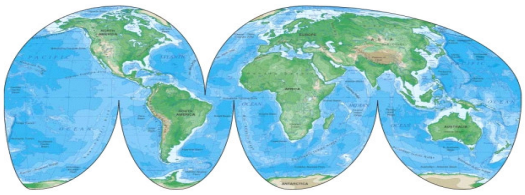
MOUNT VERNON AMATEUR RADIO CLUB

C  Q

February 2007 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

Looks like there is a lot going on for the February meeting. I would suggest that everyone come to this one. Read the Newsletter to find out what you might miss by not joining us.

The last several months, I have been publishing Earl's (N8KBR) General Class Study Guide on the last two pages of our Newsletter. As luck would have it, the VEC's have come out with a new question pool set to go into effect July, 2007. Since the last part of this series will be published in April, we will continue as planned with this important series. Those of you not wishing to upgrade until July should download Earl's new Study Guide at:

http://studyguide.eqth.org/

Be sure to download the Study Guide effective July, 2007.

Here are a few more interesting web links to check out. Enjoy, and bookmark these if they prove valuable to you.

http://www.bloomington.in.us/~wh2t/ant.htm

http://meted.ucar.edu/topics_spacewx.php

http://www.cebik.com/radio.html

http://earlyradiohistory.us/

http://www.iarc.ws/

http://www.contesting.com/

IT'S OFFICIAL! MORSE CODE REQUIREMENT ENDS FRIDAY, FEBRUARY 23

(From the ARRL Letter January 26, 2007)

Circle Friday, February 23, on your calendar. That's when the current 5 WPM Morse code requirement will officially disappear from the Amateur Radio Service Part 97 rules. Effective that date, applicants for a General or Amateur Extra class Amateur Radio license no longer will have to demonstrate proficiency in Morse code. They'll just have to pass the applicable written examination. Federal Register publication January 24 of the FCC's Report and Order (R&O) in the "Morse code proceeding," WT Docket 05-235, started a 30-day countdown for the new rules to become effective.

"The overall effect of this action is to further the public interest by encouraging individuals who are interested in communications technology or who are able to contribute to the advancement of the radio art, to become Amateur Radio operators; and eliminating a requirement that is now unnecessary and may discourage Amateur Service licensees from advancing their skills in the communications and technical phases of Amateur Radio," the FCC remarked in the Federal Register version of the "Morse code" R&O. The League had asked the FCC to retain the 5 WPM for Amateur Extra class applicants, but the Commission held to its decision to eliminate the requirement across the board. The rules that appeared in the Federal Register constitute their official version:

Mt. Vernon ARC Officers

President: Mike McCardel, KC8YLD	**kc8yld@arrl.net**	**Phone: 740-599-6614**
Vice President: Don Russell, WA8YRS	**Wa8yrs@arrl.net**	**Phone: 740-397-0249**
Secretary: Jeff Butz, N8SM	**Jaylynn@copper.net**	**Phone: 740-965-9368**
Treasurer: Barry Butz, N8PPF	**n8ppf@mvarc.net**	**Phone: 740-397-7540**

http://a257.g.akamaitech.net/7/257/2422/01jan20071800/edocket.access.gpo.gov/2007/pdf/E7-729.pdf

The new rules also mean that starting February 23 all Technician licensees, whether or not they've passed a Morse code examination, will have CW privileges on 80, 40 and 15 meters and CW, RTTY, data and SSB privileges on 10 meters. Once the new rules go into effect Technicians may begin using their new privileges without any further action.

An applicant holding a valid Certificate of Successful Completion of Examination (CSCE) for Element 3 (General) or Element 4 (Amateur Extra) credit may redeem it for an upgrade at a Volunteer Examiner Coordinator (VEC) exam session. A CSCE is good for 365 days from the date of issuance, no exceptions.

For example, a Technician licensee holding a valid CSCE for Element 3 credit would have to apply at a VEC test session and pay the application fee, which most VECs charge, in order to receive an instant upgrade to General.

ARRL Regulatory Information Specialist Dan Henderson, N1ND, cautions that a license upgrade is *not* automatic for those holding valid CSCEs for element credit. "You must apply for the upgrade at a VEC test session, and you may not operate as /AG or /AE until you have upgraded and have been issued a CSCE marked for upgrade," he stresses. "A valid CSCE for element credit only does not confer any operating privileges."

Henderson also advises all radio amateurs to know and fully understand their operating privileges before taking to the airwaves. Some Technician licensees reportedly started showing up on 75 meters December 15 in the mistaken belief that they had gained phone privileges there.

