



The Scope

Central Michigan Amateur Radio Club Lansing Civil Defense Repeater Association

May 2017
Volume 17
Issue 5

Congratulations Leota Strobel / KD8SQD on Winning the 2016 Ziegenbein Award!

Leota has not been a Ham for very long, but she helps out whenever she can. She brings food to the CMARC meetings and helps out in the kitchen. She supports the Club's activities and events, whether they are regular meetings or special events. Please join us in congratulating Leota/KD8SQD on this very special award.



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ATTENTION ALL CMARC MEMBERS AND VISITORS

Beginning with the June 2017 CMARC meeting, we will be meeting at our **new location** at the Lansing Mason Ambulance Training Facility.

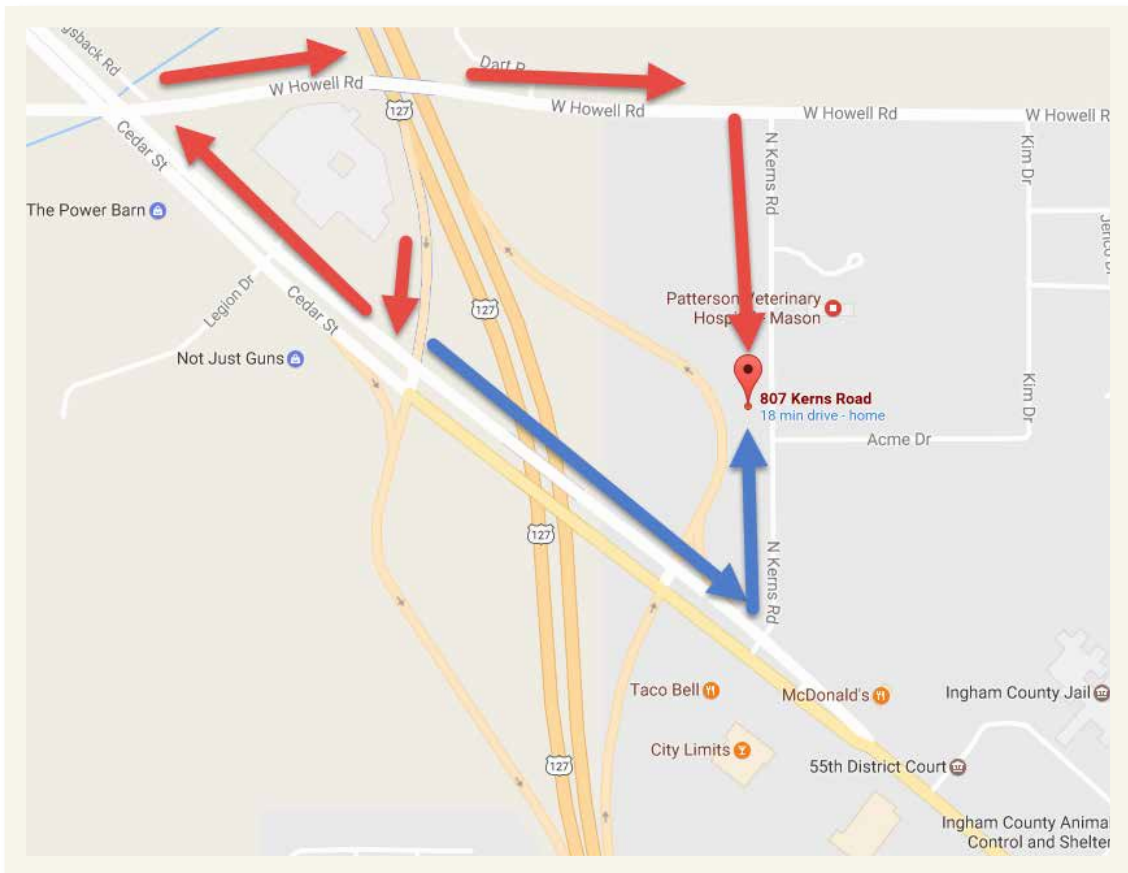
807 Kerns Rd, Mason MI 48854



Coming from the North or South, take Exit 66 (Cedar St./Mason) off US-127.

You can choose to follow the Red route or the Blue route.

When traffic is heavy, the Red route may be the easiest.



May Birthdays:

5/2 Paul Keefer / KB8YQZ
5/11 Eugene Brown / KK4DIY
5/13 Kenny Hazlett / K8NNY
5/14 Matt Warncke / W8MAT
5/17 Austin Burk / KD8OVY
5/19 John Doornhaag / KD8NNQ
5/19 Shannon Ranes / WA2NVK
5/19 Tom Davage / K8KUF
5/21 Luis Sanchez / KD8UJB
5/23 Michael Yager / KE8BIH
5/25 Garry Watson / KC8MAD
5/25 Ken Faiver / W8HNI
5/27 Marie Watson / KC8NOI
5/31 Bill Wing / W2PMH
5/31 Michael Lutz / AC8TC

May Anniversaries:

5/6 Roger / AB8RX and DeAnna / KD8BDI Barnhill
5/13 Jan / KC8BFK and Judy Bradfield
5/15 Kim / WA8KIM and Barbara Sherman
5/19 Don Hunsaker / WB8PPB
5/31 John Schuster / KD8VON
5/31 John / AC8ML and Shirley Strong

Upcoming Meetings:

CMARC

The next meeting for the Central Michigan Amateur Radio Club and our Ziegenbein / Ladies Night is Friday, **May 12th** at 6:00 pm at Delhi Cafe 4625 Willoughby Rd., Holt, MI 48842.

