

Orlando Amateur The Listening Post Radio





Dedicated to Community Service and All Central Florida Hams

February 2020

President's Message

It's hard to believe that we have made another revolution around the sun and here we are just days from HamCationSM 2020. So much to see and do. If you can't make it this year, you're going to miss a great one!

Michael came up with a theme this year for HamCationSM. **Volunteers Make the Difference**.

(Continued on Next Page)

IN THIS ISSUE

- **1** Message from the President
- **3** From the Editor
- 4 HamCationSM Chairman News
 - Annual HamCationSM Picnic
- Melissa Pore, KM4CZN, is 2020 Carole Perry Educator of the Year Award Recipient
- 8 FCC Amending Amateur Radio RF Exposure Safety Rules
- NOAA/NASA Panel Concurs that Solar Cycle 25 will Peak in July 2025
- 10 ARRL Reshapes Podcast Offerings for 2020
- FCC Formally Adopts Proposals to Remove Amateur 3 GHz Band, Invites Comments
- **13** ARRL's New *On the Air* Magazine on its Way to Members
- 14 ARRL CEO Challenges Members: "Dare to Imagine"
 - ARISS Next-Generation Radio System Ready for Launch to Space Station
- **16** ARRL On the Air Podcast Premieres January 16
- 17 WORD TO THE WISE
 - Puerto Rico Earthquake Relief Effort Continues, with Help from Ham Radio
- 19 Help Wanted
- 20 Weekly Radio Network Meeting
 - OARC Meetings and Events 2019/2020•
- 22 OARC Membership Application

OARC MEETING

February 5, 2020 7:00pm

Central Florida Fair Grounds 4603 W Colonial Dr, Orlando, FL ARRL Testing: 5:30pm

For information & Updates See www.oarc.org

OARC Board of Directors

President: John Knott, N4JTK

Vice President: Michael Cauley, W4MCA

Treasurer: Ana Groe, KM4JVE Secretary: Bob Nocero, W4KBW

Directors:

Bob Cumming, W2BZY Frank Gergits, KC9GNQ Tony Darnell, KK4VRP Dean Groe, KD4TWJ Frank Tagliani, KD4EZW James Deuel, N0XIA

The Listening Post is the OARC newsletter for OARC members. The LP will be distributed electronically via Email and the OARC web site (www.oarc.org).

Editor: Ed Thralls NE4H.

Comments, suggestions and articles are welcome. Send to editors@oarc.org.

Contributing to this edition: John Knott N4JTK, Michael Cauley W4MCA,and Ed Thralls NE4H

OARC REPEATERS

Call	Freq	Shift	PL	
KB4UT	146.760*	-600	103.5	
N4UMB	147.015	-600	103.5	
* Fusion Repeater				

D-Star

K1XC C	146.820	-600	
K1XC B	443.275	+5MHz	
K1XC A	1275.00	-12 MHz	Voice
K1XC A	1255.00	-12MHz	Digital
W4PLB C	145.160	+600	
W4PLB B	442.300	+5MHz	
All D-star re	epeaters are	connected	

President's Message (Continued from Previous Page)

It takes a lot of volunteers to put on HamCationSM. Volunteers just like many of you. If you are one of our many volunteers, we cannot thank you enough. If you have not volunteered this year for HamCationSM, why? If every club member volunteered just 4 hours during HamCationSM, all the volunteer positions could be filled with extras. Just 4 hours and your HamCationSM ticket is FREE! FREE, I don't know about you, but I like FREE! As a popular radio DJ says, "If it's FREE, it's for me" Please consider volunteering and help close up the few open positions that remain.

Along with HamCationSM coming up, we are just a few days away from our February club meeting. Our next meeting will be on Wednesday February 5 at the Central Florida Fairgrounds. Our next test session will also be on February 5 at the Central Florida Fairgrounds.

The test session will begin at 5:30pm and the meeting will begin at **7pm** (<u>February Only</u>) Here are the details for both:

Parking: Please park in the grass outside of the Social Hall. This is the area that we use for Handicap parking for HamCationSM.

Shuttles: Please walk over to the East Gate (Drive Thru) where you will catch one of our shuttles. The shuttle will then take you to the Swaps Building.

