



The Scope

January 2017
Volume 17
Issue 1

Central Michigan Amateur Radio Club Lansing Civil Defense Repeater Association

January CMARC Meeting

Welcome to the first meeting of the new year! Tonight we are going to introduce the new CMARC Board as well as hear a special presentation by Tim Jurmo / AC8NI and Paul Bodnar / KD8DLP.

Tim currently serves as the Western Michigan & Northern Indiana SATERN Coordinator. Tim and his wife Diane do what they can to support The Salvation Army's Emergency Disaster Services and SATERN programs in and around the Grand Rapids area.

Paul is a K9 Handler for the Tri-State K9 Search and Rescue Team. He is also part of the Venus Search Team, Venus Foundation, Allegan County RACES and Skywarn, and the Western Michigan / Northern Indiana SATERN Team.

Please join us in welcoming Tim and Paul to CMARC. We are glad they are able to join us this evening.

When: CMARC Monthly Meeting
7:00 pm, Friday, January 13, 2016

Where: Salvation Army South Corps
701 W. Jolly Rd., Lansing, MI 48910

For more information, you can check out our website at www.centralmiarc.com or get a hold of Club contact Don McLain/KB8RAD at KB8RAD@arrl.net.



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TIM JURMO'S PHOTO COURTESY OF QRZ.COM.

January Birthdays:

1/2	Vedder Friedrich
1/7	Charles Culton / WD8PVS
1/8	Felimon Brazas, Jr.
1/12	Edward Hartwick / KC8NQM
1/12	Tom Cain / KB8ZL
1/17	Leota Strobel / KD8SQD
1/23	Betty Hunsucker
1/23	John Ingraham / NG8L
1/23	Mary Tillitson
1/24	Pam Denomme / KB8PSF
1/31	Kim Treleaven

Upcoming Meetings:

CMARC

The next meeting for the Central Michigan Amateur Radio Club is Friday, [January 13th](#) 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 November is at 7:00pm on Monday, [January 16th](#). We will be meeting at Lansing Fire Station #48 off Marshall Street, south of Grand River. 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, [January 19th](#) at Lansing Fire Station #48, 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!

VE Exam Session:

Lansing, MI

Date: **1/14/17**
 Time: 11:00 am (Walk-Ins Allowed)
 Sponsor: Ingham County VE Group
 Contact: Don McLain/KB8RAD 517-701-9745
 Email: KB8RADon@aol.com
 Location: Lansing Fire Station #44 (Community Room)
 1435 E Miller Rd.
 Lansing, MI 48911-5322

Treasurer's Report 2016

John Doornhaag / KD8NNQ - CMARC Treasurer

Bank Balances for December	
Beginning Balance	\$3,759.63
Total Monthly Income	\$161.00
Total Monthly Expenditures	(\$181.98)
Total Business Checking	\$3,738.65
Petty Cash	\$41.00
Sub Total	\$3,779.65
Primary Share Accounts	
Humphrey's Fund	\$1,093.37
Building Fund (Club Station)	\$19.09
Field Day	\$530.35
Total Net Worth	\$5,422.46
Youth Fund Balance*	\$253.92
* Separate from CMARC Funds	

ATTENTION LADIES

Jane Hosford/KC8FSK is planning a Ladies Luncheon for February. The date has not been determined, so if you are interested in attending, please let her know.

Home: 517-515-7610

Email: jlhosford54@hotmail.com

Lansing, MI

Date: **2/02/17**
 Time: 7:00 pm (Walk-Ins Allowed)
 Sponsor: Ingham County VE Group
 Contact: Don McLain/KB8RAD 517-701-9745
 Email: KB8RADon@aol.com
 Location: Lansing Fire Station #44 (Community Room)
 1435 E Miller Rd.
 Lansing, MI 48911-5322

Ziegenbein Nominations

It's time to begin thinking about who you would like to nominate for the 2016 Ziegenbein Award.

For those of you who are not familiar with the award - it is presented each May to the Full CMARC member who has contributed the most to Amateur Radio, in general and CMARC, in particular *for the previous calendar year.*

Nomination Guidelines

1. The recipient must be a *full, current* member of CMARC
2. Nominations to be made in writing, in your own words, *no* chain letters to be accepted, stating nominees contributions to CMARC and Amateur Radio.
3. All nominations are to be kept secret until the award is presented.
4. All nominations are to be mailed (regular postal mail *OR* email).
5. The same person can receive the award more than once.
6. The Committee shall consist of the last three recipients; the senior member shall be the chairman.
7. All nominations are to be closely checked and discussed by the Committee.
8. If the Committee feels the nominees are not deserving, the award does not have to be given.
9. Nominations are to be submitted before *March 15th* of each year, so the Committee can make the selection and have the plaque engraved.
10. The recipient will be announced at the annual Ladies' Night.

REMEMBER

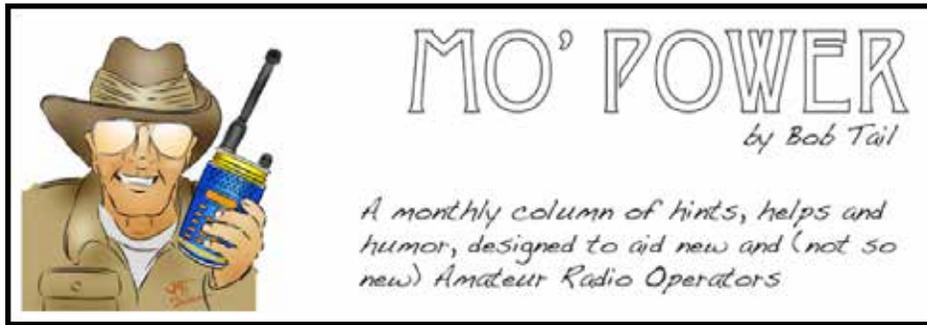
Your nominations for the Ziegenbein Award are due March 15th. This year's Senior Chairman of the Ziegenbein Committee is Jane Hosford/ KC8FSK.

