



MICH-A-CON

Iron Mountain,
Dickinson County, Mich

November 2015

Meeting Reminder: [Second Wednesday of the Month](#)

Which is **November 11 2015** at 07:00 PM at the Dickinson Library, Iron Mountain.

From The President

The Veterans Day Special Event is in the books. We completed the event as K8V this afternoon. Conditions for the weekend weren't very good but we did manage to make SSB and RTTY contact with 260 hams around the US, Canada, Portugal, and Spain, even though we didn't use the club beam and trailer/tower. The wire antennas did well considering the less than ideal propagation.

Of course this couldn't have been accomplished without the operating skills of Scott, Joe, Bill, Tom H., and Tom M. Thanks guys!

Setup and take down of the stations and antennas went smoothly thanks to the help of Dana, Barry, Joe, Burt, Scott, and Tom H. Of course, it's a lot easier in 55 degree weather without 3 feet of snow on the ground.

Many thanks to those that brought goodies for the operators and loggers. Debbie and Bill provided some wonderful subs. Burt brought his famous Sloppy-Joe recipe. Joyce and Scott provided pop and chips. Tom M. contributed buns, donuts, chips and bottled water. Joe brought some dessert bars.

We had a few visitors up on the hill. Terry, Sam, and Scott Baker stopped in for an "eyeball" QSO. Unfortunately, the general public didn't come in to visit like other years.

Again, like a few year's back, a beautiful buck crossed the road by Veterans Park. Unfortunately, a couple of walkers and their dog scared it off before I could get a photo. The sight did whet my interest for next Sunday's opening day of deer season.

More info will be delivered at the next meeting on Wednesday at 7:00 pm. Don't forget to attend! It is ELECTION NIGHT. Be there!

73,

Tom W8JWN

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MICH-A-CON AMATEUR RADIO CLUB MINUTES OF October 14, 2015

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

Secretary Report

Minutes of the September 9th meeting were read and approved.

Treasurer Report

Balances as of October 13, 2015

Checking -\$3.05

Savings -\$85.44

Trailer Fund - \$1223.35

Repeater Savings - \$324.56

Cash - \$17.00

Repeater Report

The climbers, from the Marinette club, did not relocate the new antenna. They recommended that we move it out 5 feet farther from the tower. Sam Holmes reported that he has an antenna mount that might work. The climbers will come back in the spring to do the work. At this point, the two meter repeater is on the new antenna.

A caution concerning the new Yaesu repeater was noted. It is recommended that an amplifier be placed on it, rather than running it at a high wattage. High power settings will damage the unit.

Old Business

Tom Martin noted he did not order any coax or connectors that were discussed at the September meeting. Also, Gary Schafer had nothing new to report on the search for an eight-pin socket.

There was nothing new to report on the club antenna trailer.

Setup for the Veterans Day special event will be on Friday November 6th, Equipment from the club van will be picked up at 12:30, with setup starting at 1:00. Gary Schafer or Burt Armbrust



will bring the antenna trailer. More detailed plans were discussed.

Antennas: Beam; G5RV; Multi-band

Radios: Yaesu FT-1000 (Tom M.), IC-706 (Tom M.), club Kenwood

Computers: both club laptops

Operators: Tom Martin, Scott Jarmusch, Joe Ferris, Burt Armbrust

Food & Drink:

water, buns, chips, coffee (Tom M.)

sloppy joe (Burt A.)

QSLs: Tom Martin

Publicity: Joe Ferris

New Business

The annual election of club officers will be held at the November meeting.

Tom Martin noted that complaints have been directed to him concerning amateur radio licensing exams. They ranged from not adhering to the posted testing schedule and not being able to reach the listed contact person, to a noisy testing environment. It was suggested that phone numbers for Terry Moriarity and Mike Boileau be placed in the newsletter as contact persons.

Adjournment

The meeting was adjourned at 7:26 pm. (Dana Bey/Skip Caswell)

The 50/50 drawing was won by Scott Dolatowski, with \$20 going to the club treasury.

For the Good of the Order

Attendees reported on their recent activities.

Submitted by Joe Ferris

Attendees

Tom Martin, W8JWN

Scott Jarmusch, KA8TFF

Burton Armbrust, Sr., WB8EBS

Joe Ferris, KC9TQR

Gary Schafer, K4FMX

Bill Grabowski, KD8VTT

Joe Komblevich, KB8ETK

Dana Bey, W8BEY

Skip Caswell, K9EL

Scott Dolatowski, KC9ZBC

Iver "Billy" Mercer, KC0UYT. Visitor

Sam Holmes, N8ATS

Joyce Williams, Visitor

News

Veterans Day Special Event





LCWO
LEARN CW ONLINE

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!

