



# MICH-A-CON

Iron Mountain,  
Dickinson County, Mich

JULY 2015

## **Meeting Reminder:** Second Wednesday of the Month

Which is **July 8, 2015** at 06:30 PM at the Dickinson Library, Iron Mountain.

Please be there and support the cause of Amateur Radio.

## **From The President**

Field Day 2015 is history, all but the final log and related material submission to the ARRL. From the comments that I have heard, it was a great weekend enjoyed by all!

### **Highlights**

FOOD! Great selection of goodies provided by the ladies. Thank you!

MEMBERSHIP!!! Great turnout and cooperation from our membership. Thanks to all who participated.

Jared Paul's networking went on without a glitch. I have read about other clubs having trouble with their wireless networking but not KC8VC. Nice job Jared.

Jared also made 59 6-meter SSB contacts and one digital contact on 6-meters. Great propagation on 6.

WEATHER! Sunny and clear. A brief shower at night but we didn't have to scramble to get equipment covered. The lightning passed by us to the north.

We got off to a great start this year. I made over 60 contacts on 40 SSB in the first hour. The A3S, with the 40 meter element, at 40 feet did a great job.

Sam, in spite of the flu, made a nice run on 75-meter SSB.

CW! Thanks to Mark Lewis, we had 260 two point contacts. I also spent more time on CW this year.

SETUP! We were ready to go by the time of the picnic. There were no problems to speak of. See below.

Our 3A class did well. We would have placed #1 in Michigan last year.

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## Low Lights

We missed the Youth bonus. We have to definitely get someone 18, or under up there next year.

The GOTA station only made 65 contacts. We need to get someone to make 40 contacts to get 20 extra points.

Our new tower/trailer worked great, after a heavier winch cable was connected. There could have been a bent antenna, if Burt hadn't placed a ladder under the tower.

I'll have an official scoring report at the next meeting on Wednesday, July 8th at 6:30 in the library.

73,

Tom W8JWN

## **MICH-A-CON AMATEUR RADIO CLUB MINUTES OF JUNE 10, 2015**

Vice President Scott Jarmusch called the meeting to order at 6:30 pm.

### Secretary Report

Minutes of the May 13<sup>th</sup> meeting were read and approved.

### Treasurer Report

Balances as of - June 6, 2014:

Checking - \$2.57

Savings - \$ 138.66

Trailer Fund - \$1252.43

Repeater Savings - \$ 523.06

Petty Cash - \$ 62.00

### Repeater Report

Dave Thomas reported that the new repeater is ready and the controller has been programmed. It is now a matter of waiting for the parts needed to connect the repeater and controller.

### Old Business

The new club antenna trailer is ready for the tower, the sections just need to be located.

There was a brief discussion of computers for Field Day. It is thought that the computers should be tested soon, to make sure the network will work properly.

Terry Moriarity reported that Marcouiller Foods, of Niagara, is donating brats and buns for Field



Day. We still need pop and chips. Members were advised to bring whatever else they would like for food and refreshments. Debbie Grabowski and Terry's wife Betty will coordinate the main menu.

Field Day antenna setup will be Friday, June 26, at 1:00 pm.

We should be class 3A, using the club tri-bander, Terry's hex beam, an 80-meter loop, and other antennas still to be determined.

We will coordinate band and mode use depending on band conditions and operator preferences.

### New Business

A motion by Skip Caswell, second by Jared Paul, to pay the club insurance, was approved unanimously. The cost will be \$497 and is due at the beginning of July.

Skip Caswell noted that we still need to relocate our two-meter antenna on the tower. Discussion revealed that it will require two climbers. We do not have anybody confirmed at this time. Skip said he will see if the Marinette-Menominee club has anyone available.

Jim Rye reported that the National Guard is holding a drill on June 24. They are looking for hams who would like to participate. Check-ins will begin at 9:30 am CDT.

### Adjournment

The meeting was adjourned at 7:10 p.m.

