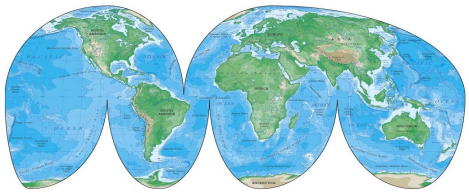
MOUNT VERNON

C  Q

AMATEUR RADIO CLUB July 2005

MEETINGS: SECOND MONDAY OF THE MONTH AT THE BIG BROTHERS OUTER LIMITS 7:00 PM
REPEATER FREQUENCYS: 146.790 (-) K8EEN 444.750(+) KC8YED
SPEED DIAL #S 7770=AAA (Howard St. Garage) 7771=Sheriff 7773=Police 7776=Highway Patrol
7778=MV Fire 7779=Report Repeater Problem # to shut off Auto Patch

Letter from the Editor

Mike reports below as PIO and mentions the Mt. Vernon Bicentennial, July 16th (thanks Mike) but lets not forget the Knox County section of the Bike-a-Thon on July 9th. Those who can help please contact Tim, KA8PCP, at ka8pcp@yahoo.com

I'd personally like to congratulate Mike, KC8JEZ, Jack, N8JQZ, John, KD8BSH, and Richard, WB8UYY, for their up-grades this June 4th. Nice job.

Phil, N1GTZ

PIO Tidbits

On May 17, 2005 Edwin M "Mike" McCardel, KC8YLD was appointed as Public Information Officer (PIO) by the ARRL. He received email notice of his appointment from Scott Yonally, N8SY.

McCardel is an Amateur Extra from Danville, OH and is an active member of the Mount Vernon Amateur Radio Club (MVARC).

Yonally is the Public Information Coordinator (PIC) for the Ohio Section of the ARRL as well as the Sections website Webmaster.

June was a busy month for MVARC.

Members participated in the Fox Hunt June 4.

Earlier the same day four club members who are also Volunteer Examiners (VEs) for the ARRL/VEC conducted a test session at the Mount Vernon Library. John Palser of Mt. Gilead passed the Element 2 test to earn his Technician Class. Michael Deane passed both the Element 1 and Element test to earn his General Class, (uh Extra, uh Tech, no its now a General) License.

Mike was put into the ARRL database incorrectly by the ARRL/VEC and suffered through two weeks of trying to get his operating privileges correct in the database. It finally appeared correctly on the ARRL database in time for Field Day. Jack Koelbl, N8JQZ from Reynoldsburg passed his Element 4 test to earn his Amateur

Extra Class ticket. Richard Ruth, WB8UYY, of Mansfield, upgraded his Tech plus license to a General Class ticket through a grandfather clause for Tech+'s who earned tickets before March 21,1987. William Hollingsworth, a tech from Columbus passed the Element 3 test and XXXXXXXXXXX, XXXXXX a tech from Grove City passed his element 1 exam to gain Tech with Code credit.

