The Ham Arundel News





Providing Fellowship and Community Service through Amateur Radio Since 1951

October 2019



Keith Miller, AE3D

The Prez Sez

Its fall. The leaves have begun to drop, and that means one thing for sure. It's easier to put up wire antennas. So get to it, before you are stuck inside till spring. Speaking of antennas, recently, on the club's north tower, we put up a Crushcraft A3S with 40 meter extension kit. The second contact was with a station calling CQ.

Before I did anything, I heard at least two other stations trying to reach him. I said "W3VPR" just once, and was immediately answered. That contact was with Belgium. The one before it, Ukraine. Obviously everything works great.

Earlier in the month the new Ham Shack Antenna Committee met for the first time, with one goal being to give AARC members access to all bands between 160 meters and 70 centimeters. They made some real progress even though they've only held one meeting. By spring, with a few more meetings, I hope to have the entire antenna plan ready for construction. Over the past few months, the Board has made arrangements for the Eagle Scouts to help us build a new slab around the base of the west tower, and as a second project will help with clearing of brush and mounting of a base plate for a future tower adjacent to the former radar dish pedestal. To make all this operational, with limited self-interference, we will need a number of single band filters. Some we already own, and others have been donated by Ed Wetherhold (W3NQN). Still others, we will have to build or buy. But we have identified what we need, and we are actively looking for it. That need of course includes some Rohn 45G tower stock. If you have some you don't need, or know someone with some to donate, let us know.

Meanwhile on October 5th we will begin yet another Technician License Class. We are getting better at publicizing our courses. Ed Santilli (KB3YMU) has been doing a great job of notifying local publications. Meanwhile this year we managed to pick up a few students courtesy of sharing booth space with Anne Arundel ARES and the Maryland Mobileers at this fall's Emergency Preparedness Expo at Marly Station. As usual around 9:15 AM on the first day of class we hope to have 5 to 15 members drop by to meet the newbies, and tell them a bit about some of their exploits as hams. If interested in speaking, prep two minutes worth of talk, and let me know you are coming, at <u>President@w3vpr.org</u>.

41st Year of Publication

One of the things we started in 2019 was a standing Rules Committee. If you have been to a Rules Committee meeting you know how much work is being done. But at least to date, the average member hasn't seen many results. The Rules Committee has a mammoth job, and Chairman Chuck Tanner (K3ACT) has proved himself as the master, if only for putting up with me. Not many members spend time wondering about the rules under which this club operates. We just assume that the Articles of Incorporation keep us straight with respect to the government, and that the Bylaws continue along those lines, plus prevent the Board from doing stupid things. What you may not know is that the only record of Motions passed by your Board is in the club minutes. If you figure the AARC holds a Board meeting a month, and that we've been operational since 1953, that means any given Motion is hopelessly lost in over 790 plus sets of minutes, most of which are not computerized for easy lookup. In other words nobody actually knows what our rules say. Nobody! So the Rules Committee is attempting to create a "Policy Book". This "Policy Book" should eventually contain all relevant ongoing Motions passed as ongoing rules by the Board of Directors or by the Membership. In addition it will contain examples and descriptions of what is considered common practice, as well as the duties of those holding various elected or appointed positions within the club. To get this whole thing in motion, we must first make any changes in the Bylaws that are required. Second we have to create and pass a Policy on Policies, to outline how things are added, modified or removed from the Policy Book. Then we have to begin approving Policies to be entered into that Policy Book.

So if this is what the Rules Committee is doing, why haven't we come to you with any of this? This spring, we became aware that various rules with respect to our Trustee, and the use of the W3VPR call sign, needed immediate study. This resulted in the Committee working first on the Trustee Policy, and rules pertaining to use of the call sign for Field Day, the Ham Shack, etc. I also asked the Rules Committee to consider changes in rules for the Maryland DC QSO Party, and though considered, the imminent nature of this August event kept many changes from being implemented this year. If was my fault. I simply hadn't considered that software providers like N1MM and N3FJP would need time to modify their products to handle any new rules. With the 2019 event now over, the Rules Committee in late September addressed possible changes for 2020. So though you have not seen much happen yet, once Bylaw changes are addressed, and the Policy on Policies is adopted, the Rules Committee will be expected to put forward a series of Policies in the upcoming months. Depending on how this goes, you may have a lot to vote on.

October 3rd we will be voting to approve our 2020 budget. Meanwhile the Nominating Committee is already busy lining up a slate of candidates for 2020. Last year when I ran for President, one of my major goals was to finish the Ham Shack renovation that former President Richard Grace (KB3ZYO) worked so hard to get started. Of course I realized even then, that renovating the Ham Shack was only half the job. The antenna system needed renovation too. What we built, was a ham shack with 4 operating positions that can run on 14 different bands. Meanwhile the antennas currently in place can handle only 5 bands and 2 operating positions at a time. Yes, only 2 of our 3 current antennas can't be run simultaneously without significant self-interference.

We are off to a good start, but we aren't done yet. So I'm hopeful you will let me stay on the job another year, so we can achieve two major goals. First, to actually work out the rules and create a "Policy Book" worth having, and second to finish giving the AARC ham shack the antenna system capabilities it deserves. 73s, and have a happy October.

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ARRL Thanks Official Observers as **Volunteer Monitor Program is** Set to Debut

As the September 30 date for the closing of the Official Observer (OO) program nears, ARRL has expressed deep appreciation to the hundreds of volunteers who gave their time as Official Observers to help preserve the integrity of the Amateur Radio bands.



The Official Observer program has served the Amateur Radio community and assisted the FCC Enforcement Bureau for more than 85 years. The OO program is giving way to the new Volunteer Monitor (VM) program, established as part of a formal

partnership between ARRL and the FCC. ARRL and the FCC signed a Memorandum of Understanding (MOU) earlier this year that establishes the Volunteer Monitor program as a successor to the Official Observers. The first Volunteer Monitors should be in place and ready to begin their duties this fall.

"Thank you for your dedication and service," ARRL Regulatory Information Manager Dan Henderson, N1ND, said. "It was the good work of the OOs over many years that laid the foundation for the FCC to recommend this new agreement for enforcement." The FCC proposed the program following the closures of several FCC regional offices and a reduction in field staff.

Last February, Riley Hollingsworth, K4ZDH, who once handled Amateur Radio enforcement for the FCC, was named to oversee the development and implementation phases of the Volunteer Monitor program. Under the new VM program, volunteers trained

and vetted by ARRL will monitor the airwaves and gather evidence that could be used to correct misconduct as well as to recognize exemplary on-air operation. ARRL will refer instances of flagrant violation to the FCC for action, accordance with FCC in guidelines, and the FCC will give priority to enforcement



cases developed by the VM program.

Official Observers were invited to apply to become Volunteer Monitors, and many did. The requirements for being a Volunteer Monitor include:

> Ability to utilize state-of-the-art receiving equipment and to access no-cost remote receive sites; strong writing and communication skills

> • An understanding of the importance of thorough documentation

Basic word processing and data entry skills

• The ability to send such information, including recordings, to ARRL electronically. Applicants must also be ARRL members, have no history of FCC enforcement action, hold a Technician-class or higher license, and been licensed for at least 3 years.

Applicants underwent a training and certification program administered by ARRL and were vetted by ARRL through at least one oral interview and a preliminary evaluation by ARRL staff. Volunteer Monitors will serve 3year terms at the pleasure of ARRL.

The objectives of the Volunteer Monitoring Program include improving and promoting knowledge and compliance of FCC Amateur Radio Service rules, extending and preserving the tradition of self-regulation and self-administration of the Amateur Radio Service by volunteers, and enabling the FCC Enforcement Bureau "to more efficiently and effectively utilize its resources in enforcing the Communications Act and Commission rules," according to the MOU.

