

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

April, 2017



Meetings are held 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, Ohio



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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Presidents View

I hope everyone's spring is off to a good start. A common theme I hear is everyone is busy. No exception here. Between the kids, grandchildren and our own interest there is never nothing to do.

I attended the 2017 Ohio ARES Conference Saturday April 1 and had a great time. Go to this web page and you will be able to view some pictures taken at the event and in the future they will be posting videos of the presentations given (<http://arrl-ohio.org/SEC/sec-conf-2017.html>). I should have taken one of our go boxes to show off. I think ours would have shined among the other boxes except for one that had a bunch of LED's. Those of you interested in the ARES side of things should attend next year.

April starts off this year's activities

On April 22, we will be participating in the NVIS Antenna Day. The location of this year's activity will be the Centerburg Conservation Club, 5680 Sycamore Road , Centerburg OH 43011

<http://www.centerburgconservationclub.com/> , same as last year. This year there will be anchor stations to compare signal strengths of the different antennas. Anchor A ,will be in the Toledo area, anchor B, in Dayton and the third anchor will be "the Sarge" Ohio Emergency Operations Center. They have not posted the frequencies on which these stations will be operating at this time but should here soon.

Presidents View, continues on page 2

This year they want to expand to 160 meters and 60 meters so we need some ideas as to what we can get signals out on these frequencies. If you have an idea or have something that will work bring it to the club meeting the 10th to share after the meeting.

Hopefully they will post more details about this year's activity prior to our meeting on the 10th and I will fill everyone in then.

This weekend is a busy one because on the 23rd is the Earth Day Challenge and Half-Marathon. This takes place starting from the Kenyon Athletics Center winds through Gambier, then out the bike trail towards Mount Vernon and back. We will gather around 6 - 6:30 a.m. to get our assignment and head out prior to the beginning of the race. This year we will be using EMA Mobile Command Trailer as our command post. If you have one of the bright yellow vest please bring that along (maybe if Bill had been wearing one he would not have been run over by a cyclist a couple years ago). I will try to have more information by the meeting on the 10th.

Well, this is getting long and I don't know if Bill will have enough space to squeeze it in, so I will wrap it up. Hope to see you at an event here soon. Don't forget Monday, April 10 at 7:00 pm is our club meeting.

73,

Frank KC8EVS

**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
ballixe@yahoo.com
Phone: 740-504-8204

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

Newsletter Editor &

Facebook Editor:

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

Minutes of the MVARC March 13th, 2017 Meeting

Meeting called to order by KC8EVS at 23:01 UTC.
19 members and 3 guest present.

Motion to approve February 13th, 2017 meeting minutes made by KE8REB, 2nd N8PPF. Approved.
Motion to approve March 13th, 2017 treasurer's report made by AC8PT, 2nd K8AEC. Approved.

Monthly Information

W8PEN reported that the MESH Network is still growing. We have approval to put a node at the water tower where our 2 meter repeater is located. This node should greatly expand our coverage of the city of Mount Vernon itself. W8PEN also reported that both the VHF and UHF repeaters are performing well. We still hope to upgrade the antenna on the UHF repeater and improve our County wide coverage. We have some problem areas in the eastern part of Knox County due to terrain.

KD8PSM reported that the National Weather Service canceled the scheduled Weather Spotters training March 6th due to bad weather in the Northern part of the state of Ohio. No re-schedule date available at this time.

President's Comments

New Handbook almost finished.
Technician class and recent VE test session went well.
Follow up on the 2 evening introduction to Ham Radio for newer licensee's was very successful.
NVIS day will be held at Centerburg Conservation Club on April 22nd. KD8HSA heading this up. Earth day ½ marathon will be held at Kenyon College on April 23rd. Volunteers are ask to arrive on site by 6 am.
KD8PSM hopes to have the EMA's communications trailer set up to use as a command post for this event.
Members were reminded that Field Day, Dan Emmett special event station, and Ohio State Parks on The A would be happening in June, August, and September respectively. These are all fun events, and all members are encouraged to participate.

General Business

Website still needs to be updated. Our information is considerably outdated.
Our Yaesu FT-847 club radio at the Red Cross has issues that need addressed. After lengthy discussion, a motion was made by N8PPF, and 2nd by W8TW to have W8PEN send the radio out to be gone over and repaired if it is determined to be cost efficient. Approved.
KE8ANQ was appointed as head of a committee to get the second station at the Red Cross up and running. W8PEN and N8IBR will assist as needed.
Bring any ideas for NVIS antennas to the April 10th meeting.

