



MICH-A-CON

Iron Mountain,
Dickinson County, Mich

May 13, 2015

Meeting Reminder: Second Wednesday of the Month

Which is **May 13, 2015** at 07:00 PM at the Dickinson Library, Iron Mountain.

Please be there and support the cause of Amateur Radio.

From The President

I cut the yard yesterday. I have played two rounds of golf. Is it safe to assume that spring has arrived? You do know that we have had snow during the 4th of July parade in 1966? I believe that it has snowed in every month except August. Great, eh?

Thank you to all that attended our club dinner. There were 16 of us at Bartolotti's in Aurora. It was nice to see the spouses, or significant others, of our members. We'll have to do it again next year.

Well, the contest season is over for me. Unfortunately, propagation for the BARTG RTTY contest was terrible! I only missed last year's record, 1.5 million points, by 900,000! For the first time ever, I didn't work one JA during the contest. Even with 250,000 plus points, I should place well in the USA, according to comments from other operators.

I'm looking for a tower climber, now that weather is more conducive to antenna work. If anyone can lend a hand let me know.

My Alpha amp is now back in the shack. I had low output and high input SWR. The two go hand in hand. Since I still had 6 months left on the warranty, I shipped it off to be repaired. Without warranty, the cost for labor alone would have been \$600! The repair included some new resistors, a couple of capacitors, and alignment. Now, it is back to 1500 watts output.

Remember, if you have any problem with a radio under warranty, ship it back. If you try a repair yourself, you can void the warranty!

See you at the next meeting to discuss Field Day.

73,

Tom W8JWN

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MICH-A-CON AMATEUR RADIO CLUB MINUTES OF APRIL 8, 2015

Vice President Scott Jarmusch called the meeting to order at 7:00 pm.

Secretary Report

Minutes of the March 11th meeting were read and approved.

Treasurer Report

Balances as of April 6, 2015

Checking- \$2.57

Regular Savings- \$2905.33 of which \$1627.43 is in the trailer fund.

Repeater Savings- \$939.56

Cash- \$17.00

Repeater Report

Dave Thomas has had the new repeater working, on the bench. Some details of its operation are still to be worked out. It was described as a "slick little repeater".

Bob Meyers reported that Marquette County is still interested in linking to our 440 repeater. Bob also suggested that it would be a good idea to link our new two meter repeater with our 440 unit. During severe weather it would provide a direct line to the National Weather Service office in Marquette.

The current repeater, using the old antenna, still has noise when it is windy. WE Energies has not done anything about the generator noise, yet. They should be up here soon, for their spring maintenance.

Old Business

The club social gathering, at Bartoletti's, on March 14th, received positive reviews from the 16 persons in attendance. It is hoped that another will be held, in the near future.

Tom Heyboer has now taken over as webmaster for the club website. Several positive comments were made regarding the layout and content of the newsletter.

The hazer donated by Don and Kathy Falls has not been picked-up, yet.

The club CW practice net that has been meeting on 10 meters will not meet until sometime in May.

New Business

Gary Schafer reported that a neighbor has an old boat trailer that might be a candidate for building an antenna trailer. Terry Moriarity said that he could pick it up.



Adjournment

The meeting was adjourned at 7:20 pm.

For the Good of the Order

Attendees reported on their recent activities.

Submitted by Joe Ferris

Attendees

Scott Jarmusch, KA8TFF
Burton Armbrust, Sr., WB8EBS
Joe Ferris, KC9TQR
Gary Schafer, K4FMX
Skip Caswell, KE9L
Sam Holmes, N8ATS
Terry Moriarity, K9TRY

Dana Bey, KD8POR
Bob Meyers, WA8FXQ

ARRL DX NEWS

DX Bulletin 18 ARLD018
From ARRL Headquarters
Newington CT **May 7, 2015**
To all radio amateurs

This week's bulletin was made possible with information provided by QRZ DX, the OPDX Bulletin, 425 DX News, The Daily DX, DXNL, Contest Corral from QST and the ARRL Contest Calendar and WA7BNM web sites.

Thanks to all.

MAURITIUS, 3B8. Jose, EA5IDQ will be QRV as 3B8/EA5IDQ from May 10 to 18. Activity will be on 40 to 6 meters using SSB and RTTY. QSL to home call.

MONTENEGRO, 4O. Arkadiy, UA4CC is QRV as 4O7CC until May 12. Activity is on 40 to 6 meters using CW, SSB and RTTY. QSL to home call.

CYPRUS, 5B. Members of the Pafos Radio Club are QRV with special call sign 5B70VE during May to commemorate the 70th anniversary of Victory in Europe. QSL via operators' instructions.

MALDIVES, 8Q. Sasha, DG4ABE will be QRV as 8Q7BI from May 10 to 17 while on vacation. Activity will be holiday style on 20 to 10 meters using mainly digital modes with some SSB. QSL to home call.

NEPAL, 9N. Dale, BA4TB and Mi, BD4TR are QRV as 9N7TB and 9N7TR, respectively, while part of the Chinese rescue team assisting in the aftermath of the earthquake. Activity is in their spare time on the HF bands using CW and SSB. QSL to home calls.

BAHAMAS, C6. Dan, N8YSZ will be QRV as C6ASZ from Long Island, IOTA NA-001, from May 9 to 16 while on vacation. Activity will be on 40 to 10 meters using SSB and various digital modes. QSL to home call.

MADEIRA ISLANDS, CT3. Johannes, DF5AU is QRV as CT9/DF5AU from Santana, IOTA AF-014, until May 10. Activity is on the HF bands using CW and SSB. He plans to be QRV as CR3L in the CQ-M contest. QSL CT9/DF5AU to home call

and CR3L via DJ6QT.

CAPE VERDE, D4. PA3FYC will be QRV as D44TCA from Boa Vista, IOTA AF-086, from May 10 to 22. QSL to home call.

CANARY ISLANDS, EA8. Mike, DG5LAC will be QRV as EA8/DG5LAC from Fuerteventura, IOTA AF-004, from May 10 to 24. Activity will be on 40 to 10 meters using SSB with QRP power. QSL to home call.

GUERNSEY, GU. Members of the Guernsey Amateur Radio Society are QRV as GU70LIB until May 10 to commemorate the liberation of Guernsey 70 years ago. Activity is on the HF bands using CW and SSB. QSL via bureau.

REPUBLIC OF KOREA, HL. Members of the Korean Amateur Radio League are QRV as DT50KJ from Seoul until June 30 to celebrate the 50th anniversary of the Diplomatic Relations between Japan and the Republic of Korea. QSL via HLI1WD.

JAPAN, JA. Special event station 8N2IKUJU is QRV from Gifu Prefecture until November 30 to commemorate the 39th All Japan IKUJU Festival. QSL via bureau.

SVALBARD, JW. Alexander, UA3IPL is QRV as JW/UA3IPL until August 29. Activity is on the HF bands using CW, SSB, RTTY, PSK31 and JT65. QSL direct to RW6HS. In addition, Karl, LA8DW is QRV as JW8DW from Longyearbyen, IOTA EU-026, until May 13. QSL to home call.

