

BIARC meets at 2 p.m.  
Saturday, Feb. 9, at the  
Keaau Community Center

## February 2019 Newsletter

**Big Island Amateur Radio Club**

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~ New General  
license test  
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~ BIARC  
triplets?  
~ BI Technician  
training schedule  
~ Waimea  
Hamfest set for  
Feb. 2

## All welcome at annual Waimea Hamfest

Kohala Hamakua  
Radio Club invites all  
hams to fun day of  
isle-wide networking

The Original Big Island of Hawaii  
International Swap meet / Ham  
Fest will be Saturday, Feb. 2, at  
the Waimea Community Center,  
next to the ballfield off  
Mamalahoa Highway in Waimea  
(Kamuela).

There will be a \$10 donation per  
table per seller, with a \$5  
donation per attendee at time of  
registration.

#### Schedule:

8:00am - breakfast at Hawaiian  
Style Cafe

9:00am - vendor setup

9:30am - Doors open to public.  
Be sure to get your raffle tickets  
for the "Big ticket items."

11:00 am - 12:00 pm -  
EMCOMM forum - Presentations in  
adjoining room.

12:00pm - Swap meet closes

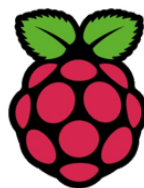
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***TINY, BUT MIGHTY -- In  
January, Pascal  
discusses applications  
of multifaceted mini  
computer Raspberry Pi  
in ham radio. (KE6TIS,  
WH6LQ photos)***

## Pascal offers Raspberry Pi basics

For most of us, Winlink  
has only been accessible  
by using Winlink Express  
on a Windows PC. I have  
the latest version  
(1.5.15.0) installed on  
my Windows  
laptop, and it  
has worked  
well. However,  
I have been  
looking at the  
possibility of running  
Winlink from a Raspberry  
Pi.



A Raspberry Pi is a  
single board computer



which is small and  
relatively inexpensive  
and can run various  
operating systems. I  
run Raspbian Linux on  
my Pi-s. It is small, light,  
and requires only a 5V  
(USB type) power  
supply, typically using  
2W or less. It is ideal for

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**Waimea Hamfest memories, above and below, courtesy of BIARC photographers.**

## *Waimea Hamfest:*

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1:00pm - VE testing (a good time to upgrade your license)

2:00pm - Event comes to a close

Guest speakers: This year we are planning to have a forum about emergency communications on Hawaii Island. We will have moderated round table discussions. Among the topics for discussion:

Exercise planning, community relationships, digital formats, repeater systems, and how better to organize our island communication resources. All Hams interested in emergency communications are invited.

Testing: Persons desiring to test for initial license or upgrade are asked to please bring a current drivers' license or passport, a copy of their current FCC license or CSCE if applicable, and \$15.00 in exact change (ARRL fee for 2018). Any questions,



please call Steve Milner, ARRL VE, at 808-938-8437 before the test date.

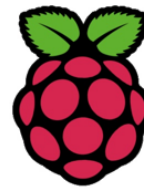
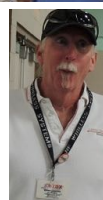
More information: There will be surprise giveaways throughout the day.

(Please note: This is a non-commercial event that promotes the trading of equipment and information between hams and the general public and to promote the open exchange of exploring Ham radio as a hobby.)

Talk in 146.940 Maui Repeater, 147.32 Waimea, and 443.650 (100 Hz tone) Kona. This is sponsored by the Kohala Hamakua Radio Club (KHRC).

This is an island-wide event, so be sure to tell all your radio friends.

See you there!  
**Steve Milner, WH6N**  
(For more info, contact him at [wh6n@arrl.net](mailto:wh6n@arrl.net))



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emergency, portable, and go-kit usage.

Quite a few of us have wondered about using Winlink on a Mac or Linux machine, or even on a Raspberry Pi. Until recently, that was difficult to do. Then along came a ham developer in Norway, LA5NTA, Martin, who wrote a very helpful program called PAT (<http://getpat.io>). It is an open source cross-platform client for Winlink that runs on Windows, MacOS, Linux, and even on a Raspberry Pi. So, I decided to try it out.

