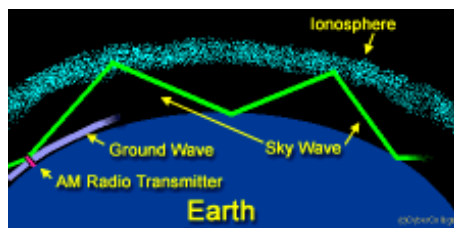


# The Hertzian Herald



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## N8DXR's Ground Waves



Despite the current weather conditions spring is here and we are moving closer to the middle of the 2018 solar year. All the while we are hearing more, and seemingly never ending, information regarding poor band conditions. But what exactly determines that the band conditions are good or bad at any given time? We see references to the terms sun spot frequency, solar flux, solar minimum and the perplexing K and A indices. But how do we determine what they mean and how do they relate to good or bad band conditions? The aforementioned terms are all part of radio propagation and not some sort of modern alchemy. An understanding of radio wave theory and the basic terms associated with propagation will give you an edge in finding the best band condition for a given frequency at a given time. All of this information will help you use your on air time more efficiently. There is no point in transmitting your call sign just to have it pass through the ionosphere and out in to space or to languish before reaching a contact. To get started in understanding the basics of propagation I recommend the article by Ian Poole, G3YWX, "Understanding Solar Indices", in the September 2002 QST. This article will give you a great start in your exploration of radio propagation and gives several references to use your new found information. I would also recommend the CQ Communications book "The New Shortwave Propagation Handbook" and from the ARRL "Radio Propagation Explained" as additions to your radio library. A basic understanding of radio propagation and its terms will allow you to begin to understand the data on a vast array of HF propagation sites. All of this new found information can lead to an increase in your chances of making that needed contact even during these variable band conditions.

And speaking of making contacts the Michigan QSO Party will run from 1600Z April 21 to 0400Z April 22. In past years we have opened our radio station at the Red Cross Building and participated in the MiQP. Providing there is enough interest we will be on the air there again this year. This is a great opportunity for those with little or no HF time on the air to get behind the mike with an experienced person there to give you help and support. Even if you have a brand new Technician license you can operate with a club member on all of the available bands with a higher license present. We will have further discussion regarding this at our meeting this coming Thursday.

If you can't be present to participate in the MiQP at the Red Cross building please note that you can operate from your own station and share you contact score with the club by listing the MCRCA as your club when you turn in you log.

Planning for the 2018 GLHamCon is moving along and new opportunities to improve operations at the event are in the planning stages. As planning moves forward I will be looking for volunteers to help make this year's event an even bigger success. If possible I urge you to leave your calendar open for the first weekend in October so that you can help the MCRCA contribute to the success of this year's GLHamCon.

Hope to see you at our meetings and on the air. 73 John - N8DXR

### Club Officers

#### PRESIDENT

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jcn8dxr@gmail.com

#### VICE PRESIDENT

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goglen@gmail.com

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## MCRCA Minutes:

March 15, 2018

Meeting called to order at 7:38 pm, by John Copeland N8DXR

Pledge of Allegiance

Introductions: No new members, upgrades or guests.

PROGRAM: March program by Jim Kvochick, K8JK, Michigan Section Manager. Outside the box thinking for what we can do to expand/improve the ARRL. Please bring your comments and ideas forward.

DOOR PRIZE DRAWING: Dave AC8SI, Gary W8GPR, and Wes KC8SKP

50/50: W8PI donated some to the scholarship fund. \$11 to the fund.

MINUTES: Motion by Dave AC8SI, supported by Bob AC8DZ, to approve as written in the Herald. Approved.

TREASURER REPORT: Not available

DX REPORT: Things going on - but nothing rare at this point, last weekend's contest was fairly good. 6m should be good North tonight and the next few days or so.

FUTURE PROGRAMS: April program by Jerry Begel W9NPI.  
May, everyone will be at Dayton.