ANTARCTICA. Mike, KD5GLX is QRV as KC4AAC from Palmer Station on Anvers Island, IOTA NA-012, until early October 2015. He has been active on 20 meters using PSK. QSL via KI1ED.

FERNANDO DE NORONHA, PY0F. Ville, PY2ZEA will be QRV as PW0F from May 12 to 20. Activity will be on 160 to 10 meters using CW and SSB, although given the high noise levels he is uncertain about 160 and 80 meters, but will try if conditions allow. QSL via OH2BH.

GREECE, SV. Members of the Thessaloniki Amateur Radio Group are QRV as SX10TARG until May 17 to celebrate their 10th anniversary. QSL direct to SZ2T.

CHRISTMAS ISLANDS, VK9X. Nobuaki, JA0JHQ is QRV as JA0JHQ/VK9X until May 10. Activity is on 40 to 6 meters using CW and SSB. QSL to home call.

CHATHAM ISLANDS, ZL7. Alain, F8FUA is QRV as ZL7/F8FUA until May 13. Activity is on the HF bands using CW, SSB and RTTY. QSL to home call.

PARAGUAY, ZP. Special event call sign ZP150ITU is QRV until May 31 to celebrate the 150th anniversary of the International Telecommunications Union. QSL via ZP5AA.

THIS WEEKEND ON THE RADIO. The CQ-M International DX Contest, NCCC RTTY Sprint, NCCC Sprint CW Ladder, F9AA PSK Cup, SKCC Weekend CW Sprintathon, HPC World Wide DX BPSK63 Contest, VOLTA World Wide RTTY Contest, Portuguese Navy Day Contest, FISTS Spring

Unlimited CW Sprint and the 50 MHz Spring Sprint are all on tap for this upcoming weekend. The RSGB 80-Meter Club Data Championship and CWops

Mini-CWT CW Test are scheduled for May 13. Please see May QST, page 82 and the ARRL and WA7BNM contest web sites for details

ARRL PROPAGATION BULLETIN

Propagation Forecast Bulletin 18 ARLP018

From Tad Cook, K7RA

Seattle, WA May 1, 2015

To all radio amateurs

There were no new sunspots over the past week (April 23-29), even though in the previous seven days there were new sunspots every day, and one day, April 21 had two new ones. The day after the reporting week, April 30, saw two new spots.

Both solar flux and daily sunspot numbers declined. The average daily sunspot number dropped from 120.9 to 60.7, and average daily solar flux went down from 150.4 to 119.8.

We currently are experiencing a very quiet Sun, but looking at the STEREO mission at <http://stereo.gsfc.nasa.gov/> there is activity just over the solar horizon.

You can see the weakening outlook in the NOAA/USAF 45 day forecast for solar flux. I have an archive of these in spreadsheet form at <http://www.filedropper.com/filemanager/public.php?service=file&t=326dd41340bab1066cf91d13df36b8fd>

. Just click "Download This File" and select "Yes" to ignore the warning.

Take a look at the weakening solar flux forecasts for May 1, which began on March 17 at 120, then rose to 130 on March 23, then to 140 on March 30, but on April 6 dropped to 115. It rose again to 125 on April 13, then 135 on April 20, then began to decline again to 125 on April 23, 115 on April 24, 110 on April 26, 100 on April 27 and 95 on April 28-29.

Predicted solar flux for May 1 is 100, 105 on May 2-3, 110 on May 4, 115 on May 5-6, 120 on May 7, 135 on May 8-9, 130 and 125 on May 10-11, 130 on May 12-14, then 125, 130 and 125 on May 15-17, 120 on May 18-19, and 115 on May 20-23. Flux values are then forecast to drop to 110 on May 27-29, then rise to 135 on June 3-5.

Predicted planetary A index is 10 on May 1, 8 on May 2, 5 on May 3-11, 25 on May 12, 20 on May 13-14, then 12, 8, 12, 20, 12 and 8 on May 15-20, 5 on May 21-25, 8 on May 26, and 10 on May 27-28. The next predicted increase is to 25 on June 8.

F.K. Janda, OK1HH of the Czech Propagation Interest Group sees active to disturbed geomagnetic conditions on May 1, quiet to active conditions May 2, mostly quiet May 3-6, active to disturbed May 7-8, quiet to active May 9, mostly quiet May

10, quiet on May 11, active to disturbed May 12, disturbed on May 13-14, quiet to active May 15, quiet to unsettled May 16-18, and mostly quiet May 19-20.

OK1HH believes that increases in solar wind are difficult to predict, but some peaks are expected May 3-5, May 15-18 and May 20.

The days are lengthening, and we sure notice it here at 47.67 degrees latitude. Compared to April 1, on May 5 the Sun rises 60 minutes earlier and sets about 47 minutes later. I'm looking at both days with W6ELprop using a solar flux of 100 over the path from Seattle to Japan, and can see that 20 meters is open about two and a half hours later in the evening of May 5.

Also notable is the path from Seattle to Atlanta on both dates, with 17 meters opening 90 minutes later on May 5 and shutting down about two hours later in the night than April 1.

Jon Jones, N0JK of Lawrence, Kansas reports that he encountered an unusual 10 meter opening on April 25 around 1800Z. Signals from Europe were extremely loud. He was mobile running 50 watts SSB, and worked 9A9A in Croatia on 28.432 MHz at 1741Z. Signals were S9 with considerable QSB. Then at 1758Z he worked TM0GA in France on 28.446 MHz with loud signals.

At 1713Z W8HF in Ohio worked 9A9A running just 5 watts, and got an S9+10dB report. At 1721Z KA2OFM reported that 9A9A was booming into New York.

Jon wrote, "I am curious regarding the propagation mode. F2 is possible, but April is late for North America to European openings via F2 on 10 and the solar flux was not high. Some sporadic-E was present on the April 25 on 6 meters, but mostly to the south. Multi-hop sporadic-E occurs to Europe from North America on 10 meters, but April is early in the Summer sporadic-E season for it. Another possibility is a combination of sporadic-E linking to F2. The heavy QSB on the Europeans reminded me of sporadic-E. I wonder if your readers have any comments."

David Moore sent a link to a video from the new 1.6-meter telescope at the Big Bear Observatory showing a twisting solar magnetic structure.

<http://www.space.com/29259-suns-flux-rope-shreds-never-before-seen-hi-res-video.html>

Another article out of Big Bear:

<http://www.scienceworldreport.com/articles/24963/20150430/new-solar-telescope-captures-interior-dark-cores-sunspot.htm>

This report is from April 24 from Jeff, N8II: "USA mobile signals seemed louder than ever on 30 meters from about 200 miles out to over 1000 miles in MO, NE, and IA including many S9+ during the mornings and afternoons even when the K index was 3-4! 40 was not nearly as good.

"Today the K index is finally down to 1! XV9NPS was an honest S9 on 15 CW today at 1422Z. Also worked this AM with one call as well YB4IR/8 on Wamar Island OC-249 and YB2B-BY/9 (New Guinea or surrounding Is.) on 15 SSB. Also worked at 1424Z E21EJC in Thailand on 12 CW about S5 and 4X67VF (special prefix) on 10 meter CW S7. EU openings are almost over until the fall season on 10 meters, but I am still getting some good EU signals on 12 meters."

