Ham Radio Rocks!

The Mt. Vernon Amateur Radio Club

October, 2009 Newsletter

Meetings are held the 2nd Monday of each Month at 7:00 P.M. at the Knox County Chapter of the American Red Cross, 300 N. Mulberry Street, Mt. Vernon, Ohio

Local Ham Community

K8EEN Repeater: 146.790 Mhz (-600 Khz With PL of 71.9 Hz)
KD8EVR Repeater: 442.100 Mhz (+5Mhz With PL of 71.9 Hz)

Sunday Night ARES Net at 9:00 P.M. on The K8EEN Repeater
Wednesday Night Social Net at 9:00 P.M. on the KD8EVR Repeater

First Aide Training Set for October Meeting.

At the October meeting the Red Cross will be providing a First Aide Training Course to club members. Please note the early start time of 6:00 P.M. There will be no business meeting during this event. As Emergency communicators, members are encouraged to take this training.

Fox Hunt / Breakfast Saturday, October 10, 2009

Members are invited to join us Saturday, October 10, 2009 for our monthly club breakfast at 9:00 A.M. Location is Allison's Finer Dinner. Following the breakfast, we will have a Fox Hunt (Transmitter Hunt).

Prize for the winner of the transmitter hunt will be a Yaesu VX-3R donated by Universal Radio, Reynoldsburg, Ohio. That should make the morning interesting. If you can't make the breakfast, feel free to join us for the hunt. The transmitter hunt should get underway at about 10:00 A.M. Monitor the 2 meter repeater around that time for more information.

ARES Simulated Emergency Test

Members of the Mt. Vernon Amateur Radio Club and Amateur Radio Emergency

MVARC Club Meeting is Monday, October 12, 2009 at 6:00 P.M. in the Red Cross Annex Building, 300 North Mulberry Street, Mt. Vernon, Ohio. Note the early time of 6:00 P.M. There will be no business meeting. The Red Cross is to provide members with First Aide training.

Please remember to check into the long running Sunday Night ARES net at 9:00 P.M. on the K8EEN 2-meter Repeater.

Also check out the UHF net on the KD8EVR Repeater. This net runs each Wednesday at 9:00 P.M. and is a social net. Please join us for the fun of it.

Every Wednesday at 5:00 PM, MVARC club members meet at Wendy's, 522 South Main Street, Mt. Vernon, Ohio. Dinner Coordinator Dick Huggins, N8RDH, reports good turnouts for this event. Come share dinner with friends, or make new friends, by attending one or all of these events.

Join MVARC club members every second Saturday of the month for breakfast. Breakfast Coordinator Arlin Bradford, KD8EVR, reports good turnouts for this event.

******The next Breakfast will be October 10, 2009 at 9:00 AM at Allison's Finer Diner, 11587 Upper Gilchrist Road, Mt. Vernon, Ohio******

Service participated in SET this year.

At 0900 Local time, Assistant EC Arlin Bradford, KD8EVR, put the 2 meter Repeater into Weather Warning Mode as a Drill only. Arlin announced that the National Weather Service had issued a Tornado Warning for all of Knox County until 1030 hours.. This was a drill.

Those checking in were KD7NMS, KB2SAI, KD8LDT, W8UMH, KD8HSA, KC8UR, KD8LFI, N8OGX, W8PEN, KD8GRM, N8TWN, KD8LPP, and N8RDH

Things started out fairly calm, but things started to heat up about 0915. when KD8EVR announced the weather service radar indicated a tornado cell in the center of Mt. Vernon.

KB2SAI announced that Knox County EMA had contacted him and reported a tornado touchdown on the East end of Mt. Vernon in the Walmart area. He was being dispatched to the scene.

At 0930 Ruben announced he had been contacted by the Red Cross. They were preparing to set up a shelter at a yet to be determined location and would need an operator dispatched to that shelter once more information was available. They also asked for an operator at the Red Cross communications center.

KD8EVR was to turn over net control to kc8ur and head to the Red Cross Com Center.

At 0935 KB2SAI reported he had arrived at the scene and Walmart was indeed hit by a tornado with a partially collapsed building.

At 0936 KD8EVR announced that the National Weather Service had cancelled the tornado warning for Knox County, however we had the situation on the East end of Mt. Vernon to deal with.

KB2SAI announced the location of the red cross shelter as being at the Mt. Vernon Baptist Temple on Yaeger Road. KD7NMS was dispatched to the shelter site.