The FCC R&O includes an Order on Reconsideration in WT Docket 04-140 -- the so-called "omnibus" proceeding. It will modify Part 97 in response to ARRL's request to accommodate automatically controlled narrowband digital stations on 80 meters in the wake of other rule changes that became effective last December 15. The Commission designated 3585 to 3600 kHz for such operations, although that segment will remain available for CW, RTTY and data. The ARRL had requested that the upper limit of the CW/RTTY/data subband be set at 3635 kHz so there would be no change in the existing 3620 to 3635 kHz subband.

The ARRL has posted all relevant information on these important Part 97 rule revisions on its "FCC's Morse Code Report and Order WT Docket 05-235" Web page

<http://www.arrl.org/fcc/morse/>.

Newsletter Credits
Editor: Don Russell, WA8YRS

Clip Art and Cartoons thanks to http://wm8c1.50megs.com/radio_clip_art.htm, http://www.qsl.net/k4adl/, http://pages.prodigy.net/kg0zz/clipart/ham_art3.htm, http://www.arrl.org/,

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

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

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

Members are encouraged to send articles pertaining to ham radio, with an emphasis on local activities, equipment reviews, and personal experience to wa8yrs@arrl.net or Don Russell, WA8YRS, 815 Brookwood Road, Mt. Vernon, Ohio 43050

Wednesday Nights are Pizza Hut Days

Wednesday nights are now officially Pizza Hut nights for the Mt. Vernon Amateur Radio Club. Come socialize with other Club members and have "all you can eat" pizza every Wednesday night. What a great combination. Cost for the Pizza Buffet and a drink is around $9.00. Gathering time is 5:00 p.m.

This event is becoming very popular. You can check in on the repeater before you come just to be sure. However, so far, there has always been a few hams there for each event. Contact Steve Dick, KC8YED, or Dick Huggins, WD8QHY for more information.

HISTORY CHANNEL TO FEATURE AMATEUR RADIO

The History Channel plans to run a new 13-part series in early 2007 on ***The Secret Life of Machines***. One of the episodes will be devoted to Amateur Radio, in particular Amateur Radio in space.

Guests on the show will include Rosalie White, K1STO of ARISS, the organization that manages ham radio contacts between school pupils and astronauts on the International Space Station. Rosalie White describes the roles of the American Radio Relay League (ARRL), the Radio Amateur Satellite Corporation (AMSAT) and the Amateur Radio on the International Space Station (ARISS) to the History Channel reporter, and provides information on SuitSat-1 and SuitSat-2.

She will also talk about the role radio amateurs have played in the SuitSat-1 experiment and explain how Amateur Radio satellites are designed, tested and launched.

The Amateur Radio episode will also highlight the work of school pupils who built five types of crystal radios and compared their qualities.

No date has been announced for this episode. The editor of this Newsletter will keep an eye on the History Channel web page and give a heads up when a date is set.

Mansfield Hamfest is February 11, 2007

Here is the one we have been waiting on to get rid of the mid winter blues.

The Mansfield Mid-Winter Hamfest/Computer/Craft Show is Sunday, Feb 11, 2007. Gates open to the general public at 6:30p.m. Tickets are $6.00 at the gate.

FORUMS / MEETINGS Scheduled for the day of the Hamfest thus far:

09:00 - 10:00: Ohio Army MARS forum
10:00 - 11:00: ARRL Forum
11:00 - 12:00: OSSBN Meeting
14:00 - 17:30: V.E. Testing - Please contact Dick Fletcher, N8CJS for more information..

vkafletch@aol.com

Directions to Event.. Coming from I-71 North or South exit at the 176 (US Route 30) exit. Turn (West) onto US 30 and travel down the highway approximately 7.4 miles to the Trimble Road exit. This exit is well marked not only for Trimble Road but for the Fairgrounds as well. When you get close (about 1 mile) you'll see all the signage for the exit. Turn (North) onto Trimble Road (you will be turning left in very short order so drive slowly and carefully here) at the first traffic light, this will be Longview Avenue. Turn Left (West) onto Longview Avenue and go to the end of the road.. you'll see the Fairgrounds on your right when you get close.. Make sure you travel to the end of the road. Turn Right (North) onto Home Road and go down Home Road to the entrance of the Fairgrounds (on your right).
For those of you with GPS units, or would just like to get directions from a web based map source the address is: 750 North Home Road, Mansfield, OH

REPEATERS AND STUFF

By Don Russell, WA8YRS

January was an interesting month of MVARC activity. First off, Mr. President Mike McCardel, KC8YLD, ran a very efficient and interesting meeting. Many items were discussed and acted upon. I got my wish granted on buying a set of Ham Radio Books for the Public Library. My thanks to those that backed this important issue, and to those that have already donated some money towards it.

Another item being worked on is the February give-a-way. Remember: you need to be a member of the club, but you do not have to be present to win. At least the major stuff. There was some talk about doing an entertaining drawing where we actually trade packages back and forth. This obviously would require members

to be present to participate. Best advice is to be there. We would love to have everyone come to the meeting!

