



The Scope

Central Michigan Amateur Radio Club Lansing Civil Defense Repeater Association

October 2016
Volume 16
Issue 10

Club Room Cleanup October 1, 2016

Here are a couple "before" shots of what our club room used to look like.

PHOTOS 1, 2, & 4: TED SADILEK/WA8MFQ



Here is what the club room looks like now.

PHOTO 3: CLYDE TOMPKINS/K8CPT



Don't tell John/KD8NNQ's wife, but here is proof that he DOES know how to use a vacuum!! Hi Hi

A BIG Thank You to everyone who came out on their Saturday to help clean our room out. It looks fantastic and much more inviting to visitors.

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October Birthdays:

10/02 Derek Flory/KD8VRS
10/13 Jane Hosford/KC8FSK
10/20 Matt Warncke/W8MAT

October Anniversaries:

10/04 Mike Holcomb/WA8KZY
10/26 Joseph/N8VYS and Pamela/KB8PSF Denomme
10/27 William Smith/KD8ZFR
10/31 Alan Shaw/WB8YOX

Upcoming Meetings:

CMARC

The next meeting for the Central Michigan Amateur Radio Club is Friday, **October 14th** at 7:00 pm at the Salvation Army South Corps, located at 701 West Jolly Road, near the corner of Washington Avenue & West Jolly Road in Lansing.

ARPSC

The ARPSC meeting for the month of October is at 7:00pm on Monday, **October 17th**. We will be meeting at Ingham County Sheriff's Department off Curtis Road in Mason - Sgt. Cole Training Room. For more information about the ARPSC, please check out our website at www.lansingarpesc.com

LCDRA

The next quarterly meeting of the "Lansing Civil Defense Repeater Association" will be at 7:00 PM on Thursday, **October 20th** at Lansing Fire Station #8, located on the corner of Marshall Street and Grand River Avenue in Lansing. If you're interested in what's REALLY going on with the repeaters, come on out to the meeting where you can get your information "straight from the horses's mouth" and maybe even JOIN!

ATTENTION LADIES

If you are interested in having a Ladies Tea Time Christmas party this year, please contact Jane Hosford/KC8FSK and let her know. So far there are four ladies interested, but more would be favorable.

**Home: 517-515-7610 Cell: 517-940-0412
Email: jlhosford54@hotmail.com**

Treasurer's Report 2016

John Doornhaag / KD8NNQ - CMARC Treasurer

Bank Balances for September

Beginning Balance	\$3,565.17
Total Monthly Income	\$15.00
Total Monthly Expenditures	(\$65.84)
Total Business Checking	\$3,514.33
Petty Cash	\$41.00
Sub Total	\$3,555.33
Primary Share Accounts	
Humphrey's Fund	\$1,093.01
Building Fund (Club Station)	\$19.09
Field Day	\$551.30
Total Net Worth	\$5,218.73
Youth Fund Balance*	\$253.84
* Separate from CMARC Funds	

VE Exam Session:

Charlotte, MI

Date: **10/8/16**
Time: 12:00 pm (Walk-Ins Allowed)
Sponsor: Eaton County ARC
Contact: Mark D. Korroch
Email: wb8tgy@yahoo.com
Location: Eaton Cty Sheriff's Dept EOC
1025 Independence Blvd (Enter Back of Bldg)
Charlotte, MI 48813-1031

Next month Ted Sadilek/WA8MFQ will bring his zoo animals from Potter Park. Ted puts on a fantastic show and you will not want to miss it. See you there!



CMARC FOOD DRIVE FOR SALVATION ARMY PANTRY

As most of you know, the Salvation Army South Corps. has been CMARC's Home since 2010 and we have been blessed with not only a great room for our meetings and a really nice kitchen, but also with a really fantastic room for our Ham Shack. To show the Salvation Army our gratitude and to help the community, we will be reenacting what we have done the last couple years by collecting food donations! We will be collecting your food contributions at our September and October CMARC meetings to help restock their pantry. Not only do they provide meals, but they also help the needy with food and personal items they have need of. We will have a big red barrel for your contributions.

PLEASE BRING ANY NON-PERISHABLE FOOD ITEMS SUCH AS THOSE LISTED BELOW:

- Canned Beans
- Canned meat
- Canned Soups
- Canned Tomatoes
- Canned Potatoes
- Canned Veggies
- Canned Fruits
- Dry Beans
- Dry Pasta
- Dry Dinner Sides
- Dry Rice
- Spaghetti Sauce
- Cereal
- Peanut butter
- Jelly
- Instant Mashed Potatoes
- Baby Food
- Baby Formula (canned or powdered)

THEY ARE ALSO IN NEED OF THE FOLLOWING PERSONAL HYGIENE ITEMS:

- Tooth Brushes
- Tooth Paste
- Diapers
- Baby Wipes
- Hand Soap
- Shampoo
- Deodorant
- Feminine Hygiene items (individually wrapped)
- Wash Cloths
- Socks & Underwear (Can be bought at the Dollar Stores.)
- Used clean & in good condition clothing

Please be sure to PRINT THIS OFF and take it with you when you're shopping so you'll be able to remember exactly what their needs are.

If you are not able to purchase products, but would like to donate money, you may do so. Please talk with a Board member at one of the CMARC meetings.

Congratulations Russ and Kelly Fitzgerald



*August 7, 2016
Mackinac City, MI
Church of the Straits*

W1AW/x QSL cards now working their way through the Bureau

By Larry Camp/WB8R



Greetings to the Michigan Section:

After a recent conversation at a hamfest with the 8th AREA QSL Bureau Letter "R" Manager, I am happy to report that the W1AW/x QSL cards are being processed and will soon be arriving in mailboxes.

It is now time to make sure that your letter manager either has a good supply of stamped SASE's or you have sent him/her enough cash on hand for your manager to provide necessary envelopes and postage.

General information on the Incoming QSL Bureau system can be obtained here:

<http://www.arrl.org/files/file/QSL/Incoming%20QSL.pdf>

Specific QSL Bureau information is available here:

<http://www.arrl.org/incoming-qsl-service>

Work your way through the website and ultimately you will end up on the Great Lakes Division 8th Area QSL Bureau web page. From there, locate the Letter Manager for the first letter of your callsign after the call area number and that will be your manager. You can locate his/her callsign and email address.

Ask your Letter Manager how he/she would prefer to handle cards coming in for you. The choices are generally cash credits or SASE. Make it easy on the volunteer.....do it the way they prefer.

Remember, volunteer is the operative word here. These folks do this job because they want to. Don't make their job unnecessarily complicated or difficult. When you communicate with them, be sure to tell them that you appreciate their efforts.

And oh, yes..... Enjoy those W1AW/x cards!!! ■

We Are Taking Orders for Club Shirts!

Russ Fitzgerald N8FZ is coordinating CMARC club shirt and hat orders from Hamthreads. Any club member who orders merchandise with the upcoming CMARC order will receive a quantity discount, regardless of the type of merchandise or quantity ordered.