ARPSC

The ARPSC meeting for the month of May is at 7:00pm on Monday, **May 15th**. We will be meeting at Lansing Fire Station 8 off Marshall Rd, South of Grand River. For more information about the ARPSC, please check out our website at www.lansingarpsc.com

Treasurer's Report 2017

John Doornhaag / KD8NNQ - CMARC Treasurer

Bank Balances for April	
Beginning Balance	\$3,334.77
Total Monthly Income	\$93.00
Total Monthly Expenditures	(\$255.56)
Total Business Checking	\$3,172.21
Petty Cash	\$1.00
Sub Total	\$3,173.21
Primary Share Accounts	
Humphrey's Fund	\$1,093.72
Building Fund (Club Station)	\$19.09
Field Day	\$530.54
Total Net Worth	\$4,816.56
Youth Fund Balance*	\$254.00
* Separate from CMARC Funds	

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.

ARRL Volunteer Exams



Ingham County VE Group Ingham County VE Group

**Lansing Fire Station #44
1435 E. Miller Rd.
Lansing, MI 48911-5322**

Contact: Don McLain / KB8RAD
(517) 930-7707
KB8RAD@arrl.net

During the EVEN MONTHS, we meet on the
first Thursday of the Month at 7:00 PM.

**June 1, August 3,
October 5, and December 7**

**Lansing Fire Station #44
1435 E. Miller Rd.
Lansing, MI 48911-5322**

Contact: Don McLain / KB8RAD
(517) 930-7707
KB8RAD@arrl.net

During the ODD MONTHS, we meet on the
second Saturday of the Month at 11:00 AM.

**May 13, July 8,
September 8, and November 11**

Eaton County ARC VE Sessions

**Charlotte Church of Christ
64 Van Sickle Dr.
Charlotte, MI 48813-9999**

Contact: Mark Korroch / WB8TGY
(517) 645-2378
wb8tgy@yahoo.com

All sessions begin at 12:00 PM and walk-ins are allowed.

**June 10,
October 14, and December 9**

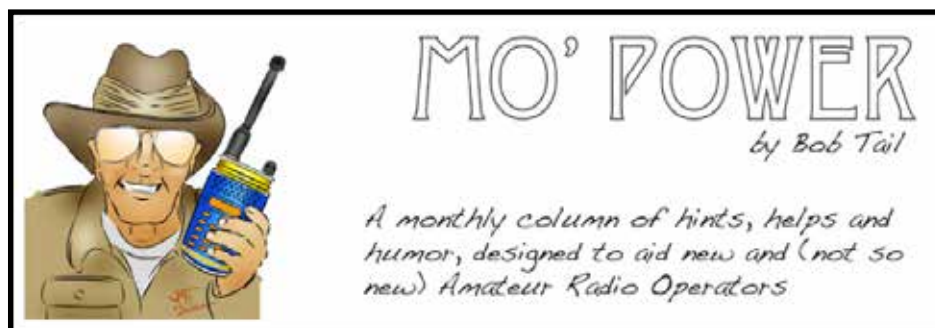
Congratulations to our Successful April Exam Candidates!!

Jeff Quinn/KE8GUM from
Lansing passed his Technician.



Wayne Barker/KE8GUL
from Grand Ledge passed his
Technician and General.





G' Day Mates!

Just returned from a nice lunch with an old timer ham friend of mine. Got me to thinking about all of the wonderful new inventions we have at our fingertips. Much of what we take for granted these days, was just a far fetched idea back when he was first licensed. Back in his “younger days” as he recalled, there were far fewer outfits making and selling radio gear. Commercial valve sets were available only for those who could afford them. All of the radiomen back then constructed their equipment. Goodies we now take for granted from Japan and China weren't even invented yet. This lead to many of the Hams being “self-educated” in the field. Many times, the valve sets he made were copied designs gleaned from used magazines shared amongst the local blokes in the Ham community. I asked him what he thought was the quickest easiest way for novices to learn about radio. Build a kit? Take electronic training in school? His answer, “Join in on an Antenna Party.” Back then the locals would all assemble for a bite to eat on the weekend to compare thoughts and get fresh inspiration for building improved valve sets of their own and experimenting with a new aerial design. Many times this would result in an antenna party to assist one of them to help construct and raise their aerials. I had to agree wholeheartedly! Never been to an antenna party, you say. Well, they can be very enlightening. One of the best ways to learn the “how to's” about the fine art of radio, is to volunteer to help raise an aerial. There is so much for the new Ham to learn, It's hard to relay it all without actually being there. Proper ways of attaching aerials to masts, lightning abatement, how to finish and seal coax connectors, right hardware to ensure strength and longevity in various weather conditions, anchoring

guy wires, clever ways of running feedlines into the shack, tuning methods and using a VSWR meter correctly, and most importantly, safety. Yes, safety. Proper planning and doing your homework, can make the job go smoothly with minimum effort and maximum safety for all concerned. Many new Hams are looking at some of the Ol' Timer's antenna farms with envy. They may only have a dipole or similar aerial hung from a nearby tree, and can only “dream” of having a mountain of aluminum of their own someday. Don't just dream it, do it! One of the things I hear most often from hams old and new is their wish for a “contest grade” aerial system. Not all of us out there have the means or the area for a massive antenna farm. Nearly everyone will agree that their own aerial system, no matter how big or small, can be improved upon. This is the very basis of our hobby. Tinkering, experimenting, trying out a new idea. Whatever you have in mind for your aerial system, it will be a lot more fun if you get other Hams involved. It's almost certain that someone has a “better way” of doing it than you first envisioned. That is why an antenna party can be very beneficial. Seems every time I've been involved with an aerial raising, I've learned something new. Who says you can't teach an old dog new tricks? Learn some new tricks for your aerial lashup. Volunteer for an antenna raising with the local hams in your area. New Foundation ticket holder or Ol' Timer, I guarantee it will be an eye-opening experience. Not to mention the added benefit of helping out the local gentry with their aerial construction projects. The camaraderie with hams is top shelf. Being with friends and making new friends. Isn't that what ham radio is all about? Till next time we meet. 'Till next time we meet. ■

73 , Bob Tail

Tips for Becoming a RagChewer

By Jarrad Mitchell, VK3BL

Recently there was an article expressing the opinion that the art of conversation on the radio bands is dead, and whilst I can certainly understand that perspective, I never seem to find myself short of a QSO and thought I might share some thoughts on the matter. The tips vary from practice, to courtesy, to the art of station building, and I hope there is some value in them to those wishing to rag chew more.

