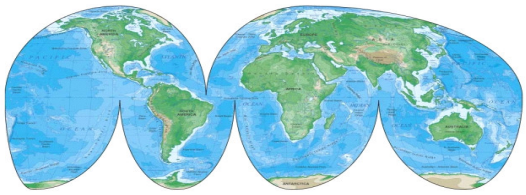
MOUNT VERNON AMATEUR RADIO CLUB

C  Q

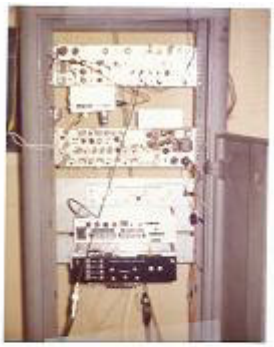
August 2006 Newsletter

MEETINGS SECOND MONDAY OF THE MONTH AT THE RED CROSS ANNEX BUILDING,
300 N MULBERRY ST, MT. VERNON, OHIO
REPEATER FREQUENCIES: 146.790 (-) K8EEN /R 444.750 (+) KC8YED /R 53.790 (-) WA8YRS/R
SUNDAY NIGHT ARES NET AT 8:00 P.M ON THE K8EEN REPEATER OPEN TO ALL

From the Editor

Welcome to another edition of "CQ", The Newsletter of the Mt. Vernon Amateur Radio Club.

This month, I finally find room for part 3 of the History of the Mt. Vernon Repeater System. For those needing a refresher, Part 1 was in the March, 2006 Newsletter. Part 2 was in the May, 2006 edition.



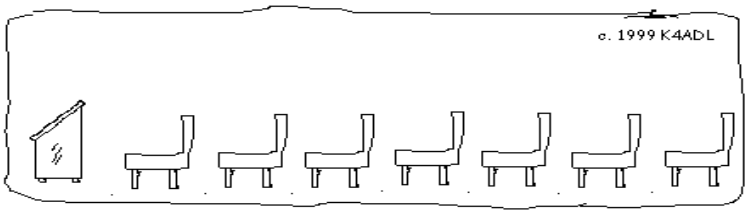
Here are a few interesting pictures from the past received from my brother Chuck, WA8ONN. The first picture is of Mt. Vernon's first Repeater, WA8ONN/R and later WR8ABA.

Not sure of everything, but the top chassis is the receiver strip. The box with the single tube sticking out of it is the COR (Carrier Operated Relay) used to wake up the repeater controller when a signal is present. The next chassis is the transmitter strip. From there, it is hard to tell. There was the home brew controller and a DTMF decoder and an audio mixer, but I can't tell which is which. The Bottom looks like a power supply.

The next two picture are of Chucks home station located at our parents house. Our shack was in an enclosed back porch. The top picture is of a Heathkit Apache 6 meter AM/CW transmitter on the left, and an National Radio NC-270, or something like that receiver. I don't believe the receiver covered 6 meters so there must be a 6 meter receiving converter somewhere in that pile! The Radios are Chuck's. My Heathkit keyer is on the table. The last box on the far right is a military surplus receiver, although I don't remember much abut it.

The next picture again shows Chuck's Apache. It also shows his new Heathkit 6 meter SSB transceiver in the middle. Don't remember the model. On the left is a better view of that surplus receiver. On top is the speaker for the transceiver, and a Heathkit signal scope. This scope hooked up to any transceiver so you could check your modulation, or the other guys modulation, among other things.

Pretty messy shack isn't it? Sometime later, my Heathkit HW-100 was added to the mix. By the way, on the side which you may not be able to read, it says the pictures were taken in 1970.



ANNUAL MEETING OF THE TRUCKERS' CB-QRP CLUB

HISTORY OF THE MT. VERNON REPEATER SYSTEM, PART III

By Don Russell, WA8YRS

Repeater number 5 was installed on a 100 foot tower at the Armory. Walter McCutchen, N8CIY, was repeater tech. Again, I was not very active in Ham Radio at the time. This was mid 80's. I remember that when my former employer shut down their manufacturing plant in Mt. Vernon (Chattanooga Glass, Diamond Bathurst, and what ever else in between!), I found work in Columbus and drove back and forth. I was using the repeater a little bit then. Coverage seemed extend out to Route 3 and Route 605. I can remember using it right along 605, but would drop out before I got to the Route 605 and Route 37 intersection. I also had to be on this side of Johnstown on route 62 to be able to get into the repeater reliably. I have no idea what kind of equipment was being used. Jim Woodland (WB8AYM) was Knox Emergency Coordinator at the time. For reasons long forgotten, Walter decided to give up the Repeater Tech job.

This was about the time that Jim Woodland and I start talking about yet another repeater. Apparently the one at the Armory was going down hill fast. So I talked to my brother (Chuck, WA8ONN) and he was nice enough to help us out. Since he worked for Ohio Mobile, getting a transmitter and receiver was not a problem. The receiver was solid state. The transmitter was mostly solid state but had a tube final. It ran about 60 watts output. For the controller, we used an Atari 400 computer (remember them?). Chuck wrote a basic program with machine language sub routines. Even had a digital voice IC connected to it. We didn't use that part of it too much, but it worked. Not sure, but I think the duplexer was a home brew job that Chuck had built when we first got into repeaters. I didn't dare touch that! Either it was going to work or not. Well, this was repeater number 6. It worked okay. About the same coverage as repeater number 5, but then again, the location was the same. Had some problems keeping the controller working. If the power went off, I had to go out there and reload the control program. No disk drive then. Just a tape drive! I did some slight modifications to the basic program controlling the repeater, but didn't get too involved in how it performed distance wise. Local was good enough for me at the time and anything extra was okay.

