

Iron Mountain, Dickinson County, Mich

March 2016

Meeting Reminder: Second Wednesday of the Month

Which is March 9, 2016 at 07:00 PM at the Dickinson Library, Iron Mountain.

From The President

Words from the President

I would like to thank all of the members and their guests, 23 in all, for attending the dinner at Bartoletti's on Saturday the 27th. There was a mix up in seating arrangements because of miscommunication between their staff and your president. It was written in their book that we would be there on March 5. Although we were seated at one long table, which didn't allow for much chat between members and guests, once orders were taken, all seemed to enjoy themselves. We will discuss future dinners, locations, and menu at the next meeting.

I'm listening to 15 meters, as I type these Words, it is packed from 21.200-21.450 with SSB signals. This weekend is the ARRL DX SSB Contest. I haven't bothered to get on the band. I haven't seen, or heard, any country that I need on 15. SSB operating tends to wear me out anyway.

On the second day of the CQWPXRTTY Contest, I lost my SteppIR beam. Narrowed it down to a bad coax connection, or bad balun. Unfortunately, the problem is at the 72 foot level! I finished the contest with my Mosley CL-33 at 40 feet. It only has 180 rotation; so, as the band went west, in the afternoon, I had a problem with Japan and the Pacific. Yet, it's always nice to have a backup.

Below, are events coming up for the club. We will discuss these at the next meeting on Wednesday at 6:30 at the library.

73.

Tom W8JWN

2016 ARRL Field Day is June 25-26

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International Lighthouse Lightship Weekend August 15-16

MICH-A-CON AMATEUR RADIO CLUB MINUTES OF February 10, 2016

President Tom Martin called the meeting to order at 7:00 pm.

Secretary Report

Minutes of the January 13th meeting were read and approved.

Treasurer Report

Balances as of February 10, 2015

Checking: \$3.05

Savings: \$1.939.65 (\$347.60 repeater)

Cash: \$17.00

Repeater Report

Bob Meyers hopes to get the new two meter unit in and running soon. It is still a work in progress.

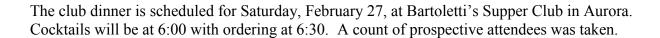
It was also reported that Scott Baker has donated a 440 MHz repeater to the club. It will most likely serve as a backup to our current 440 repeater.

Old Business

Jared Paul has his Echolink system up and running again. He is still having occasional problems with it losing settings. If anyone finds it is not working they should let Jared know.

Dave Thomas noted that he still has the club's surplus repeaters at his house. He will pull anything that the club might want and then contact Red, from Three Lakes, about the rest.

There was nothing new to report concerning the impact that the sale of Schultz Equipment will have on the location of the club storage van.



New Business

There was a brief mention of Field Day 2016. President Tom will reserve the pavilion at Vet erans Park, on Pine Mountain.

There was a discussion about the insurance carried by the club. It was determined that our coverage should be reviewed to see if it is adequate and cost-effective.

Bill Grabowski initiated a discussion regarding Lighthouse Weekend,, which is held at the be ginning of August. The initial thought is to activate the Peninsula Point Lighthouse, on the Stonington Peninsula. There appeared to be sufficient interest to get things started. Bill will continue checking into it.

Adjournment

The meeting was adjourned at 7:28 pm. (Skip Caswell/Burt Armbrust)

For the Good of the Order

Attendees reported on their recent activities.

The 50/50 drawing was won by Joe Ferris. Twenty six dollars went to the club treasury.

Submitted by Joe Ferris

Attendees

Tom Martin, W8JWN
Scott Jarmusch, KA8TFF
Burton Armbrust, Sr., WB8EBS
Joe Ferris, KC9TQR
Gary Schafer, K4FMX
Bill Grabowski, KD8VTT
Deb Grabowski, KD8VTS
Skip Caswell, K9EL
Mike Bray, K8DDB
Dave Thomas, KG9Y

Bob Meyers, WA8FXQ Sam Holmes, N8ATS Tom Heyboer, KC8TH Dana Bey, W8BEY Jared Paul, ND8M Tim Miller, N8TUM Joyce Williams, Visitor







Announcing the 2016 Michigan QSO Party

Just Have Some Fun!!!!!

- o Chance to get on the air
- o Be the station others want to work
- o Mavbe activate a rare county?
- o Excellent Club Activity

- o Reason to get together as group
- o Single Op, Multi Op, Mobile, EOC o Join the fun in the "EOC" station category
 - o Excellent Training opportunity!
 - o Get new members on the air!
 - o Friendly Competition

Let's all help make Michigan "radio-active" on the 16th of April!!!!

Get your local EOC on the air and show the emergency management team how amateur radio can benefit their efforts!!!

The 2016 Michigan QSO Party, sponsored by the Mad River Radio Club, is from 1600Z April 16 until 0400Z April 17.

Stations may operate the full 12 hours. Phone and CW on 80/40/20/15/10 meters. Single-op, multi -op, and mobile categories. Work stations once per band and mode. MI-to-MI QSOs allowed. Work portables and mobiles again as they change county, state or province. Exchange QSO number and location (county for MI stations, state/province or "DX" for others).

Suggested frequencies: CW-3545, 7045, 14045, 21045, 28045; Phone-3825, 7200, 14250, 21300, 28450. One point per phone QSO, two points per CW QSO. Count multipliers once per mode.

Multipliers are MI counties for all entries, plus states, provinces and "DX" for MI entries only. Final score is total QSO points times total multipliers.

Submit logs no later than 30 days after the contest. Electronic logs in Cabrillo format are submitted via the Log Submittal page on the MiQP web site http://www.migp.org/

submitLogFileMiQP.html. Mail paper logs with summary sheets to: Mad River Radio Club, c/o Dave Pruett, 2727 Harris Road, Ypsilanti, MI 48198.

