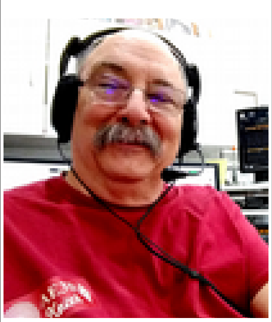
The Ham Arundel News

Providing Fellowship and Community Service through Amateur Radio Since 1951

March 2019 **40th Year of Publication**



Keith Miller, AE3D

Prez Sez...

We all have goals. And when it comes to our hobbies we have goals too. For some it's a Worked All States award, or a DXCC, for others its to have antennas for all the HF bands. Some want to learn Morse Code. The list goes on. We don't always reach our goals, but we try.

Radio Clubs have goals too. In February, your Board set out a list of four of those goals. Let me address them in reverse order of importance.

Goal #4, is to provide education and training for our members. Sometimes this is as simple as having good program meeting. Sometimes it's a course of study. Sometimes it's a kit building workshop. It all does the same thing. It makes us better 'hams'.

Goal #3, is to encourage more people to become Amateur Radio Operators. Sometimes we do this in a well organized fashion, and sometimes we don't even know we are doing it. But its what keeps our hobby going.

Goal #2, is to give the public a positive image of Amateur Radio. Ham radio works when nothing else does, but, that doesn't mean much if nobody knows it. We need to promote our value to the community using every means possible.

And then there is **Goal #1**. Have fun. Fun is the motivation that keeps the other 3 going. Those who have fun teach others, encourage others to join us, and tell everyone who will listen about the worth of Amateur Radio. Those who don't find new hobbies to take up their time.

Now there was a reason the Board decided to set out these goals. Because they help us focus on what is important as we proceed through a wide variety of club activities. Lets use Field Day as an example. You knew it had to fit in here somewhere. First and foremost, Field Day has to be fun. Those for whom it is not fun, stay home. Now fun is kind of hard to describe, but I can give you an example. The overnight crowd doubled when Rich started making home made potato chips. Fun! Oh yeah. It's got to be fun.

On Field Day, Ed Santilli's mammoth PR efforts bring out the visitors. But having a crowd show up doesn't guarantee success. Most years our visitors come and go before 6pm Saturday. Think about it, how many stations were operational before 6pm last year? And the year before when I was Field Day Chairman, where was I when the visitors arrived. I was fixing antenna problems.

It's just so easy to get distracted and miss the biggest chance we have all year to impress the world with Amateur Radio, and entice new people to come join us. So I am writing this hopeful the person heading up our Field Day Team, and our Field Day support staff will learn from my mistakes, and put some focus on our Club's Goals.

As for Goal #4, this year we need to try harder. The web site, Listserv, and lists of ham radio students can be used to reach our new hams and unseasoned operators. These folks need to know: 1) You can't mess up our contest; 2) The biggest mistake you can make is not showing up; and 3) If you are self conscious, come late Saturday or Sunday morning when the place is short on personnel. They can't watch you if they aren't there. Maybe I need a better way to put that?

73s…… Keith Miller, AE3D

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QST AARC

Tear Down Crew Needed for Field Day

The major Field Day issue this year is "Who is going to put this away." At that start of Field Day we have any number of eager, well rested, hard working volunteers who put it all together. Many take Friday off work to help, then come back Saturday for more. Many put in 12 or more hours before the contest even starts.

Then these same folks become operators and greeters and whatever else is needed. They go home Saturday night dead tired, and only a small percentage make it back Sunday. And some who are present Sunday, worked the rigs overnight! By 2pm Sunday, all anyone wants to do is go home. It is then, that that the few who remain are faced with hours of work tearing down and storing all the Field Day equipment. I remember someone saying "We put it away really fast last year, what's the problem." Glad you asked. The end result is that everything is just thrown into the storage room in disarray, and the Ham Shack becomes inoperable for days, weeks or even months while we look for missing equipment. Some stuff is still missing from last year. That's the problem. Nobody wants this. It just happens.

Last night the man I most want to appoint as Field Day Team Leader gave me his condition for taking the job. I must find him five hearty club members, who will not be involved in Field Day setup who will volunteer to show up Sunday afternoon and be the clubs tear-down crew. That way everything gets put away properly, and the Ham Shack is operational.

I know its a lot of work. I know I'm asking for a lot. But I need five volunteers, and I need a list of their names and call signs before the March 7th meeting, so I can appoint a Field Day Team Leader, and know things will be done right. If you can volunteer to be one of the five, please either call me or email me.

73s.....
Keith Miller, AE3D
AARC President
president@w3vpr.org

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TO GOTA, OR NOT TO GOTA

Before the Anne Arundel Radio Club makes a decision about a GOTA station, one needs to consider a number of factors.

First and foremost, a GOTA station may operate on any band or mode that the Control Operator is licensed for. Without the GOTA station we are limited to one transmitter per band per mode, and the modes are phone, CW & digital. Yep, digital is all one mode.

Thus we can have only 3 stations per band simultaneously without a GOTA station, but we can have 4 per band with a GOTA station.

That said, we seem to have plenty of problems with self interference using only 3 stations per band. What are we thinking? Now if we were running 4A or 3A or less, we would have some wiggle room. But we don't. IE the more stations you have, the less sense GOTA makes from an interference standpoint.

Maybe with 5 watt stations this isn't such a problem, but at 100 watts each, it is. I know last year at times our 40 meter digital was literally obliterated by our 40 meter CW signal just down the dial. Our three primary bands 80, 40 and 20 meter have only 400 kHz, 175 kHz and 200 kHz bandwidths in the phone portions respectively. Trying to squeeze two 100 watt signals into that space could spell disaster.

If we go QRP to reduce interference, it also lowers our number of contacts, and makes it harder for those GOTA operators to make them. Plus we have to erect additional antennas, probably 3 of them.

Last year we had three 40 meter antennas, and three 20 meter antennas and only two 80 meter antennas. This year if FT8 is allowed we may want to consider a third 80 meter antenna for digital and move up to 6A. In past years, without FT8 there has been almost no digital activity on the 80 meter band, so we didn't bother. Just saying we might need 4 new antennas not just 3.

Another way to dodge the bullet would be to single-band our GOTA station. For instance it could stay on 40 meters full time. Then we are back to 1 or 2 more antennas.

Or we could cut back the number of phone stations. Doing so would give us a spare antenna without added interference, but it would also cut back on the number of club members who could participate in Field Day. Of last year's members who made Field Day contacts, only about 1 in 6 used CW. The majority of the rest used only SSB. Do we really want to do that?

On the positive side, adding a GOTA station does add the chance for receiving extra bonus points. Any un-licensed, Novice, Technician or unseasoned ham (not meaning "lacking salt" but rather "I just got my General two weeks ago.") qualifies for a 20 bonus points if they make at least 20 contacts. That's right, if you don't get at least 20 contacts you get no bonus at all. So if you are new and not planning on making 20 contacts, you might as well use a non-GOTA station.

Once the GOTA user gets to 20 points they receive their first bonus. After that each addition 20 up to a total of 100 nets the GOTA user another 20 "GOTA Bonus Points". Not that this happens often, but it's possible. Note that no one who would have qualified for using a GOTA station last year would have qualified for any Bonus Points if they had used a GOTA station.

Further if we have a "GOTA Coach" or several of them, we can qualify for "GOTA Double Bonus Points". We get them if at least one such "GOTA Coach" is

physically present when all GOTA contacts are made. That's right, if even one GOTA contact is made without a "GOTA Coach" standing there watching from close proximity, we lose our chance for "GOTA Double Bonus Points". We either double all of them, or come up empty.

We also have to be aware that the vast majority of unlicensed, Novice, Technician, and unseasoned General Class operators show up on Saturday only. Most leave before 10pm. When there are no qualified operators, the GOTA station simply sits empty. We get no points for an empty station.

Maybe the correct answer is to shut down the 40 meter phone station, and re-open it as a GOTA station every time a suitable operator is present. Then shut GOTA down and go back to being a regular station when they aren't. At least that way we don't up the interference levels, or give up on GOTA Bonus or Double Bonus points.

As President it is not my job to figure out which to do. That is the job of the Field Day Team Leader. All I am attempting to do here is to state the possibilities, and let you know that its not the easy decision many think it is. I hope this gives you something to think about….

Keith Miller, AE3D
AARC President

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NA1DX Worked XX9D, Macao, Phillipines

I was finally able to work XX9D in Macao Saturday at 23:27 UTC using my old 3 element 3 band Mosley yagi that is up 54'. See my QRZ page for some pictures.

I worked him in FT8 mode in hound mode for fox-hound. I used 200w and signal report was -13.

He was heard on 30m and 40m also with my 17' vertical with a remote tuner, but he never heard me.

The distance over the pole is about 8176 miles, 'as the crow flies'.

They are still on the air until 2/26/19. So give them your best shot starting 2100 - 0200 UTC tonight or an hour before and after sunrise here tomorrow. Watch the DX cluster and reverse beacon network.

Let us know if you have already worked them or do work them before they go QRT.

73 and Good DX,
Doug - NA1DX

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Volunteers Needed for the Striders B&A Marathon / Half Marathon

Well, the running season is upon us and events are about to begin. The first event of the year that we're supporting is the Striders B&A Marathon / Half Marathon. The event is on Sunday, 31 March. The race begins at 0730 and will last until around 1500. If you work the lower half (half marathon) then you will be finished earlier.

If you can help with this race it will be greatly appreciated. You can either work the half-marathon or the full marathon. If you have worked it before and have a preference, please let me know.

Please respond to Paul@W4ATN.com and NOT reply to this email.

Thanks,
Paul, W4ATN

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Note from AA3RR

Greetings from Prescott Valley where 19 inches of snow fell over the past two days.

Yup, it snows in Arizona. Every year. But not everywhere all the time.

Here in Prescott Valley our altitude is 4800-5000 feet - The low end of my driveway is at 4668 feet.

Our snowfall every winter season we've been here (5 years) is typically divided between 4 events. One of these events is typically 3"-5" and the rest are 1/2 inch or just enough to cover the yard.

So far we've had three events this season: 31 Dec 18 we received 4-5 inches; this past Monday we received 5" but it was gone before our most recent event arrived; Thursday (13 inches) and Friday (6 inches).

