Monroe County Radio Communications Association

The Hertzian Herald

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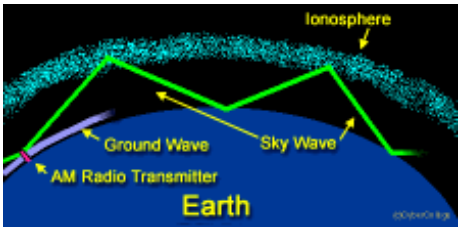
N8DXR's Ground Waves



While looking at several of the Sunspot Number graphs published by the SILSO data/image, Royal Observatory of Belgium, Brussels there is definitely a concurrence that shows the diminishing sunspot cycle will not end until sometime in the first quarter of 2019 or possibly latter. Hopefully in the next seven to nine months we will start to see a gradual, and most likely slight, improvement in HF band conditions. Until conditions improve there are many ways to enjoy being on the air.

There are many of the digital modes to be worked including the ubiquitous and very popular FT8 which seems to have displaced the once popular psk31. Or maybe it's working one of the many amateur satellites that are constantly passing overhead. If you have 6 meter capabilities you could give a try at meteor scatter.

You can try one of the three popular digital radio modes. First we have D-Star which is the oldest and was developed for Amateur Radio. Next was DMR which originated as a business communication standard in Europe and then was followed by DMR-Marc which was the first DMR for Amateur Radio. The third entry to the digital modes world was System Fusion developed by Yaesu for radios and repeaters manufactured by Yaesu for this mode. To get on the air with any one of these digital radio modes requires at least a HT radio that can range in cost from less than a hundred dollars to eight hundred dollars or more.

But what about using good old HF; it's still alive and kicking and has contacts to be made. Band conditions can make it tough to work but there could never be a better time than during this deep solar minimum to develop and hone your radio skill set for working DX. It's easy when the solar cycle is at its peak and 10 meters is full of contacts from all the zones in the world. But working 10 meters now, or any of the other bands, can be difficult and frustrating depending today's band conditions. And when the bands conditions do improve it will not necessarily make it any easier with many operators chasing that rare entity that you and everyone else wants put in their logbooks. Often it's the radio skills and techniques that they have developed that will put the DX entity into an operator's logbook.

You can check the lists for active or coming DX operations or you jump into one of the many contests or state QSO Parties that take place all year. Both offer practice working pileups and dealing with whatever the band conditions are at that time. You might review the operator's manual that came with your radio. You could find one or more features that can make copying a contact under poor conditions possible. There also can be time well spent on learning how to tune your audio output. Well-tuned audio can add power to your signal and make you stand out in a pileup. Bob Heil has an excellent You Tube video on how to set up you audio. If you are new to working DX there are many good books out there about DXing, including *The DXCC Handbook* and *The Complete DXer*. Both are available from the ARRL and other ham radio catalogs. One more thing; learn at least the basics of propagation so that you can get the most benefit from propagation forecasts and reports. So get on the air, work some DX, put some new entities in the logbook and have fun with Amateur Radio.

Hoping to see you on the air and at our meetings

73 – John N8DXR

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Inside This Issue

MCRCA Minutes:

July 19, 2018

Meeting called to order at 7:30 pm, by John Copeland N8DXR
Pledge of Allegiance
Introductions: No new members, upgrades or guests.

PROGRAM: none

BREAK

DOOR PRIZE DRAWING: Wes KC8SKP, John N8DXR, and Bob AC8DZ

50/50: Sandra KE8CQW

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

TREASURER REPORT: Motion by Wes KC8SKP, supported by Sandra KE8CQW, to approve the treasurer's report as passed out to the membership. Approved.

DX REPORT: John N8DRX – We are in the third week of no sum spots and the bands are tough but we just have to work harder to find the DX. There is a lot of DX going on right now with most being CW but some phone and digital out there.

TESTING: Next session - Sat. August 18, 2018???????????

ARPSC: The Fermi exercises are next week with two trials before the actual event.

