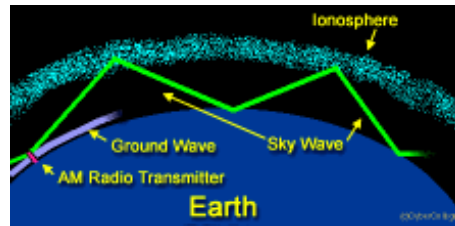


# The Hertzian Herald



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## N8DXR's Ground Waves



It's hard to believe but the first day of fall is the day after this month's meeting. At this time in June, we were getting ready for our hamfest with field day a week after that. Now we are entering the gradual slide toward the winter months. But you can cheer up a bit knowing that propagation and DX chances might improve *a little*. The end of summer and the beginning of the fall and winter seasons can have some benefits for ham radio. In summer the higher frequencies seem to have better band conditions. Beginning in late fall and into the winter months the lower frequencies tend to improve. The unique time for propagation is during the seasonal changes from fall to winter and from winter to spring. During these times you can often find much better DX conditions. Alas with current band conditions don't expect too much. During middle of this solar cycle the observed sunspot numbers hit a peak of 175 during February 2014. The current estimated index for September this year is 7.8 and for 2019 it's 2.0. If the solar cycle holds true to form and does not extend this slump we will have another 12 to 16 months, or maybe more, of single digit solar indices.

To take advantage of whatever this solar cycle brings in the coming seasons now is a good time to check antennas, coax, grounding and connections in the shack including all of those little things that can bring gremlins into play at the worst time. If you have to use a ladder, get on a roof or climb a tower use good safety practices and have a friend or family member there to help and keep an eye on you.

For those of you who have been using FT8 there is a new version that is available called FT8CALL. It is similar to FT8 but allows you to make longer calls. It has been called the "Rag Chewing version of FT8". FT8CALL is not automatic but requires user intervention since the standard messages are free text messages and do not start with a call sign. More information and the download of the current version can be found at <http://www.k0pir.us/new-mode-ft8call/>. Also check <http://qrznow.com/new-version-of-ft8call-released/> for a nice description of FT8CALL features.

There is lots of DX to work on Phone, CW and Digital if you can find the right time and band condition. A good example is ZL5A at Scott Base on Ross Island in the Antarctica. This and more DX information can be found on the ARRL DX News Letter. This bulletin and others can be subscribed to free of charge by logging into the ARRL web site and going to the "Edit Your Profile" page.

Again the ARRL stepped up to lend a hand when a disaster strikes. The league sent the same seven radio kits that were sent to Puerto Rico last September to South Carolina to assist with emergency communications during after Hurricane Florence. Repeatedly it is shown that Armature Radio is synonymous with Public Service

Hoping to see you on the air and at our meetings

73 - John N8DXR

### Club Officers

#### PRESIDENT

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## MCRCA Minutes:

**August 16, 2018**

Meeting called to order at 7:30 pm, by John Copeland N8DXR

Pledge of Allegiance

Introductions: No new members or upgrades, and 2 guests. Tom Imlach and Mark Filimon.

PROGRAM: Amateur Radio Astronomy by Wes KC8SKP

BREAK

DOOR PRIZE DRAWING: Tom Imlach, John N8DXR and Gary W8GPR

50/50: Gary W8GPR donated winnings to Scholarship

MINUTES: Motion by Sandy KE8CQW, supported by Bob AC8DZ, to approve as written in the Herald. Approved.

TREASURER REPORT: Motion by Sandy KE8CQW, supported by Gary W8GPR, to approve the treasurer's report as passed out to the membership. Approved.

DX REPORT: Tom KG8P, Austal Isl. Is TXST is going on till Aug. 21<sup>st</sup>. Kosovo is on the air. DX has been showing up on 6m including W. Sahara and Japan. Tom KG8P is continuing to operate from State Parks.

HAMFEST: Reported by John, "Did all right". Good comments from all.

FUTURE PROGRAMS: Will be announced in Hertzian Herald and MCRCA Website

TESTING: Next session - Sat. August 18, 2018. 9:00 AM Donuts!