Club shirts will be Royal Blue with CMARC's logo and your callsign embroidered in striking yellow. We have two styles of CMARC club shirts to pick from: a polo shirt (male and female) and a men's two-pocket button shirt. These are nice enough shirts that can be worn whenever you want to wear them. It would be ideal for our Club members to stand out a little when doing our various club activities (Field Day, Hamfest, Run/Walks, etc.).

Russ is also taking orders for hats with CMARC's Logo and your callsign, in the same color scheme as the shirts. You can also order your hat with just your callsign if you choose.

Hamthreads is also offering us a deal...if you buy ANY jacket you'll get a "free hat". YOU WILL HAVE TO ORDER YOUR OWN JACKET/HAT!!

To place your order or for questions, call or email Russ Fitzgerald – N8FZ as soon as possible. 517-899-2622 russf2211@aol.com

For further information, please visit <http://www.centralmiarc.com/cmarchirts.php>

Ongoing License Plate Project for the Club Room:

By Russ Fitzgerald / N8FZ

The club is trying to collect as many ham call license plates as possible from our members for a display in the club shack redesign project. Check your garage, shed, or basement and see if you have an old plate kicking around. Year or condition doesn't matter. Can't find one but still would like to participate? No problem. Here's what you do. The State of Michigan will let you order a replacement plate at any time, you do not need to wait for a renewal. All you need is a copy of your license, Amateur Radio Operator form from the state (I have

plenty of these), and a check to the state for \$2.00 for the standard plate or \$7.00 for the graphic bridge plate. When it arrives you use the new plate on your vehicle and donate the old one or donate the new one.

If you have any questions please call 517-899-2622, or email russf2211@aol.com, or see me at the next meeting. I have the forms with me.

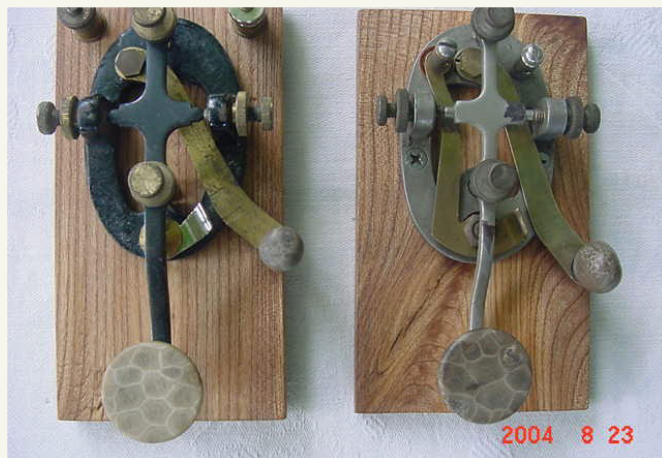
A new “March” CW paddle...

By Gregg Mulder / WB8LZG

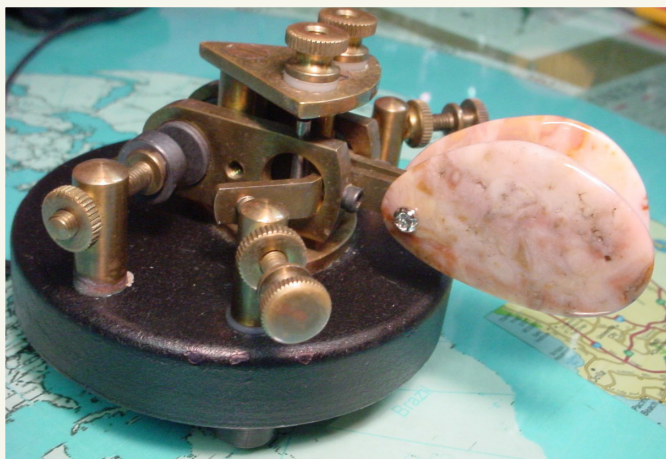


As many of you know, I make wooden finger pieces for code keys in need of repair. Some of them have turned out quite nice. I was recently given a set of stone pieces the shape and size of paddles. The problem was they only had one hole drilled into them. They sat on the shelf until I found a key that would fit them. This year at Dayton, I came home with a “MARCH” paddle. It had only one hole to mount the finger pieces. A perfect candidate. Well, a bit of fitting and fumbling to find the correct screws, and the key has a new

I'm not the only Ham with stone keys. Last year I met a Ham who does lapidary as a side hobby. This is a FB set of Petoskey Stone pieces he crafted for his straight keys.



Look, here's a set of paddles for “rock solid” keying!



These keys are very beautiful and very functional. The “feel” is a bit “hard” compared to a wooden or plastic knob. Yet they send nice code. Hams have a lot of other skills besides playing with radios.



Hope you enjoyed the pictures. ■



Should U.S. ham tests be given abroad?

By Dan Romanchik, KB6NU

Dan, KB6NU, is the author of the “No Nonsense” amateur radio license study guides, and blogs about amateur radio at KB6NU.Com, and you can contact him by e-mailing cwgeek@kb6nu.com. When he’s not pondering the vagaries of the U.S. licensing system, you’ll find him working CW on the HF bands.



A couple of weeks ago, I received an e-mail from a reader who wanted my opinion about a thread on the HamRadioHelpGroup mailing list. The e-mail that started the discussion was a message from an American living in Italy who wanted to take the Technician Class exam. In her e-mail, she told of her troubles finding a test

session, and then when she did find one, what she perceived as “irregularities” in the testing process. Reading the thread was a little disconcerting, and I blogged about this issue (<http://www.kb6nu.com/u-s-amateur-radio-license-exams-given-outside-u-s/>).

I understand why foreign national go to the trouble of taking the U.S. license exam. Some of them even buy my study guides. About a year ago, for example, I swapped some e-mail with a guy from Malaysia about why he purchased my study guide and why he wanted a U.S. license. He said that it was because a neighboring country offered reciprocal operating privileges to U.S. licensees, but not Malaysian licensees! He mentioned that he tested for the license in Thailand.

Basically, my Malaysian friend was using the U.S. licensing process to circumvent the Malaysian licensing process. Australians seem to do this, too. Apparently, according to one of the VKs who commented on the thread, getting a U.S. Tech license is easier than testing for an Australian Foundation license. So, some Australians get a U.S. Tech license first, then get the Australian government to issue them a VK Foundation license based on the reciprocal operating agreement between the U.S. and Australia.

Another reason that some outside the U.S. obtain U.S. amateur radio licenses is the challenge. That’s the reason Martin Butler, MoMRB/W9ICQ, of ICQPodcast fame, gave when I spoke to him about this recently.

Are these reasons “good enough” to continue this program of licensing non-U.S. citizens? My first reaction was that no, it’s not good enough, and I questioned whether or not the ARRL VEC should sanction non-U.S. VEs and whether or not the FCC should even allow testing outside of the United States.

I didn’t see the need for conducting these test sessions or the desirability (to the U.S.) of licensing foreign nationals. I reasoned

that not only was there a greater possibility of test fraud, this program could lead to foreign authorities claiming that the U.S. was meddling in their affairs.

This post garnered a lot of comments. Several of them took me to task for voicing this opinion and were in favor keeping the current licensing program in place. There were a variety of reasons.