TESTING: Next session - Sat. April 21, 2018. Even numbered months, 3<sup>rd</sup> Saturday 9 AM.

ARPSC: Mike N8KUF: Facebook page for ARPSC - Please look at page, link on [mcrca.org](http://mcrca.org) website as well. SET - working to improve issues found in last years SET. This year's Fermi Run may be last one - not fact but rumor.

ARRL: FCC- request for new rights on the HF bands for Tech licensees. Hoping to bring them up to General or Extra class.

RRRA: More or less in good shape - but some ongoing work to keep things up. also some enhancements too.

GLHAMCON: October 6-7, 2018, need plenty of help with this event!

OLD BUSINESS: None

NEW BUSINESS: May bring back Fox Hunts - a few during the summer months if there is enough interest.

ANOUNCEMENTS: TMRA Hamfest March 18, 2018. Club has a table there.  
**2018 Skywarn Training, Thursday, March 22 at 7 PM - 9 PM,**  
**Dundee Fire Dept. 820 Dundee-Azalia, Dundee, MI**  
Jim Nichols N8HHC passed away back on January 5, 2018  
**Check out the new web page at [mcrca.org](http://mcrca.org)**  
**MI QSO Party April 21<sup>st</sup> noon to midnight at the Red Cross**  
**May 5<sup>th</sup> Cadillac Swap**  
Monroe Hamfest setup June 17 and swap on Sunday the 16<sup>th</sup>.  
**Field Day June 23-24 at Vienna Park in Temperance**

ADJOURNED: 8:45 pm

ATTENDANCE: 11

AC8SI Dave  
KA8PQH Neil  
N8KUF Mike  
WA8EFK Dale  
KE8CQW Sandra

K8TMS Tom  
KC8SKP Wes  
W8PI Paul  
AC8DZ Bob  
W8GPR Gary

K8JK Jim

## Committees

### Classes

### Club Station

Wes Busdiecker KC8SKP

### DX Net

### Field Day

Jeff Breitner KA8NCR

### Finance

Paul Trouten W8PI (chair)  
Fred VanDaele KA8EBI  
Dale Williams WA8EFK

### HamFest

Fred VanDaele KA8EBI

### Hertzian Herald

Fred VanDaele KA8EBI

### Historian

Paul W8PI

### Public Relations

Jeff Breitner KA8NCR

### Scholarship

Fred VanDaele KA8EBI

### School Liaison

open

### Programs

open

### Membership

open

### Planning

open

### Property Custodian

open

## April MCRCA Program

*Jerry Begel has been a Ham Radio Operator since 1957, and holds the call letters W9NPI. He is a Life Member of the American Radio Relay League, and has necessarily evolved over the years with the sweeping changes in our technology.*

*He is a retired Electronic Technician and Training & Development Specialist. Jerry has spent the past six years as Education Chairman for the Hazel Park (MI) Amateur Radio Club, teaching and organizing classes and FCC exams for the three levels of Amateur Licensing.*

Jerry has created six lectures about:

- *The History of Telegraphy (Three parts)*
- *The Singing Arc: Unconventional RF Transmission Techniques*
- *A brief History of Military Communications*
- *A brief History of Recording*
- *Do You **Really** need a Tower?*

He has presented at four International Conventions of the *Antique Wireless Association*, and lectures at Libraries, Museums, and Amateur Radio Clubs in the Detroit Metropolitan Area.

Jerry mainly uses CW and digital communications on the Ham bands, with his new tower and HF antenna array. He was involved in the *Military Affiliate Radio System (MARS)* and *Detroit Civil Defense* during the "dangerous" 1960's, and once specialized in converting World War II Surplus radio equipment to Ham use.

His next lecture will be presented at the April MCARC meeting: *Do you **REALLY** need a Tower? Things we never thought of.*

## Forget cyber-crimes,

it's time to start worrying about GPS jammers - UK.gov report

The UK must reduce the dependency of its critical infrastructure and emergency services on GPS technology to mitigate against the potentially disastrous impact of signal jamming, a government report has warned.