We all talked about how to attract more members to our meetings. I read an article in the new ARRL e-mail publication "ARRL Club News", that one club started having a social event before the meeting. Turns out that hams are social animals (no wonder we like the mic!) and that having a program or social event served with donuts and coffee, the meetings became very popular. Most hams that came for the social part stayed for the meeting. So, at the February meeting, I am going to suggest that we start having a pre-meeting social hour from 7;00p.m. till 8:00p.m. The meetings will be from 8:00p.m. though 8:30p.m. Sometimes longer when necessary. Then after the meeting members can leave or stick around and talk more ham radio. There will be times we can't do this, but it is something I think we could try. You need to be there to voice your opinion. You can also pick up your prize then. By the way, the social event was more popular than any of the programs.

It was also announced that Wednesday is "Pizza Buffet" night at the local Pizza Hut. Members have been gathering there at 5:00p.m. to enjoy a meal with good company. This confirms the social animal theory from the last paragraph! You can join the fun. Check with Steve, KC8YED, or Dick, WD8QHY for more information. You can usually catch one or the other on the repeater.

I never get tired of saying this. The 2-meter repeater is doing well. Barry, N8PPF, and I did get out to the repeater site and checked a few items out. We had noticed on occasion that there was some noise in the repeater audio that was not supposed to be there. Barry and I figured it was a loose coax connector problem, but everything seemed pretty tight. Finally found a loose coax cable coming from a cavity filter that we are not using. When I shook the cable, some slight noise was noticed on the repeater audio. This cable was removed. While not positive that this was the problem, I have not noticed any noise on the repeater since then. Barry had noticed the lights blinking a bit while we were out there. Perhaps there is some electrically noisy equipment in use there and we will have to put up with it. However, the problem seems solved for now.

The 6-meter repeater is still up and running. I have become rather fond of this repeater, so it may be around for a while. Some improvements, in time, will be made.

The 440 repeater remains off the air. One of these days…….

It was requested by Bob Bruff, N8PCE, that someone else become the Club Station Trustee. That is, Trustee of the Club license for K8EEN. I have therefore been appointed the new trustee. The application was mailed in shortly after the January meeting and we have already received the new license. I would like to thank Bob for his years of dedicated service to the club. There was a time when Bob was President, Secretary, Treasurer, and Newsletter Editor for the club, all at the same time. The club may never have survived those lean years without him. He deserves a break. My hope is that he will stay around locally and eventually get back into ham radio.

Want to get on CW without having to actually learn Morse Code? I was thinking about ham radio without Morse Code, and then realized that it may never actually happen.

There are several computer programs out there that decode Morse Code and also allow sending of Morse Code via the computer keyboard.

So, I had to check this out! I used Hamscope, a freeware program to do some testing. Hamscope does a decent job of decoding Morse Code on fairly strong signals. I am in the early stages of checking this out, so a few minor adjustments may make it even better. Other programs may do as well, or better. Hamscope, however, will get you on the air with several modes, including psk31, Rtty, and Packet.

Okay, this take on things may make the old timers unhappy (oops, I am one of them!). However, with computer software, 100 wpm or greater CW is possible. More on this later, as the Newsletter is filling up fast.

See you all at the meeting.

MVARC
Mt. Vernon Amateur Radio Club
Minutes for the January 8, 2007 Meeting

Attendees:

Jeff Butz	N8SMT
Dick Huggins	WD8QHY
E. Mike McCardel	KC8YLD
Don Russell	WA8YRS
Ruben Clark	KB2SAI
Steven Seymour	KC8IKF
Arlin Bradford	KD8EVR
James Chandler	KB8YAA
Ruby Fox	KE4SJC
Don Bunner	KB8QPO
Dominic Palaketiyage	KD8EVU
Larry Helzer, DVM	AA8WP
Barry Butz	N8PPF

President McCardel called the meeting to order at 6:42 P.M.

The minutes from the December 10th meeting were read and a motion to accept them was made by Dick Huggins, WD8QHY and seconded by Don Russell, WA8YRS. The

motion was approved.

Treasurer's Report: Barry Butz, N8PPF

Barry reported that the club's total balance as of 12-31-2006 is $1785.08 and that he has collected approximately $300.00 tonight.

Repeater report: Don Russell, WA8YRS

Don reported that the 2-meter repeater is working fine. He has detected a very intermittent noise coming through the repeater and has recently visited the site. He found a loose coax connection, which may or may not have caused the problem. The noise is too occasional to pinpoint or worry much about. The 6-meter repeater has continued to put out 100 watts and is working fine. He has not heard from Steve Dick, KC8YED concerning the return of the 440 repeater. He said Arlin Bradford, KD8EVR is investigating a tower for the repeater.

