

# *The Ham Arundel News*

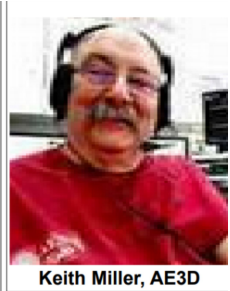


Providing Fellowship and Community Service through  
Amateur Radio since 1951



Dwccember 2020

42nd Year of Publication



Keith Miller, AE3D

## Prez Sez

In 1962 when I was a kid, there was a song called "The Last Blast of the Blasted

Bugler". It was about Gunga Din. It was hilarious. Well now it's my turn for my "Last Blast" as President of the AARC. Where is that bugle?

For the last 4 years I've been a member of the AARC Board, with the last 2 as President. During that time I kinda turned my hobby into a full time job. Besides being President, I ran the club's Training Classes (Tech, General and CW), was part of the Rules Committee, was a VE on testing days, spent a few mornings as Net Control of the Holly Net, planned the antennas for Field Day, was part of the Ham Shack Antenna Committee, was a major partner in the last two Maryland DC QSO Parties, made a few kits in the Kitbuilding Workshop, wrote the MS Access program we use to store our club roster, and helped with a variety of other projects including upgrading the website. Heck, I even Elmer'd a few folks. What I didn't do much of, was make contacts, or upkeep my own ham shack. In Biblical terms "My SWR runneth over." I need to get back to the basics. Ham Radio is a great hobby, and I want that great hobby back.

That being said I am not really giving up on most of the above. I am, however, trying to catch up on everything before I leave office. But after January 1, I will look at things differently. I may actually attend a few less meetings, but the important part is that with the exception of Training, I don't plan to be the person in charge, when I do attend. I will throw in my two cents worth, and quit feeling personally responsible if things don't go my way, get done on time, or work out right. That will be our new President's job.

So yes, I will continue to speak my mind, and try to see that the club heads in a direction I can support. But I will do my best to twist the new President's arm quietly in the background first, though being quiet is a real stretch for me. He and I both agree a club either moves forward or it goes backward. We need to broaden our interest to potential hams, and broaden what we have to offer them. This hasn't been just a 'repeater club' for a long time. It is so much more. Your incoming President knows that. He will have my support, and he will need yours too.

Meanwhile I will do my best to stay out of his way, by helping push things from behind that he sees as important. I will try to keep my mouth shut. Not that I'm any good at that, but I have to learn sometime.

So unlike some other past Presidents, expect to see me around the club house trying to help

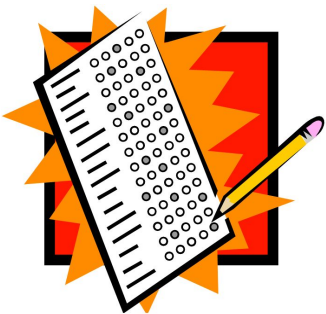
out when I can. Meanwhile on my way out the figurative door, let me urge you to support your new President with the same level of enthusiasm you've given me. It has been a privilege and an honor to serve as President, and a time period I shall cherish and never forget, COVID-19 or no COVID-19.

Speaking of your next President, whether he knows it or not, he is going to need a lot of help. So let me offer him, and you, a bit of advice. Let me suggest that he start looking now for people who make a lot of mistakes. You see people who don't make mistakes don't learn much, mostly because they don't do much. Why? Because that's the most sure fire way to avoid mistakes? Do nothing! To me making mistakes is a sure sign of progress. So be progressive. If you make mistakes, and lots of them, the Anne Arundel Radio Club has a job for you. Go see your next President. He needs your help, and lots of it.

Let me finish by urging you to make the granddaddy of all mistakes. Volunteer!



### **Congratulations...**



To Kimberly Shaffer, KC3QPQ, who took and passed the Technician and General exams in November.