Send your e-mail nominations with a subject line of "**Ziegenbein Nomination**", to jlhosford54@hotmail.com.

If you prefer to use snail mail:

Jane Hosford
7057 Kieppes Court
Lansing, MI 48911

Write "**Ziegenbein Nomination**" on the envelope.



G'Day Mates! I was eavesdropping a couple of hams on the air recently. I overheard one gent extolling the praises of his aerial. Saying to the other that his antenna was the best there is. Not a Yagi nor a Quad could even come close! He used to work at one of those antenna places, and his was "range tested" to be the "best there is." "This antenna has the most gain you can get. Period." "This is the antenna that put me on top of the Honor Roll."

Well, this peaked my interest, as I'm always quick to hear about a great skyhook. So I turned up the volume on the valve set and listened in.

He continued rambling on about this wonderful aerial. Then the tell. It turns out he is using an LPDA, with elements for 14, 18, 21, 24, and 10 meters. For those unfamiliar with this LPDA, it's the Log Periodic Dipole Array, or simply to the ham, a Log Periodic. It's also up on a 55-meter tower! Sounds like a very nice aerial system indeed. I'm thinking, just about any aerial would work well up at 55 meters, even a regular wire dipole!

However, the other gent disagreed with him on the "his is the best." As did I but I remained silent. He went on to say that his aerial was a multi-element trap Yagi with coverage on the same bands, but that he had 4 elements on 20, 5 elements on 15, and 6 elements on 12 and 10 meters. His antenna was not as high in altitude, only 25 meters, but he says that because of his longer boom and more elements, that his aerial system has more gain and is the better.

The LPDA owner would hear none of it. "traps! Ha! all those do is waste your power, they aren't any good at all. This LPDA is the best, hands down!"

Well, the two went 'round for quite a

while in a lively banter, finally realizing that there would be no conceding by the other, they politely said their 73's and signed. I switched the valve set to "standby," and turned 'er down.

Well, I'm glad I didn't get in on that one I thought to myself, but there is a lot of false claims about aerials here that I'd like to comment to the readers. The LPDA is a good aerial, yes. The best in the world? Depends on the intended use. Let's examine both aerials and compare.

The LPDA is designed to give the gain of a 3 element Yagi-Uda on the band that is excited. Only 3 of the elements are active at any one frequency. Thus making it Yagi like" It's virtues are that it will cover a wide variety of bands with one feedline, and give some good F/B ratio. They are frequently used by the military for this reason. A quick look-see in the RSGB handbook, or the ARRL antenna book will reveal all. The maximum gain that one of these LPDA's can achieve is about 6.5 dB over a dipole. 6.5db, no more, maybe less. Feed it with 75 meters of good coax, and we just lost another 1/2, maybe 1 dB. So now we have an aerial system with 6 dB gain, up at 55 meters. An impressive station, and probably works very FB.

Now to the trap Yagi-Uda. A 3 element Yagi will give about 6.8 dB gain with good F/B ratio. The books say that a 4 element Yagi will give 7.5 dB gain over a dipole. Yes I know you can "squeeze" a bit more out of some, but we have a multiband job here, and it's being optimized for all on one boom. So feed it with 35 meters of coax, we lose about 1/2 dB, leaving us with a 7 dB gain on 20 meters. With each additional director, we can add another DB of gain. On 15, we have 5 elements. This nets us about 8 dB gain. On 10 meters we have 6 elements and about 9 dB gain.

As to the traps "wasting power." Yes, it's true a small amount of power is converted to heat and lost in the trap. A VERY small amount. So small that you'd have difficulty trying to measure it.

So now let's compare. The LPDA at 6db is close to the Yagi on 20 meters with 7 dB. The trap Yagi is 2 dB better on 15 meters, and 3 dB greater on 10 meters. Clearly, the trap Yagi with more elements has more forward gain as we move up in frequency.

The winner? Well, the LPDA at 55 meters would be the envy of most any ham 'round these parts. The truth is he has a FB antenna system, and substantial investment in making it work. It works well, and therefore he is proud of the accomplishment. So to him, it is "the best."

The trap Yagi aerial system at 25 meters is no slouch either. The LPDA may "bag a few more" on 20 meters, due to the increased in height. However, the trap Yagi will probably "win out" on 15 and 10 meters with the extra gain. On 10, it has nearly 3db more gain than the LPDA. You would have to "stack" another LPDA to get that extra 3 dB. Both gents had good aerials, but trap Yagi may have a slight edge on the higher bands, especially if they are at the same height above ground.

I hope this sheds some light on the subject. Talking about aerials is always illuminating!

With the new year here already, perhaps it's time to ponder some additions or improvements to your aerials. With the warm weather upon us now is as good as any. Remember to help a new "Foundation" ticket holder. Your help and kind guidance will mold a better future to our hobby and our world. Wishing all of you good DX in the new year. ■

73, Bob Tail

Noise floor report does not inspire confidence

By Dan Romanchik, KB6NU

When he's not battling the noise floor at his QTH, Dan blogs about amateur radio at KB6NU.Com, writes the "No Nonsense" amateur radio study guides and teaches ham classes. You can contact him by e-mailing cwgeek@kb6nu.com.



Last June, the FCC's Technical Advisory Committee asked licensed and unlicensed users of the electromagnetic spectrum to answer some questions about the noise they were experiencing and whether or not it was affecting their services. Specifically, they asked:

- * Is there a noise floor problem?
- * Where does the problem exist? Spectrally? Spatially? Temporally?
- * Is there quantitative evidence of the overall increase in the total integrated noise floor across various segments of the radio frequency spectrum?
- * How should a noise study be performed?

