



MICH-A-CON

Iron Mountain,
Dickinson County, Mich

September 2019

Meeting Reminder: Second Wednesday of the Month

Which is **September 11, 2019** at 07:00 PM at the Dickinson Library, Iron Mountain. Please be there and support the cause of Amateur Radio.

From The President

Words from the President

What a hectic last few months dealing with the IRS! As I have mentioned at several meetings, I have been calling and writing the IRS to change our tax classification from a Partnership to a Not for Profit. In April I submitted our tax return for 2018. Since I couldn't file a form 990-N, used for Not for Profit entities, I sent a Form 1065 and a Schedule K-1. I wrote on the form that the information requested did not apply to our group because we had no income and no tax responsibility. Their reply will be presented and discussed at Wednesday's meeting. BE THERE!!!

Al will be here on September 14th at 12:30 to finish repeater antenna work.(Weather Permitting) Your assistance on the ground would be appreciated.

This summer has been a bust for ham radio! My antennas have been disconnected for weeks. If it wasn't for FT8, I doubt if I would have many contacts in the log.

Thanks to Jack for his propagation program. I'm sorry that I couldn't see it. Stomach flu hit me the morning of the meeting. Kudos to Scott for running the meeting.

Tentative date for the 50th Anniversary party will be October 12. I'm waiting to hear from Mike's on Main in Norway for a confirmation.

See you Wednesday at 7:00 in the library.

73, Tom W8JWN

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MICH-A-CON AMATEUR RADIO CLUB MINUTES OF August 14, 2019

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

Secretary Report

Minutes of the July 10th, 2019 meeting were read and approved.

Treasurer Report

There was no Treasurer report.

Repeater Report

The repeater was reported to be working fine.

No work will be done on the repeater during August. Al Augustine is expecting to be here about mid-September. Terry Moriarity summarized the work that still needs to be done.

Old Business

There was no discussion of old business.

**New Business**

Burt Armbrust reported that he made copies of documents related to the club taxes for President Tom Martin.

Bill Grabowski noted that at present club expenses are greater than our income. This initiated a discussion on ways the club might raise money. It was suggested that we look at club income and expenses over the past three years to see how it looks.

In a calendar note, the Appleton hamfest is scheduled for Sunday, November 3rd.

Bill Grabowski reported that he sold some items from the Leroy Anderson estate at the Tomahawk hamfest. There are proceeds to go to the club treasury.

Presentation

Jack Hudson W9MU gave a presentation on propagation entitled "Living on the Blue Edge" in which he discussed factors affecting propagation and identified several software tools that are available to help improve the chances of making contacts. The presentation was well-received.

Adjournment

The meeting adjourned at 8:20 (Bruce LaLiberte/Burt Armbrust).

For the Good of the Order

Attendees reported on their recent activities.

There was no 50/50 drawing.

Attendees

Scott Jarmusch	KA8TFF	Jack Hudson	W9MU
Joe Ferris	KC9TQR	Jan Schafer	Visitor
Burt Armbrust	WB8EBS	Joyce Williams	Visitor
Gary Schafer	K4FMX		
Bill Grabowski	KD8VTT		
Brian Lucas	W9BGL		
Bruce LaLiberte	KD9HQD		
Terry Moriarity	K9TRY		
Tim Miller	N8TUM		
Sam Holmes	N8ATS		



News

SURVEY FOR HAM EXAMS IN YOUR AREA:

By W8FWG For: CCRAA WEB PAGE

Reply to George R. Thumer

E-Mail: w8fwg@arrl.net

Hi: Please fill out this form and return to me at my E-Mail address of w8fwg@arrl.net

It is for our web page (www.ccraa.net) THANK YOU!

SURVEY FOR HAM EXAMS IN YOUR AREA:

Contact person: _____

Call Sign: _____

Telephone Nr (906) _____

E-Mail address: _____

Exam Location address: _____

Date of Exam ____/____/2019

Time of Exam: _____ Am? Pm?

Eastern Time? _____

Central Time? _____

Web Page: _____

City: _____

State: _____

County: _____

Zip Code: _____

Again: Please forward to MY E-Mail address at: w8fwg@arrl.net Thank you!

73,

George R. Thumer, W8FWG



UPDATED GREAT LAKES HAMFEST

Here is an update to the current Great Lakes Division ARRL Sanctioned Hamfest Schedule covering September and October. These swaps have received their sanctioning approval from ARRL HQ at the time of this publication.

9/7/19	GRAHamfest	Wyoming, MI
9/7/19	CMARC Hamfest	Okemos, MI
9/7/19	Greater Louisville	Shepherdsville, KY
9/8/19	Findlay Hamfest	Findlay, OH
9/14/19	Central Kentucky	Richmond, KY
9/15/19	Adrian Hamfest	Adrian, MI
9/21/19	GMARC Trunk Swap	Shelby Twp, MI
9/21/19	OHKYIN ARS Hamfest	Cincinnati, OH
9/22/19	Cleveland Hamfest	Berea, OH
9/22/19	Flying Beers Int'l	Ferndale, MI

9/28/19	Paintsville Hamfest	Paintsville, KY
10/5/19	Alpena Swap	Alpena, MI
10/5/19	Scioto Valley	Chillicothe, OH
10/5/19	Vette City	Bowling Green, KY
10/12/19	Northwest Ohio ARC	Lima, OH
10/19/19	Muskegon Color Tour	Muskegon, MI
10/20/19	Kalamazoo	Kalamazoo, MI
10/26/19	Hazard Hamfest	Hazard, KY