### For the Good of the Order

### Attendees

Scott Jarmusch, KA8TFF - Vice President  
Burton Armbrust Sr., WB8EBS - Treasurer  
Joe Ferris, KC9TQR - Secretary  
Skip Caswell, KE9L  
Bill Grabowski, KD8VTT  
Debbie Grabowski, KD8VTS  
Gary Schafer, K4FMX

Jim Rye, W8IFI  
Jared Paul, ND8M  
Tom Heyboer, KC8TH  
Sam Holmes, N8ATS  
Terry Moriarity, K9TRY  
Dana Bey, KD8POR  
Tim Miller, N8TUM

## News

ARRL Bulletin 21 ARLB021  
From ARRL Headquarters  
Newington CT July 2, 2015  
To all radio amateurs

### **ARLB021 FCC Speedily Dismisses Petitions to Alter Amateur Service Rules**

Acting with near lightning speed, the FCC has dismissed two petitions for rule making calling for separate amendments to the Part 97 Amateur Service rules. Willison H. Gormly, WD0BCS, of Des Moines, New Mexico, filed both petitions on June 16, and the FCC turned them away on July 1. Gormly had requested that the FCC amend Part 97.301(e) of the rules by dividing it into separate sub-paragraphs for technician and Novice class privileges. He had also asked the FCC to amend Part 97.305(c) to authorize spread spectrum emissions in the 2 meter band.

"The rule changes you propose were previously rejected by the Commission," Scot Stone, deputy chief of the Mobility Division in the Wireless Telecommunications Bureau, told Gormly in the FCC's dismissal letter. "Your petitions do not demonstrate or even suggest that any relevant circumstances have changed such as to merit reconsideration of these decisions."

The FCC noted that while Part 97.301(e) had been divided into two paragraphs in the past, these were consolidated when the Commission streamlined the rules in 1999. Gormly argued that the present configuration was confusing, but the FCC pointed out that Part 97.301 "has been in this arrangement for a number of years without any reported difficulty."

Regarding Gormly's second petition, the Commission noted that it had sought comment in 2004 as to whether it should expand the bands authorized for spread spectrum to permit such emissions on the 50 MHz, 144 MHz, and 222 MHz bands. Agreeing with the majority of comments, the FCC subsequently determined that authorizing spread spectrum was not warranted on 6 meters and 2 meters, "because of concerns over the compatibility of spread spectrum emission types and other Amateur radio operations in those bands," the FCC explained in its denial letter.

The FCC had said it was concerned about raising the noise floor on the band, with potential adverse effects on so-called "weak signal" communications or "otherwise affecting experimentation." The Commission also had noted that both bands are heavily used for other types of communication.



**Of Special Note.....**

**Subject: General Class Exams Notice**

Good Morning Fellow Hams...

I just received the new ham exam questions a couple of days ago for the General Test Ham Exam that takes effect as of today July 1, 2015...

So please pass the word that there are new questions on the General Exam as of today....

Tnx & 73,  
Volunteer Examiner

# ARRL MICHIGAN SECTION NEWS

Received June 15.....

Greetings to the Hams of Michigan:

**Amateur Radio Parity Act of 2015:** 75 Co-sponsors — and Climbing

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.

Michigan is fortunate to have 3 Congressmen who have signed on as co-sponsors: Representatives Benishke (1st District), Bishop (8th District) and Walburg (7th District). If one of these three are your representative, please go to their respective websites and send them a message thanking them for their co-sponsorship if you have not already done so.

If your representative has not yet signed on, please go to the ARRL website here: <http://www.arrl.org/hr-1301> and follow the instructions at the bottom of the page to send your letter via the ARRL.

## New Club Officers for Hazel Park ARC

President: Ken Krause, AD8M  
 1st VP: Jim Poehlman, K8ABZ  
 2nd VP: John Teagardin, AA8UU  
 Treasurer: Jonathan Devine (JD), KD8VXZ  
 Secretary: Reuven Gevaryahu, KB3EHW  
 Director: Gordon Scannell, KD8COJ  
 Parliamentarian: Edgar Walton, N8LBS

Thank you for stepping forward to lead. Ham radio clubs are truly the lifeblood of amateur radio.

## Michigan Senate Recognizes and Designates June 22-28 as Amateur Radio Week

Michigan Senate Resolution 49 (2015) recognizes and designates June 22-28 as Amateur Radio week. The full text of the resolution is available here: <http://www.legislature.mi.gov/documents/2015-2016/resolutionadopted/Senate/pdf/2015-SAR-0049.pdf>

The resolution was introduced by primary sponsor Senator Rick Jones and co-sponsors Steven Bieda, Darwin Booher, Jack Brandenburg, Judy Emmons, Geoff Hansen, Jim Marleau, Mike Nofs, John Proos, Jim Stamas, Rebekah Warren, and Dale Zorn. A hearty thank you to the Senators. Please take a moment to call their office to thank them.