Well, the results are in, and Radio World recently published a summary of the responses that the FCC received (<http://www.radioworld.com/business-and-law/0009/noise-floor-where-do-we-go-from-here/338242>). The FCC received 93 replies from 73 (great number, eh?) different people or organizations, including:

- * 23 companies/industry organizations
- * 39 RF professionals (broadcast and wireless)
- * 31 licensed radio amateurs
- * 9 responders did not reply to the questions asked

Respondents included the ARRL, the Society of Broadcast

Engineers, the National Association of Broadcasters, the National Public Safety Telecommunications Council, ATT, and the National Electrical Manufacturers Association. I found especially interesting comments from the Society of Broadcast Engineers. They include:

- * Increased cooperation is needed between manufacturers of Part 15 devices and users of radio spectrum to identify noise sources and take appropriate remedial action.
- * Radiated emission limits below 30 MHz in the FCC Part 15 rules for unintentional emitters should be enacted. There are presently no radiated emission limits below 30 MHz for most unintentional emitters.
- * Reduced Part 15 limits for LED lights should be enacted to be harmonized with the Part 18 lower limits for fluorescent bulbs.
- * Better labeling on packaging for Part 18 fluorescent bulbs and ballasts to better inform consumers of potential interference to radio, TV and cellphone reception in the residential environment.
- * Specific radiated and/or conducted emission limits for incidental emitters, such as motors or power lines, should be enacted.
- * Conducted emission limits on pulse-width motor controllers used in appliances should be enacted.
- * Substantially increase the visibility of enforcement in power line interference cases.

Other organizations made similar comments.

While the report is encouraging, it won't mean a thing if no action is taken on these issues. Given that the FCC is cutting back on its field offices, and our president-elect has said that he plans to reduce the number of governmental regulations, I'm not optimistic that we'll see the noise situation get better before it gets worse. What do you all think? ■

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

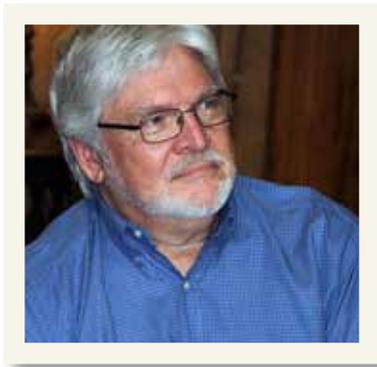
plenty of these), and a check to the state for \$2.00 for the standard plate or \$7.00 for the graphic bridge plate. When it arrives you use the new plate on your vehicle and donate the old one or donate the new one.

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.

Reading Between the Lines in Ham Gear Reviews

By Don Keith, N4KC

Copyright by Don Keith N4KC, reprinted by permission. Don writes many articles on Amateur Radio, available at his web site, www.n4kc.com, or in his various books on our hobby. See www.donkeith.com for info on those or other books by N4KC.



When I am contemplating an amateur radio purchase, I find the reviews offered by others here on eHam or other similar sites to be quite helpful. After a piece of gear has accumulated several dozen comments, I find there is enough input to make a good judgment about not only the quality of the item but whether its feature set is

really what I am looking for. After many years of perusing the reviews, though, I think I have picked up the ability to read between the lines of some of them, and to glean even more information from them.

As a service to my fellow hams, here is a quick guide to what posters are really saying in those reviews.

No need to thank me. I'm happy to help.

What the reviewer says: "This thing is a POS!"

What the reviewer means: "This wonderful bit of electronic engineering is a POS - a 'perfectly operating system!' I'd buy a dozen but I don't have room to store them."

What the reviewer says: "o/s"

What the reviewer means: "I know the thing has a 4.9/5 average, and I'm the only one—out of 527 reviews—to give it less than a 4. But I pulled mine out of the box, tossed the box and manual in the dumpster, hooked it up, tried to load it up to a lawn chair, and the output transistors went pppsssszzzzlll. What a pile of junk! How can they get away with selling stuff like this?"

What the reviewer says: "I know this antenna is only a 50-ohm resistor in a tub of epoxy, but it is the greatest radiator ever invented. My first contact was with a VK on 40 meters in broad daylight from St. Louis. Forget the laws of physics. This technology may well win the Nobel Prize. A hundred years of antenna engineering and never, until now, has someone discovered such a stunning breakthrough like this. The thing is a miracle!"

What the reviewer means: "My brother-in-law and I make these things in our basement. Every other positive review you see is from somebody we gave a free one in exchange for the '5.' Please buy one. I suddenly have lots and lots of legal bills and the Federal Trade Commission is spamming my in-box."

What the reviewer says: "Too complicated, too many knobs, the menu structure reminds me of that calculus class I dropped in college. What good is it if I can't figure out how to even turn it on?"

What the reviewer means: "I want DC-to-daylight, roofing filters, noise blanking, all modes, backlighting with a choice of a hundred colors, and instant mode and bandswitching, CW speed, mic gain, sideband selection, satellite choices, split and reverse split, three receivers, voice processing, and more...all with two knobs and no menus."

Alternative version of what the reviewer means: "I've been inactive since Nixon was president. I'm still looking for some tubes in this thing. And knobs for the plate and load. A menu on a radio? Next thing you'll tell me is that people are getting radios that plug into their computers. I think I need to go lie down for a while."

What the reviewer says: "Their customer service is the worst. Dunno how they stay in business."