 ARRL Great Lakes Division
 Director: Dale R Williams, WA8EFK
wa8efk@arrrl.org

Centennial Committee Prepares for Trial Run of WW0WWV

ZCZC AX07
 QST de W1AW
 Special Bulletin 7 ARLX007
 From ARRL Headquarters
 Newington CT August 20, 2019
 To all radio amateurs

The WWV Centennial Committee reports that it will conduct a trial run of special event station WW0WWV over the August 24/25 weekend. Radios and antennas began arriving last week, and a tower and beam will be erected, along with several vertical antennas. WW0WWV will be set up adjacent to the WWV transmitter site in Fort Collins, Colorado. WWV turns 100 years old on October 1.

"We'll be testing band and notch filtering, in an attempt to reign in the extreme RF environment created by WWV and WWVB," said Dave Swartz, W0DAS, of the Northern Colorado Amateur Radio Club (NCARC).

The club will carry out the special event operation in conjunction with the WWV Amateur Radio Club and the National Institute of Standards and Technology (NIST), which operates WWV/WWVH/WWVB.

The special event site is within 1/3 of a mile of all six WWV transmitters and the 50 kW WWVB transmitter. "On-air tests will start Saturday afternoon, August 24, and run through Sunday, August 25," Swartz said, adding that organizers will post specific times and frequencies on the WWV Centennial Committee website.

The WWV Centennial special event is set to run from Septem-

ber 28 through October 2, and round-the-clock operation will take place on CW, SSB, and digital modes. Operations will shift among HF bands following typical propagation and will include 160 meters as well as satellites (SO-50, AO-91, and AO-92) and 6-meter meteor scatter.

Up to four stations will be on the air for routine operations. A fifth station will schedule contacts with schools, universities, and museums, as well as conducting unscheduled contacts. The additional station will periodically broadcast an AM carrier from a radio locked with WWV's 10 MHz signal.

"At this point we have filled our operator's slots and met equipment goals, but we need more financial resources to cover basic operating expenses, return shipping, and site logistics," Swartz said. Members of the Amateur Radio industry have contributed equipment, including radios, amplifiers, and antennas.

NIST has announced that it will not be able to open the doors of WWV to the public for the event. "Due to a number of reasons, the scope of the formal celebration will be limited to only 100 invited participants," the WWV Centennial Committee announced. "WW0WWV will be the main public event for the centennial celebration."

Visit the WWV Centennial Committee website at <http://www100.com/> to see how you can get involved

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ARLB032 W1AW 2019 Summer/Spring Operating Schedule

QST de W1AW
ARRL Bulletin 7 ARLB007
From ARRL Headquarters
Newington CT March 11, 2019
To all radio amateurs

ARLB007 W1AW 2019 Spring/Summer Operating Schedule

Morning Schedule:

Time	Mode	Days
1300 UTC (9 AM ET)	CWs	Wed, Fri
1300 UTC (9 AM ET)	CWf	Tue, Thu

Daily Visitor Operating Hours:

1400 UTC to 1600 UTC - (10 AM to 12 PM ET)
1700 UTC to 1945 UTC - (1 PM to 3:45 PM ET)

(Station closed 1600 to 1700 UTC (12 PM to 1 PM ET))

Afternoon/Evening Schedule:

2000 UTC (4 PM ET)	CWf	Mon, Wed, Fri
2000 "	CWs	Tue, Thu
2100 " (5 PM ET)	CWb	Daily
2200 " (6 PM ET)	DIGITAL	Daily
2300 " (7 PM ET)	CWs	Mon, Wed, Fri
2300 "	CWf	Tue, Thu
0000 " (8 PM ET)	CWb	Daily
0100 " (9 PM ET)	DIGITAL	Daily
0145 " (9:45 PM ET)	VOICE	Daily
0200 " (10 PM ET)	CWf	Mon, Wed, Fri
0200 "	CWs	Tue, Thu
0300 " (11 PM ET)	CWb	Daily

Frequencies (MHz)

CW: 1.8025 3.5815 7.0475 14.0475 18.0975 21.0675 28.0675
50.350 147.555
DIGITAL: - 3.5975 7.095 14.095 18.1025 21.095 28.095 50.350
147.555
VOICE: 1.855 3.990 7.290 14.290 18.160 21.390 28.590 50.350
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 2230 UTC (6:30 PM ET), 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 0000 UTC (8 PM ET) Thursdays and 0000 UTC (8 PM ET) Fridays.

Audio from W1AW's CW code practices, and CW/digital/phone bulletins is available using EchoLink via the W1AW Conference Server named "W1AWBDCT." The monthly W1AW Qualifying Runs are presented here as well. The CW/digital/phone 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.

FCC licensed amateurs may operate the station from 1400 UTC to 1600 UTC (10 AM to 12 PM ET), and then from 1700 UTC to 1945 UTC (1 PM to 3:45 PM ET) Monday through Friday. Be sure to bring your current FCC amateur license or a photocopy.

The complete W1AW Operating Schedule may be found on page 93 in the March 2019 issue of QST or on the web at <http://www.arrl.org/w1aw-operating-schedule>.