Jim Woodland passed away sometime while repeater number 6 was going and from here on in, the picture is not quite so clear. I remember Rudy Maxwell, W8NLQ, being involved in the repeater, but not sure how much of a part I played in it. This was late 80's because I was still driving back and forth to Columbus, and I got my present job at Ariel in 1990. Rudy and Bill Morain (SK, sorry, can't remember his call) were the official greeters on the repeater. Anyone calling in would be most likely answered by one or the other. Also about this time, a Ham from Johnstown took over the repeater. I believe he installed a Commodore computer in place of the Atari computer (I call that a down grade). I was out of radio again and have no idea how well this worked. We will call this one repeater number 7, since at least the controller was changed.

Repeater number 8 was the first repeater at the water tower. I need to get the story on this repeater. This may be the first repeater that Kelly, N8NMQ, was involved in. I would say the club bought the present controller and duplexer at this time. The receiver and transmitter from the Armory repeater were used. I am not really sure about these facts though. This repeater was on par with the one out at Woody's. It had great coverage according to Bob, N8PCE. The major problem with this repeater was the final in the transmitter kept going out, and the Diamond antenna was being hit by lightening quite frequently.

Repeater number 9 was the next upgrade. It was the GE Master II that was eventually replaced by our present Repeater. We all know about this one. At times it worked really well, at other times it wasn't worth a lot. When Kelly gave up the repeater tech business, this repeater quickly went down hill. This is when I offered to look at it. I believe most of the problems with this repeater were the result of lightening strikes and the corrosion of some of the coax fittings. From what I could determine, it had a lot of desense problems. It also had a lot of noise problems in the audio, which was partly caused by desense, and some caused by grounding problems. It would sound terrible one day, and great the next. I am sure that it worked as planned when first installed. After installing our present repeater, it was found that the receiver in this repeater had a lot of corrosion in the selective cavities. So much so that Andy, KC8EVM, just threw it away!

Repeater number 10 is the present repeater. I was involved from the get go on this one and must admit, that I am very proud of the results. This repeater is almost as good as the one at Woody's, and as good as the first one at the water tower. The audio is very clean and I have never detected any desense.

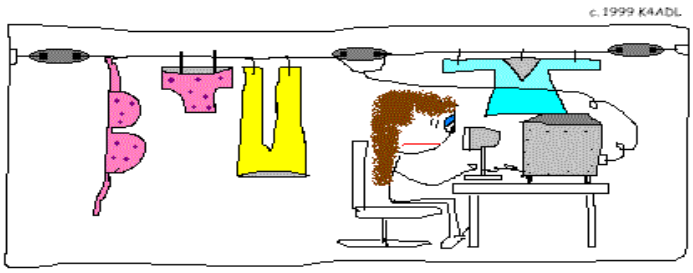
The repeater committee decided that a new repeater was in order not because of the poor condition of the previous repeater. I think problems could have been solved with the old repeater. What really convinced me to start from scratch was the lack of documentation. If anything serious happened, we would have been in a world of hurt'n to fix it ourselves. With our present repeater, there has been a real effort to keep information handy to those that may need it. There is a book at the

repeater site that contains all the information needed to do any trouble shooting. There are also at least two other books, one I have and the other belongs to Barry, N8PPF. There is also a computer CD with all the info in Word Processor files. In doing this, we have assured that the club will not be left stranded if for some reason we lose a repeater technician. Right now, I would say the Club is pretty well set. Even though not official, I would say that Bob, N8PCE, Barry, N8PPF, and myself (Don, WA8YRS) are the repeater techs. Numbers are a blessing. A double insurance is that the repeater was built by a reputable company that backs their products with a two year warranty. Even though this warranty has passed, they will still service this repeater. We also have a back up Repeater Tech in Andy, KC8EVM. Andy is available whenever needed to help us with the more technical nature of repeater servicing. With Andy's experience and knowledge, our repeater is assured of a long and useful life. I am very glad we have Andy as a friend.

This repeater will continue to be a work in progress. There are many things we can do to improve its performance. Being considered, but probably not likely to happen is a receiver site out East to improve coverage in the Eastern part of Knox County. That would be a good choice. In fact, I would have no problem with multiple receiver sites spread throughout the county. This may be too much to ask of a Club the size of Mt. Vernons. The constant financial strain could be over whelming, not to mention the increased technical problems. You can figure a minimum of about $300 per site to start.

This repeater already has an internet connection Via Echolink. This capability has not been used much lately, which is too bad because it is pretty neat. If anyone hears and station calling via Echolink, please give him a call.