The rest of the SET dealt with communications between Net Control (KC8UR), Red Cross (KD8EVR), On Site (KB2SAI), and Shelter (KD7NMS). It was interesting to listen to.

Following the SET a short net was held critiquing what happened. Everyone thought things went well.

KB2SAI: thanked everyone for their participation. Counted 15 people helped out. Everyone played along just fine. Perhaps some formal traffic should have been passed. KC8UR did a very nice job as net control.

KD7NMS: suggested that KC8UR check into the Ohio SSB net on HF and just report that we were active during the SET. Also perhaps the main participants should have more of a script to go by.

KC8UR: suggested that during an SET, stations that check in report whether they are emergency power (even a hand held).

2009 End of Summer Antenna Project

By Charles Russell, WA8ONN

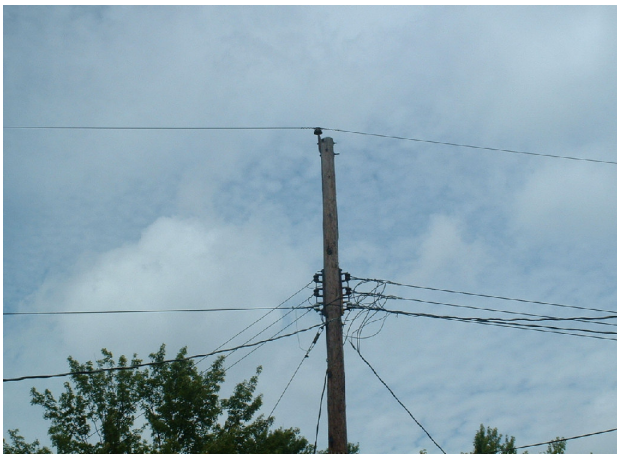
INTRODUCTION

I received my novice ticket sometime around 1965 and my tech shortly afterwards. Eventually the FCC was kind enough to make me a tech+. Finally, about a year ago, I grandfathered to General, and passed the Extra class exam. I can still do the 5 wpm code. After many years of operating absence, it was time to get back into the thick of things. First, though, was the matter of an antenna.

Please note this is not a How-To article. It is about my experience in putting up an antenna in a very restricted and cluttered space. I will tend to bloviate throughout the article, and you may opine in a future edition of this newsletter. I'm sure your editor will oblige. So, sit back and enjoy the ramblings. I do hope you find it interesting.

Antenna Selection

Initial requirement called for 80-10 meter coverage not including WARC bands, but after surveying the back lot (42 x 50), downsized to 40-10 meter coverage. Additionally, I wanted to feed the antenna with coax, not ladder line. Nonetheless, this still presented a difficult challenge. The house power, telephone, and TV cable lines ran pretty much straight down the middle of the property. Neighbors on each side also had lines running diagonally across the property. In addition, the power pole with its 17,500 volt line was position just over the fence. There are no trees or posts in the front lot to use as anchor points, so going that direction wasn't feasible. Maybe one day I'll install two 20 foot flag poles. RIGHT!



Junk, 50 ft behind the house.

Power, cable, telephones lines crossing backyard

After much deliberation, it became a toss up between the "New Carolina Windom" derived from the Carolina Short 40 (Carolina Windom Beam 40) or a Fan Dipole (Parallel Dipole, Butterfly Dipole, Multiband dipole, whatever). To be fair, other antennas were considered but discarded for numerous reasons.

Some links to antennas considered:

New Carolina Windom

http://www.hamuniverse.com/k4iwlnewwindom.html

Fan Dipole

http://www.radioworks.com/ccwbeam.html

At first, the New Carolina seemed like the best bet. It's reported as usable on 80 meters with a tuner. However, this would have meant spending m-o-n-e-y on a 4:1 balun, and associated choke balun. Plus, it would just add additional weight should the vertical radiator be eliminated. This choke balun also seems to have a requirement of not being close to metal (separation not specified). The house has aluminum siding not vinyl, so that seemed to present additional problems. So, the Fan Dipole it was. No turning back now.

