director's term.

Other items discussed:

Frank announced the death of Don Blizzard W8UMH, a long-time member and dedicated ham since his teen years. Don was a club director and valued friend.

Frank showed a draft copy of the new club handbook. He will issue it to the web site soon.

He reminded us about Winter Field Day, a non-ARRL event on January 27-28. We plan to operate indoors at the club station in the Red Cross building. In connection with that, we need to re-erect the R5 antenna, probably in the next couple weeks.

The results of the June Field Day have been published. In the 4AC class, MVARC achieved a First Place finish!

For our January meeting there will be a special table set up. Please bring anything you'd like to Show & Tell, items to sell, trade, or give away.

Meeting adjourned at 7:31 PM.

Submitted by Barry Butz N8PPF, substitute acting secretary

By Don Russell, W8PEN

Quite a bit of happenings during the month of November, so let's get right to it.

Club Station

The antennas on the clubs tower have been rearranged to provide better signals on 20, 15, and 10 meters. This has been in the planning stages for a few months but finally came to a head during the November meeting. It was decided to get the job done before Winter weather really hit us.

Basically, the only thing new is that the Cushcraft R-5 antenna is back on top of the tower, where it should be. While there has always been plans to do this, the group decided to wait until after Field Day so that the antenna could be used during that event. As it turned out, we did not use the R-5 antenna during Field Day after all.

The upgrade was a major project, consisting of taking down two of our mesh node antennas, which were at the very top on a mast. Since the mast holding the mesh nodes was a light duty mast, we also had to install a heavier mast. Then we side mounted one of the mesh node antennas and put the other one directly under the R-5 antenna.

Due to some mechanical issues, this project took two days. Luckily we had two nice days to get the work done.

After installing the R-5, Lori Randal, KE8GFZ was able to use her new General Class privileges and contacted a ham in Kansas, about 40 miles from where she grew up. Ham Radio is indeed a small world.

The mesh antennas appeared to show no ill effect from being 10 foot lower than they have been. So, all in all, it was a successful project. The club is ready for Winter Field Day, if members so desire to participate in this event.

Thanks to all those involved in this project. Steve Salyers, KD8TNT; Lori Randal, KE8GFZ; Michael Jacobs, KE8HGE; Frank Counts, KC8EVS, and myself Don Russell, W8PEN.

Club Repeater

Unfortunately, the club repeater still has some problems. Luckily, the club had enough foresight to buy a back-up repeater, so we continue to have a repeater on 19/79. If we do not get this repeater fixed soon, I will wire the controller into the backup repeater so that we get our "bells and whistles" back.

It is looking like we will have to find a repair service to fix the repeater transmitter. If this is the case, then we need to decide if we want to repair the repeater for a price, or look at buying another one.

Radio Activity, continues on page 5

EME and Meteor Scatter

As readers know, I have been working on my EME and meteor scatter project for a long time. I am finding out that 6 meter meteor scatter in much, much easier than 2 meter scatter. Then EME on 2 meters is a bit above meteor scatter in difficulty. Several times I have thought about just giving up on these two endeavors and just have fun doing 6 meter meteor scatter. It would be easy to give up. Just not something I am accustomed to doing, so I push on.

I had thought that I had gathered enough equipment to at least work a few stations on EME and many stations on 2 meter meteor scatter. This includes buying a 2 meter transverter to hook to my Kenwood TS-590S, a 160 watt 2 meter amplifier, and a 12 element Cushcraft beam. I have found that this is just not going to cut it for 2 meter weak signal work! Recently I have added two M2 5WL antennas to the mix. These 2 meter antennas are 34 foot long and have 17 elements. You are supposed to be able to hear and work a limited number of EME stations with just one of these antennas. As a bonus, one antenna should do really well for meteor scatter. Right now, I have one of these antennas on the tower. I plan on putting the other antenna up this coming Spring but the one antenna should help me finally get my feet wet and hopefully work a few of the larger EME stations. I bought these antennas used, but they still set me back $500. I have since added an Advanced Receiver Research preamplifier for $100. For EME, I will have to have a bigger amplifier, so I am looking at another $500 in the Spring. Seems like I sprung a money leak and can not get it plugged!

End results so far are nil. I have not decoded any stations off the moon. One of the problems is that I have no elevation control of the antenna. This means that the only times I can hear or work EME stations are at moon rise and moon set. Moon rise is a problem for me. I have a hill blocking the moon until it gets to about 5 degrees elevation. This gives me less time to try and I think I loose a little ground gain that one is supposed to have when working moon rise. Moon set is much better for me as I have a clear path almost down to zero elevation, but there are not as many stations on during moon set and they generally are smaller stations themselves.

