



December 2017 Newsletter

Big Island Amateur Radio Club

Annual Christmas potluck, festivities at December meeting

All invited to holiday party at Keaau Community Center

Ragchewing face-to-face is one of the highlights of the annual club Christmas party. Everyone's invited to the fun event, to be held during our regular club meeting at 2 p.m. Saturday, Dec. 9, at Keaau Community Center.

Barbara Darling will cook a ham, Paul Ducasse will bake a turkey, and the rest is up to the rest of us. So, bring along a potluck dish of whatever you like to eat during the holidays. Over the years, the repast has been creative, colorful, and full of flavor and aloha.

The club will provide coffee and tea, or bring your (non-alcoholic) beverage of choice. In addition to the fine dining, there will be a short business meeting and installation of our 2018 slate of officers: Pascal Nelson will lead BIARC as president, with Vice President Peggy Gentle, Secretary Les Hittner, Treasurer Paul Ducasse and directors Gary Schwiter, Kim Fendt, Cory Allen, Bill Hanson, Barbara Darling and Bob Schneider.



At last year's party, 2016 President Bob Schneider pays a visit to the dessert corner.

**-- Photo by
Linda Quarberg**

Road trip to Waimea Hamfest for our January meeting

BIARC will take our January meeting on the road, since the annual hamfest (postponed from Nov. 4) will be held on the same day as our monthly meeting.

Hamfest activities will get underway at 8 a.m., with a breakfast get-together at the Hawaiian Style Cafe. Vendor setup starts at 9 a.m., with doors opening at 9:30 at the nearby Waimea Community Center.

Officially known as the Big Island

of Hawaii International Swap Meet/Hamfest, the event is sponsored by the Kohala Hamakua Radio Club (Website: <http://www.hamradioandmore.com/khrc.htm>).

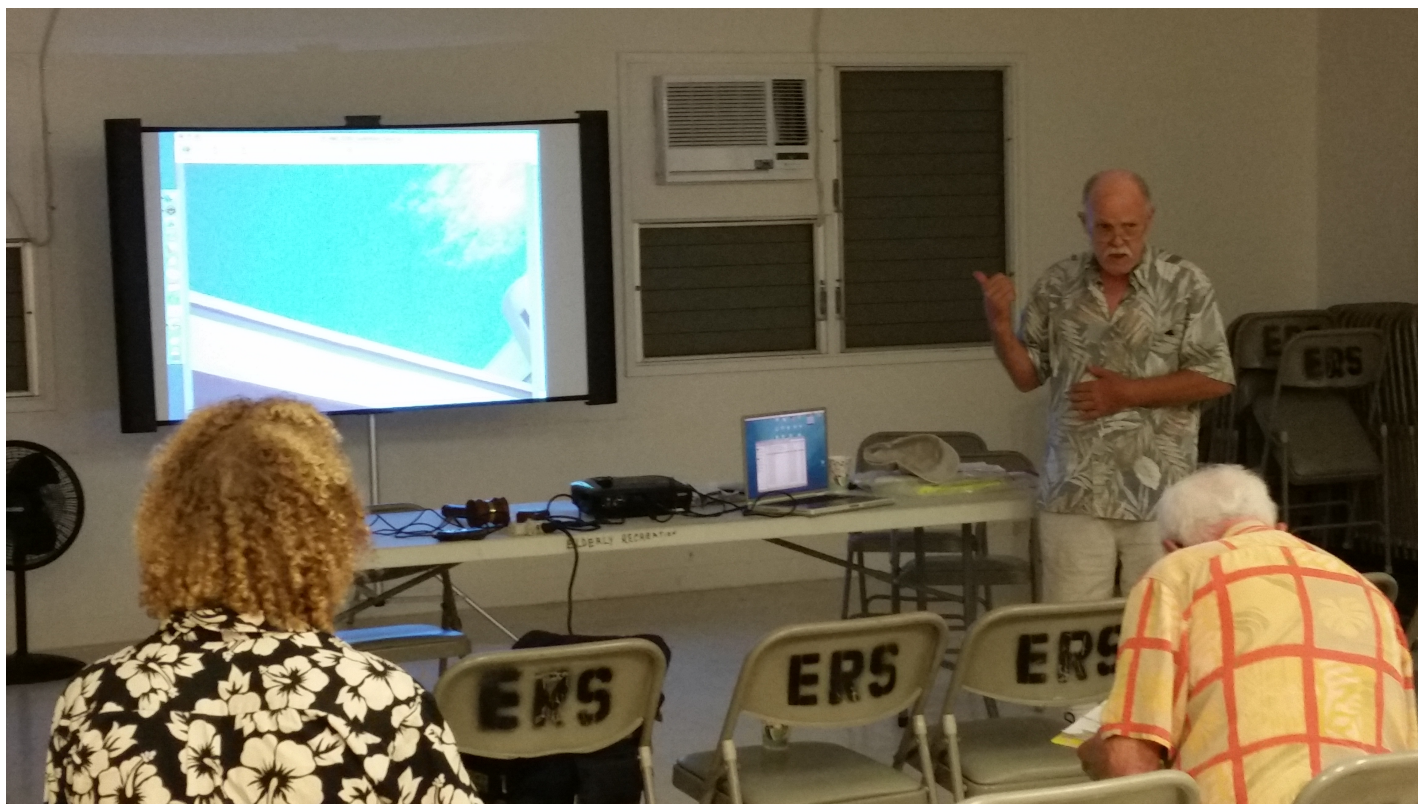
The community center is at 65-1260 Kawaihae Road in Waimea, next to the ball field off Mamalahoa Highway.

