Ham Radio Rocks!

The Mt. Vernon Amateur Radio Club

September, 2011 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

Jerry Walker, KB8JAA Silent Key

It is with sadness that I must report the passing of Jerry Walker, KB8JAA. Jerry passed away Sunday August 28, 2011at the Riverside Methodist Hospital in Columbus. Jerry was 77.

Jerry worked for General Motors as a tool and dye maker before retiring after 35 years in 1986.

According to the AE7Q website, Jerry was first licensed in March of 1990. Jerry was a General Class ham.

Jerry has been a long time club member and avid supporter. He was a regular member of the Wednesday Club dinner group.

Donald Dean, N8IOJ Silent Key

It is with equal sadness that I report the passing of Donald Dean, N8IOJ. Don passed away Tuesday, August 30, 2011 at his home surrounded by his loving family. Don was 76.

Don was a Graphic Artist for the former National Can Company in Mt. Vernon. He was an Air Force veteran of the Korean Conflict.

According to the AE7Q website, Don was first licensed in December of 1988. Don was a General Class Ham.

The next meeting of the Mt. Vernon Amateur Radio Club will be Monday, September 12, 2011 at 7:00 P.M. in the Red Cross Annex Building, 300 North Mulberry Street, Mt. Vernon, Ohio. **Mark Bisenius, AC8FV, will present a power point program/workshop on message handling. The main component of this program will be how to fill out the ARRL message form both when sending and receiving messages.**

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 Saturday, September 10, 2011 at 9:00 AM at Allison's Finer Diner, 11587 Upper Gilchrist Road,*** **Mt. Vernon, Ohio*****

Don was a past member of the Mt. Vernon Amateur Radio Club. Health issues had left him unable to participate in many club events for the past several years.

Treasurer's Report

Sept 1, 2010
for Aug 1 to Aug 31, 2010

Balance on 8-1-10:	$ 2708.03
Income:	
Dues:	$
Donations:	$
Field Day Donations:	$ 37.00
50-50:	$
Expenses:	
Field Day donation to Apple Valley:	$ 150.00
Balance on 8-31-10:	$ 2595.03
Designated Funds:	
Year 2005 Repeater Fund:	$ 364.94
Field Day Fund:	$ 18.25
Communication Vehicle Fund:	$ 540.18

Barry Butz N8PPF

CONTESTING FROM THE OUTER BANKS

a.k.a. Hurricane Alley

By Barry Butz, N8PPF

For some time I have been planning to operate HF while on a camping trip. Finally I got everything together and was able to contest from Cape Hatteras National Seashore on the outer banks of North Carolina. My setup

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Members are encouraged to send articles pertaining to Amateur Radio, with an emphasis on local activity, equipment reviews, and personal experiences to the Newsletter Editor. Articles are due on the Sunday before the first Monday of the month.

Newsletter Editor: Don Russell, W8PEN
w8pen@arrl.net
Phone: 740-397-0249

is the same as I used at Field Day this year. The antenna is crossed inverted Vs supported by a telescoping fiberglass mast, One dipole is cut for 20 meters and the other for 40 and 15 meters. My radio is an IC-706mkIIg. A Kenwood AT-120 manual tuner rounds out the equipment. Everything, including the antenna, fits in a small carry bag. The mast is mounted semi-permanently to the camper and can be raised by one person. 12-volt power was provided by the camper battery.

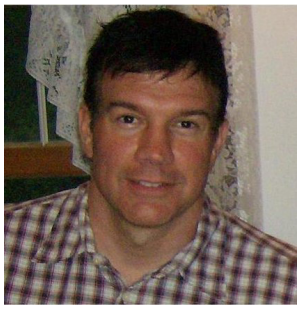
The contest I worked was the North American QSO Party (NAQP), ssb version. It ran for 12 hours on Aug 20-21. At the 2pm starting time I began operating on 40 meters. Things were a little slow at first - 7 contacts in 40 minutes, all in nearby states. Then I switched to 15 meters and things started happening. First contact was in Arizona, next in Ukraine, then several west coast stations, then Hawaii. Next I switched to 20 meters and found stations in the mid part of the country and Canada. Later in the evening I used 40 and 20 meter bands and ended up with 85 contacts in 41 multipliers, including Australia. This was in seven hours of operation.