The local news suggests this was the worst storm in the Prescott/Prescott Valley area since 1967. Must be due to cow farts.

So this is the impact of the recent event:

I-40 was closed east and west of Flagstaff - we're about 90 miles south of Flagstaff

I-17 from Flagstaff to the southern highway into Sedona was closed. W hen it was open, chains were required. - We're located about 15 miles west of I-17

Our county issued a warning to stay off the roads.

All services were cancelled (Trash pick-up, Recycle pick-up, mail delivery (USPS, FEDEX, UPS etc.)).

The sun appeared late yesterday afternoon and the melting began. The overnight low was 8 degrees.

Today, the sky is clear and we are receiving a huge download of sunshine. Despite the sub-freezing temp, the snow is melting. It's amazing what direct sunlight will do.

I expect mail to be delivered today. Maybe. Our re-cycables were picked up late this morning. No more snow is forecast for our area. In theory. Things are returning to normal.

Life is good.
Bob & Brenda Rose, AA3RR

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B & A Trail Marathon / Half Marathon

The Anne Arundel Radio Club is looking for volunteers to help with communications for the B & A Trail Marathon / Half Marathon 7:30am on March 31st.

All you need is a 2 meter HT, and if you don't have one, we might be able to lend you one for the event. **Contact W4ATN to sign up.** No experience necessary. Really! Whether a long time ham, or got-my-call-sign last week, we need your help!

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WINTERFEST!™

Dear Fellow Amateur Radio Operator:

We hope you are planning to join the Vienna Wireless Society, at its 43rd Winterfest event on **Sunday, March 24, 2019**. Forty-four exhibitors, including commercial ham radio vendors, the ARRL HQ, and all the local Ham Radio Clubs from the area will be there, to make this one of the area's largest hamfests.

Tailgating opens at 6:00 am. General admission opens at 8:00 am, and runs through the one-o'clock hour. Door prize drawings will occur throughout the event. VE testing will run from 11:00 am to 1:00 pm. Admission tickets are $10, and can be purchased at the door.

Our hamfest is located in the Richard J. Ernst Cultural Center on the Annandale Campus of Northern Virginia Community College. The campus is at 8333 Little River Turnpike Annandale, VA, just off the I-495 expressway via Little River Turnpike (SR-236), exit 52 (towards Fairfax). Free parking adjacent to the Ernst Cultural Center is available. For more info, a list of vendors or a map of the campus, see our web site at: https://viennawireless.net/wp/events/winterfest/

The Fairfax County ARES and the Northern Virginia FM Association will be hosting a "talk-in" on 146.91 MHz.

A limited number of tables are still available in our spacious indoor vendor sales area, if you wish to sell some of your radio gear. Table rental is $25 per table, and we offer a $5 per table discount if more than one table is rented. Tailgating just outside the Ernst Cultural Center is also available for $20 per car, and an admission ticket is included in each tailgate transaction.

Please contact Mike Aimone, WA8AHZ at Winterfest2019@viennawireless.net or call him at (703) 870-1730 for more information.

We look forward to seeing you there!

Sincerely,
Vienna Wireless Society
Winterfest!2019 Committee
Winterfest2019@viennawireless.net

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THE HOLLY NET

Net Control Radio Operators
ARE NEEDED

during the work-weekdays -

from 0700 to 0900 am.

Contact: Jim Wallace, N3ADF

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, March 7, 7:30pm
AARC - Club meeting, newcomers always welcome.

Saturday, March 9, 8:30am
AARC - Technician License Class

12:00pm
AARC - Free License Exams

Thursday, March 14, 7:30pm
AARC - board meeting

Saturday, March 16, 8:30am
AARC - Technician License Class

Sunday, March 17, 1:00pm
AARC - Mesh Networking group, Every 3rd Sunday, 1 to 4 PM at the clubhouse

Thursday, March 21, 7:30pm
AARC - Club meeting, newcomers always welcome.

Saturday, March 23, 8:30am
AARC - Technician License Class

Sunday, March 24, 1:00pm
AARC Kit-building, troubleshooting and repair, at 1 to 4 PM at the clubhouse

1:00pm
Open Shack Hours

Saturday, March 30, 8:30am
AARC - Technician License Class

ARRL Board Gives the Go-Ahead to Lifelong Learning Initiative

ARRL is undertaking a new initiative to provide online educational opportunities to a broad range of radio amateurs. The Lifelong Learning Initiative will seek to provide a series of learning tracks that will serve the needs of the various interest groups within the Amateur Radio community.

While designed for everyone with an interest in learning more about Amateur Radio, the Lifelong Learning Initiative will initially focus on creating online learning opportunities for new and newer hams, a segment of the Amateur Radio community desperately searching for educational and instructional and resources.

ARRL Lifelong Learning Manager Kris Bickell, K1BIC. [David Isgur, N1RSN, photo]

The ARRL Board of Directors set the Lifelong Learning Initiative in motion, endorsing and funding the program and approving the hiring of advertising agency Mintz + Hoke to work with ARRL Lifelong Learning Manager Kris Bickell, K1BIC, and other ARRL staffers in building this learning environment. Mintz + Hoke will conduct the research necessary to identify the different educational needs within the broader Amateur Radio community.

"Mintz + Hoke is a really strong partner in this project," Bickell said, adding that the firm has developed a really deep understanding of the Amateur Radio community as part of the investigation phase of this endeavor.

> ***"We are building a new learning environment." -- ARRL Lifelong Learning Manager Kris Bickell, K1BIC***

Bickell noted that youth education will be a critical component of this Learning Initiative, but he also believes that overall opportunities in this area are huge, as many individuals are looking to expand their knowledge of Amateur Radio.

He said that, where appropriate, the content of these learning tracks within the initiative will build upon much of the knowledge base that already exists within ARRL, such as the material in *QST* and *QEX* magazines, as well as other ARRL publications and manuals. Some new content will be created as well, to ensure that the information being provided stays fresh and dynamic.

In addition to providing instruction, the Learning Initiative will offer resources that allow individuals to delve further into a subject, rather than just relying on ARRL content.

"We are building a new learning environment," Bickell said. "It will take a lot of work to put this all together, but we believe that this initiative will firmly establish ARRL as an educational leader in Amateur Radio." He expects the online Lifelong Learning platform to launch in the fall of 2019.

In conjunction with its support of the Lifelong Learning Initiative, the ARRL Board also endorsed CEO Howard Michel's HQ reorganization plans, and the purchase of a modern association management software system.

"These are big investments the Board is making in ARRL, and a strong positive vote of confidence that we can deliver," Michel said. "They are giving us the tools to be successful."

Used with permission The ARRL Letter for February 7, 2019

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ARRL Board of Directors Tackles Ambitious Agenda

A demanding agenda faced the ARRL Board of Directors when it convened for its annual meeting on January 18 - 19 in Windsor, Connecticut. President Rick Roderick, K5UR, chaired the session. Several new faces were around the table, with four newly elected ARRL Directors, one newly elected Vice Director, and one recently appointed Vice Director. Attending for their first meeting as Board members were Hudson Division Director Ria Jairam, N2RJ; New England Division Director Fred Hopengarten, K1VR; Northwestern Division Director Mike Ritz, W7VO, and Roanoke Division Director George "Bud" Hippisley, W2RU. Also present were Northwestern Division Vice Director Mark Tharp, KB7HDX, and Rocky Mountain Division Vice Director Robert Wareham, N0ESQ, who was appointed last fall to fill a vacancy.


(From left to right) ARRL First Vice President Greg Widin, K0GW; ARRL President Rick Roderick, K5UR, and ARRL CEO Howard Michel, WB2ITX. [Michelle Patnode, W3MVP, photo]

On a voice vote, the Board authorized $485,000 to fund a project to be carried out by Connecticut media and advertising consultants Mintz & Hoke, to develop lifelong learning strategies and programs aimed at attracting and retaining ARRL members, especially newly licensed radio amateurs.

"Our focus is on expanding the reach of ARRL by providing instructional materials to Amateur Radio operators who have a wide range of interests and experience levels," ARRL Lifelong Learning Manager Kris Bickell, K1BIC, remarked this week. The program will offer a modern, user-friendly educational environment with various learning paths, such as getting on the air, public service, technological experimentation, and advanced operating and technical tips, Bickell said.

The Board adopted an ARES plan as recommended by the Programs and Services Committee. Committee Chair Dale Williams, WA8EFK, said the ARES plan will establish training programs and three levels of

ARES membership. It also revises ARES appointment definitions and designates the Emergency

The Board adopted an ARES plan as recommended by the Programs and Services Committee. Committee Chair Dale Williams, WA8EFK, said the ARES plan will establish training programs and three levels of ARES membership. It also revises ARES appointment definitions and designates the Emergency Coordinator (EC) as the lead person in local activations. Section and District Emergency Coordinators will serve as resources.

(From left to right) ARRL International Affairs Vice President Jay Bellows, K0QB; ARRL President Rick Roderick, K5UR, and Radio Amateurs of Canada President Glenn MacDonell, VE3XRA. [Photo courtesy of RAC]

The Board also established an EmComm Manager Requirements Committee, charged with setting the requirements for ARRL's Emergency Preparedness and Response Manager function.

The Board received the report of ARRL CEO Howard Michel, WB2ITX, who outlined plans to reorganize and refocus the activities at ARRL Headquarters. Michel said providing better value to membership is a top priority, and he sees value creation and value delivery as key components to long-term membership retention and growth.

Addressing an ARRL governance issue, the Board repealed the *ARRL Policy on Board Governance and Conduct of Members of the Board of Directors and Vice Directors*, commonly known as the "Code of Conduct," on an 11-3 vote with one abstention.

The Board voted unanimously to create a Legal Structure Review Committee to study and make recommendations to update ARRL's legal structure "to reflect ARRL's current operational needs."

The Board created a permanent Amateur Radio on the International Space Station (ARISS) Committee "to develop an interactive relationship" with ARISS, which sponsors voice contacts between ISS crew members and school groups and gatherings on Earth, "bringing together STEM program objectives and local Amateur Radio groups." The Board motion said ARISS "has demonstrated very positive public relations benefits to the ARRL, and that it's ARRL's best interests to support ARISS."