Public Information Report: Mike McCardel, KC8YLD

Mike reported that the FCC's cancellation of the Morse Code Requirement will go into effect 30 days after the Report and Order are published in the Federal Register. This means that the current Tech Class licensee will have the band privileges that current Novice and Tech Plus class' have. Any current Novices will have to take the Tech exam to get the VHF/UHF privileges that a Tech has. Anyone that has passed the General or Extra written exam but has not taken a code test will have to visit a VE testing site to get their licenses upgraded. You can't send it in on your own.

Additionally he reported the local paper "The Mount Vernon News" ran the story "Amateur radio operators keep in touch with the world" in their annual Senior Lifestyles Section. Except for the reporter's misrepresentation of call signs, it's an excellent article and covers about one full page of the paper with pictures.

Web-Master/Citizen Corps Report: Ruben Clark, KB2SAI

Ruben reported he plans to make some changes to the website in the next two months to make it easier for users to update information. The Citizen Corp Council recently had a meeting. There is not too much going on there as relates to the Club. He also added that our EMA identification cards are expired and the EMA office is working to get those updated.

Old Business:

Mike reminded everyone that next month is give away night at the meeting. He believes this will include some items from Universal Radio. Winners need to be club members but they do not have to be present to win. Dave Rankin, K4AWO wife' has given a lot of his equipment to the club. He doesn't have a full inventory but it includes a Bird Watt Meter, an Icom 3200A Duel Band Radio, and a Kenwood all mode transceiver that at least receives. He would like to recommend that these items stay with the club and could be used by the members as loaners. The other items could be put in the pool for next month's drawing or we could have a mini-hamfest at the May club meeting. Barry Butz, N8PPF recommend the items be brought in a few at a time and given away at the 50/50 drawings.

Dick Huggins, WD8QHY made a motion for the club to retain the three above-mentioned items. Ruben Clark, KB2SAI, seconded it. The vote was taken and the motion passed.

Dick Huggins, WD8QHY made a motion for the club to disburse the rest of the equipment slowly over the next year at club meetings. Don Russell, WA8YRS, seconded the motion. The vote was taken and the motion passed.

New Business:

Library Donation: Don Russell, WA8YRS recommends we take advantage of ARRL's deal where the club can buy $333.00 worth of books for $200.00 to be donated to the Mt. Vernon Public Library. Don made a motion to take $100.00 from the club treasury and take donations for the rest of the amount with any overage being put to additional books. The vote was taken and the motion passed.

General License Upgrade Class: Don suggested we could have a General License Upgrade Class weekly over the repeater.

Appointments:

The Directors have asked Don Russell, WA8YRS to be the Repeater Trustee and Barry Butz, N8PPF to be the Equipment Trustee. Mike asked that Jeff Butz, N8SMT to be the Club Historian. Jeff accepted.

Dick Huggins, WD8QHY mentioned that club members have been meeting for dinner at Pizza Hut on Wednesday nights at 5:00 PM. He would like to see more members come for dinner. Don Russell said he would mention it in the newsletter.

The motion to adjourn was made by Don Russell, WA8YRS and seconded by Dick Huggins, WD8QHY. The motion carried and the meeting was adjourned at 7:26 P.M.

Treasurer's Report

January 2007

Income:

Dues: $226
Donations for MV public library: $76

Expenses: Gift certificates: $100

Balance on 1-24-07: $1987.88

Of the balance, $76 is intended for the Library book donation. $629.94 is designated as the Year 2005 Repeater Fund.

We have transferred $1200 to CDs at the CES Credit Union, were we have our account. This will earn 5% for 11 months, instead of only 1% on savings accounts and 0.3% on checking accounts.

Our club is a low budget operation. If you don't need a newsletter in printed form and can read it online instead, please let our editor WA8YRS know. It will save the club about $6 a year, or half of your dues. On the other hand, if you'd rather have a paper newsletter, you are perfectly welcome to one. Thanks.

Barry N8PPF

HAM HISTORY
By Barry Butz, N8PPF

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

One of the most important inventions of the 19th century was the telegraph. Several people deserve credit for its development, namely Joseph Henry (1791-1872), Samuel Morse (1797-1878), Charles Wheatstone (1802-1875) and William F. Cooke(1802-1879).

No single person can be identified as the inventor of the electric telegraph. Attempts had been made since the late eighteenth century to use electricity to communicate down wires to distant locations, although none were effective or convenient enough to develop further. Oersted's discovery of electromagnetism in 1820 stimulated many individuals to attempt electrical forms of communication, especially in the 1830s when practical applications arose in railway signaling and time-keeping systems. During that decade four individuals played key roles: Henry and Morse in the USA and Wheatstone and Cooke in the UK and their respective contributions were later discussed at great length in patent litigation. All of them relied on the electromagnet, invented by the Briton William Sturgeon in 1825 and subsequently developed into a much more powerful form by Joseph Henry. In 1831, Henry used his electromagnet to show that electrical impulses could be communicated over distances greater than a few hundred meters – hitherto thought impracticable.

