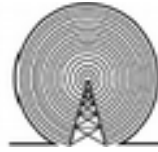


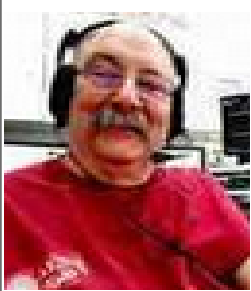
The Ham Arundel News



Providing Fellowship and Community Service through Amateur Radio Since 1951

February 2020

41st Year of Publication



Keith Miller, AE3D

The Prez Sez

Over the last two weekends of February, we had a good chance to determine the readiness of our Ham Shack for real operation. In short, it is not even close!

The contests, however, were far from being a failure. We made decent numbers of contacts in both the ARRL January VHF contest, and Winter Field Day.

Everyone who wanted to operate had a chance to do so, and a host of other hams dropped by to visit, a few of whom were checking to see if we were the kind of club they'd like to be part of. Socially these were two great weekends for the Anne Arundel Radio Club. If you showed up, likely you had a good time, which is what really counts.

In the stuff of lesser import, we fell flat in two places. First we had persistent logging problems. N1MM Logger+ was getting locked in digital mode, and the only way to return to phone, was to stop and restart the program requiring a password only known to our Networking Team, who then must be present to enter it.

Further there was some confusion as to modes allowed in the ARRL January VHF event. The rules said as a Single Op station you could either enter using *FM* only, or use a combination of *SSB*, *CW* and *Digital*. But we weren't Single Op, we were Limited Multioperator, so we expected to use all 4 modes. However N1MM would only allow us to choose between *FM* or *SSB*, *CW* and *Digital*, so we couldn't use any of our FM contacts. The end result is that I emailed the ARRL to get some rule clarification, and I doubt we will hear back in time to make a legal entry. Oh well. It was fun.

By the following weekend and Winter Field Day we knew of the problems with N1MM and getting back into phone mode, but assumed it was just in the ARRL January VHF configuration. I was wrong. Not the last time I'll bet.

Please let me interject here that our Networking Team Leader has a day job, and I have many other club duties to attend to. I tried to work on it some Tuesday but that was it.

So we went into Winter Field Day knowing we might have a problem, and we did. For the January VHF Contest we were limited to one station because we had only one VHF/UHF antenna. This time we were going to enter Winter Field Day with 4 HF stations, but only 2 working antennas. The Ham Shack Antenna Committee is working on new permanent antennas, not on temporary

antennas, and the Winter Field Day committee was working on the proper paperwork, not antennas. And my time to fix Networking issues was split between those things and a host of other club business.

As a result, I spent Friday and Saturday morning trying to rush build a 9:1 balun so they could put up a 3rd HF antenna temporarily for the contest. I spent some of my time Saturday between several other issues and had little time to fix Networking and software. When Winter Field Day started, logging was an instant mess. I was at the club 10am till almost 6pm Saturday with essentially nothing to show for it. Sunday after the Hamfest I returned and tried to replace N1MM with N3FJP for the duration of the contest. Another 6 hours and we still had no working contest logging software. But Network Guru Ted Rudie (KC3LMV) kept working after I left. Where would we be without him?

Meanwhile Jim Wallace (N3ADF) and David Rawley (N3AT) constructed a temporary antenna and got the second OCF dipole working again. The OCF seemed to work OK, however the long wire results were less than exciting. Oh well. A yeoman effort for building an antenna 2 hours before a contest.

The bottom line is that, everyone had a great time. We played with ham radio and made some contacts. (OK, everyone but we made contacts.) The food was good and plentiful, and it was well worth the effort.