Calling CQ:

For whatever reason, there are a bunch of hams that don't like to call CQ. Why this is the case is perhaps for a bunch of PhD candidates, but it is of little importance to this article. The fact of the matter is if you can pluck up the courage to call CQ, you are extending the hand of friendship. If there is one thing I have noticed on air, its that those that call CQ are never short of a QSO.

Choose Your Band:

Some bands are better for ragchews than others. 80M & 40M are ragchew bands par excellence, for a couple of reasons. Firstly, the very nature of their propagation means you are more likely to be heard by other locals, and not only that, you are more likely to be heard by them on consecutive weeks and months. That allows you to build up friendships, and there is nothing better than talking to a friend. The higher bands can of course be great for DX ragchews, but you are likely to need a well equipped station.

Choose Your Antenna:

Not all antennas are equal. On 80M & 40M, the ragchewers' weapon of choice should be a fairly low Inverted-V or Flat Top dipole. The height should be no more than 60ft for 80M, and 30ft for 40M. This may seem a little strange to DXers and those who have studied antenna theory, but the truth of the matter is that 'cloud burners' that point all their gain upwards are great for putting out a whacking big signal to your fellow countrymen, and likewise, hearing them. If you don't have one, setup a cloud burner! And avoid Verticals; they're not a ragchew antenna.

Put "Fire In The Wire":

Seasoned ragchewers and CQ callers know that the more power you radiate - everything else being equal - the better

you will be heard. No one wants to have an extended QSO with someone who is just above the noise, so the more power you can put in the direction of your fellow countrymen, the easier they will be able to copy you through QSB, QRM & QRN, and the more enjoyable the QSO will be for them. Running power is not about egos - its exactly the opposite - its about making things as easy as possible for your QSO partner. And that feeds into the next point.

Have Good Audio:

Now I don't mean super wide eSSB or anything like that. Whilst that might be an interest of yours, the fact is that traditional communications grade audio with its limited bandwidth has a higher signal to noise ratio than eSSB, so you will get more 'talk power' for your watt. It doesn't end there, however; you also want to be nice to listen to. Who on earth is going to talk to someone for hours if they sound terrible?! Don't be afraid of a little bass, but always make sure you've got +2 or more on your highs. Ask a buddy to make some recordings of you on air, and listen to yourself; you can't do this just using the monitor function of your rig as not only is it often not accurate, there is a thing called 'jaw bone conduction' that changes how you hear your own voice when you talk. When you are in a ragchew, if someone mentions fading or QSB, perhaps turn the compressor up a few notches and ask them if they are able to copy you better. Basically, learn to make the most of your radio, and do what you can to help the other party.

Lastly, Be Courteous:

As you may have noticed, a common theme in the advice proffered here is that of utmost importance is the experience of the person you are talking to, and that is not limited to the technical aspects of the hobby. When you're having a QSO, use a notepad to write down things the other party(s) have said, so that you remember to further the discussion of them when it is your turn to talk. If the party talks about a project they or their spouse is undertaking, write it down in your log so you can ask about it next time. If they tell you about the setup (radio, antenna etc) they are using, make a note of it in the log. Basically, show interest in the other person and their life. The other part of being courteous revolves around skills we should all have in everyday life. Don't

Becoming a RagChewer *Cont'd*

discuss taboo or polarizing topics, and keep any discussion of politics to journalism rather than editorializing. By that I mean, its OK to state that XYZ party has just been elected or similar, but HAM radio is not for discussing the merits of said party of politician. Its probably ok to discuss how social policy effects you, e.g. 'these new pension / healthcare cuts are making it hard for me', but you should NEVER try to persuade someone else or tell them what to think. If in doubt, avoid politics and religion; the best ragchewers discuss neither. Avoid cuss words, misogyny, racism, and all those types of things. You may think you know someone really well, but perhaps you do not know that their son or daughter is homosexual. You certainly don't know who is listening. Do your very best not to offend.

Etiquette:

This may seem a little like the pervious tip, but the formal side of etiquette plays a big part. There are little things you can do that make it more likely for people to want to join the group. For example, most ragchewers hold down the key for a minute or more, so ID on every over, that way listeners know who is participating. Be ready for breakers, and try to remember to leave a little gap if you can. If someone does break in, its good form to say 'acknowledging VK2QA' or 'acknowledging the breaker'. Some operators will hand it over to the breaker straight away, but I prefer to wind up the present discussion in a timely manner and then throw it over to the breaker.

I'm not sure there is a best approach, but I have found that my way of going about it doesn't seem to offend anyone.

Most Of All, Encourage Further QSOs:

Let the other person know that you value the fact they have returned your CQ. If its the first time I have spoken to someone, I will almost always let them know that it was my pleasure, and that I would feel most honored if they would like to talk to me again in the future. I also go a step further, and let them know that the people I regularly ragchew with share similar values, and that they should always feel welcome to break in to one of my QSOs. I assure them that not only would I be honored, but so would my fellow participants. At the end of the day, human beings want to feel valued, and I recommend going out of your way to make sure every new person you make a contact with feels valued.