This wraps up the three part series on the history of the Mt. Vernon Repeater System. What is next? Hard to tell. I guess I could go into the 440 Mhz Repeater and the 6 meter Repeater, but maybe at a latter time. We need to build some "history" on these two repeaters. I believe our current 2 meter repeater will last a very long time. Baring a severe event such as a lightening strike that would take out everything, this repeater should last another decade or two. Oh, if such an event did happen there would certainly be some down time. But since our Club Treasurer (N8PCE) keeps the repeater insured through the ARRL insurance program, the cost of putting another repeater together would at least be minimal.



UNABLE TO AFFORD REPAIRS TO HER CLOTHES DRYER, VELMA LEARNED TO TOLERATE POOR SIGNAL REPORTS.

MVARC
Mt. Vernon Amateur Radio Club
Minutes for the July 11, 2006 Meeting.

Attendees:

Barry Butz	N8PPF
Jeff Butz	N8SMT
Don Russell	WA8YRS
Mike McCardel	KC8YLD
Larry Helzer	AA8WP

Vice President Don Russell, (WA8YRS) didn't open the meeting at 7:10 P.M.

No Old Business

No New Business

The meeting wasn't adjourned at 7:11 P.M.

A rousing and entertaining Ham Radio related bull session ensued until 8:00 P.M.

HAM HISTORY
By Barry Butz, N8PPF

Credit for this article goes to: International Electrotechnical Commission (IEC)
http://www.iec.ch/100years/techline/

Last month we had a brief biography of Alessandro Volta. To continue the series on scientific pioneers, this month's figure is André Marie Ampère (1775-1836).

Ampère was a physicist and mathematician born in Lyon, France. His early life was marked by tragedy: soon after his sister's death in 1792 his father was beheaded by the Revolutionary guillotine, then Ampère's first wife died in 1803 only a year after he started a career as a school teacher of physics and chemistry. In 1804 he put this behind him as he moved to Paris to tutor mathematics at the École Polytechnique, becoming a professor there in 1809. During the next decade he worked in all three fields, identifying the new element fluorine, developing an account of refraction in the new wave theory of light and reclassifying partial differential equations.

After seeing a replication of Oersted's experimental demonstration that an electric current caused the deflection of a compass needle in 1820, Ampère immediately sought to develop a mathematical theory of electromagnetism. Working at astonishing speed he produced a full theory within two months. In November 1820 he gave a paper to the Academie des Sciences describing how the strength of rotational magnetic forces

produced by a current-carrying conductor varied inversely with distance from the wire's axis. He also showed that a pair of current-carrying conductors behaved exactly like a pair of magnets, with the magnet polarity correlated to the direction of the current. In 1826 Ampère published these electromagnetic results in his Memoir on the Mathematical Theory of Electrodynamic Phenomena, securing also a more congenial post at the Collège de France where he could teach just electrodynamics.

At an international conference on electricity in Paris in 1881, the world agreed to adopt the 'ampere' as the unit of current, a term still used in the SI system of units.

NEW EMERGENCY COMMUNICATIONS BILL INCLUDES ROLE FOR HAMS

From the ARRL Letter
July 28, 2006

A bill to enhance emergency communication at the Department of Homeland Security (DHS) includes Amateur Radio operators as part of an overall effort to provide interoperability among responders. The 21st Century Emergency Communications Act of 2006 (HR 5852), an amendment to the Homeland Security Act of 2002, passed the US House this week on a 414-2 vote and has gone to the Senate. Its sponsor, Rep David G. Reichert (R-WA) -- who chairs the Subcommittee on Emergency Preparedness, Science and Technology -- says his legislation is designed "to improve the ability of emergency responders to communicate with each other" --interoperability.

"Until the events of September 11, 2001, many people in this nation believed and assumed that first responders from different disciplines and jurisdictions could actually talk to each other," Reichert -- a former police officer -- told the House in support of his bill. "It wasn't happening. It is still not happening today. Unfortunately, that was not the case then, and, as demonstrated by the inadequate responses to Hurricane Katrina, that is not the case today."

Reichert told his colleagues that the inability of first responders to communicate with each another effectively led to the loss of many lives along the US Gulf Coast last year. "This is simply unacceptable," he said.

His measure also would require the DHS to strengthen its efforts to improve emergency communications. HR 5852 calls for Amateur Radio operators to be part of a "Regional Emergency Communications Coordination Working Group" (RECC Working Group) that would be attached to each regional Department of Homeland Security office. The RECC Working Groups would advise federal and state homeland security officials.

n addition to radio amateurs, membership in the RECC Working Groups would include state and local officials; law enforcement, first responders such as fire departments; 911 centers; hospitals; ambulance services; communications equipment vendors, telephone, wireless satellite, broadband and cable service providers; public utilities; broadcasters; emergency evacuation transit services; state emergency managers, homeland security directors or representatives of state administrative agencies; local emergency managers or homeland security directors, and "other emergency response providers or emergency support providers as deemed appropriate."

Federal government representatives to the RECC Working Groups would include representatives from the DHS "and other federal departments and agencies with responsibility for coordinating interoperable emergency communications" with state, local, and tribal governments.

According to the bill, the RECC Working Groups would function to assess the survivability, sustainability, and interoperability of local emergency communications systems to meet the goals of the National Emergency Communications Report. That report would recommend how the US could "accelerate the deployment of interoperable emergency communications nationwide."