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Net Control Radio Operators

ARE NEEDED

during the work-weekdays -

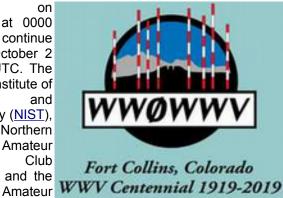
from 0700 to 0900 am.

Contact: Jim Wallace, N3ADF

WWV Centennial Celebration and Special Event Kick Off this Weekend

The culmination of months of planning will come to a head this weekend as the WWV Centennial Celebration and the related WW0WWV Amateur Radio special event get under way. WW0WWV will begin

on operation Saturday at 0000 UTC and continue through October 2 at 0000 UTC. The National Institute of Standards and Technology (NIST), Northern the Colorado Amateur Radio Club (NCARC), and the WWV



Radio Club have teamed up to organize 100th anniversary events. WW0WWV will be active around the clock on 160 - 6 meters on CW, SSB, and digital modes (FT8 operation will be Fox and Hound, except on 160 meters). WW0WWV will operate from the challenging RF environment at the WWV site near Fort Collins, Colorado. Logs will be streamed live to Club Log, and all logs will be uploaded to Logbook of The World (LoTW) after the event ends.

WW0WWV committee member Dave Swartz, W0DAS, said he's been addressing last-minute details and putting out "many little fires." Swartz is camping out at the WWV site ahead of the special event.



A c1920 WWV transmitter, built by National Bureau of Standards staff and coupled with a hand-crank record player. [Photo courtesy of WWV/NIST]

WWV is reputed to be among the oldest -- if not the oldest -- continuously operating radio stations in the world. It started out as an experimental station eventually that became a time and frequency standard. and WWV often broadcast music in its early years. WWV served as a beacon for Amateur Radio pioneers, who may only have had a rough idea of where

they were transmitting. When they began, early time announcements were in CW. Voice announcements did not start until 1950. Time announcements used to be every 5 minutes, but WWV switched to announcing the time every 60 seconds in 1971.

W3V East Coast Special Event Will Also Mark WWV Centennial

An unrelated east coast special event, W3V in Maryland, will also celebrate the 100th anniversary of WWV. Originally an experimental/demonstration radio station, WWV was licensed to what then was called the National Bureau of Standards -- today NIST -- on October 1, 1919. The transmitter site, initially in the Washington, DC, suburbs, moved to the grounds of the Agricultural Research Center (BARC) in Beltsville, Maryland, in the 1930s, before relocating to Colorado in 1966.

The NASA Goddard Space Flight Center (GSFC) also was located on the BARC campus, and the Goddard Amateur Radio Club (GARC) will host the W3V special event September 28 - October 2 at the GARC club station, just north of the old WWV site. It will use The WWV Beltsville, Maryland, home the former WA3NAN space shuttle HF retransmission

it inherited from WWV.



courtesy of WWV/NIST]

frequencies -- 3.860, 7.185, 14.295, 21.395, and 28.650 MHz -- as well as amateur satellites. For many years, the GARC retransmissions used 100-foot wooden antenna poles that

As part of the WWV centennial, HamSCI and the Case Amateur Radio Club of Case Western Reserve University (W8EDU) invites all radio amateurs and others capable of making highly accurate HF measurements to participate in the WWV Centennial Festival of Frequency Measurement. The event will take place on WWV's centennial, October 1, from 0000 to 2359 UTC (starting on Monday evening, September 30, in the Americas). Participants are requested to share their data with the HamSCI community on the Zenodo data-sharing site.

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WWV Centennial: 100 Years of Broadcasting

GODDARD AMATEUR RADIO CLUB, WA3NAN will operate Special Event Station W3V Greenbelt, called the WWV Historical Site from Sept. 28th to Oct. 2nd at their Club House on Beaver Dam Rd, Glenn Dale, MD 20769.

Historical WWV Greenbelt Site

It all started right here in the MDC Section - For almost 50 years the WWV stations transmitted from Washington D.C. and three area locations in Maryland

Starting as the Department of Commerce experimental station by the National Bureau of Standards, then at Connecticut Avenue and Upton Street, known as Chevy Chase from 1920 until 1932. This site is north of the Melvin C Hazen Park and several International Embassies.

After more than ten years WWV relocated to College Park MD before moving again to Beltsville and finally Greenbelt, MD - the location now known as Goddard

Space Flight Center - the tower sat where the Visitor Center is located. WWV was shut down and moved to Fort Collins, CO in 1966

NIST's WWV Centennial Committee will setup WW0WWV (http://wwv100.com/) adjacent to the WWV transmitter site in Fort Collins, Colorado. With help from Northern Colorado Amateur Radio Club, WOUPS, (http://ncarc.net/?g=node/1) will carry out the special event operation in Colorado in conjunction with the WWV Amateur Radio Club and the National Institute of Standards and Technology (NIST). https://www.nist.gov/news-events/events/2019/10/nistradio-station-wwv-100-year-anniversary and find the Gooale calendar's "Operator Schedule" at http://wwv100.com/ - under the Menu.

WWV Centennial special event is set to run from September 28 through October 2, and round-the-clock operation will take place on CW, SSB, and digital modes. Read more on the ARRL Website or (http://www.arrl.org/news/wwv-100th-anniversary-specialevent-operation-in-the-planning-stages)

Used with permission MDC Section News, Sept. 18, 2019

Anne Arundel Radio Club Hosts Youth to Amateur Radio Demonstrations

Eric KC3GDV, MDC Section Youth Coordinator (SYC) provides excellent coordination and support for our youth programs. Most recently Scouting Troop 442 Annapolis will visit the Anne Arundel Club for a tour.

Another opportunity - volunteers needed for any or all of the four days.

Please let Eric B (Eric B <kc3gdv@gmail.com>) know your availability

Feel free to contact Eric B KC3GDV, if you have any questions.

The ARRL Maryland DC Section and Anne Arundel Radio Club will be hosting the South River HS STEM program. The program is to expose the students to radio technology.. Each day there will be approximately 25 students and they will be divided into 5 groups.

- 1. Radio Operations in the AARC Ham Shack (Hands-on)
- 2. Space Weather (Presentation)
- 3. Soldering (Hands-on)
- 4. Basic Electronic and Ohms Law (Presentation)
- 5. Radio direction-finding (Hands-on)

Here are the times and days:

8:00 am to 2:00 pm. on the following dates.

Wednesday, October 23 and Thursday, October 24 Wednesday, November 13 and Thursday, November 14 Location::

Davidsonville Family Recreation Center 3789 Queen Anne Bridge Road Davidsonville, MD 21035

73

Eric Berman, KC3GDV

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Efforts Continue to Enhance ARES Program, Add Resources

The ARRL Board of Directors, committees, and Headquarters administrative staff are continuing efforts to

enhance the venerable Amateur Emergency Radio Service (ARES®) program. A major **ARES Plan** has been adopted. providing new direction going forward. addition, In а standardized training plan has been adopted and a new ARES Emergency Communicator Individual Task Book (attached below) approved and published.



At its July meeting, the ARRL Board considered the <u>report</u> of its Public Service Enhancement Working Group (PSEWG). A "change log" was proposed for the *Task Book* that will highlight changes made as the document is periodically revised and updated. ARES position guidelines were posted to the online *ARES Workbook* and a major revision and update of ARRL's *Introduction to Emergency Communications* course — now designated as EC-001 — has been completed.

The course is now available at no cost to any ARES registrant, and a "tutor-less" format has been added as a parallel path for completing the course. Additional tutors were recruited to assist in handling the initial surge of interest. A "challenge" path directly to the final exam is also being implemented. An update and introduction of EC-016 — *Public Service and Emergency Communications Management for Radio Amateurs* — will follow in the next few months.