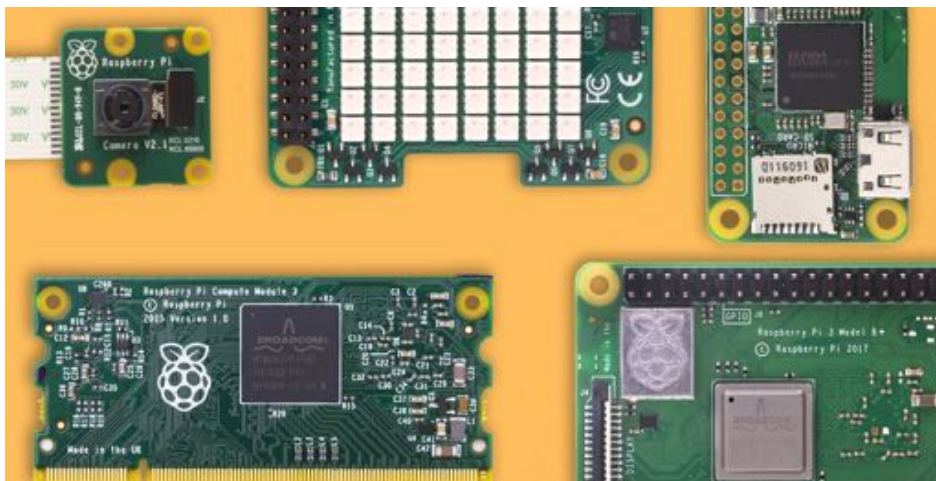
I downloaded PAT and the ARDOP software modem (<http://www.cantab.net/users/john.wiseman/Downloads/Beta/> -- get piardopc) and hamlib (<https://hamlib.github.io>). I had to build the latest release of hamlib (3.3 beta) in order to get rig control for my IC-7300.

I found a very helpful series of videos on YouTube by Jason, KM4ACK, showing how he installed PAT on his Raspberry Pi, and got it working with ARDOP, the new Winlink software modem that supercedes Winmor. Here is a link to the 4 videos by KM4ACK: <https://www.youtube.com/playlist?list=PL1QTYT4Qo9cY98NFmxrTvtGyWI9pgxtFq>

This reproduces what I did to install Pat/ARDOP/hamlib on my RPi, except that he does

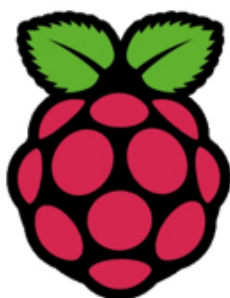
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Say the folks at Raspberry Pi headquarters:

“Our mission is to put the power of computing and digital making into the hands of people all over the world. We do this so that more people are able to harness the power of computing and digital technologies for work, to solve problems that matter to them, and to express themselves creatively.”  
(<https://www.raspberrypi.org/>)



RaspberryPi



## Memo in triplicate

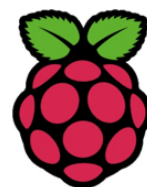
AH7J, NH7FY and AH6G show team pride at January meeting, modeling matching-color BIARC shirts. From left: former club Presidents Bob Schneider, Barbara Darling and Richard Darling.

**Photo by Peggy Gentle, KH6TIS**

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not cover building hamlib from source.

I have found the Pat/ARDOP/hamlib on the RPi to work very well. I have connected to many HF RMS stations, including NH6NN, WH6FG, and KH6SF, as well as other distant stations, with great success. I have sent and received email and attachments. It works as well as my Windows Winlink Express.



I have also made several peer-to-peer connections (thanks to WH6FAM - Trip) both as listener and originator. Works great!

The only downside at this point is that PAT is not integrated with the ITS HF Propagation prediction program that Winlink Express does. Also, at the moment there are no pre-defined forms (ICS, etc.). However, it is easy to send any file that you desire as an attachment to an email.

I've tried it, and it works well.

The Raspberry Pi Winlink setup using PAT is a great tool for normal or emergency Winlink use. I highly recommend it. If there are any questions about this project, I'd be happy to respond.

**73, Pascal Nelson,  
AC7N  
[ac7n@arrl.net](mailto:ac7n@arrl.net)**



**Pascal Nelson, AC7N.**

Hello everyone. We are now well into the New Year of 2019. So, let's get started on this year's activities.

Coming up on Saturday, February 2 is The Original Big Island of Hawaii International Swap meet / Ham Fest in Waimea. Debbie and I will be there representing the ARRL and talking to people about the benefits of membership, and what the ARRL has done over many decades for our ham radio hobby.

In addition to the swap tables, there will be an EMCOMM forum that I will be participating in. It has been and remains an important aspect of the ham radio hobby to engage in service to your communities during times of emergency using your ham radio skills and equipment.

This forum is an important opportunity for you to sync up with other Big Island hams who are working to better understand and address the unique (and not so unique) emergency response challenges of our island home.

I hope many of you will take advantage

# The President's Paragraphs

of this forum to learn from others as well as to share your thoughts and concerns .

Another activity coming up this year (as ever) is ARRL Summer Field Day on the weekend of June 22-23.