### **Slate of Officers - 2021**

#### President

Eric Berman, KC3GDV

#### Vice President

Joe Conover, KL4QG

#### Secretary

Michael Hunt, KC8GIJ

#### Treasurer

'Rick' Steer, AB3XJ

#### Board

Bernarr 'Bernie' Coletta, NK3PS

William 'Bill' Ryan NC2II

Mark Heron, KC3JTF



## Special Event Stations

For additional information, contact the sponsor organization or go to [www.arrl.org/special-event-stations](http://www.arrl.org/special-event-stations)

### Pearl Harbor Commemoration

**Pearl Harbor Day Commemoration Dec 4-Dec 14, 1300Z-2200Z, W2W**, Baltimore, MD. Amateur Radio Club of the National Electronics Museum. 14.241 14.041 7.241 7.041. [ww-2.us](http://ww-2.us)

**Pearl Harbor Remembrance Day Dec 7, 1600Z-2130Z, W5KID**, Baton Rouge, LA.. Baton Rouge Amateur Radio Club. 14.250 14.035 7.225 7035. [qrz.com/db/w5kid](http://qrz.com/db/w5kid)

**USS Midway Museum Ship Special Event: Commemorating Pearl Harbor Remembrance Day Dec 12, 1700Z-2359Z, NI6IW**, San Diego, CA. USS Midway (CV-41) Museum Ship. 14.320 7.250 14.070 (PSK31) D-STAR on various reflectors.

### Christmas

**Best DAM Christmas Dec 1-Dec 31, 0001Z-1159Z, KE0TGG**, Edwards, MO. D.A.R.K. Dam Amateur Radio Klub. 28.440 14.240 7.240 3.840 <https://damark.org>

**Christmas in Bethlehem Dec 5, 1300Z-2200Z, W9WWI**, Bethlehem, IN. Clark County Amateur Radio Club of Indiana. 14.240; all bands, all modes. <https://www.clarkcountycarc.org>

**Bethlehem on the Air Dec 17-Dec 24, 1400Z-2300Z, KC5OUR**, Belen, NM. Valencia County Amateur Radio Association. 21.283 14.283 7.183 3.883. [www.kc5our.com](http://www.kc5our.com)

**WX3MAS Special Event Dec 17-Dec 20, 1400Z-2200Z, WX3MAS**, Nazareth, PA. Christmas City Amateur Radio Club. 14.265 7.270 3.850; CW and PSK31 on 20 and 40 meters, and FT8. [www.dlarc.org](http://www.dlarc.org)

### Amateur Radio Related

**Acharya Jagadish Chandra Bose Birthday, Father of Wireless Communication, Event Nov 15-Dec 15, 0000Z-2359Z, AU2JCB**, Kalkatta, INDIA. VU2DSI. 10 20 21 40 and 80 meters; FM 10 and 6 meters; other bands possible depending on conditions.

**Commemoration of the Birth of PSK31 Dec 10-Dec 20, 1700Z-1700Z, K9Z**, Rochester, IL. Sangamon Valley Radio Club. 14.070 7.070; all bands, all modes. [www.qrz.com/db/k9z](http://www.qrz.com/db/k9z)

**120th Anniversary of the First Wireless Voice Transmission Dec 18-Dec 24, 0001Z-2359Z, W4F**, Vienna, VA. Vienna Wireless Society. 14.250 7.185. W4F will be operating on 80, 40, 20,15,10, 6, and 2 meter amateur bands on CW, and SSB, as well as FT-8 using fox/hound mode. <https://viennawireless.net>

**Major Edwin Howard Armstrong Memorial special event operation Dec 18-Dec 20, 0000Z-2359Z, W4A**, Bluff City, TN. 14.040 7.020 3.530.

**130th birthday of Major Edwin H. Armstrong Dec 19-Dec 20, 1400Z-2200Z, W2XMN & W2XEA**, Loxahatchee, FL. Major Edwin H. Armstrong Memorial Radio Club. 28.400 18.150 14.265 7.195. [www.qrz.com/db/w2xmn](http://www.qrz.com/db/w2xmn)