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ARRL MICHIGAN SECTION NEWS

Greetings to all the Amateurs of Michigan,

Just as soon as we get used to all the warm weather, the first hints of seasonal change are already in the air. Soon, we'll be discussing how cold it's become. I hope you get a chance to get out and enjoy all that Michigan has to offer, and maybe even try some portable operation!

Clubs Come Together For Maker Faire

It's been said that amateur radio operators were some of the original makers, going back to the days when very few commercial rigs were even available. Several radio clubs came together to represent amateur radio at the Makers Faire last month in Dearborn. Our thanks to all those folks, and I'm looking forward to more details from the teams soon.

2019 TAPR Digital Conference in MICHIGAN!

Mark your calendars now for the 2019 ARRL/TAPR Digital Communications Conference, September 20th through September 22nd being held at the Marriott Detroit Metro Airport Hotel. The conference schedule includes technical and introductory forums, demonstrations, a Saturday evening banquet and an in-depth Sunday seminar. This conference is for everyone with an interest in digital communications – beginner to expert! Call 972-671-8277 or online at www.tapr.org/dcc

Send a positive message to the organizers that Michigan is the place to hold these conferences!

Tell Me Something Good!

Speaking of clubs, I am sure your organizations are doing new and fun things. Why not drop me a note about what is happening in your area? I'd love to hear from you!

Section Manager Nominations Are Open

As announced in the August 2019 edition of QST, it's your opportunity to submit nominations for Michigan Section Manager. Details and forms are available at the ARRL Website, www.arrl.org/section-terms-nomination-information.

Petitions must be received by 4PM Eastern time September 6th, 2019. This is your opportunity to lead the Michigan Section!

Michigan ARRL Section Staff Travel Plans

September 7th, 2019 CMARC Hamfest (K8JK)
September 7th, 2019 GRARA Hamfest (WA8EFK)
September 15th, 2019 Adrian Hamfest (K8JK)

Hospitality Thanks

Gladwin Area Hamfest U.P. Swap

Michigan Public Service Activities

Michigan Section Traffic/ARPSC Nets (all times local)
Please note that time adjustments may be necessary due to propagation changes. Contact your net manager for alternate frequencies and/or times.

MACS - MI Amateur Communications System 3.952 1000 Daily
UPN – Upper Peninsula Net 3.921 1700 Daily; Noon Sun
MIARPSC – MI Amateur Radio Public Service Corps 3.932 1700
Sun

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) 2000 Tu,
Th, Sat

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

D8EN - District 8 Emergency Net 3.909 Wed 2000

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

Michigan Amateur Radio Public Service Corps (ARPSC) Activities for July 2019

Station Activity Reports (SAR) for July 2019

WB8WKQ 428, N5MKY 147, K8ED 101, WB8TQZ 93, WD8MWD 86, K8RDN 83, K8BKM 54, WD8USA 51, KE8CEH 36, KB8RCR 29, KD8ZCM 28, W8DW 18, KB8PGW 11, WB8RCR 9, KE8CYC 7, KE8BYC 1

Public Service Honor Roll (PSHR) for July 2019:

WD8MWD 315, KE8BYC 297, N5MKY 275, WD8USA 205, WB8RCR 199, K8RDN 148, KC8YVF 144, KD8ZCM 123, KB8RCR 113, WB8TQZ 110, K8ED 100, W8DW 96, WB8WKQ 90, KE8CYC 76, KE8CEH66, KB8PGW 51

Brass Pounder's League (BPL): No reports this month

Net traffic for July 2019:

Michigan Amateur Communications System 155
 Southeastern Michigan Traffic Net 54
 Michigan Traffic Net 54
 The Michigan Net 42
 Michigan VHF Traffic Net 41
 Upper Peninsula Net 39
 Great Lakes Emergency Traffic Net 30
 Michigan Digital Traffic Net 14
 Northern Lower Eastern Upper Peninsula Net 1
 Monroe County ARPSC Net 1

NTS person-hour Value for July 2019: \$ 35,881
 (NOTE NTS PERSON VALUE ONLY)

More information is available at <http://nts-mi.org/>.

Come join us on our traffic and public service nets.
 A hearty thanks to the hundreds of volunteers across the State of Michigan who work hard as volunteers to hone their skills month after month to make sure they are ready for any situation that may arise. Our ARPSC and NTS programs are an integral part of AuxComm, which in turn is an integral part of the Michigan State Police Homeland Security Division. Public service is in the DNA of Amateur Radio, one

of many reasons we enjoy so many radio frequencies to utilize, experiment with, and enjoy.

Final Thoughts

We duplicate this newsletter on the section website (www.mi-arrrl.org) and also mail this out in text form to the ARRL membership. I am interested in hearing from you about just sending a link to the website rather than duplicate the text? Drop me a note!

Thanks to all the radio amateurs who continue to make the hobby great!
 Get Active, Get Involved, and Get On The Air! See you all at a swap or club meeting soon!

73
 Jim K8JK

 ARRL Michigan Section
 Section Manager: James A Kvochick, K8JK
k8jk@arrrl.org



Dales Tales

Greetings, welcome to "Dale's Tales" for September, 2019.

At several recent hamfests, I have had the opportunity to seriously discuss the status of our Great Lakes Division radio clubs with some of their members. The range of comments was extraordinary, from "very healthy and growing" to "desperate and dying". The latter of course was very disappointing news. Why the differences? We did discuss them and also talked about what possible changes had affected the dying clubs.

[This is where this message gets tenuous.] The members' comments seemed often to relate to the effectiveness of the current slate of officers and/or their immediate predecessors. This is of course reported from the members' personal perspective and may have no basis in fact.