The ad hoc Logbook of The World (LoTW) Committee was elevated to permanent status, reporting to the ARRL Administration and Finance Committee.

As already announced, the Board withdrew, without prejudice to refiling, ARRL's December 18, 2018, *Petition for Rule Making* to the FCC, which sought to amend the Part 97 Amateur Service rules to incorporate the provisions of the Amateur Radio Parity Act (ARPA). The Board said that ARRL needs to "review, re-examine, and reappraise ARRL's regulatory and legislative policy with regard to private land use restrictions."

In other business, the Board:

- received the report of ARRL Treasurer Rick Niswander, K7GM, on ARRL's investments for 2018. He said ARRL's portfolio recorded a small loss for the year, "consistent with market-derived expectations."
- heard from Chief Financial Officer Diane Middleton, W2DLM, who reported that "a financially strong balance sheet generated a larger-than-expected gain from operations for 2018." Cash flow also continued to be favorable.
- received the report of EMC Committee chair Kermit Carlson, W9XA, who told the Board his panel is working to raise awareness of a variety of issues stemming from major technological advances, such as wireless power transfer systems for charging electric vehicles. Carlson said that while new systems need spectrum, protection of other bands for other services is necessary. He invited the Board's vigilance in alerting the EMC Committee to potential concerns.
- affirmed its support of the National Traffic System and all amateurs involved in traffic handling, and their role as partners to ARES in ARRL's public service tool kit.
- considered recommendations of the Administration and Finance Committee and adopted the ARRL 2019 - 2020 Plan.
- elevated past New England Division Director Tom Frenaye, K1KI, to Director Emeritus, commending him for his more than 30 years of service to Amateur Radio "as a leader in his community, ARRL Division, and nationwide." Since 1975, Frenaye has served as an ARRL employee, Director, and Vice President, and as President of the ARRL Foundation.
- elevated retiring West Gulf Director Dr. David Woolweaver, K5RAV, to ARRL Honorary Vice President, in recognition of "providing outstanding leadership" throughout his 19 continuous years as a Vice Director and Director.
- directed the ARRL Secretary to cast ballots in support of the re-election of IARU President Timothy Ellam, VE6SH, and IARU Vice President Ole Garpestad, LA2RR, for additional 5-year terms.
- received greetings from IARU Secretary David Sumner, K1ZZ, on behalf of IARU President Tim Ellam, VE6SH, and from Radio Amateurs of Canada President Glenn MacDonell, VE3XRA.

Minutes of the annual meeting have been posted.

National Weather Service Dropping High Seas and Storm Warnings on WWV/WWVH

The National Weather Service (NWS) is discontinuing its high seas and storm warnings transmitted via National Institute of Science and Technology (NIST) WWV/WWVH time and frequency-standard HF transmissions, starting January 31 at 1800 UTC. The NWS warnings are aimed at the Atlantic, the Gulf of Mexico, and the Pacific.

"This service is being terminated because weather information in the current broadcast format does not support frequent-enough updates for changes in marine weather and cannot provide enough detail in the allotted window required by mariners to avoid hazardous weather," NWS said in announcing the discontinuation. "Additionally, alternative technologies and numerous media outlets that provide weather information in various formats have overtaken the need for providing weather information through the NIST frequency signals."

The NWS said other sources of marine weather information, high seas alerts, and detailed forecasts are available over satellite, telephone, the internet, marine fax, radio fax, and VHF radio. The NWS, US Coast Guard, and US Navy provide multiple dissemination methods for storm positioning, high sea areas, observations, forecasts, outlooks, and warnings for both coastal and oceanic marine zones near the US, all through a variety of technologies, including NAVTEX and the Global Maritime Distress and Safety System (GMDSS).

Used with permission The ARRL Letter for January 31, 2019

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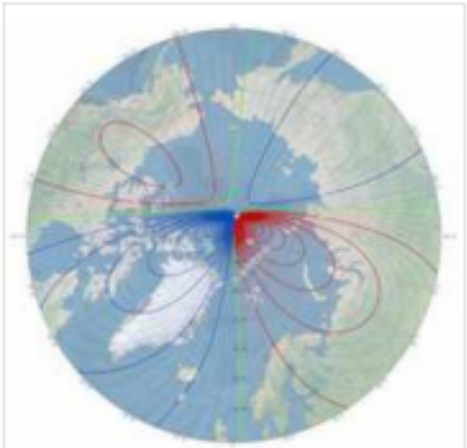
Earth's Magnetic North Pole Shifts toward Siberia

National Centers for Environmental Information (NCEI) scientists have updated the world magnetic model (WMM) mid-cycle, as Earth's northern magnetic pole has begun shifting quickly away from the Canadian Arctic and toward Siberia, an NCEI report said this week. While the new WMM more accurately represents the change of the magnetic field since 2015, it has no impact on propagation.



This map shows the location of the north magnetic pole)white star) and the magnetic declination (contour interval =2 degrees) at the start of 2019. [Photo courtesy of NOAA NCEI/CIRES]

Updated versions of the WMM are typically released every 5 years. This update comes about 1 year early.

"This out-of-cycle update before next year's official release of WMM 2020 will ensure safe navigation for military applications, commercial airlines, search and rescue operations, and others operating around the North Pole," said NCEI, which is part of the National Oceanographic and Atmospheric Administration (NOAA). "Organizations such as NASA, the Federal Aviation Administration, US Forest Service, and many more use this technology. The military uses the WMM for undersea and aircraft navigation, parachute deployment, and more." Other governmental entities use the technology for surveying and mapping, satellite/antenna tracking, and air traffic management. Smartphone and consumer electronics companies also rely on the WMM to provide consumers with accurate compass apps, maps, and GPS services.

Airport runways may be the most visible example of a navigation aid updated to match shifts in Earth's magnetic field. Airports around the country use the data to give runways numerical names, which pilots refer to on the ground. The declination has changed slightly more than 2.5° over the past 2 decades or so. Compasses use declination -- the difference between true north and where a compass points -- to help correct navigation systems for a wide variety of uses. Read more. -- *Thanks to NOAA-NCEI*

Used with permission The ARRL Letter for February 7, 2019

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Amateur Radio On ARISS Packet System

The Amateur Radio on the International Space Station (ARISS) packet system is back on the air with new equipment. The replacement gear arrived last November and had been awaiting unpacking and installation. ARISS hardware team members on the ground were able to locate a functional duplicate of the old ISS packet TNC module that had been in operation for 17 years and had become intermittent.

Crew members installed the new module on February 2; the RF gear remains the same. The ISS packet system, located in the ISS *Columbus* module, went down in July 2017, but it unexpectedly came back to life the following summer.

The packet system operates on 145.825 MHz. ARISS is an official back-up system for astronauts to talk with Mission Control in the unlikely failure of the station's primary communication systems. In 2017, hams relayed nearly 89,000 packet messages via the ISS; response to its recent return has been enthusiastic, ARISS said.

Contribute to the all-new radio system set to launch this year via the ARISS website. For more information, contact ARISS-International Chair Frank Bauer, KA3HDO, or ARISS ARRL Delegate Rosalie White, K1STO. -- *Thanks to ARISS*

Used with permission The ARRL Letter for February 14, 2019

Amateur Radio is Aboard during Attempt to Become Oldest Circumnavigator

Jeanne Socrates, VE0JS/KC2IOV, is used to solitude. The lone 76-year-old yachtswoman passed the southern tip of Africa — some 300 miles to the north — on Valentine's Day as she forged on toward Australia and New Zealand in her 38-foot sailing vessel *Nereida*. While underway, Socrates keeps in touch with a community of friends via Amateur Radio — although she had to yield to the ARRL International DX CW activity over the weekend — and she's sticking to a schedule of 7.160 MHz at 0230 UTC daily. Socrates reported making contact with some ham radio friends on the US west coast on February 17. She's been **blogging** her progress.

The retired math teacher and UK native also is no stranger to circumnavigating the globe, having already become the oldest woman to complete a solo, non-stop, unassisted round-the-world voyage. Ham radio served as her link to terra firma during her earlier adventures. Since 2013, she's made two additional attempts to become the oldest *person* to circumnavigate Earth, the goal she's now attempting to achieve. She departed Vancouver, British Columbia, last October.

Two earlier attempts were cut short when her vessel was damaged in rough seas. Then, she suffered serious injuries in a fall last year.

Socrates is working around a damaged mainsail. "We seem to be having many more days of light wind giving slow speed, than stronger wind giving good speed — need a wind of well over 15 knots and, preferably, for us to be headed downwind. Any upwind travel immediately gives poor boat speed — that's when the damaged mainsail is badly missed," she recounted in a recent blog entry. She's been using the vessel's trisail — typically used for high-wind conditions — because the *Nereida*'s mainsail repair was showing signs that it might not hold up in the wind. Socrates said she'll continue to work on the mainsail as time permits. — *Thanks to* Southgate Amateur Radio News *for some information*

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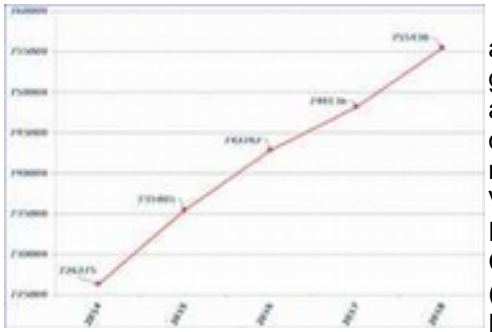
US Amateur Radio Population Grows Slightly in 2018

The US Amateur Radio population once again grew by about 1%, based upon 2017 and 2018 year-end FCC database statistics provided by Joe Speroni, AH0A. The 755,430 total licensees represent nearly 7,300 more license holders than those that were in the database at the end of 2017. Nearly 51% of the Amateur Radio population in the US -- 384,145 -- hold a Technician license. Generals are second with 175,949, and Amateur Extras number 147,369. Advanced and Novice licensee populations continue to decline, with 39,607 Advanced and 8,360 Novices, as the FCC no longer issues Advanced or Novice licenses. A more significant statistic is 31,576 *new* FCC licenses last year, although that's 620 fewer than came aboard in 2017.