Anyway, this list of tips got quite a bit longer than I intended, so hopefully it has been of interest and of value.

As always, if you hear me round, say hello, even if we have had a difference of opinion on these forums. I was educated in Philosophy, and we learnt to argue our points of view without it being personal. In that vein, any disagreement we may have had in the past was from my perspective just a robust exchange of ideas, not an attack on someone's character. ■



Central Michigan Amateur Radio Club Board Meeting Minutes

Date: April 1, 2017

Time: 5:30 PM

Location: Denny's Restaurant on W. Saginaw Hwy.

OPENING:

1. President Tom Rocheleau called the meeting to order at 5:26 pm.
2. The following Board members were in attendance: Tom Rocheleau/WA8WPI, Russ Fitzgerald/N8FZ, John Doornhaag/KD8NNQ, Chris Ranes/NS8Q, Ted Sadilek/WA8MFQ, Clyde Tompkins/K8CPT, and Sam Fitzgerald/N8FPR.

FIELD DAY:

1. Tom mentioned we officially have Rainer Park in Mason to use for Field Day for the next three years. We have an agreement with the City of Mason for 2017, 2018, and 2019. Thanks to Ed Hude/WA8QJE for his work in making this happen.

CLUB MOVE & TOWER/ANTENNA WORK:

1. We are going to contact Ed Hude to see if he could check on permit requirements for installing towers and antennas at the new location on Kerns Rd.
2. Carl Woodward/KE8FQO, a CMARC member and a Lawyer will write an agreement between CMARC and Kevin Ammerman, owner of the Lansing/Mason Area Ambulance Service building.
3. All CMARC Board Members will have key access to the building.
4. We will have access to their WiFi service.
5. Kevin is asking that we chip in for electric service every once in a while.
6. Their parking lot if plowed and salted in the winter on a regular basis.
7. **Clyde made a motion that we go ahead and move the club location to the Mason site, contingent on being able to put up a tower. John seconded the motion, and the motion passes.**

WORKING CMARC EVENTS:

1. For insurance reasons, any person would want to work at a CMARC event, needs to be a "paid-in-full" member.

501(c)3 STATUS UPDATE:

1. We need a mission statement, but not a separate purpose. The club by-laws take care of the purpose statement.
2. John came up with a mission statement, and it reads as follows:
"Central Michigan Amateur Radio Club is committed to improve the visibility of Amateur Radio as a positive force in the community, to assist in emergencies, provide and encourage training and further club activities for the betterment of our community and members of the Amateur Radio Service."
3. **Russ made a motion that we accept the mission statement as written by John, Ted seconded the motion, and the motion passes.**
4. We also need a narrative about what our club does. Chris will draft a narrative, pulling information from our Special Service Club Application. It needs to cover "New Ham Development and Training", "Public Relations", "Emergency Communication", "Technical Advancement", "Operating Activities", and "Miscellaneous Activities".
5. We have been incorporated since the beginning of the club, but do not have physical paperwork showing our Articles of Incorporation. We are going to check and see if we need them for our application or if can be bypassed.
6. **Tom made a motion that we release our financial statements for the purpose of the 501(c)3 application through BizCentralUSA. Ted seconded the motion and the motion passes.**

THE CLUB PO BOX:

1. Jerry Waite/KD8GLN paid the cost of our PO Box through March 1, 2018. It cost us \$76 + \$22 Late Fee = \$98.
2. The Board will table the idea of possibly eliminating the PO Box after March 1, 2018.

ADJOURNMENT:

1. **With there being no further business to discuss, Ted made a motion to adjourn the meeting, John seconded the motion, and the motion passes.**
2. Meeting adjourned at 7:00 pm.

Respectfully submitted by,
Chris Ranes - Secretary

Central Michigan Amateur Radio Club Meeting Minutes

Date: April 14, 2017

Time: 7:00 PM

Location: Salvation Army South Corps

OPENING:

1. President Tom Rocheleau/WA8WPI called the meeting to order at 7:08 pm.
2. All Board members present.
3. Sam/N8FPR held the flag for the Pledge of Allegiance.
4. Please be sure to sign the sign-in sheets attached to clipboards circulating the room. One for Visitors and the other for Members.

CARDS & FLOWERS REPORT:

1. Flowers were sent to the family of Don McLain's mom. A thank you note was received.
2. A thank you note was received from the facility that cared for the Brent, Clint Hannahs/KC8EHR's son.

ATTENDANCE:

1. 25 Members and 2 Visitors (Bob Berger/K8RDN and Terry Morgan/N8ERM).

APPROVAL OF REPORTS:

1. **Treasurer's Report:** Ben/WD8OVL made a motion to accept the Treasurer's Report in the March Scope. Bob/KB8DQQ seconded the motion, and the motion passes.
2. **Secretary's Report:** John/KE8CYC made a motion to accept the Secretary's Reports in the March Scope. Dennis/NS8H seconded the motion, and the motion passes.

INTERESTING DX:

1. John/KE8CYC has 281 SOTA points and leads the 8th Call Area on SSB.
2. Dennis/NS8H received his NPOTA certificate.
3. Chris/NS8Q worked Israel, Pitcairn Islands, Montserrat, Oman, Haiti, Costa Rica, Niger, Malta, Turks and Caicos Islands, and Uruguay.