If you would like to make a comment or have a tip for our readers, email the author at, k7ra@arrl.net.

For more information concerning radio propagation, see the ARRL Technical Information Service web page at <http://arrl.org/propagation-of-rf-signals>. For an explanation of the numbers used in this bulletin, see <http://arrl.org/the-sun-the-earth-the-ionosphere>. An archive of past propagation bulletins is at <http://arrl.org/wlaw-bulletins-archive-propagation>. More good information and tutorials on propagation are at <http://k9la.us/>.

Archives of the NOAA/USAF daily 45 day forecast for solar flux and planetary A index are at <http://www.filedropper.com/filemanager/public.php?service=file&t=326dd41340bab1066cf91d13df36b8fd>

And <http://www.filedropper.com/filemanager/public.php?service=file&t=be2a0a69fb6392907dc3d9a017dcace1>

. Click on "Download this file" to download the archive and view in spreadsheet format.

Monthly propagation charts between four USA regions and twelve overseas locations are at <http://arrl.org/propagation>.

Sunspot numbers for April 23 through 29 were 110, 79, 77, 55, 42, 36, and 26, with a mean of 60.7. 10.7 cm flux was 140.5, 134.5,



125.9, 118.5, 107.5, 107.7, and 104, with a mean of 119.8.
Estimated planetary A indices were 7, 5, 3, 4, 5, 6, and 4,
with a mean of 4.9. Estimated mid-latitude A indices were
6, 5, 2, 3, 5, 7, and 4, with a mean of 4.6

ARRL MICHIGAN SECTION NEWS

This is from April.....

Michigan QSO Party This Weekend

The annual Michigan QSO Party is rapidly approaching. This year's event will take place on Saturday, April 18 from noon to midnight EDT.

This is a great event and a good opportunity to get the new hams in your club on the air. Whether you are a radiosport enthusiast or a rookie to competition, this is the event for you!

Here are a couple of tips from K8CC:

Hams planning to operate in MiQP are invited to check out the Planned Operations page on the MiQP web site. This page lists the 83 Michigan counties and the callsigns of stations planning to be active from each county. MiQP participants can take note of the listed callsigns from rare counties and be on the lookout for these stations during to contest to snag additional county multipliers.

The link to the Planned Operations page can be found just below the Michigan map at the top of the MiQP web site home page at <http://www.miqp.org>.

MiQP rules require that when working stations outside of the USA and Canada in the contest, their location should be logged as "DX". For the 2015 MiQP, the contest rules have been changed to count "DX" as a multiplier, adding two multiplier opportunities for your score (once on CW, and once on phone). Entrants should not be concerned if their logging software does not count a "DX" station as a multiplier. They will receive multiplier credit for any "DX" QSOs when their log is re-scored by the contest committee.

Again, full information is available online at: <http://www.miqp.org/>.

Two Bus Trips to Dayton Available in Southern MI

The Kalamazoo SMART Club and the Arrow Club from Ann Arbor are each operating a charter bus trip to Dayton next month. Now let me tell you, this is the way to travel – down in the early morning and back the same evening. If you are making a one day pilgrimage, this is a great way to travel. Act quickly to reserve your seat as the busses are filling rapidly. This is a very easy, cost effective and comfortable way to travel to Ham Radio Mecca....

More information available for the Ann Arbor bus trip is available here: <http://www.w8pgw.org/activities/dayton-bus-trip/>

Information for the Kalamazoo bus trip is available here: <http://www.k8kzo.com/Dayton/dayton.pdf>

HR 1301 Still in Need of Co-Sponsors



The Amateur Radio Parity Act of 2015 -- H.R.1301 -- has been introduced in the US House of Representatives. The measure would direct the FCC to extend its rules relating to reasonable accommodation of Amateur Service communications to private land use restrictions. US Rep Adam Kinzinger (R-IL) introduced the bill on March 4 with 12 original co-sponsors from both sides of the aisle -- seven Republicans and five Democrats.

HR 1301 would require the FCC to amend its Part 97 Amateur Service rules to apply the three-part test of the PRB-1 federal pre-emption policy to include homeowners' association regulations and deed restrictions, often referred to as "covenants, conditions, and restrictions" (CC&Rs). At present, PRB-1 only applies to state and local zoning laws and ordinances. The FCC has been reluctant to extend the same legal protections to include such private land-use agreements without direction from Congress.

H.R. 1301 has been referred to the House Energy and Commerce Committee.

Rep Greg Walden, W7EQI (R-OR), chairs that panel's Communications and Technology Subcommittee, which will consider the measure. More information can be found here: <http://www.arrl.org/hr-1301>.

New iOS App Available for The ARRL Repeater Directory®

The ARRL Repeater Directory® — introduced this week for 2015-2016 — has a newly launched companion app for Apple® iOS® devices. iPhone®, iPad® and iPod touch® users can download the app at no cost from Apple's App Store, which requires a unique code found in each printed edition of the 2015-2016 directory to activate. Once activated, the app provides details for thousands of Amateur Radio repeaters found in The ARRL Repeater Directory database.

More data available on the new iOS app is available here: <http://www.arrl.org/news/new-ios-app-available-for-the-arrl-repeater-directory>

Hospitality Acknowledgements

Mar 14 Crossroads Hamfest, Kalamazoo, MI

It was a pleasure to attend your event and I thank you for the hospitality you have shown me.

Section Staff Travel Plans

- May 2, 2015 Cadillac Swap, Cadillac, MI – WB8R
- May 9, 2015 CCRAA – KCRA Hamfest, Chassell, MI
- May 15-17, 2015 Dayton Hamfest – WB8R
- May 23, 2015 TASYL's 50th Anniversary, Holt MI – WB8R & WA8EFK
- Jun 6, 2015 IRA Swap, Hudsonville, MI – WB8R
- Jun 7, 2015 Chelsea Swap and Shop, Chelsea, MI - WB8R
- Jun 13, 2014 LARS Swap, Newberry, MI - WB8R
- Jun 21, 2015 Monroe Hamfest, Monroe, MI - WB8R
- July 9-12, 2015 MI Section Family Outing, Hale, MI - WB8R , Section Staff
- July 18, 2015 GMARC Summer Trunk Swap, Utica, MI
- July 25, 2015 CMARC Trunk Sales, Lansing, MI - WB8R
- Aug 1, 2015 Spark in the Park, Wyoming, MI- WA8LMF
- Aug 1, 2015 GLD Hamfest, Columbus, OH – WB8R
- Aug 1, 2015 UP Hamfest, Escanaba, MI 9 – 2 PM – W8CT
- Sep 11, 2015 CMARC Meeting – WB8R
- Sep 13, 2014 GRAhamfest, Wyoming, MI – WB8R
- Sep 17, 2015 Monroe County Radio Comm. Assn Meeting – WB8R
- Sep 19, 2015 GM ARC Fall Trunk Swap
- Sep 20, 2015 Adrian Hamfest, Adrian, MI – WB8R
- Sep 26, 2015 QMN Picnic, Flint MI – WB8R
- Oct 17, 2015 Muskegon Color Tour, Muskegon, MI – WB8R
- Oct 18, 2015 Kalamazoo Hamfest, Kalamazoo, MI – WB8R - Card Checker
- Oct 25, 2015 USECA Hamfest, Madison Heights, MI – WB8R
- Dec 6, 2015 L'Anse Creuse Hamfest, Harrison Twp MI – WB8R