"New amateur licenses granted by FCC are down 2% over last year," noted ARRL Volunteer Examiner Coordinator (VEC) Manager Maria Somma, AB1FM, "but this is the fifth year in a row the total has been greater than 31,000. I predict that the number of new licensees will be more than 30,000 at the end of this year as well, and I'm optimistic this trend will continue."

Upgrades also are down slightly, compared to last year -- 9,456 in 2018 versus 9,576 in 2017, she added. "For the fifth year in a row, we have conducted more than 7,000 Amateur Radio exam sessions in a year -- an important milestone for the ARRL VEC," Somma recounted. "Our program continues to provide outstanding service to the ARRL, its members, and the entire Amateur Radio community."

ARRL VEC filed a total 30,393 license application forms last year, compared to 31,014 in 2017. That includes new, upgrade, modification, renewal, and club station filings. At 7,035 in 2018, the number of exam sessions conducted by ARRL VEC marginally trailed the 7,075 held in 2017. ARRL VEC served 34,493 exam applicants in 2018, compared to 35,352 in 2017. Exam elements administered by ARRL decreased from 47,152 last year to 45,817 this year, Somma said. Nearly 1,800 new Volunteer Examiners (VEs) have been added to the ARRL VEC program.

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US Navy Explores Amateur Radio as a Training Adjunct

The US Navy's Naval Air Warfare Center Weapons Division (NAWCWD) has adopted Amateur Radio training as a possible new approach to basic RF and electronics instruction. More than 20 NAWCWD employees took part in a week-long class in Point Mugu, California, in December. The class, which culminated in an examination session for the Technician licensed, offered NAWCWD employees a novel approach to teaching radio propagation, said Brian Hill, KF4CAM, the lead for electromagnetic maneuver warfare experimentation in the NAWCWD Avionics, Sensors and E*Warfare Department. Hill, who got his license while he

was still in high school, is also the department's "innovation ambassador."

"I looked at the breakdown of current new hires and saw that many had degrees in computer science and thought that their classwork might not have covered things like RF propagation," Hill said. Rather than have employees sit through hours of *PowerPoint* briefings, Hill thought that a licensing course might be a more dynamic, hands-on approach to convey the basics -- and cover areas such as directional antennas, signal propagation, and modulation that are necessary for their work.

Initially, Hill had 10 class slots funded, but then Target Design Engineering Branch Head Ian Mann, KI6YVO, got wind of the class, saw its potential, and helped get funding to expand participation. Mann, a General-class licensee and a ham for nearly 10 years, said he's been able to apply knowledge learned in the class to his NAWCWD work.

Target Systems Division Head Milton Gabaldon, also saw merit in the approach. He sat in on the classes, took the exam, and he's now KM6YPA. For him, it's about connecting the dots.

Some of the 23 students who recently passed Amateur Radio exams at the NAWCWD hold their Certificates of Successful Completion of Examination (CSCE).

"It's about introducing people to electronics, to start understanding what RF is all about ...so when we talk about it in the test and evaluation world, [students] know what we're talking about," Gabaldon said. "They get a better view than 'I just do software.' Now they see 'My software controls this piece, which sends out RF jamming signals that protect the warfighter.' That's the most important takeaway."

In all, 23 employees who took the Technician exam passed, and several also successfully tested at for General and Amateur Extra licenses. Hill hopes to offer more hands-on classes in the future, and he's planning a Fox Hunt for the near future, as additional hands-on training. -- *Thanks to NAWCWD and Public Affairs Officer Kimberly Brown; some information from C4ISRNET*

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FCC Invites Comments on Amateur Radio-Related Petition for Rule Making

The FCC has invited public comments on a *Petition for Rule Making* (RM-11826) from an Ohio radio amateur seeking to amend the Part 97 station identification rules to better accommodate and simplify station identification during an emergency net, drill, or activation. ARRL member Robert A. Dukish, KK8DX, filed the petition in December, and the FCC put it on public notice this week. Dukish seeks a change to Section 97.119(a) of the rules, which requires an amateur station to transmit its "assigned call sign on its transmitting channel at the end of each communication, and at least every 10 minutes during a communication."

He noted that during emergency networks, requiring participating stations -- often portable -- to use their assigned call signs during each transmission could prove "burdensome and can hinder the flow of emergency traffic on the channel."

Specifically, he is suggesting that a simple approach would be to permit the net control station or other designated participant to announce from a single point the call signs of every station taking part in the net or exercise, when tactical call signs often are in use, at 10-minute intervals, using automatic CW identification.

Dukish suggested amending Section 97.119(a) to add, "except during a local emergency network activation or drill," and providing that in such situations, a net control or designations station would be "authorized to announce all participating stations' assigned call signs at no more than 10-minute intervals while the net is in progress." The amendment would provide that participating stations "be within a 50-mile distance of the identifying station, and each individual station must self-identify by transmitting its assigned call sign at least once per hour." CW transmission could be no faster than 25 WPM if sent automatically to satisfy the suggested amendment.

Interested parties may comment via the FCC Electronic Comment Filing Service (ECFS).

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Microsoft Compatibility Official Steers Enterprise Users Away from Internet Explorer

Microsoft, which transitioned to its new browser *Edge* several years ago, is now advising enterprise users to avoid its legacy browser, Internet Explorer (IE). Microsoft Worldwide Lead for Application Compatibility Chris Jackson said this week that IE isn't really a browser but a "compatibility solution" to deal with legacy sites. Microsoft no longer supports IE with new web standards, which is at the core of the problem.

In **a new blog post**, Jackson said that, for some

organizations, using Internet Explorer as the default for all situations "is the 'easy button,' because, well, most of your sites were designed for Internet Explorer, so…just…always use it, ok?" Jackson said this sort of thinking "seems like a deliberate decision to take on some 'technical debt,'" as he put it.

He said that as the IE standards mode supported more and more standards, "we decided not to just update the mode we called standards mode, because, when we did, we risked breaking applications written for an older interpretation of the standards. So, with Internet Explorer 8, we added IE8 standards, but also kept IE7 standards."

"That meant, for sites in the internet zone, it would default to IE8 standards, but, for sites in the local *intranet* [emphasis added] zone, it would default to IE7 standards."

Jackson said companies' "habit" of paying for extended support for legacy software "needs to stop in the case of IE." He suggests using IE only selectively for internal sites that require it, pointing to tools that help customers make the transition and limit the use of IE to only where it's needed.

"Internet Explorer is a compatibility solution," Jackson concluded. "We're not supporting new web standards for it and, while many sites work fine, developers by and large just aren't testing for Internet Explorer these days."

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Riley Hollingsworth, K4ZDH, to Oversee Volunteer Monitors Development and Implementation

Riley Hollingsworth, K4ZDH, will oversee the development and implementation phases of ARRL's new Volunteer Monitors (VM) program, which will replace the Official Observers (OO) program. Hollingsworth, who once handled Amateur Radio enforcement for the FCC, has stepped down as ARRL Atlantic Division Vice Director to avoid any appearance of a conflict of interest. The development phase of the program is already under way.

"I am grateful for the Atlantic Division ARRL members supporting me, but I think I can better serve the Atlantic Division and all ARRL divisions by working in the Volunteer Monitors program," Hollingsworth said in his resignation letter. A new Atlantic Division Vice Director will be appointed.

ARRL President Rick Roderick, K5UR, said that Hollingsworth was the ideal person to lead ARRL's efforts in the development and implementation of this joint program with the FCC.

"I support Riley's decision to concentrate his efforts on this very valuable project on behalf of the ARRL," Roderick said.

Approved by the ARRL Board of Directors last July, the Volunteer Monitors will work in cooperation with the FCC. Volunteers trained and vetted by ARRL will monitor the amateur bands for possible instances of misconduct or to recognize exemplary on-air operation. Cases of flagrant violations or noncompliance will be directed to the FCC for action, in accordance with FCC guidelines. The program, which aims to re-energize Amateur Radio enforcement efforts, was proposed by the FCC following the closure of several FCC regional offices and reductions in field staff.

Hollingsworth has identified three phases to the program -- development, solicitation and training, and implementation. The development phase will include drafting a mission statement, clearly defining ARRL's and the FCC's requirements and needs as part of the program, drafting a Volunteer Manager job description, and developing a training manual for volunteers.

The solicitation and training phase will involve identifying the geographical locations where volunteer monitors will be most needed, soliciting applications, and screening applicants. Current Official Observers will be invited to apply for appointment as Volunteer Monitors (VMs). The ARRL Board has expressed its appreciation to the OOs for their dedicated volunteer service over the years.

Implementation will involve having the volunteers provide field reports, and ARRL staff offering guidance to volunteers to ensure that the information gathered meets FCC requirements. Continuing education will be provided to the volunteers as part of the program.

Hollingsworth has committed to ensure training adequacy for new VMs, to review the quality and utility of Volunteer Monitor submissions to the FCC for enforcement action, and to advocate for rapid disposition of cases appropriately submitted to the FCC.

ARRL officials estimate that it will take 9 - 12 months before the first Volunteer Monitors begin filing reports

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FCC Digging Out from Beneath Shutdown Backlog

In the wake of the more-than-month-long partial government shutdown, the FCC has set about tackling a backlog of applications already in the queue. At first, it sought to hold back the flood as it dug out, asking that Volunteer Examiner Coordinators (VECs) give the agency a little breathing room before submitting any additional new files. On Monday, services using the FCC electronic batch filing (EBF) system -- including commercial and amateur -- received an automated message from the FCC updating users on the situation.

"Due to the recent government shutdown, applications submitted through the Electronic Batch Filing (EBF) system between the dates of January 3 through January 29 will begin processing *over the next several weeks* [emphasis added]," the FCC said. "Please, be patient as we are expeditiously working through the

backlog of filings." Expeditious it was, taking not weeks but days.

"The FCC worked through its backlog very quickly, and started processing our files about noon today," Assistant ARRL VEC Manager Amanda Grimaldi, N1NHL, said on Wednesday. "We're slowly submitting the files we have in queue -- we don't want to bombard them! Assuming there are no hiccups, everyone should see their applications processed by the close of business on Thursday."

The ARRL VEC had piled up some 2,700 pending Amateur Radio applications, many of them from 425 ARRL VEC examination sessions that took place during the shutdown or immediately prior to it. These do not include files that the other 13 VECs may have ready to upload.