## 2015 Michigan Newsletter Contest

The 2015 Michigan Affiliated Club Newsletter Contest entry deadline is June 15. Any late entries received before midnight local time on the 15th will be included.

As a reminder, the Michigan Section Newsletter Contest will select the best club newsletter in the state of Michigan to compete with the best from Ohio and Kentucky in the ARRL Great Lakes Division at the forthcoming GLD convention in Columbus, OH on August 1, 2015 for the Joseph J. Phillips Newsletter of the Year Award.

## K2BSA coming to East Lansing August 3-7, 2015



K2BSA/8 will be operating from the campus of Michigan State University during the Boy Scout's National Order of the Arrow Conference (NOAC) to be held August 3-7, 2015. Be looking for the station on 20 and 40 meters – General portions of the phone band. QSL via KA7MMM. Attendance at this 100th Anniversary of the NOAC is expected to top 15,000 – youth and adults.

Volunteers will be demonstrating ham radio and operating as station control operators for K2BSA/8 throughout the week so that scouts can actually have an opportunity to go on the air.

If you would be interested in volunteering to assist with the operation of K2BSA/8 please contact Joe (W8JRK) at [W8JRK@arrl.net](mailto:W8JRK@arrl.net). The plan is to have 2-3 volunteers available for each half day of the event. Some morning and afternoon slots are still available.

**Michigan Section Outing Format Changes**

The 17th annual Michigan Section Outing will undergo some changes in 2015. The event will still be held at the Woodlands Conference Center and Campground near Hale, MI.

What had been a 4 day event (Thurs – Sun) in previous years will now be a Friday and Saturday event going forward. For those that have enjoyed tent camping or spending time in their RV's, keep in mind that you can still arrive before Friday and stay past Saturday if you wish. That portion of the event has not changed.

On Friday there will be a Foxhunt and other interesting activities in the afternoon and evening and on Saturday we will play host to the Michigan's annual Emergency Coordinator's meeting.

At the Saturday EC meeting we are planning to provide pizza and soft drinks for all that would like to participate. Please keep in mind that this entire event is funded by donations. Our financial obligation is reduced by having fewer days, but we still have obligations that need to be met in order for the outing to be viable and to continue going forward. There will be plenty of opportunities to "feed the donation can."

Keep in mind that this event is open to all who wish to attend.

Saturday's EC meeting will be filled with good information and good speakers. There are hotels located in nearby West Branch (20 miles) along with many restaurants.

This is a great opportunity to get out into the great outdoors and enjoy the Michigan woodlands.

More information available at: [www.sectionouting.info](http://www.sectionouting.info). See you there!

**Hospitality Acknowledgements**

- May 23, 2015 TASYL's 50th Anniversary Celebration, Holt, MI
- June 6, 2015 IRA Swap, Hudsonville, MI
- June 7, 2015 Chelsea Swap & Shop, Chelsea, MI
- June 13, 2015 LARS Swap, Newberry, MI

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

**Hamfests, Meetings and Section Staff Travel Plans**

*See July Issue of Dales Tales for the latest update. (Follows this article)*

**Michigan Section Traffic/ARPS Net (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 waterfall 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 May, 2015: WB9JSR  
1113, WB8WKQ 360, K8ED 318, K8RDN 164, N8FVM 88,  
WN8QGV 84, WD8MWD 57, KC8BW 46, W8MSK 36,  
WD8USA 28, WB8H 22, WB8RCR 13, KD8LSM 7, WB8R 6,  
N8OSL 4, KD8EBY 2.

Total SAR reported: 2348

Brass Pounders League (BPL) for April, 2015: WB9JSR  
1113.

Public Service Honor Roll (PSHR) May, 2015: KC8BW 440,  
KD8EBY 374, WB8R 211, WB8RCR 178, NE8B 176,  
N8FVM 160, N8OSL 157, K8RDN 150, WD8MWD 150,  
WB9JSR 140, WD8USA 118, WB8WKQ 110, K8ED 90,  
WB8H 61, WN8QGV 51, KD8LSM 33.