Michigan Section Traffic/ARPSC Nets (All times Local)

- MACS - MI Amateur Communications System 3.952 1000 Daily
- UPN – Upper Peninsula Net 3.921 1700 Daily; Noon Sunday

MIARPSC – MI Amateur Radio Public Service Corps 3.932 1700 Sunday

QMN – The Michigan Net 3.563 1830 and 2200 Daily

MITN – MI Traffic Net 3.952 1900 Daily

MIDTN – MI Digital Traffic Net 3.583 (Olivia 8/500) in w/fall 2000 Tues, Thurs, Sat

MIADS – MI ARES D-Star Net Reflector 24A Mon 2000

D8EN - District 8 Emergency Net 3.909 Wed 2100

GLETN – Great Lakes Emergency and Traffic Net 3.932 2000 Daily

MVTN – MI VHF Traffic Net IRA Link System 2100 Mon, Wed, Fri, Sun

NLEUP - Northern Lower Eastern UP Net 146.64- 18:30 Daily

SEMTN – SE MI Traffic Net 146.76- 2215 Daily

TMMTN – Thumb Mid-Michigan Traffic Net 147.30+ 2130 Mon - Sat

More information is available at <http://nts-mi.org/>. Come join us on our traffic and public service nets.

Amateur Radio Public Service Corps (ARPSC) Activities

Station Activity Reports (SAR) for March, 2015: WB9JSR 1136, WB8WKQ 502, K8RDN 319, K8ED 230, WB8TQZ 168, N8FVM 115, KD8AAD 107, KB8RCR 104, WD8USA 51, WN8QGV 49, WD8MWD 43, W8MSK 33, WB8RCR 18, WB8R 13, AC8PI 12, KD8LSM 9, N8OSL 8, N8UN 8, WB8H 7. Total SAR reported: 2932.

Brass Pounder's League (BPL) for March, 2015: WB9JSR 1136, WB8WKQ 502.

Public Service Honor Roll (PSHR) March, 2015: N8OSL 223, WB8RCR 198, WB8R 188, KC8YVF 164, N8FVM 160, WD8MWD 145, WD8USA 135, WB9JSR 130, WB8TQZ

110, WB8WKQ 110, K8RDN 100, KB8RCR 92, K8ED 90, KD8AAD 56, WN8QGV 50, KD8LSM 48, WB8H 38, KC8NFN 13.

Net traffic for March, 2015: MACS 294, MITN 136, MVTN 102, SEMTN 56, UPN 45, MIDTN 40, GLETN 35, MIARPSC 9, SCAN 4, D3DTN 2, D3AN 2, GRRC 1, BCEN , D5HN , D8EN , GCRC , GCARPSC , MIADS , NLEUP , BARTS , CARCN .

Total net traffic reported: 726.

If you are reporting monthly, you can see your PSHR eligibility status at <http://www.nts-mi.org/>. The full details are at:

<http://www.arri.org/public-service-honor-roll>. This award recognizes the efforts of hams that are active in public service. Those reporting accumulate points for checking into nets, volunteering, holding Section

appointment(s) and handling message traffic.

EC's can see their reports of Form FSD-212 here: http://ares-mi.org/ec_his.php If you send your report to WB8RCR and don't see it noted there, send a note to John to tell him your report has gone missing.

EC's: Be sure to share your FSD 212 with your District EC, your ARES/RACES members and with your county's Emergency Manager and others in your jurisdiction who need to know what you and your ARES/RACES group are contributing to your community each month.

If you have difficulty knowing how to report and how to complete the FSD 212 form, assistance is as close as your District EC or your Section EC. If you don't know who these folks are, you can locate them here: <http://ares-mi.org/ECcontact.php>. They stand ready to help you.

Until next time, 73.

Larry, WB8R

Dales Tales

Greetings everyone, welcome to "Dale's Tales" for May 2015.

The ARRL 2015 Great Lakes Division Convention is set for August 1 in Columbus. The Voice of Aladdin Amateur Radio Club will serve as hosts this year. We are in the process of completing the list of forums and presenters at this time, so please feel free to check the Division Web pages at <http://arrl-greatlakes.org/> for updates as the details and plans are finalized. Tentative forums include DX, NVIS, Digital Voice, ARES, HF Sound Card Modes, OSSBN/NTS, plus a couple of (pending) surprises.

HB 1301 the "Amateur Radio Parity Act" has been introduced in the U.S. House of Representatives. The purpose of the legislation is to allow ham radio operators living in areas controlled by homeowners associations and on deed-restricted properties, to reasonably install antennas. It is nice to see the list of co-sponsors continuing to grow and the list now includes Kentucky Rep. Brett Guthrie KY-02 who agreed to co-sponsorship this week. So, in addition to Rep. Guthrie, we currently have support from the following in our Division: Dan Benishek MI-01, David Joyce OH-14, and Tim Walberg MI-07. The ARRL Web Page <http://www.arrl.org/hr-1301> contains the complete text of the bill.

Please take some time to thank them and be sure to implore your Congressperson to support HB 1301.

As I mentioned last month, we will have a booth in the ARRL EXPO at the Dayton Hamvention to allow you to send an appropriate letter to your congressman in support of HB 1301.

Michigan Trails Day On the Air Two-fer Coming Up!

On May 30th, the ever energetic Hank Greeb, N8XX and a corps of fellow enthusiasts will be operating special event station W8T from the Long Lake Park pavillion, 10 to 4 p.m. May 30, Krauskopf Rd & M-46 in Kent County recognizing National Trails Day along the North Coun-

try Trail. The Western Michigan Chapter of the North Country Trail Association (NCTA) will be holding their annual public trails event that day, and there should be plenty of people to chat with about the NCT and amateur radio. Hank expects to be operating mostly QRP CW.

In the UP, the Alger and Lake Effect ARC's are joining forces during the weekend of June 6-7 to put on a Trails Day on the Air event at Muskallonge State Park, east of Grand Marais and NW of Newberry. The NCT actually runs through the park and the Superior Shoreline Chapter of the NCTA will have an information booth and be offering public hikes along the NCT. Station N8T will be operating sideband and PSK-31 both days. At least one hour of Hellschreiber each day, too, for the really odd ducks out there. Maybe even some 6-meter if someone wants to try a sked.

As usual, an unusually attractive QSL card has been designed by Marge, KD8AIL to commemorate these two events. Check out the W8T and N8T pages on QRZ.com starting May 10th for developing operating schedules and band plans. And, as always, amateurs in the area who would like to take a turn at the key or the public contact table are welcome to enlist. Contact respectively Hank (n8xx@arrl.org) and John

(kc8ule@arrl.net) for more information and coordination. The sponsors say: "Thanks! to the North Country Trail Association (longest of America's scenic trails network at 4,600 miles, traversing seven states Vermont to South Dakota!), the Western Michigan and Superior Shoreline NCTA chapters and the Michigan Department of Natural Resources for their cooperation in helping us put on these Trails Day on the Air events!"