An artist by training, Morse was returning by ship from England to the USA in 1832 when he overheard discussion of the electromagnet and this inspired him to develop a scheme both for the electric telegraph and also the coded language of dots and dashes later known as Morse code. Yet Morse found it difficult to secure the technical expertise and financial backing he needed to demonstrate a fully operational system. Finally in 1844 he was able to send the message "What hath God wrought?" from the Supreme Court room in the Capitol in Washington D.C. This was received by Morse's assistant and financial backer in Baltimore, Alfred Vail, in paper

CALANDER OF EVENTS FOR MVARC CLUB MEMBERS

- Feb 8, 2007 (Thursday): General Class Study Group at the Red Cross Training Center, 7:00p.m.
- Feb 11, 2007 (Sunday): Mansfield Hamfest starts at 6:30a.m. Mansfield Fairgrounds. $6 at the gate.
- Feb 11, 2007 (Sunday): ARES Net at 8:00p.m. Net Control will be Mike McCardel, KC8YLD.
- Feb 12, 2007 (Monday): MVARC Meeting at the Red Cross Training Center, 7:00p.m. Give-Away-Night; Special guest Jay Bookwalter, KC8GNL, DEC Ohio District 6 ARES
- Feb 14, 2007 (Wednesday): Pizza Buffet at Pizza Hut, 5:00p.m.
- Feb 18, 2007 (Sunday): ARES Net at 8:00p.m. Net Control will be Don Russell, WA8YRS
- Feb 21, 2007 (Wednesday): Pizza Buffet at Pizza Hut, 5:00p.m.
- Feb 22, 2007 (Thursday): General Class Study Group at the Red Cross Training Center, 7:00p.m.
- Feb 25, 2007 (Sunday): ARES Net at 8:00p.m. Net Control will be Bob McBride, N8QPM
- Feb 28, 2007 (Wednesday): Pizza Buffet at Pizza Hut, 5:00p.m.
- March 3, 2007 (Saturday): VE Test Session at the Red Cross Training Center. All license levels will be administered. Starts at 9:00a.m. $14.00 testing fee
- March 4, 2007 (Sunday): ARES Net at 8:00p.m. Net Control will be Bob McBride, N8QPM
- March 7, 2007 (Wednesday): Pizza Buffet at Pizza Hut, 5:00p.m.
- March 11, 2007 (Sunday): ARES Net at 8:00p.m. Net Control will be Mike McCardel, KC8YLD
- March 12, 2007 (Monday): MVARC Meeting at the Red Cross Training Center, 7:00p.m.

form with the raised dots and dashes characteristic of Morse code.

Technological development took place faster if less decisively in Britain. Soon after Charles Wheatstone became professor of experimental philosophy at King's College, London, in 1834, he experimented on the speed of electrical transmission along wires. Lacking the finance or connections needed to develop a commercial telegraph, Wheatstone soon teamed up with the entrepreneurial William Cooke who had seen short range telegraphs in Europe. Together they produced a receiver involving five deflecting needles controlled by electromagnets and arranged for telegraph trials with it on several British railway routes in 1837; however, it was found too expensive for general use. By 1845 they had developed a two needle device that was adopted in telegraphic lines across the country, although Wheatstone's letter-reading and type-printing forms of telegraph also came into more widespread use in Britain. Morse code was, of course, much more generally employed later on in the form of 'wireless' telegraphy that we now know as radio.

ComPIOnents, February 2007

By Mike McCardel, KC8YLD

Hello, I want to thank everyone who attended December's and January's meetings and for all those who have been checking into the Sunday night Knox County ARES Nets. Attendance and check-ins are up and that is good.

We are expecting a good turn out for our meeting Monday February 12 at 7pm. It will be held at the Red Cross Training Center, 300 N Mulberry (the rear building). We'll keep the business meeting as short as possible, although we will have the regular reports and we want to start talking about Field Day. We will have our member Give Away Drawing. Also, Joining us at our meeting will be District 6 Emergency Coordinator Jay Bookwalter, KC8GNL. Jay is from Richland County and will be joining us as part of his personal initiative to visit and maintain a closer relationship with the ARES groups of each county that report through him. Note that, while technically, Knox County ARES and MVARC are separate entities most members of one are members of the other and meeting during a regular MVARC meeting will allow him. to visit with more people. Topics he will be glad to address are NIMS, Training, SET exercises, Served Agencies, Skywarn training. The district 6 website can be found at www.oharesdist6.com
We welcome the opportunity to meet with Jay.

