



MICH-A-CON

Iron Mountain,
Dickinson County, Mich

June 2019

Meeting Reminder: Second Wednesday of the Month

Which is **June 12, 2019** at 07:00 PM at the Dickinson Library, Iron Mountain. Please be there and support the cause of Amateur Radio.

Map to Field Day, Gary's House: See Page 4

From The President

Words from the President

Field Day is coming! Get ready for flies, "skeeters", and rain/snow beginning Saturday morning on June 22nd. Every Field Day has a picnic and a camp out atmosphere. The camaraderie, just being together, is more important than the number of contacts and final score. That's what everyone says but there is still a competitive edge to the weekend.

Like last year, the Mich-A-Con ARC team will be setting up at member, Gary's (K4FMX), farm in Aurora, WI.

Hopefully, as many members as possible can come and see the club in operation. Members who haven't been active on the HF bands are really important. The GOTA (Get On The Air) station needs people to operate. We get bonus points for each operator under the age of 18. No experience is necessary and no license is required to operate the GOTA station.

Antenna work will begin on Friday, June 21nd, at 1:00 pm. at the farm. I will be at the van at 12:30 to load the generator and other communication supplies.

The picnic will begin at 11:45 before the contest/emergency exercise begins at 1:00.

See you at the next meeting Wednesday, June 12 at 7 pm in the library.

73,

Tom W8JWN

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MICH-A-CON AMATEUR RADIO CLUB MINUTES OF April 10, 2019

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

Secretary Report

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

Treasurer Report

Balances as of May 8th, 2019:

Checking: \$25.95

Savings: \$3,263.67 (Repeater: \$1,427.66)

Cash: \$48.00

Repeater Report

According to Bob Meyers, the repeater is working fine. Gary Schafer has acquired a filter for use on the repeater until we get some cavity filters. In addition, Burt Armbrust reported that he has two cavities that might work.

A motion (Skip Caswell/Bill Grabowski) to pay Gary \$75.00 for the filter was passed unanimously.

Bob Meyers also reported that the Echolink unit is currently working.

**Old Business**

There was nothing new to report with regard to the IRS and our LLC status..

Nobody present attended the storm spotter presentation by National Weather Service personnel at Bay West College, on May 6th.

It was determined that our ARRL Field Day station, on June 22-23, will be located at Gary Schafer's farm in Aurora again this year. Current thoughts are to be class 2A, possibly having only the club tower. More decisions will be made at the June meeting.

There was discussion about having the June meeting at Gary Schafer's farm in Aurora. Nothing definitive was decided.

New Business

There was no new business.

Adjournment

Meeting adjourned at 7:30. (Skip Caswell/Bob Meyers)

For the Good of the Order

Attendees reported on their recent activities.

The 50/50 drawing was won by Bob Meyers. The club treasury was enriched by \$25.00.

Attendees

Tom Martin
Scott Jarmusch
Joe Ferris
Burt Armbrust
Skip Caswell
Gary Schafer
Bob Meyers
Bill Grabowski
Debbie Grabowski
Brian Lucas

W8JWN
KA8TFF
KC9TQR
WB8EBS
KE9L
K4FMX
WA8FXQ
KD8VTT
KD8VTS
W9BGL

Tim Miller
Joyce Williams

N8TUM
Visitor



News

FCC Not Reinstating A Vanity Call Sign Fee

ZCZC AG15
QST de W1AW
ARRL Bulletin 15 ARLB015
From ARRL Headquarters
Newington CT May 16, 2019
To all radio amateurs

BAUM'S Act of 2018..."

Section 9(e)(2) of RAY BAUM'S Act gives the Commission discretion to exempt a party from paying regulatory fees when the FCC determines that the cost of collection exceeds the amount collected. A new section 9(e)(1) incorporated the Amateur Radio vanity fee exemption from FCC rules into the statute.