NEXT MONTH'S MEETING:

1. We will be meeting at the Delhi Cafe for Ladies Night and the annual Ziegenbein Award Banquet.
2. We ask everyone to be there and seated by 6pm if possible.
3. You do not need to pay in advance, but pay the night of.
4. A short business meeting will be held at the beginning.
5. Entertainment will be by Jonathan Star.
6. Forms to sign up for the dinner are found on the website, in the Scope, and available at the meeting. All information can be found on the form. Forms need to be returned to Jane Hosford/KC8FSK by May 1st.

UPDATE ON DON MCLAIN/KB8RAD:

1. Don McLain has moved to the Delhi Stratford Place apartments in Holt.
2. His address is 2385 Cedar Park Dr. Apt 311 Holt, MI 48842.

NEW LICENSES AND UPGRADES:

Jacob Emling/KE8GMB and Wayne Barker

MEMBERSHIP:

1. Please pay your 2017 dues. Dues were increased at the beginning of the year to \$20 per person.
2. If you want to help out at any CMARC activity, you must be paid in full for insurance reasons. If you are injured while working an event, our insurance will cover you, but only if you are a full member.

GREAT LAKES HAM CONVENTION:

1. Coming up October 7 & 8 at Michigan International Speedway in Brooklyn, MI.
2. Our club donated \$250 seed money and is one of the sponsors.
3. Several opportunities are available for those wishing to help out.
4. Their website is www.glhamcon.org.

501(c)3 UPDATE:

1. We are currently working with a company to get us going.
2. All of our forms have been sent in and it is just a matter of waiting for them to complete what they have to.
3. We do not have a time frame of when everything will be complete.
4. Our goal is to be a full non-profit before the Outdoor Hamfest in July.

CMARC OUTDOOR HAMFEST:

1. Clyde/K8CPT is looking for volunteers to help out this year.
2. If you are interested, please sign his form with your name, callsign, and contact information so he can contact you at a further date once plans are being finalized.

RADIO ROOM RELOCATION:

1. Our relationship with the Salvation Army has deteriorated lately, and they are making it difficult to do what we need to do, outside of our monthly meetings.
2. Lt. King has given us until October to move our stuff out. They have plans for the room we have our radio gear and other items in right now.
3. We are currently searching for new locations. The facility we are looking at is in Mason at the Lansing Mason Area Ambulance Training Facility. The owners want the building used more and would like us to come down there. They do not have a problem with us meeting there or installing towers and antennas. It is our responsibility to check on possible permits to install our towers. At this point, it doesn't look like we will have a problem getting in there. The address is 807 Kerns Rd., at the old Secretary of State building. It is located right off US127 and Cedar Street, only 11 minutes from the current meeting location at the Salvation Army. The owner is also fine with us holding classes there, but we need to make sure we take care of the place when we use it. The only requirement is that we pay for electricity when we are there. There will not be a room of our own to lock our things in. However, because the building is only used by Professionals, we should not have to worry. We will update the owners with our schedule to use the building, and as long as we do not conflict with their use, there shouldn't be a problem.
4. Carl Woodward has agreed to write up an agreement between CMARC and the LMAS owners. Currently there is a rough draft out there. The Board is working to write in a clause that the LMAS owners cannot just throw us out for no reason. The contract will be good for two years and will renew automatically unless there is an issue on either side. If the owner asks us to leave, or if we decide to leave on our own, a 90-day notice must be given. The only thing they wanted from us was to see our certificate of liability insurance.
5. Equipment security has been discussed and the Board is looking into several options.
6. If we want to extend the height of our tower, they are open to us using guy wires.
7. There has never been any sign of vandalism since the current owners have been there.
8. We are allowed to give keys to the Board Members, but the owners want a list of who has them.

FIELD DAY:

1. The agreement we had with the City of Mason lasted five years, but has since expired. Ed Hude/WA8QJE worked with the City of Mason officials to draft a new agreement. He tried to get the agreement for six years, but ended up getting for another three years instead. We do have permission to stay all day and all night, including Friday, Saturday, and Sunday. At the end of three years we will have to draft another agreement.

MISCELLANEOUS:

1. Bob Strobel/KB8DQQ is selling candy bars to benefit LCDRA. They sell for \$1 each.
2. Bob Berger/K8RDN presented information on the Michigan State Police anniversary Special Event Station. It will run April 21, 22, & 23. They plan to operate SSB, Digital Modes, and VHF/UHF repeaters. Bob does have sign up sheets if you are intersted in participating. They ask that you have your RACES certiifcation with all background checks completed. If you did not have that done, bring your drivers license and they will run the background check before the event begins. Please sign up for a minimum of 2 hours. You will never be alone while operating. The event will be held at the New State Emergency Operations Center at the Seconday Complex off Canal Rd.

50/50 RAFFLE:

1. Terry Wilson/N8ERM won \$12.00.

ADJOURNMENT:

1. **With there being no further business, Mike/W8MKB made a motion to adjourn the meeting. Sam/N8FPR seconded the motion, and the motion passes.**
2. Meeting adjourned at 8:05 pm.

Respectfully submitted by,

Chris Ranes - Secretary

CMARC Puzzle Page



Find and circle each of the words from the list below. Words may appear forwards or backwards, horizontally, vertically or diagonally in the grid.