The RECC Working Groups also would be tasked with ensuring a process to coordinate the establishment of "effective multi-jurisdictional, multi-agency emergency communications networks" that could be brought into play following acts of terrorism, natural disasters and otheremergencies.

HR 5852 has been referred to the Senate Committee on Homeland Security and Governmental Affairs.

FIRST ARRL ONLINE AUCTION PLANNED FOR OCTOBER

From the ARRL Letter
July 28,2006

The ARRL may be giving eBay and the other auction sites a little competition in the Amateur Radio arena this fall when the first ARRL Online Auction gets under way. Auction proceeds will help to support the League's educational services and programs. The event now is in the planning stages, says ARRL Business Services Manager Deb Jahnke, K1DAJ.

"We will soon embark on an exciting new venture," Jahnke said in providing the broad strokes of the online auction to ARRL Headquarters staff members. Jahnke and her Business Services team will organize

and manage the event, which is planned for late October -- the exact dates haven't been set yet -- and she promises it will be lots of fun.

"This will not be just another boring auction, because we plan to include many unique and special items related to Amateur Radio," she said. "We are hoping to offer items that will interest our audience, ranging from DXpedition vacation rentals to restored Collins 75A4s." Jahnke says this inaugural online auction will be limited to 100 items.

The auction will be open to all -- ARRL members and otherwise. Bidders just need online access to take part. "With an online auction, we can reach potential bidders across the nation and around the world," Jahnke pointed out.

Jahnke says she anticipates that the online auction will be open for about two weeks, and participants will need to register in advance. At this stage, she says, the auction planners are seeking additional ideas but no auction booty as yet. Contact Jahnke via e-mail <djahnke@arrl.org>.

Repeaters and Stuff
By Don Russell, WA8YRS

Getting the basics out of the way, the 2 meter repeater continues to be a reliable and effective Repeater. Through all the severe weather we have had this year, our repeater was always there for us. Knock on Wood! The 440 repeater is still being serviced. Just before reinstalling the repeater, Steve, KC8YED, found a few more problems with it. The 6 meter repeater continues to run smoothly. We have a bit of a receive problem, and I have not done my part on getting the main transmitter on line, but we do have the repeater working with reasonable coverage. Barry, N8PPF, and I will work on making it better. Originally, Barry and I had agreed to run the Repeater through August 2006 and see how much activity there was on the repeater. If there was little activity, then the repeater would be taken off the air. This has been delayed a bit. I would like to get the receive problem fixed, and the transmitter fully functional. Then we will go from there. Don't expect the 6 meter repeater to be turned off any time soon.

My annual fishing trip to Dunkirk, New York has come and gone. This time I made a real effort to do some ham radioing. As in Field Day, this trip only comes once a year. The rest of the year you sit around dreaming of how to make it better. Well, let me tell you, I need a lot of improvement on the ham radio end!

Armed with my trusty FT-817 QRP rig and a few choice antennas and a spool of wire just in case, I thought I was prepared to at least have a little bit of fun on the ham bands. Well, it is harder than it looks! Even though I did not spend a great deal of time trying to make contacts, I certainly expected to do better than one contact for the week!

I really did not wish to hang wires in the trees so I put a mobile mount on the boat and used my old huslter mobile antenna for 40 meters. This antenna had not been used for over 15 years. There was no problem getting the SWR down to 1 to 1. However, making a QSO was hard. I finally did work a station down in Virginia, but the QRN was so bad that he could not copy much of what I said. To be honest, using a short antenna along with a QRP rig just does not work out to well. It puts all the skill on the receive end. So, in my opinion, those QRP ops that brag about how little power and how small of an antenna they can use to make a contact; I am not impressed. The guy on the other end, however, deserves the pat on the back. Of course that changes when both stations are running QRP. Then it takes skill on both ends.

Not giving up easily, my next effort was to put a 20 meter vertical up. Against my wishes, I did need to use a tree for this antenna. It was one of the few trees that was out of the way and I felt safe putting this antenna up. While I wanted to put 8 radials on the ground, for safety reasons I limited the radials to three that were out of the way with no danger of being tripped over. I tried PSK 31 and CW with this antenna and failed to make any contacts at all! Plenty of stations on the air, just nobody could hear me.

My last effort was a long wire antenna stretched between two trees. I was really getting desperate here. This antenna was a bit over 60 feet and I felt confident that I would be able to easily work a few stations. Well, that did not happen. I thought about putting a few radials out, but again, not wanting to chance tripping anyone, I resisted the temptation.

So, my best antenna proved to be the 40 meter mobile whip. I think if there had not been as much static, I could have made a few QSO's with this antenna. The band, however did not cooperate, and there was QRN on 40 meters all week long.

I do feel my efforts were not wasted. It gave me a better appreciation for those that like to operate under these conditions. I also realized that while I have played around with QRP, I have always had a pretty decent antenna to use. I do not have the patience to do QRP with limited antenna resources. So I have revised my plans for next year.

Next year, I will take a standard 100 watt transceiver with me. My deep cycle boat battery will double as the station power supply, if I do not have the radio set up as a true

mobile. Perhaps I will invest in the mobile antenna set up that Mike, KC8YLD, is having a lot of success with. That would eliminate having to try and set up an antenna at the camp grounds. It would also provide an interesting ride from Mt. Vernon to New York and back.