What the reviewer means: "Okay, so I questioned the person's ancestry and sobriety, and used some language more appropriate for a dockworker. And that was just while talking to the receptionist. But their junk blew a fuse and all I did was go key-down for an hour with no antenna hooked up. And fudged just a bit when I told them when I bought it. Fudged by six years. But the least they could have done is send me a new one."

What the reviewer says: "Man, this is one fantastic radio! I had no idea something this great was on the market. I'd buy six more if I had the desk space."

What the reviewer means: "Look, I could have bought a slightly used Toyota for what this box full of parts cost me. It makes power on two bands, drifts like a hobo, smells like sardines when it gets hot...which it does quite quickly...and produces transmit audio that

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Reading Between the Lines in Ham Gear Reviews *Cont'd*

sounds like a cement mixer full of gravel. But if you think I'm going to spend that much on something and not pretend to love it, you're out of your mind!"

What the reviewer says: "reel gud flox bt som time seemz to gof wen glocking the qtr. hey, ifn want craigy swartz, this is the wun yu waant."

What the reviewer means: Well, truth is that I haven't quite figured those kinds of posts out yet. I know our education system is superb and that no one could graduate high school without being able to string together a coherent sentence. I figure this must be some other language with which I am not familiar.

What the reviewer says: "WOW! THIS IS ONE SWEET, SWEET PIECE OF GEAR!!!!!!!"

What the reviewer means: "I do like this piece of equipment. I just can't figure out how to get the caps lock on my keyboard turned off since all the RF in the shack turned it on back in '98."

So that is my little attempt at interpreting the web reviews for ham gear. I do hope it has been helpful and that you will all continue to give the rest of us the benefit of your comments. They do mostly serve a useful purpose, and thanks to the sites that allow for this first-hand commentary. ■

CMARC Board Meeting

December 3, 2016

~ President Tom Rocheleau/WA8WPI called the meeting to order at 5:45 with the following Board members in attendance: Vice-President Russ Fitzgerald/N8F, Secretary Jane Hosford/KC8FSK, Treasurer John Doornhaag/KD8NNQ, Director Chris Ranes/NS8Q, Director Ted Sadilek/WA8MFQ. And Under 22 Director Sam Fitzgerald/N8FPR.

DECEMBER MEETING:

~ Larry Camp/WB8R from the ARRL will be here to talk about an event at the Michigan International Speedway in 2017.

~ The 2017 Board will be elected.

~ We'll have our annual December potluck.

~ An email will go out to the listserv about absentee voting.

~ John/KD8NNQ made a motion that the Club donate \$150.00 to the Salvation Army, Chris/NS8Q seconded the motion, and it was approved.

~ We need to look into finding a new space for our radio room. We need to make a list of accommodations that we need, i.e. tower, etc. when considering a new place.

~ We'll have our annual December potluck.

~ Motion to adjourn made by John/KD8NNQ, seconded by Ted/WA8MFQ and approved.

~ Meeting adjourned at 6:45 pm.

Respectfully submitted,
Jane Hosford/KC8FSK-Secretary

General CMARC Meeting

December 9, 2016

~ President Tom/WA8WPI brought the meeting to order at 7:05 pm.

~ Board members present Treasurer John Doornhaag/KD8NNQ, Secretary Jane Hosford/KC8FSK, Director Chris Ranes/NS8Q, Director Ted Sadilek/WA8MFQ, Director Russ Fitzgerald/N8FZ and Under 22 Director Sam Fitzgerald/N8FPR.

SIGN-IN SHEETS: Please sign the sign-in sheets. There are two sign-in sheets: members and visitors.

~ We started the meeting by doing the Pledge of Allegiance. The flag was held by Under 22 Director Sam Fitzgerald/N8FPR.

~ A moment of silence for our silent keys.

ATTENDANCE: There were 39 people in attendance. Our visitors included: Bonnie Carter, Geraldine Jenks, Karin Miller, Peter Miller, Linda Dunahoo, Vicki Dembinski, Larry Camp/WB8R and Jeff Tompkins.

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General CMARC Meeting *Cont'd*

NEW LICENSES, UPGRADES, AND VANITY CALLS: Kelly Fitzgerald/K9FTZ passed the general exam.

SILENT KEYS: Jean Devendorf – wife of Don Devendorf/W8EGI who became a silent key on February 5, 2010.

CARDS AND FLOWERS REPORT: A card was sent to the family of Jean Devendorf.

~ We received a thank-you from the family of Ruth Stortz who passed away on October 6, 2016. She was the wife of Richard Stortz/K8JNZ.

~ We received a thank-you from Potter Park Zoo Education Department, Ted Sadilek/WA8MFQ, docent/volunteer at Potter Park and Bob Frease. Docent/Volunteer at Potter Park. They thanked the Club for the invitation to share their animals with us and for the contribution the Club made to Potter Park for the continuing education of the animals that Potter Park shows.

~ We received a thank-you from John Ingraham/NG8L, for the donation, the Club made in remembrance of his wife, Pamela.

PLEASE PAY YOUR DUES: NEW HAMS GET ONE YEAR FREE MEMBERSHIP

~ CMARC dues to John Doornhaag/KD8NNQ and LCDRA dues to Michael Boensch/WA8MKP.

OLD BUSINESS: A motion to accept the November secretary's report as printed in the December Scope was made by John/KE8CYC, seconded by Bob/K8ZAP and approved.

~ A motion to accept the November treasurer's report as printed in the December Scope was made by Mark/KD8YUY. Seconded by Jerry/KD8GLN and approved.

INTERESTING DX/CONTACTS: Gregg Mulder/WB8LZG talked to the Cayman Islands on 5 watts.

NEW BUSINESS:

CMARC DUES: Starting January 1, 2017, CMARC dues will be \$20.00. If you pay your 2017 Club dues by December 31st, 2016, you will still be paying \$15.00.