Cost is \$10 per table for vendors. Admission is \$5 per person at sign-in. Be sure to get your raffle tickets for the "Big ticket items." Event

ends at 2 p.m.

At noon, enjoy guest presentations in the adjoining room. At 1 p.m. there will be ARRL VE testing. (Bring current drivers' license or passport, a copy of current FCC license or CSCE if applicable, and \$15 in exact change.)

Talk-in: 146.940 Maui Repeater, 147.320 Waimea, and 443.650 (100 Hz tone) Kona. Contact: Steve Milner, wh6n@arrl.net.



HAMS HELP AT HOSPITAL

At the November BIARC meeting, Robert Oliver, NH6AH, discusses the Hilo Medical Center Emergency Radio Station, which he has coordinated for several years. All hams are invited to participate in the monthly net at 9 a.m. on the first Saturday at .7080. For more info on how to get involved in this volunteer community service effort, please contact Robert at oliver@reotron.com.

-- Photo by Linda Quarberg

Introducing: The QTH.NET Email Listserve

The Big Island Amateur Radio Club will begin using an email listserve. The main advantage of using such a listserve is that you do not have to individually maintain a list of club-member email addresses in order to enter into important conversations related to club operations. The listserve can be set up to maintain two independent lists; a general one and an administrative one.

The advantages of the listserves are as follows:

- Members do not have to maintain their own list of BIARC email addresses.
- Messages sent via the listserve can be archived. This is particularly important for the administrative listserve where club business might be discussed.

- The listserve provides a secure means of sending club email.

- Listserve emails are easily identified by their unique Subject Line headings.

- Access to the Listserve can be placed on the club's website.

Additional information can be found at:
<http://mailman.qth.net/>

In order to become a member of the BIARC Listserve, simply send me an email:

lhittner@hbc.com

and let me know that you want to be placed on the listserve. I will enroll you and then send you an information email about its use.

Mahalo,
Leslie Hittner, K0BAD



Hawai'i Electronics Recycling

Convenient, Local, Earth-Friendly Electronic Device Recycling Site:

Mr. K's Recycle & Redemption

815 Kino'ole St

Daily 8:30 a.m. to 4:30 p.m.

Call 969-1222



Accepting TVs & monitors, computers, printers, phones, DVD players/VCRs and other small electronic devices. Microwaves and heating/cooling devices not accepted.

Household free collection on Saturdays only; all other days small recycling fee assessed. All business, agency customers assessed a recycling fee. Call for fee details or more information.



Electronics contain hazardous materials and must be recycled properly. collection site, this will be deemed illegal dumping. For more information www.hawaiizerowaste.org or call the County Recycling Office at 808-961-8270.

**Submitted by
John Buck,
KH7T**

County of Hawai'i Electronics Recycling Collections

Residential/Household Electronics Collections (free):

1. Wai'ōhinu Recycling & Transfer Station: Every first Saturday of the month.
2. Waimea Recycling & Transfer Station: Every second Saturday of the month.
3. Kealahou Recycling & Transfer Station: Every third Saturday of the month.
4. Hilo Recycling & Transfer Station: Every fourth Saturday of the month.