Future Events in Planning

W8PEN announced that we will be conduction a General Class license course starting sometime in September. The exact date is yet to be determined. A VE Test Session will follow these classes.
W8PEN also stated that we may hold a VE Test Session in either June or July, if enough interest is shown. It was suggested that the club have a program covering ARRL Message Radiogram's at a future meeting. N8IBR will put together a presentation for a future meeting.

Motion to adjourn meeting made by K8AEC, 2nd N8PPF. Approved. Meeting adjourned at 0004 UTC.

KC8EVS won the 50/50 drawing. He donated the winnings back for a \$20.00 Donation.

Respectfully submitted,
N8IBR Secretary MVARC

Radio Activity

By Don Russell, W8PEN



The month of March was a very busy month for some of the active club members. A lot going on, but no real new activity. Lets get started with the happenings.

Yaesu FT-847 Repair

During the March meeting, approval was given to send the clubs Yaesu FT-847 in for repair. This radio was a donation to the club from the estate of Larry “Doc” Heltzer. Doc had had some problems with this radio and once the club started using it the defects were pretty obvious. Approval was given to spend \$500 on the repairs. This was a reasonable figure seeing that the FT-847 sells used for around \$1,000.

Since I was put in charge of the repair, I choose “Ham Radio Repair, based in Carrollton, Texas. This company had excellent reviews from the major ham radio websites. Repair was done within two weeks of the radio being received and communications were very good. Cal, the owner, did the repair work himself and seems like a very nice guy to work with.

Repair work performed was the replacement of two control switches, lubrication of front panel controls, adjustment of the transmitter fold back protection circuit, and alignment of the receiver.

We have the radio back in house but have not had time to do any testing to it. Total cost of repairs were \$315.52, which was under the budget allocated. This radio should serve the club well for years to come.

Fusion Repeater

The clubs Fusion repeater is working well. Thanks to Jim, N8IBR, the club has purchased a new commercial antenna to replace the current repeater antenna. This is a brand new commercial antenna valued at over \$1,000 and is similar to the one used on our 2 meter repeater. Jim got it for \$150.

Plans are to install this antenna Wednesday, April 5th, weather permitting. This antenna should improve a repeater system that is already performing very well.

If you have not already done so, please check out the repeater on 444.600 MHz, Plus 5 MHz, and PL 71.9 Hz. The repeater is on full automatic and will accept regular analog FM and Digital Yaesu C4FM. The repeater has mainly been used on FM.

New Dual Band Antenna

Once again, thanks to Jim, N8IBR. A new dual band antenna has been installed at the Red Cross. This replaces the old antenna, which had a high SWR on 2 meters. Jim had bought the antenna for his own use and had a change of plans. Jim donated the antenna to the club.

Mesh Network Update

Jim, N8IBR and myself have been pretty busy working on the clubs local mesh project. This project has been both rewarding and frustrating at the same time. You know what they say: “Two steps forward, one step back”.

This is where our problems began. Somewhere in the installation we had a water leak. This happened the first rainfall we had after raising the node antenna. It was hard to figure because we had no such leak at the original node location.

[Radio Activity, continues on page 5](#)

By Don Russell, W8PEN

Our problems began after a successful excursion to the Red Cross to raise the Node antenna on the tower. The objective here was to improve the link signal between the Red Cross node and the KCH node. The node antenna was raised about 10 feet from its original position. The objective was met. We now have a great signal between the Red Cross and KCH. We also installed a “mesh phone” at the Red Cross.

At first, I thought the leak was merely rain water running down the outside of the cat5 cable that runs into the Red Cross Training Center. I created a drip kink so that outside water would stop at the window and merely drip down to the ground without entering the window. I then replaced the power supply that powers the node. All was well..... Until the next rainfall. Same thing happened. The only thing left was to assume that water was coming down the inside of the cat5 cable. Which, unfortunately, meant we had a leak in the antenna or the node radio.

From experience with a node antenna of a different brand than the one we are using at the Red Cross, I assumed that the leak was occurring in the glue/seal that holds the fiberglass tube onto the antenna. My feeling is that I over tightened the U-Bolts holding the antenna to the mast, thus breaking the seal at the antenna. Another lesson learned.