Program: Joe Eisenberg, KONEB, CQ Kit Building Editor will be doing a hands-on kit build with those who answered my earlier email and signed up, which was 15 people. Many of you signed up to observe.

If you remember earlier last year, Joe joined us by Skype and did a presentation on Kit Building. Since Joe was going to be in town to for HamCationSM, it was a natural for him to join us and do the hands-on part. Joe hasn't let me know what kit we will be building, but he did say it would be something that can be built in the allotted time. If this goes as well as I think it will, this could be something that we'll do at our meeting again in the future.

Make sure you read about the OARC/HamCationSM Picnic coming up in April! Make sure you RSVP!

I want to reflect for a moment and on an email that I sent out right before Christmas last year. At last month's club meeting, Jack Leavitt, KF4WM, was at the front of the room, as he usually was. Jack was talking to both Michael and I about how excited he was with HamCationSM coming up. For many years he had tried to get his Rabi to come to HamCationSM. His Rabi is also an avid amateur radio operator. But his Rabi had not attended a HamCationSM before, Jack said mostly because of scheduling conflicts. This year, Jack found out that his Rabi was going to be available during

HamCationSM and Jack quickly convinced him to come. Jack was so excited that he bought his Rabi a ticket in advanced.

You see, Jack was a past HamCationSM General Chairman. Jack was also excited to see how much HamCationSM was growing and wanted to share this with his Rabi. If I recall correctly, they had planned to attend on Friday and Saturday and go through every inch of HamCationSM, including attending some forums.

Unfortunately, Jack would not be able to fulfill his wish of attending HamCationSM with his Rabi. Jack became a Silent Key on December 22, 2019 at 2:30pm.

So, this HamCationSM, please take a moment and remember Jack and all the previous HamCationSM Chairman and even the volunteers who are no longer with us, but I'm sure watching over us from above!

Finally, I think I might have mentioned this before, but the Orlando Amateur Radio Club and Orlando HamCationSM are rich in history. Unfortunately, over the many years that the organization has been around we have lost a lot of that documented history. Old paperwork doesn't age very well. If not captured electronically, it just fades away!

I know within the ranks of our membership, there are many veteran members. Many of you have not attended a meeting in a long time and I'm sure many of you just physically can't make it. But that doesn't mean you can't help. If you can or if you can have someone document anything from OARC's or HamCationSM's past please send it to me, I would be forever grateful. If any of you would like to head up a Historian position, which would be extremely awesome! Even if you might not think it's important, share it. Let it be known. Don't let our rich history just fade away...

73.

. John Knott, N4JTK

From the Editor:

No, you did not miss an issue of The Listening Post. This issue, February is the first issue of 2020. If you were at the Christmas Dinner, you would have heard our President, John Knott, say that there would be no meeting in January because the Beardall Center was closed on January $\mathbf{1}^{\text{st}}$ and we would not publish The Listening Post in January. So now, you are all caught up. Hope to see you at the February meeting at the Central Florida Fair Grounds.

HamCationSM Chairman News

Greetings Everyone

This is the first year we will be using the FREE ARRL Events App. It will help attendees navigate the HamCationSM Venue, activities, and exhibits from their personal smartphone or tablet. Find exhibitors and booths, forum schedules and affiliated events.

Follow the hourly prize drawings from wherever you are. Attendees are also encouraged to tap on the "MyProfile" icon to optionally include their name and call sign, email address, and any other information they'd like to share with other attendees.

The icon labeled "**Scan Badge**" will allow users to scan QR Codes displayed on a second device using the icon labeled "**MyBadge**" – instantly connecting your shared contact information with another ham.

d VOLUNTEERS
MAKE THE DIFFERENCE

HamCation, 2020

The 2020 ARRL Events App is available for both Apple and Android smart devices. A web-browser version is also available, which is optimized for nearly any type of personal computer or mobile device. Visit your **app store** to download it, or search for "ARRL Events App" in the Apple and Google Play app stores. The link will automatically redirect you to the appropriate app store to download the app, or you will be redirected to the web-browser version.