I do, however, like to play with different antennas. I am thinking of a 20 meter ground plane antenna made of the bamboo poles I was writing about in an earlier Newsletter. This would be a light weight antenna, and I could bring a 10 foot mast that could be clamped to the picnic table or something, and still be out of the way. This would be a really good antenna, I would think.

Of course, I have a year to play around with these ideas. Problem being a lot of that will be cold winter months. I have found out that if one waits until Spring to start testing ideas, vacation time sneaks up on you rather quickly.

ComPIOnents
By Mike McCardel, KC8YLD

News

Next club meeting is 7pm Monday August 14 at the American Red Cross Annex, 300 N Mulberry, Mount Vernon.

On August 6, the District 6 ECs and others will have met at the annual District 6 picnic in Mansfield. Special guest at the event was Frank Piper, KI8GW the new Ohio Section EC. Hopefully our EC and/or AECs will bring back information concerning the multi-county SET and other news from the district.

Dick Huggins, WD8QHY appears to be recovering well after his Father's Day illness. I've heard Dick several times on the air and he was a great help during the July 30 KCARES Net. Even though I seemed to be transmitting well, for some reason he was the only station I hear out of the ether and he served as a relay telling me what everyone else was saying..

Steve Dick, KC8YED has been home recovering from eye surgery. Steve suffered a detached retina and a hole in a retina. His surgery went well and he is recovery and staying busy by operating on the HF bands. I've heard him check-in several times on the Ohio Single Side Band Net (OSSBN) and understand he has joined the Old Man International Sideband Society (OMISS). OMISS is a work all states net. We wish a speedy recovery to both Dick and Steve.

Coming Events

August 6 1pm ARES District 6 Picnic/Meeting Lion's Club Park in Ontario
August 5-6 NAQP CW Contest
August 5-6 ARRL UHF Contest
August 6, 13, 20, 27 8pm KCARES Sunday Night Net, All Amateurs Welcome
August 14 7pm MVARC Club meeting
August 19-20 NAQP SSN Contest
August 26-27 Ohio QSO Party Contest
September is national Preparedness Month
September 9-11 ARRL Sept VHF QSO Party
September 10 North American CW sprint
September 16 Amateur Radio Public Awareness Day
September 17 North American Phone Sprint

KUDOS to

KC8UTL and KC8YLD for being listed in the August QST for meeting the requirements for Public Service Honor Roll for the month of May.

To all who checked-in during the Severe Weather nets in July KC8YLD, WA8YRS, KC8WXL, KC8YED, N8WL, AA8WP, WD8QHY, KA8LIZ, KC8UTL, KC8JJX, KC8TDW, KC8MKL, KC8VTG, KB2SAI, N8QPO, N8QPM and others who monitored. My apologies for anyone I missed.

Reflections on serving as NCS for Skywarn Net

The KCARES activated twice in July for tornado warnings. I was able to activate KCARES July 10 and July 14 and served as NCS during at least part of both nets. I would truly like to thanks all the people who checked in during these nets giving reports and standing by in case they were needed. Steve Dick KC8YLD took over, as Net Control on the Monday July 10 net as I became aware that the brunt of the storm passed over my home QTH and my help was needed at home. We had very good support from Richland County, especially from Mark Dailey KC8MKL and Ken Allen KC8TDW who served as liaison among KCARES, District 6 and the National Weather Service during the July 10 and July 14 nets, respectively. Licking County EC, Steve Katz, N8WL checked in early during the July 14 activation to report he was monitoring and standing by in the event we needed assistance. It's nice to know that our neighbors are looking out for us.

A couple of things I would like to comment on are the need of knowing where you are when you report, especially when you are mobile. NWS frowns on generic and non geo-specific reports. I was fortunate to have a current, official Knox County Road map. Unfortunately it was in my car and I had to vacate the net for a couple minutes to get it. I now have three maps. I now have one in the car and one at home and one more for the office. These road maps are available through the Knox County

Engineers office and are free of charge to Knox County residents. I just called the Engineer's office, identified that I was and requested a couple, and they will mailed them to me. The maps have the County divided into Townships; list all roads by road number and name and list stream names and places of interest. The reverse side of the maps have detailed city and village maps for each community in Knox County. It is a great tool for identifying a stream or creek or the nearest intersection, or the approximate address of your location. Another thing, if you are ever a net Control during such an event, is to keep a log of the check-ins and reports. I was writing things downs on scraps of paper at my office during the July 10 call up. It wasn't pretty but came in handy when I received a call from the National Weather Service on Tuesday to confirm information they had received during the net. During the July 14 call up, I was a little better prepared and kept a better log. I plan to use the ICS/NIMS log, the one we used during the County wide SET in May, for now on.

One last thing to consider is accuracy of reports. The more information you have the better. Things the NWS haves asked for clarification for have included, location of nearest intersection or notable landmarks, the size, species and health of damaged trees. Don't make assumptions about anything you don't observe yourself. If reporting on behalf of someone else state your source and their training, if known. Use plain language and be careful about the words you choose. To the NWS tracking a storm and observing the storm have two distinct different meaning.

How easy is it to become a Ham?