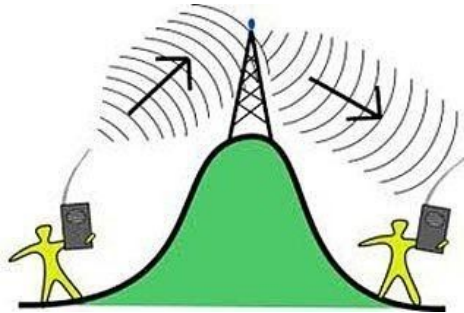
### Other

**Celebrating the 21st Amendment to the US Constitution Dec 5-Dec 6, 0500Z-0500Z, W8A**, Kent, OH. Breweries On The Air. 14.240 7.240. [www.breweriesontheair.com](http://www.breweriesontheair.com)

**Battle of Trenton Dec 26-Dec 31, 0000Z-2359Z, W2T**, Trenton, NJ. Delaware Valley Radio Association. 14.250. [w2q.com](http://w2q.com)

# REPEATER FREQUENCIES

<b>Davidsonville</b>	<b>Millersville</b>	<b>Glen Burnie</b>	<b>Annapolis</b>
<b>147.105+</b>		<b>147.075+</b>	
<b>223.880-</b>	<b>224.560-</b>		
<b>444.400+</b>			<b>442.300+</b>



**PL 107.2 is active for all repeaters**  
**The 147.105, 147.075 and 444.400 repeaters are frequently linked. Please allow 2-3 seconds after the courtesy beep to allow for the link to reset.**

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## NETS



**The "Holly Net" - Weekdays - 7-9 am**  
**Wednesday Night Talk Net - Wednesday - 8 pm**  
**Both on the 147.105 and 147.075 repeaters**

### Other Amateur Radio Nets

| Name                          | Frequency             | Day         | Time          |
|-------------------------------|-----------------------|-------------|---------------|
| AA County ARES Net            | 147.805- MHz PL 107.2 | Sunday      | 2000          |
| Anne Arundel – Annapolis CERT | 442.300+ MHz PL 107.2 | 3rd Tuesday | 1900          |
| BaltimoreTraffic Net          | 146.670- MHz          | Daily       | 1830          |
| Maryland Emergency Phone Net  | 3.820 MHz             | Daily       | 1800          |
| MD-DC-DE Traffic Net          | 3.557 MHz             | Daily       | 1900 and 2200 |
| Maryland Mobileers Net        | 146.805 MHz PL 107.2  | Monday      | 1930          |
| Maryland Slow Net             | 3.563 MHz             | Daily       | 1930          |
| REACT Net                     | 146.805+ MHz PL 107.2 | 1st Sunday  | 1930          |

**The Ham Arundel News is the official  
publication of  
The Anne Arundel Radio Club**  
(ARRL Club No.0484)

**Mailing Address:**  
Anne Arundel Radio Club  
Post Office Box 308  
Davidsonville, MD 21035-0308

**Editor: Phil Nelson / NO3N**  
Send newsletter articles, information and  
questions to: [newsletter@w3vpr.org](mailto:newsletter@w3vpr.org)

**Mailing Address:**  
Anne Arundel Radio Club  
Post Office Box 308  
Davidsonville, MD 21035-0308

**Meetings:**  
Business Meeting 1st Thursday at 7:30 PM  
Program/Activity 3rd Thursday at 7:30 PM  
Board Meeting - see calendar

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

World Wide Web: [www.w3vpr.org](http://www.w3vpr.org)

AARC supports the Maryland Slow Net:  
3.563 MHz CW 7:30 PM

**The Anne Arundel Radio Club**

**Is a registered 501(c)(3)  
Organization**

**We appreciate any contribution  
Over your dues**

## Notice

A revised list of equipment for the continuous sale was recently posted to the AARC website at <https://www.w3vpr.org/list4sale>. This may include club or donated equipment as well as items on consignment. To buy equipment or radios see <https://www.w3vpr.org/continoussaleprocedure>.

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## Visiting AARC

Visitors are welcome at all meetings and on all nets.

Meetings are held in the at Clubhouse at the Davidsonville Family Recreation Center Queen Anne Bridge and Waysons Roads off Rt. 214 near Davidsonville, MD.

For en-route directions make contact on the 147.105 repeater.

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## Ham Arundel News January Deadline

The deadline for the January 2021 issue of the newsletter will be Monday, December 21. If you have something you wish to share or contribute, please email [newsletter@w3vpr.org](mailto:newsletter@w3vpr.org)

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## News to Share?