One of the reasons in favor of using the U.S. licensing process is that in many countries, amateur radio license exam sessions are not very frequent. Another is that they often are quite expensive. This creates an artificial barrier to getting an amateur radio license. Using the U.S. licensing system breaks through this barrier and allows many more to enjoy amateur radio.

Of course, for everything to be on the up and up, the foreign authorities would have to condone the use of U.S. license tests. Apparently, this is the case in Thailand and Australia. I don’t know about Italy, but I’m guessing that the authorities there don’t really care about Italians obtaining U.S. licenses.

Perhaps the best comment came from Thida, HS1ASC/KH6ASC. He noted that the tests in Thailand were administered very strictly, and says, “The U.S. may lose some call signs, but what the U.S. and U.S. hams get from us is goodwill, very positive feeling. Everyone who gets U.S. license is so proud, and others look at them respectfully.” Since Part 97.1(e) lists as one of the purposes of amateur radio, “Continuation and extension of the amateur’s unique ability to enhance international goodwill,” I’m now all in favor of offering U.S. ham tests abroad.

I’m not one of those guys, though, and if you’re not one of those guys, then you have to resign yourself to being ignorant. But, that’s a good thing, as long as you realize that you’re ignorant. Realizing that you’re ignorant will spur you on to learn new things and accept new challenges.

Recently, I realized that I’m mostly ignorant about satellite operation. I know some of the basics from having read articles and writing about the topic in my study guides, but I have never made a contact using a satellite. I think that might be one of my next challenges. With the advent of CubeSat, there are many new satellites up in the air and many more opportunities to have interesting contacts.

So, what are you ignorant about? By that I mean, of course, what’s going to be your next challenge in amateur radio? ■

The Fist - A Tale of Ham Humor, Part 1

By Gregg Mulder / WB8LZG



It all started innocently enough. George and his friend Phil decided they would go to the Sunday hamfest together, carpooling to save a little money. Neither ham needed anything, in particular, just going to browse, socialize, and have fun. Little did they know that this hamfest would change their life, and their perception of reality forever.

We smiled “ear to ear” as we pulled into the parking lot. Each is looking at each other with that enthusiasm of two kids in a candy store! What hard to find electronic device would we be coming home with today. Only luck and fate would be the tell. Phil scowled at the gentleman taking money for parking. “Three dollars! Highway robbery!” he exclaimed as he pulled away from the attendant.

There was a line at the entrance, but it was moving quickly and soon we both had our tickets in hand and started off to find the coffee and the “ticket drum.”

The swap was at a local school, and the gymnasium was filled to capacity with tables, all filled with electronic “treasures” from days gone by. We started at one end and worked toward the doorways. Several nice looking “boat anchors” graced the tables, with odds n ends of several radios innards strewn in for good measure. Being CW men, we both naturally gravitated to any type of key, sounder, or sending apparatus that caught the eye. We spent several minutes talking to the owner of an old Lionel bug from WWII. It had come into his possession from a friend of a friend who became a ‘silent key’, and through the family, he had inherited the key. It was well cared for and had a nice “feel” to it, but the price a bit too steep and he wouldn’t haggle. Right away we both just kept on walking. “Anyone who doesn’t haggle a little at a swap just doesn’t want to sell very bad” Phil whispered to me out loud. We made it around the gym without buying a single item. The halls were also filled with tables, so we ventured out to see if there were any bargains out there. I purchased a few plugs n jacks for a project I had on the bench and was about to turn around and go back to the gym when I spotted it. Phil spotted it too, but he let me have 1st dibbs. Off to the edge of the table sat an old bug. We both were intrigued by the appearance. It was definitely NOT an American made key. Closer inspection revealed the origin was Japanese, around the WWII era. Behind the table was a wrinkled old



man, who had difficulty moving. When asked for any information about the key, he grimaced for a moment and said. “Are you ready for a story you won’t believe?” We kinda looked at each other with a half-cocked eye. “It was in the war,” he said, “and we were on the island of Tarawa in the South Pacific. We had spent 3 days in heavy combat and finally were able to win the battle, but with hundreds of casualties on both sides. The Japanese suffered tremendous losses. Of the over 1500 soldiers there, only some 50 or so were left alive when the fight was over.” His face turned very somber. “One of the gravely wounded men was the Communications Officer. Before he died, he showed me his prized possession, a beautiful bug, machined to perfection by his friend and business partner in Shikoku before the war. It was apparently a family heirloom of some sort and had been made for the Emperors nephew. He and this nephew were friends and so the key was given to him as a gift. In his dying breaths, he begged me to please find his young son, and return this key to him.” He winced, “I agreed, to be “comforting” as the life slowly left the body of the enemy I could no longer fight.” “The Jap Officer mumbled something in Japanese just before he died. Then an eerie silence. He asked one of the other Japanese prisoners who was watching what he had said.” The interpreter replied, “He say No make sense.” “Tell me what he said!” “He says to return key to his son or curse will follow you.” “Bull \$*&#! You little ...!” “What did he say?” Again the enemy soldier explained fearfully, “that if the key was not returned to his son that a curse would befall your hand and that until the key was returned, your children would also know the curse.” A stern voice from behind stopped the conversation. “Move it out!” the Sarge exclaimed. “no time play around here” That was that. “I took some of the personal ID papers from the dead man and stashed them and the key into my backpack, rolled up in my knapsack.” As he told it, the key had come back to the States with him when he returned, but he had never attempted to find the rightful owner. As the Marine returned to the civilian world he left behind, somehow the old key got set aside in a box and put into attic storage for who knows how many years. “Eventually when I moved out I found it again.” “So that’s how I came into the possession of the key, and all this time it was never really mine.” He also told us of a strange curse which apparently followed the key, and that he wanted to find the rightful owner and give it to him so that the “curse” would end. “well I looked around on the internet for a while but came up cold.” He sighed. “So now I’m going to try and sell it, and be done with it.” “So what’s the curse?” I asked. “Don’t really know!” he said sorta half clueless. “But it has something to do with your hand “... Well, I put my hand on the old bakelite finger pieces and gave er a few di-dahs. “Hmmm... seems ok to me,” I said defiantly.”

"Yeah, it seems to play OK at first, but everyone who has tried it says it will start sending the wrong letters." "I tried it once, It grabbed my hand and wouldn't let go." "so I set it on the shelf in the closet and never touched it again." "Great story" Phil said. "sounds like a bunch of malarkey to me." I said. " whatcha want for it?" "Twenty-five bucks." "Take twenty?" "Sold." I proudly placed the new key in my ditty bag and wondered over to the next table. "Looks like a good find." Phil said. "Yeah but I don't know if I believe all that stuff about a curse, though." "Yeah, pretty hokey story." We wandered up and down the aisles of goodies for another hour and then in a "look" of the mutual agreement we both chimed, "time to pack it in."

The trip home was uneventful, but neither of us could get it out of our heads what the old guy had told us about the key. It reminded us of an old black and white "cheapie" horror movie, THE HAND. We talked about "strange curses," and other scary stories we had heard over the years, but this one was just a tad over the top. Like something from "tales from the crypt, CBS radio mystery theater, and other macabre stories."