In a forward to the long-awaited doc from the Government Office of Science, Cabinet Office minister Oliver Dowden said global navigation satellite systems (GNSS) are often described as an "invisible utility". He said: "It is in our national interest, as this report makes clear, that we recognize the precise nature and extent of our dependence on GNSS.

"We must take steps to increase the resilience of our critical services in the event of GNSS disruption, including by adopting potential back-up systems where necessary," he wrote in The Satellite-derived time and position: A Study of Critical Dependencies report.

Last year the government warned the UK stands to lose £1bn per day in the event of a major disruption to GPS. In 2016 it emerged the decommissioning of a US satellite caused an error in the GPS network, having a knock-on effect across a number of UK industries

Read the full article: [https://www.theregister.co.uk/2018/01/31/gps\\_signal\\_jammers\\_critical\\_infrastructure/](https://www.theregister.co.uk/2018/01/31/gps_signal_jammers_critical_infrastructure/)

• Our thanks to Stephen, G7VFX for spotting this item

## More than 30,000 New Ham Licensees and 7,000 Amateur Radio Exam Sessions in 2017

04/04/2018 - From the ARRL

For the fourth year in a row, more than 30,000 new licensees joined the Amateur Radio ranks, and the ARRL Volunteer Examiner Coordinator (VEC) conducted more than 7,000 Amateur Radio exam sessions, serving some 35,350 candidates for a new or upgraded license. At the end of December 2017, the US Amateur Radio population stood at 748,136. At nearly 378,000, Technician licensees represented the largest segment, with General (174,206), Amateur Extra (145,034), Advanced (41,938), and Novice (9,056) trailing. Licensee numbers showed continued growth across all classes except Advanced and Novice, which the FCC no longer issues; those numbers continue to drop.

"I'm hopeful that the number of new licensees will be more than 30,000 at the end of this year," ARRL VEC Manager Maria Somma, AB1FM, said. "I would love to see this trend continue!" Somma said topping the 7,000 mark in ARRL VEC-sponsored exam sessions since 2014 was "an important milestone for us." In 2017, the ARRL VEC administered 7,075 sessions.



Despite the optimistic influx of 32,196 newcomers last year, the net growth of 5,349 — about 0.72% over December 2016 — reflects some 27,000 expired or cancelled licenses in the FCC database over the past year. In making the case for changes to the entry-level license, the ARRL Board's Entry-Level License Committee referred to **"the large number of Baby Boomers (roughly born 1945 - 65) [who] will soon be aging off the licensee rolls."** The committee predicted the likelihood of "a significant decline in the number of hams, unless we take steps to reverse it."

Somma said that, in addition to exam session administration, ARRL VEC also processed and electronically transmitted 8,765 address changes and license renewals to the FCC for ARRL members in 2017. "This free service to members continues to be a strong draw," she said. She further pointed out that, as one of three FCC-authorized Club Station Call Sign Administrators (CSCSA), ARRL VEC processed and transmitted 1,761 club license applications for the FCC in 2017, of which 338 were for new club licenses.

The number of Amateur Radio license upgrades was 9,576 in 2017, continuing a slight downward trend over the past 10 years.

### New Licenses (2008 - 2017)

2008 - 28,066  
2009 - 30,144  
2010 - 27,528  
2011 - 24,072  
2012 - 27,082  
2013 - 28,886  
2014 - 33,241  
2015 - 32,077  
2016 - 32,552  
2017 - 32,196

### Upgraded Licenses (2008 - 2017)

2008 - 15,501  
2009 - 10,796  
2010 - 10,726  
2011 - 10,337  
2012 - 10,283  
2013 - 9,325  
2014 - 10,556  
2015 - 11,224  
2016 - 10,617  
2017 - 9,576

**TMRA is looking for help for the Glass City Marathon Sunday April 22nd, contact Rick at k8rks@arrl.net for more or to sign-up.**

## Announcing the 2018 Michigan QSO Party

Just Have Some Fun!!!!