Other members may appreciate hearing of your experiments, projects and ideas. While you may have shared these on the Holly Net or the Wednesday 2-meter net, others may be inspired by your story. Items that may be dated should be received as close to the publication date as possible.

## AARC Staff - 2020

### Officers

|                       |                                                   |              |
|-----------------------|---------------------------------------------------|--------------|
| <b>President</b>      | Keith Miller / AE3D<br>president@w3vpr.org        | 240-758-0423 |
| <b>Vice President</b> | Jim Wallace / N3ADF<br>vice.president@w3vpr.org   |              |
| <b>Secretary</b>      | Bernie Colleta / NK3PS<br>secretary@w3vpr.org     |              |
| <b>Treasurer</b>      | Will Mooney / KA3UQQ<br>treasurer@w3vpr.org       |              |
| <b>Director A</b>     | Eric Berman / KC3GOV<br>eric.board20@w3vpr.org    |              |
| <b>Director B</b>     | Doug Ellmore / NA1DX<br>doug.board20@w3vpr.org    |              |
| <b>Director C</b>     | Scott DeMatteo / W3GTR<br>scott.board20@w3vpr.org |              |

### Support Staff

|                             |                                                      |
|-----------------------------|------------------------------------------------------|
| <b>Membership Secretary</b> | Lambert Matiss / KK3WOW                              |
| <b>Information Orricer</b>  | Ed Santilli / KB3YMU<br>info.officer@w3vpr.org       |
| <b>Safety</b>               | John Bowes / KB3YLY 443-760-1066<br>safety@w3vpr.org |
| <b>Security</b>             | Tom Provenze / N3HLD<br>security@w3vpr.org           |

### Representatives

|                         |                                                     |              |
|-------------------------|-----------------------------------------------------|--------------|
| <b>ARES/RACES</b>       | John Bowes / KB3YLY<br>ares.races@w3vpr.org         |              |
| <b>DFRC Rep</b>         | Milford Craig / N3WYB<br>dfrc.rep@w3vpr.org         | 391-218-8867 |
| <b>Fox Hunt</b>         | Jim Wallace / N3ADF<br>fox.hunt@w3vpr.org           |              |
| <b>Joint 440 Comm</b>   | Gordon Davids / WJ3K<br>joint440@w3vpr.org          | 410-647-2956 |
| <b>MD Slow Net</b>      | (TBA)                                               |              |
| <b>MDC Section Mgr</b>  | Martin Pittenger / KB3MXM<br>arri.sec.mgr@w3vpr.org |              |
| <b>Public Relations</b> | Ed Santilli / KB3YMU<br>pr@w3vpr.org                | 301-261-6551 |
| <b>Resident Agent</b>   | Justin Leidhmsn / KC3BJT<br>ra@w3vpr.org            |              |
| <b>Trustee</b>          | Dick Mayo / WW3R<br>trustee@w3vpr.org               |              |

### Committees

|                                |                                              |
|--------------------------------|----------------------------------------------|
| <b>APRS</b>                    | Jon Graefe / AE3JG<br>aprs@w3vpr.org         |
| <b>Beverage Supply</b>         | Jim Myrich / W3JLM<br>beverage@w3vpr.org     |
| <b>Club Sale &amp; Auction</b> | Ike Lawton / W3IKE<br>club.sale@w3vpr.org    |
| <b>Club Picnic</b>             | Jim Myrich / W3JLM<br>picnic@w3vpr.org       |
| <b>Digital Networking</b>      | Ted Ruddy / KC3LMV<br>net.leader@w3vpr.org   |
| <b>Facilities</b>              | Eric Berman / KC3GDV<br>facilities@w3vpr.org |
| <b>Field Day</b>               | Brian Mary / K3HMX                           |

