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

August, 2017

Meetings are held on 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, 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:

Presidents View

By the time you read this we will be participating in the Dan Emmitt Special Event. If you are operating from home or coming in and operating the club station, thanks. On the flip side, if you make a contact with one of the operators, great and thanks for the contact. Working special event stations can be a lot of fun and there are a bunch out there to work.

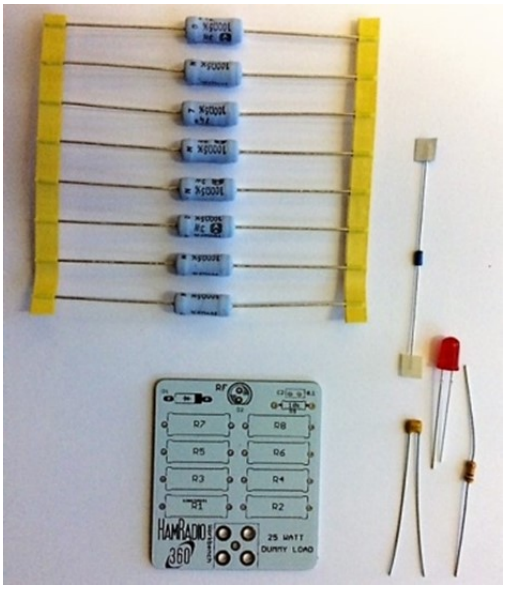
To find a listing check the ARRL web page www.arrl.org/special-event-stations

This has been a very busy summer for me and has flown by. I need to work on my station and want to put up a couple of antennas prior to it getting cold outside. I have plenty of trees to hang wire from, so what will it be? I use to have a loop up for 40 meters and it worked very well so I think I will try another loop, I have the wire cut just need to put it in the air. In addition to the loop, I want to make a couple of fan dipoles. I will keep you posted as to what bands I choose for these.

Something that I always wanted to do but have not taken the time to do is to put together some of the kits out there that I keep reading about. There's something about soldering together a kit or something from scratch that appeals to me. So I'm going to start with some small projects to make sure that it is my cup of tea, then move on to some more complicated projects. I will keep you posted as to what I'm up to. The first is a dummy load. It will be a small one for 25 watts or less. It has a little LED that light up to let you know that it is working; besides it will give me positive feedback.

Presidents View continues on page 2

Presidents View Continued from, page 1



What I bought was the circuit board and I had to come up with the components: 1 ceramic capacitor 0.1_UF, 1 diode, 1 blinky (LED), 1 - 10k ohm resistor ¼ watt, and 8- 100 ohm 3 watt resistors. I'm missing one part at this time and it is a BNC connector at the bottom of the board. Hopefully I will have one of those soon.

Keep September 9th marked on your calendar! As this is the Ohio State Parks on the Air (OSPOTA) special event. We will be operating from the Gorge Overlook at Mohican State Park again this year. Make sure to come to the August meeting (14th) as I am sure Tom, KD8HSA will have more details concerning the event.

As always, I look forward to seeing you at the meeting, Hardee's or maybe contact via one of the repeaters.

Frank KC8EVS

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Editor's Note:

I found an interesting website that hosts many videos. They have a great selection of solar eclipse videos including this great flyby from West to East which I have shown the link below:

https://vimeo.com/73595112

I have a picture on page 7 of the 2017 Eclipse path.

The Mount Vernon Amateur Radio Club Officers

President:
Frank Counts, KC8EVS
fcounts@gmail.com
Phone: 740-358-9131

Vice President:
Terry Windsor, KE8ANS
ke8ans@gmail.com
740-507-6329

Secretary/Treasurer:
Jim Williams, N8IBR
n8ibr51@centurylink.net
Phone: 740-967-0627

Call & Repeater Trustee:
Don Russell, W8PEN
w8pen@arrl.net
Phone: 740-397-0249

Equipment Trustee:
Barry Butz, N8PPF
n8ppf@mvarc.net
Phone: 740-397-7540

Directors:

Barry Butz, N8PPF
n8ppf@mvarc.net
Phone: 740-397-7540

Don Blizzard, W8UMH
w8umh@yahoo.com
Phone: 740-392-9753

Scott Fields, K8AEC
ballixxe@yahoo.com
Phone: 740-504-8204

Bill Bradley, KC8BB
wlljabradley@yahoo.com
Phone: 740-397-0267

Newsletter Editor & Facebook Editor:
Bill Bradley, KC8BB
wljabradley@yahoo.com
Phone: 740-397-0267
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NOTICE! NOTICE! NOTICE!