I am considering a climb up the tower to fix the antenna at five to 10 degrees elevation. That way the main lobe of my antenna pattern would be above that hill and also the trees.

I am hopeful though. Yesterday I saw a few traces of EME stations on my computer, but the program did not decode them. I am not sure if they were off the moon or some of the locals trying to do EME. One thing I find is that I can certainly receive local EME stations out to 200 – 300 miles. With that in mind, my receiver should be sensitive enough that I should be able to hear some EME, one would think. I am not expecting to hear a lot of stations with my small EME station, but I should hear a few.

Meteor scatter has been a little better. I am now seeing meteor scatter stations on a regular basis, although I have only made one true meteor scatter contact on 2 meters. Meteor scatter on 2 meters take place somewhere between 600 -900 miles optimum, and out to about 1400 miles with a little luck. Seems like there are not a lot of stations on the air for the optimum distance with my station. I do believe that I will start seeing stations within my range now that I have solved some receiver issues.

Radio Activity, continues on page 6

I hope everyone has learned a thing or two from my column. I try to make it interesting and motivate club members to be "radio active" in their own way. Everyone has their little plot of land in ham radio world and it is up to them to make use of it (Like building great big antennas!).

Wrap Up

That wraps this column up this column for December and the year of 2017. It has been a good year for our club. Our ranks have increased substantially with new hams both from our class and those that studied on their own. Ham radio is such a great hobby.

I hope everyone has learned a thing or two from my column. I try to make it interesting and motivate club members to be "radio active" in their own way. Everyone has their little plot of land in the ham radio world and it is up to them to make use of it (Like building great big antennas!).

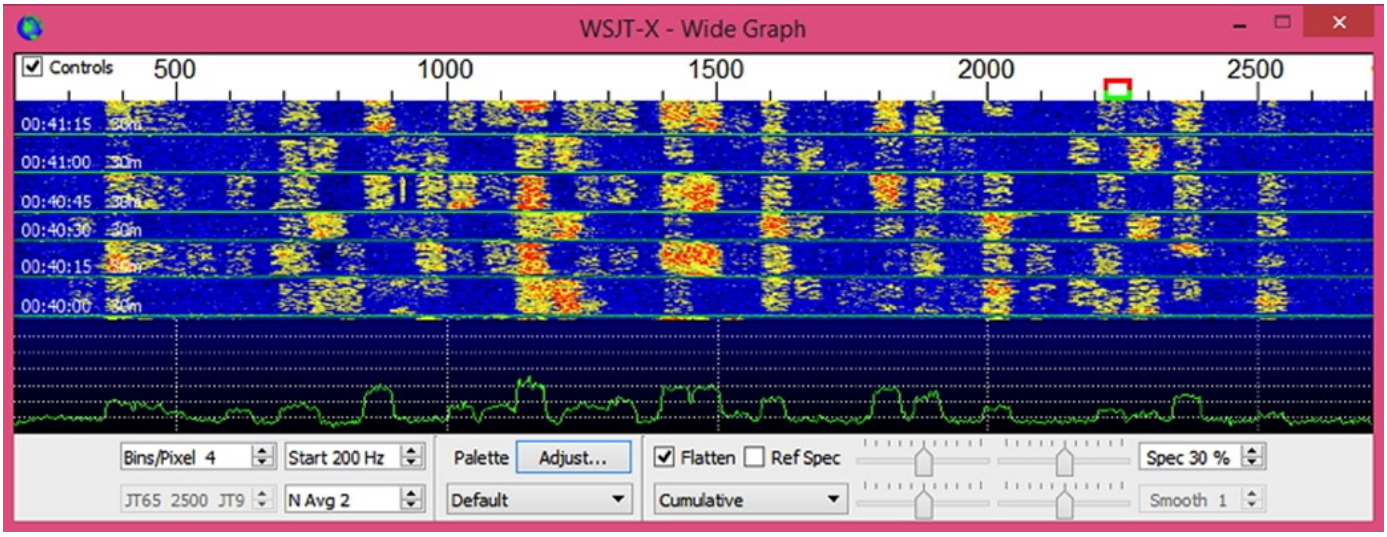
Hope to see everyone at the Christmas dinner Sunday, December 10th. Until then, 73

Lori, KE8GFZ using her new General Class license at the club station, assisted by Don, W8PEN