An erroneous report this week suggested that the FCC planned to again impose an Amateur Radio vanity call sign application (regulatory) fee of \$70 for the 10-year term. This incorrect conclusion resulted from an incomplete reading of the May 7 FCC Notice of Proposed Rulemaking (NPRM) in the matter of the assessment and collection of regulatory fees for fiscal year 2019.

The NPRM makes clear in several other places that regulatory fees no longer apply to Amateur Radio licenses. The FCC eliminated the regulatory fee for Amateur Radio vanity call signs in 2015.

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Although the Schedule of Regulatory Fees does show a \$7 annual fee for Amateur Radio vanity call signs, a boldface heading in that section of the NPRM states, "REGULATORY FEES. This section is no longer in effect as it has been amended by RAY

Field Day Location: Gary's





MICHIGAN DISTRACTED DRIVING LEGISLATION UPDATE

To all amateur radio operators in Michigan:

The message below is from Ed Hude, Larry Camp, John McDonough, and Dale Williams. A special thanks to these gentlemen for their efforts!

Please feel free to pass this on to all radio amateurs, and please publish this widely!

MICHIGAN DISTRACTED DRIVING LEGISLATION UPDATE

There are several bills (HB 4181, 4198 and 4199) that have been formulated in the Michigan House of Representatives that deal with Distracted Driving. These bills have been assigned to the House Transportation Committee for further work and study.

As written these bills did not exempt amateur radio operation from a vehicle from being considered as distracted driving.

The Michigan ARRL legislative team has been watching as these bills were introduced in the House. As the Michigan ARRL State Government Liaison, I recently testified before the House Transportation Committee. As a result, Amateur Radio was granted an exemption (the use of amateur radio while driving) from being considered a distraction. The exemption amendment referenced 47 CFR Part 97, 47 CFR Part 90 and a reference to CB radio.

The Committee vote to include said exemption language in any Distracted Driving Legislation was unanimous. The bills will now go to the House Ways & Means Committee for their consideration. If any of the bills pass out of the Ways and Means Committee, they will go to the House floor for a full vote. If the bill(s) pass the House, they will then be referred to the Michigan Senate. If a bill passes the House and Senate vote, then it will move to the Governor's Desk for her approval.

There seems to be a great deal of interest in the Governor's office to have a Distracted Driving law in Michigan. We would appreciate if every Michigan amateur radio operator would send a very brief email to the members of the Transportation Committee thanking them for their support

of the amendment exempting amateur radio and other 2-Way radio services from being considered as distracted driving.

Here is a list of the Representatives on the Transportation Committee:

Shannon, Haadsma, Yanrey, Clemente, Sneller, O'Malley, Eisen, Cole, Sheppard, Alexander, Bellino, Howell, and Afendoulis.

You can find a list of representatives and their email addresses here:

<http://www.house.mi.gov/MHRPublic/frmRepList.aspx?all=true>

It is appropriate to have friends who are or are not fellow amateurs and their friends and relatives to send a note similar to this:

"I wish to thank you for supporting the two-way radio exemption on HB 4181, 4198 and 4199. In light of the public services that amateur radio operators provide free of charge for the citizens of Michigan, it is important that amateur radio operation while driving to not be considered to be driving while distracted."

As these bills move forward in the legislative process, there will be additional opportunities for the amateur radio community (and friends) to once again communicate with our legislators. We will provide the specific names and a suggested message(s).

Thank you for your interest and for taking action on this important topic.

73,
Ed Hude, WA8QJE
Michigan ARRL State Government Liaison



From the Copper Country

Hello Everyone:

Starting next Friday, March 15 I, George, (W8FWG) will be 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.

Please let me know if you like the podcasts, downloaded from the ARRL.

I have received permission from both groups to use them with the stipulation that I edit out the music, and the advertisers, in their productions and I have been doing that on a regular basis.