But, we need to get these problems fixed before we try another Ham Shack event. In the next month or two we should figure out the networking and software issues and have that part operational. 'Should' being the key word. While Networking fixes things, the Ham Shack Antenna Committee needs to draw and approve plan for a permanent antenna system. Then we need a PE to sign off on the plan, then permission and maybe permits from the County to erect another tower. I can't see us doing all this before July. But wait! Then we need coax bought and buried, antennas created and erected, and everything tested. So the sad news is, even if we rush, we will not be ready for the Maryland DC QSO Party this year. Sorry to be the bearer of bad news.

More and better temporary antennas need to be in place and tested before the Maryland DC QSO Party, and we will need everyone pulling the same direction if we want to be ready for November Sweeps from the club house. But we can do this! We are, after all, the Anne Arundel Radio Club!

73

Keith, AE3D
President

ARRL's New *On the Air* Magazine On Its Way to Members

The premiere issue of ARRL's *On the Air* magazine has left the printer and is on its way to member subscribers. The magazine should be in mailboxes within the next 10 days.



ARRL Emergency Preparedness Assistant Sabrina Jackson, KC1JMW, is featured on the cover of the premiere issue of *On the Air* magazine.

On the Air is the newest ARRL member benefit to help new licensees and beginner-to-intermediate radio communicators navigate the world of amateur radio. Eligible US-based members can elect to receive *On the Air* or *QST* magazine in print when they join or when they renew their ARRL membership.

Delivered six times a year, the magazine will present articles and tips on selecting equipment, building projects, and getting involved in emergency

communication. *On the Air* will also spotlight the experiences of those involved in public service communication and casual operating.

All members will be able to access digital editions of *On the Air* magazine. The first digital issue of *On the Air* will be available beginning January 14, supported by a new version of ARRL's digital magazine app. With one app, members will be able to access *On the Air* and *QST*.

Used with permission XThe ARRL Letter for January 9, 2020

AA

ARRL *On the Air* Podcast Premieres January 16

ARRL's new *On the Air* podcast for those just getting started on their amateur radio journey will debut this Thursday, January 16, with a new episode posted each month. The podcast is a companion to the new bimonthly *On the Air* magazine, which is already on its way to member subscribers. *On the Air* magazine's Editorial Director Becky Schoenfeld, W1BXY, will be the host of the new podcast. Both the podcast and the magazine are aimed at offering new and beginner-to-intermediate-level radio amateurs a fresh approach to exploring radio communication.



Listeners can find the *On the Air* podcast at [Blubrry](#), [Apple iTunes](#) (or by using your iPhone or iPad podcast app -- search for *On the Air*), and [Stitcher](#) (or

through the free [Stitcher](#) app for iOS, Kindle, or Android devices). [Episodes](#) will be archived on the ARRL website.

Each *On the Air* podcast will take a deeper dive into the articles and issues raised in the magazine, including advice and insight on topics covering the range of amateur radio interests and activities: radio technology, operating, equipment, project building, and emergency communication.

Supplementing *On the Air* will be a new [Facebook page](#) for those who share a love of radio communication and are looking to learn and explore more about their interests.

The biweekly *Eclectic Tech* podcast for experienced radio amateurs will launch on February 13. Hosted by *QST* Editor Steve Ford, WB8IMY, *Eclectic Tech* will highlight topics involving amateur and non-amateur technology, offer brief interviews with individuals involved in projects of interest to amateurs, and include practical information of immediate benefit to today's hams. *Eclectic Tech* will be available via [iTunes](#) and [Stitcher](#).

The ARRL Mags apps including *QST* and *On the Air* are now live on Apple iTunes and Google Play. The [digital edition](#) of *On the Air* magazine is also live and linked from the *On the Air* page on the ARRL website.

Used with permission The ARRL Letter for January 16, 2020

AA

Net Control Radio Operators

ARE NEEDED for the HOLLY NET

during the work-weekdays -

from 0700 to 0900 am.