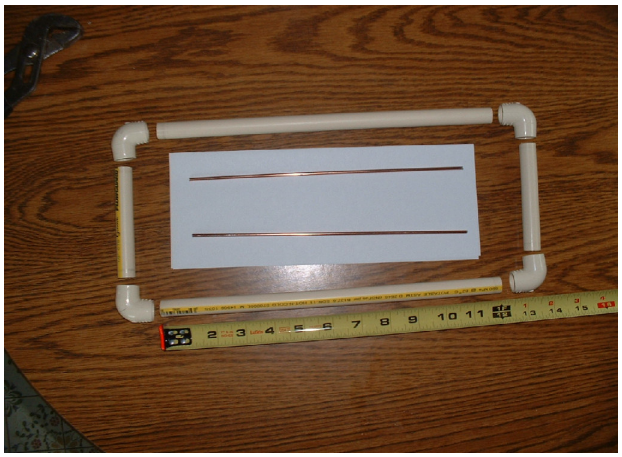
BUILDING THE FAN DIPOLE

The dipole consists of #14 gauge un-insulated stranded copper wire in 2 sets of 3 wires for 40, 20, and 10 meters. The 15 meter band to be covered by the 40 meter dipole at its 3rd harmonic. Insulated wire is can be used as well. It might even help cut down on wind and rain static charges. Don't quote me there.

The original version called for using a good RF insulator and attaching all the wires to this insulator. Instead, since the dipoles will tend to interact with each other, I followed a different procedure in hopes of making the antenna easier to tune and more stable in the wind. See this link for more details:

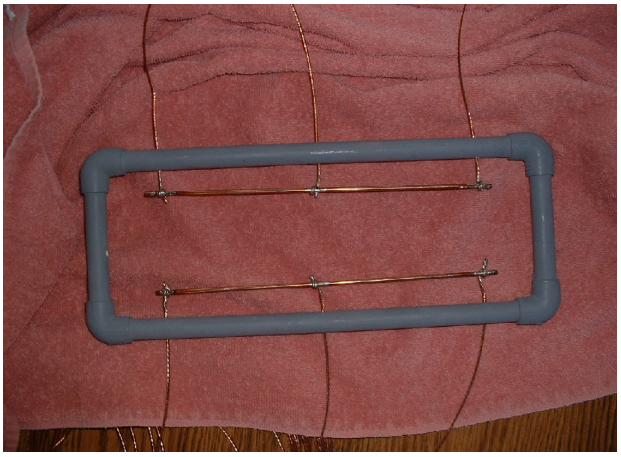
http://www.sstowers.com/aa4cv/pg2/pg2.html

The first thing I did was to use ½" PVC pipe, elbows, and some welding rod (provided by W8PEN), to create the center feed. Number 8, #6, maybe even #10 solid wire could also be used in place of welding rod.



½" PVC, elbows, and welding rod

The long pieces are 12" and short pieces ar 4". Actual size is not critical. After gluing the pieces together, 3 small holes were drilled to allow passage of the #14 wires, 5" apart in each of the longest pieces. The bottom 4" piece required a hole for the RG-8X coax. Two 1/4" weep holes was drilled on each side 1" from the coax hole. Again, this is not critical. A hole was drilled in the top 4" piece to allow hook screw to be attached. The entire piece was then painted gray for cosmetic reasons. After an appropriate drying time, I inserted and solder each of the dipole wires to the welding rod. Keep in mind that the 40 meter dipole will be the top dipole, 20 meters the middle dipole, and 10 meters the bottom dipole. A 140 watt gun was used, but a 200-250 watt gun or a 100 watt soldering iron is recommended. After everything was soldered together, it was wrapped with PVC electrical tape, making sure not to cover the weep holes allowing condensation to drip out.



Center feed with the dipole wires soldered to rod

I used a 5 foot length of RG8X for the center feed, inserted thru the hole made for the coax and soldered to the welding rod. Center conductor to one side and braid to other side. A PL-259 was attached to the free end. In retrospect, I should have just soldered the entire 50 ft piece of RG8X and not use a double-ended UHF female adapter. This would have allowed me to later create a coaxial choke balun, if desired.

I forgot to take a picture after doing all of this so here's a picture showing the hole thing laying on the ground.

Completed antenna

Here's one that shows the center piece up close as mounted with PVC pipe inserted into a tripod. You can clearly see the dipole separation. The pine tree makes a nice background. Yes?

Antenna on tripod for tuning purposes

The antenna was tuned while only 6 ft above ground using an MFJ-247 Antenna Analyzer borrowed from W8PEN. I should have waited until the antenna was in its final position. It required re-tuning of the 20 and 10 meter dipoles after it was up by adding wire. Bummer!