Upon returning home, I took my new prize and placed it on the operating desk next to my other keys. "I'll check you out tonight," I said to myself in quiet satisfaction, of having landed a nice key at the swap.

Later that evening I found myself down in the shack putzing around, and thought I'd shine up the newly acquired instrument and give er a tryout. I got out an old rag and started carefully cleaning the years of dust, dirt, and oxidation from the key. I peeled back the insulation from an old headphone cable and hooked it up to the terminals. Plugged er into the rig's key jack. A couple strings of dits to adjust the speed... And, yes! She seemed to send pretty well. So, I start pounding out a CQ. SMOOTH! Just when I get to my call, I made a mistake. So I send it again. Just when I get to my call, the thing makes an error. I try again with renewed conviction. Just when

I get to the "call," it starts sending something else. Well ! "Darn thing looks better than she sends that's for sure." I tossed it up on the shelf, along with a few other "Project Keys" and figured I'd do a real cleanup on it tomorrow and adjust it to MY fist.

Next morning I wandered down to the shack to clean up the old key and give er a real good workout. As I cleaned the pieces, I began to gain an appreciation for the craftsmanship in its construction. This was not a rapidly punched factory job, but a "one of a kind," complete with some sort of engraving in Japanese.

"There! " I said with satisfaction, after a good bit of elbow grease, gave better than usual results. The shine was superb. With renewed anticipation, I hooked it up to the oscillator. Ran a quick string of dits. Hmmm not bad! I plugged er into the rig and adjusted it on the desk. Quickly I turned on the old Heath "Hot Water 101" and waited for the warm up. I sent a few dah's to check SWR. Ahhh AOK. A set of "V"s and a snappy "QRL." Yes, this was more like it! I sent a CQ. CQ, de W8EKR AR. And just when I thought it was FB, I just kept right on sending. But the problem was " I " wasn't doing the sending. "Dang thing"! I said along with a few other explicatives! Not to give up easily, I tried again. CQ CQ de W8EKR AR. Again the thing just kept right on going. This time, I tried to "pull away" but it was as if the key "held my hand there" forcing me to continue sending! All the while I tried to decipher some of what I was sending. Not a word. Again I attempted to "pull away" and was sorta scared! It just held my hand and kept on sending! I finally reached over with the other hand and hit the XCVR power switch. As the lights went dim the key "Let Go" of its constriction of my sending hand. "Very strange," I thought to myself. " Phil's not gonna believe this one!" I could hardly wait to dial the phone and tell Phil about it. I dialed, "Yello" "Hey your not gonna believe this, but you know that key I got at the swap, It really is cursed. "

End Part 1. Stay tuned next month for the exciting conclusion! ■

Public Service Opportunity: Dewitt High School Invitational

The Dewitt High School Marching band has asked our club if we could provide communications for the Dewitt Invitational on October 15th. The Dewitt Invitational is an all volunteer high school band competition which serves as a fundraiser for all music programs in the school district. Our job is to provide communication between the various locations in and around the playing field. Good food and great high school bands from around the state. You can volunteer for a half or full day. Looking for about 6 to 10 people. If you are interested or have questions, please let me know. This event will be great exposure for the club in the Clinton County area.

The fun begins October 15th at 10:00 AM just outside the main entrance to the football field. We will have one central station there, and the

rest of us will be at the various check stations around the high school and mobile/portable the other buildings and schools. Our primary job is to relay information to from the check in points to the staging areas. In years past we have relied on cell phones for this, but that has proven to be impractical. You will only need to bring your HT or use the radio in your car. The bands will begin to show up around 11 AM so the 10 AM meeting time will give us ample time to set up and go over last minute instructions. This event should be a very easy and fun experience and would be an excellent introduction to public service for new hams. Please confirm here if you are planning to help out. I need a rough head count for food etc.. If you have any questions please let me know either here or email me at n8fz@arri.net or call 517-899-2622.

The Life of a QSL Bureau Letter Sorter

By Larry Camp/WB8R



Editor note: I received this summary of what a "Letter Manager" at the 8th Area QSL Bureau goes through to make sure that you get your QSL cards. This was written by: "Goose" Steingass, W8AV from Ohio. My thanks to Goose for sharing this inside glimpse into the world of the incoming QSL Bureau.

I am the "R" letter sorter for the 8th Area ARRL Incoming QSL Bureau. This means that I handle all of the DX QSL cards that come into the bureau whose calls have an "R" as the first letter of their callsign suffix. I have been doing this for about 7 years now taking over the "R" letter after the previous sorter K8VG became a silent key. It is a rather daunting task handling cards for over 1000 "R" customers but I have always viewed it as a way of giving back to the hobby that has enriched my life. Just as a sideline, I am also an avid contestester and DX'er as well as a DXCC Card Field Checker, so my life is busy. But, enough of that. Let's walk you through what I do as a letter sorter. By the way all letter sorters are unpaid volunteers, although we do get to use the ARRL's Outgoing QSL Bureau for our personal cards free of charge.

About 4 times a year each letter sorter receives bureau cards from the main W8 sorting bureau in West Chester, Ohio. The cards arrive at the main sorting bureau from overseas and are sorted there by the first letter of the suffix. The bureau manager, in this case Jack, N8DX, then mails the cards to the respective letter managers (26 in the 8th Area) who then sort the cards by callsign. With the "R" letter, I usually receive about 15 lbs. of cards in each sort, although the W1AW Centennial QSL cards, I received 24 pounds of cards! For me this sorting usually takes about two to three days depending on the number of cards. After the sort, I begin to stuff envelopes to mail the cards to you, the recipient. Stuffing envelopes normally takes about a week and a half before I can mail the cards. Each envelope must be weighed to insure that it has sufficient postage on it for mailing. My "heavy hitters" get a lot of their cards mailed to them in boxes since it is cheaper than addressing and mailing five or six envelopes.

This might bring up the question on why do I have to address the envelopes? The answer to this is that many of us sorters operate on a "cash credits" program in which you, the ham, sends the letter manager money and he or she provides the envelopes and postage. By doing this I can affix a 21 cent stamp to the envelope to cover the second ounce of weight without having to use an additional envelope and 47 cent stamp. Furthermore, I can buy envelopes in bulk so that I can try to save you money and I do all the leg work of getting envelopes and

postage so you don't have to. It also alleviates the problem of someone sending me a No.6 envelope (the standard letter sized envelope) which will not hold the larger cards without having to fold them in half or a No. 10 (business letter) envelope with \$1.50 of postage on it. Over the years, I have seen a lot of different sized envelopes with either not enough postage or an 8x10 envelope with one first class stamp on it. Just a note, an envelope larger than 6x9 cannot be machine processed so the postage rate for these "oversized" envelopes is 92 cents for the first ounce of weight. This is why I prefer "cash credits", as it prevents this kind of hassle. Contact your letter sorter to see if he or she wants envelopes or cash to mail your cards. You can find the list of letter sorters on the Great Lakes Division web site (http://arrl-greatlakes.org/8th_bureau.htm). If you prefer to deal with envelopes, please use the 6x9 envelopes and put only one first class "forever" stamp on each envelope so you don't get caught with your pants down when the postage rates increase.