ARRL: n/a

RRRA: n/a

GLHamCon: Glen K8GO - Oct 6-7, 2018, the web site was upgraded with tickets for sale on the website. (Ed update: HamCon 2018 has been canceled)

OLD BUSINESS: None

NEW BUSINESS: None

ANOUNCEMENTS: None

ADJOURNED: 8:15 pm

ATTENDANCE: 13

K8TMS Tom Schultz
KA8EBI Fred
KA8PQH Neil
KB8KQC Brenda
KC8SKP Wes
KE8DDM Dalton
KF8LT Jim
N8DXR John
N8NYP Terry
AC8DZ Bob
KE8CQW Sandra
W8GPR Gary
KC8UU Mike

Night time ambient sound generator for antique tube radio owners

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

ARPSC is looking for operators

-**Saturday August 18th** for the 29th FERMI Energy Run Briefing at 8:30 should be done by 1pm. Need minimum 7 operators. Email Lance KE8BYC@yahoo.com

-**Tuesday August 28th** is the FERMI Exercise from 8am-2pm will be looking for checkins and folks to "simulate" activation at shelters. No physical activation's will take place.

-**September ARPSC meeting Sept 6th** we will be discussing the changes to the ARES program and discussing NTS procedures. September Saturday session Sat 8th 9-12 at EMD we will go deeper into NTS and do some simulated traffic passing. Both are open to all.

-**Fall SET will be Sat Oct 13th** starting at 8am, will be looking for participants both via radio and to activate Red Cross and Hospital and if we get enough folks, we may activate a shelter location. FLDigi capability is a bonus.

Lance Charter
Emergency Coordinator
Monroe County Amateur Radio Public Service Corp
KE8BYC

Homebrew SSB transceiver

Al Williams WD5GNR writes on Hackaday about the videos by **Charlie Morris ZL2CTM** showing the design and construction of an amateur radio SDR SSB transceiver

It used to be homebrew ham gear meant something simple. A couple of active devices that could send CW. Maybe a receiver with a VFO. But only the most advanced builders could tackle a wide range SSB transceiver.

Today, that goal is still not trivial, but it is way easier due to specialty ICs, ready access to high-speed digital signal processing, and advances in software-defined radio techniques. Charlie Morris ZL2CTM decided to build an SSB rig that incorporated these technologies and he shared the whole process from design to operation in a series of nine videos.

Hackaday post

https://hackaday.com/2018/06/06/homebrew-sdr-ham-radio-in-9-parts/

Charlie ZL2CTM's YouTube channel

https://www.youtube.com/channel/UCSNPW3_gzuMJcX_ErBZTv2g/videos

Thanks to Lance KE8BYC and Tom KG8P for providing material for the Hertzian Herald.

If anyone would like to provide an article or some other information for the Herald please email me at ka8ebi@yahoo.com and I will do my best to get it included in the Herald.

Remember this newsletter is supposed to be about our club and member input would make for a much more interesting newsletter. Fred KA8EBI

Grand Haven State Park

Activated Grand Haven State Park MSP408 in Michigan on August 7, 2018. This is in Ottawa County and grid square EN63. Although going to Holland State Park was more logical since we were on the west side of Michigan to attend National Night out, other events and work made for a compromise. And…this is a tourist area you will find out when trying to book a room…

Grand Haven is a small park at 48 acres. The good parts included wifi/ cell was no problem and the dunes along the lake were behind you, with clear view to Lake Michigan. Basically, it is a beach with plenty of parking and a campground along the beach.

The park made the news a year ago but two days before I operated, 2 people drowned and several were hospitalized due to rip currents.

I set up away from the crowds, with some shade and near the portas… There were no expectations of big pile ups, since the park had been activated a few times and band condx were not great. Also, I was activating earlier than usual and 200 miles west of my qth.

As with most parks and always in Michigan State Parks active this year, I identified myself at the gate as a ham and was going to operate if anyone asked about my set up.

Lead Worker Matt Schwemin came out to chat with me a couple times and was interested in how hams communicated in emergencies. I explained field day and also supplied the brochure from ARRL.

All I needed was a drink with an umbrella in it…. The temp stayed around 78 with a nice breeze off the lake. Clouds when leaving told me I would have rain at the event later(lots).