ARPSC: Fermi Energy Run start at 8:30 AM

ARRL:

RRRA:

GLHamCon: - Oct 6-7, 2018 Canceled

OLD BUSINESS: None

NEW BUSINESS: None

ANOUNCEMENTS: Dan Metzger K8JWR became a silent key. Former instructor at Monroe County Community College.

ADJOURNED: 8:28 pm

ATTENDANCE: 16

AC8WE Donald  
KC8UU Mike  
KG8P Tom  
WA8EFK Dale  
W8GPR Gary  
Tom Imlach

KA8PQH Neil  
KE8DDMDalton  
N8DXR John  
AC8DZ Bob  
KC8RQK Fred

KC8SKP Wes  
KF8LT Jim  
W8PI Paul  
KE8CQW Sandy  
Mark Filimon

### 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

## Michigan State Parks on the Air (MSPOTA)

### Day 1

Let's just say it was different at Lake Hudson Recreation Area in Lenawee County, Michigan. High hopes for making 44 contacts since I had time and went to a park for what I think was a first-time activation. Everyone I contact gets credit for the park but an activator gets credit once 44 (or more) total contacts are made. After setting up for the park Jamboree to fingerprint kids, I set up the radios to find not one signal...nothing. Checked connections, un uns and antenna wire several times. Finally, got internet for a few minutes to find others looking for signals too. Almost packed it up after 6 hours of Jamboree but slugged it out for 15 qso' using 17, 20 and 30 meters and a bit of 40. Most on cw. Did work ON7NQ for EU. Pictures show set up at campsite #29, a rescued possum looking to be printed, radio set up and sign.



### Day 2

My first attempt at Lake Hudson Recreation Area was a challenge. I was there for a kid's event and thought...six hours and getting on the radio too...bonus. But the bands were gone, nada, nothing. Checked the antenna. Put up another antenna. A different un un. When I finally got cell, I learned the bands were dead. Managed 15 contacts before leaving and was uncertain what to expect on any return trip.

First thing, don't tell anyone when I expect to arrive, hi. Set up an hour after I thought I would be there, but that is another story. Instead of the campground area, decided to try the picnic area near the lake. Wide open

and no one else there. Cell showed two dots, so I could let people know what was going on. And if you look the vault toilet is straight in front for easy access. You just need to have a bathroom close.....

This park is 1 ½ hour away and I had noted Europe coming in at the home qth, so hopes were high. The bands turned out to be good but long. Got 39 in the log with EU making up 23 from 12 countries; SP, EA-2, EA8, I-3, ON-2, F-5, OH, G, SM-2, CU3, DL-2, UT. VE2, VE6 and VE7 represented Canada.

What did not work? Trying something new for 80 meters. I thought I could put two end fed wires for almost 70 feet and wrap around the Spiderbeam pole real close. Good plan but executed myself by going too fast. The sun had started to come into the vehicle and up went the pole sections by section. Looking good. Until one of the sections was not snugged up

enough. At about 30 foot or so it collapsed inside itself....You can picture this if you are a fisherperson. Think of the spool of line in coils like a slinky, just hanging there. 20 minutes later all was fine. Got on and the radio liked it. But no one could hear me. Lemons, nope. One picture shows the fully extended (41ft) Spiderbeam pole. Another you can see the lake, pavilion and set up. DE KG8P



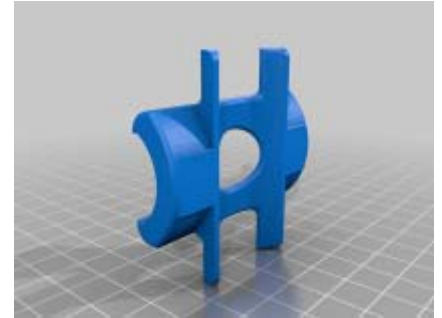


## 3D printed parts for ham radio

By Dan Romanchik, KB6NU

One of the things that I keep telling myself that I need to learn how to do is 3D printing. This morning, I ran across a couple more 3D printing projects for ham radio that I thought I'd pass along.