This is always a fun and educational time for us. We have been offered the chance to use the facilities at Reed's Bay Resort Hotel, as we did last year. However, we need to know whether this is acceptable to those who plan to participate. Do you have other suggestions and recommendations? Please come to the February meeting ready to discuss this, as well as begin to make further plans and set goals for this event.

At each monthly meeting of BIARC we try to have an engaging and educational presentation or activity. We (myself and the BIARC Board) would like to know what kinds of presentations and activities you would like to see.

What sorts of questions, topics, or workshops would you like to see? What types of presentations and activities do you enjoy? Please let us know so that we can further develop this important aspect of our club meetings.

As always, we are committed to keeping the communications lines open. Isn't that what we are supposed to be good at as hams? So, the more you communicate with each other, and with me and the other officers of the club, the better we can make the BIARC experience.

Aloha,

**Pascal ac7n**



## **BIARC Meeting Minutes Saturday, January 12, 2019**

The meeting was called to order by President, Pascal Nelson, AC7N, at 1400.

### **Announcements:**

There is a testing session in the adjoining room today.

A new newsletter mailing list is being developed. Contact Pascal if you are not receiving newsletters.

Hawaii Section SCM, Joe Speroni, complemented the club on its fantastic newsletter. Thanks, Leigh, for your great work.

### **Budget for 2019:**

Pascal asks that we delay the budget discussion and approval for a month. So-moved by Mark, WH6FSA and seconded by Peggy, KE6TIS. Motion passed. NOTE: Tony, WH6DVI, has a spreadsheet prepared and can send it by email to member upon request.

### **Memberships:**

Dues are due for 2019. Regular Membership: \$20. Family Membership: \$30. Associate Membership: \$10.

### **Repeater Trustee:**

Paul, WH7BR, is the club's trustee. All repeaters systems are monitored by the trustee or other designated club members.

### **Additional topics:**

Bob Schneider, AH6J, would like to pass the KH6EJ webpage to another club member. This is not the BIARC Club site and is likely the responsibility for entries on QRZ.com or other ham-related group sites. Interested members should contact Bob for details.

Leigh, WH6LC, discussed her recent favorable experiences with Battery Bill's (76 Keaa St, Hilo, HI 96720) and the owner's interest in supporting BIARC and its activities – especially Field Day.

Barbara, NH7FY, noted that John Bush (KH6DLK/V63JB) is currently on YAP and will return to Hilo in March.

Elizabeth, WH6FKT, announced that the Puna Emergency Radio Club (PERC) holds a net on Wednesday nights beginning at 1900. The net starts on the 146.16/76 repeater and then moves to 52 simplex. Sean Fendt, KH6SF, is making a simplex coverage map for east Hawaii based upon the simplex results during

this net. Interested hams are encouraged to check-in.

This sparked a brief conversation about NVIS results during HF nets on 60 and 80 meters when 40 is poor.

### **New Members:**

Alan Okinaka, WH6FZD is currently seeking his uncle's call: KH6APU

Roy Kunishige, WH6FYK

Les, K0BAD, discussed issues with the current BIARC Club Bylaws that make it difficult to keep track of board member terms. He also noted that the current BIARC Club Bylaws do not state the size of the BIARC Board. He presented a different set of Bylaws (along with a separate constitution) to Leigh and Pascal for their review and they both thought this might be a route worthy of pursuing.

Les moved that Pascal create an Ad Hoc Committee to study these documents, modify them as needed and then to present them to the BIARC Club at its March 2019 meeting for possible future adoption and a possible vote in May. Hank, KH6HAK seconded. Motion passed.

Committee Members: Chair: Les, K0BAD, Leigh, WH7LC, William, NH7ET, and Alan, WH6FZD.

Pascal called for a break for pupus at 1444.

The meeting resumed with the program at 1500

Pascal discussed applications of the Raspberry Pi in amateur radio. These included Winlink on PI, FLDIGI on PI, WSJX on PI. Moreover, the Pis can be used for DMR/Fusion/P25 hotspots. Most of the applications use HamLive software libraries.

Pascal also discussed and demonstrated a Pi application that he plans on putting in airplane wings for detecting and reporting orientation directional, and acceleration data. This is particularly important information when flying gliders.

The meeting was adjourned at 1545.

Respectfully submitted,  
**Leslie D. Hittner, Secretary**

## **Morse Code classes underway**

Hi all, and a Happy 2019. Here's to good propagation, interesting new communications technology and fun in training and learning from new hams.

### **Morse Code Classes**

Alan Maenchen (AD6E/KH6TU) let us know his 2019 CW class started with three Hawaii Amateurs and two from the west coast, the preferred class size for one-on-one training.

His next class begins in April. Register early to reserve a seat.