Veteran Ohio Section Manager Scott Yonally, N8SY, has been brought on board to assist in implementing *ARES Connect* and to field questions about the new software package from users. *ARES Connect* is a volunteer management system covering event signup, reporting, and roster management, to simplify managing volunteers and events.

Some modest revisions to procedures have been made to the **Ham Aid** program.

Most recently, the PSEWG has begun an extensive examination of the future role of the National Traffic System (NTS) in concert with ARES. It's hoped that a brief survey of selected Section Managers, Section Traffic Managers, and Section Emergency Coordinators will provide a starting point for a more extensive analysis of the program.

At its July meeting, the ARRL Board authorized the EmComm Manager Selection Committee to specify the position requirements for a new Director of Emergency Management at Headquarters. This individual will lead the team responsible for supporting the ARES program and will work with ARRL staff to develop standards, protocols, and processes to support the Field Organization. — *Thanks to* <u>The ARES E-Letter</u>

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Hurricane Watch Net Sets New Activation Record during Dorian

Hurricane Watch Net (<u>HWN</u>) volunteers set a new record for total hours activated during a single storm. The net was active for 157 hours -- 139 hours of which were continuous. HWN Manager Bobby Graves, KB5HAV, said the continuous activation record stands at 151 hours for Hurricane Matthew in 2018.

"During this

marathon activation, members of the Hurricane Watch Net collected and forwarded countless surface reports to the National Hurricane Center in Miami," Graves noted. After

devastating Abaco and Grand Bahama

islands with winds clocked at 200 MPH or more, Dorian made its way slowly toward Florida, before sliding up the southeastern US coast and making a second landfall on Cape Hatteras, North Carolina. It wasn't over, however. Dorian veered out into the Atlantic, affecting New England before hitting Maritime Canada, where it knocked out power and downed trees.

During its lengthy initial activation, the HWN attempted on numerous occasions to raise stations in the Bahamas but was unable to contact anyone in the most-affected area.

The HWN activated for the last time during Hurricane Dorian last Saturday, as the storm was, by then, speeding up the east coast of the US as a Category 1 storm. Poor propagation plagued net operations throughout the activation, even right up to the end. At one point, propagation was lost between net members and Nova Scotia on 40 meters, although the net continued for a while longer on 20 meters.

Early on, Amateur Radio Emergency Service (ARES[®]) volunteers went on alert along the US east coast, preparing for the worst. The major problem was storm surge-related flooding. Evacuations were ordered ahead of the storm.

The ARRL Headquarters Emergency Response Team convened early on to monitor the situation closely. ARRL officials were in regular communication with partner agencies, particularly FEMA and the Department of Homeland Security. W1AW, which had already planned to be in operation for the Hiram Percy Maxim 150th birthday special event, remained ready to assist with emergency communications.

The <u>VoIP Hurricane Net</u> activated over the weekend in conjunction with <u>WX4NHC</u> at the National Hurricane Center to keep on top of ground-truth weather information.

Used with permissionThe ARRL Letter for September 12, 2019

FCC Proposes to Make All Universal Licensing System Filings Electronic

The FCC is seeking comment on a *Notice of Proposed Rulemaking* (*NPRM*) that is part of an overall plan to transition completely to electronic filing, licenses, authorizations, and correspondence. The notice proposes to make all filings to the Universal Licensing System (ULS) electronic, expand electronic filing and correspondence elements for related systems, and require applicants to provide an email address on the FCC forms related to these systems. Although much of the FCC's ULS filings are already electronic, the changes suggested in the *NPRM* (in WT Docket No. 19-212) would require *all*

Amateur Radio Service applications be filed to electronically. Under current rules, Amateur Radio applications may still be filed manually, except those filed by Volunteer Examiner Coordinators (VECs).



"Given the drastic changes that

have occurred with regard to the ubiquity of the internet and increased personal computer access, we find it unlikely that electronic filing remains infeasible or costprohibitive for the previously exempted types of filers, or that they lack resources to file electronically," the FCC said in the *NPRM*, released on September 6. "We therefore propose to eliminate Section 1.913's exemptions to mandatory electronic filing."

The FCC said that while the vast majority of ULS applications today are submitted electronically, some are still manually filed, largely from exempted filers, such as radio amateurs. Last year, the FCC received some 5,000 manually filed applications out of a total of some 425,000. The FCC is seeking comment on whether its underlying assumptions about the ease of electronic filing for previously exempted filers are valid.

This *NPRM* also seeks comment on additional rule changes that would further expand the use of electronic filing and electronic service. The FCC stopped providing printed Amateur Radio license documents in 2015.

"Together, these proposals will facilitate the remaining steps to transition these systems from paper to electronic, reducing regulatory burdens and environmental waste, and making interaction with these systems more accessible and efficient for those who rely on them," the FCC said.

Comments are due within 30 days of the *NPRM*'s release.

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AARC STAFF – 2019 Officers

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Vice President	Tim Nagel / KB3YQK vice.president@w3vpr.org	I
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Fox Hunt	far.rep@w3vpr.org Jim Wallace / N3ADF	
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MD Slow Net	joint440@w3vpr.org (T B A)	
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Resident Agent	Justin Leishman / KC3BJ	г
Trustee	ra@w3vpr.org Dick Mayo / WW3R trustee@w3vpr.org	
(C	Committees	
Club Sale & Auction	Ike Lawton / W3IKE	
Digital Networking	club.sale@w3vpr.org Ted Ruddy	
Facilities	Eric Berman / KC3GDV	

facilities@w3vpr.org

field.day@w3vpr.org

(TBD)

(TBD)

Field Day

Station Manager

Holly Net	Jim Wallace / N3ADF	
-	holly.net@w3vpr.org	
HSMM-MESH	(TBD)	
	hsmm.mesh@w3vpr.org	
Kit building & Repair	'Raven' Weiland / KB3MU\	/ 203 948 5369
5 1	kit@w3vpr.org	
MDC QSO Party	Jim Wallace / N3ADF	301 538 6233
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Newsletter	Milford Craig / N3WYG	301 218 8867
	newsletter@w3vpr.org	
Packet Radio	Jonathon Grafe / AE2JG	240 426 2664
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Public Service	Erick Graves / WA3G	410 987 7670
	public.service@w3vpr.org	
Repeater Ops	John Williams / K8JW	410 647 7406
• •	repeaters@w3vpr.org	
Rules	Chuch Tanner / K3ACT	301 464 2667
	rules@w3vpr.org	
Service Hours	Jim Wallace / N3ADF	301 538 6233
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	training@w3vpr.org	
VE Team	David Rawley / N3AT	
	testing@w3vpr.org	
Webmaster	Mark Bova / W2PAW	240 274 6294
	webmaster@w3vpr.org	
Wed. Nite Net	Jamison Phipps / W3KNH	
	wednesday.night.net@w3vp	or.org
Winter Field Day	Rick Steer / AB3XJ	
	winter.field.day@w3vpr.org	
	•	

Groups

Board of Directors		
Kit Building Committee	board19@w3vpr.org	
Kit Building Committee	kitbuilding@w3vpr.org	
Rules Committee	rules.com@w3vpr.org	

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VE Testing Schedule

Second Saturday of each month – Noon – AARC – David Rawley, N3AT testing@w3vpr.org

Third Saturday of each month – 9AM – Laurel ARC – John Creel, 301-572-5124 Fourth Tuesday of each month – 6PM – MMARC – Mike Montrose / KA2JAI 443-310-4907 web site is

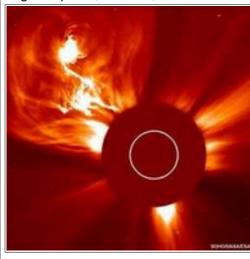
tinyurl.com/marylandmobileers

To all exams bring:

- Picture ID
- Social Security Number or FCC Registration Number (FRN)
- ORIGINAL and a COPY of current FCC amateur radio license
 ORIGINAL and a COPY of all element credits (eg., FCC letters, old licenses or unexpired Certificates of Successful Completion of Examination-CSCE)

160 Years Since The Carrington Event

September 1 marks the 160th anniversary of the Carrington Event, the strongest geomagnetic storm known to have hit Earth since at least the 14th century. The event was named for British astronomer Richard Carrington, who first viewed and sketched the huge sunspot complex on the sun from which a gigantic solar flare -- a coronal mass ejection -- erupted, as he watched. Within hours, Earth was virtually enveloped by an aurora borealis that was visible even at lower latitudes and into the tropics. It was a truly spectacular light show that in some places, turned night into day. When the flare interacted with Earth's magnetosphere, however, it was another story.