My sincere thanks go out to the large number of radio clubs around the Great Lakes Division who distribute all or part of "Dale's Tales" in their club newsletters. This really helps getting the news out and keeping everyone informed about what is happening in the Division and elsewhere. Of course, ARRL Members have the option

of receiving this newsletter and other bulletins directly by signing up for e-mailed subscriptions on their Personal Web Pages at ARRL.ORG. To do this, you simply log on to the ARRL.ORG web page and click on "Edit your profile" in yellow letters contained in the blue banner. Then select "Edit Email Subscriptions" and click the boxes for those items you want to receive, be sure to include "News and information from your Division Director and Section Manager". Lastly, click "Save" at the bottom of the page.

Hamfesting: Here is the current Great Lakes Division ARRL Sanctioned Hamfest Schedule for the next few weeks. These swaps have received their sanctioning approval from ARRL HQ at the time of this publication.

May 2 - Cadillac, Cadillac, MI - WB8R
 May 9 - Big Sandy, Louisa, KY - KY1O
 May 9 - CCRA-KCRA - Chassell, MI - WB8R
 May 15, 16, 17 - Hamvention® - Dayton, OH - Everyone!!
 May 30 - Ashland - Ashland, KY - KY1O
 June 6 - IRA Hamfest - Hudsonville, MI - WB8R
 June 6 - Princeton Hamfest - Princeton, KY - KY1O
 June 6 - Fulton County - Tedrow, OH - Ohio Cabinet
 June 7 - Chelsea - Chelsea, MI - WB8R, WA8EFK
 June 13 - Luce County - Newberry, MI
 June 20 - Milford - Milford, OH - NS8Y
 June 21 - Monroe - Monroe, MI - WB8R, WA8EFK

Hamfest officials: When you receive your "Hamfest Package" from ARRL, open it immediately. Read it over and look at all of the material you received. There is a form included to order additional material if you deem it appropriate.

Your Division and Section officials want to be at your events and we strive for insuring that the ARRL is properly represented at every ARRL Sanctioned Hamfest. Conflicts can arise, such as hamfests which might occur on the same day. It is always a good idea for your hamfest chair to contact the Section Manager, Vice-Director or Director early in the planning stages to insure his attendance at the activity. This will allow time to prepare for alternate representation in the event of time conflicts.

The ARRL Director, Vice Director and Section Managers are available to visit local radio clubs and give presentations about ARRL and what is happening in your Section or Division. Please feel free to invite any of us for an

"ARRL Night" at your club. Most of the talks are prepared in a video presentation format and can include a Q&A session as well. Advance scheduling really helps and gives you an opportunity to publicize the event. See pages 15 & 16 of a recent QST for contact information.

73, see you on the bands.

Dale Williams WA8EFK
 Director
 Great Lakes Division

News

Q Codes...

In communication there tends to develop brevity to enhance transmission/reception such as slang, Q code, Z code, 10-code (to name a few).

The **Q code** is a standardized collection of three-letter message encodings, also known as a brevity code, all of which start with the letter "Q", initially developed for commercial radiotelegraph communication, and later adopted by other radio services, especially amateur radio. Although Q codes were created when radio used Morse code exclusively, they continued to be employed after the introduction of voice transmissions. To avoid confusion, transmitter call signs are restricted; while an embedded three-letter Q sequence may occur (for instance when requested by an amateur radio station dedicated to low-power operation), no country is ever issued an ITU prefix starting with "Q".

The International Q Code can be arranged in three types of code groups according to the second letter in the three-letter Q Code.

The QAA...QNZ series are reserved for the aeronautical service. Second letter A through N (ICAO Procedures for Air Navigation Services, Abbreviations and Codes (PANS-ABC) [Doc8400])

The QOA...QOZ series are reserved for the maritime services. Second letter O, P, Q (ITU RR1990, Appendix 14)

The QRA...QUZ series are for use by all services. Assigned by the International Telecommunications Union Radio communication Sector (ITU-R). Second letter R, S, T, U (ITU RR1990, Appendix 13, 14)

The QZA...QZZ series for other usage

QN- - The ARRL has also developed its own codes for message-handling located in this range. Even though they overlap with other signals, they determined that their exclusive use in NTS nets limits confusion.

Early developments

The original Q codes were created, *circa* 1909, by the British government as a "list of abbreviations... prepared for the use of British ships and coast stations licensed by the Postmaster General". The Q codes facilitated communication between maritime radio operators speaking different languages, so they were soon adopted internationally. A total of forty-five Q

codes appeared in the "List of Abbreviations to be used in Radio Communications", which was included in the Service Regulations affixed to the Third International Radiotelegraph Convention in London (The Convention was signed on July 5, 1912, and became effective July 1, 1913.)

The following table reviews a sample of the all-services Q codes adopted by the 1912 Convention and defined in ACP-131 (Combined Communications Electronics Board (CCEB) countries (Australia, New Zealand, Canada, United Kingdom and United States controlling publication on code).

Amateur radio

Amateur radio actually has adapted two different sets of Q codes for use in amateur communications. The first set come from the ITU civil series QRA through QUZ. Most of the meanings are identical to the ITU definitions, however, they must be looked at in the context of amateur communications. For example, QSI? asks what the charges are for sending the telegraph. Since amateur communications are without charge, this Q code would not make sense.

The second set is the set of Q codes, used only in ARRL NTS nets, that begin with QN. These Q codes generally have no equivalent in the ACP 131 publication and are specifically defined only for use in NTS nets. They are not used in casual amateur radio communications.

Selected Q codes were soon adopted by amateur radio operators. In December 1915, the American Radio Relay League began publication of a magazine titled *QST*, named after the Q code for "General call to all stations". In amateur radio, the Q codes were originally used in Morse code transmissions to shorten lengthy phrases and were followed by a Morse code question mark (··— —··) if the phrase was a question.

Q codes are commonly used in voice communications as shorthand nouns, verbs, and adjectives making up phrases. For example, an amateur radio operator will

complain about QRM (man-made interference), or tell another operator that there is "QSB on the signal" (fading); "to QSY" is to change your operating frequency, or to break in on a conversation QSK is often used even on VHF and UHF frequencies.

ARRL NTS Nets (QN-)

The QN signals for amateur net operation were introduced in the late 1930s by E. L. Battey W1UE (W4IA-SK) to lighten the burdens of net control operators.

Although these codes are within the Aeronautical Code signals range (QAA–QNZ), since their use is limited to only National Traffic System Morse Code nets, both the ARRL and the ITU believe there is little chance for confusion.