This is an on-line video chat meeting twice a week for eight weeks for an hour each. Exact days and time could change depending on student availability. Since this is an internet based virtual classroom, no commute is needed. You can do this from home. Technician class hams can participate and practice their skills on their 80, 40, 15 and 10 M CW allocations.



Students must practice on-line with MorseTrainer to learn characters and numbers for an hour a day, then put them to use in an actual CW QSO. No prior CW experience required for Level 1 classes. Levels 2 and 3 classes improve CW proficiency.

More information at: <https://cwops.org/cw-academy-2/> Alan can be contacted by email at his ARRL.NET address.

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Blog - <https://oahuarrlnews.wordpress.com/>  
LinkedIn - ARRL Pacific Section

### **ARRL Pacific Section**

**Section Manager: Joseph Speroni, AH0A**  
**ah0a@arrrl.org**



## **Now open in Hilo**

Honolulu's big battery store, Battery Bill's, has opened a branch in Hilo at 76 Keaa Street, behind Hilo Mazda and across the street from the Fire/Rescue Station. Stop by and meet operator Danny Baldwin and his son, Isaac.

Hours: 8 a.m. to 5 p.m. Monday through Friday. Phone: 498-0698.

([www.batterybill.com](http://www.batterybill.com))

## **Radio operators needed for Big Island International Marathon in March**

Every spring, the Puna Emergency Radio Club provides communications for the annual Big Island International Marathon in Hilo.

All licensed radio amateurs are invited to volunteer for the fun community event set for Sunday, March 17.

It's a prime opportunity to practice in-the-field radio skills, learn new operating techniques and network with fellow hams and others who help with the marathon. Setup begins at about 5 a.m.

Interested?

Contact comms coordinator Sean Fendt, KH6SF, at 430-1884, email [sean@sfendt.net](mailto:sean@sfendt.net).

## **Welcome to new licensees Mohica, Pahio**

Charles E. Mohica and Max S. Pahio passed their Technician License exams during the BIARC meeting on Jan. 12.

Congratulations to the new hams and looking forward to hearing you on the air.



## ***Big Island Tech License course schedule for 2019***

Doug Wilson has announced the year's free amateur radio Technician License courses. The six-week classes include five training sessions, with licensing exams given on the final week.

The starting dates are: 6:30 p.m. Feb. 8 at Aupuni Center, Hilo; March 14, West Hawaii Civic Center, Kona; May 23, Waimea (TBA); Oct. 17, Keaau Community Center. (Due to a scheduling conflict, the Discovery Harbor classes in Ka'u have been changed to the following dates: April 19, 26; May 3, 10, 17, 24.)

The classes are free, with the normal \$15 testing fee to ARRL, whose volunteer VEs (volunteer examiners) conduct the testing for the Federal Communications Commission. As always, current licensees wanting to upgrade also may take tests for advanced licenses at that time. To register for the Tech training classes, or for more info, contact Doug, KH7DQ, at [douscelle@aol.com](mailto:douscelle@aol.com).



### ***ARRL podcast aimed at newbies***

For those just getting started on their Amateur Radio journey, ARRL is launching a new podcast aimed at answering your questions, providing support and encouragement for newcomers to get the most out of the hobby. The podcast, "So Now What?," will launch on Thursday, March 7, and new episodes will be posted every other Thursday, alternating new-episode weeks with the "ARRL The Doctor is In" podcast.

Co-hosting "So Now What?" will be ARRL Communications Content Producer Michelle Patnode, W3MVP, and ARRL Station Manager Joe Carcia, NJ1Q. Presented as a lively

## ***Education***

conversation, with Patnode representing newer hams and Carcia the veteran operators, the podcast will explore questions that newer hams may have and the issues that keep participants from staying active in the hobby. Some episodes will feature guests to answer questions on specific topic areas.

"No other podcast is really aimed at this segment of the Amateur Radio community...that is being underserved, that is not getting the answers to the many questions they have," said ARRL Communications Manager David Isgur, N1RSN, who will serve as the

# ***"So Now What?"***

***Hosts of the new ARRL podcast aimed at helping newly licensed hams are Michelle Patnode, W3MVP (left), and Joe Carcia, NJ1Q.***

podcast's executive producer. Topics to be discussed

in the first several episodes include getting started, operating modes available to Technician licensees, VEC and licensing issues, sunspots and propagation, mobile operating, contesting, Amateur Radio in pop culture, and perceptions of Technician license holders.

Given the growing popularity of podcasts, Isgur believes that providing this information in a podcast format will be a very effective method of reaching out and engaging this particular part of the Amateur Radio community, which is

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important for building and maintaining Amateur Radio interest and activity.