The worst part of my job is spending extra hours trying to track down hams that have QSL cards on file at the bureau but no funds or envelopes. This is a tedious process as a lot of them never list their e-mail addresses on QRZ.com and many of them never reply when I try to contact them via e-mail, the NTS, or with a postcard. There are also others that simply do not want their cards. Bureau policy is to destroy them after 90 days if there is not response from the ham but some of us keep them for longer periods in our "dead letter" files in case you change your mind and want your cards. If you work DX, you should have envelopes or funds on file with your letter manager so that the manager does not have to keep trying to find you. Also, if you move, please let your letter manager know so they can get your cards to you in a timely fashion. Remember, if you get confirmation for a QSO on LOTW, you may also get a paper card through the bureau. ■

One final note:

The letter managers do not handle "outgoing" cards. We simply do not have the time to process both incoming and outgoing cards. It is your responsibility to mail these to the ARRL if you are a member or to one of the custom QSL services if you are not a member. There is a processing cost involved for sending outgoing cards it is not a free service. Check the ARRL's website for the current fees.

CMARC Board Meeting

September 9, 2016

❖ CALL TO ORDER:

- President Tom Rocheleau/WA8WPI called the meeting to order at 6:03 with the following Board members in attendance: Secretary Jane Hosford/KC8FSK, Treasurer John Doornhaag/KD8NNQ, Director Chris Ranes/NS8Q, and Director Ted Sadilek/WA8MFQ. Vice-President Russ Fitzgerald/N8FZ and Under 22 Director Sam Fitzgerald/N8FPR had an excused absence. Also present was Clyde Tompkins/K8CPT.

❖ SILENT KEYS: None

❖ MISCELLANEOUS:

- Clyde/K8CPT is the Club Liaison for the Salvation Army and is also the Club coordinator for SATERN (Salvation Army Team Emergency Radio Network).

- Need to do a Club room clean up and possibly have a silent auction.
- A set of rules for the Club room is being drafted, as well as instructions on how to turn on the equipment, the labeling of coax runs to the different antennas, and how to properly log contacts made into the logbook.

❖ MEETING ADJOURNMENT:

- Motion to adjourn made by John/KD8NNQ, seconded by Chris/NS8Q and approved
- Meeting adjourned at 7:00 pm.

Respectfully submitted,
Jane Hosford/KC8FSK-Secretary

General CMARC Meeting

September 9, 2016

❖ CALL TO ORDER:

- President Tom Rocheleau/WA8WPI brought the meeting to order at 7:04 pm.
- We do have nametags for everyone if you don't have your own, so please use, so we know who everyone is. Please sign in on the sign in sheets that are going around, there is one for members and one for visitors.
- The meeting began with the Pledge of Allegiance. President Tom Rocheleau/WA8WPI held the flag.
- A moment of silence for our silent keys

❖ ATTENDANCE:

- There 32 people in attendance.
- Our visitors included Mary Tillitson and Dan Romanchik/KB6NU

❖ NEW LICENSES, UPGRADES, AND VANITY CALLS:

- Kenny changed his callsign to K8NNY

❖ SILENT KEYS: None

❖ CARDS & FLOWERS REPORT:

- Leota/KD8SQD, Roger/AB8RX, and Jim/KA8DDQ received cards.

❖ PLEASE PAY YOUR DUES:

- CMARC dues to John/KD8NNQ
- LCDRA dues to Michael/W8MKB
- NEW HAMS GET ONE YEAR FREE MEMBERSHIP

❖ OLD BUSINESS (CLUB ROOM REORGANIZATION):

- We need to do a Club room clean up and possibly have a silent auction. Would like to have this done by the November meeting. The tentative date is Saturday, September 24th from noon – 6:00. Also, have a set of rules for the Club room and a list of turning on everything and labeling the antennas. Russ/N8FZ is collecting amateur radio plates to display on the wall in the Club room. Russ/N8FZ has the forms for ordering them.
- Russ/N8FZ is collecting amateur radio plates to display on the wall in the Club room. Russ/N8FZ has the forms for ordering them.

❖ INTERESTING DX:

- Kenny/K8NNY talked to Brazil from the Club room.

❖ CLUB DIRECTORY:

- Need to check with Dan/KD8YDE.

❖ WEDNESDAY NIGHT INFORMATION NET:

- Clyde/K8CPT is the Net Control and for those interested would like to run the net from the Club room @8:30. For those interested, please contact Clyde/K8CPT.

General CMARC Meeting

August 12, 2016

❖ NEW BUSINESS:

- Hamfest tickets are going to be \$5.00, and spaces are also going to be \$5.00.
- Clyde/K8CPT is the Club liaison for the Salvation Army and is also the Club coordinator for SATERN (Salvation Army Team Emergency Radio Network).
- Jerry/KD8GLN made a motion to accept the August secretary's report as printed in the September Scope, Ted/WA8MFQ seconded the motion and was approved by all.
- Ben/WD8OVL made a motion to accept the August treasurer's report as printed in the September Scope, Jimmy/KD8IWQ seconded the motion and was approved by all.

❖ ENTRANCE TO CLUB MEETINGS:

- Beginning in October we will not be using the front door for entrance. Please use the back door (south side of building) from now on. This door is the one that opens into the room where we hold our meetings.

❖ CLUB SHIRTS:

- Russ/N8FZ and Sam/N8FPR Fitzgerald are taking over ordering the Club shirts. The website is hamthreads.com. A sign-up sheet is going around tonight for you to write down your shirt orders. Russ/N8FZ will get the list at the end.

❖ MISCELLANEOUS:

- John/KD6KCX thanked the 11 volunteers who came out to help Labor Day morning in Dansville for the C.H.U.M. (Children and Horses United in Movement) event.

❖ 50/50: There was no 50/50 tonight.

❖ MOTION FOR BREAK:

- A motion for break was made by Don/KB8RAD, seconded by Leota/KD8SQD and approved.

❖ COFFEE FUND:

- The money collected each month goes to purchase the coffee, creamer, punch, coffee filters, cups, napkins, plates, plastic ware, etc.. Visitors are our guests and are not expected to donate. Also, if you brought in food, you do not need to donate.
- ***Thank you to everyone who brings in food each month and thank you to everyone who helps in the kitchen each month. It is all very much appreciated.***

❖ UPCOMING EVENTS:

- In November we will be taking nominations for the 2017 Board. Think of someone you would like to nominate or you can nominate yourself. You must be a full member to be on the Board and to nominate someone.

❖ BREAK:

- Thank you to everyone who brings in food each month and thank you to everyone who helps in the kitchen each month. It is all very much appreciated

❖ TONIGHT'S PROGRAM:

- Dan Romanchik/KB6NU talked about CW and passed around three different types of keys.
- If you wish to join the ARRL, the cost is \$49.00 a year. Life membership is \$1225.00.