Due to last minute changes, the August 14th MVARC meeting at the EOC mentioned in the minutes below will be held at the Red Cross Annex as usual, not the EOC.

JULY 10TH, 2017 MEETING MINUTES FOR THE MVARC

16 members, 1 guest present.
Meeting called to order by President KC8EVS at 2305 UTC
W8PEN made a motion, W8TW 2nd, to accept minutes as published in the July newsletter. Approved.
W8PEN made a motion, KE8GFK 2nd, to accept Treasurer's report as read. Approved.

SYSTEMS REPORTS

W8PEN reported both the 146.790 and 444.600 repeaters are up and running as expected. He stated there are still adjustments he would like to make to the 444.600 repeater. But, it is covering the area intended.
W8PEN then reported that the MESH network was at a standstill right now due to other club and personal projects. He also advised a few of the members that their nodes are off-line for some reason or another. He asked those members to check their equipment to make sure everything is as should be.

ARES REPORT

KD8PSM and N8SY gave detailed report on the DMR system which is heavily relied upon by many ARES groups. They also reminded those interested in ARES activities, that the need to complete the various FEMA courses.
KD8PSM then went into a detailed report on the ARES/FEMA tabletop planning used to co-ordinate operations this year.

He also mentioned that county wide emergency siren test which are held the 1st and 3rd Fridays of the month at 12 noon. He ask that those members available, please take the time to listen for the siren in their area and report if there are any problems with them.
It was reported that Mark Maxwell had donated personal trauma kits for the groups use. Thank You note to be sent.
KD8PSM then announced that the planned open house at the EOC would be held on August 14th, 2017. Therefore the clubs next meeting will be held at the EOC. A great opportunity to see the new ARES set up at the EOC. All members are encouraged to attend.

GENERAL BUSINESS

W8PEN made the motion, and AC8PT 2nd, we send a Thank You note and a check for $150.00 to The Apple Property Owners Association for use of the grounds and their banquet tent for Field Day. Approved.
N8PPF made the motion, KE8ANS 2nd, motion to pay KC8BB to cover main course, breakfast, and supplies cost for field day meals. Approved.
KD8GFK made the motion, KE8ANS 2nd, motion to pay the $58.00 fee for the “Overlook” area in Mohican State Park. Approved.
N8IBR stated he hoped to have the operating schedule for the Daniel Emmett Days special event station written up for August 10th, 11th, and 12th passed out to stations involved by the end of July.
W8PEN reminded members that we will be putting together another General Class license course beginning in September.
W8PEN stated he had not gotten together with KD8EVR yet to acquire the two lap top computers discussed in past meetings.
KE8ANS made a motion, AC8PT 2nd, to adjourn the meeting. Approved.
Respectfully submitted,
N8IBR, Secretary MVARC

By Don Russell, W8PEN

July was a really busy month for me. You know. Being retired and all that!

Along with working on the Mesh Project and slowly setting up my EME station, I have managed to fit in plenty of fishing. Besides my annual fishing trip to New York, I have been visiting Alum Creek at least once a week. It has been an enjoyable summer thus far.

EME or Meteor Scatter?

Over the last few years I have been gathering up equipment that hopefully will fill a life long dream for me: Bouncing signals off the moon (called Moonbounce or EME for Earth-Moon-Earth). Currently I have an eleven element beam donated by Dave Phillips W8DEP, a 160 watt 2 meter amplifier bought at a bargain price from Jim Williams N8IBR, and a Down East 2 meter transverter bought off of E-Bay that can be hooked to my Kenwood TS -590S to provide a nice 2 meter all mode station.

The decision to use a transverter instead of a dedicated 2 meter all mode transceiver was something I did a lot of research on. According to all the stuff that I have read on the internet, most dedicated 2 meter all mode rigs and their HF to UHF counterparts all have one thing in common: Lack of a good front end for receiving really weak signals on VHF. Signal to noise ratio is the key factor here. Yes, most rigs have plenty of sensitivity. However, without a low signal to noise ratio, those weak signals are covered up by noise. Most dedicated 2 meter transceivers have an SN of around 3. For EME, this number needs to be 1 or under. The transverter has an SN of 1, so I should be okay there. In hind sight, I find that the 160 watt amplifier has a built in preamp with an SN of around 1. I may have gotten away with a dedicated 2 meter transceiver after all.