I had been talking about ham radio to one of the park rangers in previous years. When we arrived this year he announced that he had just gotten his license two weeks earlier. He watched me working the contest and is already planning to upgrade and buy an HF radio.

Now about “Hurricane Alley”. Four days after the contest we had to leave the island because of approaching Hurricane Irene. We expected to return when the storm had passed but it didn’t turn out that way. The only road accessing Hatteras Island was washed out by wave action and won’t be repaired for a few weeks. I had also planned to work the Ohio QSO Party and the September VHF Party from camp. Well, I missed the Ohio party but can still work the VHF contest from home.

Interesting references:
www.nps.gov/caha
www.mgs4u.com/fiberglass-push-up-mast.htm

From DC to Light



By Mark Bisenius, AC8FV

It’s a colorful saying, but do we mean it literally?

Let’s look at the 10 GHz & Up Contest. It says: “All authorized microwave bands from 10 GHz up through Light.” But it’s a microwave contest, right?

According to the General Rules for ARRL Contests Above 50 MHz, Section 1.12:

“Above 300 GHz, contacts are permitted for contest credit only between licensed amateurs using mono-chromatic signal sources (for example, laser and LED) and employing at least one stage of electronic detection on receive. Laser usage is restricted to ANSI Z136 Class I, II, IIa, and IIIa (i.e.; output power is less than 5 mW).”

This rule applies to all ARRL VHF and UHF contests. And yes, even Straight Key Night! The ARRL currently awards VHF/UHF Century Club (VUCC) certificates for laser communications.

What does the FCC have to say? Part 97, Section 301(a), authorizes all license classes on all frequencies “Above 275” (GHz), subject to the sharing requirements

in Section 303(f). Section 303(f) lists various shared frequencies from 3.332 GHz through 956 GHz.

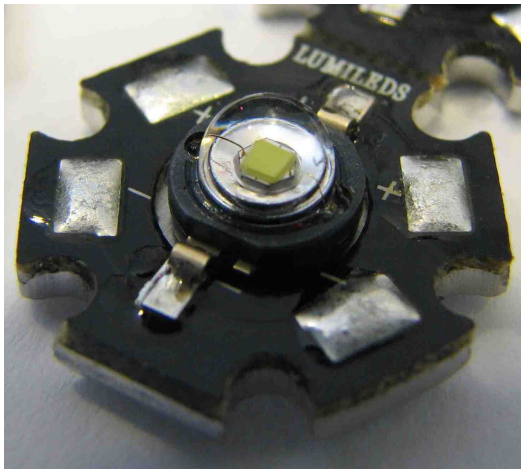
Visible light begins around 400,000 GHz, where no FCC license is required.

So what do we need to get started? Lasers have become inexpensive, but there are safety considerations. The narrow beam must be precisely aimed on a line-of-sight (LOS) path using expensive, bulky optics (telescopes), and is vulnerable to any instability, especially wind deflection and vibration.

Coherent light is also plagued by scintillation, which is the varying atmospheric refraction due to turbulence that makes stars appear to "twinkle."

The 3W Luxeon III red LED by Phillips Lumileds put LEDs in contention with lasers for the first time around 2005, achieving several 100+ mile contacts.

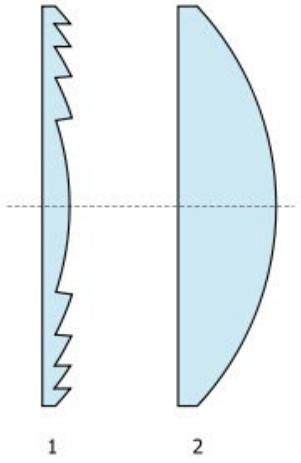
They're very inexpensive and durable. Visible wavelengths are safe, with no out-of-band ultraviolet or infrared (heat) to worry about. The beam is narrow enough to aim, but wide enough not to miss, which means instability, wind deflection, and vibration are not as critical. And their quick response time is ideal for modulation.