Net traffic for May, 2015 QMN 193, MACS 155, MITN  
148, MVTN 83, UPN 48, GLETN 36, MIDTN 18, MCN 10,  
NLEUP 6, SCAN 3, GRRC 2, D3DTN 1, D3AN 1, MIARPSC  
0, BCEN , D5HN , GCARPSC , BARTS , MIADS , D8EN. Total  
net traffic reported: 704.

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

<http://www.arrl.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 ap-  
pointment(s) and handling message traffic.

EC's can see their reports of Form FSD-212 here:  
[http://ares-mi.org/ec\\_his.php](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 juris-  
diction 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 July 2015.

**Convention: Debra Johnson K1DMJ, ARRL's Education Services Manager will be our guest and our keynote speaker for the 2015 ARRL Great Lakes Division Convention.** Debra joins us from ARRL Headquarters and is directly involved with getting school kids involved with Amateur Radio.

Among her many duties, she heads up the Teachers Institute plus the ARISS program to contact the International Space Station by amateur radio. If you have an interest in getting younger folks into this hobby, Debra's talk is one you should not miss.

The Voice of Aladdin Amateur Radio Club is hosting your Convention on August 1, this year. The location is the Aladdin Shrine Center at 3858 Stelzer Rd, in Columbus, OH. <http://arrrl-greatlakes.org/> Forums will include DX, NVIS, Digital Voice, ARES, HF Sound Card Modes, OSSBN/NTS and there will be on-site VE testing.

Returning this year will be an opportunity for ARRL members to join the Royal Order of the Wouff Hong (ROWH). A special session, available only at State, Division and National Conventions, will allow candidates to join the ROWH Check the Division Web pages at <http://arrrl-greatlakes.org/> for membership applications. Not familiar with the ROWH? The ARRL Great Lakes Convention is your time to discover the Royal Order of the Wouff Hong.

### **Comments: from our Vice Director, Tom W8WTD**

Such crazy weather. I started thinking about past Field Days, and the only one that I can remember that was so cold and rainy wasn't one around here. It was in the late 1970's, when we were camping out on a mountainside in Idaho, above the 8,000 foot level. Cold and rainy. And that's what it was in West-Central Ohio this past weekend.

Still, it was good to see some of the clubs and their efforts. I only managed to get to two sites, the Champaign/Logan club in West Liberty, Ohio, and the Shelby County ARES Group in Sidney, Ohio. The weather was a factor limiting each club, with a scaled-down operation in West Liberty at the park, and another accommodation to the weather in Sidney, keeping the vehicles off the very soggy grass fields, and moving the operation partly indoors.

The spirit of Field Day held everyone together in spite of the weather.

Put up that antenna, get on the air!

You have to admit that some things are easier to do when they are "fun." And Field Day was work this year. Putting antennas up in the rain just takes some of the fun out of it. And having to work for contacts isn't great, either. But we saw some real dedication out there this weekend. It may not be as much fun, but it hones the operating skills to ask for repeats, to keep trying to dig signals out of the noise. It's satisfying when you get that difficult contact in the log. It's just one more contact, but it was worth the effort to listen just a little harder, to figure out that call sign or section. Good work, everyone!

The next big event for the Division is our convention on August 1st in Columbus, Ohio. You'll be hearing more about it over the next several weeks. Make plans now to be there

73, until next month, Tom W8WTD

**Amateur Radio Parity Act:** A companion bill to House Bill 1301 has been introduced in the US Senate. It is Senate Bill S. 1685, introduced by Mississippi Senator Roger Wicker, with Senator Richard Blumenthal of Connecticut as the initial Cosponsor. We have full details on the ARRL Web pages related to field support of this measure.

Our efforts with House Bill 1301 are continuing very well with your support, as of Tuesday June 30, we have reached 84 cosponsors.

Current FCC Regulations allow homeowners in deed-restricted residences to install TV receive only (TVRO) antennas. This includes both dish antennas and conventional over the air antennas. "Amateur Radio Parity Act" HB 1301 was introduced in the U.S. House of Representatives to direct the FCC to allow Radio Amateurs to have "parity" with the current TVRO antenna regulations and install reasonable ham radio antennas. The new ARRL Web Page <http://www.arrl.org/amateur-radio-parity-act> contains the complete text of both bills.