For full rules, along with free logging software, log and summary sheets, see http://www.migp.org.

Thanks and 73, Mike, N8MR 2016 MiQP Publicity

ARRL Bulletin 8 ARLB008 From ARRL Headquarters Newington CT February 24, 2016 To all radio amateurs

SB QST ARL ARLB008

ARLB008 FCC Seeks Comments on Petition to Grant Lifetime Amateur Radio Licenses

The FCC is seeking comments on a Petition for Rule Making (RM 11760

- available on the web at,

http://apps.fcc.gov/ecfs/document/view?id=60001333714) that asks the FCC to grant lifetime Amateur Radio licenses. Mark F. Krotz, N7MK, of Mesa, Arizona, filed his request with the FCC last November. He wants the FCC to

revise Part 97.25 of its rules to indicate that Amateur Radio licenses are granted for the holder's lifetime, instead of for the current 10 year term. Krotz noted that the General Radiotelephone Operator License (GROL) already is issued on a lifetime basis, and he maintained that not having to renew licenses would lighten the FCC's workload.

"It would be mutually beneficial for the FCC and Amateur Radio operators to update Part 97 to grant operator licenses for lifetime, Krotz said in his filing. "The FCC would benefit by reducing administrative costs."

In 2014 the FCC granted lifetime credit for examination elements 3 and 4, but applicants seeking relicensing under that provision still must pass examination element 2.



Learn CW online, in your web browser!

Koch Method Morse Course, Speed Training, Text to CW conversion, Statistics, Forum

A new website to learn and practice Morse telegraphy has been launched: http://lcwo.net/ - Learn CW Online

There are already hundreds of training programs, MP3/CD courses and practice aids available, but LCWO follows a radically different concept: While sticking to well-proven methods for learning and practice, all you need for using LCWO is a web browser!

Currently the site, which is available in 30 languages offers a complete Koch method Morse course, code group practice, callsign- and plain text training modes and also allows to convert random text to Morse MP3s.

LCWO.net is a non-commercial project. Creating a free account only takes a few seconds, and you can start practicing CW right away!

FCC Invites Comments 80/75 Meter Adjustments

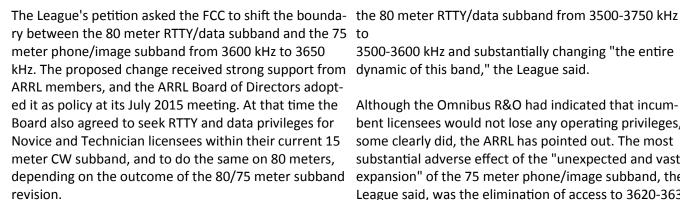
ARRL Bulletin 7 ARLB007 From ARRL Headquarters Newington CT February 23, 2016 To all radio amateurs

SB QST ARL ARLB007 ARLB007 FCC Invites Comments on ARRL Petition That Seeks 80/75 Meter Adjustments

The FCC has put the ARRL's January Petition for Rule Making (RM

11759 - found on the web at,
http://apps.fcc.gov/ecfs/comment/view?
id=60001374190
) on public notice and invited interested parties to comment on what the League has called "minimal but necessary changes" to 80 and 75 meters.

The ARRL petitioned the FCC to fix a "shortfall in available RTTY/data spectrum" that the Commission created when it reapportioned 80 and 75 meters 10 years ago.



The petition asks the FCC to make the following changes

97 Amateur Radio Service rules, with respect to 80/75 meters:

- * Modify the RTTY/data subband, so that it extends from 3500 kHz to 3650 kHz.
- * Modify the phone/image subband, so that it extends from 3650 kHz to 4000 kHz.
- * Make 3600-3650 kHz available for General and Advanced Class licensees, as was the case prior to 2006.
- * Make 3600-3650 kHz available to Novice and Technician licensees for telegraphy - consistent with existing rules permitting Novices and Technicians to operate CW in the 80, 40, and 15 meter General and Advanced RTTY/data subbands.
- * Modify the rules governing automatically controlled digital stations (ACDS), to shift the ACDS segment from 3585-3600 kHz to

3600-3615 kHz, consistent with the IARU Region 1 and 2 band plans.

According to the ARRL, the FCC R&O in Docket 04-140 released in 2006 departed substantially and without justification from the rules proposed in the FCC's socalled "Omnibus" Notice of Proposed Rule Making (NPRM), with respect to 75 and 80 meters. Among other actions, the resulting changes expanded voice privileges on additional frequencies in various bands, including 75 meters. The FCC shifted the phone/image subband from 3750-4000 kHz to 3600-4000 kHz, trimming

3500-3600 kHz and substantially changing "the entire

Although the Omnibus R&O had indicated that incumbent licensees would not lose any operating privileges, some clearly did, the ARRL has pointed out. The most substantial adverse effect of the "unexpected and vast expansion" of the 75 meter phone/image subband, the League said, was the elimination of access to 3620-3635 kHz by ACDS.

The Omnibus R&O rule changes limited 80 meters to 3500-3600 kHz, and no longer authorized RTTY and data emissions above 3600 kHz. That the Omnibus R&O did not modify Part 97.221 of the rules to provide for ACDS "was clearly an oversight by the Commission."

After the FCC denied a subsequent ARRL Petition for Reconsideration, the Commission replaced the inadvertently deleted 3620-3635 kHz ACDS segment with 3585-3600 kHz.

"Far from fixing the problem created by the error in the Omnibus R&O, the moving of the inadvertently deleted digital subband downward in frequency below 3600 kHz made the situation in the 80 meter RTTY/data subband even worse than it was," the ARRL said. The result has been a shortfall in available RTTY/data spectrum at 80 meters.