And of course June is Field Day month. During the week prior to Field Day, MVARC received a nice write up in the Mount Vernon News (June 16) and local radio stations WQIO and WMVO ran regular public service announcements about field and MVARCS local set up. Several were on hand to set up Friday night. In fact we had more help setting up than we had operators over the weekend. One of Friday's highlights was getting a picture of Phil Buble, N1GTZ, climbing the tower. Saturday morning we were visited by a local Cub Scout troop some of who got an opportunity to talk on the air under the guidance Don Russell, WA8YRS and Jack Koelbl, N8JQZ. Operation got off to smooth start with all three transmitters getting action. Don (WA8YRS) manned the CW station, Ruben KB2SAI the 40 meter station and Phil (N1GTZ) and Steve (KC8YED) the 20 meter station. All went well until we had to shut down several times because of lightening and thunder. Then the big storm from the NE hit camp and everyone who had gathered in the big tent were literally "holding down the fort" in the heavy winds. (Note: two of the tents met there demise three days later when a storm hit Howard during Majorette/Flagger workouts. No one was hurt but he tents laden with cement blocks flew over 30 yards before crashing to the ground.) About midnight, wet and tired we shut down for the night. Operations renewed before 7am the next morning. Don was first on the scene operating CW. Zach McCardel, KC8YLD and I tried to work the pace station but could only get digital from the station and we were set up for voice. When we fired up the SSB radios one of the computers we were using to record our contacts on 40 and 80 meters wouldn't boot. All told over 200 contacts were on the machine. Much of these were worked Ruben Clark, KB2SAI. Ruben took the laptop home with him in hope to remove the hard drive and attempt to recover the data from another machine. For the remainder of Sunday a paper log was kept for 40 meter contacts. Counting the lost contacts we recorded over 560 contacts over 200 of these were on CW. He had able help most of the weekend. Whereas, Don sent most of the code several people recorded and just hung around to help and hone their CW skills. Among these were Larry 'Doc" Helzer, AA8WP, Jeff Butts, N8SMPT, Don Blizzard, W8UMH, and Jack Koelbl, N8JQZ We had several visitors throughout the weekend. Mostly they were hams and and their families. Things wound down about 1:30 Sunday and we began the process of packing everything away. I believe most everyone was out by 3pm.

All in all I had a great time during, this, my first Field Day. I wish I had gotten more operation time, but I found myself tiring easily. My stamina was better on Sunday when I worked 40 meters most all morning. I wish I could remember names and calls signs better. I know I left a lot of people out and I apologize for that. So I hope if I didn't mention you your aren't offended.

WHAT's COMING NEXT

Well, Bicentennial for one. * JULY 16 * We still need volunteers for the parade and for monitoring Parking. (No has to park cars, just report where parking is or isn't available.) I hope to have 2-3 people work as a team for a couple hours at time. Then we can all enjoy the celebration. And, hopefully, get the opportunity to work our Special Events Station W8V. Please contact me kc8yld@arrl.net to offer assistance. I hope to have a sign up sheet at the meeting.

Next Meeting is July 11 at Big Brothers and Sisters

Then What? Well there are a couple of contests coming up in August. No matter what remember to GET ON THE AIR!!

Mike McCardel, KC8YLD

ATTENDANCE	June 13th, 2005	MONTHLY MEETING
Name	Call	e-mail (if not already on record)
1. Phillip Buble	N1GTZ	
2. Jack Koelbl	N8JQZ	n8jqz@arrl.net
3. Jeff Butz	N8SMT	
4. Ruben Clark	KB2SAI	
5. Michael Denne	KC8JEZ	
6. John Palser	KD8BSH	jhn_palser@yahoo.com
7. Robert McBride, Sr.	N8QPM	bobmcbridesr@earthlink.net
8. Mike McCardel	KC8YLD	emike@mccardel.net

MINUTES June 13th, 2005 MONTHLY MEETING

Meeting called to order at 7:10pm local time.
Treasury report: Same as last month save for a telephone bill.

Old News:
Issue 1: Bicentennial Event. The parade is a separate Amateur event and will not use the W8V call. Starts at 10:00am. Meet up at the old football lot.

Issue 2: Telephone line to the repeater will need to remain. No chance to save costs here.

New News
Issue 1: Should there be a need to bring up the Weather Net during the day we should relay with Mansfield on their 146.94 repeater.

Issue 2: Fox Hunt improvements:

Running the Fox Hunt with APRS Net (Automatic Positioning Recording System)

Use a single board computer to key transmitter.

Issue 3: Our next VE exam session is scheduled in December.

Meeting adjourned at 8:05pm local time.

50/50 drawing was won by Mike McCardel, KC8YLD, and donated to the repeater fund.

REPEATERS AND STUFF
By Don Russell, WA8YRS

Before I get into Field Day, I would like to report that both our Repeaters are working great and without problems. Apparently the debate on the Mt. Gilead Repeater is over. I have heard few complaints since we tightened that loose cable and put the repeater on PL full time. Once in a while during the Sunday night net I think I hear a little bleed over, but nothing we can't deal with.