**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.

July 10-11 - Michigan Summer Outing - Hale (Lupton) MI

July 11 - 20/9 Tailgate - Austintown, OH

July 18 - NOARS Fest - Elyria, OH

July 18 - GMARC Trunk Fest - Shelby Twp, MI

July 19 - Van Wert - Van Wert, OH

July 26 - CMARC Outdoor - Lansing, MI

July 26 - Portage - Randolph, OH

**Aug 1 - UP Hamfest - Escanaba, MI**

Aug 1 - Great Lakes Convention - Columbus, OH

Aug 9 - Central Kentucky - Lawrenceburg, KY

Aug 16 - Seaway Trunk Swap - Port Huron, MI

Aug 23 - Cuyahoga Falls Trunk Swap - Stow, OH

Hamfest officials: When you receive your "Hamfest Package" from ARRL, please 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 presenta-

tions 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



## ARRL PROPAGATION BULLETIN

Propagation Forecast Bulletin 26 ARLP026 From Tad Cook, K7RA Seattle, WA June 26, 2015 To all radio amateurs

This was a very active week for solar flares and aurora. On Monday and Tuesday the planetary A index was 55 and 76, indicating a geomagnetic storm. The planetary A index was high again on Thursday, June 25 at 33, and the high latitude college A index was 42.

It turns out that the magnetometer at Fredericksburg, Virginia was knocked out on five of the seven days, so the mid-latitude A index we are reporting for June 18-21 and June 24 are approximations, or actually wild guesses based on other readings from magnetometers that were working.

Average daily sunspot numbers dropped from 99.9 during the week of June 11-17 to 71.6 a week later. Average daily solar flux declined from 135.9 to 130.8. Average daily planetary A index rose from 12.1 to 24.4.

The current outlook from NOAA/USAF has solar flux at 100 on June 26-27, 105 on June 28, 110 on June 29, 115 on June 30, 120 on July 1, 125 on July 2-4, 120 on July 5-6, 125 on July 7-10, 130 on July 11-20, 125 on July 21-22 and 130 on July 23-24.

Predicted planetary A index is 15 and 45 on June 26-27, then 60, 18 and 8 on June 28-30, 5 on July 1-4, then 25, 15 and 12 on July 5-7, then 10, 5 and 8 on July 8-10, 18, 12 and 8 on July 11-13, 5 on July 14-17, 8 on July 18-19, 5 on July 20-31, then 25, 15, 12 and 10 on August 1-4.

Petr Kolman, OK1MGW believes the geomagnetic field will be quiet to active on June 26-27, mostly quiet June 28-30, quiet July 1-2, quiet to unsettled July 3, active to disturbed July 4, quiet to active July 5, quiet to unsettled July 6-8, mostly quiet July 9-10, quiet to active July 11-12, quiet to unsettled July 13-14, mostly quiet July 15-17, quiet to unsettled July 18, and quiet to active July 19-22.

Rich Zwirko, K1HTV reported on June 21: "Here in the Mid-Atlantic at the K1HTV Amissville, VA QTH, the Magic Band came alive just before 1600Z on Father's Day, June 21. The first of 13 countries that I worked were all from a

southerly direction. NP3CW was first in the log, followed by Yuri, UT1FG/MM in EL59 off the Cuban coast, CO3JA, 6Y5WJ, YV4NN and XE2CQ in DM12 northwestern Mexico.

"From 1650Z to 1750Z I worked 17 stations in W6 and W7 land. During that same hour, stations from GA and FL to as far west as NM and XE2 were working into HA, S5, YT, ISO, 9A and DL, but all I heard to the east during that hour was F2DX calling XE2X.

"It wasn't until 1845Z that I heard European DX here. In the next 65 minutes I worked IOJX, IK5MEJ, IZ5BRW and IK5PWJ, HA8CE, ON7BG, OK1DO, G4DBL, S59A, HA8FK, PA2M and ON4IQ. That was it for DX to the east for the day.

"Local late afternoon to early evening produced many more double hop QSOs to the West Coast, 15 stations in AZ, 15 in CA, 3 in NM and 1 in NV.

"It was a memorable Father's Day."

Jon Jones, N0JK wrote: "I worked Father's Day, but got off a little early at 2100Z and worked WU1ITU on 6 meters before going home.