All County electronics recycling collection sites are open from 9:00 a.m. to 4:00 p.m. on their scheduled days.

Acceptable Electronics:

TVs, computers, laptops, monitors, printers/fax machines/multi-function printers, VCRs, CD/DVD players, stereo receivers/amplifiers (no speakers), UPS systems, digital cameras, cellular and landline telephones.

We do not accept disassembled electronic devices, parts, microwave ovens, printer cartridges or cracked TVs/monitors. We are prohibited from accepting electronics from businesses, farms, agencies or non-profits.

Revised 2016-03-27

Clarification (See story on next page) **International Grid Chase** **Will Allow Use of** **630 and 2200 Meters**

ARRL Contest Branch Manager Bart Jahnke, W9JJ, has clarified that the new 630- and 2200-meter bands will be fair territory in the ARRL International Grid Chase. The year-long operating event begins on January 1, 2018 at 0000 UTC (New Year's Eve in US time zones). The object is to work stations in as many Maidenhead grid squares as possible, and radio amateurs around the world

are encouraged to take part.

Contacts made on the 60-meter band will not be eligible for award credit, however.

US radio amateurs are advised, however, that the use of 630 and 2200 meters requires advance notification to the Utilities Technology Council (UTC), formerly the Utilities Telecom Council, of their intention to operate on one or both bands.

If UTC does not respond within 30 days or specifically denies access, these stations may commence operation there.

Once approved to use either 630 meters, 2200 meters, or both, US radio amateurs must adhere to the FCC rules regarding the use of those bands.



A map segment showing part of the EN field of grid squares. Note that some grid squares are very nearly surrounded by water. [Photo courtesy of Icom America]



Announcing: The ARRL International Grid Chase

A new and exciting operating event will kick off on January 1, 2018, at 0000 UTC (New Year's Eve in US time zones), when the ARRL International Grid Chase gets under way. The year-long event hopes to build on the success of the highly successful 2016 National Parks on the Air (NPOTA).

The objective is to work stations on any band (except 60 meters) in as many different Maidenhead grid squares as possible, and then upload your log data to ARRL's Logbook of The World (LoTW). Registration in LoTW is free, and it costs nothing to participate.

Many hams are familiar with grid squares from the VHF/UHF and satellite realms, and everyone lives in one. ARRL's VUCC is based on grid squares, and some contests on HF, VHF, and UHF also use them as a scoring factor.

The Maidenhead grid square system divvies up the entire globe into 324 fields, each containing 100 grid squares 1° latitude \times 2° longitude in size. With 32,400 potential grid squares, it's not likely that anyone will run out of challenges, even though some grid squares are surrounded entirely by water or are in areas that are uninhabited or difficult to access.

If you don't know your grid square, David Levine, K2DSL, has an online calculator. Just enter a postal address, ZIP code, or even a call sign, and his site will tell you the grid square for that location. For example, enter "W1AW" and the site



will return "FN31pr." For the purposes of the ARRL International Grid Chase, though, just the two initial letters and the two numbers that follow (e.g., FN31) are all you'll need to know.

Once you get active in the chase and start uploading your log data, each new grid square contact confirmed through LoTW will count toward your monthly total. Getting started is simple. Turn on the radio and just call CQ or "CQ Grid Chase" or listen for others doing the same. Make a contact, exchange grid squares, log it, and move on to another. At the end of each month, your totals on the Grid Chase leader board will reset to zero, although the system retains these to determine top finishers in various categories at the end of the year.

Any contact you make in 2018 can count toward your Chase score; it doesn't have to involve an exchange of grid squares. As long as the other operators also participate in LoTW, you'll get credit automatically when they upload their logs. This means that contest contacts also count, as will contacts with special event stations or other on-air activity that uses LoTW to confirm contacts.

Some radio amateurs live in sparsely populated grid squares, and if you're one of those, you could find yourself handling a pileup! Expeditions to hard-to-reach or rare grid squares undoubtedly will evolve. You also can travel to one of those grid squares yourself. Some vehicle or handheld GPS units can be set to display when you are in a particular grid square. Apps are available for smartphones or tablets, such as Ham Square for iOS devices or HamGPS for Android devices.