Here now is a summary of what this new service will bring you:

New ARRL Podcast Geared Toward Newcomers to Amateur Radio Debuts Today

A new ARRL podcast aimed newcomers to Amateur Radio will launch on Thursday, March 7. Called, "[So Now What?](#)," the podcast will alternate new-episode weeks with the "[ARRL The Doctor is In](#)" podcast. "So Now What?" will focus on answering questions and providing support and encouragement for new licensees t

George Thurner

o get the most

-73- and GL

"George" W8FWG w8fwg@arrl.net

P.S. IMPORTANT!!! SUNDAY, MARCH 10 AT 2AM, THIS IS THE ANNUAL CHANGE TO DAYLIGHT SAVING TIME. ON SUNDAY MORNING AT 2AM IT CHANGES SO REMEMBER TO "SPRING FORWARD" ONE-HOUR ON ALL OF YOUR CLOCKS AND DON'T FORGET THE ONE IN YOUR CAR AND THE MICROWAVE OVEN TOO ! AND....ON NOVEMBER 3, 2019 WE REVERT BACK TO STANDARD TIME ONCE AGAIN.

we welcome volunteers interested in utilizing their 2 meter equipment and helping with the automo-

I've attached a flyer on the rally with a link to more

Roger VanDamme

Chairman, CUPRally 2019

rgvandamme@gmail.com



PRESENTS THE



Powers, Michigan

Automotive Rally racing in the heart of the Upper Peninsula

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For information or to volunteer goto-
www.cuprally.net
www.nasarallysport.com



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,

Hamvention is the word for today, as tomorrow starts the 2019 Hamvention. Many other mentions are yours for the viewing in the May 2019 edition of the Michigan Section ARRL Newsletter, live and direct from Xenia, Ohio!

Section Staff Vacancies

With the passing of our Section PIO, Patrick Mullet, KC8RTW, we are in seeking a replacement for that position. The job responsibilities of a PIO (Public Information Officer) are listed on the ARRL website, simply do a search for PIO.

We'll also be seeking replacements for other positions throughout 2019. Some vacancies will be created as folks who have served retire, and others may need to be filled to improve activity levels within their offices.

I'm always happy to talk about your ideas and potential roles you would like to take on, and since I try and make appearances at a number of local swaps, it shouldn't be too tough to track me down. Please remember that it's relatively easy to spot issues, but much more challenging to craft workable solutions.

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!

Michigan Section Manager at Hamvention

As I mentioned, I am at Hamvention, and intend to spend time on Friday and Saturday at the ARRL expo booths. Drop on in!

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 April 2019

Station Activity Reports (SAR) for April 2019

WB8WKQ 422, K8ED 162, N5MKY 135, K8RDN 118, WD8MWD 97, WB8TQZ 96, K8BKM 74, KB8RCR 50, KE8CEH 42, KD8ZCM 25, WD8USA 21, KE8CYC 14, WB8RCR 13, KB8PGW 4

Public Service Honor Roll (PSHR) for April 2019:

KE8BYC 306, KE8CYC 224, WB8RCR 218, WD8MWD 200,
K8RDN 155, KC8YVF 121, KB8RCR 120, WB8TQZ 110, KD8ZCM
105, N5MKY 100, K8ED 100, WB8WKQ 90, KE8CEH 83,
WD8USA 73, W8DW 72, KB8PGW 54, N8OSL 28

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

Net traffic for April 2019:

Michigan Amateur Communications System 122
Michigan Traffic Net 81

Southeastern Michigan Traffic Net 51
The Michigan Net 69
Great Lakes Emergency Traffic Net 45
Upper Peninsula Net 39
Michigan VHF Traffic Net 33
Michigan Digital Traffic Net 10
Northern Lower Eastern Upper Peninsula Net 12
Saginaw County ARES Net 6

NTS person-hour Value for April 2019: \$ 40,798

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

I'm looking forward to hearing from all of you, and to visit your local club or group. I deeply appreciate the countless hours folks spend in volunteering their energy to make the hobby even better. Thanks to all the radio amateurs who continue to make the hobby great!

Get Active, Get Involved, and Get On The Air!