So, Sunday, April 2nd, Jim and I made another trip to the Red Cross. We replaced the node antenna and radio, and ran new cat5 cable to the building. I took extra precautions with the new antenna. I sealed it good, tapped with electrical tape, then put more sealant on top of the electrical tape.

We also put a parabolic antenna and an AirGrid M2 node on the tower pointing at Bills, KC8BB'S node hoping we would have a better link with Bill. This did not work as well as I expected. The signal fluctuates a great deal and the link with Bill's node is weak or non existent. Not sure what is going on. I am still looking at it.

The only other item to report on is that I have installed a “mesh phone” at the Red Cross. This phone is working really well in the system. Next phone to be installed will be one at KCH. I will install this phone along with installing the new repeater antenna.

After this, I am hoping on getting a node and mesh phone at the EOC. I can see a very big advantage of having alternative phones (not commercial) between these three hot spots: Red Cross, KCH, and EOC.

We are also pushing to get the node up at the water tower. This will be the “Big One”, which should solve a lot of our connection issues between all other nodes.

HF Station at the Red Cross

Work continues on this HF station. We are looking at putting the end-fed antenna back up now that the weather is getting better. Chances are we will take the folded dipole down. It does not really fit well in the space we have. If we run the end-fed antenna the same direction we previously had it, and use a counterpoise wire to one of the trees, I think we will have an effective station.

We are also planning on side mounting the R5 (20 – 10 meter Vertical) on the tower. We will need someone to weld up a side mount in order to do this. This won't take place until after Field Day (But before the Dan Emmett Festival). I would like for the SSB FD station to have this antenna available.

That wraps up another Radio-Activity column. See you all at the meeting.

Arnold Sports Festival

By Terry Windsor, KE8ANS

This year I again volunteered at the Arnold Sports Festival to work with the medical teams as an Amateur Radio operator. The radio operator function is to provide communication for the assigned team back to the Medical Control Center. Since the Greater Columbus Convention Center is shielded and cell phone service is spotty, Ham Radio is the only approved method of internal communication between medical teams and the control center.

During the three days of the Arnold there are over 30 medical teams deployed at a time to cover all of the events. The scope of the festival requires as many volunteer medical personnel and Ham operators as Dr. Brian Griffin, Chairman and Executive Medical Director, can recruit. I originally signed up to work all day Saturday 3/04/17 but I decided to work Sunday also 3/05, due to a shortage of Hams. This year there were over 400 injuries and greater than two dozen calls to EMS for transport consideration. In each of these events the Ham was providing communication between the event medical team and the Control Center. This picture is a medical team I assisted during CrossFit Challenge on Saturday.



The Arnold is a lot of fun, get to meet lots of people, and attend several of the sports events/Expo right next to the stage. The teams are fantastic to work with, since everyone is a volunteer and wants to be there and do a good job. The Team has started to recruit for 2018 and information can be found on Facebook by searching Arnold Expo Medical Team.



Ohio ARES Annual Conference By Terry Windsor: KE8ANS

The Annual OHIO ARES Conference was held Saturday, 4/01 at Marion Technical College in Marion. From the Mount Vernon Amateur Radio Club myself, Frank Counts, KC8EVS; Scott Keyes, AC8PT and Ed Liddle, KE8ANU were in attendance.



The conference started at 9am with Stan Broadway presenting an ARES business session of what is occurring and the efforts needed to keep ARES active in Ohio. The next presentation was about NTS traffic handling followed by a session on Winlink 2000, sending and receiving email via Ham Radio.

One of the more spirited presentations and question and answer sessions was MARCS which allows emergency personnel to communicate with each other. This was presented by Dick Miller, Ohio Field Operations Manager who is leading the statewide MARCS efforts. The final session of the day was EMA and Amateur Radio presented by Sean Miller, President, Ohio EMA Director's Assn.

There were displays of club and individual Go Boxes with antennas and a mobile ARES communication trailer. The Go boxes were interesting but the MVARC go box configuration is cleaner than most, thanks to Tom Evans, KD8HSA. Also, next time you see or talk to Ed Liddle, KE8ANU congratulate him for taking on the Union County EC role. The photo shows a large portion of the Ohio ARES members in attendance. The conference finished about 3:45pm with most of us leaving with ideas of what our local areas could be doing.