|                         |                                                           |              |
|-------------------------|-----------------------------------------------------------|--------------|
| <b>Station Manager</b>  | field.day@w3vpr.org<br>(TBA)<br>station.manager@w3vpr.org |              |
| <b>Holly Net</b>        | Jim Wallace / N3ADF<br>holly.net@w3vpr.org                |              |
| <b>HAMM-MESH</b>        | (TBA)<br>hamm.mesh@w3vpr.org                              |              |
| <b>Kit Building</b>     | 'Raven' Weiland / KB3MUV<br>kit@w3vpr.org                 | 203 948 5369 |
| <b>MDC QSO Party</b>    | Jim Wallace / N3ADF<br>mdcqsop@w3vpr.org                  | 301 538 6233 |
| <b>Newsletter</b>       | Phil Nelson / NO3N<br>newsletter@w3vpr.org                |              |
| <b>Photography</b>      | Ed Santilli / KB3YMU<br>photo@w3vpr.org                   |              |
| <b>Presentation</b>     | Jim Wallace / N3ADF<br>presentation@w3vpr.org             |              |
| <b>Public Service</b>   | Erick Graves / WA3G<br>public.service@w3vpr.org           | 410 987 7670 |
| <b>Repeater Ops</b>     | John Williams / K8JW<br>repeater@w3vpr.org                | 410 647 7406 |
| <b>Rules</b>            | Chuch Tanner / W3ACT<br>rules.chair@w3vpr.org             | 301 464 2667 |
| <b>Service Hours</b>    | Jim Wallace / N3ADF<br>service.hours@w3vpr.org            | 301 538 6233 |
| <b>Tower</b>            | (TBA)<br>tower@w3vpr.org                                  |              |
| <b>Training</b>         | Keith Miller / AE3D<br>learn@w3vpr.org                    | 240-758-0423 |
| <b>VE Team</b>          | David Rawley / N3AT<br>ve.team.leader@w3vpr.org           |              |
| <b>Video</b>            | Ed Santilli / KB3YMU<br>video@w3vpr.org                   |              |
| <b>Webmaster</b>        | Mike Bova / W2PAW<br>webmaster@w3vpr.org                  | 240 274 6294 |
| <b>Wed. Nite Net</b>    | Mike Waterson / K3MAW<br>wednesday.night.net@w3vpr.org    |              |
| <b>Winter Field Day</b> | Rick Steer / AB3XJ<br>winter.field.day@w3vpr.org          |              |
| <b>Workshop</b>         | (TBA)<br>workshop@w3vpr.org                               |              |

### Groups

|                               |                       |
|-------------------------------|-----------------------|
| <b>Board of Directors</b>     | board20@w3vpr.org     |
| <b>Kit Building Committee</b> | kitbuilding@w3vpr.org |
| <b>Rules</b>                  | rules@w3vpr.org       |





# Calendar

## Club

Due to social distancing requirements, club meetings are being held on Zoom and there have been some changes. The meeting schedule for December - March is:

December 3 - Membership Meeting, 7:30 PM,  
Agenda: Election of Board

December 17 - Membership Meeting, 7:30 PM,  
Agenda: Service Recognition

January 7 - Membership Meeting, 7:30 PM

January 21 - Membership Meeting, 7:30 PM

February 4 - Membership Meeting, 7:30 PM

February 18 - Membership Meeting, 7:30 PM

March 4 - Membership Meeting, 7:30 PM

February 18 - Membership Meeting, 7:30 PM

**There is no Board meeting in December.**

Invitations to the membership meetings will be emailed to the membership before the meetings. You must request meeting information from the President for Board meetings or the Rules Committee Chairman for the committee meeting

## Testing

Testing for AARC and Maryland Mobileers has been canceled until further notice due to health restrictions by the state of Maryland due to the ongoing COVID-19 pandemic. PG County has attendance restrictions and exams are likely cancelled in Laurel.



## Contesting

**December 4 - 6**, 2200 UTC Friday, ends 1559 UTC Sunday; 160 meter contest. Information at <http://www.arrrl.org/160-meter>

**December 12-13**, 0000 UTC Saturday, ends 2359 UTC Sunday; 10 meter contest. Information at <http://www.arrrl.org/10-meter>

**December 12-13**, 1600 UTC Saturday, ends 1559 UTC Sunday; International Naval Contest. Information at <http://www.rnars.org.uk/>

**December 20**, 1800 to 2359 UTC; Rookie Roundup - CW (3 years or less licensed). Information at <http://www.arrrl.org/rookie-roundup>

**December 26**, 0830 to 1059 UTC; DARC Christmas Contest. Information at <https://www.darc.de/der-club/referate/conteste/weihnachtswettbewerb/en>

# W1AW 2020 Operating Schedule



## 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](mailto: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 91 in the March 2020 issue of QST or on the web at <http://www.arrl.org/w1aw-operating-schedule>.