❖ MEETING ADJOURNMENT:

- Made by John/KD6KCX, seconded by Michael/W8MKB and approved.
- With all business concluded, the meeting was adjourned at 8:45 pm.

Respectfully submitted,
Jane Hosford/KC8FSK-Secretary

CMARC Board Elections

Have you thought about the 2017 Board of Directors or Appointees?
Begin thinking about running or who you might like to nominate.
Nominations will close at the November Meeting.

The DX Corner

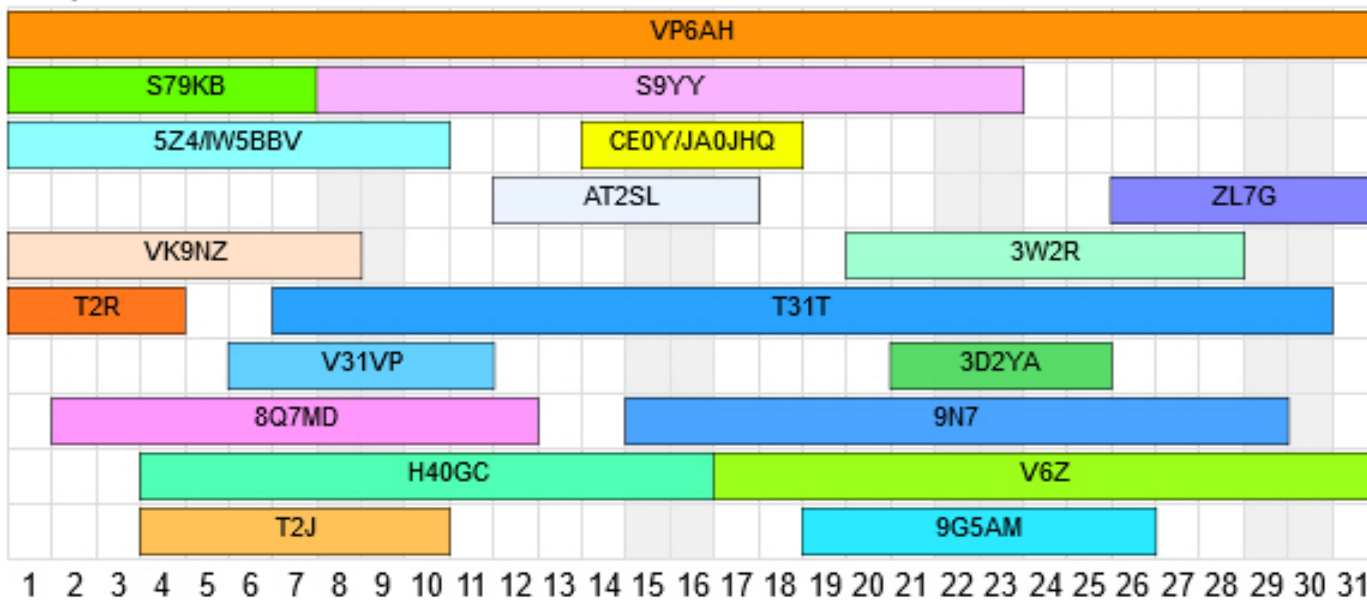
By Col McGowan, MM0NDX

The images and articles about current and/or upcoming DX operations are published here with permission by Col McGowan/MM0NDX as made available on www.dx-world.net.

Images for the QSL cards are published with permission from Tom Roscoe/K8CX and the QSL Card Museum at www.hamgallery.com/qsl.

DX WORLD.net FEATURED DXPEDITIONS TIMELINE

Last update: October 5, 2016



Edited by MM0NDX

OCTOBER

© IK8LOV Max Laconca

Current & Upcoming DXpeditions

T31T - Central Kiribati (Kanton Island)

DX Oceania

- Dom 3Z9DX, SP3DOI, & SP7VC from the Rebel DX Group plan to be on the island for 4-6 weeks. Besides operating they will be volunteering in the community.
- They are planning all HF bands and modes
- QSL via ClubLog OQRS
- *At the end of the operating, 1-2 people will be trained in how to operate Ham Radio, and a permanent callsign will be issued at that time. A radio running 100W, with a couple antennas will be donated to them to use. This will be their only communication outlet with the rest of the world.*



T31T 1999 Central Kiribati
Courtesy of K8CX

REBEL
DX GROUP

Current & Upcoming DXpeditions

S9YY - Sao Tome & Principe *DX Africa*

- Operating will take place between October 8-23, 2016.
- They plan to operate CW, SSB, and digital on HF and 2m EME
- QSL via DH7WW - Direct or Bureau



*S9SS 2002-2007 Sao Tome & Principe
Courtesy of KY4P*

AT2SL - Shiyal Bet Island, India *DX World*

- First ever activation of Gujarat State East Group IOTA AS-176
- *Up until June 2016, the island had been without power since 1947, when they won their independence.*
- Operating will take place between October 12-17
- They plan to operate CW, SSB, & RTTY on 40-15m
- QSL via VU2CDP Direct or by ClubLog OQRS



H40GC - Nendo Island, Temotu *DX Oceania*

- IOTA OC-100
- Operating will take place between October 4-17
- They plan to operate various bands and modes
- QSL via Secure ClubLog and LOTW



*H40FN 2013 Temotu Province
Courtesy of KM7R*

CLASSIFIEDS

6 element 6-meter Yagi-Uda. This Yagi is being taken down from the W8SH tower. It is a "Force 12" yagi and has been up on the mast for 20 years. It is in working condition, although it could use a good cleanup.
\$75 or best offer.

J-37 Hand Key - \$20
J-38 Hand Key - \$20
Speed-X Hand Key - \$20

Contact: Gregg Mulder/WB8LZG
(517) 646-6257 after 5pm please.

The following items of equipment from the station of Louis Larche/KD8BWL - SK, are still available. Listed is the suggested price for each. Please make an offer if you are interested. All the proceeds will go to Barb, Louie's XYL.

Kenwood AT-230 antenna tuner, for use with TS-830, TS-530, etc.
200 Watts, 1.8 to 30 MHz, 20 & 200 watt scales -- \$120

Kenwood VFO-230 digital synthesized VFO, for split frequency. 20 Hz steps. 5 memories. Designed to connect to TS-830s or TS-530 -- \$135

Contact: Ken Faiver/W8HNI
(517) 896-3570 or
kfaiver@sbcglobal.net

Alinco DJ-V57T HT for 2 meters and 70 cm. Radio includes a speaker mic and car battery charger. It runs 5 watts max and has 200 memories.
\$90 or Best Offer

Contact: Ed Oxe / W8EO:
eaoyer@gmail.com

ICOM IC-746 Transceiver - \$750
Comes with hand mic, DC power cord, instruction manual, and service manual.
ICOM SM-8 DESK MIC - \$100.00
Voice Synthesizer UT-102 - \$40.00

Package Deal - \$800

All working great and look nearly new. I have the original boxes for everything.

Contact: Jim Hein/K8UHF:
k8uhf@sbcglobal.net

Connect Systems CS700 Handheld DMR Radio - \$150

Contact: Joe Urdzela/K8JJU:
JJUrdzela@gmail.com

(2) Tytera MD-380 DMR Handheld Radios - \$150 ea.