"Sunday evening I worked 6Y5WJ from home for a 'new one' on 6 so all in all not a bad day.

"I have a shoe box full of 6 meter JA cards."

Rich Zwirko, K1HTV wrote again: "After the excellent double hop 6 meter Es earlier in the June 22 UTC day, the 6 meter and 2 meter bands came alive with aurora propagation around 1940Z. After making a few 6 meter AU QSOs from my FM18ap Virginia QTH to W1 and W2 land I switched to 144 MHz at 1945Z. I quickly worked K9CT in IL (EN50), W9EWZ in WI (EN52), WB8AIZ in MI (EN82) on 2 meters as well as a couple of closer stations before the buzz mode switched off. On June 23, 6 meters was alive with Es propagation when I got on around 0100Z. I worked dozens of stations in the Midwestern States via Es until around 0340Z, when the aurora returned. It only lasted for about 30 minutes. I worked a few VE3s on 6



meters before switching to 2 meters to work stations in Maine, PA and Ohio.

"Later that same UTC day (June 23) the 6 meter band was alive with single and double hop E-skip propagation. From 2130Z until the end of the UTC day, I worked what seemed to be an endless stream of over 120 stations, with over three dozen from W6 and W7 land.

Shortly after 0000Z on June 24, while watching the DXMAPS.COM web site, it indicated that a patch of ionization, with an MUF in excess of 150 MHz, was well positioned for possible 2M propagation. It appeared to favor an area to the southwest of my FM18 VA QTH around 1000 to 1100 miles away. At 0006Z, W5VQ in EM13 (TX) answered my 2 meter SSB CQ. At 0028Z I called and worked K7XC in EM12, also in Texas, on CW, then again a few minutes later on SSB. Both Texas stations were around 1100 miles away. At 0028Z I was called on SSB by N5NET in EM26 in Oklahoma. I also heard but didn't work Sam, K5SW in EM25. About 15 minutes later the same patch apparently was responsible for a QSO between W0LD operating temporarily in FM05or (NC) and K5PHF in DM61ts (TX), a distance of 1550 miles.

"The evening produced a number of ionized patches in the center of the country and others farther west, making for many hours of exciting VHF propagation."

Elwood Downey, WB0OEW wrote to Ken Tapping of the Penticton observatory in British Columbia (the source of 10.7 cm solar flux data) on June 28, and Cc'd us: "Hello Ken, Do you expect today's spike in solar flux will be calibrated downward or will it stand?"

What Elwood refers to is when there is an unusually high solar flux reading, the NOAA Space Weather Forecast Center will report it as a lower value. I always assumed this was because the 10.7 cm receivers in Penticton were overloaded, but as Ken says, whether to change the value or not depends on what the data will be used for.

Ken responded: "I know that in the distant past there were attempts to 'de-burst' flux values. However, it is not possible to do this with any accuracy at all. For example,

at first sight it should be easy just to draw a line under the spike and use that value.

However, in almost all cases the baseline is elevated by heating and some accelerated electrons beforehand and by heating and residual accelerated electrons afterwards. In some cases the baseline elevation lasts hours. In addition, with the on and off-source telescope motions that are an essential part of every measurement, it is even harder to separate what is going on.

"In addition, those who are using the fluxes for antenna calibration should have exactly what is measured. Some proxy applications need the whole flux too. So in the end the 'correction' process is application dependent, so our policy has been for some decades, tell the user what value we got, with no messing."

The reading Elwood referenced is the local noon reading in Penticton on June 22, 2015. The three readings that day, at 1700 UTC, 2000 UTC and 2300 UTC were 130.1, 246.9 and 127.2.

Checking <ftp://ftp.swpc.noaa.gov/pub/indices/DSD.txt> we see that NOAA reduced that to 135.

The Australian Space Forecast Centre issued this warning at 0210 UTC June 26:

"The CME from region 2371 M7.9 flare is expected to arrive mid to late in the UT day on 27Jun.

"INCREASED GEOMAGNETIC ACTIVITY EXPECTED DUE TO CORONAL MASS EJECTION FROM 27-29 JUNE 2015.

"GEOMAGNETIC ACTIVITY FORECAST 27 Jun: Minor Storm 28 Jun: Active to Minor Storm 29 Jun: Unsettled with Active periods."

ARRL Field Day is this weekend. I hope conditions remain calm!