73
Jim K8JK



Dales Tales

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

The fourth full weekend in June brings Field Day, probably the largest ham radio operating event held annually. It's a time to test our mettle, get out there with our temporary antennas, improvise shelters, set up non-commercial power and see how many contacts we can put in the log. Field Day is a great opportunity to demonstrate some of the most interesting facets of our hobby.

So with that in mind, I recommend you invite some of your local elected officials and some of the non-elected ones as well. (You get FD points for doing this). Let them see first-hand some contacts being made. If you do this, remember to talk with them in terms they can understand. Drop the ham-lingo, forget "QSO", forget "DX", even forget "rig", your guest probably doesn't have a clue about what those terms mean. Think about keeping the terms pretty basic and in understandable common vernacular. These demonstrations keep ham radio in the eyes of our public officials; keeps the information flowing about how Amateur Radio can service the public good, and shows them how we are community minded. Remember this when you want to install that new antenna.

Most importantly, don't forget the really good parts of Field Day; the pot-luck meals with our families joining us and the opportunity to nurture some new operators.

At this time, let's not forget our fellow hams in Ohio as these gals and guys are heavily involved with the aftermath of a series of tornadoes that struck several communities this past week. ARES Teams across the state are assisting local officials and their needs with surveys and cleanup operations. Please be alert for continuing net operations on frequencies across the state. What may be a temporarily quiet channel, frequency or talk group may have ongoing operations related

to the storms.

TOM'S COMMENTS:

Another successful Hamvention this month! The organizers again deserve a lot of credit and praise for a job well done. Things keep getting better at the new facility.

And they really struck a good note with their theme: "Mentoring the Next Generation." Very timely. It's been on the minds of many of us as we look around for the next generation. Where are they? At the ARRL Forum on Saturday, President Rick Roderick, K5UR, asked how many in attendance were under thirty. The answer—none. How many under forty? — one!

Not to be all doom and gloom, there really are younger hams out there, and many local clubs in the Division are reaching out and offering classes. In fact, I'll bet that your club, or a club near you, has just finished spring classes and your area has a number of newly licensed hams. That's great. Now—are the efforts at mentoring ready? It can't just be that, well, I'm available to talk if someone wants to. Who scheduled the next meeting for that group of new hams? Class is over, and that's it? Who's going to help them get on the air? Can we make that a club activity and priority? Some clubs do, with great success. All clubs should do the same. Need some suggestions? Contact me, and I'll pass along the stories of those clubs that are making the efforts.

Another way to reach out is coming up in June. It's called Field Day. Yes, Field Day is lots of things. Operating. Meals. Good friends. It's also about meeting the public. Are you prepared? Do you have a PIO specifically for Field Day? Have you done any publicity? Will you have people at the site looking out for visitors? Can you explain ham radio in terms that inter-

est non-hams? Do you have a good supply of hand-outs about ham radio? For young people in particular, can someone talk about some fun technical projects that having a license can facilitate? Yes, the contesting aspect of Field Day is on display. But what about describing "science" things that might interest, like balloon launches with APRS tracking, remote control of models, and particularly remote control of robots?

Interestingly, really young kids, up to about 8 years old, are fascinated by CW, in that they love to learn how to send their name in code. Can someone please bring a code practice oscillator to let them try? Are you doing data as part of Field Day? Show them how the computer works through the radio. The recent tornado outbreak, unfortunate as it was for so many people who lost homes, can be a chance to talk about public service, both in Skywarn and in the many relief efforts underway. There are lots of things to talk about in ham radio, so make sure you're prepared to meet the public.

As you can tell, I can get pretty wound up about this subject. I look forward to talking with many of you at some of the many summer hamfests.

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

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 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. With 52 weeks and 70+ hamfests in the Great Lakes Division, things do double up a little and we need to share duties. Plan ahead for requesting your ARRL Officials to attend.