While Jay's attendance is important, I'm sure most members will be attending because it is our Give Away Night. Following the meeting we will be conducting two drawings. The first drawing will be for several door prizes (about twenty) donated from Universal Radio and other entities. These prizes will be drawn from members in attendance at the meeting. The door prizes include a coffee mug, T-shirts, several books, coaxseal, coax jumper cable, AM/FM receivers, CW Practice CDs and more. The second drawing will be for 4-5 prizes, which can be won by any currently paid up member. The winner of these prizes does not need to be present to win. Four of these prizes will include a Grand Prize of $50 worth of gifts certificates to Universal Radio, two second prizes of a $25 gift certificate for Universal, a 2006 ARRL Handbook, and hopefully another prize. The second drawing will include all paid members whether they won a door prize or not. In the event we have more door prizes from the first drawing than members in attendance we will add the unclaimed prizes to the second drawing. Oh yes, we WILL have our 50/50 drawing as well!

I am looking forward to this meeting and hope most members are available to attend.

The League rolled out its Emergency Radio Public Relations Campaign, Web Site recently. Visit the "Emergency Radio… Getting the message through for your family and community" website via http://www.emergency-radio.org/

Beginning February 23, 2007 Morse code proficiency tests will no longer be required for any class of Amateur Radio license. Also Technicians, will gain CW privileges on 3525-3600 KHz on 80 meters, 7025-7125 KHz on 40 meters, 21025-21200 KHz on 15 meters and CW, RTTY and data privileges on 28000-28300 KHz on 10 meters and CW and SSB PHONE! Privileges on 28300-28500 KHz on 10 meters! These new privileges become affective automatically at 12 midnight Feb 23, 2007. It's a great time to upgrade to your General Class license!

MVARC will be sponsoring a licensing exam, 9am Saturday March 3, 2007 at The American Red Cross Training Center, 300 North Mulberry St., Mount Vernon. This is just 8 days after the beginning of the No Code rules going into affect. If you just can't wait you can take your exam or do an administrative upgrade at Coshocton or Columbus Feb. 24. See information below. For a complete question pool information visit http://www.arrl.org/arrlvec/pools.html
Kudos to 10 year old Marcus Nogaj, KD8EVP and 78 year young Kenneth Hodges, KD8EVS who have received Statewide and National attention. They both passed their Technician Class License at our exam session in December. Their age span of 68 years is being announced as one of the largest (if not the largest) ever at the same testing session.

Until next month, 73, and remember to get on the air!

EMike McCardel, KC8YLD
President MVARC
ARRL PIO for Knox County

Up coming events:

MVARC:
ARES Net: 8pm Feb. 4, Feb. 11, Feb 18, Feb. 25, March 4
146.79 MHz
MVARC: Meetings: 7pm Feb 12, March 12, American Red Cross Training Center

Exams: 9am March 3, American Red Cross Training Center

Hamfests:
Winter HAM Fest
Northern Ohio Amateur Radio Society
http://www.noars.net
Talk-In: 146.70- (open repeater)
Contact: Tom Porter, W8KYZ
161 Herrmann Drive
Avon Lake, OH 44012
Phone: 440-930-9115
Email: tporter161@oh.rr.com

Mid-Winter Hamfest
InterCity ARC
http://www.iarc.ws
Talk-In: 146.940 (PL 71.9)
Contact: Dean Wrasse, KB8MG
1094 Beal Road
Mansfield, OH 44905
Phone: 419-589-2415
Email: deanwrasse@yahoo.com

Hamfest and Computer Fair
Toledo Mobile Radio Association
http://www.tmrahamradio.org
Talk-In: 147.27+ (will be in net mode - no tone needed)
Contact: Brian Harrington, WD8MXR
4463 Holly Hill Drive
Toledo, OH 43614
Phone: 419-385-5624
Email: bharrington@meduohio.edu

Licensing exams:
04-Feb-2007
Sponsor: MARION ARC
Time: 2:30 PM (Walk-ins allowed)
Contact: RICHARD W CAREY
(740)528-2296
Email: RWCAREY@GTE.NET
VEC: ARRL/VEC
Location: TV 39
1282 N MAIN ST
MARION, OH 43302

11-Feb-2007
Sponsor: INTER CITY ARC/HAMFEST
Time: (No walk-ins)
Contact: RICHARD E FLETCHER
(419)886-2463
Email: VKAFLETCH@AOL.COM
VEC: ARRL/VEC
Location: RICHLAND CNTY FAIRGRNDS ADMISSION BLDG
750 NORTH HOME ROAD
PRE-REGISTER ONLY!
CHECKS PAYABLE TO ARRL
MANSFIELD, OH 44901