This was the Victorian age, when practical

Victorian age, when practical wireless was still few а decades off. but the "auroral phenomena," as it was called then, had "a remarkable manifestation of magnetic influence" on telegraph wires -- the internet

of the day, as it were. So considerable was the effect that *The New York Times* reported telegraph operators were able to disconnect the batteries that normally operated the system and were "working by the atmospheric current entirely!" Although the operators subsequently were able to reconnect their batteries, the storm continued to affect the lines. A telegraph manager in Pittsburgh reported "streams of fire" emitted from the circuits. In Washington, DC, telegraph operator Frederick W. Royce was severely shocked as his forehead grazed a ground wire. A witness said an arc of fire jumped from Royce's head to the telegraphic equipment.

The *Times* account quoted an operator in Worcester, Massachusetts, who said, "During ten years' experience in telegraphing, I have frequently observed the effect of the Aurora Borealis on the wires, but never before have I seen it so grand and appalling."

Operators said that at times the polarity of the battery power supply would become reversed. "One moment the batteries would begin to boil over, and we would have so strong a circuit that the armature would not come away from the magnet; the next moment, there would be no current at all," a report from Quebec recounted.

Based on examinations of ice samples, scientists believe that geomagnetic storms two and three times stronger occurred prior to the 14th century.

After the Carrington Event, scientists began paying a lot more attention to solar phenomena and sunspots. --Thanks to Frank Donovan, W3LPL

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Ad Hoc Legislative Advocacy Committee to Meet with Lawmakers

ARRL's Ad Hoc Legislative Advisory Committee will meet with several members of Congress later this month in Washington to introduce new Committee members, reacquaint the lawmakers with Amateur Radio's most-pressing issues, seek their input on the best ways to achieve ARRL's objectives in Congress, and request their continuing support. Committee members have completed a comprehensive analysis of Amateur Radio Parity Act



deficiencies for dissemination to Amateur Radio's backers on The Hill. The panel now is following up on this process with the meetings later this month.

The Committee has contracted with The Keelen Group to provide advice and recommendations regarding ARRL's legislative relationships. Keelen Group advisors also will aid in organizing and guiding the meetings between ARRL representatives and key

congressional allies in support of Amateur Radio initiatives.

On June 12, the Legislative Advisory Committee held the first of a series of meetings in DC with ARRL Washington Counsel David Siddall, K3ZJ, The Keelen Group, and a small contingent of radio amateurs associated with various governmental and nongovernmental partners to solicit their perspectives and assistance in charting a future course of action. Pacific Division Director and Committee Chair Jim Tiemstra, K6JAT, described these individuals a "critical allies in ARRL's efforts to achieve its legislative objectives."

The process of analyzing and clarifying ARRL's aims began when the Committee was reconstituted with new members at the ARRL Board of Directors' January meeting. The Board had determined a need to "review, reexamine, and reappraise the ARRL's regulatory and legislative policy with regard to private land-use restrictions," with the aim of renewing, continuing, and strengthening ARRL's effort to achieve relief from such restrictions.

"There seems to be no countervailing policy that could justify arbitrary conditions, covenants and restrictions," Tiemstra said. "Indeed, public policy should clearly favor the needs of the Amateur Radio operator."

Amateur Radio's role in public service and emergency communication will be the Committee's strongest argument in seeking relief from private land-use restrictions that limit amateurs' ability to operate effectively.

The Committee will analyze the outcomes of this month's meetings and draft a report with recommendations for the ARRL Executive Committee to review and consider at its October 12 meeting. The full Board is expected to take up the issue at its January 2020 meeting.

Used with permission The ARRL Letter for September 19, 2019

W1AW 2019 Spring/Summer Operating Schedule

Morning Schedule:

Time	Mode	Days
1300 UTC (9 AM ET)	CWs	Wed, Fri
1300 UTC (9 AM ET) 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 l	PM ET)	VOICE	Daily
0200	"	(10 PN	1 ET)	CWf	Mon, Wed, Fri
0200	"		"	CWs	Tue, Thu
0300	"	(11 Pl	M 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, <u>http://www.arrl.org/w1aw-operating-schedule</u>

ARRL's Special Service Club Award Presented To The Anne Arundel Radio Club.



At the September 19, 2019 meeting, the ARRL MDC-Section Affiliated Club Coordinator, Joe Dorffner KC3KFG (right) presented the ARRL's Special Service Club Award to the Anne Arundel Radio Club. Keith Miller AE3D (left), the current AARC President happily accepted the award on behalf of the club.

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SECTION TRAFFIC MANAGER'S REPORT

MDC NTS NETS:

MEPN 1908 W3YVQ QND/31 QNI/392 QTC/56 MINS/682 BTN 1908 AB3WG QND/31 QNI/323 QTC/37 MINS/511 MDD 1908 AA3SB QND/62 QNI/242 QTC/84 MINS/494 MSN 1908 N3AEA QND/26 QNI/106 QTC/56 MINS/491

PSHR: KK3F 150, W3YVQ 135, K3IN 110, N3JET 108, NI2W 101, AA3SB 100, WB3FTQ 100, AB3WG 82;

TFC: KK3F 1619, K3IN 240, WB3FTQ 102, W3YVQ 93, AA3SB 73, N3JET 59, AB3WG 33, NI2W 26

HF PROPAGATION

MEPN: The net NVIS propagation was functional throughout August, 2019, with good signals after 1800L most evenings.

Due to the low solar activity, the afternoon propagation suffered which resulted in higher absorption and less effective NVIS propagation between 1730L and 1800L, often with the residual E layer from the daytime high sun angle obscuring the F1-F2 layers overhead. Signals tended to improve after 1800L. The MEPN DTS stations continue to also provide liaison with the national digital messaging services including DTN and Winlink.

MDD: NVIS propagation for local MDC stations on MDD early and late (and on RRI/3RN/C4 nets) was greatly improved. As August progressed, the higher sun angle allowed the MUF to remain above the net frequency on most nights. After 0400Z the MUF has been approaching 3 MHz some nights.

CW OPERATORS NEEDED

Additional CW operators are needed for liaison to MDD and to the higher nets, and Net Control Stations are also needed on MDD and 3RN/C4. The evening NTS and RRI nets in Cycle 4 nation-wide are conducted on CW.

MEPN/MDD/3RN ECHOLINK

MEPN representatives check for EchoLink checkins starting at net call daily via the WB3GXW-L link node (or *WASH_DC* conference node backup if the -L node is not available).

MSN CW TRAINING

The MSN net continues to operate and serve nightly at 1930L on 3563 kHz. Ron, N3AEA, is stepping up to fill the Net Manager's role. Thanks, Ron. Show your support by checking in even if you do not take training. MSN needs NCS stations and liaison stations to early and late MDD. Ron could use your help.