It should be noted here that the analyzer showed the 15 meter band to have an SWR greater than 3. I have no explanation for this. Perhaps it is due to the interaction between the dipoles. Thankfully, a tuner will eliminate this problem. SWR values are provided later.

The installation

There were several ways to mount my new antenna.

Option 1
A tripod centered on the roof at its apex would have been perfect for several reasons. It would have put the antenna 8 ft above the roof . For a total height of 29 ft. The 10 meter would easily fit across the roof. The 20 meter just barely, but could be made it work. The 40 meter would have needed 16 ft each side to go down to 8-10 ft poles. But alas! Screwing into my roof bothered me considerably. Yes, others have done it, but I just couldn't stomach the idea. This would have also meant the mounting of a mast at each end of the house. More money. I thought about eliminating the tripod, but the weight of the center piece proved to be more than I expected. It definitely needed to be supported.

Option 2
Use a chimney mount and place the center of the antenna there using a 5 ft mast. A good option, plus the chimney was higher than the roof apex. But after evaluating my chimney, its condition was somewhat questionable. I became fearful it might come down. It didn't seem reasonable to spend money on a chimney just to mount an antenna.

Option 3
Purchase two 10 ft 1-1/4" masts from Radio Shack, and mount from ground up. These babies were $25 a pop,

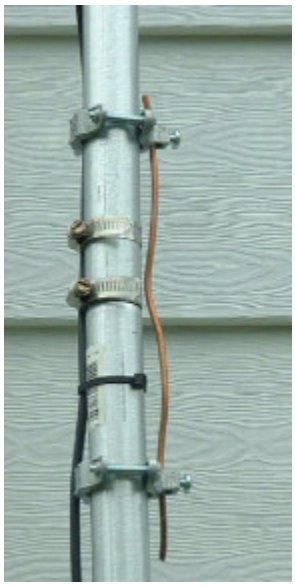
and not in stock. W8PEN suggested fence railing. I wasn't quite convinced so did some research on using fence railing. As usual, my research turned up 10 different answers to one question. Not to be daunted, a trip to Lowe's was undertaken. I found 1-3/8" fence railing at $8 per 10 ft section. Although a little thin, it seemed sturdy enough, so I bought 2 pieces and carted them home. Option 3 was underway.

My research also indicated that the fence rail was weakest at its joints when mounted vertically. Apparently, the joint will tend to buckle over time, but not bend. A solution to this is placing a piece of tight fitting pipe over the joint to keep it from buckling. Instead, a pair of hose clamps was placed around the joint. Time will tell if this is sufficient. The research also suggested having no more than 8 ft above the mounting clamp. Turned out the mast joints were right at the mounting clamp. Instead of digging a 2 ft hole to insert the mast into, I cut 1-1/2 ft off the bottom and dug a 8" hole. A 2" brick was placed in the hole on which the mast rested vertically. This should prevent it from shifting. Now the mast can be clamped 2 ft above the joint. This resulted in the top of the mast at 18 feet, 3 feet below the roof apex. A compromise over having the antenna at 25 feet, especially since the roof also has foiled back insulation on the inside.

In order to mount the mast to the house, a small piece of 2x4 was required behind the mounting clamp to clear the gutter. This wood was also painted and sprayed with varnish to ward off rot.

The mast was grounded using a ground clamps and #6 wire to an 8 ft ground rod. Also a #12 wire was attached to the ground rod. This wire comes into the shack and is less than 9 ft long, otherwise it could become part of the radiating system at 10 meters. So theory says.

Antenna mounted against the house



Hose clamps and ground straps at mast joint

One end of the 20 meter antenna is tied off through an insulator to a gutter support. A better method would be an eye screw above the gutter. Just in case ice brings down the gutter. Which has yet to happen. The other end of the 20 meter dipole goes to an 8 foot pole u-clamped to a fence post. This happens because the antenna is not centered on the house. This is not the same pole for the 40 meter dipole.

Dipole tie off. Top to bottom is 40-20-10.

Thankfully, each end of the 10 meter dipole is tied off to my gutter supports requiring no additional poles.

Tuning The Antenna

Not having a radio, the MFJ-247 was used to do the final tuning on the antenna. Results for 40 are:

7.000	1.8	7.150	1.5
7.200	1.4	7.300	1.6

Unfortunately, I had to add some wire to the 20 and 10 meter dipoles since they were trimmed to short while on

the ground. Luckily, I was able to do this no more than 10 feet off the ground, but it was still a chore.