As it attempts to dig out from beneath a blizzard of applications from all services, the FCC this week reset some filing deadlines and established new receipt dates. The FCC said filings due between January 3 and January 7 (inclusive) will be due on January 30. Filings that would otherwise be required to be filed between January 8 and February 7 will be due on February 8. The FCC said all ULS applications and notifications originally due on January 3 through February 8 (inclusive) are now due on February 8, 2019.

"In addition, all Universal Licensing System (ULS) filings that were held during the lapse in funding through January 25, as well as any other ULS filings that were held from January 26 through January 29, will be considered received on January 29," the FCC said. The large volume of filings submitted during the partial government shutdown will be entered into ULS in batches and assigned a January 29 receipt date, the FCC said. That includes Amateur Radio vanity call sign applications filed via ULS or by mail between January 3 and January 29, which will be treated as filed on January 29.

Ordinarily, vanity call sign applications are processed on a daily basis, with a random selection procedure used to determine the processing order for applications filed on the same day.

The FCC said changes in receipt dates were made "in order to accommodate the orderly resumption of business."

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Reshaping ARRL Objectives, Refocusing ARRL HQ Structure. is New CEO's Goal

A plan by ARRL CEO Howard Michel, WB2ITX, to reshape and reorganize the management structure at ARRL Headquarters will go into effect on Monday, February 11. The ARRL Board of Directors endorsed the plan during its Annual Meeting on January 18 – 19 in Windsor, Connecticut.

"I see ARRL as a membership association, a business, and a 501(c)(3) public charity. As CEO, I intend to strengthen all three aspects. And all three must remain in balance for ARRL to function effectively," Michel said.

ARRL CEO during a visit to W1AW. [Michelle Patnode, W3MVP, photo]

"As a business, ARRL is not just *QST* magazine, *The Handbook*, DXCC or the VEC program. We can't allow ourselves to continue to think within those traditional parameters." He continued, "ARRL's businesses are not membership, publishing, and advertising. ARRL's businesses are value creation, value delivery, and advocacy. I plan to architect ARRL along those lines. To quote Steve Jobs, 'More important than building a product, we are in the process of architecting a company that will hopefully be much more incredible, the total will be much more incredible than the sum of its parts.'" Michel said.

The reorganization has three key components. The first major change is the creation of a management council (MC). The MC will be a deliberative and generative body to discuss ideas, operations, and long-term planning for ARRL. The group's goal is to foster horizontal lines of communication within the organization. Direct horizontal lines of communications are much more efficient than "up, over, and down," Michel offered.

> **"ARRL's businesses are value creation, value delivery, and advocacy." -- *ARRL CEO Howard Michel, WB2ITX***

The second key change, Michel said, is the addition of a Product Development Manager. This individual's responsibility will be to create new ideas for products and services, create pilot programs to quickly test those ideas, and then — if the pilot programs are successful — transition them to operations. "The motto in startups is to fail fast," Michel said. "Let's innovate like a startup."

Third, he said, is creating the position of a Marketing Communications Manager. "Our brand works with our traditional members. It is not working for newly licensed hams," Michel said. "If we are to create a demand for the value we bring to Amateur Radio, we need a coordinated and consistent message, across all forms of media that resonates with current and potential members."

In conjunction with its support of this reorganization plan, the ARRL Board of Directors also endorsed a proposal to create a new Lifelong Learning platform that will establish ARRL as an educational leader in Amateur Radio, and the purchase of a modern association management software system that should dramatically improve ARRL members' experiences.

"These are big investments the Board is making in ARRL, and a strong positive vote of confidence that we can deliver," Michel said. "They are giving us the tools to be successful."

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WWV 100th Anniversary Special Event Operation in the Planning Stages

It's a celebratory year for the WWV stations. The fiscal year (FY) 2019 budget -- once signed -- will include full funding for the stations, which also mark their 100th year this fall. The WWV Centennial Committee has a tentative agreement with the National Institute of Standards and Technology (NIST) to mount a special event station this fall adjacent to the WWV site in Colorado to mark the 100th anniversary of the time and frequency standard station, the world's oldest continuously operating radio station. A memorandum of understanding is in the works.

Dave Swartz, W0DAS, of the Northern Colorado Amateur Radio Club (NCARC) heads the committee, which is developing plans for an NCARC special event from September 28 through October 2, with a NIST centennial observance tentatively set for October 1.

The NIST budget for WWV, WWVH, and WWVB will remain level for FY 2019. With the funding suspense over, Swartz told ARRL, "our committee is moving forward."

Swartz and committee members Darren Kalmbach, KC0ZIE, and Kevin Utter, N7GES, met on February 8 with WWV/WWVB/WWVH Station Manager John Lowe, WWV Electronics Technician Glenn Nelson, and WWV Chief Engineer Matt Deutch, N0RGT.

The WWV Building near Fort Collins, Colorado. [Photo courtesy of NIST]

"This was the first meeting for the committee and the first to include NIST upper management," said Swartz, who called the meeting "very productive." Swartz said NIST management is "on board" with the celebration, and Deutch plans to attend Hamvention May 17 - 19 to promote the centennial event.

Although the US government cannot fund any Amateur Radio special event expenses, the club members will be allowed to use a 15-acre parcel on WWV property, Swartz explained on the WWV Centennial website. "The operating site lies outside the security fence and simplifies logistics," he said.

Swartz hopes that other clubs in Colorado will be able to pitch in to make the WWV Centennial a success.

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New Plan Aligns ARES with the Needs of Served Agencies

The new **ARES Plan** adopted by the ARRL Board of Directors at its Annual Meeting in January represents an effort to provide ARES with a clearly defined mission, goals, and objectives; specific training requirements, and a system for consistent reporting and record-keeping. The Board's Public Service Enhancement Working Group (PSEWG) spent more than 3 years crafting the ARES Plan which, ARRL officials believe, provides a much-needed update of the program's role in public service and emergency preparedness in the 21st century. Concerns focused on bringing ARES into alignment with the National Incident Management System (NIMS) and Incident Command System (ICS), and creating more consistent and standardized ARES training requirements. Given dramatic changes and upgrades in national, regional, and local emergency and disaster response organizations, ARRL faced a major challenge, said ARRL Great Lakes Division Director Dale Williams, WA8EFK, who chaired the PSEWG.

"If we didn't address these issues, such as training standards and organizational management, ARES faced the very real possibility that it would no longer be viewed as a valid and valuable partner in emergency and disaster relief situations," Williams said.

With input from ARES members and a peer review team, and the assistance of emergency response officials with some partner organizations, the PSEWG came up with a plan that provides guidelines to ensure that ARES remains a service of organized, trained, qualified, and credentialed Amateur Radio volunteers who can provide public service partners with radio communication expertise, capability, and capacity, Williams added.

A drafted ARES Plan was circulated among ARRL Section Managers (SMs) and Section Emergency Coordinators (ECs) to gather feedback. During the comment period from August through October 2018, the PSEWG heard from 55 ARRL Sections, representing 40 states — more than 125 pages of feedback in all. The PSEWG expressed appreciation to all who submitted comments and ideas.

The PSEWG reviewed every comment and suggestion, identifying about a dozen key items commonly cited by those in the Field Organization to improve the plan.

Based on input from ARES participants, the training requirements in the final ARES Plan consist of the free FEMA Professional Development Series. The series comprises these independent study (IS) courses: 120.c, 230.d, 235.c, 240.d, 241.b, 242.b, and 244.b (as they may be amended), as well as the ARRL's EC-001 and EC-016 emergency communication courses. As part of adopting the ARES Plan, the ARRL Board approved a proposal to make the ARRL EC courses free for ARES members.

The plan highlights some additional training programs that ARES participants are encouraged to

consider taking, but that are not required, such as AUXCOMM and training courses like ICS-300 and ICS-400.

The ARES Plan outlines a three-tiered membership structure based on increased responsibility levels and accompanying training requirements. Although the tiers are not a required path, they serve to define three distinct ways to participate in the ARES program; it's up to the participant to determine his or her level of involvement.

The ARES Plan points out that public service events such as parades and marathons are within the realm of ARES activity and are, in fact, a key part of it, because such events are an integral part of effective training.

In recognizing the local and regional nature of emergency communication needs in disaster response activations, the Plan notes that training requirements are ultimately the responsibility of the Section Manager, with each SM approving training for local ARES teams, as local conditions and needs dictate.

ARRL Great Lakes Division Director Dale Williams, WA8EFK.

The ARES Plan also highlights the relationship between ARES and the National Traffic System (NTS). The PSEWG indicated that it will continue moving forward with efforts to find ways to refine and strengthen that relationship.

While the intent of the ARES Plan is to align the ARES organizational structure with the NIMS and ICS systems, Williams noted that, within the ARES structure, the Emergency Coordinator (EC) will continue to lead the ARES team locally during an incident, while the District and Section Emergency Coordinators will continue to serve as resources and support for the EC. (The emergency preparedness staff at ARRL is in the process of updating the EC manual.) The ARES Plan stresses that ARES participants are not first responders, and it encourages ARES leaders to develop and grow their group's partnerships with state emergency management agencies and officials. Williams said the adoption of the ARES Plan is not the end of this process.

"ARES cannot remain stagnant only to be updated once every few generations," he said. "The ARES Plan, and the ARES program, must be able to evolve." Williams added that the ARRL Headquarters emergency preparedness staff will review the program annually to ensure its continued relevance.

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Young Amateurs Radio Club Wants to Pair Youthful Contesters with Big Gun Stations

The Young Amateurs Radio Club (**YARC**) Youth Contesting Program (**YCP**) wants to match groups of enthusiastic young contesters with "Big Gun" stations to gain operating experience during the **CQ World Wide WPX SSB Contest** over the March 30 – 31 weekend. The YCP is a weekend initiative for groups of young Amateur Radio contesters in the US and Canada.

"It will hopefully enable a new dimension of the hobby to young hams who have contested a little before and set a new precedent for the welcoming of a new generation of radiosport aficionados," explained YARC Board Member Sterling Mann, N0SSC. The 27-year-old electrical engineer, who helps manage YARC programs and outreach, described the initiative as "intentionally flexible, lightly organized, and low-cost."