The first I found on reddit: 3D Printed Parts for Portable Tape Measure Yagi Designs ([https://www.reddit.com/r/amateurradio/comments/963br3/3d\\_printed\\_parts\\_for\\_portable\\_tape\\_measure\\_yagi/](https://www.reddit.com/r/amateurradio/comments/963br3/3d_printed_parts_for_portable_tape_measure_yagi/)). The summary on Thingiverse (<https://www.thingiverse.com/thing:3042505>), which is a website where "makers" share their designs, says:



These parts are made for use with 1-in. PVC pipe and 1-in. Harbor Freight tape measure steel. You can use electrical tape to attach the element holders to the side of the pipe, and use the driven element bridge to give structural rigidity across the driven dipole element. I have used this with up to 5 elements on 2m with good success. When not using the antenna, just pinch the elements to remove them from the holders, and store them INSIDE the tube! you can add some end caps to make this ultra portable. Use these parts with any of the multitude of tape measure YAGI design guides online.

Here's a look at an antenna made with these parts:



The element holders are attached to the boom with electrical tape in the photo above. While I haven't tried it, I'd suggest that the antenna might be a bit more robust if you could screw or perhaps glue the holders to the boom.

There are lots of other cool amateur radio 3D printing projects available on Thingiverse. (<https://www.thingiverse.com/search?q=ham+radio&dw=415b6d8da129c3c>). Browsing through the list quickly, here are just two that look like they might be useful to me:

- Soldering Fingers (<https://www.thingiverse.com/thing:1725308>). This project looks simple and quick.

- $\mu$ Bitx Case (<https://www.thingiverse.com/thing:2925336>). I still gotta do something with the  $\mu$ Bitx I bought. This looks like it might get me started.

### Finally getting in gear

Last week, I attended a 3D printing class at our local maker space, All Hands Active ([allhandsactive.org](http://allhandsactive.org)), and now I feel like I can finally attempt a 3D printing project. I'm thinking about starting out with the simple Soldering Fingers project. If that goes well, I'll try a Raspberry Pic case and finally start using that in the shack. And, while these projects all seem pretty cool, I feel like I'm only scratching the surface.

Have any of you 3D printed anything cool for your ham radio projects? Is there another source of designs for ham radio 3D printed stuff besides Thingiverse?

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When he's not 3D printing enclosures for his ham radio projects, Dan blogs about amateur radio, writes exam study guides ([www.kb6nu.com/study-guides](http://www.kb6nu.com/study-guides)), and operates CW on the HF bands. Look for him on 30m, 40m, and 80m. You can email him about your experiences with 3D printing at [cwgeek@kb6nu.com](mailto:cwgeek@kb6nu.com).

## ARPSC Report

KE8BYC-Lance Charter Monroe County EC

The last few weeks of August kept Monroe ARPSC members busy as we finished the final drills and evaluated exercises for this year's cycle of FERMI II preparedness testing and provided operators for the 29<sup>th</sup> annual Fermi Energy Run.

The last FERMEX drill was Aug 14<sup>th</sup> and the Federally evaluated exercise was on Aug 28<sup>th</sup> and was held at the county EOC and Monroe County Community College as the Joint Information Center. This was the first year we were asked to provide an operator at the JIC for backup communications and while it did present its challenges; our great operators made quick work of them and manned the station wonderfully. 2020 will be the next Bi-annual testing cycle. Thanks to all those that participated in the last drills, WA8EFK-Dale, N8KUF-Mike, N8DXR-John, KD8KHX-Tim, KD8ZNZ-Rodney, KE8DDM-Dalton, N8NYP-Terry, AC8DZ-Bob and also Thanks to our friends in Lucas County, Lenawee County, Washtenaw County and Wayne County ARES programs that operated their EOC stations during the drills this year.



Saturday Aug 18<sup>th</sup> ARPSC provided operators to man the check points at Fermi II power plant for the energy run put on by Monroe Milers. We had another beautiful day and everything went smoothly as the walking team crossed the finish line at the 59min 57sec mark. Thanks to WA8EFK-Dale, KA8EBI-Fred, KB8KQC-Brenda, KD8KHX-Tim, K8YOR-Lorie, and KE8DDM-Dalton for their assistance at the run.