However, for most of us, perception is pretty close to reality, so the comments included items such as these: Some leaders had grown weary of the job and could not recruit replacements, others seemed unaware of their plight, others seemed to have no plans for the club while other leaders pointed their fingers at the "other guy" being at fault, not facing the reality of their own situation.

In the meantime, the really successful clubs are reported to

have truly active and involved leadership, programs at their meetings, guest speakers, club projects, special interest groups, active local nets, club field activities, club parties, and importantly a PLAN to make themselves a success.

Perhaps it is time for the less than successful clubs to take a self-examination and ask themselves "Where do we want to go and how do we want to get there?" Frankly folks, if your club Board of Directors does not occasionally meet and plan for the club's future, you may want to consider urging them to move in that direction. Strong words I am sure, but today, one has a choice to do the things necessary to succeed, adapt to change, and CREATE excitement and growth, or face the unfortunate alternative: a slow and certain demise. From some of the members from those clubs on that slippery slope, I have heard the stories of "power struggles", "club empires" "entrenched officers" and a host of other reasons alleging change is not possible. Really?

Club members need to stand up and take action. Don't allow a continuing stagnant condition to exist in your club, empower yourselves to make change. Set some goals to make your club the success it needs to be.

It only takes two or three to create a "wake up call" and encourage the needed changes. Plans and goals are critical to a

club's future, have at it!

To those clubs on the successful part: congratulations! Keep it rolling! To those ready to make the paradigm shift to a new adventure, best wishes for your renewed success.

TOM'S TOME Comments from your ARRL Vice Director Tom W8WTD.

Of the many ways that ham radio has changed over the years, one of them has to be in the operating habits of many of us. It used to be that you could find contacts on the HF bands easily, whenever they were open. (As an operator who prefers SSB, I wish we were at a different point in the sunspot cycle. Oh well....) Of course, there are still some contacts to be made. But not as easily. Maybe our schedules provide us with so many more things to do that we allocate less time to radio.

So "events" become more important. Probably the biggest event to bring out lots of activity of HF was the National Parks on the Air several years ago. It was the right combination of contesting, contacting, portable operating, etc., to really make a hit with hams and get a lot of radio waves stirred up.

There are still lots of operating events to take advantage of. For example, the state QSO parties usually do well for participation. So if you're looking for an "event," you can probably find something to operate in most weekends.

A short-term "event" sponsored by ARRL is coming up right now. The Hiram Percy Maxim Birthday Celebration starts on August 31st and runs through September 8th. Full details are on the ARRL website or in the September issue of QST.

Some of us need an "excuse" to get on the air, or at least an assurance that we'll find stations to work. This is a good one.

Hope we take advantage of it.

--73, Tom W8WTD Vice Director, Great Lakes Division

OUR GREAT LAKES DIVISION web page does carry news from some of the recent events in the Division, useful links and information as well as some neat photos supplied from around the Division. Check it out:

<http://arrl-greatlakes.org/>

Be sure to check your ARRL Section's news pages for the latest local happenings, club and net information.

HAMFESTING: Here is the current Great Lakes Division ARRL Sanctioned

Hamfest Schedule covering the next few months. These swaps have received their sanctioning approval from ARRL HQ at the time of this publication.

If you plan to request ARRL Hamfest Sanctioning, please be sure to do it well in advance of your Hamfest date, as this allows adequate time for QST Listings. Be sure to invite your ARRL Officials as soon as your date is set. Plan ahead and request your ARRL Officials to attend. With 52 weeks and 70+ hamfests in the Great Lakes Division, things do double up a little and we need to share duties.

9/7/19	GRAHamfest	Wyoming, MI
9/7/19	CMARC Hamfest	Okemos, MI
9/7/19	Greater Louisville	Shepherdsville, KY
9/8/19	Findlay Hamfest	Findlay, OH
9/14/19	Central Kentucky	Richmond, KY
9/15/19	Adrian Hamfest	Adrian, MI
9/21/19	GMARC Trunk Swap	Shelby Twp, MI
9/21/19	OHKYIN ARS Hamfest	Cincinnati, OH
9/22/19	Cleveland Hamfest	Berea, OH
9/22/19	Flying Beers Int'l	Ferndale, MI
9/28/19	Paintsville Hamfest	Paintsville, KY
10/5/19	Alpena Swap	Alpena, MI
10/5/19	Scioto Valley	Chillicothe, OH
10/12/19	Northwest Ohio ARC	Lima, OH
10/19/19	Muskegon Color Tour	Muskegon, MI
10/20/19	Kalamazoo	Kalamazoo, MI
10/26/19	Hazard Hamfest	Hazard, KY

73,
Were you on the air today??? Ham it up!

Dale Williams WA8EFK
Director
Great Lakes Division
wa8efk@arrl.org

ARRL PROPAGATION BULLETIN

ZCZC AP36

QST de W1AW

Propagation Forecast Bulletin 36 ARLP036

From Tad Cook, K7RA

Seattle, WA September 6, 2019

To all radio amateurs

Old Solar Cycle 24 sunspots returned this week, but for only two days (Sunday and Monday) with a sunspot number of 12. Average daily solar flux increased from 66 reported in last week's Propagation Forecast Bulletin ARLP035 to 67.4 this week.