FT-8: I'm not really feeling the magic

By Dan Romanchik, KB6NU

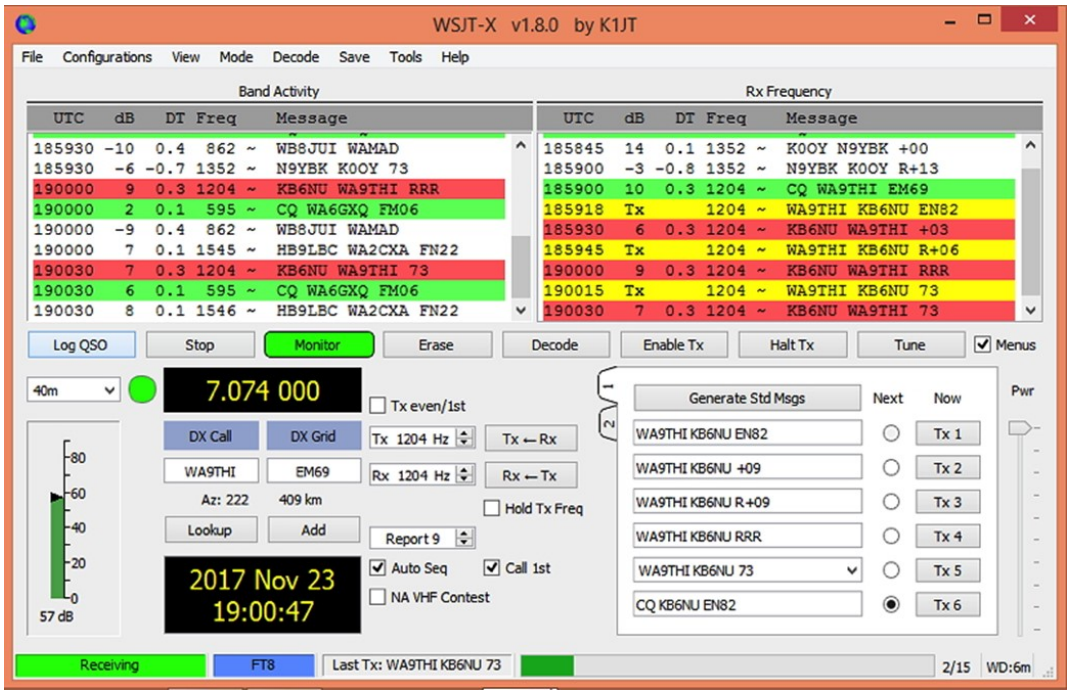
Partly out of curiosity and partly because Jeff, KE9V, shamed me into it, I setup my Signalink interface, downloaded WSJT-X from https://physics.princeton.edu/pulsar/k1jt/wsjtx.html, and started operating FT-8, the latest "shiny object" (as the ARRL dubbed it) from the K1JT team. As you probably know, this mode has really caught on with the digital crowd, and the waterfall is chock full of FT-8 signals. Part of the reason for this is that it has some of the characteristics of JT-65, but is not as excruciatingly slow.



A waterfall display generated by WSJT-X at 7:30 pm, 11/23/17

Over the past couple of days, I've made 32 QSOs, including a couple of DX contacts. It's been fun to try something new, but to be honest, I'm not really feeling the magic.

Part of it is that I don't feel like I'm really doing anything. I downloaded the software, plugged in my digital interface, fooled around with the settings a bit, and then, the computer started making contacts. I have to click a few on-screen controls to make contacts, but even that's a step that could be easily programmed in by the WSJT-X developers. (In fact, I wonder why they haven't done that already!)



WSJT-X screenshot. The sequence of transmissions in the Rx Frequency window comprises a contact.

Take a look at the screenshot above to see how a typical contact happens. When a CQ appears in the "Band Activity" window, you double click on it. When you do this, the software begins listening for signals on that frequency. In this case, I double-clicked on the CQ by WA9THI. When I double-clicked on the CQ, the program began decoding signals on that frequency and display the transmissions in the "Rx Frequency" window.

Then, I clicked on "Enable TX" and the program began the contact sequence, sending "WA9THI KB6NU EN82." EN82 is my grid designator. This is shown as the first yellow line in the Rx Frequency window. The transmissions that I sent are highlighted in yellow. The transmissions sent by WA9THI are highlighted in red.

The sequence of transmissions shown there comprise a complete contact, and that whole process takes less than two minutes. And, once WA9THI received my first transmission, the sequence is all automatic. You just sit there and watch the two computers talk to one another.

While I can certainly appreciate the thought and the work that went into the design of the protocol and programming to implement it, sitting and watching the computers talk to one another just doesn't excite me. On the other hand, if you're one of those guys who wants to make contacts, but doesn't really want to talk to anyone, than this is the mode for you!

FT8, continues on page 8

Here are a few more notes about FT-8 operation:

Not surprisingly, synchronizing your computer with the other stations computer is very important. To do that, you need to get your computer to use the network time protocol (NTP). I failed to do this when I first installed WSJT-X, and while my waterfall was full of FT-8 signals, WSJT-X just wouldn't decode them.