Patnode said she is excited to ask questions she has about different aspects of Amateur Radio, such as how to incorporate ham radio with newer technologies like Raspberry Pi computers and Arduino microcontrollers, and to learn more about the hobby right along with the audience.

Carcia believes the "So Now What?" podcast will be a perfect complement to the podcasts that the ARRL already offers -- "ARRL The Doctor Is In" and "ARRL Audio News."

In addition to serving as co-host, Patnode is also the audio editor/producer of the podcast. ARRL Graphics Department Supervisor

### ***Attend MIT radio talks, courtesy of Internet***

The MIT Radio Society (W1MX) and the Department of Electrical Engineering and Computer Science (EECS) are hosting a series of public lectures on "everything radio." The lectures, presented by academics and industry professionals, will be held every Tuesday at 5:30 PM ET in Building 3, Room 270. Sessions will also be live-streamed via YouTube, courtesy of MIT Student Cable (January 8 lecture) and archived.

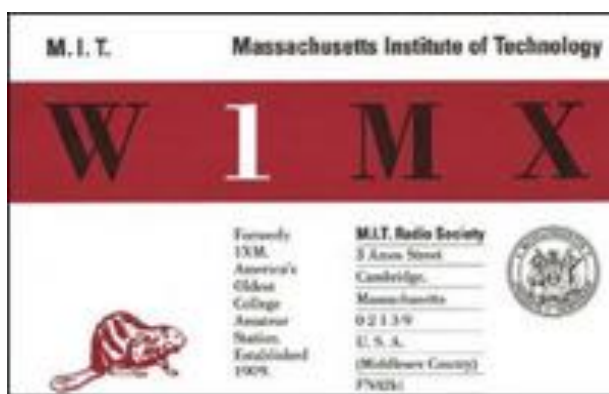
Each self-contained talk will address a different facet of radio, ranging from modulation, propagation, and Amateur Radio, to radar, radio astronomy, space-based applications, and cellular and 5G



Sue Fagan, KB1OKW, designed the podcast logo, and ARRL Radiosport Administrative Manager Sabrina Jackson, KC1JMW, will voice the introduction and closing.

Listeners can find the "So Now What?" podcast at Blubrry.com, Apple Podcasts, Stitcher, or wherever you get your podcasts. Episodes will also be archived on the ARRL website.

"So Now What?" will be sponsored by LDG Electronics, a family owned and operated business with laboratories in southern Maryland that offers a wide array of antenna tuners and other Amateur Radio products.



technology.

No prior experience with radio is necessary. All are welcome to attend individual lectures or the entire series. The schedule and speakers list is on the EECS Independent Activities Period (IAP) page, under the Radio Technology, History, and Applications tab (click "Expand All" to view). For more information, contact Daniel Sheen, KC1EPN.



## ***Countdown to Third Annual AM Rally has begun***

The third annual AM Rally is on the near horizon, beginning at 0000 UTC on February 2 and continuing until 0700 UTC on February 4. The event aims to encourage the use of AM on 160, 80, 40, 20, 15, 10, and 6 meters while highlighting the various types of AM equipment in use today.

The event is open to all radio amateurs running AM using any type of radio equipment -- modern, vintage, tube, solid-state, software-defined, military, boatanchor, broadcast, homebrew, or commercial. It's an incentive to dig out that old AM-capable tube gear that's collecting dust and spiderwebs in the attic or basement.

"We're very excited about the upcoming AM Rally in February, given its growth over the past 2 years and the positive comments we've received," said Clark Burgard, N1BCG, who is spearheading the event with Steve Cloutier, WA1QIX, and Brian Kress, KB3WV. "In particular, it's great to hear how so many ops are giving this classic mode a try, many for the first time, and of the help offered to them by those who have mastered the technology."

For many, if not most, radio amateurs getting on AM is as simple as pressing the AM mode button on the front panel. Numerous transceivers in use today offer AM capability. A lot of hams enjoy restoring and using vintage Amateur Radio equipment, which typically means a separate transmitter and receiver. Until SSB subsumed it on the ham bands, AM was the primary HF voice mode.

Today, a group of dedicated radio amateurs keeps the flame alive, getting on AM frequently, and for many of them, AM is their primary operating mode. The AM Rally gives the



***AM superstar Tim Smith, WA1HLR, with the Gates BC-1T AM broadcast transmitter he helped to restore for occasional use under W1AW or under the ARRL Headquarters Operators Club call sign, W1INF.***

uninitiated a chance to dip a toe into the pool, so to speak.

The event website has complete AM Rally details, contact information, award categories, logging, and tips on how to get the most out of your station equipment in AM mode. Contact Clark Burgard, N1BCG, for more information.