Radiation from a coronal hole increased the average planetary A index from 5.7 last week to 19.9 this week, with the level on Saturday and Sunday at 38 and 45. In Fairbanks, Alaska's College A index reached 59 and 86, and at one point on Sunday the K index was 8!

The College K index (a component measured every 3 hours, and used to calculate the daily A index) had not previously reached 8 since twice in 2018, on August 26 and two weeks later on September 11.

Predicted solar flux is 68 on September 6-13, 67 on September 14-22, 68 on September 23 through October 6, then 67 on October 7-19 and 68 on October 20.

Predicted planetary A index is 10, 8 and 8 on September 6-8, 5 on September 9-22, 8 on September 23, 5 on September 24-25, then 10, 35, 44, 24 and 8 on September 26-30, 5 on October 1-3, 8 on October 4-5, 5 on October 6-19 and 8 on October 20.

Geomagnetic activity forecast for the period September 06-October 02, 2019 from F.K. Janda, OK1HH.

"Geomagnetic field will be:

Quiet on: September 10-11, 15-16, 20 (-21)

Quiet to unsettled on: September 8, 13, 18-19, 22, (25)

Quiet to active on: September (9, 12, 14, 17,) 23-24, 30

Unsettled to active on: September (6-7, 26)

Active to disturbed: September (27-29)

"Solar wind will intensify on: September 6, 16-18, (24-27,) 28-30. October 1-2

"- Parenthesis means lower probability of activity enhancement.

- The predictability of changes is lower at present."

Lance Collister, W7GJ of Frenchtown, Montana wrote:

"Even though ionospheric propagation (other than Es) seems a distant memory for most of us in northern latitudes, low solar activity means great conditions for 6m EME.

"And activity on 6m EME has been steadily increasing due to the increased use of the very sensitive digital mode of JT65A and the rapidly expanding 6m arrays and amplifiers around the world!

"If you are having trouble keeping track of all the recent activity on 6m EME, you are not alone! This has been an amazing year for 6m EME DXpeditions! I count 14 new DXCC being activated on 6m EME this year. In addition to new DXCC such as ZL7DX and 9K2GS home stations coming on the air this year, there already have been 6m EME DXpeditions to V84SAA, T77C, CP1GJ, and CY9C! But be sure to get things ready for even more to come! In the next few months, watch for S79GJ, HB0/S59A, A35JT, VP6R, ZK3A, A21EME, 5H3EME, VP8DBL and others!"

Peter Greene, N2LVI of Marlton, New Jersey noted that I mistakenly called the solar flux measurements at 10.7 GHz, when I should have said 10.7 cm and 2.8 GHz.

Peter sent us a resource for historical solar flux values:

ftp://ftp.geolab.nrcan.gc.ca/data/solar_flux/

He noted:

"On a monthly basis, the lowest average since 1947 was in May 1954 (65.36). The most recent low was July 2008 (65.67)."

Jim, WB6BET sent similar historical data.

K3WWP also offered data. But look at his website documenting his long devotion to CW and QRP:

<http://k3wwp.com>

Jeff, N8II in West Virginia sent what he called a "brief, late report":

"I took part in the Kansas QSO party August 24-25. Propagation on the 24th was definitely near rock bottom. Kansas is a good distance from here for a single F2 hop about 1400-1500

miles to the western border. Starting 2000Z signals weakened on 20M, by 2100Z activity was quite low and when I returned at 2220Z the band was nearly dead, but I still managed about 6-8 more QSOs, the last with extremely weak signals. And 40 meter signals were also weak until about 2345Z which is 15 minutes before my sunset. Despite similar SFI, Sunday was much better with good conditions on 20M throughout the day and 40 was good from 1400-1530Z.

"The mobiles were all easy to hear and work on 20 and they were much busier with more callers than Saturday. 15 appeared to be completely closed to Kansas. I heard and worked KH6LC on 15 CW around 1700Z.

"Despite the poor conditions, thanks to good Kansas activity, I managed to work all 105 counties, the last 19 minutes before the end at 1941Z. I also worked all 56 of the active 1x1 special KSQP calls. So, even at the cycle bottom, it is possible to have fun and do well."

Dr. Tamitha Skov, WX6SWW released a new video on September 5:

<https://youtu.be/oYTHdtaCrY>

I will be giving a talk about my history in ham radio (I was licensed at age 12, many years ago), propagation, (and they said I can talk about anything else I want) at the Western Washington DX Club in Seattle on Tuesday, September 10. See <https://www.wwdxc.org/> for details.

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

For more information concerning radio propagation, see the ARRL Technical Information Service web page at, <http://arrl.org/propagation-of-rf-signals>. For an explanation of 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/>.

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 August 29 through September 4, 2019 were 0, 0, 0, 12, 12, 0, and 0, with a mean of 3.4. 10.7 cm flux was 65.9, 66.5, 66.4, 67.1, 68.8, 68.6, and 68.6, with a mean of

67.4.

Estimated planetary A indices were 3, 10, 38, 45, 21, 10, and 12, with a mean of 19.9. Middle latitude A index was 4, 10, 29, 33, 19, 11, and 11, with a mean of 16.7.

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ARRL DX NEWS

ZCZC AE35
QST de W1AW
DX Bulletin 35 ARLD035
From ARRL Headquarters
Newington CT September 5, 2019
To all radio amateurs

This week's bulletin was made possible with information provided by AA3B, K5SL, The Daily DX, the OPDX Bulletin, 425 DX News, DXNL, Contest Corral from QST and the ARRL Contest Calendar and WA7BNM web sites. Thanks to all.