- o Chance to get on the air
- o Single Op, Multi Op, Mobile, EOC
- o Be the station others want to work
- o Maybe activate a rare county?
- o Excellent Club Activity
- o Reason to get together as group
- o Join the fun in the "EOC" station category
- o Excellent Training opportunity!
- o Get new members on the air!
- o Friendly Competition

Let's all help make Michigan "radio-active" on April 21-22!!!!



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

The 2018 Michigan QSO Party, sponsored by the Mad River Radio Club, is from 1600Z April 20 until 0400Z April 21.

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

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

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

Submit logs no later than 30 days after the contest. Electronic logs in Cabrillo format are submitted via the Log Submittal page on the MiQP web site <http://www.miqp.org/submitLogFileMiQP.html>. Mail paper logs with summary sheets to: Mad River Radio Club, c/o Dave Pruett, 2727 Harris Road, Ypsilanti, MI 48198.

## River Raisin Repeater Association annual meeting

The River Raisin Repeater Association (RRRA) would like to invite you to attend the annual business meeting to find out where the association has been and to help determine where it is going. Elections for the Board of Directors will be held at that time, and current / planned business and projects for the association will be discussed (only current members may vote on association business).

**This year's business meeting will take place on Saturday May 5, 2018, 10:00 a.m. at the American Red Cross in Monroe (1645 N. Dixie, Monroe, MI)**

The Association is an independent radio club and is supported solely by member dues and contributions. Dues are \$20.00 per year. Additional Family Members (same address) are \$5.00 each. Membership runs from May 1 to May 1 of each calendar year. You may pay your membership dues at the meeting (please bring the membership form) or fill out the form at [www.mcrca.org/RRRA](http://www.mcrca.org/RRRA) and mail them in (preferred method). Your membership and participation are critical to the successful maintenance of RRRA equipment and continued services.

## MONROE COUNTY SKYWARN SPOTTER REPORTING GUIDELINES

-Except for Severe Thunderstorm or Tornado Warnings, Monroe SKYWARN policy is to activate approximately 30 minutes before the storm affects the county, unless there has been multiple/verified Severe aspects in neighboring counties and radar indicates Monroe County will be in the path.

-Please check-in by giving call sign phonetically, First name and Location (Nearest Streets).

-Never give Broadcast 3<sup>rd</sup> party reports i.e. TV, Radio, Weather Radio, Scanner-If they are on these formats, the NWS and Emergency Management already know about them.

### CONDITION GREEN

When NCS places the net under condition GREEN, spotters may report any and all storm effects, at the discretion and directions of NCS, such as:

- Gust front arrival
- Approaching Thunderstorm
- Heavy Rain, etc.
- And as always Tornadoes, Funnel Clouds or other Emergencies

-Most likely will not be a net in progress and normal repeater use will be allowed. Please allow extra time between exchanges for stations needing to break in.

### CONDITION YELLOW

When NCS places the net under condition YELLOW, spotter reports are restricted to RED reports plus other extreme storm effects such as:

- Intense and frequent lightning
- Hail. Give its approximate diameter
- Damaging winds, giving brief reports of damage observed
- Torrential rain (with near zero visibility)
- Flooding over the curb

-Check-ins WILL be permitted if NO Emergency traffic is holding at the discretion of the NCS. Allow extra time between key-ups for Priority and Emergency traffic. Less serious reports are not permitted under Condition Yellow. Repeater is closed to non net traffic

### CONDITION RED

When NCS places the net under condition RED spotters should ONLY report sightings of:

- Tornadoes
  - Funnel Clouds
  - Wall Clouds
  - 3/4 diameter or larger hail (dime size=3/4 inch)
- Spotters should otherwise maintain radio silence. Casual Check-ins and other less serious reports are NOT permitted under Condition Red. Emergency traffic check-ins should still do so.