The 440 repeater keeps chugging along without problems. We really do need to find a nice, High home for this repeater. Steve, KC8YED, is working on this. We put on hold for now the plan of moving the 440 repeater out to the water tower. I don't want to chance over doing our welcome at the water tower by adding more equipment than we already have out there with our 2-meter repeater. In the mean time, we need to make use of this 440 repeater a bit more. Mobiles can hit it easily from around town and it has generally good coverage out to 10 or 15 miles. If the 2-meter repeater is busy and you want to talk, try the 440 repeater if possible.

We have the okay from the Ohio Repeater Council to put up our 6-meter Repeater. We have until the end of August to get it going without asking for an extension. I think that might be a bit too quick for us, especially if we find a site for the 440 repeater and get involved in moving it. I most likely will ask for an extension when the time comes and shoot for being on-line with the 6-meter repeater sometime in early fall. Everyone is busy with vacations and such during the summer. Not much time for playing with repeaters!

A few years ago, I was talking about how hams in Michigan were creating a "Ham Intranet" using standard wireless network cards in the 2.4 Gigahertz region. Some of the channels used for the license free 2.4 Gig cards happen to be in our Ham Bands, making it possible to build our own long range network with cheap off the shelf wireless cards. Ham Radio High Speed Multimedia. There have been articles in QST about linking computers together that are anywhere from 5 to 40 miles apart. Apparently, the cards work best at between zero and 10 miles though. That would be plenty to cover Mt. Vernon. I am learning about it as fast as I can, but I don't understand all I need to know about this subject yet. It will come (or not!). My goal is to get an access point with an omni directional antenna that others can "beam" into with high gain antennas. To make it work we will no doubt need many access points around Mt. Vernon, but one will do for starters. Barry, N8PPF, and I are planning on testing this out between our houses, which are about a quarter of a mile apart. If it works there, we will slowly expand things. Perhaps the Mt. Vernon ham community had better start looking into what it takes to participate in this interesting venture.

Field Day has once again come and gone. Kind of like Christmas. All that anticipation, then it is over before you know it. Okay, I got to say it: As of this writing, Field Day 2006 is only 362 days away!

Field Day was once again a very successful event for our club, although not without its difficulties. Jeff, KC8WXL, was in a car accident, so we lost pretty much everything that was being arranged by him. No local government officials, no Mt. Vernon News coverage on the day of Field Day (although there was a nice article written by Mike, KC8YLD, just before Field Day). The picnic did not go off as planned. Instead, we ordered pizza, which was okay by me. We had a pretty good thunder storm come through Saturday afternoon. Operations were shut down for 3 or 4 hours until we thought it safe to hook the antennas back up. We also lost the hard drive in one of the laptops. If Ruben, KB2SAI, cannot recover the log data, then we will loose about 200 contacts.

On the positive side, things went well during the Friday night set up. In fact, we were ahead of schedule. All antennas were set up Friday night. So were the canopies. The radios all had to be set up on Saturday morning and we had a problem finding enough laptops to run our logging software, but everything turned out okay. The two SSB stations started on time. The CW station waited for a laptop to show up. Actually Zach, KC8YLE, was trying his alternate power station running off of electricity developed from potatoes. He was using the CW stations antenna. Unfortunately, no contacts were made, but it was fun watching him try.

We had a Cub Scout troop show up for a demo even before we had any stations running. My friend from Reynoldsburg Jack, N8JQZ, gave a very good presentation on what ham radio was and what we do, while Mike, KC8JEZ, and I got the CW station put together for a quick demo. We were successful and put the CW station on 20-meter SSB. We were able to have two very good QSO's with Florida stations, and one QSO with a Georgia station. Several of the Scouts were able to talk to the hams on the other end. I think they were very

impressed with it all. I did run into a DX station calling CQ, but the pile up was big and I couldn't get through. That would have been a big plus though.

I want to think about it before we make plans for next year. I might make a list of things to work on like I did after last years Field Day. Never mind that we didn't really do anything about last years suggestions. Well, some of them did come about.