18-Feb-2007
Sponsor: LANCASTER & FAIRFIELD CTY ARC
Time: 10:00AM (Walk-ins allowed)
Contact: ALLEN P SELLERS
(740)654-8167
Email: LSELLERS@GREENAPPLE.COM
VEC: ARRL/VEC
Location: CLUBHOUSE
1611 ROUTE 37 NORTH
NEXT TO BEAVERS' FIELD
ACROSS FROM OH UNIV @LANCASTER
LANCASTER, OH 43130

24-Feb-2007
Sponsor: COSHOCTON CTY ARA
Time: 1:00 PM (Walk-ins allowed)
Contact: COLLEEN G WHEATCRAFT
(740)622-5761
Email: AA8UA@ARRL.NET
VEC: ARRL/VEC
Location: COSHOCTON PUBLIC LIBRARY
655 MAIN STREET
BASEMENT MEETING ROOM
WWW.W8CCA.ORG
COSHOCTON, OH 43812

24-Feb-2007
Sponsor: CENTRAL OH ARES & OSU ARC,W8LT
Time: 9:00 AM (Walk-ins allowed)
Contact: SCOTT A RYAN
(614)451-0113
Email: AB8KN@COLUMBUS.RR.COM
VEC: ARRL/VEC
Location: PRESSEY HALL - ROOM 35
1070 CARMACK RD
WWW.COARES.ORG
PARK @ BEEKMAN PARK WC SPACES
COLUMBUS, OH 43210

03-MAR-2007
Sponsor: MOUNT VERNON AMATEUR RADIO CLUB
Time: 9:00 AM (Walk-ins allowed)
Contact: MIKE McCARDEL
(740)599-6614
Email: kc8yld@arrl.net
VEC: ARRL/VEC
Location: THE AMERICAN RED CROSS TRAINING CENTER
300 MULBERRY ST. (REAR)
WWW.MVARC.NET
MOUNT VERNON, OH 43050

Contests:
February 12 – 16 School Club Roundup
7 – 18 ARRL International DX Contest (CW)
March 3 – 4 ARRL International DX Contest (Phone)

GENERAL STUDY GUIDE
PART 5
FROM EARL PAAZIG, N8KBR
http://studyguide.eqth.org/

Read through this material a couple of times, then visit one of the many on-line web pages that allow you to take a General Class practice test. Here are a few: http://www.aa9pw.com/radio/ , http://www.eham.net/exams/ , http://www.qrz.com/ham/ Take a practice test every month and see how your score improves

SUBELEMENT G6 -- CIRCUIT COMPONENTS [1 exam question -- 1 group]

Resistors

- If a carbon resistor's temperature is increased, the resistance will change depending on the resistor's temperature coefficient rating.
- It would not be a good idea to use a wire-wound resistor in a resonant circuit because the resistor's inductance would detune the circuit.

Capacitors

- An electrolytic capacitor is often used in power-supply circuits to filter the rectified AC.
- A capacitor serves as a Suppressor capacitor, if it is used in a power supply circuit to filter transient voltage spikes across the transformer's secondary winding.

Inductors/Transformers

- Advantages of ferrite toroidal inductors:
- Large values of inductance may be obtained
- The inductor may be used in applications where core saturation is desirable
- Most of the magnetic field is contained in the core
- *(All of these choices are correct)*
- Two solenoid inductors should be placed at right angles to their winding axis so as to minimize their mutual inductance.
- It might be important to minimize the mutual inductance between two inductors in order to reduce or eliminate stray coupling between RF stages.
- The source of energy is connected to the primary winding in a transformer.
- If no load is attached to the secondary winding of a transformer, the current in the primary winding is called the Magnetizing current.

Rectifiers

- The peak-inverse-voltage rating of a power-supply rectifier is the maximum voltage the rectifier will handle in the non-conducting direction.
- The two major ratings that must not be exceeded for silicon-diode rectifiers used in power-supply circuits are Peak inverse voltage and average forward current.
- The output waveform of an unfiltered full-wave rectifier connected to a resistive load is a series of pulses at twice the frequency of the AC input.
- A half-wave rectifier conducts during 180 degrees of each cycle.
- A full-wave rectifier conducts during 360 degrees of each cycle.
- When two or more diodes are connected in parallel to increase the current-handling capacity of a power supply, the purpose of the resistor connected in series with each diode is to ensure that one diode doesn't take most of the current.

Transistors

- The stable operating points for a bipolar transistor that are used as a switch in a logic circuit are in its saturation and cut-off regions.