6/1/19	Luce County	Newberry, MI
6/1/19	Princeton	Princeton, KY
6/1/19	IRA	Hudsonville, MI
6/1/19	Fulton County	Wauseon, OH
6/2/19	Chelsea	Chelsea, MI
6/8/19	Union County	Marysville, OH
6/15/19	Milford/W8DXCC Conv	Milford, OH
6/15/19	Midland Hamfest	Midland, MI
6/16/19	Monroe	Monroe, MI
7/7/19	20/9 RC Tailgate Swap	Austinville, OH
7/20/19	Big Sandy Hamfest	Louisa, KY
7/20/19	NOARS Fest	Elyria, OH
7/20/19	Gladwin Swap	Gladwin, MI
7/27/19	Van Wert	Van Wert, OH
7/28/19	Portage Hamfair	Portage, OH

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://arrrl-greatlakes.org/>

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

73, Ham it up!

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

ARRL PROPAGATION BULLETIN

ZCZC AP23

QST de W1AW

Propagation Forecast Bulletin 23 ARLP023

From Tad Cook, K7RA

Seattle, WA June 7, 2019

To all radio amateurs

According to <http://www.spaceweather.com>, as of June 5 there have been no sunspots for 17 days in a row. Average daily solar flux went to 69.5 this reporting week (May 30 through June 5) from 67.4 in the previous seven days. Average daily planetary A index declined from 7.3 to 5.6, while mid-latitude A index went from 8.1 to 5.

Last week I mentioned that sunspots should return soon, based on the predicted solar flux, but those projections have softened. On June 6 the 45-day predicted solar flux was 70 on June 7-14, 72, 72 and 71 on June 15-17, 70 on June 18-29, 71 on June 30, 72 on July 1-13, 71 on July 14, and 70 on July 15-21.

Predicted planetary A index is 8, 10 and 8 on June 7-9, 5 on June 10-22, then 8, 10, 12 and 8 on June 23-26, 5 on June 27-29, 8 on June 30 through July 2, 5 on July 3-4, 8 on July 5-6, 5 on July 7-19, then 8 and 10 on July 20-21.

Spaceweather.com sent this alert on June 5: "A DAYTIME METEOR SHOWER IS UNDERWAY: Radars in the northern hemisphere are pinging with activity as one of the strongest meteor showers of the year takes place in broad daylight. The source of the shower is sungrazing Comet 96P/Machholz."

Dick Bingham, W7WKR alerted us to this, and wrote: "What a fine 6-meter opening this afternoon! I copied many of you on FT8 working across the country. The one I really would have enjoyed capturing was NW1P in FN67 - probably the only person in the USA there. Listening to all the meteor-echoes was impressive. Seemed like up to 10 per MINUTE for a while."

Jon Jones, N0JK wrote:

"I enjoyed reading N8II's detailed report of his activity in the WPX CW this year.

"Especially noted his rare Hawaiian contact on 10M in this contest in <http://www.arrl.org/w1aw-bulletinsarchive/ARLP022/2019>.

"6 meters was also open from Hawaii to the mainland USA May 25.

"At almost the exact same time Jeff worked WH7V on 10, VE2XK worked NH6Y on 6 meters:

"NH6Y 19/05/25 1859Z 50313.0 FN07 ES BL10 TU FT8 qso & grid VE2XK NH6Y 19/05/25 1857Z 50313.0 DN70MQ ES BL10TS KOGU

"No Hawaii from Kansas, but logged KP4EIT and KP4AJ on 50 MHz FT8 about 2000z May 25."

Geomagnetic activity forecast for the period June 7 to July 3, 2019 from F.K. Janda, OK1HH.

"Geomagnetic field will be:

Quiet on June 13, 16-18, 28, 30, July 1, 3
Quiet to unsettled on 8, 10-11, 14, 19-22, 27, 29
Quiet to active on June (12, 15,) 26, July 2
Unsettled to active on June (7, 9,) 23-25
No active to disturbed days expected.

"Solar wind will intensify on June 10-14, 24-27

"Parenthesis means lower probability of activity enhancement."