Managed 35 contacts on 20, 30 and 40. Tried 10 and 6 meters but they were pretty much dead. Even with poor condx, did work 15 states, some VEs, and 3 EU stations.

Pictures show the lighthouse (some construction going on), some signage, the setup and a coast guard helicopter along the shoreline.

Log uploaded to LoTW and will be sent along to the parks programs.

De KG8P

FCC Cites Baofeng Importer for Illegally Marketing Unauthorized RF Devices

08/02/2018

The FCC has issued a Citation and Order (Citation) to Amcrest Industries, LLC (formerly Foscam Digital Technologies, LLC), an importer and marketer of popular and inexpensive Baofeng hand-held transceivers, alleging that the company violated FCC rules and the Communications Act by illegally marketing unauthorized RF devices. The FCC asserts that Amcrest marketed Baofeng model UV-5R-series FM hand-held radios capable of transmitting on "restricted frequencies." The Baofeng models UV-5R and UV-5R V2+ were granted an FCC equipment authorization in 2012 to operate under Part 90 Private Land Mobile Radio Service (Land Mobile) rules.

"Under § 2.803 of the Commission's rules, an entity may not market a device that is capable of operating outside the scope of its equipment authorization," the FCC Citation said. "RF devices that have been authorized under Part 90 rules, such as the model as issue, must operate within the technical parameters established in those rules." The FCC also maintained that the UV-5R 2+ is capable of operating at 1 W or 4 W, while the Part 90 Equipment Authorization limits the power output to 1.78 W.

Amcrest conceded that the units were capable of operating on restricted frequencies but told the FCC that, per discussions with the manufacturer, were "only capable of operating at 1 W, the FCC said. The company instructed the manufacturer to fix the problem and later confirmed with the manufacturer that all Amcrest inventory on order and in the future would operate only on 145 – 155 MHz and 400 – 520 MHz.

While the Citation does not mention Amateur Radio, the UV-5R series radios can be programmed in a channelized configuration to function on 2-meters and 70-centimeters. According to the Citation, Amcrest had added a warning in its user manuals and marketing and sales materials implying that the UV-5R V2+ could operate on unauthorized and restricted frequencies, including Part 87 Aviation Services frequencies, Part 80 Maritime Services frequencies, and frequencies reserved for federal government use. The FCC said Part 90 radios that permit the operator to use external controls to program and transmit on frequencies other than those programmed by the manufacturer are "generally prohibited."

Amcrest told the FCC that it had ceased marketing four models in the Baofeng UV-5R series "a few years ago," but it did not remove them from its website until last February. Numerous online retailers continue selling UV-5R series radios for less than $25, with some ads indicating that these are "ham" equipment.

Amcrest Industries, LLC, which owns and operates Baofengradio US, is an import, distribution, and marketing company based in Houston, Texas. It also sells hand-held transceivers under its own label.

"While we recognize Amcrest's efforts to date to achieve compliance with the Commission's rules, the company must nonetheless ensure the version of the UV-5R V2+ it is marketing operates only on frequencies specified in its Equipment Authorization," the FCC said in its Citation. The FCC directed Amcrest "to take immediate steps to come into compliance with the Commission's equipment authorization rules and cease marketing unauthorized RF devices in the United States." Amcrest could face fines of nearly $20,000 per day if it fails to comply.

The great FT8 debate

In his blog **Dominic Smith M0BLF** gives his take on the great **FT8** debate

Since its introduction a year ago FT8 has transformed amateur radio, enabling amateurs living in high-noise environments to make contacts that would have been impossible using traditional modes.

Dominic notes *"The other fantastic thing about FT8 is that it brings, for the first time, objective signal reports to the hobby. We all know that '59' is a nonsense, but in the more 'manual' modes, we don't have anything better. Using actual, genuine, signal-to-noise measurements for signal reports allows more meaningful comparisons of equipment, antenna performance and propagation research."*

Read the M0BLF blog post at

http://www.domsmith.co.uk/blog/2018/06/09/the-great-ft8-debate/

Get your free copy of *A Field Guide to Simple HF Dipoles*

by Dan Romanchik, KB6NU

A link to *A Field Guide to Simple HF Dipoles* (http://www.dtic.mil/dtic/tr/fulltext/u2/684938.pdf) was posted to reddit recently, and I liked this document so much that I thought I would share it with you. It was originally written for the military, but is now available for free from the Defense Technical Information Center.