SAMOA, 5W. Heli, DD0VR and Bigi, DE3BWR will be QRV as 5W0VR from September 9 to 16. Activity will be on the HF bands using SSB. QSL via DD0VR.

GHANA, 9G. Chip, KB1QU will be QRV as 9G5QU from September 8 to 21. Activity will be on 40, 30 and 20 meters using CW, FT8, FT4 and some SSB. QSL direct to N4GNR.

WEST MALAYSIA, 9M2. Special event station 9M16KING is QRV during September to honor Malaysia's 16th head of state. Activity is on 80

to 10 meters using CW, SSB and various digital modes. QSL via operators' instructions.

BURUNDI, 9U. Francesco, IV3TMM is QRV as 9U3TMM until September 17. Activity is on 60 to 6 meters using SSB and various digital modes. QSL via LoTW.

NIUE, E6. Andrew, OZ5E will be QRV as E6AN from September 7 to 10. Activity will be holiday style on the HF bands using SSB, FT8 and some CW. QSL direct to home call.

BALEARIC ISLANDS, EA6. Alessandro, IU2IBU will be QRV as EA6/IU2IBU from Punta Prime, Minorca Island, from September 7 to 13. Activity will be holiday style on 80 to 10 meters using SSB. QSL to home call.

KYRGYZSTAN, EX. A group of operators are QRV as EX0QP from Lake Issyk Kul until September 15. Activity is on the HF bands using CW, SSB, RTTY and FT8. QSL via SP6OJK.

JAPAN, JA. Operators Take, JI3DST and Masa, JR8YLY are QRV as JI3DST/0 and JR8YLY/0, respectively, from Sado Island, IOTA AS-206, until September 11. Activity is on 80 to 6 meters using CW, SSB, RTTY and FT8. QSL to home calls.

MONGOLIA, JT. Operators RA0SMS, UA0SC, UA0SE, UA0SRQ and UA0SU are QRV as JT7A from the Khovsgol Nuur National Park until September 9. Activity is on the HF bands using CW, SSB, FT8 and FT4. QSL via RA0SMS.

FAROE ISLANDS, OY. Operators DL1ZBO, DL2VU and DL5FF are QRV as OY/home calls until September 12. Activity is on the HF bands using CW, SSB and various digital modes. They will be active in the Russian RTTY World Wide contest. QSL to home calls.

BONAIRE, PJ4. Randy, K5SL will be QRV as PJ4/K5SL from September 7 to 14. Activity will be holiday style on 40, 30, 20 and 17 meters using mainly CW and possibly SSB. QSL to home call.

GREECE, SV. Zdeno, OK1MBZ will be QRV as SV8/OK1MBZ/p from Kerkyra, IOTA EU-052, from September 10 to 20. QSL to home call.

WESTERN KIRIBATI, T30. Operators Kaspars, YL1ZF, Yuris, YL2GM Jack, YL2KA and Kristers, YL3JA are QRV as T30L until September 25. Activity is on 160 to 6 meters using CW, SSB, RTTY and FT8. QSL via YL2GN.

PALAU, T8. Nobu, JA0JHQ is QRV as T88PB from Koror, IOTA OC-009, until September 9. This includes being an entry in the All Asian DX SSB contest. QSL direct to home call.

ANTIGUA AND BARBUDA, V2. Bud, AA3B will be QRV as V26K from Antigua, IOTA NA-100, from September 8 to 20 while performing maintenance on the station. Activity will be in his spare time on the HF bands using primarily CW. QSL to home call.

INDONESIA, YB. Station 7I1TI is QRV from Tunda Island, IOTA OC-237, until September 8. Activity is on the HF bands. QSL via HA3JB.

KOSOVO, Z6. Station Z62FB has occasionally been QRV on 20 meters using SSB between 2000 to 2200Z. QSL via operator's instructions.

THIS WEEKEND ON THE RADIO. The All Asian DX Phone Contest, IARU Region 1 SSB Field Day, RSGB SSB Field Day, North American CW Sprint, NCCC RTTY Sprint, NCCC CW Sprint, Russian RTTY World Wide Contest, CWOps CW Open, Wake-Up, QRP CW Sprint, SKCC Weekend CW Sprintathon, Nebraska QSO Party, Ohio State Parks on the Air, AGCW Straight Key 40-Meter CW Party, PODXS 070 Club Jay Hudak Memorial 80-Meter Sprint and the WAB 144 MHz QRO Phone will certainly keep contesters busy this upcoming weekend.

The RSGB 80-Meter Autumn SSB Series and 4 States QRP Group Second Sunday Sprint are scheduled for September 9.

The CWops Mini-CWT Test and Phone Fray are scheduled for September 11.

The Hiram Percy Maxim 150th Birthday Celebration runs until September 8.