"ARRL has analyzed the regulatory limitations as part of a comprehensive effort to make more efficient the use of those HF allocations, especially with respect to encouraging further experimentation and proficiency in narrowband digital communications technologies," the League said in concluding its Petition. "The recommendations for modified band plans developed by ARRL necessitate the few, but important regulatory changes proposed."



ARLB032 W1AW 2015/2016 Winter Operating Schedule

ARRL Bulletin 1 ARLB001 From ARRL Headquarters Newington CT January 4, 2016 To all radio amateurs

Morning Schedule:

Time	Mode	Days	
1400 UTC (9	AM EST)	CWs	Wed, Fri
1400 UTC (9	AM FST)	CWf	Tue. Thu

Daily Visitor Operating Hours:

1500 UTC to 1700 UTC - (10 AM to 12 PM EST) 1800 UTC to 2045 UTC - (1 PM to 3:45 PM EST) (Station closed 1700 to 1800 UTC (12 PM to 1 PM EST))

Afternoon/Evening Schedule:

```
2100 UTC (4 PM EST) CWf
                           Mon, Wed, Fri
2100 " "
              CWs Tue, Thu
2200 " (5 PM EST) CWb
                          Daily
2300 " (6 PM EST) DIGITAL Daily
0000 " (7 PM EST) CWs Mor
0000 " " CWf Tue, Thu
                         Mon, Wed, Fri
0100 " (8 PM EST) CWb
0200 " (9 PM EST) DIGITAL Daily
0245 " (9:45 PM EST) VOICE Daily
0300 " (10 PM EST) CWf Mon, Wed, Fri
0300 " "
              CWs
                     Tue. Thu
0400 " (11 PM EST) CWb
                          Daily
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Frequencies (MHz)

28.0675 147.555 DIGITAL: - 3.5975 7.095 14.095 18.1025 21.095 28.095 147.555

CW: 1.8025 3.5815 7.0475 14.0475 18.0975 21.0675

VOICE: 1.855 3.990 7.290 14.290 18.160 21.390

28.590 147.555

Notes:

CWs = Morse Code practice (slow) = 5, 7.5, 10, 13 and 15 WPM CWf = Morse Code practice (fast) = 35, 30, 25, 20, 15, 13 and 10 WPM CWb = Morse Code Bulletins = 18 WPM

CW frequencies include code practices, Qualifying Runs and CW bulletins.

DIGITAL = BAUDOT (45.45 baud), BPSK31 and MFSK16 in a revolving schedule.

Code practice texts are from QST, and the source of each practice is given at the beginning of each practice and at the beginning of alternate speeds.

On Tuesdays and Fridays at 2330 UTC (6:30 PM EST), Keplerian Elements for active amateur satellites are sent on the regular digital frequencies.

A DX bulletin replaces or is added to the regular bulletins between 0100 UTC (8 PM EST) Thursdays and 0100 UTC (8 PM EST) Fridays.

Audio from W1AW's CW code practices, CW/digital bulletins and phone bulletin is available using EchoLink via the W1AW Conference Server named "W1AWBDCT." The monthly W1AW Qualifying Runs are presented here as well. The audio is sent in real-time and runs concurrently with W1AW's regular transmission schedule.

All users who connect to the conference server are muted. Please note that any questions or comments about this server should not be sent via the "Text" window in EchoLink. Please direct any questions or comments to w1aw@arrl.org.

In a communications emergency, monitor W1AW for special bulletins as

follows: Voice on the hour, Digital at 15 minutes past the hour, and CW on the half hour.

All licensed amateurs may operate the station from 1500 UTC to 1700 UTC (10 AM to 12 PM EST), and then from 1800 UTC to 2045 UTC (1 PM to 3:45 PM EST) Monday through Friday. Be sure to bring your current FCC amateur radio license or a photocopy.

The W1AW Operating Schedule may also be found on page 100 in the January 2016 issue of QST or on the web at, http://www.arrl.org/w1aw-operating-schedule . NNNN

ARRL MICHIGAN SECTION NEWS

Greetings to the Hams of Michigan:

Thus far in February, I have had the pleasure of making two trips into the Great White North and both trips turned out to be pretty good with minimal problems. As always, it is great to be home and thanks to the good folks at the Negaunee and Traverse City swaps for their warm hospitality.

New Club Officers

I would like to recognize a group of individuals who have offered their services and leadership to their local clubs by agreeing to serve as officers and directors of their clubs.

Today's leaders serve to guide, instruct and inspire others to participate in leadership and to excel. Thanks to the "Class of 2016".

Monroe County Radio Communications Association

President - Glen Ohlemacher, K8GO Vice-President - W. Paul Trouten, W8PI Secretary - Brenda VanDaele, KB8KQC Treasurer - Fred VanDaele, KA8EBI Director - John Copeland, N8DXR Director - David Buchko, AC8SI Director - Wes Busdiecker, KC8SKP

Kalamazoo Amateur Radio Club

President - David Moss, KE8DI Vice President - Don Batts, WE8UPJ Secretary - Gary Thompson, KD8RMD Treasurer/Membership - Dustin Thomas, N8RMA Trustee - John Tucker, WB8ZVV Member-At-Large - Fred Devries, AC8ED Member-At-Large - Jim Buchanan, K8WPI

Hospitality Acknowledgements

Hazel Park Hamfest, Madison Heights HARA Swap, Negaunee Cherryland Swap, Traverse City It was my pleasure to attend your events.

Michigan ARRL Website

The new Michigan ARRL website (www.mi-arrl.org) is coming along nicely and we are adding content as we move forward. For late-breaking happenings directly relative to Michigan Hams, the website is the first stop to learn what is going on. An even better way to keep yourself in the know is by signing up for ARRL Section and Division news, bulletins and calls to action. You can do this by editing your profile on the ARRL webpage (www.arrl.org) to select to receive section and division news and bulletins by email. This document (and others) will appear in your inbox just like magic.

Michigan QSO Party