73
Michael Cauley, W4MCA
HamCation General Chairman

HamCationSM Volunteer Appreciation Picnic

(By Michael Cauley, W4MCA)

April 4, 2020, 1:00pm Bill Fredrick Park at Turkey Lake 3401 S. Hiawassee Road, Orlando, Florida 32835 Pavilion #6

On behalf of the Orlando Amateur Radio Club and the HamCationSM Committee you are cordially invited to our annual HamCationSM Volunteer Appreciation Picnic.

We thank you for your devoted time and efforts with helping make HamCationSM the

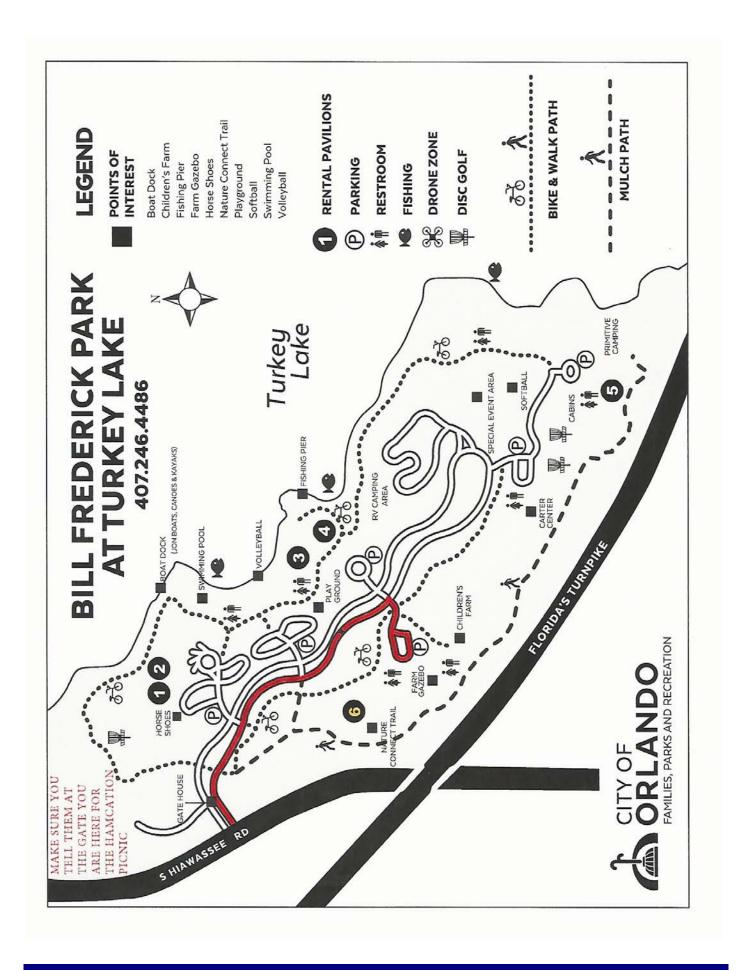
HUGE success it is. Your contribution has allowed us to continue to grow every year and make the show better every year.

We will be having Hamburgers, Hotdogs, Veggie Burgers, Potato Salad, Beans and lots more. I promise you will not go away hungry. We will have some great prizes to give away. Please RSVP to picnic@oarc.org by March 21st.

When you come thru the main gate follow the road to the right. Then follow the signs to Pavilion #6. On the map below, follow the red road.

The Park Charges admission. When you get to the Main Gate tell them you are attending the HamCation Picnic and it will be free to get in. OARC is covering the fee for everyone.





Melissa Pore, KM4CZN, is 2020 Carole Perry Educator of the Year Award Recipient

(The ARRL Letter for December 12, 2019)

Melissa Pore, KM4CZN, of Vienna, Virginia, is the 2020 recipient of the Carole Perry Educator of the Year Award, <u>Orlando HamCation</u> has announced. The award, which recognizes outstanding contributions in educating and advancing youth in amateur radio, was first awarded last year to its namesake, Carole Perry, WB2MGP, in honor of



her work teaching students about ham radio. Pore is an Amateur Radio on the International Space Station (ARISS) Education Committee member and an ambassador for the ARISS program.