Used with permission ARRL Bulletin 8

## Morning Schedule:

| Time               | Mode | Days     |
|--------------------|------|----------|
| 1300 UTC (9 AM ET) | CWs  | Wed, Fri |
| 1300 UTC (9 AM ET) | CWf  | Tue, Thu |

## Daily Visitor Operating Hours:

1400 UTC to 1600 UTC - (10 AM to 12 PM ET)  
1700 UTC to 1945 UTC - (1 PM to 3:45 PM ET)

(Station closed 1600 to 1700 UTC (12 PM to 1 PM ET))

## Afternoon/Evening Schedule:

|                     |         |               |
|---------------------|---------|---------------|
| 2000 UTC (4 PM ET)  | CWf     | Mon, Wed, Fri |
| 2000 " "            | CWs     | Tue, Thu      |
| 2100 " (5 PM ET)    | CWb     | Daily         |
| 2200 " (6 PM ET)    | DIGITAL | Daily         |
| 2300 " (7 PM ET)    | CWs     | Mon, Wed, Fri |
| 2300 " "            | CWf     | Tue, Thu      |
| 0000 " (8 PM ET)    | CWb     | Daily         |
| 0100 " (9 PM ET)    | DIGITAL | Daily         |
| 0145 " (9:45 PM ET) | VOICE   | Daily         |
| 0200 " (10 PM ET)   | CWf     | Mon, Wed, Fri |
| 0200 " "            | CWs     | Tue, Thu      |
| 0300 " (11 PM ET)   | CWb     | Daily         |

## Frequencies (MHz)

CW: 1.8025 3.5815 7.0475 14.0475 18.0975  
21.0675 28.0675 50.350 147.555

DIGITAL: - 3.5975 7.095 14.095 18.1025 21.095 28.095  
50.350 147.555

VOICE: 1.855 3.990 7.290 14.290 18.160 21.390  
28.590 50.350 147.555



## ARRL Seeks Waiver of Proposed FCC Amateur Application Fees



ARRL has urged the FCC to waive its proposed \$50 amateur radio application fee. The Commission proposal was made last month in a Notice of Proposed Rulemaking (NPRM) in MD 20-270. The

proposal already has drawn more than 3,200 individual comments overwhelmingly opposed to the plan. The fees, directed by Congress and imposed on all FCC-regulated services, are to recover the FCC's costs of handling and processing applications.

ARRL argued that the FCC has explicit authority to waive the fees if it would be in the public interest, and should do so for the Amateur Radio Service. Unlike other FCC services, the Amateur Radio Service is all volunteer and largely self-governing, with examination preparation, administration, and grading handled by volunteers, who submit licensing paperwork to the FCC, ARRL pointed out.

These volunteer services lessen the regulatory burden - including the application burden - on the Commission's resources and budget in ways that licensees in other services do not, ARRL said.

Amateur radio's role in providing emergency and disaster communication, education, and other volunteer services also justifies exempting radio amateurs from FCC application fees. For example, ARRL noted, last year more than 31,000 participated as members of the ARRL Amateur Radio Emergency Service (ARES), and local ARES teams reported taking part in more than 37,000 events, donating nearly 573,000 volunteer hours, providing a total value of more than \$14.5 million.

"Accomplishing these purposes entails working with young people, many of whom may have difficulty paying the proposed application fees of \$50, \$100, or \$150," ARRL said. "The \$150 fee would be the

cost of passing the examinations for the three amateur license levels in three examination sessions," ARRL said. "Such multiple application fees to upgrade would dampen the incentive to study and demonstrate the greater proficiency needed to pass the examinations or the higher amateur classes.