Contact: Jim Wallace, N3ADF

Strong Earthquake Shakes Puerto Rico; Generating Capacity Severely Compromised

ARRL Puerto Rico Section Manager Oscar Resto, KP4RF, says small tremors continue on the island in the wake of the 6.4 magnitude earthquake that struck the



southwestern part of the island on January 7. A magnitude 5.8 quake struck a day earlier. The Puerto Rico Electric Power Authority (PREPA) reported widespread power outages after generating plants automatically activated protective shutdown systems following the

earthquake. But Resto told ARRL this week that considerable generating capacity was lost due to

earthquake damage, and that it will take at least several days before replacement units can be brought back on line. Only about 20% of the island has electric power at this point, he estimated.

"We have a shortage of about 1,100 megawatts of power," Resto told ARRL. "We normally need about 2,000 megawatts for the island."

Resto cited the largely operational telecommunications network as the reason why no Amateur Radio Emergency Service (ARES) activations have been necessary. "We have cell phones all over the island working," he said. Resto told ARRL that he's been working up a list of ready and resilient amateur radio volunteers who would be able to muster if needed to assist the American Red Cross, with which Puerto Rico ARES has a memorandum of understanding. "We are in continuous communication with the ARC in case we're needed."

Resto stressed that he wants to avoid situations where volunteers activate only to be told they're not needed.

The worst-impacted cities were Guayanilla, Peñuelas, Yauco, and Guánica. Resto said engineers have determined that 80% of the houses in the earthquake's impact zone are uninhabitable. Residents are sleeping outdoors, Resto said.

Puerto Rico Section Public Information Officer Angel Santana, WP3GW, told ARRL that VHF and UHF repeaters with emergency power have carried reports of power and water outages, the continuing



aftershocks, and other information on an informal basis. Bottled water and canned food have been in high demand, he said. Santana said the PREMA Emergency Operations Center (EOC) has been activated.

Resto earlier this week called the situation "scary, with houses, schools, and roads collapsing." At least one death has resulted from the earthquake. He said the earthquake disaster definitely was a setback for the US territory as it continues its long recovery from severe hurricane damage in 2017. But, he added, the restored telecommunications infrastructure is more robust, to minimize damage in future disasters.

Used with permission The ARRL Letter for January 9, 2020
AA

Puerto Rico Volunteers Deployed to Red Cross, ARRL Sending Equipment

Puerto Rico Section Manager Oscar Resto, KP4RF, reports that several Amateur Radio Emergency Service (ARES) volunteers have been deployed to earthquake-ravaged regions of the island at the request of the American Red Cross. Initial operations got under way

in the town of Yauco, where the Red Cross has a central warehouse for the earthquake relief effort. Operations are on VHF and UHF, although commercial telecommunication services remain in operation for the most part. A station has also been activated at the Red Cross Headquarters in the capital of San Juan, which is not in the earthquake zone. Aftershocks continue on the island. A magnitude 5.9 tremor struck over the weekend.

"The stations are operating as a backbone, in case a new or stronger earthquake hits the region," Resto explained. "HF equipment is stored in Pelican Cases for protection from a larger catastrophic event, if communications fail." Power has been re-established over more than 90% of Puerto Rico, and water service is operational in most places, Resto added.

ARRL is shipping six VHF/UHF base/repeater antennas and six 50-foot rolls of LMR-400 coax, through the [Ham Aid Fund](#).

Since January 12, the ARES Zone 5 amateur radio volunteers have been handling health-and-welfare traffic from the earthquake zone, reports Yauco ARES District Emergency Coordinator Heriberto Perez, WP4ZZ, who said internet service has been slow. He said the Red Cross has been providing food and drinks for the volunteers. Operations are running from 9 AM until 5 PM each day.

"Today was a bit of a rough day," Perez said on Saturday. "Many quakes during the day. It feels like you're in a simulator." He said the three-person team is using UHF for direct contact with San Juan, with a backup support frequency on VHF, and communication has been solid.

"During the course of the day, we began to handle health-and-welfare traffic from nearby victims," he said. "We are now reaching out to affected communities asking for tents for the community [as well as] diapers or medicine, and many other requests. We also initiated food collection in our community."