ARLB032 W1AW 2015/2016 Winter Operating Schedule

ARRL Bulletin 32 ARLB032
 From ARRL Headquarters
 Newington CT November 2, 2015
 To all radio amateurs

Morning Schedule:

Time	Mode	Days
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1400 UTC (9 AM EST)	CWs	Wed, Fri
1400 UTC (9 AM EST)	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	Mon, Wed, Fri
0000 " "	CWf	Tue, Thu
0100 " (8 PM EST)	CWb	Daily
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

Frequencies (MHz)

CW:	1.8025	3.5815	7.0475	14.0475	18.0975	21.0675	28.0675	147.555
DIGITAL:	3.5975	7.095	14.095	18.1025	21.095	28.095	147.555	
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 102 in the November 2015 issue of QST or on the web at, <http://www.arrl.org/w1aw-operating-schedule>.

ARRL Asks FCC to Clarify that Hams May Modify Non-Amateur Gear for Amateur Use

From ARRL Headquarters
Newington CT October 14, 2015
To all radio amateurs
ARLB030

The ARRL has asked the FCC to make clear that Amateur Radio licensees may modify non-amateur equipment for use on Amateur Radio frequencies. Some hams have expressed concerns that recently proposed rules would inhibit post-sale modification of Wi-Fi equipment, now sometimes altered for use on Amateur Radio frequencies. The ARRL made its point in comments filed on October 8 on a Notice of Proposed Rule Making (NPRM) in ET Docket 15-170 and RM-11673. The proceeding mostly addresses proposed amendments to FCC rules regarding authorization of RF equipment. The NPRM can be found on the web in PDF format at, https://apps.fcc.gov/edocs_public/attachmatch/

[FCC-15-92A1.pdf](#) .

"The Commission should clarify...that the ability of licensed radio amateurs to modify and adapt non-amateur equipment for use in the Amateur Service is beneficial, is permitted, and is not restricted by any rule of general applicability adopted in this proceeding," the League said in its comments. The ARRL said proposed rules requiring manufacturers to include security features to prevent network devices from being modified were "problematic," to the extent that they would preclude hams from adapting network equipment for ham radio applications.

"The Amateur Radio Service has a very long tradition of modification and adaptation of commercial communications equipment," the ARRL's comments pointed out. Amateur licensees should be permitted to modify any previously authorized equipment for use under Amateur Service rules, the League asserted. The proceeding attracted many comments regarding this aspect of the proceeding, although the proposed rules differ only slightly from the current rules.

The ARRL also urged the FCC not to apply any limitations proposed for Software Defined Radios to SDRs intended for use exclusively in the Amateur Radio Service, "as has been the policy for the past 10 years."

Equipment Authorization

The League also has called on the Commission not to combine the Declaration of Conformity (DoC) and Verification equipment authorization procedures into a single, self-approval program. The League said the proposal could lead to abuse by unscrupulous importers and manufacturers of unintentional emitters. Under the proposed rules, the FCC would do away with its DoC authorization program by combining it with equipment Verification to form a so-called "Suppliers Declaration of Conformity" category of equipment authorization. Testing in an accredited laboratory would not be required, nor would database registration or third-party review. The ARRL expressed concerns that the new regime would encourage and facilitate the introduction into the US of "non-compliant unintentional emitters" and offer no oversight.

The ARRL's comments said, "the only opportunity to preclude widespread sale and deployment of non-compliant RF devices, including unintentional emitters, is via the equipment authorization process." The League said hams and AM broadcasters have been victims of interference from such unintentional emitters as RF lighting ballasts "that routinely exceed the Commission's conducted emission limits." The ARRL said the solution is "not to loosen but to tighten the procedural controls over the testing and affirmative confirmations of compliance" to ensure greater compliance in conducted limits and other technical parameters that determine how much such devices contribute to ambient noise levels.

The League said some RF devices, such as RF "grow lights," now subject to the more informal Verification process should be subject to Certification, owing to their substantial interference potential.

The ARRL noted that it has received and investigated "numerous reports of interference" from devices subject only to Verification.

"A number of interfering devices, when tested by the ARRL Laboratory, have been found to exceed the FCC limits, sometimes by an alarming amount," the League said.

Improved Labeling for Part 15 and Part 18 Devices

The ARRL also said there is "an urgent need" for improved labeling requirements for certain Part 15 and Part 18 devices. "Necessitating change, notably, is the fact that there are many industrial Part 18 devices sold that are neither intended nor designed for use in residential environments, but because there is no external labeling...the end user consumer is left without guidance," the ARRL said, noting that, in most cases, equipment retailers are not providing any either.

In July, the ARRL complained to the FCC about the marketing practices of various "big box" retailers, where non-consumer-rated lighting ballasts have been mixed in with consumer ballasts and other consumer products on display with no explanatory signage.

Ballasts intended for industrial applications have higher permitted conducted emission limits in the Amateur Radio HF spectrum. The League called on the FCC to include a definition in Part 18 for the term "consumer

RF lighting device," to provide a way to differentiate consumer devices from those intended for industrial or commercial environments.

The League also said the FCC should consider reducing its Part 15 limits for lighting devices to correspond with the Part 18 lighting device limits between 3 and 30 MHz to reduce the RFI potential of LED bulbs now being widely marketed, "before they become an aggregate problem." LED lamps operate under Part 15 rules.