If you would like to make a comment or have a tip for our readers, email the author at, [k7ra@arri.net](mailto:k7ra@arri.net).

For more information concerning radio propagation, see the ARRL Technical Information Service web page at <http://arri.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/w1aw-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 in downloadable spreadsheet format at <http://bit.ly/1IBXtnG> and <http://bit.ly/1KQGbRm>.

Click on "Download this file" to download the archive and ignore the security warning about file format. Pop-up blockers may suppress download. I've had better luck with Firefox than IE.

Monthly propagation charts between four USA regions

and twelve overseas locations are at <http://arrl.org/propagation>.

Instructions for starting or ending email distribution of ARRL bulletins are at <http://arrl.org/bulletins>.

Sunspot numbers for June 18 through 24 were 82, 74, 89, 79, 77, 61, and 39, with a mean of 71.6. 10.7 cm flux was 150.8, 137.3, 135.4, 131.7, 135, 116.1, and 109.5, with a mean of 130.8. Estimated planetary A indices were 7, 5, 3, 8, 55, 76, and 17, with a mean of 24.4. Estimated mid-latitude A indices were 6, 4, 2, 7, 57, 47, and 15, with a mean of 19.7.

## ARRL DX NEWS

DX Bulletin 26 ARLD026  
From ARRL Headquarters  
Newington CT July 2, 2015  
To all radio amateurs

This week's bulletin was made possible with information provided by IK6BAK, JA1TRC, 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.** Paul, HB9ARY will be QRV as 3B8HC from July 9 to 25. Activity will be holiday style on 80 to 6 meters using mainly CW. QSL via NI5DX.

**KENYA, 5Z.** Giuseppe, IK2YDJ is QRV as 5Z4/IK2YDJ from Rongo until July 20. Activity is on 40 to 6 meters. QSL to home call.

**CUBA, CO.** Members of Grupo DX de Cuba are QRV as CO2FRC until July 5 during the celebration of the 8th Congress of Federacion de Radioaficionados de Cuba at the city of Santa Clara. Activity is on all bands and modes. QSL via operators' instructions.

**SOUTH COOK ISLANDS, E5.** Tony, ZL2AGY plans to be QRV as E51AGY from Rarotonga Island, IOTA OC-013, from July 6 to August 3. Activity will be holiday style on the HF bands using CW. QSL to home call.

**GALAPAGOS ISLANDS, HC8.** Jeff, G8OFQ is QRV as HC8/G8OFQ from the Galapagos National Park on Isabela Island, IOTA SA-004, until September 30 while working as a volunteer. Activity will be in his spare time on 160 to 6 meters. QSL via HA3JB.

**HAITI, HH.** Terry, K7TD is QRV as HH2TD until July 13 from various locations. Activity is mainly on 30, 17 and 12 meters using CW. QSL direct to home call.

**REPUBLIC OF KOREA, HL.** Operators Han, DS2GOO, Lee, 6K2CEW and Ka, 6K2JFW are QRV as home calls/4 from Taehuksan Island, IOTA AS-093, until July 5. Activity is on 80 to 6 meters using CW, SSB, RTTY and some PSK31/JT65. QSL to home calls.

**SVALBARD, JW.** Erik is QRV as JW2US from Hopen Island, IOTA EU-063, and can be found daily on the bottom end of 20 meters using CW between 1100 and 1800z. QSL via LA2US.



**MARIANA ISLANDS, KH0.** Zorro, JH1AJT will be QRV as KH0/KH8Z from Saipan from July 6 to 10 while on a business trip. Activity will be holiday style on 20, 15 and 10 meters using mainly SSB. QSL to home call.

**DENMARK, OZ.** Dieter, DF2SD will be QRV as OZ/DF2SD from Fano Island, IOTA EU-125, from July 4 to 18. Activity will be on 40 to 6 meters using SSB and RTTY. QSL to home call.

**SEYCHELLES, S7.** Stan, EI6DX will be QRV as S79OWZ from Mahe Island, IOTA AS-024, from July 7 to 18. Activity will be holiday style on the HF bands. QSL via RX3RC.

**CRETE, SV9.** Goran, S5500 will be QRV as SV9/S5500 from Rethymnon, IOTA EU-015, from July 8 to 19. Activity will be holiday style on 40 to 6 meters using CW, SSB and various digital modes. QSL to home call.