Perez said an HF radio was to be on site for backup on 20 and 40 meters. Power to the distribution center is 40% from the power utility and 60% from generators.

Resto said over the weekend that he'd been told that the Red Cross was relocating the disaster relief operation to Mayagüez, which is a much closer site to the initial impact area, and ARES will provide communication support at the new site.

"A personal comment," Resto added. "[It] is very difficult to sleep with so many earthquakes — more than 3,000 from December 28 — shaking your house. I hope that my house survives these intense seismic events."

A 6.4 magnitude earthquake struck the southwestern part of Puerto Rico on January 7, fast on the heels of a magnitude 5.8 tremor the day before. The worst-impacted cities were Guayanilla, Peñuelas, Yauco, and Guánica, where, Resto said, engineers have determined that 80% of the houses in the earthquake's impact zone are uninhabitable.

Resto told ARRL last week that the earthquake disaster has definitely been a setback for the US territory as it continues its long recovery from severe hurricane damage in 2017.

Used with permission The ARES E-Letter for January 15, 2020

AARC STAFF – 2020 Officers

| | | |
|-----------------------|---|--------------|
| President | Keith Miller / AE3D president@w3vpr.org | 240 758 0423 |
| Vice President | Jim Wallace, (N3ADF) vice.president@w3vpr.org | |
| Secretary | Bernie Coletta / NK3PS secretary@w3vpr.org | |
| Treasurer | Bill Mooney / KA3UQQ treasurer@w3vpr.org | |
| Director A | Eric Berman / KC3GDV eric.board20@w3vpr.org | |
| Director B | Doug Ellmore, (NA1DX) doug.board20@w3vpr.org | |
| Director C | Scott DeMatteo, (W3GTR) scott.board 20@w3vpr.org | |

Support Staff

| | | |
|-----------------------------|--|--------------|
| Membership Secretary | Lambert Matias / KK3WOW | |
| 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 |
| Fox Hunt | Jim Wallace / N3ADF fox.hunt@w3vpr.org | |
| Joint 440 Comm | Gordon Davids / WJ3K joint440@w3vpr.org | 410 647 2956 |
| MD Slow Net | (T B A) | |
| MDC Section Manager | Marty Pittinger / KB3MXM ar1.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 t.rustee@w3vpr.org | |

Committees

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

| | |
|-------------------------|--|
| Station Manager | (TBD) station.manager@w3vpr.org |
| Holly Net | Jim Wallace / N3ADF holly.net@w3vpr.org |
| HAMM-MESH | (TBD) hsmm.mesh@w3vpr.ORG |
| Kit building | 'Raven' Weiland / KB3MUV 203 948 5369 kit@w3vpr.org |
| MDC QSO Party | Jim Wallace / N3ADF 301 538 6233 mdcqsop@w3vpr.org |
| Newsletter | Milford Craig / N3WYG 301 218 8867 newsletter@w3vpr.org |
| Photography | Ed Santilli / KB3YMU photo@w3vpr |
| Presentation | Jim Wallace / N3ADF presentation@w3vpr.org |
| Public Service | Erick Graves / WA3G 410 987 7670 public.service@w3vpr.org |
| Repeater Ops | John Williams / K8JW 410 647 7406 repeater@w3vpr.org |
| Rules | Chuch Tanner / K3ACT 301 464 2667 rules.chair@w3vpr.org |
| Service Hours | Jim Wallace / N3ADF 301 538 6233 service.hours@w3vpr.org |
| Tower | (TBD) tower@w3vpr.org |
| Training | Keith Miller / AE3D 240 758 0423 learn@w3vpr.org |
| VE Team | David Rawley / N3AT ve.team.leader@w3vpr.org |
| Video | Ed Santilli / KB3YMU video@w3vpr.org |
| Webmaster | Mark Bova / W2PAW 240 274 6294 webmaster@w3vpr.org |
| Wed. Nite Net | Jamison Phipps / W3KNH wednesday.night.net@w3vpr.org |
| Winter Field Day | Rick Steer / AB3XJ winter.field.day@w3vpr.org |
| Workshop | (TBD) workshop@w3vpr.org |