The real “iffy” part of my system will be the antenna. I am not sure that a single 11 element short boom beam will have enough gain to allow a successful EME contact. That is if you call 11 elements on a 12 foot boom short! One more similar antenna fed in phase with this one would be much better. I am thinking of building me a pair of quaigi 2 meter antennas. They can be built rather cheaply and may better serve my purposes. But for now, I will stick with the single yagi antenna and give it a try. Pictures of my yagi are shown below.

Radio Activity, continues on page 5

Radio Activity, continued from page 4

By Don Russell, W8PEN

I am planning on putting the station out on the deck with the antenna to have as short of a feed line as possible. I will also be able to manually aim the antenna wherever I need to. The antenna is mounted on a camera tripod. The tripod is just sturdy enough for one antenna. If I go with two antennas, I will have to figure something else out. Yes, my wife is giving me strange looks these days. And my neighbor keeps looking my way with an odd look on his face. Memories of the Twilight Zone.

I will be running the amplifier at about 100 watts. This should be enough power to do the trick, but I can add a fan and maybe use the full 160 watts if need be.

The mode I will be running will be JT65 using WSJT software by K1JT. This is a popular program for EME operators. This is a digital mode and I still have to figure it out how to use, but I am working on it.

My strategy for now will be trying to hear some EME activity. If I can hear some signals, then I will work on the transmit end. One thing at a time. There is an EME contest coming up this month. I plan on listening for the stronger stations. I will be ready to transmit if the opportunity arises.

While I am not sure my station is capable of EME, I am pretty sure that it will be an effective meteor scatter station. Since I have to familiarize myself with the procedure for making contacts with the WSJT program, I might as well give meteor scatter a try.

There is a meteor shower scheduled for around the 10th of August. I may be "Radio Active" during this event. I have been listening but have not decoded any signals yet. The internet reflector for meteor scatter says the sky has be quite though.

Once I get the hang of meteor scatter contacts, I will be better prepared for trying EME.

Club members will be invited. Perhaps we can have an EME party on the day I try to make an EME QSO. It would be fun for sure.

Mesh Network Update

Our Mesh Network has been running for over a year now. Except for a few hiccups, the system has worked well.

I have finally recovered from a power failure that took out the Email Server and the PBX system. I have confidence that it will not happen again. Even if it does, I am better prepared to fix the problem quickly.

On the Email Server, I found that all I needed to do was restore the system from a previous point, much like you would with Windows Restore feature.

On the PBX side, I have moved the system from the Raspberry Pi to a true Laptop computer. This has worked out well and if there are problems with the laptop, I have a backup with the Raspberry Pi.

Radio Activity, continues on page 6

By Don Russell, W8PEN

We are still having problems with linking the KC8BB node to the Red Cross. I have a few ideas on how to make this better but will need a helper at the Red Cross while we rearrange the antennas and equipment.

The one thing still lacking is a node on the Water Tower. We must get this done before Winter arrives. A node at the Water Tower would solve a lot of our problems. Perhaps we can discuss this at the August meeting. We have the equipment ready to go. Just need to get it installed.

Repeater Updates

Both of the clubs repeaters are doing well. The 2 meter repeater works exceptionally well. One of these days we will fix the little noise issue we have with it.

The 70 cm repeater holds its own. While the repeater is capable of Yaesu's C4FM digital mode, it is rarely used in that format. Most of the activity is analog FM. This is okay with me. I personally think analog FM sounds better.

Not much activity on this repeater. It is meant to be a backup to the 2 meter repeater anyway. Give this repeater a try. I give a call out almost every time I am mobile.

QRP Contesting

It has been a while since I have played with QRP. For those beginner hams, QRP is using a transmitter with a power of 5 watts or less.

Just for fun, I tried the IARU contest using CW only with QRP. Since I do not have a true QRP radio, I simply turned the power down on my Kenwood TS-590S to 5 watts and verified that I was actually running about 4 watts with my watt meter.

While I did not do great, I did okay. I made about 175 contacts in five hours of playing around. I was actually surprised how many stations came back to me on my first call. I was also surprised that I could work Europe on 40 meters with 5 watts.

It was a fun experiment. One which I may try again in the North American QSO Party contest this month. Should be interesting to see how well my new loop antenna performs with QRP.

That is it for this month. See you all at the meeting.