Can you pass this test? I am not a test taker. I mean, I do okay, but I am not one who inherently or intuitively takes tests well. A lot has changed within the radio communicating ranks over the years. It can be argued that the tests are getting easier. Be it a good thing or a bad thing I believe what the instruments by which we prove our knowledge, abilities and readiness has gotten easier over the years. So here is this month's challenge. Could you pass this test to prove you qualify and earn the rights and privileges that passing it would give you?

Okay let's make it easier. Can you correctly identify what completing these ten criterions would earn you? The first person that can email me the correct answer, to what you would earn by completing these requirements, will receive an oval HAM sticker for their car. All entrants who attend the September 11, club meeting, will receive a 1.5" x 1.5" "When All Else Fails sticker." I know I'm cheap, but it is something. Guessing the year these requirements were published will be the tie -breaker. The decision of the judge (that's me) is final, omnipotent and unchallengeable. The correct response will be published in next month's newsletter.

Email the answers to kc8yld@arrl.net.

To obtain _____ (you) must…

1. Receive and send correctly a (CW) message of not less than 5 words per minutes.

2. a. Explain how and what he would transmit in order to establish communication with another station.

   b. Make up a sample radiogram including the body of the message.

3. Tell what the United States radio Laws state about wave length, power, operating hours, and kinds of apparatus for amateur radio stations; whether a license is necessary for all such stations; whether the operator needs a license; how one knows what calls to use at an amateur station.

4. Write down 10 of the most important "Q" signals and give the meaning of each.

5. Draw from memory, using correct symbols, the circuit diagram for a low power, short wave transmitting set. Describe each part of the apparatus and explain briefly its purpose. Explain how to use a wave meter in connection with this transmitting apparatus to obtain radiation on the proper wavelength.

6. Draw from memory, using correct symbols, a wiring diagram of a complete receiving set, using a vacuum tube detector, and one stage audio frequency amplifier showing all essential apparatus and including antenna and telephones, Describe each part of the apparatus and explain briefly its purpose.

7. Explain the difference between continuous wave and modulated or interrupted continuous waves.

8. Construct with his own two hands a practical working receiving set and demonstrate its operations for receiving signals from a station 25 or more miles away.

9. Submit satisfactory evidence that he has located and repaired a fault in a receiving set.

10. Explain how to install an antenna, how to connect it for use on a sending and receiving set, how to ground it properly and how to protect it against lightening and power lines.

Good Luck! A special thank you to John Lehman, WA8MHO, of Lexington, Ohio. Who brought these to my attention and mailed me a copy.

VANITY CALL SIGN FEE TO DROP SEPTEMBER 6

(From the ARRL Letter, August 4, 2006)

The regulatory fee to obtain or renew an Amateur Radio vanity call sign will drop slightly starting with applications received by the FCC on or after Wednesday, September 6, the FCC's Wireless Telecommunications Bureau (WTB) said this week. The new fee will be $20.80 for the 10-year license term. This year promises to be a big one for vanity call sign renewals, since the initial round of vanity grants under the current system occurred in 1996. Licensees who want to retain vanity call signs issued under the current (post-1995) system must pay the regulatory fee when renewing.

"Consistent with our established practice, we plan to collect these regulatory fees in the August-September 2006 time frame in order to collect the required amount by the end of the fiscal year," the FCC explained in a July 17 Report and Order (R&O), "Assessment and Collection of Regulatory Fees for Fiscal Year 2006," in MD Docket 06-68. The FY 2006 vanity fee is a bit higher than the $20.10 for the license term that the Commission had proposed in a Notice of Proposed Rule Making last March. The current vanity call sign fee of $21.90 remains in effect for applications received by the FCC before September 6.

Amateur Radio licensees may file renewal applications no sooner than 90 days of their license expiration date. While the regulatory fee payment is required from licensees wishing to keep their current vanity call signs after renewal, vanity holders can opt to get a sequential call sign and avoid paying any fee when they renew.

ARRL VEC Manager Maria Somma, AB1FM, says the FCC has been handling vanity call sign license renewals from June without any delay or problems. "I'm sure Gate 2 will go just as smoothly if you use one of the automated methods of filing, such as via the ARRL or using the Universal Licensing System (ULS)," she predicted. "Paper filings to the FCC can be confusing and difficult." The FCC renewed nearly 3000 vanity call sign licenses during June and July.

Amateur Radio licensees holding vanity call signs granted prior to 1996 do not have to pay a regulatory fee when renewing. This is because Congress did not begin requiring the FCC to annually recover its regulatory costs until 1993. Additionally, such licensees are not specifically tagged as vanity call sign holders in the ULS.

The ARRL VEC will process license renewals for vanity call sign holders for a modest fee. The service is available to ARRL members and nonmembers, although League members pay less. Routine, non-vanity renewals continue to be free for ARRL members. Trustees of club stations with vanity call signs may renew either via the ULS or through a Club Station Call Sign Administrator, such as ARRL VEC.

Somma says the ARRL's new license renewal/modification Web pages:

<http://www.arrl.org/fcc/memberlicenseinstructions.html>

contain complete information on license-filing procedures, including step-by-step instructions on how to renew or update a license using the ULS <http://wireless.fcc.gov/uls/>.

WHY ARE THEY CALLED "HAM" RADIO OPERATORS?