Now is the time to begin to think about participation in the Annual Michigan QSO Party on April 16 from noon to midnight, which is sponsored by the Mad River Radio Club. You can locate all necessary information here: http://miqp.org/. On their web page, you can find the

2016 MiQP flyer which is handy for printing a few copies to take to your club meetings to pass around to interest your members in participating.

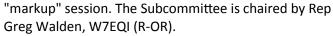
There are a number of categories of participation and room for participants from large, experienced contest groups to individual operators participating for the very first time. The contest is a maximum of 12 hours (noon to midnight), so there will still be family time available that weekend. No amplifier? No problem. A hundred watts will work just fine. Modest stations are able to do quite nicely.

I look forward to bumping into you on the air!

Amateur Radio Parity Act

02/12/2016

On a voice vote, the US House Subcommittee on Communications and Technology has sent the Amateur Radio Parity Act, H.R. 1301, to the full House Energy and Commerce Committee with a favorable report for further consideration. The measure was among three bills the Subcommittee considered during a February 11



"I'm optimistic that we can put the finishing touches on these bills in the weeks ahead and once again produce important, bipartisan legislation that protects consumers, small businesses, and access to the latest communications services," Walden said after the hearing.

During the markup session, Walden and the bill's sponsor, Rep Adam Kinzinger (R-IL) made impassioned statements in favor of the legislation. Kinzinger said that while he can appreciate some of the concerns expressed by those who do not agree with his bill, he believes that the time has come to adopt a "reasonable accommodation standard" with respect to the erection of outdoor antennas in neighborhoods governed by private landuse restrictions.

Walden agreed. "You don't necessarily need to have a giant tower blocking everybody's view," he pointed out to the Subcommittee. He suggested that more modest antenna systems often are sufficient. He and Kinzinger noted that there is common ground between proponents and opponents of the measure and that "it's important to get this done." Rep Anna Eshoo (D-CA) also spoke to recognize the work all parties have been doing to ensure the bill's passage in the House.

At a Subcommittee hearing on H.R. 1301 last month, Walden called it "a commonsense bill" and urged his colleagues' support. Kinzinger also spoke in favor of H.R. 1301 at the January 12 hearing, saying that his bill's "reasonable accommodation standard" would not mandate placement, size, or aesthetics regarding an outdoor antenna, leaving ham radio operators and homeowners associations to decide those issues.

H.R. 1301 would direct the FCC to extend its rules relating to reasonable accommodation of Amateur Service communications to private land-use restrictions, such as deed covenants, conditions, and restrictions. The bill has attracted 120 cosponsors from both sides of the aisle. An identical US Senate measure, S. 1685, has attracted three cosponsors. It cleared the Senate Committee on Commerce, Science, and Transportation last November.

Section Travel Plans

Feb 21, 2016 - Livonia ARC Swap, Livonia, MI – WB8TKL Feb 21-25, 2016 - MI Interop Conf. Traverse City, MI – WB8R et al

Mar 5, 2016 - MI Section Staff Meeting, Lansing, MI – WB8R et al

Mar 19, 2016 - Crossroads Hamfest, Kalamazoo, MI – WB8R

May 7, 2016 - Cadillac Hamfest, Cadillac, MI – WB8R May 14, 2016 - Chassell Hamfest, Chassell, MI

May 21-22, 2016 - Dayton Hamvention, Dayton, OH – WB8R et al

Jun 16, 2016 - Midland Hamfest, Midland MI – WB8R Jul 8-9, 2016 - MI Section Family Outing, Hale, MI – WB8R et al

Jul 16, 2016 - Lowell Youth Club, Lowell, MI – WB8R Jul 30, 2016 - CMARC, Lansing, MI – WB8R

National Parks On The Air (NPOTA)

The NPOTA event of 2016 is underway. Complete information about this year-long on the air operating event can be found on the ARRL website.

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 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 January, 2016: WB9JSR 293, K8ED 255, WB8WKQ 210, K8RDN 120, WB8TQZ 93, KC8BW 54, WD8MWD 40, W8MSK 32, WD8USA 30, WB8RCR 19, N8OSL 13, WB8R 3, KC8NFN 3

Total SAR reported: 1165

Brass Pounder's League (BPL) for January, 2016: None

Public Service Honor Roll (PSHR) for January, 2016 WB8RCR 494, KC8YVF 197, N8OSL 193, K8RDN 190, WB8R 143, WD8MWD 140, WB9JSR 130, WB8WKQ 120, WD8USA 115, WB8TQZ 110, K8ED 100, KC8BW 90, KC8NFN 40, KD8LSM 38, NE8B 26.

Net traffic for January, 2016: Michigan Amateur Communications System 116, Michigan Traffic Net 90, The Michigan Net 90, Upper Peninsula Net 43, Great Lakes Emergency and Traffic Net 39, Southeastern Michigan Traffic Net 36, Michigan Digital Traffic Net 29, Michigan Amateur Radio Public Service Corps 10, District 3 Digital Training net 4, Saginaw County ARES Net 3, District 3 ARPSC Net 3, Northern Lower Eastern Upper Peninsula Net 3, Red Cross Net of Greater Grand Rapids 1, District 5 Hospital Net , Genesee County ARPSC Traffic and Training Net , Luce County ARES Net , Chelsea ARC Net , Michigan VHF Traffic Net , Michigan ARES D-Star net , Branch County Emergency Net , District 8 Emergency Net, Bay Area Regional Traffic System, Oakland County Amateur Radio Society Net.

Total net traffic reported: 467

Brass Pounder's League

Michigan has a great group of public service operators who provide many hours of their time to the citizens of Michigan each month. In terms of traffic handling, the pinnacle of traffic handling is recognized for those hams that originate 100 or more radiograms each month or have a collective total of 500 or more radiograms that are Originated, Sent, Received or Delivered in one month's time. This award harkens back to the early days of radio and is called Brass Pounder's League or more commonly BPL.