We started September by hosting hands-on training for the National Traffic System; How to format and pass Radiograms and the importance to EVERY amateur operator to be able to format and pass Radiograms and message traffic. These skills will be touched upon in upcoming Monday night APRSC Nets.

### Upcoming Events will include:

**Saturday Sept 29<sup>th</sup> 11a-2p** at the Mall of Monroe we will have a table set up during the 5<sup>th</sup> Annual Emergency Preparedness Expo hosted by Monroe County Emergency Management. Stop out and visit us and the other public safety organizations.

**Thursday October 4<sup>th</sup> 7:30p-8:30p** is the October ARPSC Meeting at the EMD building; we will be discussing the upcoming Fall SET and finalizing the plans. Everyone is welcome to stop by.

**Saturday October 13<sup>th</sup> 8a-1p** is the **Michigan Section Fall Simulated Emergency Test**. We will be looking for help both at setup locations and by operator check ins; anyone with FLDigi experience is especially needed. Last year Monroe County took 1<sup>st</sup> place in the State of Michigan, this year our hope is to take top place in the Great Lakes Division! More details upcoming at the MCRCA meeting Thursday and the ARPSC meeting, along with the Monday Night Nets.

Anyone wanting more information can contact me; [KE8BYC@yahoo.com](mailto:KE8BYC@yahoo.com) or visit our facebook page, there is a link on the club website.

73, KE8BYC



## A HOLE IN THE SUN'S ATMOSPHERE:

A [jagged hole](#) in the sun's atmosphere is facing Earth and spewing a stream of solar wind toward our planet. Estimated time of arrival: **Sept. 17th**. Because the gaseous material will reach Earth only a few days before the onset of northern autumn, it may be extra-effective at sparking auroras—a result of "equinox cracks" in the geomagnetic field.

## EQUINOX CRACKS ARE OPENING IN EARTH'S MAGNETIC FIELD:

The northern autumnal equinox is less than a week away. That means one thing: [Cracks](#) are opening in Earth's magnetic field. Researchers have long known that during weeks around equinoxes fissures form in Earth's magnetosphere. Solar wind pours through the gaps to fuel bright displays of Northern Lights. It happened just last night in Rovaniemi, Finland.

"The auroras were totally awesome," says photographer Alexander Kuznetsov. "We weren't expecting a huge storm, yet this was the best display of the new season."

This is called the "[Russell-McPherron effect](#)," named after the researchers who first explained it. The cracks are opened by the solar wind itself. [South-pointing magnetic fields](#) inside the solar wind oppose Earth's north-pointing magnetic field. North and South partially cancel one another, opening a crack. This cancellation can happen at any time of year, but it happens with greatest effect around the equinoxes. Indeed, [a 75-year study](#) shows that September is one of the most geomagnetically active months of the year—a direct result of "equinox cracks."

NASA and European spacecraft have been detecting [these cracks](#) for years. Small ones are about the size of California, and many are wider than the entire planet. There's no danger to people on Earth. Our planet's atmosphere intercepts the rush of incoming particles with no harm done and a [beautiful afterglow](#).

Stay tuned for more Arctic lights as autumn approaches







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 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.

**SWAZILAND, 3DA.** Pista, HA5AO plans to be QRV as 3DA0AO from Mbabane from September 16 to 28. Activity will be on 80 to 10 meters using CW, RTTY and FT8. QSL to home call.

**VIET NAM, 3W.** Jacek, SP5APW will be QRV as 3W9JK/p from Cham Island, IOTA AS-162, until September 22 and then as 3W9JK from Hoi An until September 27. Activity will be on 20 to 6 meters using SSB. QSL to home call.

**MALAWI, 7Q.** Alex, IW5ELA will be QRV as 7Q7ELA from September 17 to 26 while traveling through the country. Activity will be on the HF bands using mostly CW in his spare time. QSL to home call.