Lance Collister, W7GJ of Frenchtown, Montana is interested in 6 meter moonbounce, and runs a Magic Band EME email group, which you can subscribe to via his web site:

<http://www.bigskyspaces.com/w7gi/>

Dr. Tamitha Skov's latest video can be found at:

<https://youtu.be/dWwCxWEK1EQ>

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 May 30 through June 5, 2019 were 0, 0, 0, 0, 0, 0, and 0, with a mean of 0. 10.7 cm flux was 68.7, 68.7, 69.7, 69.9, 69.8, 70, and 69.8, with a mean of 69.5. Estimated planetary A indices were 8, 5, 4, 4, 5, 8, and 5, with a mean of 5.6. Middle latitude A index was 8, 5, 3, 4, 4, 7, and 4, with a mean of 5.

NNNN



ARRL DX NEWS

ZCZC AE23
QST de W1AW
DX Bulletin 23 ARLD023
From ARRL Headquarters
Newington CT June 6, 2019
To all radio amateurs

This week's bulletin was made possible with information provided by 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.

GHANA, 9G. Matteo, IZ4YGS is QRV as 9G5GS until July 2. Activity is on 160 to 6 meters using SSB and FT8. QSL direct to home call.

AZORES, CU. Herman, HB9CRV is QRV as CU8FN from Flores Island, IOTA EU-089, until June 11. Activity is on the HF bands using FT8 and FT4. He plans to be QRV in the Portugal Day Contest operating CW while CU8AS will be active using SSB. QSL via operators' instructions.

IRELAND, EI. Members of the Galway Radio Experimenters Club will be QRV with special event call sign EI100ABC from June 11 to 16 during the Alcock and Brown Centenary Festival

to commemorate the first non-stop transatlantic flight by John Alcock and Arthur Brown. QSL via EI2II.

FRANCE, F. Members of the Association des Radioamateurs des Cotes d'Armor will be QRV with special call sign TM1MOON on June 8 and 9 to commemorate the first space-flight landing humans on the moon. QSL via F4EUG.

GUADELOUPE, FG. Reiner, DL2AAZ is QRV as FG/DL2AAZ from Deshaies, Basseterre Island until June 13. Activity is on 20 and 17 meters using SSB. QSL direct to home call.

ENGLAND, G. Members of the Peterborough and District Amateur Radio Club are QRV as GB0DDR until June 9 to commemorate the 75th anniversary of D-Day. QSL direct to M5ATR.

WALES, GW. Special event station GB2ORM is QRV until June 9 to commemorate the 75th anniversary of D-Day. QSL via bureau.

JAPAN, JA. Special event station 8N7JAPAN is QRV until October 31, 2020 to commemorate the Olympic Games 2020, the Paralympics 2020, and the World Cup Games 2019. QSL via bureau.

SVALBARD, JW. Erling, LB2PG is QRV as JW/LB2PG from Bear Island, IOTA EU-027, until November 2019 while working at the weather station. Activity is in his spare time on 80 to 20 meters using SSB. QSL to home call.

test Web Sites for details.
NNNN

MARKET REEF, OJO. A large group of operators will be QRV as OJ0AW from June 8 to 15. Activity will be mostly on the HF bands, with some VHF activity, using CW, SSB, FT8 and other digital modes. QSL via OH6AD.

CURACAO, PJ2. Paul, VA3ZC will be QRV as PJ2/VA3ZC from June 9 to 16. Activity will be holiday style on 40, 30 and 20 meters using CW and FT8. QSL to home call.

SAO TOME AND PRINCIPE, S9. Operators EA1ACP, EA1DVY, EA5BJ, EA5EL, EA7FTR, EB7DX and S92HP are QRV as S9A from Sao Tome, IOTA AF-023, until June 18. Activity is on the HF bands using CW, SSB and FT8. QSL via EB7DX.

GREECE, SV. Operators Alex, SV8QG, Pantelis, SV8DCY, Kostas, SV8DCW, Periklis, SV8DTD and Fotis, SV8RMA are QRV as J48GEO from the Geo park on Lesvos Island, IOTA EU-049, during June. Activity is on the HF bands using SSB and various digital modes. QSL via LoTW.