Just briefly though. For next year, I would like to simplify things a bit. Yes, it is nice setting up the 2-meter and 440 MHz dual band station; but we only made one contact! Last year we put up a 6-meter beam and only made 3 contacts. Hardly worth the effort! While the towers get us up just a bit higher, I would like to try doing it with just the 30 foot antenna masts and see what happens. I am also thinking about changing our 20 meter antennas to something different, or in addition to the loops. I think a full sized dipole made of fiberglass and wire would be a great antenna at the top of the 30 foot mast. The loops can still be under that antenna if we want to do it that way. Another item we need to work on is wireless networking all our computers. We should also start setting up on Friday at 2 p.m. That is the earliest we can start setting up and be within the rules. We should strive to have everything ready to go Friday night so that we can relax Saturday before things start rocking. We worked really hard Saturday morning. That didn't help when it came time to do the actual operating.

The above items will be addressed for sure. I will once again volunteer as the Technical Advisor for our Field Day committee. If someone will step up to Chair the entire committee, that would be great! Setting up three stations is enough work for one man!

I would like to thank all who participated in our Field Day this year, especially the ones that helped set everything up and those that stuck around to help with the tear down.

See you all at the meeting.

The Transmitater Experiment

The CW transceiver circuit I chose for this experiment is a well known design often referred to as the Pixie II. It consists simply of a Colpitts oscillator, a keyed power amplifier. Mixing is done at the final amplifier, eliminating the need for an external mixer. It runs nicely off of a 9-volt battery, and the transmitted signal is nice and clean since the oscillator is always running. It's so simple it almost shouldn't work.

The goal was to power this thing from a series of potatoes and use an antenna constructed from a chain of paperclips to make a few contacts on Field Day. It soon became clear that if there was to be any success at all, a "real" antenna was essential.

The power supply was constructed using bits of copper and steal wire stuck close together into the unsuspecting spuds. The different metals react with the electrolytes in the potato to create a fairly steady voltage from 0.7-0.8 volts, depending on how closely the wires were inserted to each other. By wiring several of these cells in series (copper to steel), I managed to pull over 9 volts. To increase the available amperage, I needed to wire several cells in parallel. This was accomplished by slicing the potatoes and introducing a narrow space between the slices, along the length of wires. Using this method I was able to draw over half an amp from each potato.

By the time I was finished wiring up the power supply, the cells had dried out significantly. I was still getting some pretty decent juice from them, so I went ahead as planned. I disassembled what had become a pretty ridiculous mess and rebuilt it down at the CW station so I could use the good antenna. By first powering the rig from the 9-volt battery, Don (WA8YRS) was able to tune to my frequency on the Field Day CW rig. It was time to test the taters!

They actually managed to power the rig, although I couldn't hear much of anything. Odd, since it was Field Day. Don, however, was picking up my direct conversion receive carrier loud and clear on the rig two feet away. That is, until I touched my key. My audio clicked out and the hum on Don's rig ceased. The circuit was trying to draw too much current. Never wanting to concede defeat, I unkeyed to produce a short morse code message on the nearby rig using the receive carrier hum. It's still a signal, right?

Later on, during a storm, I hooked the little transceiver back up to the 9-volt battery and a new antenna hastily constructed from 30 feet of speaker wire split down the middle. The audio output went crazy with CW and other digital activity. By later measurements, the circuit only draws just over 10mA while keyed. A single potato cell (not even sliced and in parallel) gave me over 100mA. I must have introduced a short when soldering my feedline to the PL-259 connector to connect with the good antenna.

While I firmly believe it would have worked fine without the short, there are several improvements that could be made and different power sources to explore. For instance, lemons, while more expensive, would probably provide more energy per cell and are better protected from dehydration by their thick pericarp (peel). Other power source ideas include an acidic playdough mixture sealed in plastic to prevent dehydration and a small alternator built onto a hamster wheel (just think of all the Ham-ster jokes!).

Stay tuned for Field Day 2006!

73's
KC8YLE

Vacuum Tube Daze
A tongue-in-cheek look at the days when tubes ruled.
By Phillip Buble, N1GTZ

Episode 12: I sing the body electric.