Results for 20 and 10 meters are:

14.000 2.5	14.150 2.1
14.350 1.8	
28.000 2.8	28.300 2.0
29.000 1.4	29.700 2.1

15 meters still showed higher than 3:1 across the band so a tuner would be required to operate that band.

After borrowing an FT-847 from W8PEN and using an MFJ Versa Tuner III, the SWR readings above were confirmed, with slight variations, but well within tolerance. 40, 20, and 10 can be used across the bands at the radio's full power without requiring a tuner. As confirmed above, 15 meters is a problem, but the tuner resolved that issue. I was however, able to reduce power on 15 to 25 watts and not trip the high SWR indicator on FT-847.

The final question is "Does it work?". The best answer is I had no trouble working the stations called during the Texas QSO party on 20 meters. Only one contact was made on 40, but then I didn't spend a lot of time there. Plus, I seem to get a lot of QRN on the band. I haven't heard any stations as yet on 15 or 10.

Final Thought

I still want to get on 80/75 meters, but winter is fast approaching. Maybe I will give the **New Carolina** antenna a try next spring. In the meantime, brushing up on my CW sounds like a neat idea. It would be fun to do some Morse Code after so many years.

Radio-Activity

By Don Russell, W8PEN

Recently I received an email listing ten activities that are dying and will be obsolete in the near future. Amateur Radio is on the list. I had to smile a bit because I know that this is not true. This email has made its rounds and is about the third time I have read it. The email claims that recent strides in communications technology is leaving Ham Radio behind in its dust.

Pardon me? Okay. Ham Radio has not seen much growth lately. In fact, according to one survey,

http://www.w5yi.org/ama_news_article.php?id=388 ,

there are about 7,000 less hams today than in 1999. That is not a lot of loss for a decade. Heck, when I first got my license in 1965, the U.S. ham population was around 150,000. As of May this year it was 668,000! If the indications I have seen locally hold true at a national level, Amateur Radio is just now starting to see some growth. This is probably because Ham Radio is being promoted as a Public Service by many government agencies and the ARRL. That is as it should be. We are a valuable resource. If one looks at what we have been up to lately with digital technology, you can hardly call us outdated.

In spite of the FCC decision to drop the Morse Code requirement, this hundred year old communications mode has seen a surge of activity. Didn't notice? Well, tune to the Morse Code bands on the weekends, especially during a contest. It is possible that you will hear wall to wall signals. Many of them are new calls. Several CW organizations such as "Fists", and the "Straight Key Century Club" has seen a tremendous growth in membership. Relax, this not another learn Morse Code lecture. Just pointing out a few facts concerning the future of Amateur Radio.

Ham Radio may have decreased slightly in population lately, however, there are now more hams than ever upgrading from Technician Class to General or Extra, thus allowing more people to experience the magic of shortwave radio.

I believe the future of this hobby is secure. Time will prove the Doom and Gloom'ers wrong.

One problem with entering a hobby such as ours is the "Art of Conversation". Just what the heck do hams talk about? Well I am the first to admit that I am very bad at public speaking. I have always been scared to death of getting up in front of people and talking. Heck, I don't really consider myself a very good conversationalist. However, put a microphone in front of me and I can talk for hours! What is the difference? Well, no one staring at me I guess. I have been talking on the radio in Morse Code or Voice for over 4 decades.

Now comes the twist. Most new hams have a problem picking up a microphone and talking. This is called being "mic shy". How do new hams get over this? It has been a long, long time ago, but here are some things I did:

- This is sort of easy with Morse Code. You see, sending at five to ten words a minute, as one does when first learning code tends to slow things down a bit. The first month or so of my ham career, most of the conversations where about signal reports, type of equipment used, antennas and weather. At the speed we are talking, all this information took about 20 minutes to half an hour to send. Then you signed off with that station and looked for another contact in

which you would basically repeat the above. This was okay while one learned and built up code speed up, but the next step was carrying on a real conversation.