"It works like this — we will attempt to pair a small group (up to four) of young contesters interested in operating with a 'Big Gun' station owner interested in hosting the youth group," continued Mann, an ARRL member active in the College Amateur Radio Initiative. "The contesters will operate from the station, and the host has the option to help the youth improve their skills, provide advice, and even operate alongside. We will try to keep it such that young hams will only require a relatively short drive (ideally no more than 5 hours) to keep travel costs low."

Sterling Mann, N0SSC, during the Solar Eclipse QSO Party in 2017.

Mann concedes that this arrangement will require the participation of as many operators and hosts as possible, but suitable matches may not exist at all. He said YARC would try its best to improve the program going forward.

YARC's YCP is inspired by the efforts of Youngsters on the Air (**YOTA**) and its own **Youth Contesting Program**, as well as **Team Exuberance**, Mann said. He added, "We hope to inspire a big chunk of young hams into becoming the greatest contesters of the 21st century."

YARC is reaching out to radio amateurs under age 27 or so with at least some contesting experience who would be interested in operating the CQ WW WPX SSB at

a contest-grade ham radio station, and to owners of such stations. He urges those interested to **sign up** (scroll down to select your role of station host or operator).

"Because we're trying to keep costs low by making this a drivable event for our young ops, we can't promise that you'll be selected as a host or operator, especially if either no young ops sign up nearby your station or there's no station near young operators," Mann said. "Since this is our first try, we probably have a lot to learn about this, so bear with us."

YARC hopes to announce matches on March 1. **Email** with any questions or comments

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New Campaign Exploiting Linux Servers to Insert Backdoor "SpeakUp" Trojan

A new backdoor Linux-based operating system trojan dubbed "SpeakUp" is on the loose, although so far it does not appear to have propagated to North America or Europe. Research team Check Point Research recently **reported** the discovery and said SpeakUp exploits known vulnerabilities in six separate Linux distributions and is able to evade all security vendors. A community of radio amateurs use various forms of Linux, including the popular *Ubuntu* software, which includes ham radio apps. Check Point Research said the attack is targeting worldwide servers.

"The attack is gaining momentum and targeting servers in East Asia and Latin America, including AWS [Amazon Web Services]-hosted machines," the Check Point Research article said. "SpeakUp acts to propagate internally within the infected subnet, and beyond to new IP ranges, exploiting remote code execution vulnerabilities. In addition, SpeakUp presented ability to infect Mac devices with the undetected backdoor." The origin of the malware appears to be in East Asia, although its developer may be Russian.

Check Point Research said the sample it analyzed had targeted a machine in China on January 14. Once the software successfully registers a victim, it receives commands to manipulate the machine to download and execute various files. Check Point Research said SpeakUp serves XMRig cryptocurrency miners listening to infected servers.

"SpeakUp's obfuscated payloads and propagation technique is beyond any doubt the work of a bigger threat in the making," Check Point Research concluded. "It is hard to imagine anyone would build such a compound array of payloads just to deploy few miners. The threat actor behind this campaign can at any given time deploy additional payloads, potentially more intrusive and offensive. It has the ability to scan the surrounding network of an infected server and distribute the malware."

Linux is a family of free, open-source operating systems based on the *Linux* kernel first released in 1991 by Linus Torvalds.

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Cuban Radio Amateurs Respond to Severe Tornado

From the early morning hours of January 27, radio amateurs in Cuba's capital of Havana were keeping an eye on the weather. An extratropical low-pressure system in the southeastern Gulf of Mexico associated with a cold front approaching from the west was preceded by a line of pre-frontal storms, generating severe weather conditions that deteriorated considerably that evening and into the night. Completely unexpected, though, was an F4 tornado that caused considerable damage in Havana. While hurricanes and tropical storms are fairly regular occurrences, the tornado was said to be the first ever to hit Havana.

Damage from the F4 tornado in Havana and surrounding communities was severe. [Photo courtesy of the FRC]

"Once again, Amateur Radio operators proved how they could handle emergency traffic during the severe weather event, when the 2G and 3G mobile cellular phone systems collapsed due to damage and the excessive traffic generated by the event," Radio Havana's Arnie Coro, CO2KK, reported on his *DXers Unlimited, Weekend Edition* program. "Using the Havana Metropolitan Area main repeater on 145.190, stations with handheld FM transceiver[s] could keep in touch from even the most difficult places in the affected areas comprising the municipalities of Regla, San Miguel del Padrón, Habana del Este, and 10 de Octubre."

According to media accounts, the storm, with winds approaching 260 MPH, left at least six dead and more than 200 injured; damage to homes and buildings was substantial. The severe weather also left much of Havana in darkness.

A Havana repeater on 145.33 MHz was pressed into service for the first time for this sort of event. A 144.410 MHz repeater in the affected area of 10 de Octubre proved very useful in handling traffic with medical workers, firefighters, and government emergency managers, Coro said in his broadcast.

More than a dozen radio amateurs responded to assist in the weather emergency, handling message traffic, a Federación de Radioaficionados de Cuba (FRC) report said. "It is worth mentioning the speed with which the emergency information was handled via radio, since everything happened so fast, complicated by a lack of electrical power, landline, and cell communication. [E]verything was in chaos. In seconds, everything stopped working," the report added.

While power and telecommunications were promptly restored in many areas, repair or replacement of homes, buildings, and infrastructure lost in the severe storm will take a lot longer.

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World Scout Jamboree is Possible ARISS Amateur Radio Contact Host

The Amateur Radio on the International Space Station US team (ARISS-US) has announced the list of schools or organizations that may host Amateur Radio contacts with International Space Station (ISS) crew members from July through December. The list includes the 24th World Scout Jamboree, which is set for this summer at the Summit Bechtel Scout Reserve in West Virginia. Schools and organizations had submitted proposals seeking an opportunity to host contacts, and a review team of teachers from the ARISS-US Education Committee selected from those submissions. Applicants chosen will advance to the second phase of the selection process — developing an Amateur Radio equipment plan to host a scheduled ARISS contact.

ARISS's primary goal is to engage young people in science, technology, engineering, and math (STEM) activities, and involve them in pursuits related to space exploration, Amateur Radio, communication, and associated areas of study and career options.

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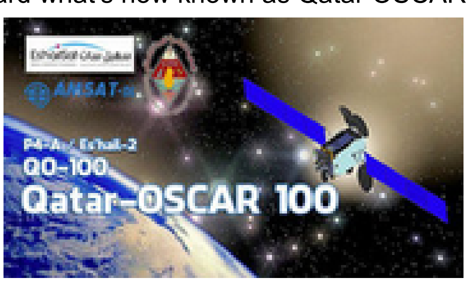
Es'hail-2 (QO-100) Opened for Amateur Radio Use

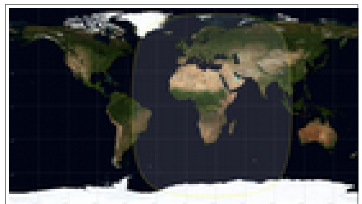
The Es-hail-2 narrowband transponder went live a couple of days early and now is open for Amateur Radio. Thursday, February 14, was Teleport Inauguration Day in Qatar, celebrating the opening of the new Es'hailSat teleport and the "official" opening of Es'hail-2, which carries the first geostationary Amateur Radio payload, a German P4A package. Es'hail-2 launched last November from Cape Canaveral. The two Amateur Radio transponders onboard what's now known as Qatar OSCAR 100 (QO-100) became available on February 12 for general operation by stations within QO-100's footprint. Emceeing the opening ceremony was Qatar's former Deputy Prime Minister Abdullah bin Hamad al-Attiya, A71AU, who chairs the Qatar Amateur Radio Society (QARS) and is a satellite patron.



A delegation from Germany -- AMSAT-DL President Peter Guelzow, DB2OS; Achim Vollhardt, DH2VA, and Thomas Kleffel, DG5NGI, of the P4A team -- went to Qatar to set up and commission the ground segment of P4A, which includes a club station that will operate under the auspices of QARS as A71A.

An AMSAT-DL ground station at the Bochum Observatory in Germany has been set up for QO-100, and operation via the satellite will be carried out using the call sign DL50AMSAT, recognizing AMSAT's 50th anniversary.

The satellite transponder offers a 250-kHz passband for modes such as SSB, FreeDV, CW, RTTY, and other modes, plus an 8-MHz wideband downlink for digital amateur TV (DATV) modes. Downlink frequencies are at 10 GHz. The uplink frequency is at 2.4 GHz.



The approximate footprint of Es'hail-2.

Stations located outside of the QO-100 footprint or lacking 10 GHz receive capability can monitor the proceeding using online WebSDR resources. In cooperation with AMSAT-DL, the British Amateur Television Club (BATC) will operate a WebSDR for the narrowband segment, and a spectrum viewer for the wideband (DATV) segment. The satellite is in geostationary orbit at 25.9° E. Read more. -- *Thanks to* AMSAT News Service *via AMSAT-DL*

Used with permission The ARRL Letter for February 14, 2019
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The AMSAT 50th Anniversary Symposium

The AMSAT 50th Anniversary Symposium will take place on October 18 - 20 at the Hilton Arlington in Arlington, Virginia, next to Washington, DC. Connected to the Ballston metro station, the hotel offers easy access to the capital's top tourist destinations, and tours will be available; it's 6 miles from Reagan National Airport. The AMSAT Board of Directors will meet on October 16 - 17. -- *Thanks to* AMSAT News Service.

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The Anne Arundel Radio Club

We are pleased to receive any donations over your yearly dues.

Anne Arundel Radio Club NEWS

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

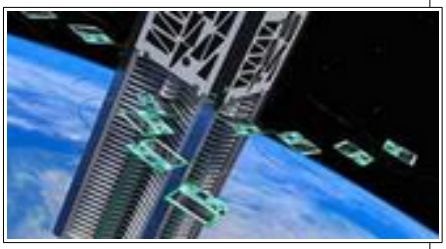
ARRL affiliated clubs receive a commission for every new ARRL membership and renewal they submit to ARRL Headquarters. Clubs retain a portion of the dues for each regular or senior membership submitted to ARRL Headquarters:

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.