Think the world moves fast today. Forget it. In medical circles the vacuum tube's ability to generate X-rays and the X-ray's ability to help doctors detect and treat cancer moved the technology along very quickly at the beginning of the last century.

Three weeks after Roentgen publicly announced his discovery of X-rays in 1896, Chicago vacuum tube manufacturer Emil H. Grubbe built and used an X-ray machine to treat breast cancer for the first time. That's not a missprint folks, 3 weeks. Try that today. Better yet forget it. Treatment had to be stopped due to skin damage and the patient died a month later but there was no stopping progress in the machinery. Very early on it was realized more voltage was required to generate X-rays able to penetrate more than just skin deep so by 1913 a fellow by the name of William Coolidge invented a tube capable of using 140 kilovolts plate voltage. By 1922 he had one able to use 200 kilovolts. These tubes were used in what was called "deep" X-ray machines but apparently not deep enough for doctors so by 1933 megavoltage therapy was first used at the California Institute of Technology. The voltage soon went even higher after that but it was beyond what the vacuum tube technology of the time could handle. That was left for the Van de Graaf generator to deal with.

Shoe store fluoroscopes using something less than megavoltage were quite good at sizing up one's feet - and sterilizing the customers. First used in 1927 it wasn't until radiation dose became federally regulated in the late 40's that they were finally banned in the early 50's - surely to the dismay of some.

Cleveland Dr. Claude Beck was the first to defibrillate an exposed heart in 1947 but it was left to Paul Zoll to first defibrillate a patient with a closed chest in 1956 using tube-type equipment. We are now up to the year I was born. As a side note CPR was developed shortly after. By 1956 Dr. Zoll had apparently been playing around with tube electronics for some years as he is also credited with the first external pacemaker in 1952. The first internal pacemaker was implanted in 1958 by Swedish doctor Rune Elmqvist. The patient died a few hours later but the pacemaker was working fine.

Things were moving just as fast in hearing-aid design but they nearly instantly abandoned my beloved vacuum tubes in favor of the transistor after its invention so I'll leave that story to someone else. I like to give credit where credit is due and for nearly everything we come to expect in ever more sophisticated electronics it nearly all started with the tube.

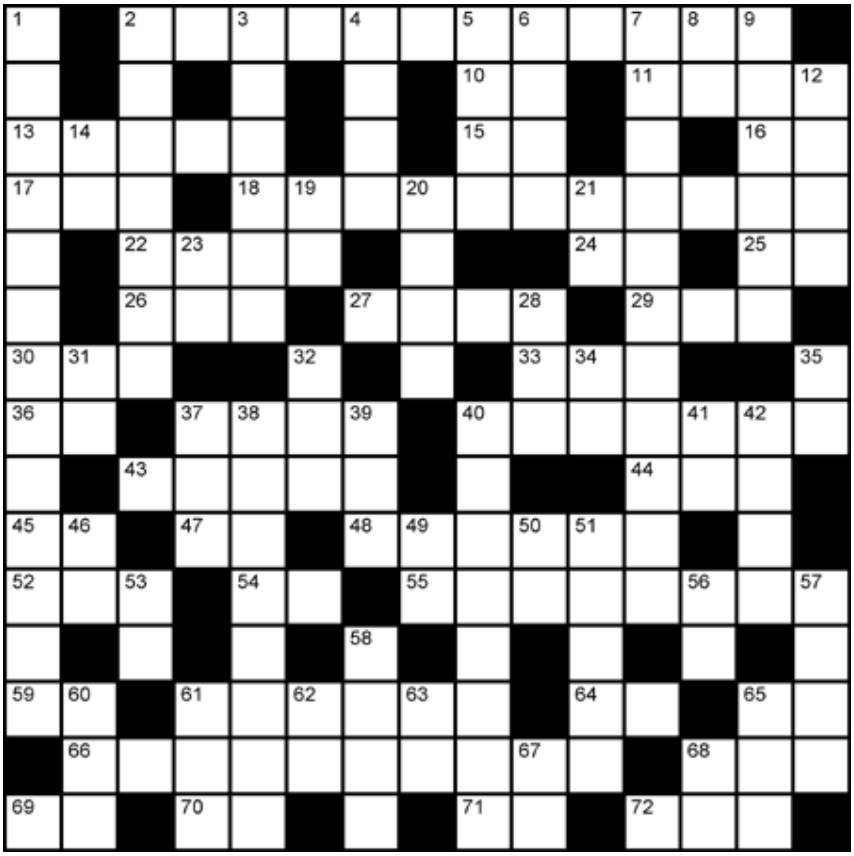
Including hearing-aids!