This prestigious award is the result of a lot of effort on the part of the operator and is the pinnacle of Traffic Handling. Congratulations go to each of the three Michigan operators who achieved this lofty status in 2015. Of particular note is WB9JSR earning BPL for all 12 months of 2015.

2015 Michigan ARRL Section BPL Awards

January - WB9JSR, K8LJG
February - WB9JSR
March - WB9JSR, WB8WKQ
April - WB9JSR
May - WB9JSR
June - WB9JSR
July - WB9JSR
August - WB9JSR
September - WB9JSR
October - WB9JSR
November - WB9JSR
December - WB9JSR

My sincere thanks go to the Michigan operators who are in a perpetual state of preparing for the emergency that we all hope never comes. Your tireless efforts speak highly of the Michigan work ethic and I am proud of each and every one of you.

Until next time and Best 73,

Larry, WB8R



Dales Tales

Greetings everyone,

The Great Lakes Division was well represented in the current issue of Radio Waves, published by the League http://www.arrl.org/files/file/Radio%20Waves% 20Newsletter/Winter%202016%20Radio%20Waves.pdf. This ARRL periodical is aimed at instructors and educators, keeping them informed about ham radio and STEM Programs. Ohio's West Chester Amateur Radio Association teamed up with National Voice of America Broadcasting Museum to host "Pi Day +6" in honor of May 14. (This year it really stacks up as 3.14.16 and is also Albert Einstein's birthday). In addition, the West Michigan Aviation Academy in Grand Rapids has started a ham club as the result of its prep work for their scheduled ARISS Contact. This publication may offer your club an introduction to STEM instructors in your area and open an opportunity to begin a local school program for prospective hams. Check it out.

As announced in this column last month, Chief Operating Officer, Harold Kramer W1JB is entering the world of retirees. Knowing Harold, I suspect this is not the last we will hear from him. I spoke with him on the phone Friday and we talked a little about some of his plans.

These will include an opportunity to do a little writing and probably make some other interesting contributions to ham radio. Please feel free to extend your well wishes to Harold at WJ1B@arrl.org.

A special thanks goes out to the Cherryland Amateur Radio Club for their warm hospitality when Michigan Section Manager Larry WB8R, Monroe County EC Dave AC8SI and your ARRL Director Dale WA8EFK "dropped in" for a visit at their February club meeting. The three of us were attending the Michigan Statewide Interoperability Conference in Traverse City and could not pass the opportunity for an evening visit with the club.

I am pleased to report that Amateur Radio is playing a continually more important part in Michigan's overall emergency communications plan.

This Interoperability Conference, which was hosted by the Homeland Security Division of the MI State Police, devoted several hours time to Auxiliary Communications, which is based upon ARES®, NTS, CAP, MARS, SATERN how these groups are organized, operate and respond in emergencies. Michigan Section manager John McDonough WB8RCR also detailed RACES, covering what it is and what it is not. The several hundred conference attendees were from police, fire, EMT, Emergency Management and first responder teams from across the state.

Great Lakes Division members can be proud of their respective Section leadership teams for their diligence in working with their individual state's Emergency Management organizations and promoting a very positive atmosphere relating to the services that we radio amateur operators can provide for our communities. While each of our three Sections has its own unique operating relationship with state officials, amateur radio is highly regarded in every case. This is not to say all is perfect, certainly not, as we have many opportunities to improve. We all need to strive for accurate documentation, uniform registration and timely reporting. ARRL Leadership is working to reduce the burden of complying with these needs, and over the next few months, we may begin testing these services in selected locations.

Remember, our agency partner leadership managers see the reporting numbers and stats, lets insure that we continue to keep them up to date and accurate. These figures show how much we do, and what cost benefits our services provide to each partner-agency.

TOM'S COMMENTS: Comments from our Vice Director Tom Delany W8WTD

Last weekend, I listened in on a conversation on HF. One by one, the voices of some young girls came on, talking with another girl. First steps in radio. Then I realized I had had a similar contact a year ago with the same station, but had no young person in my shack to speak to them. The station was from New Brunswick, Canada, and the woman ham was introducing "Girl Guides" (the equivalent of our Girl Scouts) to ham radio. It was great to hear the enthusiasm for making contacts.

I still have the QSL cards that I got from each of the young ladies I talked to. And I'm sure these girls were even happier to talk to someone young like themselves. From what I could piece together, the girl on the other end was the six-year-old daughter of that ham operator,

and I think they were in Great Britain. Band conditions were not favoring their signal in my direction, but the Canadians were loud and clear.