The "Daniel Emmett Special Event Station" will be active again this year from August 10th to August 12th. Operations will start at 1600 UTC daily and run until conditions drop out. The special event station is to celebrate the life and music of composer Daniel Emmett who was born in Mount Vernon, Ohio. He returned to live out his final years in the Mount Vernon area. The special event station will use the club call of "K8EEN". To extend the operating time of the special event station, members will be operating from both the club station and their home qth's. HF operations will be on SSB, CW and some digital modes.

If you would like a certificate, please send a self-addressed, stamped 8x11 envelope to:

Mount Vernon Amateur Radio Club K8EEN, C/O DESES, PO Box 372, Mount Vernon, OH 43050

For more information, please contact:

Jim Williams, N8IBR: 740.967.0627 or Frank Counts, KC8EVS: 740.358.9131

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Amateur Radio General Class Upgrade Course

This course is intended for Amateur Radio Operators wishing to upgrade from the Technician Class license to the General Class license.

When: Classes begin Thursday, September 7, 2017 at 7:00 p.m.

Class will be held each Thursday through October 26, 2017

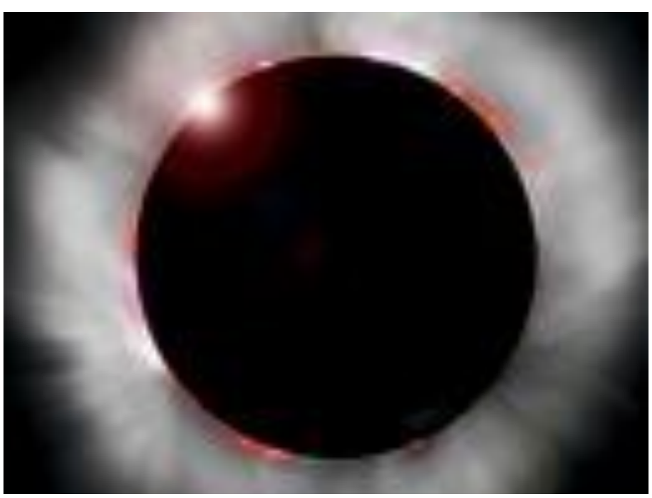
Time: Class will be held from 7:00 p.m. to 9:30 p.m. each Thursday

Where: The Knox County Chapter of the American Red Cross, 300 North Mulberry Street, Mt. Vernon, Ohio. We will be using the Training Center in back of the main building.

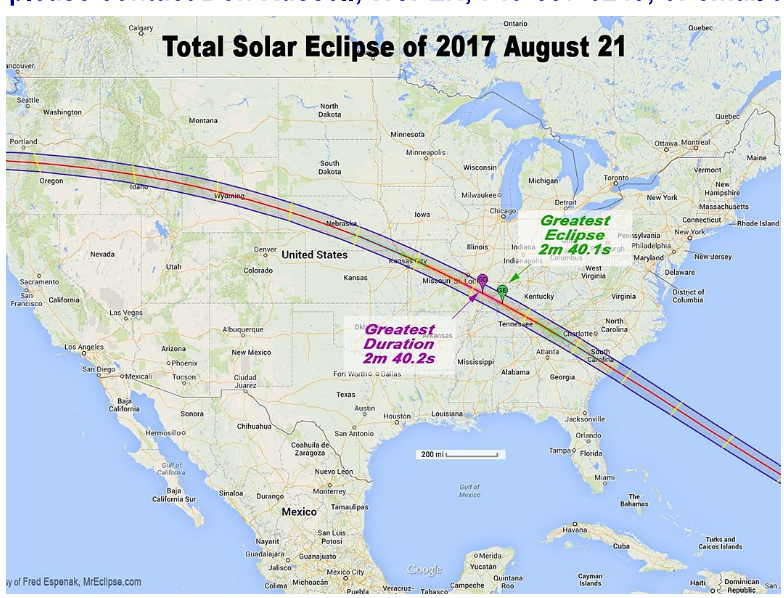
Students must purchase a copy of the current ARRL General Class Study Manual. The 8th edition for testing through June 30, 2019 will be used. Students can purchase this manual through the ARRL or Amazon.com.

Students should be committed to studying assigned chapters. The course will consist of answering questions posed by students and going over question and answers from the question pool.

For more information and to sign up for this course, please contact Don Russell, W8PEN, 740-397-0249, or email to w8pen@yahoo.com.