The ARRL said the FCC should adopt the League's new equipment-labeling proposals with respect to certain Part 15 and Part 18 equipment "in order to stop the

flood of such devices intended for commercial or industrial areas only into residential areas."

ARRL MICHIGAN SECTION NEWS

From October, 2015:

Greetings to the hams of Michigan:

Here it comes, folks....the weather forecasters are calling for a rain/snow mix in northern Michigan and parts of the UP this weekend. I am going to spend my time thinking forward to spring! Seriously, be sure to take the opportunity to enjoy the beautiful fall colors in our great state!

Amateur Radio Parity Act of 2015

We are still in the process of putting pressure on our state senators (Peters and Stabenow) to support S 1685 by becoming a co-sponsor of the bill. Our efforts thus far have not had the desired results. But we are not ones to give up easily and are continuing the fight.

With that said, there have been some bright spots around the state. Now keep in mind that any successes that I am not aware of are not listed here.

Here are some great examples of those successes:

The following clubs have taken the initiative to have their members sign letters to our Senators at their club meetings:

Branch County ARC
Holland ARC
Monroe County Communication Association
Muskegon Area Amateur Radio Council
Utica-Shelby Emergency Communications Association

The GRAHamfest crew did yeoman's duty as well by providing letters for those attending the swap.
(Thanks K8TB)

Going forward, the SMARS club of Battle Creek will be signing letters at their meeting of the 15th, the St. Joseph County ARC will be doing the same on the 16th. We will have letters available at the Muskegon and Kalamazoo swaps on the 17th and 18th and the USECA swap on the 25th. On Nov 5, the Big Rapids Area ARC will sign letters at their meeting and The L'Anse Creuse club will also have letters available at their hamfest as will the Hazel Park swap in January. The Livonia swap in February is on the list as well.

Your club can (and should) do this also.

Letters can be downloaded here:



<http://www.k8tb.org/Stabenow.pdf>

<http://www.k8tb.org/Peters.pdf>

In advance of your next meeting, download the two letters and print the appropriate number of copies. At your next meeting, ask that all hams that have not yet sent a letter to their Senators to add their signature, printed name, callsign, address, city, state and zip code to a letter for each Senator. Bring a handful of pens so that no one has to stand in line waiting for a pen to use. In 10 minutes you can have 30 or more letters signed for each Senator.

Collect the completed letters, and mail them to ARRL HQ at:

ARRL
225 Main St
Newington, CT 06111
Attn: S1685 Grassroots campaign

Or, if you would like to avoid the postage costs, you can scan the signed letters into PDF format and then email them to:

reginfo@arrl.org.

Please include "S1685 Grassroots Letter" in the subject field of your email.

Please send me a note at wb8r@arrl.org telling me how many letters your club generated and sent to HQ.

New Michigan Section Website

After considerable effort, we are nearing the point of having our new website ready to go. While it is not yet ready for prime time, with work yet to be done, we are moving forward again. Many thanks go to Dave Adams, N9UXU, Gordon Baldwin, W8CT and Jay Nugent, WB8TKL. Stay tuned....

Michigan Net (QMN) Net Manager Changes

At the recent QMN picnic in Burton, MI we sadly allowed our longtime General Manager and Early Net Manager and Newsletter Editor retire.

Anne Travis, K8AE poured her heart and soul into the QMN net for many years and now the time is right for her to step down and concentrate her energies on her health priorities. Anne will always hold a warm place in our hearts for her outstanding spirit and willingness to do what it took to continue to make QMN great. Our thoughts and prayers will always be with you.

The following individuals agreed to serve as follows:

General Manager and Newsletter Editor: John, WB9JSR (New)

Early Net Manager: Jerry, W8MSK (New)

Late Net Manager: Stan, K8SB

Treasurer: John, K8LJG

Thanks to everyone who attended the picnic and special thanks to those who volunteered to serve.

Hospitality Acknowledgements

Monroe County Radio Comms Assn Meeting
Adrian Hamfest, Adrian, MI
QMN Picnic, Flint MI
Muskegon Area Amateur Radio Council Meeting
GRAHamfest, Wyoming, MI

It was a pleasure to attend your club meeting/hamfest/picnic and I thank you for the hospitality you have shown me. You make it very enjoyable to attend these events.

Hamfests, Meetings and Section Staff Travel Plans

- Oct 15, 2015 SMARS Meeting, Battle Creek – WB8R
- Oct 17, 2015 Muskegon Color Tour Swap, Muskegon – WB8R
- Oct 18, 2015 Kalamazoo Swap, Kalamazoo - WB8R
- Oct 25, 2015 USECA Swap, Madison Heights – WB8R
- Nov 5, 2015 Big Rapids AARC Mtg, Big Rapids – WB8R
- Dec 6, 2015 L’Anse Creuse Swap, Harrison Twp – WB8R

Michigan Section Traffic/ARPSC Nets (All times Local)

MACS - MI Amateur Communications System 3.952 1000 Daily

UPN – Upper Peninsula Net 3.921 1700 Daily; Noon Sunday

MIARPSC – MI Amateur Radio Public Service Corps 3.932 1700 Sunday

QMN – The Michigan Net 3.563 1830 and 2200 Daily

MITN – MI Traffic Net 3.952 1900 Daily

MIDTN – MI Digital Traffic Net 3.583 (Olivia 8/500) in 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

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

<http://www.arrl.org/public-service-honor-roll>. This

award recognizes the efforts of hams that are active in public service. Those reporting accumulate points for checking into nets, volunteering, holding Section

appointment(s) and handling message traffic.