Contact: Jason McLaughlin/KC8RBK:
(517) 712-0478 or
kc8rrrrbk@gmail.com

If you have something to sell or if you are looking for something specific to buy, please send your requests to cmarscope@gmail.com. There is not charge to list a classified ad in our newsletter.

Greater Lansing Nets

The **"Central Michigan Slow Scan TV Net"** meets every Sunday evening from 7:00- 8:30pm on the 145.39 repeater (PL 100 Hz), with Net Coordinator Carl Canfield/K8YHH. EVERYONE is welcome to join in and have fun learning and using this interesting and useful mode of communication. Other digital modes will be explored from time to time. For more information, call Carl at: (517) 755 6627.

The **"Ladies Tea Time Net"** meets every Tuesday night at 7:00 pm on the 145.39 repeater (PL 100.0), with Net Coordinator Janine Lieber/KK6GYM.

The **"Quarter Century Wireless Association Net"** also meets every Tuesday night but at 8pm and on the 146.70 repeater (PL 107.2 Hz), with Net Coordinator Don Tillitson/WB8NUS.

The **"Mid-Michigan Information & Trader's Net"** meets every Wednesday evening at 7:00pm on the 145.39 repeater (PL 100 Hz), with Net Coordinator Clyde Tompkins/K8CPT.

The **"MSUARC Friends and Info Net"** meets every Thursday evening at 7:00pm on the 145.39 repeater (PL 100 Hz), with Net Coordinator Gregg Mulder/WB8LZG. The first half of the net is time for chatting, while the second half is for Morse Code practice. If you wanted to learn Morse Code, but didn't know how to go about doing it, then please join us. The speeds are kept down to a minimum, to make it easier to learn.

ALL are welcome on these nets, so be sure to check in to show your support. And as with all Nets, 3rd party check-ins are welcome, but must have Control Operator present at check-in time.

7	5	3	1	6	8	4	2	9				7	3	5	1	9	6	2	4	8	
1	6	8	2	9	4	5	3	7					2	1	8	5	4	7	9	3	6
2	4	9	3	5	7	1	8	6					4	6	9	3	8	2	5	1	7
9	7	2	6	8	1	3	4	5					9	8	1	2	3	5	6	7	4
4	8	1	5	3	9	6	7	2					6	2	7	9	1	4	8	5	3
6	3	5	4	7	2	8	9	1					5	4	3	6	7	8	1	9	2
3	1	7	8	2	6	9	5	4	3	6	8	1	7	2	4	6	9	3	8	5	
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8	9	6	7	4	5	2	1	3	5	4	7	8	9	6	7	5	3	4	2	1	
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2	7	3	5	1	9	8	4	6	1	7	3	9	2	5	8	1	4	3	7	6	
7	3	2	1	9	5	4	6	8				2	8	4	7	5	3	6	1	9	
8	5	9	2	6	4	7	1	3				1	3	9	2	4	6	7	8	5	
1	4	6	3	7	8	5	9	2				5	7	6	1	8	9	2	4	3	
5	2	1	7	3	6	9	8	4				8	9	1	3	2	5	4	6	7	
9	8	7	4	5	2	6	3	1				3	5	7	4	6	8	1	9	2	
3	6	4	9	8	1	2	5	7				6	4	2	9	7	1	5	3	8	

CMARC Officers and Appointees

President / Webmaster
Tom Rocheleau, WA8WPI

Vice President / Youth Liaison
Russ Fitzgerald, N8FZ

Secretary / Cards & Flowers
Jane Hosford, KC8FSK
(517) 505-7610

Treasurer
John Doornhaag, KD8NNQ
(517) 882-5406

Director
Ted Sadilek, WA8MFQ
(517) 881-6093
tdsadilek@sbcglobal.net

Director / Scope Editor
Chris Ranes, NS8Q
(517) 487-8376

Under 22 Director
Sam Fitzgerald, N8FRP

Club Contact
Don McLain, KB8RAD

Club Historian
William Cote, WD8NYW

Antenna Projects Chairman
Gregg Mulder, WB8LZG

Lansing ARPSC Liaison
Jim Hannahs, KC8OWH

QSL/Awards Manager
Don DeFeyer, KC8CY
(517) 641-4533

Photographer
Kenneth Hazlett, N8BVV
(517) 348-5513

Salvation Army Liaison
Jerry Waite, KD8GLN
(517) 882-5406

Meetings
Held Monthly on the second
Friday of the month at:
Salvation Army-Capital Area,
701 W. Jolly Rd, Lansing
at 7:00 PM. Board Meeting
begins at 6:00 pm.

CMARC Calls: W8MAA & W8PLP

LCDRA Officers and Appointees

President
John Imeson, N8JI
(517) 449-1517

Vice President
Don Tillitson, WB8NUS
(517) 321-2004

Secretary
Ron Harger, WD8BCS
wd8bcs@arrl.net

Treasurer
Jeff Oberq, KB8SXX

Director
Jan Bradfield, KC8BFK
(517) 202-1779

Director
Don McLain
(386) 916-7673

Director
Jim Harvey, KA8DDQ
(517) 882-5796

Membership Chair
Michael Boensch, W8MKB

Repeater Trustee
Dennis Boone, KB8ZOZ

Meetings
Held Quarterly on the third
Thursday of the month at:
Fire Station #48,
Marshall St, Lansing
at 7:00 PM.

**LCDRA Call:
W8BCI**

The Scope is a monthly joint publication of The Central Michigan Amateur Radio Club and the Lansing Civil Defense Repeater Association. Please send all articles, classified ads, or other Information to the editor, Chris Ranes, N58Q, at cmarscope@gmail.com. **The deadline for each issue is midnight on the 20th of the preceding month.**



5th ANNUAL MUSKEGON COLOR TOUR HAMFEST



Saturday October 15

Fellowship Reformed Church 4200 E. Apple Ave.
Muskegon, MI 49442

General admission 8 AM to Noon

Tickets \$5.00 in advance, \$6.00 at the door.