- After a while, the excitement of just being on the air was taming down a bit and I found I really wanted to have a few conversations with other hams that where more than what was described above. I took several index cards and listed a few things I would like to say about myself, or ask the other station. Seems like I had about ten cards. Want to keep the other station talking? Ask questions! Hams just like everyone else, like to talk about things they have done. That may be the biggest ham radio skill of all. Be a good listener and ask questions. Back to the cards. I was sending Morse Code faster after the first month or so. Contacts were ending faster because we got through the preliminaries much quicker. I started using these cards to great effect. I would just send whatever I had wrote on a card by golly the other station made comments about my comments and I would reply to his comments and maybe add to it with the next item on my card. Hey, this works. Every few days I would write up a few new cards so I would have new things to say.

- Contests are fun, but are they really useful? Yes they are! They get one used to having a microphone in front of them. Not much true conversation happens during a contest unless you run into an old friend or two, but contesting gets one comfortable with using a radio.

- Try joining a net. You get to know the other hams on the net and become comfortable talking to them. This is especially true on the HF bands. I was in High School when I first got my General Class license. I would go home after school and turn on the radio first thing. While it was not a true net, there were several of us teenagers that got on after school at about the same time on the same frequency. Ohio, Michigan, Indiana, and Wisconsin. Some were High School clubs getting on the air after school. The rest of us were just getting home. In my mind this was the most fun I ever had with ham radio. Talking to my distant high school buddies. Too bad we lost track of each other. I can't even remember their names, let alone their calls. To me, this is the problem with 2 meter repeaters being so popular. School kids have little choice but to talk to adults. I would suppose that gets boring to them pretty quick. If only they could get on HF with kids their own age….

See you at the meeting.

International Reply Coupons (IRCs): Out with the Old, In with the New

From the ARRL Letter October 1, 2009. It is now time to start dumping your old International Reply Coupons (IRCs). The "Beijing Model No 2" must be redeemed before December 31, 2009. The new IRC -- the Nairobi Model IRC -- has been available in the US since September 10 and elsewhere since July; the price is $2.10 each in the US. The Nairobi Model is due to expire in 2013. For more information, click here. Thanks to *The Daily DX* for the information.

The Amateur's Code

The Radio Amateur is

CONSIDERATE...never knowingly operates in such a way as to lessen the pleasure of others.

LOYAL...offers loyalty, encouragement and support to other amateurs, local clubs, and the American Radio Relay League, through which Amateur Radio in the United States is represented nationally and internationally.

PROGRESSIVE...with knowledge abreast of science, a well-built and efficient station and operation above reproach.

FRIENDLY...slow and patient operating when requested; friendly advice and counsel to the beginner; kindly assistance, cooperation and consideration for the interests of others. These are the hallmarks of the amateur spirit.

BALANCED...radio is an avocation, never interfering with duties owed to family, job, school or community.

PATRIOTIC...station and skill always ready for service to country and community.

--The original Amateur's Code was written by Paul M. Segal, W9EEA, in 1928.

Mt. Vernon ARC Officers

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The ARRL letter is a weekly e-mail publication by the ARRL. You may read the entire ARRL letter by visiting the ARRL Web page at http://www.arrl.org/. **Other News** from: http://ky4ky.com/fyi.htm.

The ARES E-Letter is an e-mail digest of news and information of interest to active members of the ARRL Amateur Radio Emergency Service (ARES). Past issues of The ARES E-Letter are available at http://www.arrl.org/ares-el/. Issues are posted to this page after publication.

Project OSCAR is a monthly column written for Newsletter Editors. Columns will appear as space permits. You may download all the columns yourself at: http://www.projectoscar.net/beacon.php

Members are encouraged to send articles pertaining to ham radio, with an emphasis on local activities, equipment reviews, and personal experience to w8pen@arrl.net or Don Russell, W8PEN, 815 Brookwood Road, Mt. Vernon, Ohio 43050

Membership Form

Club dues run from Jan. 1 until Dec. 31 and are collected during the last quarter of the year. You can mail in the dues to the address below or bring them to a meeting. Dues are prorated for new members at the time of application. Visit our Web Page at www.mvarc.net

Dues Schedule: $12 regular

$10 for second member in the same family, for those over 65 yrs. of age, and for those living outside Knox County

Mt. Vernon Amateur Radio Club, P.O. Box 372, Mt. Vernon, OH 43050

Name_____Call-Sign_____

Street_____

City_____State_____Zip Code_____

Phone Number_____License Class_____

ARRL Member (Y/N)_____E-Mail_____

Extra Donation (Optional)_____

Members are entitled to a free MVARC E-Mail address. Would you like one? No_____Yes_____

If yes please enter password_____

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