EC's can see their reports of Form FSD-212 here: http://ares-mi.org/ec_his.php If you send your report to WB8RCR and don't see it noted there, send a note to John to tell him your report has gone missing. EC's: Be sure to share your FSD 212 with your District EC, your ARES/RACES members and with your county's Emergency Manager and others in your jurisdiction who need to know what you and your ARES/RACES group are contributing to your community each month.

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

Until next time,

73,

Larry, WB8R

Dales Tales

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

SPECIAL EVENT: Recent activities at the Michigan State University Radio Club, W8SH, have been running in high gear. First, was the club's hosting Katie Breen WY7YL and Sean Kutzko KX9X from ARRL HQ to meet with MSU's Scott Westerman W9WSW to investigate new ways to market ham radio to a new generation of potential hams.

Then there was "Sparticipation" a Field Day-like event to welcome 8000 new students to the campus, and this included an active demonstration from the MSU Radio Club. Several potential hams registered their interest in getting licensed and the club welcomed a couple of hams with the incoming freshmen class.

Then...well, MSU alumnus Gregg WB8LZG says it like this: "The 1st Spartan Radio Tailgate Party was a good one! We had the chance to meet and play radio with several of the new incoming Hams! It looks like we're off to a great start this year! Ed Oxer, Reece Cole es I went to the shack a bit early to make sure all was in readiness for the event.

There was a crock pot full of Ed's famous 'busted QSO chili', and lots of snacks and chips, including MSU Football cupcakes! Wow, this really is a tailgate party! At the starting bell the students took right over and started making QSO's ! They did quite well too. A rough tally shows

44 QSO's, in 19 states, the Galapagos Is, Martinique, El Salvador, and others. Just to keep things exciting they also had a few pileups!

Alumnus Mike, KB8ZGL helped out by connecting to the "Mike LINC" so that we could garner some more check in's via 'echo link'. This proved very worthwhile; also as we had many hams reach us on that link. ...

how nice it was to see the shack FULL of students all having fun, as well as learning from each other. To sum it up, our 1st installment to the 'Spartan Tailgate Special Event' went very well." Gregg says we can look for

W8SH and the Spartan Tailgate Special Event as part of every MSU home game.

CLUB OPPORTUNITIES: So this begs the question: "With all of the excellent colleges and universities in the Great Lakes Division, Ohio, Kentucky and Michigan, what are others doing to promote the growth of Amateur Radio?" I am very interested in reporting the activities of all of our Division's college radio clubs and we can do this in "Dale's Tales" over the next few months. Let me know. This is a wonderful opportunity to share some truly innovative ideas. Following this, we can introduce our cadre of High School Clubs and their recruitment ideas and activities.

COMMENTS: from our Vice Director, Tom W8WTD My word for the month is "persistence." It's a good concept for just about any time, but I use it to refer to the efforts of so many people around the ARRL's legislative efforts for the Amateur Radio Parity Act.

Here's a quick story about persistence. One member of Congress was approached by a delegation of hams over a year ago. Follow-up efforts took place. Then the letter-writing campaign from the League started.

And at least one individual with a personal link made contact. Just last month, after more than a year of consideration, that member became one of our co-sponsors. Meanwhile, across the U.S., more and more members of Congress continue to sign on as co-sponsors. It didn't happen all at once. Besides the letters, many people took the time to personally contact their representatives through visits or phone calls.

Those efforts are still paying off. The first contact is not always the one that convinces.

But the continuing contacts, and increasing number of constituents advocating the position seems to make the difference. I think we can be successful in this effort. But it's going to require some persistence on the part of all of us. Thank your rep if he or she has signed on. Keep writing emails if they haven't. When the bill comes up for a vote, be sure to make a phone call or send an e-

mail of continued encouragement. Don't give up. We can do this!

73, Tom W8WTD

UPDATE for AMATEUR RADIO PARITY ACT: 111 and climbing. As of this date, we have 111 House members that have agreed to Co-sponsor HB 1301 in the U.S. House of Representatives. FCC Rules currently allow residents in these associations to install TV receive antennas, both satellite dishes and multi-element arrays. This bill has been introduced to allow Radio Amateurs parity within homeowners associations so hams may install an antenna. The ARRL Web Page <http://www.arrl.org/amateur-radio-parity-act> contains the complete text of both the House and Senate bills.

So, here is the League's recent statement on the Act, written to present some of the key facts:

"Clarity on Amateur Radio Parity"

Prepared by ARRL, the national association for Amateur Radio

Some objections and concerns have recently been raised about the Amateur Radio Parity Act, H.R. 1301 and S. 1685, by representatives of community associations. To address them, and to separate fact from fiction, let's look at the bill itself and what it would and would not do.