The preface to this document reads:

> "Under project Agile, Stanford Research Institute has supplied several teams to assist operating personnel in improving the performance of field radio networks. In this work, it has been observed that U.S. military and civilian antenna manuals often contain misleading information regarding the operation of field antennas and tend to be overly complex. Consequently, this guide has been prepared to assist in training personnel concerned with the construction of simple HF antennas in the field."

I must say that *A Field Guide to Simple HF Dipoles* does this very well. It not only explains how dipole antennas work, it also does a very good job of describing the basics of radio waves and propagation. And it does this without getting overly technical.

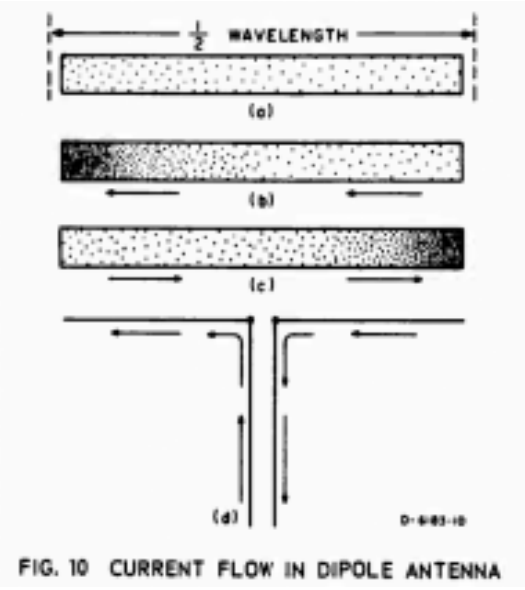


FIG. 10 CURRENT FLOW IN DIPOLE ANTENNA

For example, below is Figure 10. It's used to describe current flow in a dipole antenna.

The *Field Guide* reads:

> "Electric current in a conductor consists of the flow of small particles called electrons. Figure 10(a) represents a dipole with electrons in it. When the transmitter is turned off, the electrons distribute themselves evenly throughout the dipole, as shown. All electrons repel each other and try to get as far from each other as possible; that is how they achieve the uniform distribution show in Figure 10(a). When the transmitter is turned on, the electrons flow back and forth from end to end as shown in Figures 10(b) and 10(c). First the electrons flow to the left and crowded at one end as shown in Figure 10(b). Second, since the electrons repel each other, the push off to the right and get crowded together at the other end, as in Figure 10(c)."

It then uses this description to talk about voltage and current distribution along a dipole antenna:

> "The difference between voltage (volts) and current (amperes) in a dipole is also illustrated by Figs. 10(b) and 10(c). You can see that the maximum flow of current is going to be in the middle of the dipole. An observer at the center of the dipole would see the electrons rush past, first one way and then the other. The center is the maximum current point. Very little current flows near the end of the dipole; in fact, at the extreme ends there is no current at all for there is no place for it to go. However, at the ends of the dipole, there is a great change of voltage; when the electrons are densely packed, this represents a negative voltages, and when there is a scarcity of electrons, it represents a positive voltage. Thus you can see that the voltage at each end swings alternately positive and and negative. An end of the dipole is a maximum voltage point."

A Field Guide to Simple HF Dipoles is packed with all kinds of goodies like this. Download it (http://www.dtic.mil/dtic/tr/fulltext/u2/684938.pdf) right now.

———————————————

When he's not building dipoles or teaching ham radio classes, Dan blogs about amateur radio, writes exam study guides (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 simple HF dipoles at cwgeek@kb6nu.com.

DX news

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 F6AJA, 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.

GREENLAND, OX. Brandon, W0GPR is QRV as OX/W0GPR until August 27. QSL via LoTW or to W0GPR. Also, Bo, OZ1DJJ will be active as OX3LX from August 15 to 29. Activity will be on various HF bands. QSL via OZ0J direct.