Luxeon III red LED

Incoherent light is not as affected by scintillation. Since an LED is not a point source like a star or a laser, it behaves more like light from Venus, which doesn't "twinkle." And the beam can be easily collimated, or focused parallel with a magnifying glass lens, or better yet, with a large, lightweight, inexpensive plastic Fresnel (fruh-nel) lens.

Unlike a convex lens, a Fresnel lens is a 2-dimensional, flat lens consisting of concentric rings, which are "banked" to refract light to the focal point. They do not produce a high fidelity optical image, but they excel at gathering light to a focal point in one direction, and projecting a collimated beam in the other direction.



Fresnel lens

Why use red light? It's the least affected by atmospheric dispersion. Shorter blue wavelengths get scattered much more by the atmosphere than longer red wavelengths, which is why the sky appears blue to humans, and sunsets have a reddish hue.

We could use the transmitter LED as our photodiode receptor, but a state-of-the-art portable kit for mountain topping consists of a small footlocker box with one Fresnel lens to collimate the red LED emitter beam, side by-side-with a larger Fresnel lens to gather and focus the received beam on an inexpensive photodiode. Other kits use PVC pipes with magnifying glass lenses.

Separate circuits are used to modulate the emitter beam with sound or modulated CW (MCW), and to demodulate the received beam. Alexander Graham Bell did this using sunlight and mirrors with his photophone, to make the first wireless communication modulated by speech in 1880!

Optical communications are vulnerable to dispersion and absorption. Just like the headlights of an oncoming car, LEDs can penetrate rain and snow, but fog, haze, mist, smog, smoke, dust and blizzards will scatter and absorb even red wavelengths.

The all-time light communications record is still held by the United States Army Signal Sergeants using a heliograph, which is a mirror aimed from a tripod that uses sunlight to "flash" Morse code. They spanned a distance of 183 miles from Uncompaghre Peak in Colorado to Mount Ellen in Utah, in 1896!

RONJA, an open-source WiFi system using red LEDs operates day and night unless the sun is right behind the

emitter and washes out the signal. The bandwidth at visible light frequencies is immense. There is no licensing required, as there is no interference with RF.

RONJA uses a 640nm red Philipps Lumileds SuperFlux HPWT-BD00-F4000 paired with a Vishay BPW43 photoresistor, which is a perfect combination for any homebrew project.

SuperFlux HPWT-BD00-F4000

A few precautions should be noted. Lasers can damage eyesight even at 5 mW. At infrared (IR) wavelengths, they're invisible coherent heat torches.

Large Fresnel lenses will concentrate sunlight to heat metal red in seconds. The focal spot is so bright you need to wear welding goggles.

Red LEDs are pretty safe. You don't see the collimated beam unless you're right in it's path, and it's safe to look at. But "painting" an aircraft with a collimated beam is not going to be good for our hobby. A pilot may mistake it for a laser, or a rescue signal.

Last year in the 10 GHz & Up Contest, there were 31 logs submitted in the "& Up" category. No activity was submitted for 78 GHz and above. So yes, it's a microwave contest.

But Rule 1.12 was just updated last summer to include LEDs. So a 1km LED contact might get you in the books this year!

Radio Activity

By Don Russell, W8PEN

Antenna ideas

Last month I worked both North American QSO party contests (SSB and Morse Code). Before the contests I was wondering how my homebrew triband dipole would perform. Readers may remember that I built this antenna a few years ago. See the April through July 2009 Newsletters to see how this triband dipole evolved. While I did an adequate job of building the thing, I am not a Mechanical Engineer and I figured it would last about a year or so. I have actually come up with a better way of building this antenna which will be subject to a future Newsletter article. In fact, I am also incorporating some of my ideas in a groundplane antenna project for a future Newsletter.

Anyway, I was thrilled that this antenna still performed well. I had not used it much for over a year. In fact the last contest I used this antenna for had to be the 2009 Ohio QSO Party. Then in early 2010 my brother Chuck, AC8R and I were doing some PSK on 20 meters.