Editors note: This question was asked by David Gore during the May 13 SET. Since I really did not know the answer, I thought it would be fun to do an internet search on the subject. I found this from the Web Site of the Great Falls Area Amateur Radio Club. Visit them at http://w7eca.org. I had to reduce the font size by one to make this fit, so put your reading glasses on!

The true reason why amateur radio operators came to be called "HAMS" is no longer known.

More specifically, the truth has been lost to time over the many years. Various speculations do exist, however, each with their own degree of believability. Presented below are some of the more common theories, **presented in no particular order of importance or preference**. The theories presented have been gleaned from internet searches, printed works, and word of mouth from some of our more experienced... (Older) hams !

Theory One: The three letters (H.A.M.) are **initials,** which pay homage to the last names of three of the great radio experimenters of bygone years. George **HERTZ**, who demonstrated the existence of electromagnetic waves in 1888, Edwin **ARMSTRONG,** who developed a resonant oscillator circuit for radio frequency work, and finally, Guglielmo **MARCONI**, the 1909 Nobel laureate in Physics, who in the year 1901 established the first transatlantic radio contact. Similar to this name / initials honorarium of the past great minds of radio, comes one based on slightly lesser minds, but nonetheless most heroic in their own right. Let's look at:

Theory Two: This theory suggests that "HAM" is the combination of initials of the last names of three college students at Harvard, who supposedly had their own amateur radio station in the early nineteen hundred teen something. This was at a time when experimenters had free reign of the radio spectrum, and any legal administration, red tape or federally assigned callsigns were in their infancy or altogether non-existent. Their last names were (supposedly) **HYMAN**,

ALMAY, and **MURRAY**, and they operated their little amateur radio station with a (self-assigned) call sign of "H.A.M." The three young men were merely identifying their station as "theirs" by using their names. ("H.A.M.") Shortly after this fledgling station emerged, the government **DID** start proceedings to license, administrate, and "control" all radio operators, amateurs included. Amateur radio stations, Commercial broadcast stations, and rogue radio operators were springing up all across the nation. Some of these transmissions were causing interference, and thus the government was attempting to gain control and administration of the entire radio spectrum. Early amateur radio operators had quite a fight to maintain any radio spectrum what so ever for their use in their experiments. This fight for government control threatened to eliminate all amateur radio stations entirely by placing all radio transmissions under the control of the Department of the Navy. The Navy's official position on this issue was, "the ONLY radio transmissions that should be authorized should be those of a military nature." Now, with that brief history concerning the control of radio spectrum in mind, let's get back to our college students and their "H.A.M." station. "Supposedly", an impassioned speech was made on the floor of the US Congress in behalf and support of amateur radio operators and their commercial broadcast counterpart stations as well. The Harvard boys, which operated "H.A.M", became the poster child, so to speak, of ALL of amateur and commercial radio's experimental advancements and endeavors nationwide. They became known as "the little HAM station that could". This congressional speech, citing the station "H.A.M.", supposedly turned the tide and defeated the bill that would eliminate commercial and amateur radio entirely, and turn the airwaves completely over to the navy. The problem with this theory is that an exhaustive search of the Congressional Record turns up no such speech, and the Harvard School histories have no record of the Amateur Radio station called "HAM". However, that having been said, it is also a very well known fact there were inaccuracies in the Congressional Record in the early part of this century, yielding it a dubious tool for proof or disproof of any topic. Before Congressional reforms were enacted later on in the 1900's, the rules of Congress were very lax indeed. Enough so, that just about any member of congress could have just about anything posted as having been read into the congressional record, whether it was actually SPOKEN on the floor of Congress or not. Likewise, members of Congress who knew the "right people" and had enough "pull", could have certain "nonessential" items REMOVED from the Congressional record, under the guise of shortening an already impossibly large document. The potential here for misuse and abuse is obvious. Back then, many members of Congress could appease their constituents and special interests by claiming to have made an impassioned plea for their cause on the floor, and pointed to the "Congressional Record" as proof. This led to many obviously ridiculous paradoxes on "matters of record," such as speeches made by members days or weeks AFTER they boarded a plane or boat which crashed or sank, killing them. These paradoxes and inaccuracies have been documented, so the fact that no (congressional) record exists of the HAM debate remains suspect and subject to conjecture.

Theory Three: Drawing from the congressional "control" theory above, and in an attempt to explain "technical, radio, and electronic matters" to a no technical congress and general public, here is yet another theory of why Amateur Radio operators are called HAMS: During the earlier days of radio communication, the commercial and Amateur Radio broadcasters had won their fight against the NAVY, (see above). The government (not the military) stepped in to organize and control frequency allocation of these new "short-wave" frequencies. When all was said and done, the government allowed radio amateurs to operate only on certain frequencies which were scattered in an amongst the other licensed (authorized) frequencies. This holds true to this day. The Amateur Radio frequencies were said to be sandwiched **"like the HAM in a sandwich"** between the other frequencies, and so Amateur Radio frequencies came to be known as the "HAM" segments of a particular band.