Groups

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



VE Testing Schedule

Second Saturday of each month

– Noon – AARC –

David Rawley, N3AT testing@w3vpr.org

Third Saturday of each month – 9AM – Laurel ARC –
John Creel, 301-572-5124

Fourth Tuesday of each month – 6PM – MMARC –
Mike Montrose / KA2JAI 443-310-4907 web site is
tinyurl.com/marylandmobileers

To all exams bring:

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

Massachusetts Club Offers Support to Arecibo Observatory Following Earthquakes

Although not in the hardest-hit earthquake zone, Puerto Rico's Arecibo Observatory nonetheless has been affected by the recent spate of earthquakes and aftershocks. The landmark Arecibo radio telescope and ionospheric radar facility was a victim of the devastation wrought by Hurricane Maria in 2017.

Members of the Nashoba Valley Amateur Radio Club ([NVARC](#)) have stepped up to assist in support and recovery efforts for the Arecibo Observatory radio telescope and ionospheric radar facility. NVARC members Phil Erickson, W1PJE; Rod Hersh, WA1TAC, and Jim



Wilber, AB1WQ, participated in daily scheduled radio contacts with Arecibo's lead telescope operator and spectrum manager, Angel Vazquez, WP3R. Other NVARC members volunteered to serve as back-up stations.

"All AO staff members are safe, and our technical teams have completed preliminary visual analysis of the primary structure and have found no immediate damage/issues, however a more detailed inspection needs to be completed once the aftershocks subside," said Francisco Córdova, Arecibo Observatory's director, at the University of Central Florida.

Site operations were suspended and access was limited to essential personnel, according to the latest information available from the Arecibo Observatory website.

Over several days, when commercial power and water were not available near Arecibo, club members inquired about potential assistance. Although conditions are slowly improving on the northern portion of the island where the observatory is located, Vazquez noted that thousands of people displaced from their homes in the hard-hit southern part of the island had to camp outside, due to extensive structural damage and ongoing aftershocks.

NVARC members were also able to provide messages of support from MIT's Haystack Observatory in Westford, Massachusetts, and from program officers at the National Science Foundation (NSF) Geospace Facilities Division in Washington, DC. NSF funds the observation programs and scientific research at Arecibo Observatory. NVARC said the radio contacts would continue as the recovery proceeds.

Used with permission The ARRL Letter for January 23, 2020
AA

Winlink Development Team Members Awarded Tennessee Military Department Patriot Medals

In a recent ceremony, two Winlink development team members were awarded the Military Department of Tennessee Adjutant General's Distinguished Patriot Medal. Steve Waterman, K4CJX, was awarded the Medal "for his distinguished patriotic service as the Winlink Network Administrator," citing his "vision, hard work, and dedication to emergency communication contributed significantly to the disaster readiness and communications interoperability of the emergency

responders across the United States and the world." The citation concluded with "His efforts reflect great credit upon himself, the Amateur Radio Safety Foundation, and the State of Tennessee."

Phil Sherrod, W4PHS, was awarded the Medal "for his distinguished patriotic service as the lead developer for Winlink,"

with "technical skill, hard work, and dedication to emergency communication contributed significantly to the disaster readiness and communications interoperability of the emergency responders across the United States and the world."



Waterman (second from left) and Sherrod (third from left), receive their medals from the Military Department of Tennessee. (photo courtesy K4CJX)

Used with permission The ARES E-Letter for January 15, 2020
AA

Australian Bushfires Causing Major Telecommunication Outages, Hams on Duty

Wireless Institute of Australia ([WIA](#)) President Greg Kelly, VK2GPK, says the bushfires in Australia have caused significant disruption of telecommunication services in the states of Victoria and New South Wales. Radio amateurs are supporting relief operations and communication.