This is the end of the series.

Field Day 2005

CW alive and well

Fields of Dreams



By H. Ward Silver, N0AX
June 21, 2005

Across

2. What we get for winning
10. Small amount of current (abbr.)
11. Do this to the rules before Field Day
13. Heals
15. After noon (abbr.)
16. Add to "wi" to get broadband data
17. Generators need this
18. Satellite relay system
22. Comply with the rules
24. For sale (abbr.)
25. CW for "that"
26. Our kind of waves
27. Good ones are a dime a dozen
29. Field Day pest

Down

1. First revision of a book (two words)
2. How much stuff you'll haul to Field Day
3. List of members
4. DX program to work islands
5. Gremlins that work for Murphy
6. Spend the night outdoors
7. Changes ac voltage
8. Engineer that designs radios (abbr.)
9. Put this first!
12. Add water to get mud
14. Interfaces with the user (abbr.)
19. RTTY tuning signal
20. Packet station
21. Makes a rain shield with 63 Down

30. When you expect to leave (abbr.)
33. Popular antenna mount (abbr.)
36. What is!
37. Correct or alter text
40. Solid material that stores hydrogen in batteries
43. Early personal computer
44. Military meal
45. Time of delay (abbr.)
47. CW for "AND"
48. Give equipment to the club
52. Keeps those Field Day drinks cool
54. 11-Meter Service
55. ATV Test Pattern (two words)
59. Opposite of Normally Closed (abbr.)
61. Good for VHF, bad for HF
64. Da dits n dots
65. Trade name for CTCSS
66. Method of teaching Morse Code
68. Layer
69. First popular contest logging program
70. Out of gas (abbr.)
71. Instead of "Roger", Rocky says this
72. Highest Field Day station

23. Prefix meaning "two"
28. CQ means "calling ... station"
31. Transmit (abbr.)
32. Radio
34. Doctor (abbr.)
35. Comes after GA (CW prosign)
37. Longest possible contact path
38. Reduced price
39. Small amount
40. Awarded without authority
41. Light that heats (abbr.)
42. Prefix meaning "one tenth"
46. Current from batteries
49. Off-center (abbr.0
50. Used to make antennas (chem. symbol)
51. British term for flashlight
53. The two types of fields in a radio signal
56. Ball bearing (abbr.)
57. Too many FD hot dogs makes you ....-poly
58. State that's home to Collins
60. Short for "often"
61. Used to throw things
62. Phone signal report
63. Makes a rain shield with 21 Across
65. CW for the magic word
67. Goes with "fro"
68. Abbreviation that follows signature

Field Day 2005 Zach's potato power supply and rig

Solution to last month's puzzle

A Pause For Thought

“The first half of life consists of the capacity to enjoy without the chance; the last half consists of the chance without the capacity.”

by Mark Twain

==========

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:

$20 regular

$10 for second member in the same family

$10 for over 65 yrs. of age

$15 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

Classifieds

Only Need to Ask, Inc
24 South Clayton Street
Centerburg, Ohio 43011

NEXTEL®
AUTHORIZED REPRESENTATIVE

740-625-6659
740-625-6649 fax

Or at the new Johnstown location at 740-966-5888

onlyneedtoask@core.com Your total communication shop.

2way radio Sales & Service Nextel authorized representative

Special right now, Free Phone and Free car charger with every NEW activation of 2 years.