Edited from *ARRL Bulletin* 35, November 19, 2020

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## Academic Paper Predicts Sunspot Cycle 25 Could be Among the Strongest Ever

A research paper, "Overlapping Magnetic Activity Cycles and the Sunspot Number: Forecasting Sunspot Cycle 25 Amplitude," by Scott W. McIntosh, Deputy Director of the National Center for Atmospheric Research in Boulder, et al., has concluded that Solar Cycle 25 could be among the strongest sunspot cycles ever observed, and will almost certainly be stronger than the just-ended Solar Cycle 24 (sunspot number of 116). The scientists say it will also most likely be stronger than Solar Cycle 23 (sunspot number of 180). As the abstract explains:

"The sun exhibits a well-observed modulation in the number of spots on its disk over a period of about 11 years. From the dawn of modern observational astronomy, sunspots have presented a challenge to understanding -- their quasi-periodic variation in number, first noted 175 years ago, stimulates community-wide interest to this day. A large number of techniques are able to explain the temporal landmarks, (geometric) shape, and amplitude of sunspot 'cycles;' however, forecasting these features accurately in advance remains elusive.

"Recent observationally motivated studies have illustrated a relationship between the sun's 22-year magnetic cycle and the production of the sunspot cycle landmarks and patterns, but not the amplitude of the sunspot cycle. Using (discrete) Hilbert transforms on more than 270 years of (monthly) sunspot numbers, we robustly identify the so-called 'termination' events that mark the end of the previous 11-year sunspot cycle, the

enhancement/acceleration of the present cycle, and the end of 22-year magnetic activity cycles. Using these, we extract a relationship between the temporal spacing of terminators and the magnitude of sunspot cycles.

"Given this relationship and our prediction of a terminator event in 2020, we deduce that Sunspot Cycle 25 could have a magnitude that rivals the top few since records began. This outcome would be in stark contrast to the community consensus estimate of Sunspot Cycle 25 magnitude."

*The ARRL Letter*, November 19, 2020

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**SpaceX Dragon Capsule Resilience Ferries Four Radio Amateurs to the ISS**

A SpaceX Dragon capsule carrying four radio amateurs autonomously docked on November 17 at 0401 UTC with the International Space Station (ISS). A SpaceX Falcon 9 launcher carrying the precious payload went into space on Sunday, November 15, from NASA's Kennedy Space Center. They comprise the ISS Expedition 64/65 crew.

"Well, the ISS is loaded with hams now," Amateur Radio on the International Space Station (ARISS) US Delegate for ARRL Rosalie White, K1STO, said on Tuesday. "These four arrived very early this morning Eastern Time: NASA astronauts Victor Glover, KI5BKC; Mike Hopkins, KF5LJG, and Shannon Walker, KD5DXB, as well as Japan Aerospace Exploration Agency (JAXA) astronaut Soichi Noguchi, KD5TVP." This marks Glover's first time in space. The others all are ISS veterans.

Earlier this year, NASA ISS Ham Project Coordinator Kenneth Ransom, N5VHO, held amateur radio licensing study sessions for Glover, who passed the Technician-class exam on August 20.

The four will remain on station until next spring. They joined Expedition 64 Commander Sergey Ryzhikov and Flight Engineer Sergey Kud-Sverchkov of the Russian space agency Roscosmos, on the ISS.

White said all but Noguchi likely will take part in ARISS contacts with schools. White said the first

school contact is tentatively scheduled for December 4 with Tecumseh High School in Oklahoma, home of the Tecumseh High School Amateur Radio Club, K5THS. She said the students have earned their ham licenses, and the club has built an antenna and is learning about satellites and circuits. Members of the South Canadian Amateur Radio Society of Norman, Oklahoma, are providing support and mentoring assistance.

The Sunday launch from Kennedy Space Center marked only the second crewed-flight for the SpaceX Crew Dragon, which became the first commercial vehicle to put humans into orbit when astronauts Doug Hurley and Bob Behnken, KE5GGX, launched in May, and NASA gave SpaceX the go for future such launches.

"The return of human spaceflight to the United States with one of the safest, most advanced systems ever built is a turning point for America's future space exploration," SpaceX claimed, "and it lays the groundwork for missions to the moon, Mars, and beyond."