**EUROPEAN RUSSIA, UA.** Special event station UE40SA is QRV until July 20 to commemorate the Apollo-Soyuz Test Project 40 years ago. QSL via GMOWRR.

**THIS WEEKEND ON THE RADIO.** The QRP CW Fox Hunt, NCCC RTTY Sprint, NCCC Sprint, FISTS Summer Slow Speed CW Sprint, Venezuelan Independence Day Contest, DL-DX RTTY Contest, Marconi Memorial HF CW Contest, Original QRP CW Contest, PODXS 070 Club 40-Meter Firecracker BPSK31 Sprint, WAB 144 MHz Low Power Phone, DARC 10-Meter Digital Contest and the QRP ARCI Summer Homebrew CW Sprint will certainly keep contesters busy this upcoming weekend.

The 10-10 International Spirit of 76 QSO Party runs until July 5.

The RSGB 80-Meter Club CW Championship is scheduled for July 6. The ARS Spartan CW Sprint is scheduled for July 7. The CWops Mini-CWT Test is scheduled for July 8.

Please see July QST, page 81 and the ARRL and WA7BNM contest web sites for details.



## Field Day 2015.....

### Preparation

Let it be known from the top of Pine Mountain at the Veteran's Memorial



Some assembly required











The tower has arisen after much reconfiguration and mumbling and weighting in.



A Pause to refresh. And a thank you for the feast.







*A Thanks to all who participated!*



# CLASSIFIED

## K8DDB Items For Sale

Prices as of June 20, 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.  
Priced to sell - \$1,699
- \* 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)  
Priced to sell - \$750
- \* 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

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

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](http://www.dcars.org)*

*Cooper Country Radio Amateur  
Dollar Bay, MI  
[www.ccras.net](http://www.ccras.net)*

*Cooper Country Radio Amateur  
Dollar Bay, MI  
[www.ccras.net](http://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](mailto:tmartin@chartermi.net)

**Vice President**

Scott Jarmusch, KA8TFF

**Secretary:**

Joe Ferris, KC9TQR  
[irferris@borderlandnet.net](mailto:irferris@borderlandnet.net)

**Treasurer:**

Burt Armbrust, WB8EB  
 (906) 774-8383  
[Wb8ebs@yahoo.com](mailto:Wb8ebs@yahoo.com)

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**Web Editor:**

Tom Heyboer, KC8TH  
 (906) 779-0481  
[Heyboer.tom@gmail.com](mailto: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	<a href="mailto:n8wqq@fast-air.net">n8wqq@fast-air.net</a>
WB8EBS	ARMBRUST	BURT	QUINNESEC	906-774-8383	<a href="mailto:wb8ebs@yahoo.com">wb8ebs@yahoo.com</a>
W8XBO	ARMBRUST	ED	IRON MOUNTAIN	906-779-5593	w8xbo@sbcglobal.net
KC9KVP	BAKER	BETH	NIAGARA		
KB9AVX	BAKER	SCOTT	NIAGARA	715-251-1944	<a href="mailto:kb9avx@yahoo.com">kb9avx@yahoo.com</a>
KD8POR	BEY	DANA L.	KINGSFORD	906-774-7937	<a href="mailto:lst797@charter.net">lst797@charter.net</a>
W9MB	BOILEAU	MIKE	NIAGARA	906-563-1350	<a href="mailto:w9mb@uplogon.com">w9mb@uplogon.com</a>
K8DDB	BRAY	MIKE	VULCAN	906-563-7020	<a href="mailto:mikebray@chartermi.net">mikebray@chartermi.net</a>
KC9SBY	BROSCART	FRED	NIAGARA	715-251-1423	<a href="mailto:broschart.fred@gmail.com">broschart.fred@gmail.com</a>
KE9L	CASWELL	SKIP	IRON MOUNTAIN	906-774-3371	<a href="mailto:acaswell4238@charter.net">acaswell4238@charter.net</a>
KD8GLO	COSTA	ART	KINGSFORD	906-774-7388	<a href="mailto:catraxcavator@hotmail.com">catraxcavator@hotmail.com</a>
KC9ZBC	DOLATOWSKI	SCOTT	GOODMAN	715-633-1006	kc9zbc@live.com



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



**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.