Q codes as adapted for use in amateur radio

Code	Question	Answer or Statement
QLE	What is your expected signal?	The expected signal is low...
QRA	What is the name (or call sign) of your station?	The name (or call sign) of my station is ...
QRG	Will you tell me my exact frequency (or that of ...)?	Your exact frequency (or that of ...) is ... kHz (or MHz).
QRH	Does my frequency vary?	Your frequency varies.
QRI	How is the tone of my transmission?	The tone of your transmission is (1. Good; 2. Variable; 3. Bad)
QRJ	How many voice contacts do you want to make?	I want to make ... voice contacts.
QRK	What is the readability of my signals (or those of ...)?	The readability of your signals (or those of ...) is ... (1 to 5).
QRL	Are you busy?	I am busy. (or I am busy with ...) Please do not interfere.
QRM	Do you have interference?	I have interference.
QRN	Are you troubled by static?	I am troubled by static.
QRO	Shall I increase power?	Increase power.
QRP	Shall I decrease power?	Decrease power.
QRQ	Shall I send faster?	Send faster (... wpm)
QRS	Shall I send more slowly?	Send more slowly (... wpm)
QRT	Shall I cease or suspend operation?/ shutoff the radio	I am suspending operation. /shutting off the radio
QRU	Have you anything for me?	I have nothing for you.

Code	Question	Answer or Statement
QRV	Are you ready?	I am ready.
QRW	Shall I inform ... that you are calling him on ... kHz (or MHz)?	Please inform ... that I am calling him on ... kHz (or MHz).
QRX	Shall I standby / When will you call me again?	Please standby / I will call you again at ... (hours) on ... kHz (or MHz)
QRZ	Who is calling me?	You are being called by ... on ... kHz (or MHz)
QSA	What is the strength of my signals (or those of ...)?	The strength of your signals (or those of ...) is ... (1 to 5).
QSB	Are my signals fading?	Your signals are fading.
QSD	Is my keying defective?	Your keying is defective.
QSG	Shall I send ... telegrams (messages) at a time?	Send ... telegrams (messages) at a time.
QSK	Can you hear me between your signals?	I can hear you between my signals.
QSL	Can you acknowledge receipt?	I am acknowledging receipt.
QSM	Shall I repeat the last telegram (message) which I sent you, or some previous telegram (message)?	Repeat the last telegram (message) which you sent me (or telegram(s) (message(s)) numbers(s) ...).
QSN	Did you hear me (or ... (call sign)) on .. kHz (or MHz)?	I did hear you (or ... (call sign)) on ... kHz (or MHz).
<u>QSO</u>	Can you communicate with ... direct or by relay?	I can communicate with ... direct (or by relay through ...).
QSP	Will you relay a message to ...?	I will relay a message to
QSR	Do you want me to repeat my call?	Please repeat your call; I did not hear you.
QST	–	Here is a broadcast message to all amateurs.
QSU	Shall I send or reply on this frequency (or on ... kHz (or MHz))?	Send or reply on this frequency (or on ... kHz (or MHz)).
QSW	Will you send on this frequency (or on ... kHz (or MHz))?	I am going to send on this frequency (or on ... kHz (or MHz)).
QSX	Will you listen to ... (call sign(s)) on ... kHz (or MHz)?	I am listening to ... (call sign(s)) on ... kHz (or MHz)
QSY	Shall I change to transmission on another frequency?	Change to transmission on another frequency (or on ... kHz (or MHz)).

Code	Question	Answer or Statement
QSZ	Shall I send each word or group more than once?	Send each word or group twice (or ... times).
QTA	Shall I cancel telegram (message) No. ... as if it had not been sent?	Cancel telegram (message) No. ... as if it had not been sent.
QTC	How many telegrams (messages) have you to send?	I have ... telegrams (messages) for you (or for ...).
QTH	What is your position in latitude and longitude (or according to any other indication)?	My position is ... latitude...longitude
QTR	What is the correct time?	The correct time is ... hours
QTU	At what times are you operating?	I am operating from ... to ... hours.
QTX	Will you keep your station open for further communication with me until further notice (or until ... hours)?	I will keep my station open for further communication with you until further notice (or until ... hours).
QUA	Have you news of ... (call sign)?	Here is news of ... (call sign).
QUC	What is the number (or other indication) of the last message you received from me (or from ... (call sign))?	The number (or other indication) of the last message I received from you (or from ... (call sign)) is ...
QUD	Have you received the urgency signal sent by ... (call sign of mobile station)?	I have received the urgency signal sent by ... (call sign of mobile station) at ... hours.
QUE	Can you speak in ... (language), – with interpreter if necessary; if so, on what frequencies?	I can speak in ... (language) on ... kHz (or MHz).
QUF	Have you received the distress signal sent by ... (call sign of mobile station)?	I have received the distress signal sent by ... (call sign of mobile station) at ... hours.

**ARRL NTS Nets (QN-)**

Code	Question ?	Answer or Advice
QNA		Answer in prearranged order
QNB		Act as relay station between ... and ...
QNC		All net stations copy. I have a message for all net stations
QND		Net is directed (controlled by net control station)
QNE		Entire net stand by
QNF		Net is free (not controlled)

ARRL NTS Nets (QN-) Continued

Code	Question ?	Answer or Advice
QNG		Take over as net control station
QNH		Your net frequency is high
QNI		Net stations report in, <i>or</i> I am reporting into the net
QNJ		Can you copy me
QNK		Transmit messages for ... to ...
QNL		Your net frequency is low
QNM		You are QRMing the net. Stand by
QNN		Net control station is ... <i>or</i> What station has net control
QNO		Station is leaving the net
QNP		Unable to copy you <i>or</i> Unable to copy ...
QNQ		Move frequency to ... and wait for ... to finish handling traffic. Then send him traffic for ...
QNR		Answer ... and receive traffic
QNS		Following stations are in the net (Follow with list), when used by Net Control Station <i>or</i> Request list of stations in the net, when used by other net mem- bers
QNT		I request permission to leave the net for ... minutes
QNU		The net has traffic for you. Stand by
QNV		Establish contact with ... on the frequency. If successful, move to ... and send him traffic for ...
QNW		How do I route messages for ...
QNX		You are excused from the net
QNY		Shift to another frequency, or to ... kHz, to clear traffic with ...
QNZ		Zero beat your signal with mine
QST		CQ ARRL members

CLASSIFIED

K8DDB

Items For Sale

Prices as of March 3, 2015

All prices are negotiable, items sold "as is", shipping is not included
(I would prefer to sell the bulky items locally)

Cell phone: (906) 221-1550 or Email: mikebray@chartermi.net

Radio Gear:

Elecraft K3 Transceiver (serial # 5093 purchased 1/11/2011) – 100 watts, w/ATU, general coverage Rx module, filters for - 6 khz, 400 hz, 250 hz -includes manuals,

Heil Proset-K2 boom headset for the K3/K2 (Heil iC element) and book "The Elecraft K3" by Fred Cady.