*The ARRL Letter*, November 19, 2020

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**SKYWARN Recognition Day 2020 Adjusts for COVID-19**

Since 1999, the annual SKYWARN™ Recognition Day ([SRD](#)) has celebrated the long relationship between the amateur community and the National Weather Service (NWS). SKYWARN Recognition Day 2020 will take place from 0000 UTC to 2400 UTC on December 5. Amateur radio operators comprise a large percentage of SKYWARN volunteers across the country.

The purpose of the event is to recognize amateurs for the vital public service they perform during times of severe weather and to strengthen the bond between radio amateurs and local NWS offices. The event is cosponsored by ARRL and the NWS.

Normally, each year, radio amateurs participate from home stations and from stations at NWS forecast offices with the goal of making contact with as many offices as possible. This year, due to COVID-19 restrictions, participation from NWS

forecast offices is expected to be minimal, so the focus will shift this year to contacting as many trained SKYWARN spotters as possible.

During the event, operators are encouraged to exchange their name, home station, SRD number, and current weather conditions with other participating stations. The event website provides complete operating guidelines.

Radio amateurs may sign up for a SKYWARN Recognition Day number by completing a [participant sign-up form](#). A [SKYWARN Recognition Day Facebook page](#) has been created and will host a variety of live and recorded segments throughout the day.

*The ARRL Letter*, November 19, 2020

## ARRL Learning Network Webinars

Visit the ARRL Learning Network website (a members-only benefit) to [register](#) for upcoming sessions and to view previously recorded sessions. The schedule is subject to change.

Amateur Radio's Role at the Boston Marathon Bombing: Steve Schwarm, W3EVE

Amateur radio has played a significant role in public service communications for the Boston Marathon for several decades. That role was put to the test in 2013 when two bombs were exploded near the finish line. This presentation will describe the role that ham radio played at the Marathon and how that role changed due to the bombing.

Tuesday, December 8, 2020, 10 AM PST / 1 PM EST (1800 UTC)

Learn and Have Fun with Morse Code: Howard Bernstein, WB2UZE, and Jim Crites, W6JIM

Morse code, or "CW," is a popular ham radio operating mode. Learning CW does not have to be an arduous or lonely experience. Learn, practice, and enjoy CW with the methods used by the Long Island CW Club.

Thursday, December 17, 2020, 5 PM PST / 8 PM EST (0100 UTC on Friday, December 18)

*The ARRL Letter*, November 19, 2020

## Low-Frequency Station SAQ Broadcasts UN Day Message of Unity in Face of COVID-19

On United Nations Day, October 24, the Alexanderson alternator station SAQ in Sweden transmitted a message on 17.2 kHz urging unity in the face of the COVID-19 pandemic. The message transcript follows.

"CQ CQ CQ DE SAQ SAQ SAQ This is Grimeton Radio/SAQ in a transmission using the Alexanderson 200 kW alternator on 17.2 kHz. The global COVID-19 pandemic challenges people and nations to unite to minimize the negative consequences for individuals and societies, and to uphold the advancements in public health made in recent decades. Good health and wellbeing is a prerequisite for a peaceful and sustainable global development, and health equity cannot be achieved without peace and human security."

The message was signed by Anders Tegnell, chief epidemiologist of Sweden's Public Health Agency. SAQ notes that QSL information is on the Alexanderson alternator website.

SAQ received some 400 listener reports from all over the world, with just 20 reporting they were unable to copy the message.

"As usual, we have received very many reports from north, central, and eastern Europe," the SAQ report said. "We also have received reports from the US and some from Russia and Japan. The farthest reports comes from Tasmania, south of Melbourne, approximately 16,000 kilometers (9,942 miles) from Grimeton, Sweden."

The entire transmission event was also broadcast on the SAQ YouTube channel, with some technical problems experienced.

Following the United Nations Day transmission, singer [Anna Louise Ekman](#) performed a concert in the transmitter hall with songs in Swedish and Italian. She was accompanied by her pianist, Oscar Johansson, and her sister, violinist Åsa Grimberg.

*The ARRL Letter*, November 19, 2020

# 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                             | Frequency (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.

# 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 1928 The Radio Amateur's Code