WICEN (Wireless Institute Civil Emergency Network) in New South Wales reports it has been active assisting in a number of multi-

agency activities during the bushfire emergency, in its role as a support squad of the NSW Volunteer Rescue Association (VRA) operations center in Bega. WICEN teams in NSW and in the Australian Capital Territory (ACT) have sent a team to Bega to help re-establish radio

Intergovernmental Advisory Committee to the FCC Files Recommendation, Reports on Amateur Radio Disaster Communications Capability

The Intergovernmental Advisory Committee to the FCC filed Advisory Recommendation No: 2019-3 in the *Matter of Intergovernmental Disaster Response Coordination*, which included a discussion of the Amateur Radio service. [See below for excerpts]. The mission of the Intergovernmental Advisory Committee is to provide aid to the Commission on the many telecommunications issues affecting local, state and Tribal governments that are within the jurisdiction of the FCC. The IAC is composed of elected officials of municipal, county, state, and Tribal governments.

From the filing: "One of the mainstays for many decades in disaster communications in a recovery has been the use of amateur radio operators, often referred to as ham operators. Ham radio's ability to operate when other telecommunications systems cannot is critical to understand in this discussion . . . Generally, amateur radio operators assist when other means of communications are down or overloaded. Ham radio resources are available for emergency communications support to any public service agency and can bridge interoperability gaps between agencies on a local, Tribal, and/or state level. Potential ham deployment locations include, but are not limited to, auxiliary command posts, emergency operations centers, emergency shelters, evacuation sites, fire stations, medical facilities, mobile disaster vehicles, police stations, public works sites, and volunteer intake centers. They can also be deployed to provide links to: Create communications links between similar agencies across political boundaries, especially where there are misalignments in frequency bands and modes; Establish communications in locations outside the existing coverage areas of public service and commercial communications systems; "Shadow" critical public officials and emergency management personnel to facilitate constant and rapid contact; Monitor critical infrastructure (such as highways and bridges) and provide periodic situation reports; Staff operation posts (river levels, flooding, damaged areas) and provide periodic situation reports; Every hospital has a ham radio station on premises and there are volunteer hams ready to operate (they are generally not hospital employees). These systems are tested on a very regular basis. A typical emergency activity might be identifying which hospitals have the available capacity to accept the injured after an event.

"Another overlooked ham application is continuing communications support after an event. An example of this would be after a hurricane has blown through and fires are out etc. There is still no power or phone service. Hams have provided on-going coordination to families outside the disaster area.

"As a communications provider, ham radio falls under the Emergency Support Function #2 umbrella. Planning for a 'when all else fails' communications scenario is essential for all jurisdictions."

[View the entire report at <https://docs.fcc.gov/public/attachments/DOC-360696A4.pdf>. It's worth your time. - ed.]

Used with permission The ARES E-Letter for January 15, 2020
AA

Volunteer Monitor Program Coordinator Looks Forward to a Positive 2020

In a holiday season message to ARRL leadership and to members of the new ARRL Volunteer Monitor (VM) program, its coordinator, Riley Hollingsworth, K4ZDH, expressed his gratitude to all involved for their contributions to getting the program off to a solid start in January.

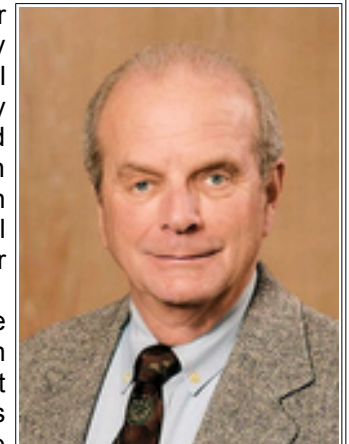
"It will be a good year," Hollingsworth said. "We will have fun, you will enjoy it more than you probably think, and -- thanks to the talent and generosity of one of our VMs -- a computer program will make your reporting *much* easier (there will be no need for bi-monthly reports!)," he wrote. "This is our opportunity to help amateur radio last another hundred years and to pay forward this wonderful avocation that joyfully occupies our lives. This could be our legacy if we do it with all the energy and devotion that characterized the Official Observer (OO) program for decades."