The experience made me think about our outreach to youth in this country. It's not easy to go from that initial contact to a license, but we're out there trying to make it happen. We have programs in place, from JOTA (Jamboree on the Air) to Kid's Day on the Radio, to school clubs and license classes. We all have to do our part to make sure that the airwaves are a welcome and happy experience for young people, whether they are just learning how radio works, or whether they are applying science concepts and figuring out how interesting ham radio can be. A salute to those who work with youth, and a reminder to us all to be welcoming on the air!

Friends in high places-- You all know that there are a few hams in Congress, such as Rep. Greg Walden, W7EQI, of Oregon, on the subcommittee for Communications and Technology, and some others, including a new ham, Rep. Steve Pearce of New Mexico. Rep. Walden has been helpful in many ways, not least of which is calling FCC attention to the problem of interference.

Closer to home, in the fall elections, Kentucky got a new governor and lieutenant governor, and it just so happens to register early for ARRL Sanctioning. It is never too that the lieutenant governor is a ham. Her name is Jenean Hampton, and her call is K5EIB.

The Northern Kentucky Amateur Radio Club invited her to speak at their February meeting, and she accepted their invitation. She is particularly interested in spreading the word about the emergency communications capabilities that ham radio provides. An engineer by background, she is now an extra class licensee. She doesn't have a lot of time to be on the air, but anything any of the Kentucky hams can do to help her will probably be much appreciated. She will be a good advocate for ham radio, and will be counting on us during emergencies. I'm sure her trust will be well-placed.

A few of you have noticed that the Great Lakes Division now has a Facebook page. If you haven't noticed, please take a look. Granted, Facebook is not for everyone, but for those who participate, it's one more way of keeping in touch with activities of the Division. Please let us know what you think. Thanks go out to Greg, WOQI, Kentucky ASM, whose initiative got it going.

It's Hamfest season again. In March, I plan to be in Cave City, KY and Kalamazoo, MI. Looking forward to seeing many of you during those times. Stop by and say hello.

73, Tom W8WTD Vice Director, Great Lakes Division

UPDATE for AMATEUR RADIO PARITY ACT: HR 1301 is the Bill number for the House of Representatives. Progress continues, as last month the

House version had 118 Co-Sponsors, today the number is up to 123. The Senate version of the bill is number S 1685. If you have not done so, please contact your Senators and Congressman in Washington and encourage their support for the Act. You can find more information at http://www.arrl.org/amateur-radio-parity-act. Please be sure to route your letters through ARRL Headquarters for personal delivery: ARRL,

Attn: Amateur Radio Parity Act grassroots campaign, 225 Main St., Newington, CT 06111.

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. We have approximately 65 hamfests each year in the Great Lakes Division. I do encourage each Hamfest Chair early to register your hamfest with Headquarters. Be sure to invite your ARRL Officials as soon as your date is set. Help avoid date conflicts, do it early!

Mar 5 - Cave City - Cave City, KY

Mar 6 - NOARS - Elyria, OH

Mar 19 - Crossroads - Kalamazoo, MI

Mar 20 - TMRA Hamfest - Perrysburg, OH

Mar 26 - MOVARC - Gallipolis, OH

Apr 2 - Portsmouth - Portsmouth, OH

Apr 9 - Cuyahoga Falls - Cuyahoga Falls, OH

Apr 19 - Letcher County - Whitesburg, KY

Apr 24 - Athens - Athens, OH

May 7 - Cadillac - Cadillac, MI

May 14 - Chassell Hamfest - Chassel, MI

May 20-22 - Dayton HamVention - Dayton, OH

73, See you on the bands. Dale Williams WA8EFK, Director **Great Lakes Division**



ARRL PROPAGATION BULLETIN

Propagation Forecast Bulletin 10 ARLP010 From Tad Cook, K7RA Seattle, WA March 4, 2016 To all radio amateurs

SB PROP ARL ARLP010 ARLP010 Propagation de K7RA

Average daily sunspot numbers over our reporting week (February 25 through March 2) were marginally higher than the previous seven days, going from 37.9 to 41.4, while average daily solar flux was down by just one point, to 92.9.

Average planetary A index changed from 10.1 to 5.9 and average mid-latitude A index went from 12.6 to 5.3., so it was a quiet week with stable geomagnetic conditions.

Predicted solar flux from USAF/NOAA for the near term is 100 on March 4-7, 105 on March 8-13, 100 on March 14-15, 95 on March 16-20 and then bottoming out at 90 on March 21-26. Flux values then peak at 115 on March 30-31.

The planetary A index prediction shows 12, 15, 20, 15 and 10 on March 4-8, then 8 on March 9-11, 5 on March 12 and 12 on March 13.

The predicted A index then makes a huge jump to 30 on March 14-16.

This perhaps is from a recurring coronal hole, because on April

10-12 the A index again goes to 30. Note that in mid-February there were similar numbers on February 17-19 of 38, 34 and 29.

Petr Kolman, OK1MGW of the Czech Propagation Interest Group (actually they call it the Propagation Interested Group, but I suspect Interest Group is a better translation to standard American

English) sent his outlook for geomagnetic conditions. He says to expect quiet to unsettled conditions on March 4, quiet to active March 5-6, quiet to unsettled March 7-8, quiet to active March 9-10, quiet to unsettled March 11-

12, quiet to active March 13, active to disturbed March 14-16, quiet to active March 17, mostly quiet March 18-19, quiet on March 20-21, mostly quiet March 22-24, quiet March 25-26, quiet to unsettled March 27, quiet to active March 28-29, and quiet to unsettled March 30.

Petr expects an increase in solar wind on March 5-6, 9-10, 13-16 and 27-29.