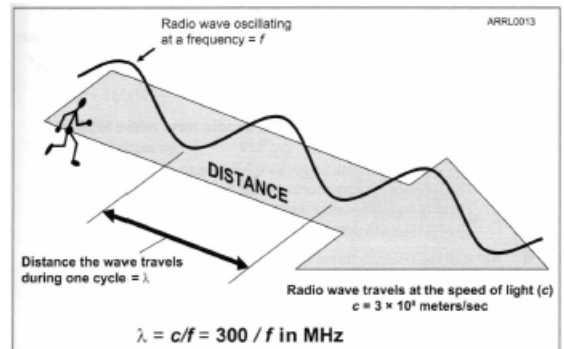
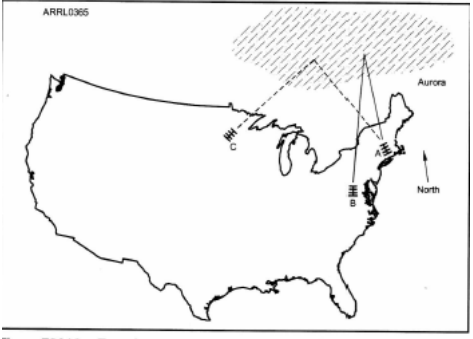
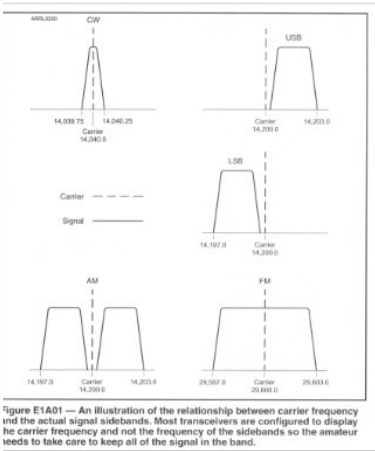
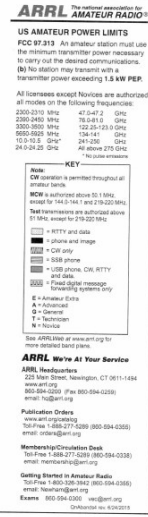
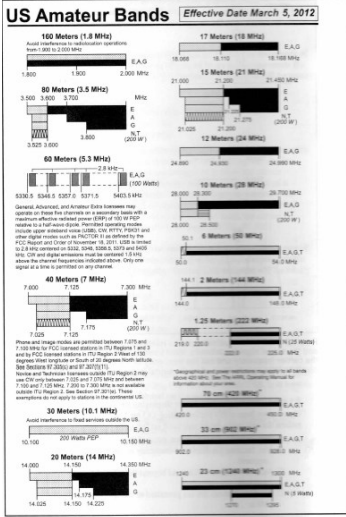
The Canadian National Parks on the Air, CNPOTA, operating event runs for the entire year of 2019, with special stations active from Canada's parks and historic sites.

Please see September QST, page 80, and the ARRL and WA7BNM Contest Web Sites for details.

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Review

This section is dedicated to refreshing what qualified our Licensing. Something different will appear each month. Enjoy....



As a radio wave travels, it oscillates at the frequency of the signal. The distance covered by the wave during the time it takes for one complete cycle is its wavelength.

T1B03 Which frequency is within the 6 meter band?

- A. 49.00 MHz
- B. 52.525 MHz
- C. 28.50 MHz
- D. 222.15 MHz

T2B02 What term describes the use of a sub-audible tone transmitted along with normal voice audio to open the squelch of a receiver?

- A. Carrier squelch
- B. Tone burst
- C. DTMF
- D. CTCSS

- T3B01 What is the name for the distance a radio wave travels during one complete cycle?
- A. Wave speed
 - B. Wave form
 - C. Wave length
 - D. Wave spread
- G1A14 In what ITU region is operation in the 7.175 to 7.300 MHz band permitted for a control operator holding an FCC issued General Class License?
- A. Region 1
 - B. Region 2
 - C. Region 3
 - D. All three regions
- G2B03 If propagation changes during your contact and you notice increasing interference from other activity on the same frequency, what should you do?
- A. Tell the interfering stations to change frequency
 - B. Report the interference to you local Amateur Auxiliary Coordinator
 - C. As a common courtesy, move you contact to another frequency
 - D. Increase power to overcome interference
- G3A14 How are radio communications usually affected by the charged particles that reach the Earth from solar coronal holes?
- A. HF communications are improved
 - B. HF communications are disturbed
 - C. VHF/UHF ducting is improved
 - D. VHF/UHF ducting is disturbed
- E1A14 What is the maximum bandwidth for a data emission on 60 meters?
- A. 60 Hz
 - B. 170 Hz
 - C. 1.5 kHz
 - D. 2.8 kHz
- E2A14 What technology is used to track, in real time, balloons carrying amateur radio transmitters?
- A. Radar
 - B. Bandwidth compressed LORAN
 - C. APRS
 - D. Doppler shift of beacon signals
- E3A14 From the contiguous 48 states, in which approximate direction should an antenna be pointed to take maximum advantage of aurora propagation?
- A. South
 - B. North
 - C. East
 - D. West