An educational professional for more than 20 years, Pore is on the staff at Bishop Denis J. O'Connell High School in Arlington, Virginia, the site of a November 2018 ARISS contact. In addition to teaching engineering and computer science, she is involved in the school's amateur radio and engineering clubs. While she was a teacher at St. Thomas More Elementary School, Pore was associated with the STMSAT-1 project. The Earth-observation CubeSat, built entirely by students at the school, was launched

in 2015 but failed to transmit any images. It was the first satellite constructed by elementary schoolers.

Pore was a cofacilitator of a workshop at the 2019 Space Port Area Conference for Educators. Last year, she and her students presented during Innovation Day at National Air and Space Museum's Steven F. Udvar-Hazy Center. She is a member of AMSAT and the NASA Goddard Amateur Radio Club. As an ambassador for the ARISS Education Team, her talks and educational outreach have showcased ARISS and the STEM activities of her students, several of whom are radio amateurs. She assisted with the Dayton Hamvention 2019 ARISS booth and helped staff the exhibit at the Space Explorers Education Conference last February in Houston, where she's set to present a workshop in 2020.

At the 2019 <u>Space Port Area Conference for Educators</u> at Cape Kennedy, Pore received a plaque from the ISS National Lab Space Station Explorer Program citing her "service, commitment, and desire to push the boundaries of STEM Education."

FCC Amending Amateur Radio RF Exposure Safety Rules

(The ARRL Letter for December 12, 2019)

The FCC is amending its Part 97 Amateur Service rules relating to RF exposure safety. In a <u>lengthy document</u> in ET Docket 19-226 released on December 4 and addressing a broad range of RF safety issues, the FCC said current amateur radio RF exposure safety limits will remain unchanged, but that the amateur-specific exemption from having to conduct an RF exposure evaluation will be replaced by the FCC's general exemption criteria. Radio amateurs have always had to comply with RF exposure

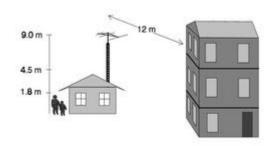
limits, but certain stations have been exempt from having to conduct evaluations based only upon power and frequency. The Commission indicated that, by and large, if an RF source was "categorically excluded" from routine evaluation under the old rules, it will most likely still be exempt under the new rules, which are expected to take effect in the next couple of months.

"For applicants and licensees in the Amateur Radio Service, we substitute our general exemption criteria for the specific exemption from routine evaluation based on power alone in Section 97.13(c)(1) and specify the use of occupational/controlled limits for amateurs where appropriate," the FCC said.



"The sky is not falling here," ARRL Lab Manager Ed Hare, W1RFI, commented. "The major aspects of the rules will not impose major new burdens on the Amateur Radio Service. As in all regulatory matters, though, the devil may be in the details, so the ARRL technical staff, legal staff, and the experts on the ARRL RF Safety Committee are carefully evaluating this FCC document."

Under the revised Section 97.13(c)(1), "In lieu of evaluation with the general population/uncontrolled exposure limits, amateur licensees may evaluate their operation with respect to members of his or her immediate household using the occupational/controlled exposure limits in Section 1.1310, provided appropriate training and information has been accessed by the amateur licensee and members of his/her household," the amended rule says.



An FCC OET Bulletin 65 illustration of how to determine exposure distances.

"RF exposure of other nearby persons who are not members of the amateur licensee's household must be evaluated with respect to the general population/uncontrolled exposure limits. Appropriate methodologies and guidance for evaluating Amateur Radio Service operation is described in the Office of Engineering and Technology (OET) <u>Bulletin 65</u>, <u>Supplement B</u>," the revised rule concludes.

The FCC said it was not persuaded by ARRL's argument in its comments that the routine evaluation exemption for amateur radio stations operating below a certain power threshold should be maintained. "Amateur radio licensees operate a variety of

installations of different size, power, and frequency, which can be located in close proximity to people, giving rise to various RF exposure concerns," the FCC noted.

In a meeting with FCC OET Chief Julius Knapp and senior staff in early November, ARRL asked the FCC to make available on the internet a calculator to facilitate making the correct calculations the rules require. ARRL said that would be preferable to unofficial third-party calculators, the results from which might not be accorded the same degree of deference in local disputes. Several software programs were suggested as models.