Asking \$1,999

Ten- Tec Centurion Model 422 Linear Amp – Two 3-500Z tubes – 1300 watts SSB, 1000 watts CW, 50% duty cycle. Tubes have very few hours on them as I operate primarily QRP - (includes manual)

Asking \$850

Viking 6n2 Transmitter

Asking \$19

Regulated CB Power Supply

Asking \$5

Test Equipment:

RCA Type WO-33A Oscilloscope

WG-349A Direct/Low Capacitance Probe

Instruction manual

Asking \$9

B&K Model 162 Transistor/F.E.T. Tester

With probe and manual

Asking \$39

Miscellaneous:


Scanner - Uniden Bearcat BC-210XL 18 channel scanning radio w/owner's manual and 1996 Radio Shack Police Call Plus Frequency Guide for Michigan and Ohio - Asking \$25

- CB Radio - Old 1970s Radio Shack Realistic TRC-55 console CB (23 channel AM) with digital clock (which no longer works) but its set at the perfect time for CB, 10:04 good buddy! Comes with hand mic and nostalgia of "Smokey and the Bandit" days - Asking \$25

UP AREA HAM FEST INFORMATION

Thunder Bay
Amateur Radio
Club

Find us on the web at:
<http://ThunderBayARC.org>



Alpena's 2nd Annual Swap meet!
October 10th, 2015
9:00 AM until Noon

See <http://ThunderBayARC.org> for updates and details on the Swap meet.

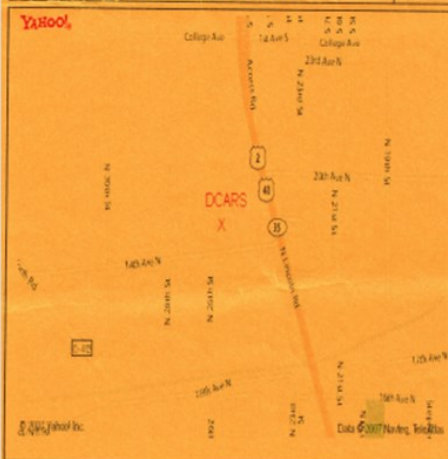
Make a Fall trip to Alpena, Michigan. Take in a great Swap and see some of the other sites and events in the Alpena area on that weekend.
<http://lighthousefestival.org/> <http://www.alpenashipwrecktours.com/> <http://thunderbay.noaa.gov/>

U.P. Hamfest 2015

Quick Reference Guide

Date – Saturday, August 1 st 2015	Swap Info – First table is Free. Each additional table \$5.00
Time – 9:00 am to 2:00 pm EDST	Setup – Friday from 6 pm to 9 pm and Sat from 7 am to 9 am
Where – Bay de Noc Community College 2001 N. Lincoln Rd. Escanaba MI 49829	Talk In – 147.150 (+600 / 100 PL)
Coordinates – N45°46.226 W087°05.087	Web Site – http://dcars.org/u-p-hamfest/

THIS
Space
Reserved
For
You



Events

- U.P. Net Meeting
- QCWA Chapter 219 Meeting
- Upper Peninsula Amateur Radio Repeater Association (UPARRA)
- U.P. ARES Meeting
- Vendors & Swap
- Food



LINKS AND STUFF

Under re-construction. Watch for the orange barrels

*Delta County Amateur Radio
Escanaba, MI
www.dcars.org*

*Cooper Country Radio Amateur
Dollar Bay, MI
www.ccras.net*

*Cooper Country Radio Amateur
Dollar Bay, MI
www.ccras.net*

Area Repeaters

Escanaba 147.15+	100.0
	145.13- No PL
Wells 444.30+	No PL
Gladstone	
IRLP 4013 147.55 Smpx	100.0
Champion 146.82-	100.0
Cooks 146.70 -	110.9
GrdMarais 147.195+	No PL
Gwinn 146.64	100.0
Iron Mtn 146.85 -	No PL
Iron River 145.17-	107.2
Ishpeming 146.91-	No PL
IRLP 8993 443.50+	100.0
Manistique 146.79 -	No PL
Marquette 146.97 -	No PL
	147.27+ 100.0
	444.80+
	No PL
Menominee 147.00+	107.2
Newberry 146.61 +	No PL
	147.09+ 114.8
Republic 147.09+	No PL
Trenary 147.03 +	100.0
Wetmore 145.41-	100.0

ARRL Affiliated Club Area Nets

UP Net 3921khz
Daily 5pm EST
Sunday Noon EST

UP CW NET 3590khz
Sunday 7pm EST

160 Net 1895khz
Everynight 0100UTC
Dailey 0600UTC

Midcars 7258khz
Daily 0730am EST
0200pm EST

Outhcars Node 9614
Saturday 0900am EST

UP Echolink Node 9617
Sunday 8pm EST

Delta County ARES
147.150
Sunday 7pm EST

Mich-A-Con Social
146.850
Thursday 0630pm CST
ARES follows

ARRL WEB PAGE: <http://www.arrl.org>

ARRLMICHIGAN: <http://www.arrl-mi.org/>

US REPEATERS: <http://www.usrepeaters.com>

Tropospheric Ducting Forecasts:
<http://www.d/infocentre.com/tropo.html>

MICH-A-CON : <http://www.qsl.net/ka1ddb>

FCC Universal Licensing System: <http://wireless.fcc.gov/uls/>

QTH Com: <http://www.qth.com/>

QRZ <http://www.qrz.com/>

E Ham Net <http://www.eham.net/>

UP Skywarn: <http://kera-mi.net/skywarn/>

ABOUT OUR CLUB....**Club Officers****President:**

Tom Martin, W8JWN
(906) 774-5463
tmartin@chartermi.net

Vice President

Scott Jarmusch, KA8TFF

Secretary:

Joe Ferris, KC9TQR
irferris@borderlandnet.net

Treasurer:

Burt Armbrust, WB8EB
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Heyboer.tom@gmail.com

Web Editor:

Tom Heyboer, KC8TH
(906) 779-0481
Heyboer.tom@gmail.com

Activities:

Second Wednesday of the month the Mich-A-Con Amateur Radio Club meets in the Dickinson Country Library at 7:00 P.M. Winter or 6:30 PM Summer

Visitors and prospective members are always welcome!

Club Repeater:

The Club maintains two repeaters which are located on Pine Mountain (Elevation 1650 ft) in Iron Mountain with tower and facilities provided by the Wisconsin Electric Power Co.

The range of the 2 meter repeater is about 40 miles. The range of the 440 MHZ repeater is about 25 miles. Both are under normal conditions, depending upon terrain.

The Repeater Specifications:

The 146.85 repeater is a GR Master Pro, 40 watt output. The 440 MHZ repeater is a GE Master Pro, 80 watt output. The repeaters share a Diamond dual band antenna at a tower height of 125 ft.

We're on the Web!

<http://www.qsl.net/ka1ddb/>

Previous editions of the Newsletter can be accessed by a link on the **news** page

From Your Newsletter Editor

Thank you to those contributors and critiques.
Welcome your articles - They make the Newsletter.

For those not getting the Newsletter, it is because I have an incorrect email address. Please give me the correct address.

*Hear on any Events in the UP / Wisconsin Area
Send Info to the Newsletter Editor so the Info can get out*

The following is referenced from <http://www.dx-code.org>

DX Code Of Conduct

I will listen, and listen, and then listen again before calling.

I will only call if I can copy the DX station properly.

I will not trust the DX cluster and will be sure of the DX station's call sign before calling.

I will not interfere with the DX station nor anyone calling and will never tune up on the DX frequency or in the QSX slot.