**MALDIVES, 8Q.** Christian, OE3DEC is QRV as 8Q7EC until September 23 while on vacation. Activity is mostly on 20 meters using SSB. QSL to home call.

**WEST MALAYSIA, 9M2.** Members of the Kuala Lumpur DX Team will be QRV as 9M4IOTA from Redang Island, IOTA AS-073, from September 15 to 17. Activity will be on 80 to 10 meters using CW, SSB and various digital modes. QSL direct to 9M2000.

**TONGA, A3.** Eberhard, DL7JLL is QRV as A35JLL from Niuafu'Ou Island, IOTA OC-123, until September 19. Activity is on 40 to 10 meters using QRP power. QSL to home call.

**SAUDI ARABIA, HZ.** Members of the Saudi Amateur Radio Society will be QRV with special calls HZ88ND, 7Z88ND and 8Z88ND from Riyadh from September 16 to 30 to celebrate the 88 National Day of the Kingdom of Saudi Arabia. QSL via HZ1BF.

**MARIANA ISLANDS, KH0.** Harry, JG7PSJ is QRV as WHORU from Saipan, IOTA OC-086, until September 18. Activity is on 40 to 10 meters using CW, SSB and RTTY. QSL direct to home call.

**DODECANESE, SV5.** Alex, SQ9UM is QRV as SV5/SQ9UM from Rhodes Island, IOTA EU-001, until September 24. Activity is holiday style on 40 to 6 meters, and possibly 60 meters, using CW, RTTY, PSK and FT8. QSL to home call.

**EAST KIRIBATI, T32.** Uli, DL2AH is QRV as T32AH from Kiritimati Island, IOTA OC-024, until October 2. Activity is holiday style on 80 to 10 meters using SSB, RTTY and FT8. QSL direct to home call.

**SAN MARINO, T7.** Members of the Radioamateurs Association of the Republic of San Marino will be QRV as T71A from Torre Guaita, T71B from Torre Cesta, and as T71C from Torre del Montale, also known as the three towers of San Marino, on September 15 and 16. Activity will be on 40 to 10 meters. QSL via T70A.

**EUROPEAN RUSSIA, UA.** Dima, UA1OLM is QRV as RK1OWA/p from Solovetsky Island, IOTA EU-066, until the end of September. Activity is in his spare time on 40, 30 and 20 meters using CW. QSL via RZ1OA.

**KOSOVO, Z6.** Max, ON5UR will be QRV as Z68UR from Gjakove from September 20 to 30. Activity will be on various HF bands using mainly SSB and FT8. QSL via M0URX.

**TRISTAN DA CUNHA AND GOUGH ISLAND, ZD9.** Steve, G4EDG will be QRV as ZD9CW from Tristan da Cunha Island, IOTA AF-029, from September 20 to October 22. Activity will be on 40 to 15 meters, and possibly 80 meters later in the operation, using mainly CW and RTTY. QSL via LZ1JZ.

**ANTARCTICA.** Adam, ZL4ASC is QRV as ZL5A from the Scott Base on Ross Island, IOTA AN-011, while on work assignment. Activity is in his spare time. QSL via operator's instructions.

## THIS WEEKEND ON THE RADIO

The ARRL 10 GHz and Up Contest, North American RTTY Sprint, NCCC RTTY Sprint, NCCC Sprint CW Ladder, Collegiate QSO Party, SARL VHF/UHF Digital Contest, Scandinavian Activity CW Contest, All Africa International DX Contest, Iowa QSO Party, QRP Afield, New Hampshire QSO Party, New Jersey QSO Party, Washington State Salmon Run, Feld Hell Sprint and the BARTG Sprint 75 will certainly keep contesters busy this upcoming weekend.

The Phone Fray, 144 MHz Fall Sprint and Run for the Bacon QRP CW Contest are scheduled for September 17.

The CWops Mini-CWT Test and RSGB 80-Meter Autumn CW Series are scheduled for September 19.

The ARRL International Grid Chase runs during all of 2018.

Please see September QST, page 83 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

September 20th 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