BOARD MEETINGS: The Board has decided to hold their meetings the Saturday before the regular CMARC meeting

at RAD'S/Denny's at 5:30. That way we have more time to discuss things without running into the time that the regular club meeting starts. Anyone is welcome to attend the Board meetings.

SALVATION ARMY BUILDING USE: Clyde/K8CPT is the liaison between CMARC and the Salvation Army. We might have to move our Club room, as usage is limited. Wednesday night after 8:30 pm and our Club meetings. Weekends are pretty much off limits; they need notice. Might have to move to the Salvation Army on South Pennsylvania.

CANDY BARS: Bob/KB8DQQ is selling candy bars for a \$1.00 each. Profits from the sale of the candy bars are then donated to LCDRA (Lansing Civil Defense Repeater Association).

50/50: Stacy/KC8ZSR won \$21.00.

BREAK: Thank you for making our annual Christmas potluck a great success, once again..

JANUARY MEETING: Tim Jurmo/AC8NI, from SATERN, will be our speaker.

PROGRAM: Tonight we voted for the 2017 Board. The 2017 Board members are Tom Rocheleau/WA8WPI, Russ Fitzgerald/N8FZ, John Doornhaag/KD8NNQ, Chris Ranes/NS8Q, Ted Sadilek/WA8MFQ, Clyde Tompkins/K8CPT and Under 22 Director/Sam Fitzgerald/N8FPR. They will meet at a later date to determine who gets what position.

~ Larry Camp/WB8R, section manager from the ARRL, is here to talk to us about an event on October 7th and 8th, 2017, at the Michigan International Speedway (MIS).

~ He also mentioned Michigan State Parks on the Air, a three-year amateur radio event, 2017, 2018, 2019. There is a facebook page – Michigan State Parks on the Air.

MOTION TO ADJOURN: Made by John/KE8CYC seconded by Michael/W8MKB and approved.

~ With all business concluded, the meeting was adjourned at 8:30 pm.

Respectfully submitted,
Jane Hosford/KC8FSK-Secretary

ARRL Michigan Section News

By Larry Camp/WB8R



Irish Hills Hamfest at Michigan International Speedway

We have assembled our management team and are beginning the process of putting the pieces together to form our parent organization, which will be known as the Great Lakes Amateur Radio Association, which will be a 501 (c) (3) corporation. We have settled on the dates of October 7 and 8, 2017 for our event at MIS.

In the past couple of months I have visited 8 club meetings to talk about the event and am very pleased to report all clubs were very positive and excited about the event. I have more club meetings to attend in the next 2-3 months to complete the process of getting the assistance that we need.

Flyers and other documentation are under development and will be available for distribution soon. Stay tuned for more information as this exciting event comes to life.

More details soon.....

ARRL Vows Continued Pursuit of the Amateur Radio Parity Act in the 115th Congress

The Amateur Radio Parity Act, H.R. 1301, died an unbecoming death as the 114th Congress of the United States drew to a close today. After having passed the House of Representatives on a unanimous vote, the bill stalled in the Senate due to the intervention of only one member, Sen. Bill Nelson (D-FL).

Over the course of the past year, Sen. Nelson has received thousands of e-mails, letters, and phone calls from concerned constituents asking for his support of H.R. 1301. Numerous meetings were held with his senior staff in an effort to move the legislation forward. Negotiations, which led to an agreement with the national association of homeowner's associations and publicly supported by CAI and ARRL, were brushed aside by Sen. Nelson as irrelevant.

In a final meeting with the Senator's staff earlier this week, it became clear that no matter what was said or done, the Senator opposed the bill and refused to allow it to move forward. Unfortunately, as the bill did not receive floor time, the only manner in which it could get passed in the Senate would be through a process that required unanimous consent, which means no one opposes the bill.

The legislation will be reintroduced in both houses of Congress after the 115th Session begins in January. We have already been in contact with the sponsors of the bill to allow for an early introduction, which will give us more time to obtain success. We believe that we can get his bill adopted given the fact that we were inches away from crossing the goal line. We will continue to need the support of the membership, particularly in Florida, as we go forward through the next year.

Michigan Distracted Driving Bill

The Michigan Distracted Driving bill that was known as HB 6857 will be reintroduced in the 2017 Legislative session under a new number. We will be monitoring the bill to ensure that our ability to operate our equipment from our vehicles is not affected.

Michigan State Parks on the Air (MSPOTA)

Beginning in the spring of 2017, MSPOTA will run through 2019 and incorporate Michigan's 107 State Parks, Recreation Areas, Scenic and Memorial Sites. Our target date for startup is March 1. Starting prior to that is problematical in that Park Staff would be limited.

MSPOTA goes beyond "pulling up and keying up" as it is a cooperative program between Michigan amateur radio operators and DNR Parks & Recreation Division to mutually promote one another's interests. MSPOTA is designed to allow regional and statewide activation opportunities throughout the event and is coordinated with other MDNR Parks & Recreation Division programs. The event will feature about fifty parks available for activation in each of the three event years with some parks active throughout the entire event.

The schedule is being finalized and will be available after the first of the year. MSPOTA's online logging, scheduling and award tracking system is currently being assembled. We will be seeking local clubs to sponsor parks, act as QSL bureaus and tend to parks local to them.

MSPOTA is sponsored by The Northern Michigan Amateur Radio Service Team (NM8RT).

For MSPOTA news and progress or to volunteer to help, please visit the "MSPOTA" group on Facebook or email Will at w8wdr@arrl.net.

Many thanks to W8WDR for this informational update and many thanks to the MSPOTA development team for working so hard to bring this fun activity to the hams of Michigan.

CMARC News Desk

News provided with permission from Amateur Radio Newsline. Please visit www.arnewsline.org for more updated information.