### SPOTTERS REPORTING PROCEDURES

The simplest way of reporting is called the TEL SYSTEM:

**T** = Time of Observation

**E** – Effect (Hail, Wind, Etc.)

**L** = Location

**TIME** of the observation is very important in the spotter's report. For example, a tornado moving at 50 MPH will travel over 4 miles in 5 minutes. The time of the sighting will help radar man more quickly determine the specific storm cell of the tornado as it moves along. All reports should use "local" time.

**EFFECTS** of the storm system can include such things as: hail, heavy rain, a wall cloud, a funnel cloud or tornado. Description of the effects should be brief and concise. It is usually enough to give just the name of the storm effects such as "funnel cloud". A "hail" report should include it's size (i.e. pea size, golf ball size or estimated like 1/4 inch). A report of damaging winds should, briefly and concisely, describe the damage being observed.

**LOCATION** of storm effect should be indicated as closely as possible, using reference to the nearest town (i.e. 2 miles east of Dundee) or the nearest major road or street intersections, including an estimate of the direction that the storm is traveling. Give your location with every report.

Here are some examples of how a report might be made:

- 6:52 – Gust front with 50 mph winds at 23 and Stearns heading to the northeast
- 6:57 – 5/8 inch hail at Secor and 151 moving to the northeast,
- 7:05– Wall cloud 1 mile south of Samaria moving toward the northeast at approximately 20 mph.
- 7:06 – Funnel cloud at 23 and Dixon heading to the northeast.
- 7:35- Heavy Flooding over curbs Telegraph and 7<sup>th</sup>, near zero visibility

Just remember **TEL-TIME, EFFECTS, LOCATION**.

If a SKYWARN net is not already in progress when threatening weather appears, by all means start one up. Contact your Emergency Coordinator or an Assistant EC, (via phone if necessary). He will take over the net as soon as possible. In the mean time, report any funnel clouds/tornadoes to Central Dispatch via 911.

### Report Limitations

- Funnel Cloud Aloft
- Tornado Touchdown (including direction and estimated speed of travel, if possible)
- Cloud Rotations (Sustained)
- Damaging Winds (Above 58 mph)
- Large Hail (1/2 inch or larger)
- Flooding in Progress
- Any Damage from the above



The American Radio Relay League's round-up of the forthcoming week's DX activity on the amateur radio bands

This week's bulletin was made possible with information provided by UR5BCP, 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.

**AGALEGA AND ST. BRANDON ISLANDS, 3B6.7.** A large group of operators are QRV as 3B7A from Saint Brandon Island, IOTA AF-015, until April 17. Activity is on the HF bands with five stations active using CW, SSB and RTTY. QSL via F5CWU.

**CROATIA, 9A.** Dusan, S52DG is QRV as 9A/S52DG/p from Krk Island, IOTA EU-136, until April 15. Activity is holiday style on 80 to 10 meters using CW and SSB. QSL to home call.

**SOUTH COOK ISLANDS, E5.** Oleh, UR5BCP will be QRV as E51BCP from Rarotonga Island, IOTA OC-013, from April 15 to 20. Activity will be on 40 to 6 meters using CW, SSB, FM and various digital modes. This includes some SOTA activations. QSL via KD7WPJ.

**CANARY ISLANDS, EA8.** Mike, DG5LAC is QRV as EA8/DG5LAC from Fuerteventura, IOTA AF-004, until April 28. Activity is on the HF bands using SSB and FT8. QSL to home call.

**MOLDOVA, ER.** Ben, DL7UCX and Bernd, DL7VBJ are QRV as ER/home calls until April 15. Activity is on 160 to 10 meters using CW and various digital modes. QSL to home calls.

**PHILIPPINES, DU.** Bodo, DF8DX will be QRV as DU1WQY/1 from Palawan Island, IOTA OC-128, from April 15 to 18. QSL to home call.