The event is sponsored by Radio Engineering Associates (REA), in cooperation with ARRL, which supports all modes of Amateur Radio operation. W1AW will play a leading role in the event, as it has for the past 2 years.

Certificates will be awarded to stations scoring the highest number of points in each of the five power classes, regardless of rig category, both for most contacts and most states/provinces.

### **Aloha Chapter of 10-10 International**

**Local hams active on 10-meters encourage amateur radio licensees at all levels to join in the fun.**

**[More info on the world of Ten-Ten is available on Facebook and at <https://www.ten-ten.org>]**

## ARRL Board issues statement on Amateur Radio Parity Act

At its annual meeting Jan. 18-19, the ARRL Board of Directors decided that the organization needs to "review, re-examine, and reappraise ARRL's regulatory and legislative policy with regard to private land use restrictions.

"In order to effectively undertake such a review, the Board adopted a resolution to withdraw its Dec. 18 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), without prejudice to refiling.

The resolution also is asking members of Congress who had refiled legislation to enact the Amateur Radio Parity Act (ARPA) to refrain from seeking to advance that legislation pending further input from ARRL.

Board members noted that ARRL has been pursuing adoption of the ARPA for the past several years, and that objective has not yet been achieved.

While everyone understands that getting Congressional approval on any matter can be a lengthy process, the

difficulties getting the ARPA approved has been a source of frustration to the organization and its members. A majority of the Board now believes that there is a need to reassess the organization's approach to this issue.

The Board wants to make clear to its members, and to those whose policies and conduct prevent or impair the right of US Amateur Radio operators to operate from their homes, that this pause is not, and should not be interpreted as an abandonment of its efforts to obtain relief from private land-use restrictions. The

Board noted that its intent is "to renew, continue and strengthen the ARRL's effort to achieve relief from such restrictions." This action represents a chance to get the best product possible for all US Amateur Radio operators.

The Board expressed its sincere appreciation to the thousands of ARRL members who took the time to contact their representatives in Congress to urge them to support the Amateur Radio Parity Act. The Board also offered its thanks to those members of Congress who have consistently and continuously supported the rights of US Amateur Radio operators.



### ***The latest General-class Question Pool, effective July 1, has been released***

The National Conference of Volunteer Examiner Coordinators (NCVEC) Question Pool Committee has released the 2019 - 2023 FCC Element 3 General Class Question Pool into the public domain. The 2019 - 2023 General Class (Element 3) Question Pool is available in Word, ASCII text, and PDF versions. The new Question Pool is effective for Element 3 exams administered on or after July 1, 2019. On January 6, the Question Pool Committee also released a revised diagram Figure G7-1 (PDF) (JPG), as part of the new Element 3 Question Pool. -- Thanks to NCVEC Question Pool Committee





# ***New ARRL CEO wants to "Start a Conversation"***

In his first appearance at a ham radio event, ARRL CEO Howard Michel, WB2ITX, told Ham Radio University 2019 attendees on January 5 that he was there to initiate a dialogue on what will make ARRL more successful in its missions amid a changing Amateur Radio environment. Michel became ARRL CEO about 3 months ago.

"What I'm here for is to start a conversation," Michel told his audience at New York's Long Island University. "I'm starting conversations everywhere I go to find out, by talking to people, what's really important."



**ARRL CEO Howard Michel, WB2ITX.**

In his view, Michel said, ARRL is a membership organization, a business, and a 501(c)(3) public charity that exists for the public good. "All three of those must exist in balance," he said, adding that the balance has been lost. He said changes need to be made in how ARRL is organized and how it operates, and made clear during the post-presentation Q&A that he sees himself as an agent of change.

In terms of a membership organization, Michel said ARRL's some 157,000 members, local clubs, and headquarters staffers should form a three-way partnership. He conceded that the links among those components "are shaky at times," due to a lack of understanding and differing expectations.

Citing ARRL publications as an example, Michel pointed out that the way people get information today is far different than what it was 50 years ago. ARRL's business of the future will be based upon the creation of value. "If we don't create the value and deliver the value, then we're not really an

advocate," he said. "ARRL is uniquely positioned to create, curate, and deliver information about Amateur Radio. The way that information is created and delivered is changing, and if we don't change with that, we're not going to be the dominant provider."

ARRL membership is falling behind in terms of a percentage of licensees. "We need to turn that around," Michel said.

In terms of numbers, out of some 30,000 new licensees each year, some 17 - 18% join ARRL, and after 1 year, 61% remain. "Why are we not getting 100% of those new hams?" Michel said. Because 80% of the new licensees took their exams through ARRL VEC, Michel said their lack of interest in joining ARRL suggests "something is wrong in the value proposition." More telling, he continued, is the fact that ARRL membership is falling behind in terms of a percentage of licensees. "We need to turn that around," he said, if ARRL is to continue representing itself as speaking on behalf of Amateur Radio.