Why is it needed?

Thirty years ago the Federal Communications Commission, recognizing that there was a strong federal interest in effective Amateur Radio communication from residences, adopted a policy of limited preemption of state and local regulations of Amateur Radio station antennas. Those regulations:

- 1) Must not preclude Amateur Radio communications;
- 2) Must reasonably accommodate such communications; and
- 3) Must constitute the minimum practicable regulation to accomplish the state or local authority's legitimate purpose.

Since that time, private land-use restrictions have become increasingly common. Restrictions on antennas are now so pervasive that they prevent effective com-

munication from residences in large areas of the country.

What would the Amateur Radio Parity Act do?

As introduced in both the House and Senate, the bill recognizes the fact that whether a residence is subject only to state and local regulations or also to private land-use restrictions, the federal interest in effective Amateur Radio communications is the same. The bill simply instructs the FCC to extend its time-tested limited preemption policy to private land-use restrictions.

What would it not do?

The Amateur Radio Parity Act does not create new federal policy regarding outdoor antennas. Congress and the FCC already have acted to prohibit restrictions that prevent the installation of direct-to-home satellite dishes, TV antennas, and customer-end wireless broadband antennas.

The bill does not prohibit community association review of proposed Amateur Radio antenna installations. It simply limits restrictions to what may be necessary to accomplish the association's legitimate purposes, such as safety and aesthetics. Prior approval still can be required, just as in the case of municipal land-use regulation.

The bill does not mandate that a particular size of antenna be permitted. As long as a size and placement restriction does not constitute a prohibition, but reasonably accommodates Amateur Radio communication, and provided that the restriction is necessary to accomplish a legitimate purpose, it will be allowed.

Claims that the bill will do any of these things are simply wrong, and are either misunderstandings of the plain language of the bill or deliberate misrepresentations.

What is the current status of the bill?

As of August 28, 2015, H.R. 1301 had 94 cosponsors (Update Oct 30, 2015 to 111) in addition to its sponsor, Rep. Adam Kinzinger of Illinois. It has been referred to the Subcommittee on Communications and Technology of the House Committee on Energy and Commerce. S.1685 was introduced on June 25, 2015 by its sponsor, Senator Roger Wicker of Mississippi, and original co-sponsor, Senator Richard Blumenthal of Connecticut. It

has been referred to the Senate Committee on Commerce, Science, and Transportation.

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.

Nov 7 - Grant County - Georgetown, OH
Dec 5 - Fulton County Winterfest - Delta, OH
Dec 6 - L'Anse Creuse - Harrison Twp., MI
Jan 17 - SCARF - Nelsonville, OH
Jan 24 - Tusco - Strausburg, OH
Jan 24 - Hazel Park - Madison Hgts, MI

HAMFEST OFFICIALS: Your Division and Section officials want to be at your events and we strive for insuring that the ARRL is properly represented at every ARRL Sanctioned Hamfest. It is always a good idea for your hamfest chair to contact the Section Manager, Vice-Director or Director early in the planning stages to invite them to attend the activity. This will allow time to prepare for alternate representation in the event of time conflicts. When you receive your "Hamfest Package" from ARRL, please open it immediately. Read it over and check out all of the material you received. There is a form included to order additional material if you deem it appropriate.

73, see you on the bands.

Dale Williams WA8EFK
Director
Great Lakes Division

ARRL PROPAGATION BULLETIN

ARLP045 Propagation de K7RA

ZCZC AP45

QST de W1AW

Propagation Forecast Bulletin 45 ARLP045 From Tad Cook, K7RA Seattle, WA November 6, 2015 To all radio amateurs

Solar activity increased over last week, with the average daily sunspot number rising from 77.6 to 90.3, and average daily solar flux from 110.9 to 118.3. These comparisons contrast October 29 through November 4 with the previous seven days.

A high speed solar wind caused aurora on November 3-4 and the high planetary A index of 32 and 33 on those days.

Predicted planetary A index is 8 on November 6, 25 on November 7-8, then 15 and 12 on November 9-10, 8 on November 11-12, then 12, 20, 5, 8 and 12 on November 13-17, 5 on November 18-21, then 10, 5, 8 and 12 on November 22-25, and 10 on November 26-27. Planetary A index then jumps to 50 and 40 on November 30 and December 1, when the same region causing aurora the past few days rotates back into view.

Predicted solar flux is 110 on November 6, 115 on November 7-8, 120 on November 9-12, 105 and 110 on November 13-14, 115 on November 15-16, then 120, 115 and 110 on November 17-19, and 105 on November 20-24. Flux values dip below 100 on November 27 through December 8, reaching a low of 85 on November 30 through December 5.