Featuring news clips from Amateur Radio Newsline

U.S. Winter Field Day is Hot!, Hot!, Hot!

When is it too cold for Field Day in the U.S.? Never, if you ask this hardy bunch, as Amateur Radio Newsline's Neil Rapp explains, in our final report for this week.

Bundle up! You may not think that Field Day in the middle of winter is a good idea, but 10 years after the first one was held - in January 2007 - more and more amateurs in the U.S. are warming to the idea, joining hams in Australia and the UK in this practice. In the States, Winter Field Day 2017 begins on Saturday January 28 at 1900 UTC and runs through Sunday January 29 at the same time. It's happening on all bands and in all modes except the WARC bands.

So what's the point of it? As the Winter Field Day website itself notes, disasters - like the weather - cannot always be predicted accurately and having a Field Day such as this one, in more challenging weather conditions, is good

preparation for the real thing when it happens.

For this Winter Field Day, guidelines allow solo operators, pairs and teams and can be done as an outing, a remote location, or even from home - although there are bonus points for outdoor and remote operation with a noncommercial power source. There will also be at least one bonus station.

The exchange has changed from last year, however, so please visit the website at winterfieldday.com to get the specifics before getting on the air and calling "CQ WFD."

Just be sure to leave your flipflops and your beverage cooler at home -- unless the winter weather turns TRULY unpredictable!

For Amateur Radio Newsline, I'm Neil Rapp WB9VPG ■

(WINTER FIELD DAY ASSOCIATION)

Scout Merit Badge Finds New Direction

There are some big changes in the Radio Merit Badge program for Boy Scouts, as we learn from Amateur Radio Newsline's Bill Stearns NE4RD.

This week in Radio Scouting we have updates to the Radio Merit Badge program to announce.

A big new addition to the Radio Merit Badge is a new option of Amateur Radio Direction Finding. This combines orienteering and foxhunting and opens a new interactive component to this program. Cellular telephone topics have been added and different types of radio modulation have been included. Key requirement changes were dropping open, closed, and short circuits as well as schematic symbols and components as these are covered in the Electricity and Electronics merit badges.

Other revisions include: minor edits and reordering of requirements in the Amateur

Continued on Page 11

GigaParts Opens Las Vegas Location

[Editor's Note: Article is courtesy of eHam.net and not ARN.]

Huntsville, Alabama, January 6, 2017 -- After Amateur Electronic Supply went out of business in July, GigaParts began hiring the AES staff in Las Vegas and working on moving the operation to a new location less than 5 minutes from the famous Las Vegas Strip and just 3 miles from the former AES building. Although the retail showroom won't be ready for visitors for another few months, starting today, the Las Vegas store becomes the primary distribution center for GigaParts shipments to the western half of the US. That means fast, affordable shipping to the huge population of hams in California and other western states, without sales tax!

Former AES customers will see some familiar faces at GigaParts Las Vegas, including AES's former shipping manager, Terry Spaulding, and store manager, Julio Suarez. "I'm excited to be back and I'm looking forward

to helping all of my old friends again," said Julio. "AES was iconic in ham radio and it was sad to see it die off, but we have an opportunity with GigaParts to do things better than we ever could before," he continued.

In addition to the new and improved facility, another improvement over the AES business model will be a single toll free number for customers wishing to place orders by telephone: (866) 535-4442. Sue Stephens, Customer Service Manager for GigaParts: "Technology has come a long way in the 70 years since AES first opened. Our state-of-the-art call center in Huntsville handles calls and online chats from all over the world. The guys in Las Vegas are going to be a huge asset to us by helping with employee training, adding new product lines and even backing up our reps on the phones during peak call times."

Jeff Sinclair, the e-Commerce Division Manager at GigaParts, states, "This is a significant move forward for GigaParts as

we continue to expand our distribution capabilities in North America. The new facility in Las Vegas doesn't just mean faster shipping to our west coast customers, but the employees there add decades of experience in customer service and ham radio product knowledge."

Initially, the Las Vegas store will carry the complete lines of amateur radio and maker equipment with more product lines being added later. Understanding that hams come to Las Vegas from all over the country and all over the world, GigaParts plans on making the retail showroom more of an interactive showcase of the latest equipment rather than a self-service shopping experience common amongst other amateur radio outlets.

Today, GigaParts Las Vegas is stocked with ham radio gear and is ready to fill your order! To welcome AES customers, GigaParts is offering a \$25 gift certificate to every former AES customer. See www.gigaparts.com/AES for details. ■

CMARC News Desk

News provided with permission from Amateur Radio Newsline. Please visit www.arnewsline.org for more updated information.

Featuring news clips from Amateur Radio Newsline

Scout Merit Badge Finds New Direction *Cont'd*

Radio option; Radio Broadcasting option now includes Internet streaming, regulations, and power levels; Medium Wave and Shortwave Listening option includes both types of listening as well as listening via streaming services on your smartphone.

These updates will take effect in 2017, and those scouts working on the previous set of requirements generally can finish them up the same year.

For this and more information on K2BSA and Radio Scouting, please visit www.k2bsa.net.

For Amateur Radio Newsline and the K2BSA Amateur Radio Association, this is Bill Stearns, NE4RD ■

A Net Gain for the Santa Net

NEIL/ANCHOR: And finally, with Christmas 2016 behind us, we reflect on Santa's popularity. It's big, because he has his own 80-meter Net. Amateur Radio Newsline's Jim Damron N8TMW has more:

JIM: Christmas is over and the results are in: Santa is apparently more popular than ever on ham radio. The 3916 Nets, which run the annual Santa Net, connecting youngsters to the voice of Santa on ham radio, reports that 426 stations and 656 children spoke to the big elf this year. According to Pete Thomson KE5GGY the stations were from all over the U.S. and into Canada. Best of all, the number represents an increase of 54 percent over the check-ins in 2015. No doubt this gives the Santa Net operators, and even folks at the North Pole, a lot of ho-ho-hope for Christmas next year. ■

For Amateur Radio Newsline, I'm Jim Damron, N8TMW.