BTN LOCAL NTS TRAFFIC AND TRAINING NET

The BTN continues to meet on 145.33/R (no tone) daily at 6:30PM local time. The BTN was established to provide a welcoming place for newcomers to the Amateur Service, and their first exposure to directed traffic nets and

message handling. The NM, AB3WG, has initiated plans for broader cooperation between BTN and MSN to foster more awareness between operators using the respective modes. Instructive message swapping and liaison duties are in effect.

Thanks to all the Section traffic net NCS stations, RRI/DTN and WL2K stations, liaisons, and traffic handlers for the continuing effort to keep the nets running and traffic moving.

Thank you for your continued support of MDC integrated ARES(r), RRI, and NTS operations.

73, W3YVQ, MDC ASM, STM w3yvq atsign arrl dot net w3yvq atsign winlink dot org from WL2K

Used with permission MDC Section News, Sept. 18, 2019

Digital Text and Images From Shortwave Radio

Get More Digital Text and Images via HF Shortwave Radio

Shortwave Radiogram transmission schedule -

0	
Day UTC/ET Frequency Site	
Thu 2330/7:30 PM 9265 kHz WINB PA	
Fri 1300/ 9:00 AM 15770 kHz WRMI FL	
Fri 1500/11:00 AM 15120 kHz WINB PA DRM*	
Sat 0230/10:30 PM 9265 kHz WINB PA	
Sun 0800/ 4:00 AM 5850 kHz WRMI FL	
Sun 0800/ 4:00 AM 7730 kHz WRMI FL	
Sun 2330/ 7:30 PM 7780 kHz WRMI FL	
https://swradiogram.net/	

https://swradiogram.net/

Shortwave Radiogram transmits digital text and images on an analog shortwave broadcast transmitter. This weekend's show is in the usual MFSK32 and MFSK64, with text and pics.

Lineup for Shortwave Radiogram, Program #118

19-22 September 2019, in MFSK modes as noted:

- MFSK32: Program preview

- Synthetic Hall Effect achieves one-way radio transmission

- MFSK64: Volcano may explain recent purple sunrises*

- This week's images*

- MFSK32: Closing announcements*

* with image(s)

Please send reception reports to radiogram@verizon.net

https://swradiogram.net/

Used with permission MDC Section News, Sept. 18, 2019



UN Headquarters' 4U1UN Making Slow but Steady Progress in **Returning to Air**

Responding to inquiries noting the lack of 4U1UN activity, the United Nations Amateur Radio Club (UNARC) indicated on its Facebook page this week that it's making slow but steady progress in its efforts to get a station back on the air from UN Headquarters. The main difficulties in getting 4U1UN up and running again following its displacement by renovations at UN Headquarters have been administrative and organizational, the UNARC team said. The club explained that as a result of UN

Headquarters renovation. the room on the 41st floor housing the 4U1UN radio equipment was reallocated to the UN Broadcast and Conference Support Section (BCSS) and is now off limits.



"After the successful activity of 4U70UN back in 2015, with the support of the UN Administration, we were able to secure a tiny 20-square-foot room for the club's needs on the ground floor of the building," the club said in its post. With no opportunity to run a feed line from the ground floor to the top of the building and the tenuous hold even on the tiny, bottom-floor shack space, the club is in the process of installing a remotely controlled station on the 41st floor.

Over a recent weekend, several UNARC members, representatives of UN services, and quests had an opportunity to continue equipment configuration. An assembled 19-inch rack and part of the equipment were



disconnected during delivery to the 41st floor so that BCSS personnel could hand-carry the equipment up several flights of stairs to the top floor. "After 4 hours of work, the connections of the SteppIR BigIR vertical antennas were restored, a new SDA-100 controller was installed, and a RemoteRig 1216H was connected for easy remote access," the club post said. "The antenna was tested and configured."

UNARC says remote access from the 1st floor now works, thanks to a separate Ethernet cable run up the entire height of the building for UNARC's use. Operation of the ACOM-2000A amplifier also was tested with an antenna.

"We really hope that in the very near future, after debugging and setting up all the equipment, we will finally be able to proudly look at the work done and begin to appear steadily on the bands," the club said.

Used with permission The ARRL Letter for September 12, 2019 ^^^^^

A Radio on Your Belt -- 1930s Style

Since the advent of wireless technology, efforts have aimed at condensing the size of the necessary equipment to permit ease of transport, mobile installation, and radios that could be hand carried, slipped into a pocket or -- in this case -- carried on the belt. Hugo Gernsback's Radio-Craft for December 1936 included the article, "How to Make the World's Smallest 3-Tube Radio Set" by Arthur Miller (likely not the playwright). It details how a clever radio crafter could construct a set worn on a belt around the waist and -- in this case -- with the antenna

worn on the head in the manner of an old-time banker's eyeshade. The individual wearing such equipment today likely would not only have to endure considerable pointing and laughing but would raise the alert level at any airport TSA checkpoint.

Vacuum tubes of the day were not too sensitive. required separate voltage sources



for filament and plate, and were pretty hard on batteries. The filaments for the three tubes came from "a liquid unspillable storage cell" (i.e., rechargeable) to supply the necessary 2 V. The article says this battery should last from 7 to 10 hours and came "with an oiled silk bag and fits in the hip pocket." This was the sort of futuristic innovation that Gernsback typically featured in his publications, and the entire December 1936 issue of Radio-Craft is worth perusing.

"When using this 'Belt-Radio' the wearer is guite unmindful that the latest news or dance music is coming from an ultra-midget receiver which is actually being worn on the belt!" the article exults. "And it takes only a minute to put the whole equipment on -- and less to take it off!"

According to Miller's article, building the three-tube set was easy. "The loop aerial is wound on a cardboard



disc 13 ins. in dia," it explains. "Litz wire is used and 22 turns are interlaced around the 9 ribs." No mention of gauging hat size.

The article concedes just to "one disadvantage" in having to wear the antenna on one's head. "The 4-ft. cable connecting it with the receiver acts as a capacity and restricts the tuning

range of the set," it explains.

The set tuned the AM broadcast band, and with the antenna on the head, directionality was less of an issue. While it might look silly to us now, project ideas such as this helped advance the radio art toward the technology we use and enjoy today

Used with permission The ARRL Letter for September 19, 2019 ^^^^^

Dayton Hamvention Signs 5-Year Contract with Greene County Expo Center

The Dayton Amateur Radio Association (DARA) has signed a 5-year agreement to keep Dayton Hamvention[®] at the Greene County Expo Center. The agreement was announced on September 9 by Hamvention General Chairman Jack Gerbs, WB8SCT.

"It has been a wonderful experience working with the Expo Center team in the development of this agreement," Gerbs said. "With the 5-year agreement signed, the Expo Center and Hamvention can move forward with additional enhancements to the facilities."



Dayton Amateur Radio Association President Ron Cramer, KD8ENJ, said the DARA Board, in approving the contract, noted that the relationship with the Expo Center and Greene County, the City of Xenia, and Xenia Township "has proven especially rewarding." Cramer said, "They all have worked hard to make Hamvention a success over the last 3 years. We look forward to a great relationship over the next 5 years and beyond." Hamvention's 2019 attendance was 32,472 -- the highest recorded since the move to the Exposition Center in Xenia in 2017, which was coordinated by Cramer, the Hamvention General Chairman in 2017 and 2018.

The largest Amateur Radio show in the US, Dayton Hamvention is held the third full weekend in May. The dates for 2020 are May 15 - 17.

Used with permission The ARRL Letter for September 12, 2019



ARRL HF Band Planning Committee Chair and First Vice President Greg Widin, K0GW

ARRL HF Band Planning Committee Reactivated to Address Spectrum Issues

In an effort to more effectively address HF digital technology issues, ARRL President Rick Roderick, K5UR, has reactivated the ARRL Board of Directors' HF Band Planning Committee. The six-member panel, chaired by First Vice President Greg Widin, K0GW, will primarily

focus on spectrum allocation issues that have gained increased visibility with discussions on accommodating

automatically controlled digital stations (ACDS) — many employing <u>Winlink</u> email. The committee will also discuss operating frequencies for FT4, FT8, and other digital modes. Widin says the committee will meet next week to chart its course. Reactivation of the HF Band Planning Committee came out of discussions during the July 2019 ARRL Board meeting.