F.K. Janda, OK1HH of the Czech Propagation Interest Group sent his geomagnetic forecast, and he expects the geomagnetic field to be quiet to unsettled on November 6, active to disturbed November 7-8, quiet to active November 9, quiet to unsettled November 10, quiet to active November 11, quiet on November 12, quiet to unsettled November 13, quiet to active November 14, quiet on November 15, quiet to active November 16, quiet to unsettled November 17, mostly quiet November 18-19, quiet to unsettled November 20, mostly quiet November

21, quiet on November 22, quiet to unsettled November 23, mostly quiet November 24, quiet on November 25, quiet to active November 26, quiet to unsettled November 27, mostly quiet November 28-29, active to disturbed November 30, and quiet to active December 1-2.

OK1HH expects increases in solar wind on November 7-8, 10-11, 15, 18, and 29. There is a chance of increased solar wind, although less likely, on November 19-21 and 30.

The average daily sunspot number for October 2015 was 59.6, the lowest since September 2013, when it was 55. February 2012 was even lower, at 50.1.

For our 3-month moving average of daily sunspot numbers, the highest average for the current solar cycle was centered on February and March 2014, when it was 146.4 and 148.2. The 3-month averages centered on December 2014 through September 2015 were 107.8, 98.2, 78.1, 68.2, 72.4, 77.7, 76.3, 69.1, 67.5 and 64.5. The September number is the average of all daily sunspot numbers from August 1 through October 31.

This weekend is ARRL CW Sweepstakes and the high geomagnetic activity expected for Saturday and Sunday could be a problem.

Predicted planetary A index for November 7-8 is 25 on both days.

At 2320 UTC on November 5, the Australian Space Forecast Centre issued a geomagnetic disturbance warning: "The partial halo coronal mass ejection associated with the 4 November M3.7 flare has an Earth-directed component. It is likely to impact Earth late on UT day Nov 06/2200 or thereabout. As a result, minor to major geomagnetic storms could occur on UT day 07 Nov depending on IMF Bz conditions."

Here is info on the Interplanetary Magnetic Field Bz: <http://www.spaceweatherlive.com/en/help/the-interplanetary-magnetic-field-imf>

David Moore sent this article about the U.S. government plans for dealing with problematic space weather:

<http://www.space.com/30986-united-states-space-weather-plan.html>

David also sent this link to a high definition video of the Sun:

<http://www.pbs.org/newshour/rundown/4k-nasa-video-lets-see-sun-new-light/>

Robert Wood, W5AJ of Midland, Texas noted that sunspot 2443 is close to the Sun's equator, and we both got to wondering what this means regarding the current sunspot cycle projection. I couldn't remember.

A check of butterfly diagrams shows us that early in a solar cycle, sunspots appear further north or south of the solar equator, and gradually appear close to the equator as the cycle progresses: <http://bit.ly/1SvnU0a>
So this sunspot is probably typical of spots appearing after the peak of the solar cycle.

A sign that the solar cycle is transitioning to the next cycle is when the magnetic signature of sunspots begins to change. In the most recent magnetogram, we can see the north magnetic polarization as the white splotches, and south as black:

http://sohowww.nascom.nasa.gov/data/realtime/hmi_mag/512/

You can click that image to see it with higher resolution.

This image is in real time, so by the time you see it in the future, the image may have changed significantly.

Here is an article from nine years ago about sunspot polarization.

http://sohowww.nascom.nasa.gov/data/realtime/hmi_mag/512/

As the solar cycle transitions from one to the next, that polarization will change, with an increasing number of new cycle spots gradually replacing the old. But don't expect this until five years from now.

Mike Treister, W9NY who operates from Chicago, Illinois and another station on a sand dune in Dune Acres, Indiana at the southern tip of Lake Michigan filed this report:

"I was very surprised at the excellent conditions on 10 and 15 meters during the CQ WW SSB contest. From my QTH in Dune Acres, Indiana, 10 meters was chock full of activity most of the morning with many European stations well over S9 all the way from 28.3 up to 29 MHz. I stayed near the top and had no problem running stations.

The band was really packed, just like the good ole days.

"But the real surprise was 15 meters which remained open for nearly the entire day. While I had my TH7 pointed at Europe I was getting calls from Hawaii, Alaska, the Middle East, South America, etc. Late in the afternoon, with my beam pointed toward Asia, I was running lots of strong Japanese stations, and also got calls from China, India, Indonesia, Siberia, the Philippines etc. etc. And while doing this I was still getting calls from basically all over the world off the sides and back of my beam. Heard some flutter echo suggesting long path propagation at times.

"Also, in the early morning hours, 40 meters was terrific. "What an unexpected fun weekend!

"Perhaps conditions are frequently good, like this, and there is just very little activity!"

Yes, I agree. And a big HF contest brings out the activity to reveal propagation paths otherwise unheard.

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

For more information concerning radio propagation, see the ARRL Technical Information Service web page at <http://arrl.org/propagation-of-rf-signals>. For an explanation of the numbers used in this bulletin, see <http://arrl.org/the-sun-the-earth-the-ionosphere>. An archive of past propagation bulletins is at <http://arrl.org/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/1VOqf9B> and <http://bit.ly/1DcpaC5>.