Interesting gadgets I wish I had time for

By Dan Romanchik, KB6NU

I'm on a lot of mailing lists and participate in a bunch of amateur radio forums. As a result, I see a lot of interesting gadgets that guys are buying or are thinking about buying. Here are three of the latest that look interesting to me. I wish I had time (and money) to purchase all of these and try them out.

Android antenna analyzer

On Reddit (https://www.reddit.com/r/amateurradio/comments/60nnp1/finally_got_my_mini60_ebay_antenna_analyzer_time/), some of the guys have been talking about the Mini60 Antenna Analyzer (<http://www.ebay.com/itm/CW-USB-Interface-Cable-WINKEYER-compatible-3-5mm-plug-/132121085623?hash=item1ec307c6b7:g:up8AAOSw241YeTei>). Its frequency range is 1 – 60MHz, but the cool thing about this device is that you can use it standalone with the built-in LCD display or with some software (http://www.jtelectronics.co.nz/information_links/MINI60/Add-Bluetooth-Module-To-MINI60-Antenna-Analyser.htm) and a tablet with a Bluetooth interface to get fancy frequency vs. SWR plots. See <http://www.kb6nu.com/wp-content/uploads/2017/03/mini60-ant-analyzer.jpg> for a photo of the Mini60 Antenna Analyzer being used with an Android tablet.

Of course, this is made in China, but how can you beat the price? It costs \$112 shipped.

Multi-functional component tester

Here's another marvel of Chinese engineering and manufacture – a smart component tester (http://www.banggood.com/3_5inch-Colorful-Display-Multi-functional-TFT-Backlight-Transistor-Tester-p-1083042.html) for only \$30, shipped. It identifies and characterizes NPN and PNP transistors, capacitors, resistors, diodes (including Zener diodes), N-channel and P-channel MOSFET, IGBT, JFET, triacs, and batteries.

This isn't the first smart component tester to hit the market, but the unique thing about this unit is that it has a graphical display that not only identifies the type of component that you've connected to it, but also draws the schematic symbol of the part. You can see a video of this tester in action at <https://www.youtube.com/watch?v=07FH6tjzWg>.

Make your Raspberry Pi into a desktop PC

Newark/element 14 will soon start selling a kit of part that will make it easier to turn your Raspberry Pi into a desktop PC (https://www.element14.com/community/docs/DOC-83477?CMP=e-email-SEPO-210317-e14PI&et_cid=28941683&et_rid=1231362216&cmp=).

The kit includes:

- Intelligent and Safe Power Controller
- Interface to connect mSATA SSD (up to 1TB)
- Real Time Clock to keep track of time
- Heat Sink
- Enclosure

They don't list the price just yet, but this might be what I need to actually make use of the Raspberry Pi 3 I bought several months ago.

If you have one of these gadgets, or buy one in the future, please let me know how you like it. I'll put your review up on my blog, so that everyone can benefit from your experience.

When he's not drooling over electronic gadgets, Dan blogs about amateur radio at KB6NU.Com, writes the "No Nonsense" amateur radio study guides, and teaches ham classes. You can contact him by e-mailing

April, 2017

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
2 9:00 pm ARES Sunday Night Net on K8EEN KC8BB –Bill	3	4	5 5:00 pm Dinner at Southside Diner	6	7 10:00 am Breakfast at Hardee's	8 9:00 am Breakfast at Allison's Finer Diner
9 9:00 pm ARES Sunday Night Net on K8EEN KE8ANS –Terry	10 7:00 pm MVARC Monthly Meeting	11	12 5:00 pm Dinner at Southside Diner	13	14 10:00 am Breakfast at Hardee's	15
16 9:00 pm ARES Sunday Night Net on K8EEN W8PEN – Don	17	18	19 5:00 pm Dinner at Southside Diner	20	21 10:00 am Breakfast at Hardee's	22 NVIS Antenna Day @ Centerburg Conservation Club
23 6:00 a.m. Earth Day Marathon @ Kenyon College 9:00 pm ARES Sunday Night Net on K8EEN, KD8HSA Tom	24	25	26 5:00 pm Dinner at Southside Diner	27	28 10:00 am Breakfast at Hardee's	29
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