P	M	E	E	U	V	R	U	C	D	Y	K	A	D	Y	Y	I	O	O	I	S	T	U	K	O	K	I	K	U	C	E
N	O	I	T	A	L	U	D	O	M	E	D	U	T	I	L	P	M	A	M	R	K	E	F	V	J	O	T	F	N	U
S	S	U	E	E	W	Y	K	U	Y	Z	Y	L	M	G	S	A	C	A	F	O	A	Y	O	N	T	U	E	C	N	S
E	B	E	A	C	O	N	S	T	A	T	I	O	N	T	M	Q	U	W	I	U	E	M	I	I	X	U	I	E	F	O
Z	Q	G	U	P	Y	D	V	V	M	W	W	E	M	P	A	E	G	R	C	M	D	O	G	C	S	B	N	E	H	E
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S	W	F	G	T	C	I	X	R	T	N	O	F	P	L	T	C	D	M	O	N	Y	A	U	T	O	P	A	T	C	H
S	R	E	T	T	I	M	S	N	A	R	T	D	E	L	L	O	R	T	N	O	C	L	A	T	S	Y	R	C	X	T
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G	K	M	U	R	O	T	A	L	L	I	C	S	O	Y	C	N	E	U	Q	E	R	F	T	A	E	B	S	B	T	V
R	N	M	X	A	G	P	R	Y	U	R	M	L	T	I	D	D	I	N	R	Q	P	A	R	S	M	Q	X	L	A	W
O	L	Q	U	I	A	E	R	Y	H	R	O	R	E	T	A	E	P	E	R	D	E	S	O	L	C	N	F	O	L	E
U	K	D	W	A	X	W	A	O	I	C	N	R	D	W	M	A	F	A	U	Z	O	Q	C	S	F	S	E	C	L	Y
N	I	U	O	E	T	P	A	T	X	V	C	E	N	O	T	Y	S	E	T	R	U	O	C	I	Z	U	I	K	I	R
D	C	V	L	F	R	A	O	A	E	O	P	U	N	U	R	H	X	W	C	U	B	U	B	C	A	S	Y	D	C	E
O	I	P	Q	I	A	A	D	W	N	I	B	L	E	N	A	C	M	O	O	C	U	X	A	M	E	J	I	I	S	T
E	U	U	H	P	K	F	N	N	D	O	A	M	C	A	P	A	C	I	T	O	R	P	G	O	D	E	P	A	O	T
D	Q	C	E	Y	T	F	E	S	I	C	I	E	L	X	E	Y	P	U	O	R	J	M	D	A	V	S	B	G	L	A
R	B	E	O	F	F	C	D	R	U	J	Y	U	D	G	C	S	D	A	O	L	Y	M	M	U	D	U	T	R	A	B
U	S	G	D	A	T	F	L	X	L	Z	E	Y	V	O	D	R	I	V	E	N	E	L	E	M	E	N	T	A	T	E
Y	A	Q	O	E	B	Y	G	N	M	F	N	A	N	N	E	T	N	A	D	N	A	B	L	A	U	D	I	M	S	E
X	P	T	D	I	T	Q	M	Z	T	N	O	V	M	P	Y	E	H	E	T	N	T	L	E	A	N	C	O	O	Y	A
A	I	G	D	E	L	T	A	L	O	O	P	A	N	T	E	N	N	A	S	T	P	C	I	X	I	U	M	Y	R	L
O	U	B	U	U	J	P	E	O	A	A	L	T	E	R	N	A	T	I	N	G	C	U	R	R	E	N	T	C	C	U

Alternating Current Delta Loop Antenna Dual Band Antenna Crystal Oscillator Connected
 Crystal Controlled Transmitter Beat Frequency Oscillator Amplitude Modulation Color Code
 Chirp Block Diagram Dummy Load Antenna tuner DPDT Switch Autopatch Capacitor
 Closed Repeater Driven Element Courtesy Tone Beacon Station Battery Chassis Ground
 Data Duplexer

Sudoku Solutions for April

VERY EASY

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

EASY

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

MEDIUM

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

HARD

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

CLASSIFIEDS

Gregg Mulder / WB8LZG
(517) 646-6257 after 5pm

\$5 Each

Cleaning off the book shelves in the shack. I have the following books available. Many are in "brand new" condition. Good time to stock your library at a big savings!

- The Joy of QRP by Ade Weiss (autographed copy)
- Your QRP Operating Companion
- The Secret Wireless War by Geoff Pidgeon
- The History of QRP 1924-1960 by Ade Weiss
- Interference Handbook by Nelson
- The Contest Cookbook
- Keys II the Emporium by Dave Ingram
- International QRP Collection by George Dobbs
- Radio Projects for the Radio Amateur Vols 2, 3, & 4

UPDATED

Ed Ozer / W8EO
eaoxer@gmail.com

\$90 or Best Offer

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.

Gregg Wesley / KD8PA
(517) 614-6573

Aluminum Tubing, Masts, and other odds and ends for antenna building.

Jason McLaughlin / KC8RBK
(517) 712-0478 or
kc8rrrbk@gmail.com

\$150

Tytera MD-380 DMR Handheld Radio

UPDATED

Brian Monaghan / KC8QWJ
(517) 219-8183

FREE

(4) 1.2 meter Satellite Dishes

Jim Hein / K8UHF
k8uhf@sbcglobal.net

\$675

Icom IC-746 Transceiver HF/6/2 meters, all mode, 100 watts on all bands, includes hand mic HM-36, Voice Synthesizer UT-102, power cable, built-in auto tuner, Owners and Service Manuals, and Original Box.

\$100

Icom IC-SM-8 Desk Microphone, includes two cables, original box, and manual.

\$750

Both Radio and Desk Microphone together.

\$12

Radio Shack 21-533 SWR, Field-Strength Meter, 3-30 MHz, Handles up to 1,000 Watts, Like New with original box and manual.

\$300

PC Electronics ATV Transceiver TC70-20S, 20 watts, includes video generator for playing video from USB, SD Flash Cards, etc., Color Camera and 12vdc power cube, with a Verifocal lens, wall mount, 5" color TV/monitor, will run on AC or DC, cables, and manuals.