I will wait for the DX station to end a contact before I call.

I will always send my full call sign.

I will call and then listen for a reasonable interval. I will not call continuously.

I will not transmit when the DX operator calls another call sign, not mine.

I will not transmit when the DX operator queries a call sign not like mine.

I will not transmit when the DX station requests geographic areas other than mine.

When the DX operator calls me, I will not repeat my call sign unless I think he has copied it incorrectly.

I will be thankful if and when I do make a contact.

I will respect my fellow hams and conduct myself so as to earn their respect.

MEMBERSHIP

Call Sign	Last Name	First Name	City	Phone	Email
KD8GHG	AHO	ROGER	QUINNESEC	906-774-3552	rogeraa@chartermi.net
N8WQG	ANDERSON	LE ROY	CRYSTAL FALLS	906-265-3960	n8wqq@fast-air.net
WB8EBS	ARMBRUST	BURT	QUINNESEC	906-774-8383	wb8ebs@yahoo.com
W8XBO	ARMBRUST	ED	IRON MOUNTAIN	906-779-5593	w8xbo@sbcglobal.net
KC9KVP	BAKER	BETH	NIAGARA		
KB9AVX	BAKER	SCOTT	NIAGARA	715-251-1944	kb9avx@yahoo.com
KD8POR	BEY	DANA L.	KINGSFORD	906-774-7937	lst797@charter.net
W9MB	BOILEAU	MIKE	NIAGARA	906-563-1350	w9mb@uplogon.com
K8DDB	BRAY	MIKE	VULCAN	906-563-7020	mikebray@chartermi.net
KC9SBY	BROSCHART	FRED	NIAGARA	715-251-1423	broschart.fred@gmail.com
KE9L	CASWELL	SKIP	IRON MOUNTAIN	906-774-3371	acaswell4238@charter.net
KD8GLO	COSTA	ART	KINGSFORD	906-774-7388	catraxcavator@hotmail.com
KC9ZBC	DOLATOWSKI	SCOTT	GOODMAN	715-633-1006	kc9zbc@live.com



Call Sign	Last Name	First Name	City	Phone	Email
KC8CKX	FAULKNER	JAMES	FOSTER CITY		jcbearit@yahoo.com
KC9TQR	FERRIS	JOE	FLORENCE	517-589-4386	jrferris@borderlandnet.net
N9MBG	FRY	EDWARD	PEMBINE	906-221-7307	efry@centrylink.net
KG8NK	GEMBOLIS	LOUIS	ISHPEMING	906-485-5442	lgembolis@chartermi.net
KD8VTS	GRABOWSKI	DEBRA	CRYSTAL FALLS	906-284-2450	kd8vts@gmail.com
KD8VTT	GRABOWSKI	WILLIAM	CRYSTAL FALLS		
KD8WAK	HEBERT	STEVEN	IRON MOUNTAIN	906-221-2507	viparsteve@yahoo.com
KC8TH	HEYBOER	TOM	IRON MOUNTAIN	906-779-0481	heyboer.tom@gmail.com
N8ATS	HOLMES	SAM	PEMBINE	906-322-8507	chopsam@centrylink.com
KA8TFF	JARMUSCH	SCOTT	IRON MOUNTAIN		
HC8SZP	JOHNSON	DEBBY	IRON MOUNTAIN	906-396-9323	
KC8RYY	JOHNSON	STEVE	IRON MOUNTAIN	906-396-5292	kc8ryy@outlook.com
KB9EMU	KNUTSON	WILLIAM	FENCE	715-336-2250	dknutson54@gmail.com
KB8ETK	KOMBLEVICZ	JOSEPH	IRON MOUNTAIN	906-774-4094	kombleviczj@charter.net
W8JWN	MARTIN	THOMAS	IRON MOUNTAIN	906-774-5463	tmartin@chartermi.net
KC9KWS	MAXWELL	RED	FLORENCE	574-855-8666	kc9kws@yahoo.com
WA8FXQ	MEYERS	BOB	VULCAN	906-390-0119	meyersb@uplogon.com
KC8LRP	MEYERS	MARGE	VULCAN	906-396-8913	mgmeyer@uplogon.com
KD8GLP	MIERAS	NATE	KINGSFORD	616-240-6919	kd8glo@gmail.com
N8TUM	MILLER	TIMOTHY	MILWAUKEE		
K9TRY	MORIARITY	TERRY	NIAGARA	715-251-1670	kb9zer@yahoo.com
ND8M	PAUL	JARED	NORWAY	989-660-9535	jaredpaul@me.com
KD8SZA	PAUL	MICHELLE	NORWAY		
KC9NFT	PERRON	BARRY	FLORENCE	715-887-2892	bperron2@netzero.com
KC8JRI	REED	GORDY	IRON MOUNTAIN	906-779-1254	gordyreed@charter.net
K8ABS	RIVERSIDE	JIM	IRON MOUNTAIN	906-458-0773	jriverside@charter.net
W8IFI	RYE	JIM	CRYSTAL FALLS	906-875-3582	jimrye@up.net
KC8JRH	SCHLITT	PETER	NORWAY	906-563-8126	peteschlitt@yahoo.com
KD8KUF	SCHULTZ	PAUL	KINGSFORD	906-774-8900	pauls@schultzequipment.com
KD8CCP	SKAUGE	STEVE	ISHPEMING	906-458-4798	kd8ccp@yahoo.com
KG9Y	THOMAS	DAVE	NIAGARA	715-251-1393	kg9y@arrl.net
KB8SPB	BILL	BERTOLDI	KINGSFORD		
KD8KUI	ADAM	DENNIS	IRON MOUNTAIN	906-774-8129	duferdoc@chartermi.net
KD8QEX	AMICANGELO	PERRY	VULCAN	906-563-8076	perryamicangelo@msn.com
K8SWX	BEURJEY	DENNIS	KINGSFORD	906-282-4440	dbeurjey@gmail.com
KC8QZG	DAKE	DAVE	NEWBERRY		-
KD8LQK	HULL	ADAM	NIAGARA	715-251-1302	hullar13@baycollege.edu
KD8SZA	LASEN	MICHELL	NORWAY	231-510-0202	myln1973@gmail.com
KB8YEU	O'BRION	JACK	NORWAY	906-396-3316	jobrion@sbcglobal.net
KD8DJK	SCHUTTE	JOE	VULCAN	906-563-8273	dschutte@uplogon.com



Please remit dues to:

**Burt Armbrust, WB8EBS
693 Cliff St
Quinnesec, Mi. 49876**

Name: _____

Call Sign: _____

Address: _____

City, State, Zip: _____, _____, _____

Email Address: _____

Phone: _____

ARRL Member? Yes _____ No _____

Please make check payable to: **Mich-A-Con ARC**

Annual dues for Full Membership -

Single \$20 __ Family \$30 __ Repeater Only \$10 __

If family membership, please list additional:

Names: _____

Call signs: _____

City, State, Zip: _____

Annual dues are Payable January 1st.

Dues for New Members are Pro-rated. Please remit \$1.67 per month for a Single membership or \$.50 per month for a Family membership.