Notice that his expected active to disturbed conditions on March

14-16 lines up with the prediction for an A index of 30 on those same dates from USAF/NOAA.

February is done, so let's examine our 3-month moving average of sunspot numbers.

According to our own data, cycle 24 peaked with a 3-month moving average of 146.4 and 148.2 centered on February and March of 2014.

Four months later the moving average centered on July 2014 was 109.2, and December 2014 was 107.8. January 2015 was 98.2, the first time the average was below 100 since September 2013. July 2015 was 69.1, December 2015 was 55.4, and the latest number centered on January 2016 was 53.5. The moving average centered on January is an arithmetic average of daily sunspot numbers from December 1, 2015 through February 29, 2016. Adding all sunspot numbers for those days totals 4,868 and divided by 91 days yields an average of 53.4945 or 53.5.

The last time the average was at this level was February 2011, five years ago, when it was 55.7.

The ARRL International SSB DX Contest is this weekend, and it runs from 0000 UTC March 5 through 2359 UTC March 6. See http://www.arrl.org/arrl-dx for details.

Eric Guzman, NP3A had a comment on NOJK's note about what a difference a year makes on 10 meters. Eric wrote "I think is not only 10 meters. This February I will com-

plete one year of monthly reports using our Club Skimmer KP3Z data.

Comparing the 2015 to 2016 tally for the ARRL DX CW Contest, 80 meter activity was down 9 percent, 40 was up 9 percent, 20 meters down 20 percent, 15 meters down 75 percent and 10 meters down 89 percent. I believe this is just the number of call signs copied, but it was 14,503 on 10 meters last year, and only 1,644 this year."

Eric notes, "Full SH5 reports for both weekends can be found here:

http://www.np3a.com/website/index.php/skimmer-sh5

Huge difference on 15 meters as well. Of course there are other factors that affect these numbers like participation, but in general propagation is the main factor."

Thanks Eric. 40 meters was the only band with an increased count, and with propagation down on 10, 15 and 20 meters, where else would you go?

For more information concerning radio propagation, see the ARRL Technical Information Service 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/w1aw-bulletins-archive-propagation. More good information and tutorials on propagation are at http://k9la.us/.

My own 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/1DcpaC5.

Click on "Download this file" to download the archive, and ignore the security warning about file format. Popup blockers may suppress the download.

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 February 25 through March 2 were 26, 41, 37, 38, 44, 39, and 65, with a mean of 41.4. 10.7 cm flux was 91.7, 89, 90.4, 93.2, 90.9, 96.8, and 98.2, with a mean of 92.9. Estimated planetary A indices were 5, 7, 4, 4, 5, 9, and 7, with a mean of 5.9. Estimated midlatitude A indices were 6, 5, 3, 4, 4, 8, and 7, with a mean of 5.3.



QST de W1AW DX Bulletin 9 ARLD009 From ARRL Headquarters Newington CT March 3, 2016 To all radio amateurs

SB DX ARL ARLDOO9 ARLD009 DX news

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

EQUATORIAL GUINEA, 3C. Kenneth, LA7GIA is QRV as 3C7GIA from Malabo on Bioko Island, IOTA AF-010, until March 13. Activity is on 80 to 10 meters using CW and SSB. QSL direct to home call.

TUNISIA, 3V. Ash, KF5EYY will be QRV as 3V8SS in the ARRL International SSB DX contest. QSL via LX1NO.

SRI LANKA, 4S. A group of operators are QRV as 4S7BBG until March 9. Activity is on 80 to 10 meters plus EME on MARQUESAS ISLANDS, FO. Ernoe, DK2AMM, Hans, 2 meters and 70 cm. QSL via OM2FY.

JAMAICA, 6Y. Robert, N4GU, Dan, W0CN, Kyle, WA4PGM and Everett, WZ8P will be QRV as 6Y6Y in the ARRL International SSB DX contest. QSL via operators' instructions.

BARBADOS, 8P. Charles, 8P6ET will be QRV in the ARRL International SSB DX contest as an All Band entry. QSL via KU9C.

MALDIVES, 8Q. Wolfgang, OE1MWW is QRV as 8Q7WK until March 12.

Activity is holiday style on all bands. QSL to home call.

BAHRAIN, A9. Max, KE5JA will be QRV as A93JA in the ARRL International SSB DX contest as an All Band entry. OSL to home call.

BAHAMAS, C6. Ken, AG2K is QRV as C6AKE from New Providence Island, IOTA NA-001, March 6. Activity is hol-

iday style. This includes an entry in the ARRL International SSB DX contest. QSL via operator's instructions.

CHILE, CE. Members of the Antofagasta Contest Group will be QRV as CB1H in the ARRL International SSB DX contest. QSL via CE1DY.

ANGOLA, D2. Paulo, CT1ITE is QRV as D2/CT1ITE until the end of March. Activity is in his spare time on 80 to 10 meters, and possibly 160 meters, using CW and SSB. QSL to home call.

CAPE VERDE, D4. Massimo, IZ4DPV will be QRV as D4C in the ARRL International SSB DX contest. QSL direct via HB9DUR.

CANARY ISLANDS, EA8. Romeo, S59M will be QRV as ED8M from La Palma, IOTA AF-004, in the ARRL International SSB DX contest. QSL via W3HNK.

ETHIOPIA, ET. Members of the ET7L team are QRV until April 12. QSL via USOLW.

DL2JGN, Tom, GM4FDM and Ronald, PA3EWP are QRV as TX7EU from Nuku-Hiva Island, IOTA OC-027, until March 15. Activity is on 40 to 10 meters using CW, SSB and various digital modes. QSL via DK2AMM.

SAN ANDRES AND PROVIDENCIA, HKO. A group of operators will be QRV as 5JOP from San Andres Island, IOTA NA-033, from March 6 to 21.

Activity will be on the HF bands and 6 meters. QSL via SP6IXF.

ARUBA, P4. Ken, VE3LA is QRV as P4/VE8DX until March 8. He will be active as P40M in the ARRL International SSB DX contest. QSL both calls direct via LY5W.