Click on "Download this file" to download the archive, and ignore the security warning about file format. Pop-up 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 October 29 through November 4 were 101, 88, 73, 88, 94, 95, and 93, with a mean of 90.3. 10.7 cm flux was 112.9, 112.1, 118.5, 124.3, 122, 124.2, and 113.8, with a mean of 118.3. Estimated planetary A indices were 5, 9, 6, 11, 7, 32, and 33, with a mean of 14.7. Estimated mid-latitude A indices were 4, 6, 6, 9, 5, 23, and 31, with a mean of 12.

ARRL DX NEWS

ARLD044 DX news

QST de W1AW

DX Bulletin 44 ARLD044

From ARRL Headquarters

Newington CT November 5, 2015

To all radio amateurs

SB DX ARL ARLD044

ARLD044 DX news

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

VIETNAM, 3W. Mats, SM6LRR (RM2D) plans to be QRV holiday style from Mui Ne, as XV2D from November 23 to December 5, including a serious effort in the CQ WW DX CW Contest. QSL via LoTW and SM6LRR.

SENEGAL, 6W. Members of the Association of Radio Amateurs of Senegal (ARAS) plan to operate 6V1A from Goree Island (AF-045) on November 27, 28 and 29. Team members include 6W7JX, 6W1KI, 6W1PZ and

6W1QL. Activity will be on SSB and CW on all bands. QSL direct to 6W7JX, P. O. Box 1958, Mbour, SENEGAL.

PALAU, T8. JH1BGH and 7K1HLJ will be QRV as T88WI and T88WH, respectively, from November 10 to 15. QSL via home calls.

AZERBAIJAN, 4K. 4K6FO plans to run SOAB during the CQ WW DX CW Contest. QSL via DC9RI and eQSL.

ARGENTINA, LU. CE6SAX and CE6VMO are teaming up with Argentine ops LU1YT, LU7YWC, LU7YS, LU7YZ, LW2DX and LU4HK for the CQ WW DX CW Contest as LU8YE in the multi-single category. QSL via IK2DUW.

MADAGASCAR, 5R. Eric, F6ICX is QRV as 5R8IC until December 12. He is QRV mostly on CW, but also RTTY, PSK, and SSB. QSL via F6ICX (d), ClubLog OQRS, LoTW.

KENYA, 5Z. Ops Manfred, DK1BT, Sigi, DL7DF, Reiner, DL7KL, and Frank, DL7UFR will be active as 5Z4HW until November 18. Look for them on 160 to 6 meter with two setups on CW, SSB, RTTY and PSK31. Their pilot will be Bernd, DF3CB. Also watch for them signing 5Z4/home calls. QSL via DL7DF (d/B).

SOUTH COOK ISLANDS, E5. Steve, G0KIK is going to operate holiday style as E51KIK from Rarotonga from November 9 and 15. QSL via home call.

SABA AND ST. EASTATIUS, PJ5/6. Seppo, OH1VR and Henri, OH3JR will be operating as PJ6/OH1VR and PJ6/OH3JR from November 23 to December 3. Both ops plan to participate in the CQ WW DX CW Contest. Activity before and after will be on CW, SSB and RTTY. QSL via their home calls.

BELARUS, EU. Special event station EV70UN is celebrating the founding of the United Nations 70 years ago. They are QRV until November 20 on CW and SSB. QSL via bureau, EW1NY (d).

SAN ANDRES AND PROVIDENCIA, HK0. Martin, LU9EFO and Faber, HK6F will sign HK0/home calls from November 11 to 17. QSL via SP5QAZ.

BRAZIL, PY. The Amateur Radio Brazilian League (LABRE-RJ) celebrates its 80th anniversary on the air with the call PY1AA on 80, 40, 20, 17, 12 and 10 meters. QSL via bureau, LoTW, eQSL.

RUSSIA, R. Special event station R170GS celebrates the 170th anniversary of the Russian Geographical Society until the end of the year. The call will be active from nine different Russian federal districts. QSL via RL5G direct.

MICRONESIA, V6. Kou, JR2GAG will be QRV as V63GG from Chuuk Island (OC-011) from November 8 to 10, and from Pohnpei Island (OC-010) between the 11th and 16th. QSL via JR2GAG.

HAWAII, KH6. Jim, N6TJ will be signing KH7M in the CQ WW DX CW Contest in the Single-Operator All-Bands category. US/Canada ops should QSL via KH6ZM while all others to IOMWI.

MONTSERRAT, VP2M. Rick, AI5P, Phil, K3EW, and Jim, W3NRJ will be active from Gingerbread Hill until November 12, signing VP2MXP, VP2MEW and VP2MVI. QSL via home calls.

BURKINA FASO, XT. XT2AW will be QRV from November 7 to 27, using slow CW as well as SSB, RTTY, PSK and JT65. QSL via M00XO.

TIMOR LESTE, 4W. Toshi, JA8BMK will be active as 4W/JA8BMK until November 9. Activity will be only 80 and 40 meters using mainly CW. QSL via JA8BMK direct only.