Hollingsworth said the success of the OO program convinced the FCC to trust ARRL with the responsibilities now to be taken up by the Volunteer Monitor program. "Those of you who are former OOs have an extra reason to be proud, and amateur radio is grateful to you more than you will ever know," Hollingsworth concluded. "Thank you. It will be a privilege to work with you this new year."

Approved by the ARRL Board of Directors in 2018, the Volunteer Monitor program supplants the venerable OO program. The VM program represents a formal agreement between the FCC and ARRL in which volunteers trained and vetted by ARRL will monitor the airwaves and collect evidence that can be used to correct misconduct. The program also will recognize exemplary on-air operation, something not done during the OO program. Cases of flagrant violations will be referred to the FCC by ARRL for action in accordance with FCC guidelines.

The FCC proposed the new program in the wake of several FCC regional office closures and a reduction in field staff. It will give enforcement priority to cases developed by the Volunteer Monitor program without ARRL's having to refer cases through the FCC online complaint process.

Used with permission The ARRL Letter for January 9, 2020
AA



ARISS Next-Generation Radio System Ready for Launch to Space Station

Amateur Radio on the International Space Station (ARISS) reports that its first Interoperable Radio System (IORS) flight unit -- serial number 1001 -- has been delivered to NASA's Johnson Space Center for launch in early March. The IORS represents the first major upgrade in ARISS equipment on the International Space Station since Amateur Radio gained a permanent presence onboard the ISS in 2000. In December, ARISS received approval from NASA Safety to launch the IORS on SpaceX CRS-20 and stow the radio system on the ISS for future installation.

"The IORS is a foundational element of the ARISS next-generation radio system and is an incredible engineering achievement by the ARISS hardware team," ARISS International President Frank Bauer, KA3HDO, said. "This first element delivery will support easier radio mode transitions and enable new, exciting capabilities for hams, students, and the general public."

The new system includes a higher-power radio, an enhanced voice repeater, and updated digital packet radio (APRS) and slow-scan television (SSTV) capabilities for both the US and Russian space station segments. The IORS consists of a custom-modified JVC Kenwood TM-D710GA transceiver, an AMSAT-developed multi-voltage power supply, and interconnecting cables.

The IORS set to launch in March will be installed in the ISS *Columbus* module; a second flight unit is expected to be launched later this year for installation in the Russian *Service* module. The ARISS hardware team will assemble four flight units -- and 10 IORS units in all -- to support onboard flight operations, training, operations planning, and hardware testing.



ARISS International President Frank Bauer, KA3HDO.

"Future upgrades and enhancements to the next-generation system are in various stages of design and development," Bauer said. "These include a repaired Ham Video system -- currently planned for launch in mid-to-late 2020, L-band (uplink) repeater, ground command operations capability, LimeSDR signal reception, a microwave

'Ham Communicator,' and Lunar Gateway prototype experiment."

Bauer said a lot of "heavy lifting" remains to prepare the IORS for operation on the space station. "ARISS has 92 engineering requirements and our

operations Phase III safety review to complete," he explained. "The space agencies take a position of 'trust, but verify.' Thus, these engineering and safety 'verifications' all need to be closed out before the IORS can be unstowed and turned on. This will be the ARISS hardware team's focus over the next few months."

Bauer reminded that ARISS is almost entirely run by volunteers and encouraged [donations](#) for next-generation hardware developments, operations, education, and administrative functions.