\$550

For the entire ATC Transceiver package above plus a Mirage D1010 ATVN Amplifier. 100watt amp, 50 watt average, video output with only 1 watt drive.

Ed Hude / WA8QJE
WA8QJE@arrl.net

517-676-4480 between 9am and 6pm on Weekdays.

\$150

Icom IC2300H, 2 meter mobile, like new condition, never used mobile with Radio Shack DC power Supply, photocopy of instruction manual included. For more information go on line to Icom website.

\$45

One, DPD Productions, 2 meter Blade Indoor antenna. Rated at 3dbi gain, half wave, 58 inches in height, includes approximately 18 feet of RG8X coax. Has plastic hook that allows it to hang from some types of indoor window or patio door curtain rods. Gently used inside only. For more information go on line to "dpdproductions.com"

NEW

CLASSIFIEDS

THE FOLLOWING EQUIPMENT LIST IS FOR SALE. THE EQUIPMENT SALE IS FOR (AAR5CA) - JIM HARVEY'S ESTATE						
MANUFACTURER	EQUIPMENT	DESCRIPTION	SERIAL NO.	YR MANUF.	SALE PRICE	NOTES
KENWOOD	TS-570S	160-6M HF XTR	90400014	2007	\$ 700	
KENWOOD	TS-570D	160-10M HF XTR	60700019	2004	\$ 600	
KENWOOD	TS-480 DSP SAT	160-6M HF XTR	300059	2008	\$ 1,000	
KENWOOD	TR-9000	2M ALL MODE XTR	110344	1982	\$ 195	
KENWOOD	TM-2550A	2M FM XTR	80383	2006	\$ 95	
KENWOOD	TM-D700 (DATA)	144/440 MHZ FM XTR	60100177	2004	\$ 200	
KENWOOD	TH-D72A	2M XTR W/ CHARGER & SPEAKER MIC	B1900040	2013	\$ 335	
KENWOOD	TH-79A	DUAL BAND W/ CHARGER	10900005	1995	\$ 180	
KENWOOD	TH-315A	220 FM XTR	10500038	1990	\$ 65	NO ANTENNA, NO CHARGER, GOOD BATTERY
KENWOOD	SH2P4	SPEAKERS	NA	NA	\$ 10	
ICOM	IC-2200H	2M FM TX, FM & AM RX XTR	510990	2012	\$ 110	
ICOM	IC-2100H	2M FM XTR	66904	2006	\$ 95	
ALINCO	DR-235T	220 FM XTR	T10073	2006	\$ 195	
MIRAGE	B108	2M 10-80W FM-SSB AMP	2397-480	1992	\$ 125	
SCS	PTC II USB	MODEM	NA	2007	\$ 750	
TIGERTRONICS	SIGNALINK USB	AUDIO MODEM	NA	2012	\$ 75	??
TIGERTRONICS	SIGNALINK USB	AUDIO MODEM	NA	2012	\$ 75	
HEIL	HEADSET	HEADSET	NA	NA	\$ 50	ROUGH SHAPE
MFJ	MFJ-941E	VERSA TUNER 2	NA	4/2/1996	\$ 75	

If you are interested in purchasing any of this equipment or would like more information on a specific piece, please contact Geff / N8CE at 517-626-6044 or richard0g@frontier.com. If you are calling Geff, please make sure you are calling from a line that has a name attached to it, and not one that is "blocked". He will not be able to receive the call if you do.

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.

CMARC Officers and Appointees

President / Webmaster
Tom Rocheleau, WA8WPI

Vice President / Youth Liaison
Russ Fitzgerald, N8FZ

Treasurer
John Doornhaag, KD8NNQ
(517) 672-2759

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

Director
Ted Sadilek, WA8MFQ
(517) 881-6093

Director / Salvation Army Liaison
Clyde Tompkins, K8CPT
(517) 927-3801

Under 22 Director
Sam Fitzgerald, N8FRP

Cards & Flowers
Jane Hosford, KC8FSK
(517) 515-7610

Club Contact
Don McLain, KB8RAD
(517) 930-7707

Club Historian
William Cote, WD8NYW

Antenna Projects Chairman
Gregg Mulder, WB8LZG

Lansing ARPSC Liaison
Jim Hannahs, KC8QWH

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

Photographer
Kenneth Hazlett, N8BVV
(517) 348-5513

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 Meetings are held the first Saturday of the month at Denny’s beginning at 5:30 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 Oberg, KB8SXX

Director
Jan Bradfield, KC8BFB
(517) 202-1779

Director
Don McLain, KB8RAD
(517) 930-7707

Director / Membership Chair
Michael Boensch, W8MKB

Repeater Trustee
Dennis Boone, KB8ZQZ

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, NS8Q, at cmarcscope@gmail.com. **The deadline for each issue is midnight on the 20th of the preceding month.**

Central Michigan Amateur Radio Club

presents:

Outdoor Hamfest 2017

Saturday, July 29, 2017

Holt Christian Church
2424 Washington Rd. - Lansing, MI 48911



Vendor Set-up: 6:00 AM to 8:00 AM

General Admission: 8:00 AM to 1:00 PM

\$5.00 admission per person at the door
(Children 15 years old and younger are FREE)

Vendors/Sellers: \$5.00 per person
(includes 1 trunk space).
Additional spaces are \$5.00 each.