**MARIANA ISLANDS, KHO.** Antonio, AH0D is QRV from Saipan Island, IOTA OC-086. QSL direct to home call.

**DENMARK, OZ.** Special event station 5POWARD will be QRV on April 18 to mark the 93rd World Amateur Radio Day. The station will be active with various call sign extensions. QSL via LoTW.

**TUVALU, T2.** Antoine, 3D2AG is QRV as T2AR from Funafuti, IOTA OC-015, until April 21. Activity is in his spare time on 160 to 10 meters using CW, SSB, RTTY, JT65 and FT8. QSL to home call.

**PALAU, T8.** Kazuhiro, JA7WFT and Shinichi, JI6IHG will be QRV as T88FT and T88IH, respectively, from Koror Island, IOTA OC-009, from April 17 to 25. Activity will be on the HF bands. QSL to home calls.

**EAST KIRIBATI, T32.** Ken, KH6QJ will be QRV as T32AZ from Kiritimati Island, IOTA OC-024, from April 17 to 24. Activity will be on 20, 15 and 10 meters. This includes being an entry in the upcoming Worked All Provinces China contest. QSL to home call.

**MICRONESIA, V6.** Sho, JA7HMZ will be QRV as V63DX from Pohnpei Island, IOTA OC-010, from April 18 to 24. Activity will primarily be on 160 meters using FT8. QSL direct to home call.

**VANUATU, YJ.** Grant, VK5GR will be QRV as YJ0AG from Efate Island, IOTA OC-035, from April 16 to 30. Activity will be on 80 to 10 meters using some CW, SSB and various digital modes. This include being an entry in the upcoming SP DX RTTY Contest. QSL via M0OXO.

**ROMANIA, YO.** Special event station YR57GC is QRV until April 20 to commemorate the first manned space flight 57 years ago by cosmonaut Yuri Gagarin. QSL via YO8AXP.

**KOSOVO, Z6.** A group of operators will be QRV as Z66D from April 14 to 22. Activity will be on the HF bands using CW, SSB, RTTY and FT8 with several stations active. QSL via OK6DJ.

## THIS WEEKEND ON THE RADIO

The ARRL SSB Rookie Roundup, Japan International DX CW Contest, NCCC RTTY Sprint, NCCC CW Sprint, QRP ARCI Spring CW QSO Party, OK/OM DX SSB Contest, F9AA PSK Cup, New Mexico QSO Party, Georgia QSO Party, North Dakota QSO Party, Yuri Gagarin International DX Contest, International Vintage HF Contest, WAB 3.5/7/14 MHz Data Modes and the Hungarian 80-Meter Straight Key CW Contest are scheduled for this weekend.

The Run for the Bacon QRP CW Contest is scheduled for April 16.

The 222 MHz Spring Sprint is scheduled for April 17.

The CWops Mini-CWT CW Test and Phone Fray are scheduled for April 18.

The ARRL International Grid Chase runs during all of 2018.

Please see April QST, page 84, and the ARRL and WA7BNM contest web sites for details

## Amateur Radio Examinations Monroe, MI

Monroe County Radio Communications Association Amateur Radio examinations are held the 3<sup>rd</sup> Saturday of every even numbered month at:

**American Red Cross Chapter Bldg.**  
1645 North Dixie Highway  
Monroe, MI 48161

Walk-ins are always welcome.

### 2018 Schedule:

February 17	April 21
June 16	August 18
October 20	December 15

### TESTING BEGINS PROMPTLY AT 9:00 AM

Applicants are expected to have all forms filled out and be ready to take tests at that time. Coffee and doughnuts are available at 8:30 AM. For more information or to make reservations, call Paul Trouten - W8PI at 734-854-2224

### Join us at the next meeting

April 19th at 7:30 pm  
American Red Cross Chapter Bldg.  
1645 North Dixie Highway  
Monroe, MI 48162

### Local Net

**ARPSC Net** - Every Monday evening on '72-Monroe (146.72 Mhz) starting at 8:00pm.

**ARPSC Meeting** first Thursday of every month at the EMD office on Raisinville Rd.. 7:00 PM