BONAIRE, PJ4. Noah, K2NG, David, NA2AA and Brooke, N2BA are QRV as PJ4/home calls. They will be active as PJ4G in the ARRL International SSB DX contest. QSL PJ4G via WA2NHA and all others direct to home calls.

SURINAME, PZ. Matthew, KOBBC and Ronald, NOAT are QRV as PZ5W from Lelydorp until March 8. This includes



an entry in the ARRL International SSB DX contest. QSL via NOAT.

SAO TOME AND PRINCIPE, S9. Bruno, HB9BEI is QRV as S9BK from both islands until March 7. Activity is on the HF bands. QSL to home call.

COSTA RICA, TI. Kamal, N3KS, Andrius, LY7Z and Nathan, N4YDU are QRV as TI5/home calls. They will be active as TI5W in the ARRL International SSB DX contest. QSL TI5W direct via N3YIM and all others via operators' instructions.

ST. KITTS AND NEVIS, V4. Eric, KB1EHE will be QRV as V4/KB1EHE from St. Kitts from March 9 to 13. Activity will be holiday style on 80 to 10 meters using SSB. QSL direct to home call.

BRITISH VIRGIN ISLANDS, VP2V. Kevin, K6TOP is QRV as VP2V/K6TOP until March 7. Activity is on 40 to 10 meters using CW. He will be active as VP2VGG in the ARRL International SSB DX contest. QSL via operator's instructions.

INDONESIA, YB. Operator YBONDT will be a Single Op/Single Band on

40 meter entry in the ARRL International SSB DX contest. QSL via operator's instructions.

VENEZUELA, YV. Members of the Radio Club Venezolano Casa Regional Maracay are QRV using special call sign YW315MCY to celebrate the founding of Maracay 315 years ago. QSL via YV4AA.

THIS WEEKEND ON THE RADIO. The ARRL International SSB DX Contest, NCCC RTTY Sprint, QRP 80-Meter CW Fox Hunt, NCCC CW Sprint, Wake-Up.

QRP CW Sprint, Open Ukraine RTTY Championship, UBA Spring 80-Meter CW Contest, DARC 10-Meter Digital Contest and the SARL Hamnet 40-Meter SSB Simulated Emergency Contest will certainly keep contesters busy this upcoming weekend.

The RSGB 80-Meter Club Data Championship is scheduled for March 7.

The ARS Spartan CW Sprint is scheduled for March 8. The AWA John Rollins Memorial DX CW Contest, Phone Fray, CWops Mini-CWT Test and QRP 40-Meter CW Fox Hunt are scheduled for March 9.

The ARRL National Parks on the Air event runs during all of 2016 to mark the 100th anniversary of the National Park Service.

Please see March 2016 QST, page 83, and the ARRL and WA7BNM contest web sites for details.

CLASSIFIED

Below are items for sale:

Radio Shack PRO 2040 100 channel home scanner \$40

GC Electronics RF Meter 0-10 and 0-100 watts \$15

Mobile 5/8 wave 2 meter antenna, magnetic base \$15

Astron RS-20M 12 volt power supply vy gud cndx \$50

Contact Tom Martin W8JWN

Space Available to push your stuff



UP AREA HAM FEST INFORMATION

From ARRL: May 14, 2016 - Chassell Hamfest, Chassell, MI

No information provide by the Club about location, times, etc.

THIS
Space
Reserved
For
You

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.ccraa.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

Cooks 146.82- 100.0 146.70 - 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 Net1895khzEverynight0100UTCDailey0600UTC

Midcars 7258khz
Daily 0730am EST
0200pm EST

Outhcars Node 9614 Saturday 0900am EST

UP Echolink Node 9617 Sunday 8pm EST

Delta County ARES

I47.150 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:

QTH Com: http://www.qth.com/
QRZ http://www.qrz.com/

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

UP Skywarn: http://kcra-mi.net/skywarn/

http://wireless.fcc.gov/uls/



ABOUT OUR CLUB....

Club Officers

President:

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

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Scott Jarmusch, KA8TFF

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Radio License Exam Contact Persons:

Mike Boileau: 906 563 1350 Terry Moriarity: 715 251 1670

We're on the Web!

http://www.qsl.net/kalddb/

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

Activities:

Second Wednesday of the month the Mich-A-Con Amateur Radio Club meets in the Dick-inson 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

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.



Call Sign	Last Name	First Name	City	Phone	Email
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
KB8SBP	BERTOLDI	BILL	KINGSFORD		
W8BEY	BEY	DANA L.	KINGSFORD	906-774-7937	lst797@charter.net
KE9L	CASWELL	SKIP	IRON MOUNTAIN	906-774-3371	acaswell4238@charter.net
KC8QZG	DAKE	DAVE	NEWBERRY		
KC9ZBC	DOLATOWSKI	SCOTT	GOODMAN	715-633-1006	kc9zbc@live.com
KC9TQR	FERRIS	JOE	FLORENCE	517-589-4386	jrferris@borderlandnet.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		
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		
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
WA8FXQ	MEYERS	BOB	VULCAN	906-396-0119	meyersb@uplogon.com
KC8LRP	MEYERS	MARGE	VULCAN	906-396-8913	mgmeyer@uplogon.com
N8TUM	MILLER	TIMOTHY	FLORENCE	715-696-6517	timmiller.up@gmail.com
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	715-696-6175	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
KG9Y	THOMAS	DAVE	NIAGARA	715-251-1393	kg9y@arrl.net

Annual dues are Payable January 1st.

\$.50 per month for a Family membership.



Please remit dues to: Debbie Garbowski, KD8VTS 203 Camp 5 Road Crystal Falls, MI 49920

Name:				· · · · · · · · · · · · · · · · · · ·	
Call Sign:					
Address: _				· · · · · · · · · · · · · · · · · · ·	
City, State, Zip:		,			
Email Address: _				 	
Phone: _					
ARRL Member? Yes	s No				
Please mak	e check	payable	to:	Mich-A-Coi	n ARC
Annual dues for Ful	ll Membership -				
Single \$20 Fam	nily \$30 Repe	eater Only \$10 _	_		
If family membershi	ip, please list additi	ional:			
Names:					
Call signs:					
City, State, Zip:					

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