Theory Four: Another theory attributes the term "HAM" to: Hugo Gernsback, publisher of a magazine called **"H**ome **A**mateur **M**echanic**"** which was very, very popular back in the early days of radio. It was so well know, it was a household word, just as the magazines "People", or "Reader's Digest" are today. Although it was primarily more mechanical in content, it did contain fairly regularly, Amateur Radio construction projects. Thus, when asked what sort of radio a person had, the reply, more often than not, was he: "had one of those "H.A.M." (using just the initials of the well known magazine name.) This theory becomes a bit more believable when you consider the Amateur Radio practice of using just initials or letters for many commonly understood words in order to shorten transmissions and ease sending of messages, especially when using Morse Code. "Home Amateur Mechanic" was simply shortened to H.A.M.

Theory Five: Some speculate the term "HAM" stands for **"Help All Mankind"** as reflected in the radio amateur's long history of service towards people in distress during natural calamities, disasters and civil emergencies. In fine S.O.S. tradition, this gives us H.A.M.

Theory Six: Others believe the term "HAM" derivesit's origin from the British. From late in the nineteenth century forward, British sports writers used the "AM" to describe rank AMateurs in sports. It first came into the "electronics arena" from the "wire telegraphers" used by these sports writers. The telegraph operators originally applied it to the younger and inexperienced "cub" reporters. These young sports writers often provided illegibly written or poorly worded copy for the telegrapher to transmit. The professional news telegraphers had beginners in their own line of work, and they picked up the 'AM terminology from the sportswriters, and applied it to their own field. Often the inexperienced new telegraph operators were called "AMs", for the amateurish way they sent messages. That theory is further explained in the following account...

Theory Seven: (or maybe theory: 6.5): This theory holds that the term "HAM" actually derives from what the seasoned commercial (professional) telegraph operators called the (hobby) amateur radio operators. When the inexperienced hobby radio enthusiasts began to venture on air with crude spark-gap transmitters, based on vehicle ignition coils, their code transmissions must have been pretty poor compared to the commercial telegraphs of the day. The commercial operators referred to the amateurs by using a modification of the old telegrapher's insult (from above) by saying the operator was "ham fisted", meaning that they weren't of professional skill. "Ham Fisted" referred to their style and proficiency of sending telegraph code which could have been done just as well by using a ham (the cut of pork) on the telegraph key to poundout their rudimentary code.

Theory Eight: Along those same lines of thought, came this

theory linked to the stage and theater, where the term "HAM" is used to denote an actor of indifferent ability, or one who shows off his skill (or lack thereof), by performing in spite of and mostly oblivious to his own ineptitude.

Theory Nine: This following theory seems to combine the "ham fisted" and the "un-professional operator" theories from above, but also adds a bit more insight as to why amateur radio operators might be called "HAMS": Definition of HAM: "A poor performer. [in this case:] "An operator of poor performance and courtesy". Even before wireless radio, that's the gist of a definition of the word "Ham" given in the G. M. Dodge book: "The Telegraph Instructor." The definition never changed throughout wire telegraphy history. The first WIRELESS operators were, of course, originally land based (wire) telegraphers, who left their offices to go to sea or to man the coastal stations. They brought with them to their now jobs their old habits, both good and bad. Along with them came also slang terms, operating practices, and much of the tradition of their older profession. In those early days, spark-gap radio transmissions were king, in fact it was the only type of transmission readily available, and every station occupied the same wavelength - or, more accurately perhaps, every station occupied a very large portion of the bandwidth with its broad spark signal. Government stations, ships, coastal stations and the increasingly numerous Amateur Radio operators all competed for signal supremacy, causing quite a cacophony noise and interference in each other's radio receivers. Many of the amateur stations were very powerful indeed. Two amateurs, who were just talking to each other across town or in neighboring cities, could effectively "jam" all the other operators in a very large area with their strong signals. When this happened, the frustrated commercial operators would telegraph the ship whose weaker signals had been blotted out by the amateurs and send: "SRI OM THOSE HAMS ARE JAMMING YOU." ("Sorry old man, those "HAMS, (meaning poor and discourteous performers), are jamming you'). Amateur radio operators, who may have been unaware of the real meaning of that derogatory term "HAM", picked it up and applied it to themselves and wore it with pride. Much as the term "Yankee Doodle" started out as a derogatory term from the British, and then came full circle to be worn with pride to those it was once intended to ridicule. As the years advanced, the telegrapher's original meaning of inept and poor performing completely disappeared. These past few derogatory theories may well be close to the true origin of the term, but it seems unlikely that amateurs would willingly adopt a term meant to be insulting to them as their name. However, consider this: There was an English professor at University of MD who pointed out that "bad" or "insulting" words sometimes fall into a period of disuse, which causes the meaning to become obscure, setting the stage for them to be (ironically) resurrected with more polite, or merely self-deprecating, meanings. Consider, for example, the word "naughty." In Shakespeare's time, it directly translated as "evil" or "demonic," and therefore fell out of polite usage in most social circles of the time. In current usage, however, it's much more benign, and often used to good naturedly scold friends or even children. It would not be implausible then, for what started out as an insult, to later become adopted by the very group it was intended to ridicule. Today, to be "branded" a "good Ham", is one of the highest compliments an Amateur Radio operator can receive.

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 Schedule: $12 regular, $10 for second member in the same family, for over 65 years of age, and for those living outside Knox County.

Mail Dues to: **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)___ EMail_____

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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