"ARRL is not trying to shut down digital communication or shut down Winlink in particular," Widin said, adding that ARRL recognizes Winlink's proven track record in emergency communication. His committee also will consider Winlink supporters' calls for the expansion of the ACDS segments spelled out in §97.221(b) of the amateur rules.

"This is not an easy task by any means," Widin allowed. "They're not making more bandwidth." He said this is especially a problem on 40 meters.

"We're well aware that Winlink is the *de facto* standard supporting emergency communications in many parts of the country, but we have to figure out how it can operate with other modes, so that everybody can communicate," Widin said, "without having one mode overrun any other mode." The committee will not address data encryption questions at this point, however.

In response to ARRL's 2013 petition to delete the so-called "symbol rate" limit and replace it with a maximum

bandwidth for data emissions of 2.8 kHz below 29.7 MHz, the FCC **proposed** to eliminate symbol rate (baud rate) limitations for data transmissions but declined to propose a bandwidth limitation.



At its July meeting, the

ARRL Board of Directors called for ARRL's Washington Counsel to obtain FCC approval for several Part 97 rule changes. The Board asked for a rulemaking petition to remove the current 300 baud rate limitation; authorize all ACDS below 30 MHz, regardless of bandwidth, to operate only within the ACDS bands designated in §97.221(b); require digital stations operating with a bandwidth greater than 500 Hz to operate within the ACDS bands, whether or not automatically controlled, and limit the maximum bandwidth of digital signals below 29 MHz to 2.8 kHz.

ARRL-initiated mediation efforts for rival parties to reach consensus on all or some of the issues raised in the "symbol rate" proceeding ended a few days prior to the July Board meeting. While those discussion were useful, no consensus among parties was reached for FCC consideration. Widin said some positions may have been too divergent to find viable middle ground.

"We still want to change the symbol rate limitation into a bandwidth limitation, which makes a lot more sense in terms of current and future modes," Widin said. The panel also hopes to work with the WSJT-X Development Group to establish FT4 frequencies compatible with existing band plans.

Widin further suggested that his committee will have to look beyond the current landscape of HF digital modes into what might lie ahead.

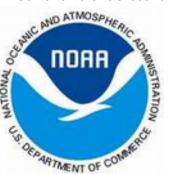
Used with permission The ARRL Letter for August 29, 2019

Concerns Aired that 5G Spectrum Expansion Could Affect Weather Data Collection

An April <u>report</u> in *Nature* magazine says the National Oceanic and Atmospheric Administration (NOAA) and NASA are asking the FCC to work with them to protect frequencies used for Earth observation from interference as 5G rolls out. The FCC in April auctioned the first block of 5G spectrum with minimal protection to other users. The sale reaped nearly \$2 billion. Some of the 5G-bound

frequencies are close to those used by satellites for Earth observations, and meteorologists have expressed fears that 5G transmissions could interfere with their data collection. The worry is that

The worry is that NOAA won't be able to detect concentrations of water vapor in the atmosphere accurately. Meteorologists rely on those



data to feed into their models, and without it, weather forecasts worldwide could suffer.

"Because the United States is such a large communications market, the decisions the government makes about how to deploy 5G are likely to influence global discussions on how to regulate the technology," the The article noted that Nature article said. telecommunications regulators will gather in Egypt in October and November for World Radiocomunication Conference 2019 (WRC-19), where delegates will "hammer out international agreements for which frequencies companies will be able to use for 5G transmissions, and what level of interference with Earthobservation frequencies is acceptable," the magazine said.

"Astronomers, meteorologists and other scientists have long worked to share the spectrum with other users, sometimes shifting to different frequencies to prevent conflicts," the article points out. "But 'this is the first time we've seen a threat to what I'd call the crown jewels of our frequencies -- the ones that we absolutely must defend come what may," said Stephen English, a meteorologist at the European Centre for Medium-Range Weather Forecasts in the UK.



The recent FCC auction focused on two bands of spectrum -between 24.25 and 24.45 GHz and between 24.75 and 25.25 GHz. Wireless equipment transmitting near the lower end of that

range could interfere with the 23.8 GHz water-vapor measurement. *Nature* said the FCC did not respond to its request for comment on the matter.

The FCC auction set a noise limit on the US 5G network of -20 dBW, much noisier than thresholds under consideration most other systems around the world. The European Commission has settled on -42 dBW for 5G base stations; the World Meteorological Organization

(WMO) is recommending -55 dBW.

"NOAA and NASA have reportedly finished a study on the effects of differing levels of noise interference, but it has not been made public, despite at least one formal request from Congress," *Nature* reported. The Department of Commerce, which oversees NOAA, "strongly supports the administration's policy to promote US leadership in secure 5G networks, while at the same time sustaining and improving critical government and scientific missions."

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Unraveling the Mystery of 1 × 1 Call Signs

The <u>1 × 1 Special Event Call Signs</u> system offers a way for clubs, groups, or even individuals to use a short call sign of special significance to the amateur community. These 1 × 1 call signs are <u>reserved</u> in advance for use in conjunction with short-term special events and commemorative operations. The FCC does not assign 1 × 1 call signs, so they are not "official."

On the matter of special event call signs, the FCC says, in Section 97.3(a)(11)(iii) of the Amateur Service rules: "The call sign is selected by the station licensee from a list of call signs shown on a common database coordinated, maintained and disseminated by the amateur station special event call sign data base coordinators. The call sign must have the single letter prefix K, N, or W, followed by a single numeral 0 through 9, followed by a single letter A through W or Y or Z (for example K1A). The special event call sign is substituted for the call sign shown on the station license grant while the station is transmitting."



The FCC also says in Section 97.119 (d): "Additionally, the station must transmit its *assigned call sign* at least once per hour during such transmissions." This requirement tends to be widely flouted, however.

A 1 × 1 Special Event Call Sign aids other radio amateurs by calling attention to the special event or other occasion. 1 × 1 call signs may be used for a variety of purposes, such as conventions, festivals, dedications, anniversaries, commemorations, and ARRL Field Day. Even local events qualify.

There are 750 1 × 1 Special Event Call Sign possibilities, and radio amateurs of any license class may reserve one as far as a year in advance to use for up to 15 days. Of course, 1 × 1 Special Event Call Signs are recycled. It's first come, first served. See the Frequently Asked Questions page for more information.

The FCC has selected coordinators to approve and post 1 × 1 Special Event Call Sign reservations to a <u>searchable database</u>. -- Thanks to The Radiogram (Portage County Amateur Radio Society newsletter)

Used with permission The ARRL Letter for September 12, 2019

The Ham Arundel News is the monthly official publication of

The Anne Arundel Radio Club, Inc. (ARRL Club No. 0484).

Editor: Milford Craig / N3WYG Send newsletter articles, questions and information to Milford at newsletter@w3vpr.org Deadline for submissions – The Saturday after the 3rd Thursday of the month

Mailing Address: Anne Arundel Radio Club

Post Office Box 308 Davidsonville, MD 21035

Meetings:

General Business 1st Thursday at 7:30 PM Board Meeting 2nd Thursday at 7:30 PM Program/Activity 3rd Thursday at 7:30 PM

Dues:

\$30 per year, payable December 1st Discounts available for family members and students

World Wide Web:

www.w3vpr.org

AARC Supports The Maryland Slow Net: 3.563 MHz CW 7:30 P. M. Daily

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Free Money for AARC! ARRL Membership Reminder

ARRL affiliated clubs receive a commission for every new ARRL membership and renewal they submit to ARRL Headquarters. Clubs retain a portion of the dues for each regular or senior membership submitted to ARRL Headquarters:

Clubs retain \$15 for each new membership OR lapsed membership (of two years or more). Clubs retain \$2 for each renewal,

A RENEWING MEMBER can renew at any time, even before their current membership expires.