**FREE
PARKING**

**FOOD &
DRINK**

EVENTS & CLINICS
SEVERAL DIFFERENT CLASSES
AND VE TESTING

Muskegoncolortourhamfest.com

**DOOR
PRIZES**

TALK-IN
146.820 PL 94.8

PRE-REGISTRATION / VENDORS

VENDOR SETUP

Friday 10/14 6PM - 8PM

Saturday 10/15 6AM - 8AM

NAME/ COMPANY _____ CALL SIGN _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____ PHONE (____) _____

EMAIL ADDRESS _____

_____ TABLE \$10.00 EACH _____ ELECTRIC REQUESTED, AS AVAILABLE.

_____ ADVANCE TICKETS \$5.00 TOTAL AMOUNT INCLUDED _____

SEND CHECKS PAYABLE TO MCECS P.O. BOX 386 FRUITPORT, MI 49415

FOR MORE INFORMATION CONTACT JIM DURAM @ 231-638-7010

34th Annual Kalamazoo HamFest and Amateur Radio Swap and Shop



Sunday October 16, 2016

Kalamazoo County Expo Center & Fairgrounds

2900 Lake Street Kalamazoo MI

Open 8 Am to Noon

Vendor Setup 6am Sunday with Saturday hours available

Sponsored by:

Kalamazoo Amateur Radio Club

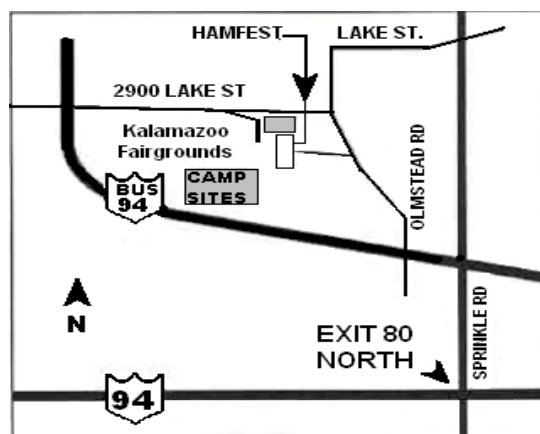
Southwest Michigan Amateur Radio Team

- TALK-IN 147.040 (pl 94.8) K8KZO REPEATER
- Tickets \$6.00
- Over 20,000 square feet of selling area
- We have **HELP** for vendors to load/unload
- Trunk Sales Spaces Available (admission ticket required)
- Featuring the Kalamazoo Makers Guild
- Door Prizes
- Forums
- Amateur Radio License Testing at 10 AM
- Campsites available w. electric & water
- Scouts in uniform admitted free

See <http://www.kalcounty.com/parks/activities.htm>

For more information see our web-site at: <http://KalamazooHamFest.com> or

Email us at : Info@KalamazooHamfest.com or call us at (269)205-3560 and leave a message



Name/Company _____ Call Sign _____

Address _____

City _____ State _____ Zip _____ Phone () _____

Email Address _____

___ Hamfest tickets @\$6.00 Ea.	\$ _____	To order send check with this order form and SASE to:
___ Tables 8' @ \$12.00 Ea.	\$ _____	
___ Tables 8' w/power @\$22.00 Ea.	\$ _____	
___ Send information on Saturday setup		
Total Amount enclosed	\$ _____	

Kalamazoo Hamfest
PO Box 33
Richland, MI 49083-0033

Orders received after September 30, 2016 will
be held for pickup at the door.

****An ARRL Sanctioned Hamfest****



New & Used Sales
Radio test bench
VE Test Session
(9 AM - 10 AM)
Great Door Prizes
Food & Fun

U.S.E.C.A. Hamfest 2016

**You are invited to attend our 31st annual
Hamfest on Sunday, October 30, 2016
Doors open at 8 am, it runs until 2 pm
Vendors are welcome to set up at 6:30 am**



Talk-in on USECA's K8UO Repeater: 147.180+ 100 Hz CTCSS

**United Food & Commercial Workers 876 Hall
876 Horace Brown Drive, Madison Heights, MI 48071
(2 blocks south of 13 Mile Road between Stephenson Highway and John R Road)
GPS Coordinates N42.516818, W-83.113124
Grid Square: EN82KM63KX**

**Questions may be directed to our Swap Coordinator, Rob Lifton, NY8W
Call our Hamfest Hotline: (248)565-3329 or email ny8w@arrrl.net**

**Admission is \$5.00 and each table is \$12.00 if received by September 6th,
after which time, tables will cost \$15.00 each and may be purchased,
subject to availability, on the day of the event.**

**QSL card checking for DXCC is available. Forms need to be filled out in advance.
Does not include 160 meter. All other bands and ARRL awards are covered.**

VE Testing: Show up between 9 & 10. Bring \$14.00 cash, photocopies of existing licenses or CSCEs (originals will not be accepted). Two pieces of ID are also required, one of which must have a photo. You must also provide either your Social Security number or FRN. Pre-registration is preferred but not required. Contact Alec, NF8X nf8x@arrrl.net

DO NOT ATTACH ANYTHING TO THE WALLS

Name	Callsign	Email	Telephone Number
Address	City	State	Zip
Number of Tables	No. Tickets	Amount Enclosed	
Please List any other special needs or requests, i.e.: power, table assignment next to someone.			

**Table Reservations with ticket Checks should be made payable to USECA and sent
with this form to: USECA Hamfest 2015, PO Box 46331 Mt. Clemens, MI 48046**



Show Your Support for Amateur Radio and Join CMARC & LCDRA Today!



JOIN TODAY!

Central Michigan Amateur Radio Club, Inc.

As a licensed Amateur, you can sign up today as a Full Member. As a Full Member of CMARC, you will receive voting rights and an annual subscription to 'The SCOPE'. This newsletter is filled with Club News, special interests and events.

Sign up today as an Associate Member and it includes an annual subscription to 'The SCOPE'. (no voting rights as an Associate Member)

New licensees are now eligible for a one FREE year membership at CMARC and Under 18 licensees are eligible for FREE membership!

Name		Call Sign
Address		City State
ZIP	Phone	Lic. Class
ARRL Member?	Birthday	Wedding Anniversary
Year 1st Licensed		Please supply email address for SCOPE mailing
<input type="checkbox"/> Full <input type="checkbox"/> Associate <input type="checkbox"/> New Licensee (1yr. free) <input type="checkbox"/> Under 18 (free)		
Full Membership \$15 per calendar year (must be a licensed amateur to obtain Full Membership) Associate Membership \$5 per calendar year		
Mail Your Check or Money Order to: John Doornhaag 1165 S Ainger Rd Charlotte, MI 48813-9540 (Checks made payable to CMARC)		

JOIN TODAY!

Lansing Civil Defense Repeater Association

As a licensed Amateur, you can sign up today for only \$15. As a member of LCDRA, you will receive an annual subscription to 'The SCOPE', as well as voting rights in the Association.

LCDRA oversees the operation and maintenance of all Lansing Area repeaters. Use of the repeaters does NOT require LCDRA or CMARC membership, but your support is welcome and appreciated.

Name		Call Sign
Address		City State
ZIP	Phone	Lic. Class
ARRL Member?	Birthday	Wedding Anniversary
Year 1st Licensed		Please supply email address for SCOPE mailing
LCDRA Membership is \$15 per calendar year (add a Family member for only \$7.50 per person, per year). LCDRA maintains our local repeaters and your support is appreciated. (Membership not required to use repeaters)		
Mail Your Check or Money Order to: Michael Boensch 1897 Sunnymede Ln Lansing, MI 48906 (Checks made payable to LCDRA)		



Central Michigan Amateur Radio Club
P.O. BOX 27321
Lansing, MI 48909-7321

Central Michigan Amateur Radio Club



THE SCOPE



Lansing Civil Defense Repeater Association

centralmiarc.com Serving Our Community Since 1921 lcdra.net

CMARC	ARPSC	LCDRA
		
WWW.CENTRALMIARC.COM/	WWW.LANSINGARPSC.COM/	WWW.LCDRA.NET