Part of the problem lies in current demographic trends in membership. Most ARRL members are Amateur Extra-class licensees, while a larger majority of those who have never been members are Technician licensees. Active radio amateurs are 33% more likely to join ARRL, Michel pointed out. He said a significant majority of non-member Technician licensees have indicated they would like training and support for newcomers, courses for licensing and practical radio operating, training for public service and disaster communication volunteers, and continuing education on technical topics and "online live help" to learn more about ARRL and ham radio.

"We've got them through the test to get their license, and then we've dropped them," Michel said. "We've got to fix that." ARRL members do not represent a monolith, but have individual niches in a spectrum spanning communications, service, technology, and hobby.

"Let's think about an average person with some kinds of traits and how you market material to them," Michel proposed. "I'm trying to start a conversation with everybody about how to start something new."

# ***Ailing Space Station transmitter back home for possible repairs***

The malfunctioning Amateur Radio on the International Space Station (ARISS) "HamTV" transmitter now is back on Earth for repair or replacement, and it likely won't be until sometime in 2020 at the earliest that Amateur Radio TV (DATV) capability will be restored to the orbiting laboratory. Onboard repair was not possible.

Also known as "Ham Video," the DATV system transmissions were not seen by ARISS ground stations as of last April, and a subsequent test using a second L/S band patch antenna on the ISS Columbus module failed. Since February 2016, the DATV transmitter has served to provide a visual dimension to ARISS school and group ham radio events.

Late last year, the ISS crew packed the HamTV unit and stowed it on the SpaceX-16 Dragon vehicle, which undocked and departed from the ISS on January 13. The HamTV unit returned to Earth when Dragon successfully splashed down in the Pacific Ocean, the first nighttime splashdown and recovery of a Dragon vehicle.

ARISS Ham Project Coordinator Kenneth Ransom, N5VHO, told those attending the January ARISS meeting that the HamTV unit would be processed and sent to NASA's Johnson Space Center. In time, ARISS will



***European Space Agency Astronaut Tim Peake, KG5BVI/ GB1SS, was the first to use HamTV for an ARISS school contact.***

coordinate shipment of the unit to Kayser-Italia, which built the transmitter, where it will undergo a full failure investigation by ARISS, AMSAT-Italia, and the Kayser-Italia team. Depending on the outcome of the inspection, ARISS will decide the best way to move forward.

ARISS expressed gratitude to NASA, CASIS, and the team working with NASA Ham Payload Integration Manager Mitch Polt for organizing the return of the unit.

Given various handling protocols, the unit is not expected to be received by NASA until this spring, and tests in Europe not completed until this fall.

If the HamTV unit is able to be repaired or refurbished, another wait would ensue. Documentation is required 50 days before a safety certification meeting, and all must be approved 2 months prior to launch, which could take place in a little more than a year. ARISS said it also will prepare for the possibility that repairs are not feasible and be ready to move forward with a new, improved HamTV unit.



## **December YOTA Month activity records more than 80,000 contacts**

More than 80,000 contacts went into logs at YOTA suffix stations and others participating in December Youngsters on the Air (YOTA) Month, with most operations in International Amateur Radio Union Region 1 (IARU-R1).

The final tally included 46,989 on SSB, another 28,064 on CW, some 3,814 on FT8, and the rest on various other modes.

"This year, as many as 44 participating stations made 82,938 QSOs in December, proving once again that neither the weather nor the holidays can keep a radio amateur away from the station," Gergana Ruseva, LZ1ZYL, said in the 2018 YOTA Month report.

Ruseva said YOTA was happy to bring young radio amateurs together by hosting this event, which "inspires them to be more active on the bands and shows them there are many people listening on the other side."



***YOTA Month station OL18YOTA was operated during December from several places within the Czech Republic. [Photo courtesy of YOTA]***

The most active station during YOTA Month 2018 was I15YOTA in Italy, which logged 8,387 contacts.

The preferred bands turned out to be 40 and 20 meters, with more than 30,000 contacts logged from YOTA Month participants on each band. Complete statistics are on the YOTA website.

YOTA also has announced that the YOTA Youth Sked will start up again in 2019.

The on-the-air event will take place every fourth Thursday from 1900 to 2200 UTC, with a different group of youngsters acting as net control.

The YOTA Youth Sked will convene on or about 7.175 MHz, shifting later to 3.675 MHz.