Send your application and payment (made out to AARC) to the club treasurer.



Mark Your Calendars

REGULAR ACTIVITIES

Club Meetings are held on the first and third Thursdays of the month from 7:30 to 9PM at the clubhouse located at the Davidsonville Family Recreation Center in Davidsonville, MD

Free License Exams every 2nd Saturday of the Month - Check in at Noon, Exams at 1PM - At the clubhouse - Contact David Rawley / AE5Z, testing@w3vpr.org

Weekly AARC 2-Meter Net on 147.105 (Typically linked to 147.075 and 444.400 with CTCSS tone of 107.2 Hz) every Wednesday at 8 PM - All Welcome

2 meter "HOLLY NET" on 147.105 (Typically linked to 147.075 and 444.400 with CTCSS tone of 107.2 Hz) every morning 7:00 am to 9:00 am. All hams are welcome.

EVENT SCHEDULE

Thursday, October 3 7:30pm AARC - Club meeting, newcomers always welcome.

Saturday, October 5, 8:30am Technician Class

Thursday, October 10, 7:30pm AARC - board meeting

Saturday, October 12, 8:30am

Technician Class 12:00pm

AARC - Free License Exams

Thursday, October 17, 7:30pm AARC - Club meeting, newcomers always welcome.

Saturday, October 19, 8:30am Technician Class

Sunday, October 20, 1:00pm AARC - Mesh Networking group, Every 3rd Sunday, 1 to 4 PM at the clubhouse

Saturday, October 26, 8:30am Technician Class

Sunday, October 27, 1:00pm

ARC Kit-building, troubleshooting and repair, at 1 to 4 PM at the clubhouse

1:00pm Open Shack Hours

Upcoming Hamfests

Saturday, October 5, 2019

7th Annual TailgateFest - Hollywood VFD

Talk-In: 146.64(-) PL 146.2 Address: Hollywood Volunteer Fire Dept. Bingo Hall, 24801 Three Notch Road (MD Route 235) Sponsor: St. Mary's Co. Amateur Radio Assoc. Website: http://www.k3hki.org

Saturday, October 5, 2019

Red Rose Repeater Assn. Hamfest - West Earl Community Park

Talk-In: 147.015(+) PL 118.8 Address: 189 S. State Street, Leola, PA 17540 near Talmage, PA Sponsor: Red Rose Repeater Association Website: http://W3RRR.org

Sunday, October 6, 2019

CARAFest 2019 - Howard County Fairgrounds

Talk-In: 147.390(+) PL 156.7 Howard County Fairgrounds, 2210 Fairgrounds Road, West Friendship, MD 21794 Sponsor: Columbia Amateur Radio Association Website: http://www.carafest.org - Guest speaker, Tom W3TOM, Atlantic Division Director, 09:30 to 10:00, ARRL Amateur Radio Parity Act / HOA Restrictions / etc. - Cory Sickles from Yeasu presenting updated

System Fusion and Wires-X, 11;30 - 12:00

- HF GOTA for Scouts and New Hams - AMSAT promoting 50th Anniversary
- VEC Testing
- T-MARC Meeting
- Glazey Days Donuts Food Truck
- Eye-ball fellow Hams

Sunday, October 27, 2019

Mason Dixon Hamfest - Sportsman's Hall Roller Skating Center

Talk-In: 145.410(-) PL 114.8 Address: Sportsman's Hall Roller Skating Center, 15500 Hanover Pike, Upperco, MD 21155 Sponsor: Carroll County Amateur Radio Club Website: https://k3pzn.net/hamfest/

Used with permission MDC Section News, Sept. 18, 2019

1921 Solar Event May Have Been Bigger than Carrington Event

Scientific American reports that, according to new data, the "New York Railroad Storm" of 1921 may have surpassed the intensity of the famous Carrington Event of 1859. In his paper published in the journal *Space Weather*, Jeffrey Love of the US Geological Survey and his colleagues reexamined the intensity of the 1921 event in greater detail than previously.

Although different measures of intensity exist, geomagnetic storms are often rated on an index called disturbance storm time (D_{st}) -- a way of gauging global

magnetic activity by averaging out values for the strength



of Earth's magnetic field measured at multiple locations. Earth's baseline D_{st} level is about -20 nanoteslas (nT), with a "superstorm" condition occurring when levels fall below -250 nT. Studies of the very limited magnetic data from the Carrington Event peg its intensity at anywhere from -850 to -1,050 nT. According to Love's study, the 1921 storm came in at about -907 nT.

Peter Ward in his 2017 New York History Blog article "Strange Phenomena: The New York Railroad Storm" recounted that

theatre-goers in New York City "marveled at the spectacle" of an iridescent cloud that was brighter than the moon. "On the roof of the *Times* Building, reporters, having discovered the telegraph lines to be curiously blocked, gathered to watch the aerial kaleidoscope," he wrote.

As with the earlier Carrington Event, telegraph operators experienced wild fluctuations in the current on their circuits, while wireless propagation was enhanced. "The next day, papers reported that the Central New England railroad station (also home to the telegraph switchboard) had burned to the ground." Railroad officials later blamed the fire on the aurora.

According to Ward's article, the lights were visible in New York, California, and Nevada. Especially in rural areas, "the lights were said to be brighter, appear closer to the ground, and even move with a swishing sound."

Railroad and telegraph service were restored the following week, although one Western Union transatlantic cable showed signs of damage. "Delays and damage lead to some referring to it as the New York Railroad Storm," Ward wrote.

A dramatic <u>description</u> of the event on the SolarStorms.org website said, "At 7:04 AM on May 15, the entire signal and switching system of the New York Central Railroad below 125th Street was put out of operation, followed by a fire in the control tower at 57th Street and Park Avenue."

The short article said a telegraph operator reported being driven away from his station by flames that enveloped his switchboard and set the building on fire. "In Sweden a telephone station was reported to have been 'burned out,' and the storm interfered with telephone, telegraph, and cable traffic over most of Europe," the article said.

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Festival of Frequency Measurement Set to Honor WWV Centennial

HamSCI and the Case Amateur Radio Club of Case Western Reserve University (W8EDU) will sponsor a "<u>Festival of Frequency Measurement</u>" on the day of WWV's centennial, October 1, from 0000 to 2359 UTC (starting on Monday evening, September 30, in the Americas). The event invites radio amateurs, shortwave listeners, and others capable of making high-quality



freauencv measurements on HF to participate and publish their data to the HamSCI community on the Zenodo open-data sharing site.

"Changes in ionospheric electron density caused by space weather and diurnal solar changes are known to cause Doppler shifts on HF ray paths," the event announcement says. "HamSCI's first attempt at a measurement of these Doppler shifts was during the August 2017 total solar eclipse. We plan a careful measurement during the 2024 eclipse."

Some of the questions the research event is hoping to answer include how WWV's 5 MHz propagation path varies over a given calendar day, and how various measurement techniques for understanding the path variations compare. The objectives are to measure Doppler shifts caused by the effect of space weather on the ionosphere, and to use a specified measurement protocol available to Amateur Radio operators and other citizen-scientists. The experiment will use August 1, 2019 (UTC) as a control date.

"The recordings in this experiment are expected to show formations of the D-layer at stations' local sunrise and other daily events of the ionosphere," the announcement said. "Space weather varies day to day and some features may be prominent. We'll see what we get!"