A neat Total Eclipse picture



2017 Total Eclipse path across USA
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By Dan Romanchik, KB6NU

Ham researcher to investigate effects of solar eclipse
By Dan Romanchik, KB6NU

August 21 is a once-in-a-lifetime opportunity for many in the U.S. to see a total eclipse. It's also an opportunity for a team of Virginia Tech researchers to study the effects of the eclipse on changes in the upper atmosphere that have an impact on HF propagation and the global positioning system (GPS). Backed by research funding from NASA and the National Science foundation, the team is headed by Dr. Greg Earle, W4GDE.

The Virginia Tech team plans to gather data from a variety of sources, including radar systems, transceivers, satellites, ham radio, and GPS receivers, in order to analyze the effects of the solar eclipse on the conductive region of the atmosphere.

“Whether military radar, or consumer GPS signals, the eclipse is going to have effects on the medium that we would like to understand better, so that we can either mitigate them or use them to our advantage,” said Earle.

Here are a couple of links to news stories on the research team and the experiments:

Virginia Tech team prepares for special project during total solar eclipse
Virginia Tech expert to study August solar eclipse effects on radar, ham radio, GPS
Let's party!

In conjunction with the eclipse, the HamSCI and the ARRL are sponsoring the Solar Eclipse QSO Party. (SEQP). According to an article in the August 2017 issue of *QST*, the goal of the SEQP is to "flood the airwaves with contacts, all measured by the automated receiver networks of the Reverse Beacon Network, PSKReporter, and WSPRNet." Once all the logs are in, researchers will analyze the data to see what effect the eclipse had on radio propagation.

A YouTube video of a presentation at Dayton on the SEQP can be found at https://youtu.be/3EviY2Cuxpo?list=PLihPo8xWmo8-xDYAtpP9BWX9QnhUoT7k4

The SEQP will run from 1400Z - 2200Z on Monday, August 21. This is well before the eclipse is due to begin on the West Coast. The reason it starts before the eclipse is to establish a baseline for radio propagation conditions.

SEQP organizers urge you to make as many contacts as you can on as many bands as you can operate. Like nearly every contest, contacts are not allowed on 60m, 30m, 17m, and 12m. CW, RTTY, and PSK31 are the preferred modes because automated receivers can record those contacts, but phone and other digital modes count, too.

An interesting twist to this contest is that, like Field Day, you can earn a number of bonus points, including:

Operating outdoors (100 points)
Operating in a public place (100 points)
Operating a wide-band automated receiver at your station (100 points)

Hams have had a long history of supporting scientific research. They provided communications for some of the early polar explorations and listened for Sputnik as it flew overhead. The Solar Eclipse QSO Party continues this tradition, and it's going to be a lot of fun as well. Visit the HamSCI website for more information.

Dan Romanchik, KB6NU, blogs about amateur radio at KB6NU.Com, and is the author of the “No Nonsense” amateur radio license study guides and the CW Geek's Guide to Having Fun With Morse Code.” You can reach him by emailing cwgeek@kb6nu.com.

August, 2017

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
6 9:00 pm ARES Sunday Night Net on K8EEN **KC8BB – Bill**	**7**	**8**	**9** 5:00 pm Dinner at Southside Diner	**10** Dan Emmett Days Special Event	**11** 10:00 am Breakfast at Hardee's Dan Emmett Days Special Event	**12** 9:00 am Breakfast at Allison's Finer Diner Dan Emmett Days Special Event
13 9:00 pm ARES Sunday Night Net on K8EEN **W8PEN – Don**	**14** **7:00 pm** **MVARC Monthly Meeting**	**15**	**16** 5:00 pm Dinner at Southside Diner	**17**	**18** 10:00 am Breakfast at Hardee's	**19**
20 9:00 pm ARES Sunday Night Net on K8EEN **KE8ANS – Terry**	**21** **2017 Solar Eclipse**	**22**	**23** 5:00 pm Dinner at Southside Diner	**24**	**25** 10:00 am Breakfast at Hardee's	**26**
27 9:00 pm ARES Sunday Night Net on K8EEN **KD8HSA - Tom**	**28**	**29**	**30** 5:00 pm Dinner at Southside Diner	**31**	**1** **September** 10:00 am Breakfast at Hardee's	**2**
3 9:00 pm ARES Sunday Night Net on K8EEN **KC8BB –Bill**	**4** **Labor Day**	**5**	**6** 5:00 pm Dinner at Southside Diner	**7** **7:00 p.m. General Class Upgrade Course at the Red Cross Training Center**	**8** 10:00 am Breakfast at Hardee's	**9** 10:00 am– 6pm Ohio State Parks on the Air