The FCC did not single out amateur radio in drafting its latest RF exposure rules. The rules affect multiple services, and exemptions for many other services were also deleted as part of a broader policy driven by a proliferation of RF devices, some resulting in situations where gain antennas are sited much closer to people than was expected in 1996 when the rules were last revised.

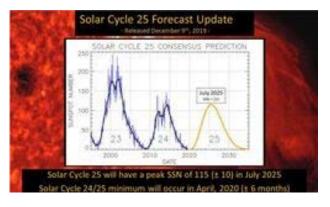
NOAA/NASA Panel Concurs that Solar Cycle 25 will Peak in July 2025

(The ARRL Letter for December 12, 2019)

The NOAA/NASA-co-chaired international Solar Cycle Prediction Panel has released its latest forecast for the coming Solar Cycle 25. The panel's consensus calls for a peak in July 2025 (±8 months), with a smoothed sunspot number of 115. The panel agreed that Cycle 25 will be of average intensity and similar to Cycle 24. The panel additionally concurred that the solar minimum between Cycles 24 and 25 will occur in April 2020 (±6 months). If the solar minimum prediction is correct, this would make Solar Cycle 24 the seventh longest on record at 11.4 years. In its preliminary forecast

released last April, the scientists on the panel forecast that Solar Cycle 25 would likely be weak, much like the current Cycle 24.

"Solar Cycle 25 may have a slow start, but is anticipated to peak with solar maximum occurring between 2023 and 2026, and a sunspot range of 95 to 130. This is well below the average number of sunspots," the panel said last spring, adding with "high confidence" that Cycle 25 "should break the trend of weakening solar activity seen over the past four cycles." The panel said the expectation that Cycle 25 would be comparable in size to



Cycle 24 suggests that the steady decline in solar cycle amplitude seen from Cycle 21 through Cycle 24 has ended and that there is no indication of an approaching "Maunder-type" minimum. Cycle 24 peaked in April 2014 with an average sunspot number of 82.

The Solar Cycle Prediction Panel forecasts the number of sunspots expected for solar maximum, along with the timing of the peak and minimum solar activity levels for the cycle. It is comprised of scientists representing NOAA, NASA, the International Space Environment Services, and other US and international scientists.

ARRL Reshapes Podcast Offerings for 2020

(The ARRL Letter for December 19, 2019)

In conjunction with the launch of its new <u>On the Air</u> magazine, which is aimed at those just beginning their journey in amateur radio, ARRL is reconfiguring its podcast lineup.

Heading up the new schedule will be a free companion podcast to the bimonthly *On the Air* magazine. The monthly *On the Air* podcast will take a deeper look into select



features and projects from the magazine. Each month, host and *On the Air* Editorial Director Becky Schoenfeld, W1BXY, will offer additional resources, techniques, and hints to help less-experienced radio amateurs to get the most from the magazine's content.

In addition to the podcast, ARRL Product Development Manager Bob Inderbitzen, NQ1R, will curate a free *On the Air* blog featuring content from the communicators and makers who are the driving force of amateur radio

today. The blog will highlight opportunities and activities available to new licensees. The *On the Air* blog is intended as an entry point into the world of amateur radio for

those seeking original voices and perspectives. Readers will be <u>invited</u> to take part in the conversation by sharing their stories and experiences.

ARRL's current <u>So Now What?</u> podcast will cease production in January, as the full complement of *On the Air* content is rolled out. The <u>catalog</u> of *So Now What?* episodes is available for listening or downloading.

In addition, <u>The Doctor is In</u> podcast, which has served more-experienced amateurs since 2016, will conclude its 4-year run with its December 19 episode. *Eclectic Tech*, a new biweekly podcast designed to appeal to experienced amateurs, will launch in February.

Hosted by *QST* Editor Steve Ford, WB8IMY, *Eclectic Tech* will highlight technical 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.



The Doctor is In co-host Joel Hallas, W1ZR, is selecting some of his favorite podcast episodes for re-broadcast in the interim between the end of production for *The Doctor is In* and the debut of *Eclectic Tech*. The complete *The Doctor is In* archive is available on the ARRL website. Hallas will continue to answer questions about amateur radio in *OST*'s "The Doctor is In" column.