<u>Full information</u> is on the Festival of Frequency Measurement website.

Used with permission The ARRL Letter for September 19, 2019

Scouting's 2019 Jamboree on the Air (JOTA)

Registration now is open for stations to register for Scouting's 2019 Jamboree on the Air (JOTA). JOTA will take place October 18 - 20. JOTA is Scouting's largest event in the world and always takes place over the third weekend of October. Click on "Sign Up Now" and register using your free Scout.org user id. Use the same site to register for the 2019 Jamboree on the Internet. Bill Stearns, NE4RD, has been named the Boy Scouts of America (BSA) National Jamboree on the Air Task Force Chair. He has activated a number of JOTA and Scout Camp stations from the Montana Scout Council and served on the 2017 National Scout Jamboree K2BSA and 2019 World Scout Jamboree NA1WJ staffs. The NA1WJ Amateur Radio operation at the 2019 World Scout Jamboree in West Virginia <u>reported</u> that more than 3,000 Scouts took part in the ham radio demonstrations, logging more than 4,000 contacts in 86 DXCC entities. Used with permission The ARRL Letter for August 29, 2019

62nd JOTA - Jamboree on the Air

Friday thru Sunday, October 18-20, 2019 (held 3rd weekend in October)

World Jamboree — the very successful NA1WJ at World Scout Jamboree this past Summer

On-The-Air / On-The-Internet, see

https://www.jotajoti.info/

Scouting JOTA webpage

- https://www.scouting.org/jota/station-registration/

Check with your Local ARCs for activities in your MDC Section.

Used with permission MDC Section News, Sept. 18, 2019

A CubeSat, Taurus-1 Has Been Launched

A CubeSat with an FM-to-Codec-2 transponder has been launched. The Taurus-1 (Jinniuzuo-1) CubeSat carrying an Amateur Radio FM-to-Codec-2 transponder was launched on September 12 from China's Taiyuan Satellite Launch Center. The CubeSat was developed by Aerospace System Engineering Research Institute of Shanghai for youth education and Amateur Radio. The transponder is similar to that used on the LilacSat-1 (LO-90) CubeSat and can use the same software, once frequencies are changed, receiving FM with 67 Hz CTCSS on 145.820 MHz and retransmitting it as Codec-2 9,600 bps BPSK digital voice on 436.760 MHz. The telemetry downlink is 435.840 MHz. In addition to the transponder, the satellite also carries a drag sail. For more information on the transponder type, see "Digital Voice on Amateur Satellites: Experiences with LilacSat-OSCAR 90," which appeared in the January/February edition of The AMSAT Journal. -- Thanks to AMSAT News Service Used with permission The ARRL Letter for September 19, 2019

Used with permission The ARRL Letter for September 19, 2019

AARC Mesh Networking Group

1:00 to 4:00 PM monthly, on the 3rd Sunday of the month AARC Clubhouse, Davidsonville, MD (Next Meeting will be Oct. 20, 2019.)

AARC Repeaters and Nets

2 Meter Repeaters

Location	Frequency	Tone	Notes	
Davidsonville	147.105+	107.2	AARC Repeater with morning traffic net.	
Glen Burnie	147.075+	107.2	AARC repeater Located in Northern AA County.	
BrandyWine	147.150+	114.8	SMARC Repeater.	
Prince Frederick	145.350-	156.7	SPARC/CARC Repeater.	
Laurel	147.225+	156.7	Laurel ARC Repeater.	
Millersville	146.805-	107.2	Repeater.	

1.25 Meter Repeaters

Location	Frequency	Tone	Notes
Davidsonville	223.880-	107.2	AARC 1.25M repeater *check to see if tied into 7.105
Millersville	224.560-	107.2	AARC repeater Located in Northern AA County.

70cm Repeaters

Location	Frequency	Tone	Notes
Davidsonville	444.400+	107.2	AARC 70 cm Repeater.
Annapolis	442.300+	107.2	AARC 70 cm repeater
Laurel	442.500+	156.7	Laurel ARC 70 cm Repeater.
Millersville	449.125-	107.2	Maryland Mobileers Repeater.
Upper Marlboro	443.600+	103.5	SMARC 70 cm Repeater.

Packet Stations

Location	Frequency	Call	Notes
Davidsonville	145.050	W3VPR	AARC Club packet node running JNOS
Davidsonville	145.010	W3VPR-5	Digipeter Relay to EOC Winlink
Millersville	145.010	W3AAC-5	Digipeter Relay to EOC Winlink
Glen Burnie	145.010	W3AAC-10	EOC Winlink system and digipeter

Amateur Radio NETS

Name	Frequenc	y (in Mhz)	Day	Time
The "Holly Net"	147.105+	PL 107.2	Weekdays	0700
AARC Talk Net	147.105+	PL 107.2	Wednesday	2000
AA County ARES Net	146.805-	PL 107.2	Sunday	2000
Baltimore Traffic Net	146.670-		Daily	1830
Boating Net	146.805-	PL 107.2	Wednesday	1930
Maryland Emergency Phone Net	3.920		Daily	1800
Maryland-DC-Delaware Traffic Net	3.643		Daily	1900 and 2200
Maryland Slow Net	3.563		Daily	1930
React Net	442.300+	PL 107.2	1st Sunday	1930

We use **simplex 146.430 Mhz** frequently enough that you should probably program that into your HT or mobile. This is the go-to frequency for many 5K race/walk volunteering efforts, local communication, Field Day setup, and the like when we're not using a repeater.

REPEATER FREQUENCIES

Davidsonville	Millersville	Glen Burnie	Annapolis
147.105+		147.075+	
223.880-	224.560-		
444.400+			442.300+

PL: 107.2 for all repeaters

The 147.105 and 147.075 repeaters are frequently linked. Please leave an extra second after the courtesy beep to allow the link to reset as well.

Visitors are welcome to all meetings and nets. Meetings are held in the Clubhouse at the Davidsonville Family Recreation Center, Queen Anne Bridge and Wayson Roads off MD Route 214 near Davidsonville, MD. For en-route directions,make initial contact on the 147.105 repeater.

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Wednesday Night Talk Net -- All are welcome

8PM, On the AARC Repeater 147.105

Name	Frequency		Day	Time
The "Holly Net"	147.105+Mhz PL 10	7.2	Weekdays	0700
AA County ARES Net	146.805- Mhz PL 10	7.2	Sunday	2000
Baltimore Traffic Net	146.670- Mhz		Daily	1830
Maryland Emergency Phone Net	3.820Mhz		Daily	1800
MD-DC-DE Traffic Net	3.557Mhz		Daily	1900 and 2200
Maryland Mobileers Net	146.805 Pl	_107.2	Monday	1930
Maryland Slow Net	3.563 MHz		Daily	1930
REACT Net	442.300+Mhz PL	107.2	1st Sunday	1930

Other Amateur Radio nets

The Radio Amateur Operator is...

CONSIDERATE

...He/[She] never knowingly operates in such a way as to lessen the pleasure of others.

LOYAL

...He/[She] offers loyalty, encouragement and support to other amateurs, local clubs, the IARU Radio Society in his/[her] country, through which Amateur Radio in his/[her] country is represented nationally and internationally.

PROGRESSIVE

...He/[She] keeps his/[her] station up to date. It is well-built and efficient. His/[Her] operating practice is above reproach.

FRIENDLY

...He/[She] operates slowly and patiently when requested; offers friendly advice and counsel to beginners; kind assistance, cooperation and consideration for the interests of others. These are the marks of the amateur spirit.

BALANCED

...Radio is a hobby, never interfering with duties owed to family, job, school or community.

PATRIOTIC

...His/[Her] station and skills are always ready for service to country and community.

- adapted from the original Amateur's Code, written by Paul M. Segal, W9EEA, in 1928The Radio Amateur's Cod