On-site ARRL VE testing @ 11 AM

Walk-ins Welcome (Sponsored by
the "Ingham County VE Group")

Talk-in 145.390 (100 Hz PL)

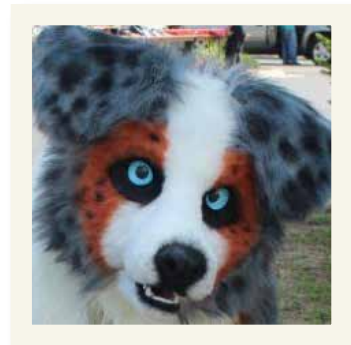
HF G.O.T.A. Station

For more info or to purchase a table:

Web: www.centralmiarc.com

Contact Person: Clyde Tompkins K8CPT

phone: 517-927-3801 email: k8cpt@qsl.net



TYCHO AUSSIE

CMARC'S 6'-3"

Mascot will be here
again this year.



Michigan International Speedway, Brooklyn, MI

October 7 & 8, 2017

Indoor Commercial Vendors
Huge Paved Flea Market
Loads of Parking
KB6NU's One-Day Tech Class
Great Food Available
Mobility Scooters Available
Unique Location
Saturday Evening Banquet

Forums
Workshops
Camping
VE Testing
Fox Hunt
Door Prizes
Room to Grow
2 Days of Fun!

2017 ARRL Great Lakes Division Convention

ARRL President Rick Roderick, K5UR will be in attendance



www.glhamcon.org

Info@glhamcon.org

Fellow ham,

Plans for the Great Lakes HamCon at Michigan International Speedway are moving forward. The event has recently been approved as the site of the 2017 ARRL Great Lakes Division Convention. Volunteer help is needed, Event preparation has started and the pace will pick up as October grows closer.

Your skills and expertise are needed. Marketing and promotion is just one area. Do you have expertise in social media, website design, videography, graphic design or similar? We will have a presence at Dayton and many other hamfests over the summer. A robust program of forums will be staged at the event. Help will be needed staging the venue as well as setup and event day activities. Do you have contacts or relationships in the commercial side of ham radio that can help ensure an exhibitor comes to the event?

The success of Great Lakes HamCon depends on the engagement of the area hams and their clubs. Let us know how you can help. Send an email to volunteer@GLHamCon.org. Include where your interests lay and the skills and experiences you bring with you. Don't hold back, include those ideas that will make the event unique and special. If you just want to help out in general, that's fine, we need you.

Please forward this email to other hams. Include this in your club newsletter. Spread the word.

Thanks in advance for your help.

73,

Glen Ohlemacher - K8GO

President - Great Lakes Amateur Radio Association

The Great Lakes Amateur Radio Association, a consortium of clubs formed to host Great Lakes HamCon

volunteer@GLHamCon.org



Central Michigan Amateur Radio Club

W8PLP/W8MAA

Membership Form



For new CMARC applicants: Please complete all sections.

For existing CMARC members: Please include your Name and Call Sign along with only the information you would like changed.

Mail completed form to Membership Chairman (see address below) or take to Club meeting for processing. Please include payment if applicable. (Checks or Money Orders should be made payable to 'CMARC').

John Doornhaag | 1165 S. Ainger Rd. | Charlotte, MI 48813-9540

Membership Type		<input type="checkbox"/> New	<input type="checkbox"/> Renewal
Full:	<input type="checkbox"/> Annual Dues: \$20.00 <i>Includes voting rights and an annual subscription to The Scope.</i>		
Associate:	<input type="checkbox"/> Annual Dues: \$5.00 <i>Includes an annual subscription to The Scope but NO voting rights.</i>		
New Licensee:	<input type="checkbox"/> Annual Dues: 1st Year Free		
Under 18:	<input type="checkbox"/> Annual Dues: Free		

Contact Information	
First Name: _____	Last Name: _____
Call Sign: _____	License Class: _____ Phone #: _____
Address: _____	Apt/Unit: _____
City: _____	State: _____ Zip Code: _____
Birthday: _____	Anniversary: _____
Email: _____	Sign up for the List Serv: <input type="checkbox"/> Yes <input type="checkbox"/> No
<i>Note: Email is used by club officers to communicate club business and may appear in the club directory for use by club members. CMARC does not share/sell contact information to other parties.</i>	

Club Communications	
Newsletter Preference (select only one option)	<input type="checkbox"/> I will download from the web site.
	<input type="checkbox"/> Please mail to my address (Note: Direct mailing increases postage costs.)
ARRL Affiliation	<input type="checkbox"/> I am an ARRL member



Lansing Civil Defense Repeater Association

Membership Form

For new LCDRA applicants: Please complete all sections.

For existing LCDRA members: Please include your Name and Call Sign along with only the information you would like changed.

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.

Mail completed form to Membership Chairman (see address below) or take to a meeting for processing. Please include payment if applicable. (Checks or Money Orders should be made payable to 'LCDRA').

Michael Boensch | 1897 Sunnymede Ln | Lansing, MI 48906-1356

Membership Type		<input type="checkbox"/> New	<input type="checkbox"/> Renewal
Full:	<input type="checkbox"/> Annual Dues: \$15.00 <i>Includes voting rights and an annual subscription to The SCOPE.</i>		
Family Mbrs:	<input type="checkbox"/> Annual Dues: \$7.50 ea. No. of Family Members: _____		
ARRL Affiliation	<input type="checkbox"/> I am an ARRL member		

Contact Information	
First Name: _____	Last Name: _____
Call Sign: _____	License Class: _____ Phone #: _____
Address: _____	Apt/Unit: _____
City: _____	State: _____ Zip Code: _____
Birthday: _____	Anniversary: _____
Email: _____	
<i>Note: Email is used by club officers to communicate club business and may appear in the club directory for use by club members. <u>LCDRA does not share/sell contact information to other parties.</u></i>	

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