BURKINA FASO, XT. Elvira, IV3FSG is QRV as XT2SE from Ouagadougou until June 13. Activity is on the HF bands. QSL via IK3GES.

VIET NAM, XV. Operators R9LAJ, R9LR, UA9KDF and UA9LDD are QRV as XV9DF from Hon Tre Island, IOTA AS-157, until June 15. Activity is on 40 to 10 meters using CW, SSB and FT8. QSL via M0OXO.

THIS WEEKEND ON THE RADIO. The ARRL June VHF Contest, NCCC RTTY Sprint, NCCC CW Sprint, HA3NS Sprint Memorial CW Contest, DRCG World Wide RTTY Contest, VK Shires Contest, Asia-Pacific SSB Sprint, SKCC Weekend CW Sprintathon, Portugal Day Contest, GACW WWSA DX CW Contest, REF DDFM 6-Meter Contest, Cookie Crumble QRP Contest and The 4 States QRP Group Second Sunday Sprint will certainly keep operators busy this upcoming weekend.

The RSGB 80-Meter Club Data Championship is scheduled for June 10.

The CWops Mini-CWT Test, NAQCC CW Sprint and Phone Fray are scheduled for June 12.

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 June QST, page 86, and the ARRL and WA7BNM Con-

Review

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

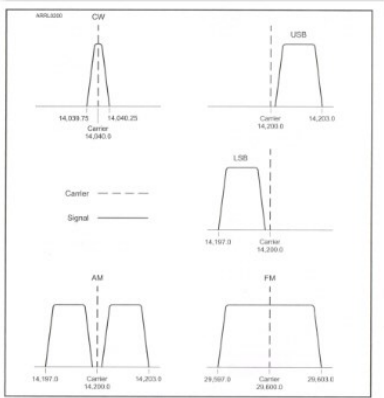


Figure E1A01 — An illustration of the relationship between carrier frequency and the actual signal sidebands. Most transceivers are configured to display the carrier frequency and not the frequency of the sidebands so the amateur needs to take care to keep all of the signal in the band.

E1A03

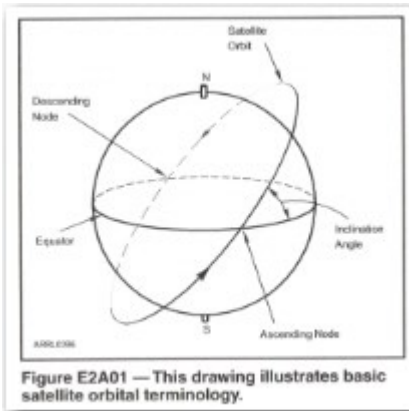


Figure E2A01 — This drawing illustrates basic satellite orbital terminology.

E2A09

Table E2-1

Satellite Operating Modes

Mode	Satellite Receive (Uplink)	Satellite Transmit (Downlink)
V/H	VHF (144 – 146 MHz)	HF (21 – 30 MHz)
U/V	UHF (435 – 438 MHz)	VHF (144 – 146 MHz)
V/U	VHF (144 – 146 MHz)	UHF (435 – 438 MHz)
L/U	L-Band (1.26 – 1.27 GHz)	UHF (435 – 438 MHz)

T2A11: What term describes an amateur station that is transmitting and receiving on the same frequency?

- A. Full duplex
- B. Duplex
- C. Simplex
- D. Multiplex

T1A11: When is willful interference to other amateur radio stations permitted?

- A. To stop another amateur station which is breaking the FCC rules
- B. At no time
- C. When making short test transmissions
- D. At any time, stations in the Amateur Radio Service are not protected from willful interference

T3A11: Which part of the atmosphere enables the propagation of radio signals around the world?