VIETNAM, 3W9. Jacek, SP5APW will be active as 3W9JK/P from Cham Island (AS-162) from September 15 to 22, and as 3W9JK from Ho An City in the Quang Nam Province from September 22 to 27. Activity will be on 20 to 6 meters using SSB. QSL via his home call sign, direct, via the bureau or ClubLog's OQRS.

MOROCCO, 5E. Operators Jose, EA1ACP, Gen, EA5EL, Francisco, EA7FTR and David, EB7DX will be active with special call sign 5E5A on August 14 and 15, August 19 to 21 and August 30 to September 3. Operations will be on CW, SSB and FT8. QSL via EA7FTR.

CHINA, B0. Operators Lide, BI8CKU and Rui-Li, BI8JDW will be QRV as B0/BI8CKU from Lhasa, Tibet, China, until August 14. Activity will be on 40 and 20 meters using FT8 only. QSL via EA5GL or BI8CKU direct or via ClubLog's OQRS.

GREECE, SV8. Jacques, F6HMJ will be QRV as SV8/F6HMJ from Ios Island (IOTA EU067) from August 27 to September 6 on 40 to 10 meters using CW and some SSB. QSL via F6HMJ.

CURACAO, PJ2. Charles, NK8O will be active as PJ2/NK8O from August 27 to September 2. Activity will be holiday style, QRP only, on 20, 17, 15, 12 and 10 meters. QSL via LoTW.

CUBA, T42. Operators Alexei, CO2XK, Lazaro, CO2WL, Amed, CO2AME and possibly others will be active as T42W from October 25 to 29. Activity will include the CQWW DX SSB Contest, October 27 and 28, and include some FT8 operations.

AUSTRAL ISLANDS, TX5. A five man team will be QRV on 160 through 10 meters, except 60 meters, from August 13 to 22, signing TX5T.

ANTIGUA, V2. Philippe, EA4NF will be active as V26NF from August 12 to 19. Activity will be on 40 to 10 meters. QSL via his home call sign, direct or by the bureau.

KOSOVO, Z6. Tev, TA1HZ will be on the air as Z68HZ from August 17 to 27. QSL via TA1HZ or preferably via LoTW.

WAKE ISLAND, KH9. Randy, WW6RG will be QRV on August 17 as KH9/WW6RG using SSB and running QRP.

MARSHALL ISLANDS, V7. Randy will then move on to Kwajalein Atoll from August 21 to 23, signing V73/WW6RG. QSL via WW6RG.

UNITED ARAB EMIRATES, A6. Enrico, IZ0GYP will be living in Dubai for at least a year. He has been issued the call A65FU. QSL via LoTW or via the bureau to his home call.

CAMBODIA, XU. Rene, F6CTW is QRV as XU7AEX until August 20. Listen for him using CW on 40, 30 and 20 meters. QSL direct only.

QATAR, A7. Rasto, OM6AA is signing A75GR from Doha. He has been QRV on 20 meter CW. QSL via M0OXO.

BELIZE, V3. Victor, WB0TEV will sign V31TP from August 16 to 22 while QRV on 80 to 10 meters. QSL via home call.

THIS WEEKEND ON THE RADIO

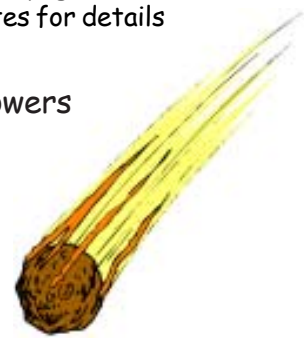
The WAE DX Contest, CW, SKCC Weekend Sprintathon, Maryland-DC QSO Party and the MMMonVHF/DUBUS 144 MHz Meteorscatter Sprint are all on tap for this weekend.

The NAQCC CW Sprint is scheduled for August 15.

The ARRL International Grid Chase runs during all of 2018.

Please see August QST, page 86 and the ARRL and WA7BNM contest web sites for details

Perseid Meteor Showers



Amateur Radio Examinations Monroe, MI

Monroe County Radio Communications Association Amateur Radio examinations are held the 3rd 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

August 16th 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

Monroe County Radio
Communications Association
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