During the August 2011 running of the North American QSO party on CW (Morse Code), contacts came easy. I was able to run a frequency about anytime I wanted to. For those uninitiated to contesting, running a frequency is the term used to stay on one frequency and call "CQ", letting other stations call you. It is the most effective way to contest. Conversely, Search and Pounce is when a contester tunes around for stations in the contest to call (Find a station and pounce on it!). When Search and Pouncing on CW I generally worked the station on the first call. This indicates to me the antenna was getting out very well indeed. During the SSB version, I had similar results with the antenna, some stations saying I was 20 over 9 on the S meter at their location. Who needs a beam? I was able to work easily into Florida. Stations in California were likewise easy to work on 20 and 15 meters. 10 meters did not open up for either contest.

This got me thinking. I have this antenna up about 50 feet and use a rotator to turn it. My rotator got hit by lightening about five years ago and I never got it fixed or replaced. It does turn, I just have to go outside and see what direction I am pointing to. Most heavy duty antenna rotators are pretty expensive. One that will turn even a small triband beam will run over $300. One can build

two of these triband dipoles and place them crossways so that one will aim North and South and the Other aims East and West. This would be much cheaper than a beam and rotator and from my experience, I am just has happy with the dipoles as I was with the beam. More so. One could switch to either dipole by using a relay at the top of the tower, thus saving money on coax cable, or simply run two sets of RG-8X down the tower and switch at the bottom of the tower or in the shack. I think I would run the two cables into the shack and use a manual antenna switch right at the rig. Keeps it simple. I suspect this project could be done for under $150, including the cost of the two coax runs at about 100 feet per run.

In my case, I could really use a new rotator. The 6 meter beam is still up there and needs rotated every now and then. However, this antenna would not require a heavy duty rotator. The triband dipole at most, weighs 3 pounds and attracts very little wind torque. The 6 meter beam is no bigger than a TV antenna. So, a simple TV antenna rotator would do just fine. You can find these almost anywhere for under $100. Perhaps this would be cheaper than my two antennas broadside to each other idea. Okay. This is the way I should go. Thanks for helping me think through this.....

Readers may be interested in one or the other solutions so I will leave the whole thing in the Newsletter. That is the idea of this column. Bringing up interesting things to try be it home brewing something or an operating activity.

Club Cookout

What a great time we all had at the August club meeting. Good food, a good program. Everyone went away happy.

For those not “in the know”, the club had its annual “finish the Field Day food” event during the August meeting. We had a huge Charcoal Grill going for the hamburgers and two smaller gas grills to handle the brats. Matt Ware, KD8PSK handled the brats, while Larry “Doc” Helzer, AA8WP, worked on the hamburgers. Plenty of covered dishes were on hand and the feast had begun.

After a quick meeting, Craig Butts, KJ6DYP, talked about his involvement in working with his students to launch weather type balloons. The balloons had cameras on board along with APRS tracking. Was indeed an interesting night. The group has pegged Mike McCardel, KC8YLD, as the one most likely to try a balloon launch from Knox County before Winter sets in.

Club members that missed this meeting missed a lot of fun and interesting conversations. I understand Mark, AC8FV, is planning a program on message handling for the September meeting. This is something we all need refreshed on once in a while. Mark has been handling a lot of the messages directed to our Sunday Night Net, so he should be well prepared to present this topic.

It's Back to School Time...for Ham Radio, too!

By Dan Romanchik, KB6NU

As I write this, it's about 85 degrees, and I'm sitting on the patio of a cottage overlooking Elk Lake in northern Michigan. This idyllic spot is about as far away from school as you can get. And yet, in less than a month, kids will be back in school, and if kids are going to be back in school, why not ham radio operators?

The fall is a good time to begin teaching a new group of Technicians. I favor the "Tech in a Day" or "Ham Cram" type of class. This type of class focuses on teaching students the answers to questions on the test rather than the material itself.