- A. The stratosphere
- B. The troposphere
- C. The ionosphere
- D. The magnetosphere

- G1A11: When General Class licensees are not permitted to use the entire voice portion of a particular band, which portion of the voice segment is generally available to them?
- A. The lower frequency used
 - B. The upper frequency used
 - C. The lower frequency end on frequencies below 7.3 MHz and the upper end on frequencies above 14.150 MHz
 - D. The upper frequency end on frequencies below 7.3 MHz and the lower end on frequencies above 14.150 MHz
- G2A11: What does the expression "CQ DX" usually indicate?
- A. The general call for any station
 - B. The caller is listening for a station in Germany
 - C. The caller is looking for any station outside their own country
 - D. A distress call
- G3A11: Approximately how long is the typical sunspot cycle?
- A. 8 minutes
 - B. 40 hours
 - C. 28 days
 - D. 11 years
- E1A11: Which of the following describes authorization or licensing required when operating an amateur station aboard a U.S. registered vessel in international waters?
- A. Any amateur license with an FCC Marine or Aircraft endorsement
 - B. Any FCC-issued amateur license
 - C. Only General class or higher amateur licenses
 - D. An unrestricted Radiotelephone Operator Permit
- E2A11: What type of antenna can be used to minimize the effects of spin modulation and Faraday rotation?
- A. A linearly polarize antenna
 - B. A circularly polarized antenna
 - C. An isotropic antenna
 - D. A log-periodic dipole array
- E3A11: What is a typical range for tropospheric propagation of microwave signals?
- A. 10 to 50 miles
 - B. 100 to 300 miles
 - C. 1200 miles
 - D. 2500 miles



ANSWERS

- T2A11: C: Simplex and duplex refer to the type of communication taking place. Simplex communication is transmitting and receiving on the same frequency. Duplex communication uses on frequency for transmitting and another frequency for receiving.
- T1A11: B: [97.101(d)] Intentionally creating harmful interference is called willful interference and is never allowed.
- T3A11: C: Reflections from the ionosphere allow radio waves to be received hundreds or thousands of miles away.
- G1A11: B: [97.301] If you look at the US Amateur Band chart available in the General Class License Manual or on the ARRL website at www.arrl.org/graphical-frequency-allocations you will see that in the bands on which there are mode restricted segments, such as 80 meters, General Class licensees have access to the higher frequencies of the segment.
- G2A11: C: DX means "distant stations" in ham jargon, so combining CQ which means "I am calling any station" with DX means "I am calling any distant station." You may also hear stations making targeted calls be combining CQ with some other description, such as "CQ mobile stations" or "CQ California". It is polite to avoid to responding if you are not of the type of station being called.
- G3A11: D: The internal dynamics of the Sun cause its activity to vary in a cycle lasting approximately 11 years. Sunspots are one indication of solar activity and since they were the earliest phenomenon observed on the Sun, the cycle is called the sunspot cycle.
- E1A11: B: [97.5] As a licensed US amateur you may operate with your full privileges from U.S. registered vessel but only in international waters. Once in the territorial waters of another country, you are required to abide by their amateur licensing regulations. For the types of reciprocal permits, see Subelement E1F (Miscellaneous rules). You are also required to have permission to operate.
- E2A11: B: Circularly polarized antennas of the proper sense (direction of polarization rotation) will minimize the effects of spin modulation. The polarization of a radio signal passing through the ionosphere does not remain constant. A horizontally polarized signal leaving a satellite will not be horizontally polarized after it passes through the ionosphere on its way to Earth. That signal will in fact seem to be changing polarization at a receiving station. This effect is called Faraday rotation. The best way to compensate for Faraday rotation is to use circularly polarized antennas for transmitting and receiving.
- E3A11: B: The maximum range of tropospheric propagation is about the same as the size of the atmospheric structures that create the path.

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/>

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Scott Jarmusch, KA8TFF

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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	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
KE8GHH	RITTENHOUSE	DAVE	IRON MOUNTAIN	?	?
K4FMX	SCHAFFER	GARY	NIAGRA, WI	?	GARYSCHAFFER@LARGERIVER.NET
KG9Y	THOMAS	DAVE	NIAGARA	715-251-1393	kg9y@arll.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.