MALTA, 9H. Henning, OZ1BII will be QRV as 9H3EE from Malta (EU-023) from November 24 to 30. Activity will be on 160 to 10 meters with an emphasis on 30, 17 and 12 meters using CW only. He plans to be in the CQ WW DX CW Contest as a Single-Op/All-Band/Low-Power entry. QSL via OZ1BII or ClubLog.

U.S. VIRGIN ISLANDS, NP2. Yuriy, N2TTA will be active as NP2P during the CQ WW DX CW Contest as a Single-Op/All-Band/Low-Power entry. QSL via LoTW.

INDIA, VU2. Prasad, VU2PTT will be active during the CQ WW DX CW Contest as a Single-Op/Single-Band (40 meter) entry. QSL via the LoTW, by the Bureau or direct using the info on QRZ.com.

VANUATU, YJ. Barry, VK2BJ will be QRV as YJ0BJ until November 16. Activity will be on 40 to 6 meters, and possibly 80 meters, using CW and SSB. QSL via VK2BJ, direct, LoTW or eQSL.

THIS WEEKEND ON THE RADIO. The IPARC Contest CW, SKCC Weekend Sprintathon, Ukrainian DX Contest, ARRL Sweepstakes CW, NA Collegiate ARC Championship CW, IPARC Contest SSB, EANET Sprint and the DARC 10 Meter Digital Contest are all on tap for this weekend.

The RSGB 80 Meter Club Sprint SSB is on November 11. Please see November 2015 QST, page 91 and the ARRL and WA7BNM contest web sites for details.

CLASSIFIED

K8DDB Items For Sale

Prices as of September 2, 2015

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

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

Radio Gear:

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

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

Asking \$1,500 or reasonable offer

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

Asking \$500 or reasonable offer

* **Viking 6n2 Transmitter** Asking \$19

* **Regulated CB Power Supply** Asking \$5

Test Equipment:

* **RCA Type WO-33A Oscilloscope**

WG-349A Direct/Low Capacitance Probe

Instruction manual Asking \$9

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

With probe and manual

Asking \$29

Miscellaneous:

* **Scanner - Uniden Bearcat BC-210XL** 18 channel scanning radio w/owner's manual and 1996 Radio Shack Police Call Plus Frequency Guide for Michigan and Ohio - Asking \$20

* **CB Radio** - Old 1970s Radio Shack Realistic TRC-55 console CB (23 channel AM) with digital clock (which no longer works) but its set at the perfect time for CB, 10:04 good buddy! Comes with hand mic and nostalgia of "Smokey and the Bandit" days - Asking \$20



UP AREA HAM FEST INFORMATION

**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.ccras.net*

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

Area Repeaters

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

ARRL Affiliated Club Area Nets

UP Net 3921khz
Daily 5pm EST
Sunday Noon EST

UP CW NET 3590khz
Sunday 7pm EST

160 Net 1895khz
Everynight 0100UTC
Dailey 0600UTC

Midcars 7258khz
Daily 0730am EST
0200pm EST

Outhcars Node 9614
Saturday 0900am EST

UP Echolink Node 9617
Sunday 8pm EST

Delta County ARES
147.150
Sunday 7pm EST

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

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

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

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

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

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

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

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

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

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

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

ABOUT OUR CLUB....

Club Officers

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

We're on the Web!

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

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

From Your Newsletter Editor

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

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

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

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

DX Code Of Conduct

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

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

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

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

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

I will always send my full call sign.

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

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

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

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

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

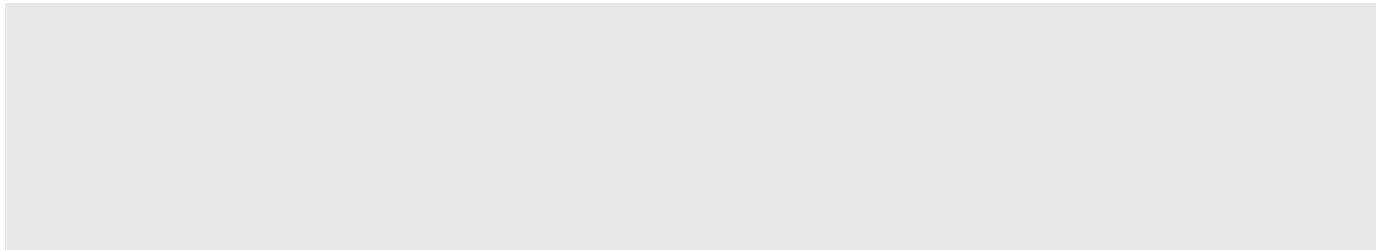
I will be thankful if and when I do make a contact.

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



MEMBERSHIP

Call Sign	Last Name	First Name	City	Phone	Email
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





Hewlett-Packard

Please remit dues to:

Burt Armbrust, WB8EBS

693 Cliff St

Quinnesec, Mi. 49876

Name: _____

Call Sign: _____

Address: _____

City, State, Zip: _____, _____, _____

Email Address: _____

Phone: _____

ARRL Member? Yes _____ No _____

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

Annual dues for Full Membership -

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

If family membership, please list additional:

Names: _____

Call signs: _____

City, State, Zip: _____

Annual dues are Payable January 1st.

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