Native American Tribes Host First Net

SKEETER/ANCHOR: American Indian tribes now have their own Net. If you want to join them, listen to this report from Amateur Radio Newsline's Paul Braun WD9GCO.

PAUL: There is a new HF activity starting this weekend, and it's hosted by a very special organization. The National Tribal Amateur Radio Association will hold the first of what they hope are many more nets this Saturday, January 7th, at 0100 UTC on 3925 MHz to start.

I spoke with Association president Nathan Nixon, N7NAN about their plans:

NIXON: What we're starting is our first HF net that we hope to use to not only kinda bring people together but also to put out information as to what's going on out there in Indian country, ways that people can help. You know, through National Tribal we've never said "no" to anybody joining and it's open to everybody so ultimately we just want to get the word out there that hey, most everybody, regardless of where you live in the US, either has tribal nations within their state or if you're in a state like Arizona where I'm at we've got 22 of them. And they're close - there may be community members who are ham radio operators you may not be aware of, but every tribal community I've been out to absolutely loves what amateur radio is and what it's all about so I'm hoping with this net we can move forwards from once a month to twice a month and kinda spread the word about Indian country and bring folks together and go from there.

PAUL:NTARA's membership is growing. According to Nixon.....

NIXON:As of January 1, we are sitting right at 482 across the U.S. That's all 50 states. Out of those 482, we've got 21 of the 567 recognized tribal nations represented.

PAUL: The mission of the net will evolve over time, according to Nixon:

NIXON: So the first one is more just to - actually, the first couple - will be more to test the waters and see, you know, which band, what time, that sort of stuff works for everybody else. I'm hoping that by April or May that we'll have a list of people who check in on a regular basis so we'll do check-ins and then with some of the resources that I have it's mainly to share information as to what's going on out there. So if I know that the Navajo Nation has a big fair going on or something like that I'll put that out there for people. Either that, or there's like emergency communications events that Indian Country's doing or anything like that, that's what we're going to start putting out there after I'd say probably the third net after we get our feet wet and kind of figure out which band's going to work the best.

PAUL: Nixon said that while the first net will be on 75 meters, they are also going to try one on 40 and one on 20 to see what works best for most hams.

You can learn more about the Association and follow the progress of the net by joining the Facebook page - just search for National Tribal Amateur Radio Association or look for them on Twitter under @NatTribalHams. They have a QRZ page under W7NTV. ■

For Amateur Radio Newsline, I'm Paul Braun, WD9GCO

The DX Corner

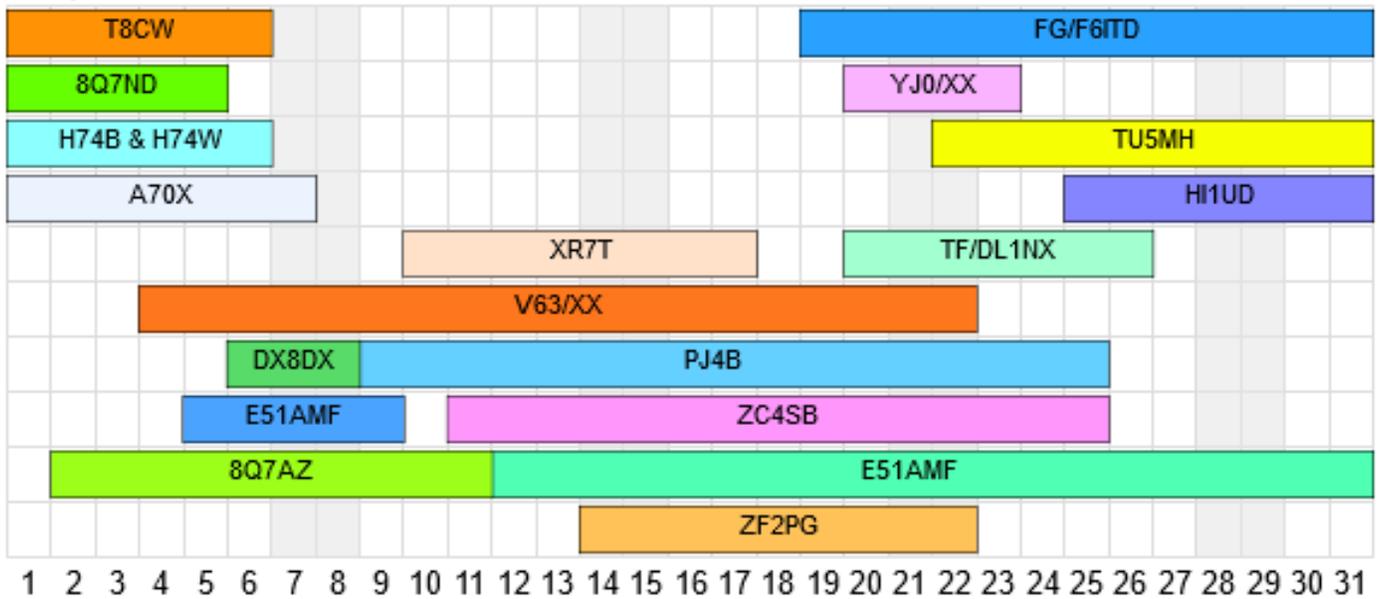
By Col McGowan, MM0NDX

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/qs/.