KickSat-2 is Alive and Being Tracked

For the first couple of days after the 3U KickSat-2 was deployed from *Cygnus NG-10* last November, nothing was heard from the satellite. But in a February 16 **post** to AMSAT-BB, Nico Janssen, PA0DLO, reported receiving several short and weak transmissions from KickSat 2 — short telemetry bursts on 437.5077 MHz. Assistant Professor of Aeronautics and Astronautics at Stanford University Zac Manchester, KD2BHC, is the principal investigator for the KickSat project, which NASA adopted as an official mission.



"Yes, KickSat-2 is alive," Manchester told ARRL. "We have been tracking it since Thursday, [February 14,] and have been able to decode at least some packets. The signal is weak and we think the antenna did not properly deploy on the CubeSat."

KickSat-2 is scheduled to deploy up to 104 tiny Sprite satellites into low Earth orbit. The Sprites then would transmit on 437.240 MHz at 10 mW, communicating with each other via a mesh network and with command stations on Earth. The Sprites, which are less than 2 square inches, are expected to reenter Earth's atmosphere within weeks. Manchester did not indicate if attempts would be made to deploy the Sprites.

NASA calls KickSat-2 a technology demonstration mission that's designed to demonstrate the deployment and operation of prototype Sprite "ChipSats," also known as "femtosatellites."

The FCC recently imposed a $900,000 penalty on a commercial concern, Swarm Technologies, for launching similar tiny satellites after the FCC had denied permission.

Zac Manchester, KD2BHC, with the original KickSat in 2014. [Photo courtesy of Cornell University]

"These spacecraft are therefore below the size threshold at which detection by the Space Surveillance Network can be considered routine," the FCC told Swarm Technologies.

Manchester had been trying without success to convince the FCC to allow him to deploy the Sprites from KickSat-2, but, apparently gun shy after the Swarm action, the agency denied permission at the last moment.

Once NASA adopted KickSat-2 as its own mission, however, the regulatory body shifted to the National Telecommunications and Information Administration (NTIA), and the launch went forward.

In the Swarm Technologies proceeding, the FCC

has argued that satellites smaller than 10 centimeters on any side were too small, although the agency has been accused of inconsistency in its approach to licensing small satellites. KickSat-2's Sprites are 3.5 centimeters on the side and just 0.2 centimeters thick. Manchester's 2014 KickSat was unable to deploy its Sprites before deorbiting.

The FCC issued an *Enforcement Advisory* last April to remind satellite operators that they must obtain FCC authorization for space station and Earth station operations. The advisory cautioned satellite operators and launch companies against proceeding with launch arrangements following a license denial or prior to receiving an FCC authorization.

Manchester is reported to be developing a plan to deploy a group of small satellites to survey the sky in the LF radio range, something that cannot be done from the ground owing to the ionosphere.

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Maryland/DC SECTION TRAFFIC MANAGER'S REPORT

MDC NTS NETS:
MEPN 1901 W3YVQ QND/31 QNI/486 QTC/44 MINS/744
BTN 1901 AB3WG QND/31 QNI/374 QTC/27 MINS/477
MDD 1901 AA3SB QND/59 QNI/245 QTC/69 MINS/535
MSN 1901 W8CPG QND/31 QNI/118 QTC/25 MINS/567

PSHR: WB4FDT 140, KK3F 140, W3CB 139, W3YVQ 135, NI2W 112, K3IN 110, AA3SB 100, N3JET 97, WB3FTQ 73, AB3WG 59, KB3LFG 15
TFC: KK3F 1734, WB4FDT 324, K3IN 188, W3YVQ 56, AA3SB 49, N3JET 32, W3CB 24, WB3FTQ 23, NI2W 22, AB3WG 19, KB3LFG 0,

HF PROPAGATION

MEPN: The winter schedule propagation was functional throughout JAN, 2019, with good signals until well after 1700L. Outbound traffic to MDD may be routed via the Digital Traffic Net if it is anticipated that MDD may not be able to conduct a net, a tricky prediction at best; or may be carried by the MDD liaison to an MDD EchoLink session, if held, for DTN; or outbound traffic may be sent to one of the MDC DTS stations via WL2K (as advised by the MDD NM) if MDD fails.

MDD: NVIS propagation for local MDC stations on MDD early and late, and on RRI/3RN/C4 nets, was nearly or totally non-existent for many evenings in JAN 2019. On some of those nights the propagation recovered enough by 2130L 3RN and/or 2200L late MDD for net sessions to be run. On a number of nights, the NVIS propagation was functional for all four nets, on others it failed for all. Outbound traffic may be posted via WL2K to one of the MDC DTS stations as advised by the MDD NM if the net fails. If 3RN fails and the MDD rep cannot go to RRIE, the outbound traffic may be posted with one of the MDC DTS stations as advised by the MDD NM.

As we watch the days get longer since the solstice, we are beginning to see a slow change due to the time of sunset at altitude, but the solar activity is not supporting 80m NVIS propagation well after dark on many nights. It was interesting to note that on some nights when the NVIS MUF was below MDD frequency we were still able to run the nets due to a residual active E layer which persisted for a number of hours after dark.

EchoLink on WB3GXW-L may also be used to coordinate the movement of traffic to Digital Traffic Net liaisons, or such traffic may be sent to such stations via WL2K for posting that night or the following morning for daytime distribution nation-wide. 160m at 1857 kHz ± may also be used as an alternative as notified by the NM or NCS. Moving traffic by DTN HF PacTor is still an on-air activity for SAR reporting. Moving traffic via Winlink between stations or to DTN hubs is permitted and may be done via radio on HF or Packet, or via internet on one or both ends if necessary.

Email may be used when no other paths are available. Only the radio paths qualify for SAR points.

These are solar minimum issues being experienced by nets all over the country. Work-arounds similar to ours are in force for many nets. Sunspot activity continued to decline with many spotless days. This is expected to continue in 2019.

BTN LOCAL NTS TRAFFIC AND TRAINING NET

The BTN continues to meet on 145.33/R (no tone) daily at 6:30PM local time and continues to welcome new amateurs. The availability of an active directed traffic net of the NTS on VHF is exactly why the BTN was established, providing a welcoming place for newcomers to the Amateur Service. Thanks to all the BTN stations checking into the MEPN via EchoLink.

MEPN/MDD/3RN ECHOLINK

MEPN representatives check for EchoLink check-ins starting at net call daily via the WB3GXW-L link node (or ***WASH_DC*** conference node backup if the -L node is not available). A number of BTN and MEPN members, as well as stations outside the area, have used EchoLink to check in when HF is not available to them. MDD operators are also welcome. Thanks to all. WB3GXW has kindly given permission for the MDD and 3RN operators to coordinate message handling on the WB3GXW-L conference bridge as needed during this solar minimum period.

MSN CW TRAINING

Remember that the MSN provides CW training daily for newcomers to the mode, or those wishing to refresh their skills, daily at

7:30 PM on 3563 kHz. Each trainee works with an

assigned instructor off the net frequency to receive radiograms containing training information. Instructors work with each student at their own desired speed and check-in schedule. All are encouraged to master the art of CW via this net or personal training in order to support and join the ranks of our MDD Section CW net. Robin, AA3SB, MDD NM, and the veteran staff, will be glad to help you advance to the evening CW full Cycle 4 RRI.

Thanks to all the Section traffic net NCS stations, DTN/RRI 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 , February 14, 2019
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UPCOMING HAMFESTS

This is a list of Hamfests in the Maryland-DC Section and nearby Pennsylvania, northern Virginia, West Virginia and Delaware [... and nearby] as a courtesy to our neighboring Section Managers.

MDC Section Manager Marty Pittinger, KB3MXM, and/or a designated ARRL representative(s) will plan to attend all Hamfests in the ARRL Maryland-DC Section.

We hope to see you there and bring a fellow Ham and friends.

Fredfest '19

Date: Saturday, March 16, 2019
End Date: 03/16/2019
Location: Independent Hose Company, 310 Baughmans Ln, Frederick, MD 21701
Sponsor: Frederick Amateur Radio Club
Website: http://frederickarc.org
Talk-In: 146.580
Public Contact: Jeffrey Fishman, KB3FIO
Email: ljfish1@comcast.net

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West Virginia Section Convention (Charleston Hamfest & Computer Show)

Date: Saturday, March 23, 2019
Location: Charleston Civic Center, 200 Civic Center Drive, Charleston, WV 25301 Sponsor: Charleston Hamfest Committee
Website: http://www.w8gk.org
Talk-In: 145.350(-) PL 91.5, W8GK Charleston WV
Public Contact: Rick Cummings, WV8RC
Email: rickwv8rc@gmail.com

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35th Annual Charleston Area Hamfest

2019 ARRL West Virginia Section Convention
Date: Saturday, March 23 from 9 AM to 2 PM
Location: Charleston Coliseum & Convention Center, 200 Civic Center Dr.
Website: https://www.qsl.net/wvsarc/
Talk-in: 145.35(-) PL 91.5 VE exams, DXCC / WAS / VUCC and CQDX card checking.
Public Contact: Rick Cummings, WV8RC,
Email: rickwv8rc@gmail.com

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The Vienna Wireless Society Winterfest

Date: Sunday, March 24 from 6 AM [Tailgating] to 1 PM
Location: Northern Virginia Community College Annandale Campus, Richard J. Ernst Cultural Center, 8333 Little River Turnpike, Annandale, VA
Website: http://www.viennawireless.net
Talk-in: 146.910 | VE exams, WAS / DXCC / VUCC card checking
Public Contact: Doug, AK4AO

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WINTERFEST
Date: Sunday, March 24, 2019
Location: Northern Virginia Community College, Annandale Campus, Richard J. Ernst Cultural Center, 8333 Little River Turnpike, Annandale, VA 22003
Sponsor: Vienna Wireless Society
Website:
http://viennawireless.net/wp/events/winterfest
Talk-In: 146.910(-) PL 77.0, WD5DBC Tyson's Corner, VA
Public Contact: Harry Mamaux, K3NF
Email: k3nf@cox.net

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SJRA 2019 Radio Conference

Start Date: 03/24/2019
End Date: Sunday, March 24, 2019
Location: The Hotel ML, 915 Route 73, Mount Laurel, NJ 08054
Sponsor: South Jersey Radio Association
Website: http://www.sjra.org
Talk-In: 145.290(-) PL 91.5
Public Contact: Ken Botterbrodt , K2WB
Email: ken@k2wb.com

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Amendment Aims to Promote CITEL/CEPT Amateur Radio Operating Reciprocity

Chile recently became the third country to sign the Amendment of the Inter-American Convention on the use of an International Amateur Radio Permit (IARP). Once the Amendment is in effect, Chile and other Inter-American Telecommunication Commission (CITEL) signatories may offer reciprocal Amateur Radio privileges to Amateur Radio licensees from European Conference of

Postal and Telecommunications Administrations (CEPT) member-countries that have implemented CEPT Recommendation T/R 61-01 (CEPT Radio Amateur License).