There's a lot of controversy about this, and many decry this method of teaching, but I think the best way to learn about ham radio is by actually doing it, and you can't do if you don't have a license. Besides, how much more instruction will students actually get in a more traditional eight-week or ten-week course, maybe 16 hours? Will those 16 hours make that much of a difference?

For the sake of argument, let's say that you've decided to offer a one-day Tech class. Now what? Well, the first thing you have to do is to find a place to teach it. Possible sites include your local public library, a township hall, a community college, perhaps even your church.

Now that you have the place, you need to find some students. Your local emergency-management group would be a good place to start. Also, make sure a notice gets published in your amateur radio club's newsletter. Chances are most of the subscribers already have licenses, but they may have friends or relatives who would be interested. Also, make sure the class gets listed in the upcoming events section of local newspapers or magazines.

Once people start signing up, you should suggest that they either purchase a study guide or download my free study guide (www.kb6nu.com/tech-manual). Because I use my study guide when teaching the class, I always advise them to get a copy, but if you'll be using other materials, then your advice may differ.

I counsel the students to read through my study guide a few times and take some online practice tests before coming to class. That will make them familiar with the material, especially areas they may be weak in or have questions about. By bringing those questions to class, we can address those areas in a little more depth, which will, hopefully, give them the help they need to pass the test.

The class itself is six hours long, running from 9am to 3pm, at which time we give them the test. This is not a lot of time for the amount of material I have to cover, so I move along at a pretty brisk pace. I concentrate on giving them the answers, but with enough context to that it all makes sense.

OK, let's say your class was wildly successful, and you now have a group of newly-minted Techs. What do you do now?

Well, you might consider offering some short sessions on what ham radio operators do--Ham Radio 101, so to speak. The topics could include how to choose your first radio, the basics of FM repeater and net operation, and building your first antenna (say a 2m ground plane). They'll be more enthusiastic about these classes now that they actually have a license.

It might also be a good idea to schedule a General Class license course for sometime shortly after the Tech class. This will encourage them to upgrade while they are enthusiastic about the hobby.

I hope that this has encouraged you to offer some ham radio courses of your own. If you have any questions, feel free to e-mail me at cwgeek@kb6nu.com or phone me at 734-930-6564. Good luck, and let me know how your classes turn out.

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When not preparing for his next ham radio class, Dan publishes the "No-Nonsense" study guides for the Technician and General Class license exams. Free versions and print version are available from his website at www.kb6nu.com/tech-manual.
E-book versions are available for the Kindle and devices that run the Kindle app on Amazon.Com and for the Nook on BarnesandNoble.Com.

A GOOD FCC EXPERIENCE

By Barry Butz, N8PPF

In early May I renewed my license online at the FCC web site. After 3 ½ weeks I hadn't received it in the mail. I decided to call them on the phone to ask if I should be worried. The last menu choice was to talk to a person, so that's what I chose. The operator directed me to the ULS help line, where it was answered immediately by Angie. This was late on a Monday. She said the process shouldn't take that long and she would "open a case" (I don't think my favorite kind of case) and direct it to the proper department. She would call back the next day to tell me what action would be taken. Sure enough, she called on Tuesday morning to say they would print a new license and send it by certified mail. The next day it was mailed and it arrived at my house on Friday. I was very pleased with the experience. I only had to listen to one menu and then everything went smoothly with no waiting. By the way, the FCC paid $5.59 for certified mail.

Hurricane Irene

From the ARRL Letter, September 1, 2011

Hurricane Irene -- the first major hurricane of the 2011 hurricane season -- left extensive flood and wind damage along its path through the Caribbean, the East Coast of the United States and as far north as Atlantic Canada. Beginning on August 20 as then-Tropical Storm Irene headed toward Puerto Rico, radio amateurs were already on alert.

Irene first made landfall in the US as a Category 1 storm on the morning of Saturday, August 27 on North Carolina's Outer Banks. In preparation, ARRL Emergency Preparedness Manager Mike Corey, W5MPC, activated the ARRL HQ Emergency Response Team (HQERT). On Tuesday, August 23, this team of ARRL HQ staffers began monitoring various nets and providing support to the affected Field Organizations from W1AW, the Hiram Percy Maxim Memorial Station. Two days later, the HQERT went into active mode. Read more here.