The <u>ARRL Audio News</u> podcast will continue to provide a weekly summary of news and activities within the amateur radio community

FCC Formally Adopts Proposals to Remove Amateur 3 GHz Band, Invites Comments

(The ARRL Letter for December 19, 2019)



The FCC's plan to remove "existing non-federal secondary radiolocation and amateur allocations" in the 3.3 - 3.55 GHz band and relocate incumbent non-federal operations already has begun drawing fire. The Commission formally adopted the *Notice of Proposed Rulemaking* (*NPRM*) in WT Docket 19-348 on December 12 and invited comments on appropriate "transition mechanisms" to make the spectrum available for mobile and fixed wireless broadband use. ARRL plans to oppose the move. The amateur 9-centimeter allocation is 3.3 -

3.5 GHz.

"By proposing to delete the existing non-federal secondary allocations from the 3.3 - 3.55 GHz band, we are taking an important initial step towards satisfying Congress's directives and making as much as 250 megahertz of spectrum potentially available for advanced wireless services, including 5G," the FCC said in the Introduction to its *NPRM*.

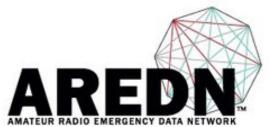
Some comments arrived before formal adoption of the *NPRM*, which was circulated ahead of the December meeting. Kevin Milner, KD0MA, the secretary/treasurer of the Ski Country Amateur Radio Club in Colorado, argued that the club's equipment cannot be re-channeled below 3.4 GHz, and the club is seeking relocation costs. Devin Ulibarri, W7ND, told the FCC that amateur networks in the current band cannot move easily into other amateur allocations because there is no readily available commercial equipment to support the bandwidth, the FCC said in a footnote.

Currently, the entire 3.1 - 3.55 GHz band is allocated for both federal and non-federal radiolocation services, with non-federal users operating on a secondary basis to federal radiolocation services.

With respect to amateur operations, the FCC invited comments on whether sufficient amateur spectrum exists in other bands that can support the operations currently conducted at 3.3 - 3.5 GHz. The 3.40 - 3.41 GHz segment is earmarked for amateur satellite communication. The FCC said if non-federal licensees are relocated to the 3.1 - 3.3 GHz band, it proposes to have them continue to operate on a secondary basis to federal operations, consistent with current band allocations.

Also at its December 12 meeting, the FCC considered <u>another NPRM</u> in WT Docket 19-138 that would "take a fresh and comprehensive look" at the rules for the 5.9 GHz band and propose, among other things, to make the lower 45 MHz of the band available for unlicensed operations and to permit "cellular vehicle-to-everything" (C-V2X) operations in the upper 20 MHz of the band. The FCC is *not* proposing to delete or otherwise amend the 5-centimeter amateur 5.650 - 5.925 GHz allocation, which would continue as secondary. The *NPRM*, if approved, would address the top 75 MHz of that amateur secondary band. Although no changes are proposed to the amateur allocation, an anticipated increase in primary use could restrict secondary amateur use.

The Amateur Radio Emergency Data Network (AREDN) has offered its voice in challenging the FCC proposals on both 9 and 5 centimeters, saying their adoption would "eliminate our use of the most-effective resource hams have to build its networks."



"The AREDN Project is able to leverage low-cost commercial devices solely because they are designed to operate on adjacent

allocations," AREDN said on its website. "Moving to other allocations would be difficult if not impossible without a complete redesign, manufacture, purchase, and installation of new custom amateur hardware and software...raising the price out of reach for the typical ham."

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

(The ARRL Letter for January 9, 2020)

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*

ARRL CEO Challenges Members: "Dare to Imagine"

(The ARRL Letter for January 9, 2020)

In his January 2020 *QST* "Second Century" editorial, ARRL CEO Howard Michel, WB2ITX, challenges members to imagine what ARRL and amateur radio will look like in 5 years and beyond and to dare to imagine change.

"Younger hams are not just younger versions of you or me," Michel writes. "They have grown up in a different world." He points out that 75% of non-members hold Technician licenses. "But more than license class, their interests are different. Their demographics are different. They are different, and they want different things," he said. His approach is to target specific interest groups, which he calls "verticals," that will allow ARRL to provide individual members what they want.