DX WORLD.net FEATURED DXPEDITIONS TIMELINE

Last update: December 29, 2016



Edited by MM0NDX

JANUARY

© IK8LOV Max Laconca

Current & Upcoming DXpeditions

FG/F6ITD - La Desirade, Guadeloupe

DXNorth America

- Jean-Pierre / F6ITD will be active between January 19 and March 9, 2017.
- He plans to operate SSB and DIGI
- During contests he plans to use T07D
- QSL via Home Call



T31T 1999 Central Kiribati
Courtesy of K8CX

TU5MH - Ivory Coast *DXAfrica*

- Bertrand/DF3FS, Norbert/DJ7JC, and Heye/DJ9RR plan to operate from January 22 to February 2, 2017.
- He plans to operate CW, SSB, and RTTY on 80-10m.
- QSL via Direct, Bureau, OQRS, and LoTW.



HI1UD - Beata Island, NA-122 *DXNorth America*

- Operators plan to activate the island between January 25 and February 1, 2017.
- They will be active on all HF bands
- QSL via OQRS, Direct (W2CCW), Bureau, and LoTW.



TF/DL1NX - Iceland *DXEurope*

- Alex/DL1NX will be active holiday style between January 20-26, 2017.
- He will be using a KX3, and a Buddipole on 80-10m.
- QSL via LoTW.



ZF2PG - Cayman Islands *DXNorth America*

- Pete/K8PGJ plans to operate between January 14-22, 2017.
- He will be active on all HF bands / NAQP Contest
- QSL via Home Call and LoTW.



CMARC Puzzle Page

Samurai Sudoku

Here is another Samari Sudoku puzzle for this month. I hope you enjoyed working on last month's puzzle. I would like to hear some feedback from our readers if you would like to continue to see a puzzle in future issues.

Complete the Samurai grid so that within each of the five 9x9 Sudokus, every row, column and three-by-three box contains the digits 1 to 9. You will always need to solve the puzzle as a whole, you cannot just solve each Sudoku individually. Have fun! ***The solution for this puzzle will be in next month's issue.***

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

SOLUTION IN NEXT MONTH'S ISSUE

CLASSIFIEDS

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

\$75 or Best Offer

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.

\$20 Each

J-37 Hand Key
J-38 Hand Key
Speed-X Hand Key

\$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
- 2007 ARRL Handbook
- 2010 ARRL Handbook

Ed Oxer / 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.

Mark Carter / KD8YUY
(517) 231-3108

\$.02 / Ft.
Rope for sale.

Gregg Wesley / KD8PA
(517) 614-6573

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

Steve Lyon / W8RQS
(517) 641-4543

Impedence transformer for use in microphones.

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

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

Brian Monaghan / KC8QWJ
(517) 219-8183

FREE
(4) 1.2 meter Satellite Dishes

Jim Hein / K8UHF
k8uhf@sbcglobal.net

UPDATED

\$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.

NEW

\$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.

NEW

\$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.

NEW

\$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 dive.

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) 882-5406

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) 701-9745

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, KC8BFK
(517) 202-1779

Director
Don McLain, KB8RAD
(517) 701-9745

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

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: _____
Birthdate: _____	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 <i>(select only one option)</i>	<input type="checkbox"/> I will download from the web site.
	<input type="checkbox"/> Please mail to my address <i>(Note: Direct mailing increases postage costs.)</i>
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>		

HAZEL PARK AMATEUR RADIO CLUB 51st ANNUAL SWAP & SHOP

****NEW LOCATION****

****UFCW Local 876 - 876 Horace Brown Dr. Madison Heights, MI 48071****

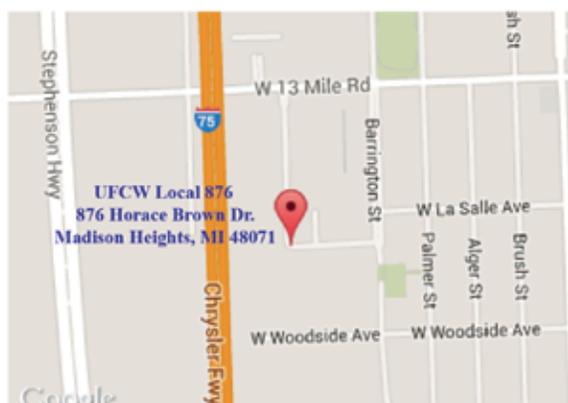
January 29, 2017 - 8:00 a.m. til 12:00 noon

W8HP - Talk-in 146.640 (100hz.PL) D.A.R.T. Repeater
Tables \$15.00 Tickets \$5.00 Ample Free Parking

NEW for VENDORS!

Vendor setup times with paid admission

Jan. 28th 11:00 a.m. - 3:00 pm. and Jan. 29th 7:30 a.m.



PRIZES	
1ST	CASH PRIZE \$100.00
2ND	CASH PRIZE \$50.00
3RD	CASH PRIZE \$25.00

E-mail Address: HazelParkSwap@gmail.com Phone: Hugh Boyle (248) 755-6094

Web Site: WWW.HPARC.ORG

Facebook: <https://www.facebook.com/groups/hparcgroup/>

Tickets and Table Reservation Mail-in Coupon

Name _____

Address _____

City _____ State _____ Zip _____

Phone() _____ Email _____

Tickets ____ x \$5.00 Tables ____ x \$15.00 Enclosed \$ _____

MAIL TO: H.P.A.R.C. INC. SWAP, P.O. BOX 368 HAZEL PARK, MI 48030

TABLE RESERVATIONS MUST BE RECEIVED BY JANUARY 10, 2017

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	ARPSA	LCDRA
		
WWW.CENTRALMIARC.COM/	WWW.LANSINGARPSA.COM/	WWW.LCDRA.NET