## **ISS Fan Club Website closed; new ISS Fan Club Site opened**

The ISS Fan Club website closed on January 1, 2019, after nearly 17 years. The site offered information on tracking the International Space Station and on crew activity. It provided frequencies and ISS digipeating assistance, as well as a place to showcase ISS slow-scan TV (SSTV) images and to meet fellow ISS fans.

Brian Clark, KF6FES, has told ARRL

that one of the founding members of the ISS Fan Club site, Claudio Ariotti, IK1SLD, and several members of the ARISS team, including Clark, have launched a new ISS Fan Club site. "This new site is growing by the day, and very soon we will also offer much of the historical voice QSOs from the original site, as well as SSTV photos," Clark said. An unrelated International Space Station Fan Group Facebook page offers similar information.

## ***SRTTY and FT8 successfully coexist in 2019 ARRL RTTY Roundup***

Coordinators are pleased that RTTY and FT8 successfully shared spectrum during the ARRL RTTY Roundup over the Jan. 5-6 weekend. The event saw a dramatic uptick from last year in the number of logs submitted, noted ARRL Contest Branch Manager Bart Jahnke, W9JJ.

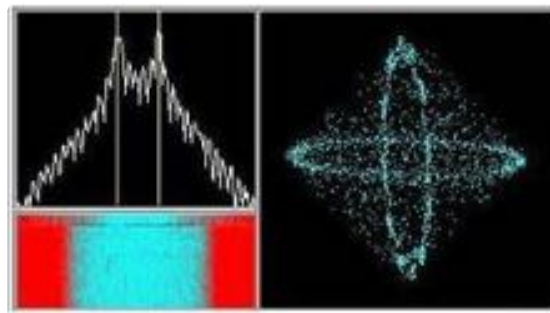
"The 30th running of the ARRL RTTY Roundup is now in the books," Jahnke said. "All indications are that the event -- in both RTTY and other digital categories -- gained significant additional attention and increased popularity with the inclusion of FT8 in the digital lineup." Jahnke said digital operating experience gained through the RTTY Roundup should benefit participants in VHF contests, where WSJT-X protocols such as JTx, MSK144, and FT8 continue to gain popularity as a means to work hard-to-reach grids beyond the usual 400-mile tropo-scatter range, and for slower activity periods.

The inclusion of FT8 for the first time in the RTTY Roundup had generated considerable pre-contest debate, but when all was said and done, many stations tended to operate one mode or the other, although some took advantage of both (and perhaps of other digital modes), judging from logs posted on the 3830 scores website.

The RTTY Roundup came close on the heels of the inaugural FT8 Roundup over the first weekend in December, which was deemed a success (it was the first-ever contest for the winner -- only licensed for 2 years -- and for one other Top 10 finisher).

Alex Panoiu, YO9HP, in Romania, said he was initially hesitant about the idea of mixing RTTY and FT8, but he set up for both modes anyway. "Definitely in the first hours, the rates were three times higher in RTTY compared to FT8," he said in his 3830scores comments. "But later, when less 'fresh meat' was available in RTTY and propagation became marginal, FT8 became interesting. I noticed that most of the calls worked in FT8 never appeared in my RTTY log." He logged 369 digital contacts and 639 RTTY contacts.

The WW4LL Multi-Single, High Power team made



about one-third of its contacts using digital modes. J42L, operating Multi-Single, Low Power from SV2DCD, avoided RTTY altogether, logging 535 digital contacts.

FT8 co-developer Joe Taylor, K1JT, operating Single Operator Unlimited, Low Power, used only FT8, logging 585 contacts. He noted "close to zero" inter-mode interference between RTTY and FT8 signals.

NCJ Digital Contesting Editor Ed Muns, W0YK, said he was very impressed

with how the first RTTY Roundup to permit FT8 worked out.

"FT8 has significant advantages for a much larger group of contest participants who are constrained by geography, housing limitations, solar conditions, power, and noise," Muns said. "The amazing explosive growth of FT8 activity since its introduction in mid-2017 also means that there are many more participants for all of us to work in contests."

Muns said he initially didn't believe that RTTY and FT8 could coexist in the same contest.

"Of course, like many things we can debate ad infinitum, a little bit of actual experience goes a long way to inform our [preconceived notions]," he added.

"I'm very impressed with how it all worked out."





## Factoids on fulfillment

According to the Harvard Grant & Glueck Study, which tracked more than 700 participants over the course of 75 years, the key to long-term happiness and fulfillment comes down to a single factor: the quality of our relationships.

The root of happiness is not money, fame, or good looks — it's the people we choose to surround ourselves with and how well we nurture our relationships with them, the researchers have concluded.

Robert Waldinger, director of the Harvard Study of Adult Development, explained that: "The clearest message that we get from this 75-year study is this: Good relationships keep us happier and healthier. Period."

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