ANSWERS

- T1B03: B: [97.301(a)] The Technician VHF/UHF is between 50.0 to 54.0 MHz. Remember you can use the formula $f(\text{in MHz}) = 300 / \text{wavelength}(\text{in meters})$ or $\text{wavelength}(\text{in meters}) = 300 / f(\text{in MHz})$ to convert between frequency and wavelength.
- T2B02: D: Repeater access tones are known by various names: Continuous Tone Code Squelch System (CTCSS), PL (for Private Line, the Motorola trade name) or sub-audible.
- T3B01: C: The wavelength or a radio wave is the distance that it travels during one complete cycle.
- G1A14: B: [97.301(d)] Amateur allocations vary among the different ITU regions of the world. FCC Rule 97.301 contains a compete listing of allocations for US hams.
- Parts (a) and (d) of that section contain the Region 2 frequency allocations that apply to General class amateurs operation from the US.
- G2B03: C: Good operating practice suggests that whoever can most easily resolve an interference problem be the one to do so. If you begin to have interference from other activity on the same frequency, moving your contact to another frequency may be the simplest thing to do. Switching antennas or rotating a beam antenna may also achieve the same results.
- G3A14: B: The corona is the Sun's outer layer. Temperatures in the corona are typically about two million degrees Celsius, but can be more than four million degrees Celsius above an active sunspot region. A coronal hole is an area of somewhat lower temperature. Matter ejected through such a 'hole' is in the form of plasma, a highly ionized gas made up of electrons, protons, and neutral particles. If the 'jet' of material is directed toward Earth it can result in a geomagnetic storm on Earth, disrupting HF communications.
- E1A14: D: [97.303(h)] Operation on 60 meters is restricted to five 2.8 kHz wide channels centered on 5332 kHz, 5348 kHz, 5373 kHz, and 5405 kHz with USB, data, and CW signals. This secondary allocation to amateurs is restricted in order to maintain compatibility with non-amateur stations who are the primary users of the band.
- E2A14: C: APRS (Automatic Packet Reporting System) packets containing latitude, longitude, and altitude information are generated by trackers (small automated stations) carried aloft by balloons. The same technology can be used to track radio-controlled craft.
- E3A14: B: Auroras occur around the magnetic poles. Stations in the Northern Hemisphere point their antennas toward the North Pole – or toward the North Magnetic Pole if they are close enough for there to be significant difference in bearings. Aim your antenna in different directions to find strongest reflection.

LINKS AND STUFF

Under re-construction. Watch for

Copper Country Podcast

George, (W8FWG) is offering this new service from the ARRL. It is entitled "**So Now What?**" and is geared to the NEW HAM. We will continue with the original podcast of ("**The Doctor Is In**") too, and the two will alternate from week to week, each Friday night at 9 pm Eastern time over the Calumet Repeater 147.315 MHz PL-100.0 Hz.

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

Copper Country Radio Amateur
Dollar Bay, MI
www.ccrac.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 — 100.0 444.85 — 100.0
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
South Republic	146.82 + 100.0
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

Copper County ARES
146.88
Wednesday 9pm EST

**Mich-A-Con Social and
ARES**
146.85
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://kcra-mi.net/skywarn/>
Band Conditons: <http://bandconditions.com/>



ABOUT OUR CLUB....

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Treasurer:

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

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 Yaesu DR 1 digital and Analog repeater Frequency. 146.85 minus offset, 100 hz PL tone encode and decode Power 50 watts. The Controller is an Arcom RC 210 . It is also System Fusion capable.

. The 440 MHZ repeater is a GE Master II 444.85, plus offset, 100 hz pl tone. 35 watts output. The Controller is a Arcom 210.

The 2 meter and the 440 can be linked. 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.

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.

SkyWarn Spotters (2018)

Steve Johnson	K8CRY	Millie Hill
Tom Martin	W8JWN	Millie Hill Overlook
Burt Armbrust	WB8EBS	Hill above Wells Fargo, along US-2
Skip Caswell	KE9L	Merriman/Granite Bluff area
Barry Perron	KC9NFT	Keyes Peak
Bob Meyers	WA8FXQ	Faithhorn area (if not in Copper Country)
Terry Moriarity	K9TRY	Niagara
Dave Thomas	KG9Y	Niagara
Bill Grabowski Debbie Grabowski	KD8VTT KD8VTS	Mansfield Township/Johnson Potato Farm area
Sam Holmes	N8ATS	Pike Plains, Dunbar
Joe Ferris	KC9TQR	Vicinity of CR-N, U, & C in Florence County
Scott Dolatowski	KC9ZBC	Goodman

MEMBERSHIP

Call Sign	Last Name	First Name	City	Phone	Email
WB8EBS	ARMBRUST	BURT	QUINNESEC	906-774-8383	wb8ebs@yahoo.com
KC9KVP	BAKER	BETH	NIAGARA		
KB9AVX	BAKER	SCOTT	NIAGARA	715-251-1944	kb9avx@yahoo.com
KB8SBP	BERTOLDI	BILL	KINGSFORD		
K8DDA	BRAY	MIKE	VULCAN	906-201-1550	mikebray@chartermi.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
N9MBG	FRY	ED	PEMBINE	906-221-7307	efry7849@gmail.com
KG8NK	GEMBOLIS	LOUIS	ISHPEMING	906-485-5442	lgembolis@chartermi.net
KE8FWN	GRABOWSKI	BILLY	CRYSTAL FALLS	?	
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
KD9HQD	LaLIBERTE	BRUCE	NIAGRA, WI	?	liberte@borderlandnet.net
W9BGL	LUCAS	BRIAN			bagel99@gmail.com
KE8GHE	LUNDAMO	DUANE	?	?	?
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	MORIRITY	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
KE8GHH	RITTENHOUSE	DAVE	IRON MOUNTAIN	?	?
K4FMX	SCHAFFER	GARY	NIAGRA, WI	?	GARYSCHAFFER@LARGERIVER.NET
KG9Y	THOMAS	DAVE	NIAGARA	715-251-1393	kg9y@arrl.net

BLACK: Paid Members

BROWN: Past or Unpaid Members



MICH - A - CON

**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 _____ 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.