The Inter-American Convention says CEPT-country licensees "shall be entitled to the same rights and privileges enjoyed by holders of the IARP, provided, however, that CEPT accords all holders of the IARP the same rights and privileges enjoyed by holders of the CEPT Amateur Radio license. The Organization of American States (OAS) General Assembly approved the treaty last June; CITEL comes under the OAS umbrella. In addition to Chile, the Dominican Republic and Argentina have signed.

IARPs are not valid for operation in the territory of the issuing country and are valid for 1 year. A Class-1 IARP allows the use of all frequency bands allocated to the Amateur and Amateur-Satellite Services and specified by the country where the amateur station is to be operated, per Recommendation ITU-R M.1544. A Class-2 IARP permits utilization of all frequency bands allocated to the Amateur and Amateur-Satellite Services above 30 MHz and specified by the country where the amateur station is to be operated.

US radio amateurs already enjoy both IARP and CEPT reciprocity.

Used with permission The ARRL Letter for January 31, 2019

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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 March 17, 2019.)

COMMENTS From Our ARRL SECTION MANAGER

TRAINING, TRAINING, TRAINING !

Four months until 2019 Atlantic hurricane season, June 1st., less until Spring Storms.

Online NIMS/ICS training - ICS 100, 200, 300, 400, 700, 800 - https://training.fema.gov/

Red Cross CPR, First Aid, CPR, AED Training - https://www.redcross.org/local/maryland/take-a-class/first-aid

Montgomery County, MD Community Emergency Response Team (CERT) Training - http://montgomerycert.org/training/cert-training/

Exercises, Drills, Practice and COMEX - http://www.hocoares.org/ & http://www.pgares.org/ & http://www.mocoares.org/

Self-Study Morse Code - http://www.cranburyscouts.org/SamsMorseCourse.htm

Self-Study National Traffic System Manual - http://www.arrl.org/nts-manual

Maryland NTS Traffic and Training Nets - http://www.arrl-mdc.net/MDC_NTS_NETS/MDCNTS71.htm

Maryland Slow Net, CW traffic and training net - http://www.bdb.com/~msn/

Emergency Coordinators needed! Contact your MDC SEC for details and opportunities to join ARES Leadership Team. Jim WB3KAS@AOL.com

MDC Section-wide, Eye-ball staff meeting. Location will be near Annapolis, MD on Saturday, June 8th from 11:00 until 4 PM. All MDC Section appointed staff is required to participate - alternate representative by invitation only (Online/Internet Video Conferencing TDB). The agenda will be published by April 16th. Send your topics of interest and discussions by March 15th

We use our voices to help others,
future of Amateur Radio is in your hands.

Please continue your support and JOIN the **ARES-Connect Roll Out.** ARES team should get together and plan to 100% on-line participation.

The new volunteer management system for the Amateur Radio Emergency Service ARES® will allow MDC Section Staff and our ECs, DECs and SEC. ARES® participants sign-up for and log hours. More about this system in the coming weeks.

Your MDC Section staff needs your help - Leaders are encouraged to begin your ARES® EC or MDC Section Staff future. Contact your SM, SEC or ASM to learn how. Please email your request to KB3MXM@arrl.net

73,
Marty, KB3MXM
ARRL MDC Section Manager

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W1AW 2018 Winter Operating Schedule

Morning Schedule:

Time	Mode	Days
1400 UTC (9 AM EST)	CWs	Wed, Fri
1400 UTC (9 AM EST)	CWf	Tue, Thu

Daily Visitor Operating Hours:

1500 UTC to 1700 UTC - (10 AM to 12 PM EST)
1800 UTC to 2045 UTC - (1 PM to 3:45 PM EST)

(Station closed 1700 to 1800 UTC (12 PM to 1 PM EST))

Afternoon/Evening Schedule:

2100 UTC (4 PM EST)	CWf	Mon, Wed, Fri
2100 " "	CWs	Tue, Thu
2200 " (5 PM EST)	CWb	Daily
2300 " (6 PM EST)	DIGITAL	Daily
0000 " (7 PM EST)	CWs	Mon, Wed, Fri
0000 " "	CWf	Tue, Thu
0100 " (8 PM EST)	CWb	Daily
0200 " (9 PM EST)	DIGITAL	Daily
0245 " (9:45 PM EST)	VOICE	Daily
0300 " (10 PM EST)	CWf	Mon, Wed, Fri
0300 " "	CWs	Tue, Thu
0400 " (11 PM EST)	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 2330 UTC (6:30 PM EST), 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 0100 UTC (8 PM EST) Thursdays and 0100 UTC (8 PM EST) Fridays.

Audio from W1AW's CW code practices, CW/digital bulletins and phone bulletin is available using EchoLink via the W1AW Conference Server named "W1AWBDCT." The monthly W1AW Qualifying Runs are presented here as well. The 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.

All licensed amateurs may operate the station from 1500 UTC to 1700 UTC (10 AM to 12 PM EST), and then from 1800 UTC to 2045 UTC (1 PM to 3:45 PM EST) Monday through Friday. Be sure to bring your current FCC amateur radio license or a photocopy.

The W1AW Operating Schedule may also be found on page 91 in the December 2018 issue of QST or on the web at, http://www.arrl.org/w1aw-operating-schedule .

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AARC STAFF – 2019

Officers

President	Keith Miller / AE3D president@w3vpr.org	240 758 0423
Vice President	Tim Nagel / KB3YQK vice.president@w3vpr.org	
Secretary	Steve Grimaud / W3SWG secretary@w3vpr.org	
Treasurer	Bill Mooney / KA3UQQ treasurer@3vpr.org	
Director A	Eric Berman / KC3GDV eric.board19@w3vpr.oprg	
Director B	Larry Booth / AA3AU larry.board19@w3vpr.org	
Director C	Bernie Coletta / NK3PS bernie.board19@w3vpr.org	

Support Staff

Membership Secretary	Jim Wolfe / NA3C membership.secretary@w3vpr.org	
Information Officer	Ed Santilli / KB3YMU info.officer@w3vpr.org	
Safety	John Bowes / KB3YLY safety@w3vpr.org	443 760 1666
Security	Tom Provenza / N3HLD security@w3vpr.org	

Representatives

ARES/RACES	John Bowes / KB3YLY ares.races@w3vpr.org	
DFRC Rep	Milford Craig / N3WYG dfrc.rep@w3vpr.org	301 218 8867
FAR	Ed Brown / AA3EB far.rep@w3vpr.org	301 856 3317
Fox Hunt	Bruce Strackbein / WR3Q fox.hunt@w3vpr.org	
Joint 440 Comm	Gordon Davids / WJ3K joint440@w3vpr.org	410 647 2956
MD Slow Net	Bruce Stewart / W8CPG chickenfarm9@gmail.com	
MDC Section Manager	Marty Pittinger / KB3MXM arrl.sec.mgr@w3vpr.org	
Public Relations	Ed Santilli / KB3YMU pr@w3vpr.org	301 261 7561
Resident Agent	Justin Leishman / KC3BJT ra@w3vpr.org	
Trustee	Dick Mayo / WW3R trustee@w3vpr.org	

Committees

Club Sale & Auction	Ike Lawton / W3IKE club.sale@w3vpr.org	
Digital Networking	Scott Rasmus / KC3BFW networking@w3vpr.org	240 758 0463
Facilities	Eric Berman / KC3GDV facilities@w3vpr.org	
Field Day	(TBD) field.day@w3vpr.org	
Station Manager	Rick Steer / AB3XJ ham.shack.coordinator@w3vpr.org	
Ham Shack Renovation	Jamison Phipps / W3KNH ham.shack.renovation@w3vpr.org	
Holly Net	Jim Wallace / N3ADF holly.net@w3vpr.org	
HSMM-MESH	(TBD) hsmm.mesh@w3vpr.org	
Kit building & Repair	'Raven' Weiland / KB3MUV kit@w3vpr.org	203 948 5369
MDC QSO Party	Jim Wallace / N3ADF mdcqsop@w3vpr.org	301 538 6233
Newsletter	Milford Craig / N3WYG newsletter@w3vpr.org	301 218 8867
Packet Radio	Jonathon Grafe / AE2JG packet@w3vpr.org	240 426 2664
Program	Tim Nagel / KB3YQK vice.president@w3vpr.org	
Public Service	Erick Graves / WA3G public.service@w3vpr.org	410 987 7670
Repeater Ops	John Williams / K8JW repeaters@w3vpr.org	410 647 7406
Rules	Chuch Tanner / K3ACT rules@w3vpr.org	301 464 2667
Service Hours	Jim Wallace / N3ADF service.hours@w3vpr.org	301 538 6233
Tower	(TBD) tower@w3vpr.org	
Training	Keith Miller / AE3D training@w3vpr.org	240 758 0423
VE Team	David Rawley / AE5Z testing@w3vpr.org	
Webmaster	Mark Bova / W2PAW webmaster@w3vpr.org	240 274 6294
Wed. Nite Net	Jamison Phipps / W3KNH wednesday.night.net@w3vpr.org	
Winter Field Day	Rick Steer / AB3XJ winter.field.day@w3vpr.org	

Groups

Board of Directors	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 – Rick Steer / AB3XJ **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)

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.*

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.

Wednesday Night Talk Net -- All are welcome

8PM, On the AARC Repeater 147.105

Other Amateur Radio nets

Name	Frequency	Day	Time
The "Holly Net"	147.105+Mhz PL 107.2	Weekdays	0700
AA County ARES Net	146.805- Mhz PL 107.2	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 PL107.2	Monday	1930
Maryland Slow Net	3.563 MHz	Daily	1930
REACT Net	442.300+Mhz PL107.2	1st Sunday	1930

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 Code