I got my PC laptop to talk ntp by installing Meinberg NTP software (http://www.ntp.org/ntpfaq/NTP-s-def.htm). Once I did that, WSJT-X magically started decoding transmissions.

Most of the cool guys seem to be using Meinberg NTP, but there are other options. One of the guys in our club is using a program called Dimension 4, for example.

Apparently, you don't have to limit your power output as you would with PSK-31. At first, I set my output power to 10 W. I had a bit of success at 10 W, but I expected more. When I asked on Twitter how much power other guys were using, most of them said that they were using more than that.

For the last couple of sessions, I've been setting my output power to 25 W, and I've been having more success. I've now worked several Europeans on 30m.

Even at 25 W, my signal reports are more often than not, not as good as the signal reports I'm handing out. I haven't figured this one out yet. This doesn't happen to me when I'm operating CW, so I don't think it's my antenna.

When I'm operating, I write down the calls of stations I've contacted. The reason for this is that while WSJT-X does have a logging function, it doesn't have a log window, so unless you have a great memory, you could end up working guys two or three times a session. That's probably not a big deal since contacts are so quick, but I'd rather avoid doing that if I can.

WSJT-X works "split." While most contacts take place on the same frequency, a station can call you anywhere in the passband of your receiver and WSJT-X will decoded the signal and begin a contact. This threw me the first time or two that this happened, and I tried to change my transmit frequency to match the other station's. In doing so, I messed up the sequence. I now just let the contact proceed normally, and it works out great.

When I work the other digital modes, I set my IC-746PRO to the USB-D mode. In this mode, the receive passband is narrower than for working phone. When operating FT-8, however, you don't want to limit that passband. Signals will appear across the entire 2.6 kHz of the USB signal, and if you narrow the passband, you won't be able to work those stations.

WSJT-X checks the validity of call signs. This afternoon, there was a guy who had typed in his call as "WAMAD" and was calling CQ. WSJT-X wouldn't let me answer that CQ.

Operating this mode opens up the possibility of working more stations whose callsigns spell words and adding those QSL cards to my collection. I have, for example, already worked K1GUY, N4HER, and N5SLY. I'm guessing that these guys don't operate CW.

All told, I've found this to be an interesting foray into a new digital mode. While I'm not feeling the magic that some others seem to be feeling when operating FT-8, it certainly will be a change of pace to operate this mode from time to time. Give it a shot and tell me what you think.

Dan, KB6NU, is the author of the "No Nonsense" amateur radio license study guides and blogs about amateur radio at KB6NU.Com. When he's not working FT-8, he teaches ham radio classes and operates CW on the HF bands. You can email him at cwgeek@kb6nu.com.

December, 2017

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
3 9:00 pm ARES Sunday Night Net on K8EEN **KC8BB -Bill**	**4**	**5**	**6** 5:00 pm Dinner at Southside Diner	**7**	**8** 10:00 am Breakfast at Hardee's	**9** 9:00 am Breakfast at Allison's Finer Diner **10 Meter Contest Dec. 9-10**
10 Christmas Dinner & Meeting **9:00 pm** **ARES Sunday Night Net on K8EEN** **W8PEN – Don**	**6:00 p.m. Fiesta Mexicana Express-997 Coshocton Road**	**12**	**13** 5:00 pm Dinner at Southside Diner	**14**	**15** 10:00 am Breakfast at Hardee's	**16**
17 9:00 pm ARES Sunday Night Net on K8EEN **KE8ANS – Terry**	**18**	**19**	**20** 5:00 pm Dinner at Southside Diner	**21**	**22** 10:00 am Breakfast at Hardee's	**23**
24 9:00 pm ARES Sunday Night Net on K8EEN **KD8HSA —Tom**	**25**	**26**	**27** 5:00 pm Dinner at Southside Diner	**28**	**29** 10:00 am Breakfast at Hardee's	**30**
31 9:00 pm ARES Sunday Night Net on K8EEN **W8PEN – Don**	**1 January 2018**	**2**	**3** 5:00 pm Dinner at Southside Diner	**4**	**5** 10:00 am Breakfast at Hardee's	**6**
7 9:00 pm ARES Sunday Night Net on K8EEN **KC8BB —Bill**	**8** **7:00 p.m. MVARC Monthly Meeting -Red Cross Annex**	**9**	**10** 5:00 pm Dinner at Southside Diner	**11**	**12** 10:00 am Breakfast at Hardee's	**13** 9:00 am Breakfast at Allison's Finer Diner