Used with permission The ARRL Letter for January 9, 2020

AA

US Air Force Space Fence Nearing Operational Acceptance

According to NASA's most recent *Orbital Debris Quarterly News*, the space agency calculates about 17.6 million pounds of objects are in earth orbit, a number that will grow as launches proliferate -- including thousands of small satellites -- presenting a huge problem. The US Air Force Space Fence -- a second-generation space surveillance system now nearing completion -- is expected to play a crucial role.



Space Fence is located on Kwajalein Atoll in the Marshall Islands. [US Army photo]

Using advanced solid-state S-band radar technology, Space Fence is located on Kwajalein Atoll in the Marshall Islands. Such critical space-based technologies as weather forecasting, banking, global communications,

and GPS navigation are under threat from space junk orbiting Earth. Collisions already are frequent, and defunct satellites and rocket boosters have increased the amount of space debris.

The Air Force Space Surveillance Network tracks about 25,000 objects. When Space Fence comes online, the catalog will expand considerably, and when fully operational, it will be the world's largest and most advanced radar system, offering unprecedented space situational awareness. Beyond cataloging objects, Space Fence will detect closely spaced objects, breakups, maneuvers, launches, and more.

Contractor Lockheed Martin reported last spring that Space Fence was able to detect debris from a microsatellite destroyed by India as part of an anti-satellite test. It then was able to determine the orbit of the remnants and predict when the space junk would pass through the fence again.

Space Fence is expected to become fully operational this year. -- *Thanks to AMSAT News Service via Milsat Magazine; Lockheed Martin*

Used with permission The ARRL Letter for January 16, 2020

CONGRATULATIONS

| | |
|--------------------------------|----------------------------|
| JAMES, MAURICE – KO4AXY | – New Technician |
| KELLY, CHRISTOPHER – KC3OIC | – Upgrade to General |
| KELLY, SELENE M – KC3ORS | – New Technician |
| KELLY, TIFFANY M – KC3ORT | – New Technician |
| ROBSON, CHRISTOPHER L – KC3OOD | – Upgrade to General |
| RYAN, WILLIAM – W3WDR | – Upgrade to Amateur Extra |
| TAYLOR, CHASE H – KC3ORW | – New Technician |
| WANACK, ALEXANDRA – KC3ORX | – New Technician |
| WILSON, ANDREW – KC3ORV | – New General |

*Good job! Well done! Welcome to the Amateur Radio.
Please join us in all the activities of the
Anne Arundel Radio Club.*

*President and board of Directors
Anne Arundel Radio Club*

January 2020

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

AA

Free Money for AARC!
ARRL Membership Reminder

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

Clubs retain \$15 for each new membership OR lapsed membership (of two years or more).
Clubs retain \$2 for each renewal,
A RENEWING MEMBER can renew at any time, even before their current membership expires.

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



Mark Your Calendars
REGULAR ACTIVITIES

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

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

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

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

EVENT SCHEDULE

Saturday, February 1 8:30am
FrostFest

Thursday, February 6 7:30pm
Membership Meeting

Thursday, February 13 7:30pm
Board Meeting

Thursday, February 20 7:30pm
Membership Meeting

Thursday, February 27 7:30pm
Rules Meeting

Saturday, February 29 8:30am
Spring Technician Class

The Anne Arundel Radio Club

is a registered 501C3 charity.

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

AARC Repeaters and Nets

2 Meter Repeaters

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

1.25 Meter Repeaters

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

70cm Repeaters

| Location | Frequency | Tone | Notes |
|----------------|-----------|-------|-------------------------------------|
| Davidsonville | 444.400+ | 107.2 | AARC 70 cm Repeater. |
| Annapolis | 442.300+ | 107.2 | AARC 70 cm repeater |
| Laurel | 442.500+ | 156.7 | Laurel ARC 70 cm Repeater. |
| Millersville | 449.125- | 107.2 | <u>Maryland</u> 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.

Copyright © 2011 Anne Arundel Radio Club



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.