MVARC

Mt. Vernon Amateur Radio Club

Minutes for the August 8, 2011 Meeting.

By Jeff Butz, N8SMT

Attendees:

1.	Jeff A. Butz	KD8LTD
2.	Nicole Butz	KD8BHG
3.	Jim Jennessee	KD8UT
4.	Don Russell	W8PEN
5.	Mark Bisenius	AC8FV
6.	Barry Butz	N8PPF
7.	Tom Evans	KD8HSA
8.	Matt Ware	KD8PSK
9.	Mike McCardel	KD8YLD
10.	Don Blizzard	W8UMH
11.	Ruben Clark	KB2SAI
12.	Bart Hains	KD8LDT
13.	Larry Helzer	AA8WP
14.	Jeff L. Butz	N8SMT
15.	Scott E. Fields	KD8OAB

Vice President Mark Bisenius opened the meeting at 7:15 P.M.

Treasurer's Report: Barry Butz, N8PPF

As of the end of July

Income

Dues	$ 12.00

Expenses

Red Cross Donation	$ 200.00
Communication Vehicle Equip.	$ 69.14

Balance on 7-31-11 $ 2656.54

A motion to accept the Treasurer's Report was made by Jim Jennessee, seconded by Don Russell and passed by voice vote.

Secretary's Report: Jeff Butz, N8SMT

A motion to accept the Secretary's Report as published in the newsletter was made by Barry Butz, seconded by Tom Evans and passed by voice vote.

EC Report: Ruben Clark, KB2SAI

Ruben has been working with "the Local Emergency Planning Committee" (LEPC) and the next exercise is scheduled for September 15th. in the evening. It will only be a functional exercise not a full exercise and will only require two or three additional members.

Public Information Officer: Mike McCardel

On a statewide note; Frank Piper just appointed Training Director a will work with the local Emergency Coordinators.

Old Business:

None

New Business:

Steve Barr KD8GRM told Mark that the Mansfield Club is participating in the "Ohio State Parks on the Air" event on September 10th. at Malabar Farm and has invited anyone from our club to join them there.

Larry Helzer, AA8WP, announced that Keith Frank, W8JZR, has recently passed away. Keith worked on bombers during WWII and worked on the Manhattan project.

A motion to adjourn was made by Ruben Clark and seconded by Scott Fields. The motion was carried by voice vote.

The meeting was adjourned at 7:35P.M.

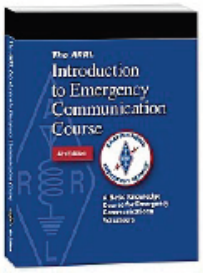
ARRL Introduction to Emergency Communications Course

Saturday & Sunday October 8 & 9, 2011
8:00 AM to 6 PM

20 Hour two day intensive course leading to the exam for ARRL's 'Introduction to Emergency Communications 'Certification

This course contains all the topics and subject matter found in the ARRL's online Introduction to Emergency Communication Course in a classroom format. This format leads to the same certification as the online version in a single weekend for those who pass the exam. An exam will be offered after the class for $15 payable to the ARRL.

The lead instructor will be Bill NE1LL. Bill is a veteran mentor of the online version mentoring over 150 Hams in over 50 sessions. Special topics instructors will include: David Dilbeck Ph.D-W8ACE; Stan-N8BHL, Delaware County EC; Bob Fitrakis JD Ph.D-KD8JLL



The course is free but registration is required. Those wishing to purchase a book may do so at Universal Radio for under $25.00 plus tax. For those wishing to take the exam, the fee is $15 payable to the ARRL.

This course will be held at the Columbus Institute of Contemporary Journalism's Carriage House, 1021 East Broad Street-Columbus, Ohio. Saturday will include a working lunch. On Sunday, lunch will be on your own.

Reservations to: colvetexams@yahoo.com or 614-726-5539. Further information and updates are available at our website www.colvet.org and at the American Radio Relay League website www.arrl.org

8/2011

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_____

Other Comments:

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