SUBELEMENT G7 -- PRACTICAL CIRCUITS [1 exam question -- 1 group]

Power supplies and filters

- The safety feature a power-supply bleeder resistor provides is it discharges the filter capacitors.
- Capacitors and inductors are used in a power-supply filter network.
- The minimum peak-inverse-voltage rating of the rectifier in a full-wave power supply is double the normal peak output voltage of the power supply.
- The minimum peak-inverse-voltage rating of the rectifier in a half-wave power supply should be one to two times the normal peak output voltage of the power supply.
- The impedance of a low-pass filter as compared to the impedance of the transmission line into which it is inserted should be about the same.
- A Crowbar power supply circuit is often used to provide over voltage protection at its output.
- Capacitors with low equivalent series resistance should be used to filter the rectified DC output of a switching power supply.
- An advantage of a switched-mode power supply as compared to a linear power supply is the relatively high frequency power oscillator allows the use of small, lightweight and low-cost transformers in the switched-mode supply.
- In a switched-mode power supply, the first step in converting the 120 volt AC input voltage to a 12 volt DC output voltage is the 120 volt AC is rectified and filtered.

Single-sideband transmitters and receivers

- In a typical single-sideband phone transmitter, a Filter circuit processes signals from the balanced modulator and sends signals to the mixer.
- In a single-sideband phone transmitter, a Balanced Modulator circuit processes signals from the carrier oscillator and the speech amplifier and sends signals to the filter.
- In a single-sideband phone superheterodyne receiver, the Mixer circuit processes signals from the RF amplifier and the local oscillator and sends signals to the IF filter.
- In a single-sideband phone superheterodyne receiver, the Detector circuit processes signals from the IF amplifier and the BFO and sends signals to the AF amplifier.

SUBELEMENT G8 -- SIGNALS AND EMISSIONS [2 Exam Questions -- 2 Groups]

Signal information

AM

- An Amplitude Modulation system changes the amplitude of an RF wave for the purpose of conveying information.
- In the emission type, Amplitude modulation, the instantaneous amplitude (envelope) of the RF signal varies in accordance with the modulating audio.

FM

- A Frequency modulation system changes the frequency of an RF wave for the purpose of conveying information.
- When a modulating audio signal is applied to an FM transmitter the RF carrier signal frequency changes proportionally to the instantaneous amplitude of the modulating signal.

PM

- A Phase modulation system changes the phase of an RF wave for the purpose of conveying information
- Phase modulation emission is produced by a reactance modulator connected to an RF power amplifier.

Single and double sideband and carrier

- One advantage of carrier suppression in a double-sideband phone transmission is more power can be put into the sidebands.
- The microphone gain control should be adjusted on a single-sideband phone transmitter for slight movement of the ALC meter on modulation peaks.

Modulation envelope

- Both upper and lower sidebands signal(s) would be found at the output of a properly adjusted balanced modulator.

Deviation

- The frequency deviation for a 12.21-MHz reactance-modulated oscillator in a 5-kHz deviation, 146.52-MHz FM-phone transmitter is 416.7 Hz.

Overmodulation

- The signal of an overmodulated single-sideband or double-sideband phone transmitter becomes distorted and occupies more bandwidth.
- Flattopping in a single-sideband phone transmission means signal distortion caused by excessive drive.

Multiplication

- The Multiplier stage in a VHF FM transmitter selects a harmonic of an HF signal to reach the desired operating frequency.

Frequency mixing

- The Mixer receiver stage combines a 14.25-MHz input signal with a 13.795-MHz oscillator signal to produce a 455-kHz intermediate frequency (IF) signal.
- If a receiver mixes a 13.800-MHz VFO with a 14.255-MHz received signal to produce a 455-kHz intermediate frequency (IF) signal, a 13.345-MHz signal will produce Image response interference in the receiver.
- A mixer stage in a transmitter would change a 5.3-MHz input signal to 14.3 MHz.
- Another term for the mixing of two RF signals is Heterodyning.

Bandwidths

- Frequency modulated (FM) phone isn’t used below 29.5 MHz because the bandwidth would exceed FCC limits.
- The total bandwidth of an FM-phone transmission having a 5-kHz deviation and a 3-kHz modulating frequency would be 16 kHz.
- The maximum bandwidth permitted by FCC rules for amateur radio stations when operating on USB frequencies in the 60-meter band is 2.8 kHz.
- The popular phone emission, Single-sideband, uses the narrowest frequency bandwidth.

HF data communications

- Frequency shift is related to keying speed in an FSK signal in that greater keying speeds require greater frequency shifts.
- RTTY, Morse code, PSK31 and packet communications have in common the fact that they are digital communications.
- When sending data modes, it is important to know the duty cycle of the mode you are using to prevent damage to your transmitter's final output stage due to its inability to dissipate excess heat.
- Most PSK31 operations are found below the RTTY segment, near 14.070 MHz, in the 20-meter band.