"We can try to mold the future generation of hams to our image, or we can embrace new hams for what they are," Michel asserted. "ARRL needs to do the latter."

In addition to initiatives such as the new *On the Air* magazine, debuting this month in print and digital editions, and the Lifelong Learning program to engage new licensees, Michel is proposing verticals focusing on radiosport, experimentation, and emergency communication. He's recommending a new family of "mini-magazines" to reach niche membership interests. "To jump start the mini-mag revolution," he said, "We will offer *NCJ* and *QEX* in digital form to everyone." ARRL also plans to hire a national club coordinator this year.

"Our focus will be on developing ways, and an infrastructure, that members can use to organize themselves in ways they want, to do things that they consider meaningful," Michel said.

He has invited members' comments.

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

(The ARRL Letter for January 9, 2020)

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 nextgeneration 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.

ARRL On the Air Podcast Premieres January16

(The ARRL Letter for January 16, 2020)

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 <u>Blubrry</u>, <u>Apple iTunes</u> (or by using your iPhone or iPad podcast app -- search for *On the Air*), and <u>Stitcher</u> (or through the free Stitcher app for iOS, Kindle, or Android devices). <u>Episodes</u> 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 <u>Facebook page</u> for those who share a love of radio communication and are looking to learn and explore more about their interests.

WORD TO THE WISE

(The ARRL Contest Update for December 11, 2019)

Octave

The interval between a frequency and another twice the original frequency. The range of 7 MHz to 14 MHz is an octave.

(The ARRL Contest Update for November 13, 2019)

Nomophobia: The fear of being without, or not being able to use, your cellular phone.

(The ARRL Contest Update for January 8, 2020)

GOAT

"Greatest of All Time" -- If you want to hang with the cool kids, you have to know the lingo. This one does not involve mountaintop operating. The term may originally have come from the sports arena, but is now seeing wider use. "Stew Perry - now he certainly has GOAT status on 160."

Puerto Rico Earthquake Relief Effort Continues, with Help from Ham Radio

(The ARRL Letter for January 16, 2020)

In Puerto Rico, Amateur Radio Emergency Service (ARES) volunteers continue to operate from the American Red Cross distribution center in Yauco -- one of the towns hit the hardest by the recent earthquakes and ongoing aftershocks on the island. The Red Cross requested assistance last week to identify undeclared refugee camps and to report on closed or damaged roadways and bridges. ARES District 5 Emergency Coordinator Herb Perez, WP4ZZ, who is among those volunteering for the Red Cross at Yauco, reported on January 14 that he, Melvin Velazquez, WP4RAP, and Yolanda Garcia, WP4QZF, were on duty there.

"Today, we were able to occupy our space with no major incident other than the usual shaking of the entire structure. More than 10 per hour," Perez said. "One of our members, Jared Martinez, KP4LCO, was able to search near his hometown of Lajas and was able to locate more than 10 unidentified campsites around the area." Perez said such reports enable the Red Cross to provide necessary assistance to those left homeless as a result of the earthquakes.

Perez said volunteers were able to collect food from a church-run food pantry in Sabana Grande for isolated communities in the mountain region. He said local members of the General Mobile Radio Service (GMRS) and Citizens Band radio communities have been pitching in.

Operations from Yauco have been on VHF and UHF, although commercial telecommunication services remain in operation for the most part. Another station has been established at the Red Cross Headquarters in the capital of San Juan, which is not in the earthquake zone. Puerto Rico Section Manager Oscar Resto, KP4RF, said the stations are operating as a backbone, in the event of new or stronger earthquakes. HF equipment has been safely stowed if communications fail, Resto said. Most of Puerto Rico now has power and water.



Volunteers Eduardo Hernandez, WP4RAF (left), and Herb Perez, WP4ZZ. [Photo courtesy of Oscar Resto, KP4RF]



Puerto Rico Section Manager Oscar Resto, KP4RF, installs an antenna at Red Cross Headquarters in San Juan.

ARRL is shipping six VHF/UHF base/repeater antennas and six 50-foot rolls of LMR-400 coax through the Ham Aid Fund. Resto said a new Red Cross warehouse will be placed in Mayagüez, where he will install a third station for backbone communication. "That is the reason for the new antennas," he said. "We already have the radios. In case we need to escalate to HF, we are ready with ARRL go-kits from Hurricane Maria."

A lot of seismic activity was reported on January 15. "Many more or less 3.1 quakes were felt during the day," Perez said. That included a magnitude 5.1 temblor that shook the facilities.

The ARES team in Yauco has also been handling health-and-welfare traffic from the earthquake zone. Operations are running from 9 AM until 5 PM each day.

A magnitude 6.4 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 most homes are no longer habitable.

HELP WANTED

We are in need of a co-editor for our monthly Listening Post. The job duties are to collect the articles from various authors/members within the club and on the Board of Directors. Gather other information pertinent to creating a newsletter. Afterwards provide the President with a print ready copy of the newsletter for publication to the membership.

You will be working with another co-editor and as in the past, one co-editor takes one month the other co-editor takes the following month, creating a monthly rotation. Having some editing and newsletter creation is a huge plus. Patience dealing with volunteer authors is golden!!

If you are interested, please contact John Knott, N4JTK at jknott@oarc.org . If you have any examples of your work you want to send, please do so.





Weekly Radio Network Meetings

Mon @ 20:00	147.460	Seminole ARES Net
Tues @ 19:00	145.350	Osceola ARES Net
Tues @ 19:30	147.195	Quarter Century Wireless Association
Tues @ 20:00	146.760	Wayne Nelson Trader's Net
Wed @ 19:00	147.300	Disney Emergency Amateur Radio Service
Wed @ 21:00	432.090	Florida Weak Signal Group
Thur @ 19:00	443.050	Orange County ARES Net
Thur @ 20:30	432.090	Florida Weak Signal Group

OARC Meetings and Events 2020

February 5, Wednesday	Meeting, 7:00pm (Central Florida Fair Grounds)	
February 7-9, Friday - Sunday	HamCation SM 2020	
March 4, Wednesday	Meeting, 7:30pm at the Beardall Center	
March 29, Sunday	American Diabetes Association Tour de Cure	
April 1, Wednesday	Meeting, 7:30pm at the Beardall Center	
May 6, Wednesday	Meeting, 7:30pm at the Beardall Center	
June 3, Wednesday	Meeting, 7:30pm at the Beardall Center	
June 26-27, Saturday and Sunday	ARRL Field Day	
July 1, Wednesday	Meeting, 7:30pm at the Beardall Center	
August 5, Wednesday	Meeting, 7:30pm at the Beardall Center	

September 2, Wednesday	Meeting, 7:30pm at the Beardall Center	
October 7, Wednesday	Meeting, 7:30pm at the Beardall Center	
November 4, Wednesday	Meeting, 7:30pm at the Beardall Center	
December 2, Wednesday	No Club Meeting	
December 5, Saturday	Christmas Party	





OARC Membership Application

Make Checks payable to: Orlando Amateur Radio Club, OARC

Orlando Amateur Radio Club Post Office Box 574962 Orlando FL 32857

To have your membership card mailed to you, please include a SASE with your check.

Date://20 [] Regular Member [] Family Member [] Associate Member [] CMP				
Name:	Call	Class		
Address:		_		
City	_ State Zip	_		
E-mail Address (print)		_		
(Home) Phone:	(Cell) Phone	Birth Month		
Rates: Regular [] 1 year \$15.00 [] 3 years \$40.00 [] 6 years \$75.00				
Rates: Family [] 1 year \$5.00 p	er family member Husband, Wife	e or Child under 18		
Rates: Associate [] 1 year \$15.00		Dues Total:		
All Membership(s) will expire ONE year from date paid. Other Club Affiliation: Are you an ARRL Member: [] Yes [] No				
Name Badges: White letters on Black background with Gold embossed OARC logo.				
[] Regular 3" x 1.5" @ \$10.00 e	each			
Name:	Call			
All badges are to be picked up at the General meeting or add \$2.00 for shipping & handling.				
Shipping & Handling: [] Yes [] No			
	Badges S&H	Total		