There are no restrictions on modes or bands, as long as they are legal. Satellite contacts are valid for the Chase. The event is open to all radio amateurs.

Full details of the ARRL International Grid Chase appear in the December 2017 issue of QST. The digital edition also is now available.

For more information, contact the ARRL Contest Branch.

Gordon Royer, J73GAR (left), and John Mitchell, J73MH, at the Canefield Airport, in contact via HF ALE with the Douglas-Charles Airport across the mountainous center of the country.



Amateur Radio Poised to Bring a Brighter Future to Dominica

Despite the devastating blow Hurricane Maria dealt to the Caribbean island nation of Dominica, Brian Machesney, K1LI, is optimistic that the recent delivery of Amateur Radio gear to the island will help to expedite ongoing recovery and better prepare Dominica for any similar disasters in the future. Machesney is recently back from Dominica, where he and others helped deploy the nearly 600 pounds of radio equipment, transported by air, thanks to Dave Bridgham, N1AHF.

Assisting him was Brian Lloyd WB6RQN, who circumnavigated the globe earlier this year.

"I wish we could have accomplished more in the 10 days we were on the ground in Dominica but, as any reasonable person would concede, the weeks immediately following the region's most devastating hurricane in living memory were not the best time to deploy new radio equipment," Machesney said. Nonetheless, the gear was delivered safely to the Dominica Amateur Radio Club, Inc. (DARCI). Many DARCI members lost everything in the hurricane. All of the ham radio gear was donated or purchased with donations. Some of the primary players included the Yasme Foundation, the Foundation for Amateur

International Radio Service (FAIRS), and Yaesu.

"The first challenge the hams faced in providing communications after the hurricane was the lack of power to recharge their HT batteries," Machesney said. "The solar-charged battery power systems supplied by FAIRS were quickly dispersed to stations from Jimmit to Castle Comfort where, in addition to powering ham equipment, they served to recharge neighbors' mobile devices and further raised ham radio's profile in Dominica."

Machesney sees a productive future on Dominica for HF Automatic Link Establishment (ALE), a mode widely used by the government and the military. Through a cooperative arrangement with the Dominica Air and Seaports Authority, HF ALE transceivers, purchased by the Yasme Foundation, were installed at a station at Canefield Airport, with a companion station at the larger Douglas-Charles Airport. A third HF ALE station was set up at the DARCI club station, J73Z, and powered by solar panels. FAIRS provided six solar-charged battery power kits, Machesney said. Yaesu also supplied 10 FT-8900 transceivers and 30 FT-65R handheld transceivers and accessories. Generous donations to a GoFundMe campaign provided the cash to purchase antennas and other gear.

"All parties are thoroughly sold on HF ALE as a valuable addition to their local and long-range communication capabilities," Machesney said. "Once the state of emergency has passed, the HF ALE stations will be re-deployed to private amateur stations strategically located around the island." He hopes that HF ALE will augment the island's VHF/UHF repeater coverage.

"It was a great, cooperative effort that resulted in an integrated package of equipment that should 'keep the lights on' for the foreseeable future," Machesney said.

2017 BIARC leadership

The club is led this year by President Gary Schwiter, WH6EPS; Vice President Peggy Gentle, KE6TIS; Secretary Angelina Schwiter, WH6EVK; Treasurer Paul Ducasse, WH7BR; and Directors Gus Treewater, K2GT; John Bush, KH6DLK; Kim Fendt, WH6KIM; Cory Allen, KN6ZU; Barbara Darling, NH7FY; Richard Darling, AH7G; Bob Schneider, AH6J; and Bill Hanson, N0CAN.



The Polar Prince receives a Victoria Fire Department salute as it arrives in British Columbia.

Canada C3 Voyage Carrying WSPR ends; Beacon May Remain Active on Return Trip

The epic Canada C3 voyage of the Polar Prince to commemorate Canada's 150th Anniversary of Confederation celebration ended successfully on October 28.

Over the course of the 150-day expedition from Toronto, Ontario, to Victoria, British Columbia via the Northwest Passage, the CG3EXP WSPR HF beacon was received on every continent except Antarctica, CG3EXP trustee Barrie Crampton, VE3BSB, told ARRL.

"The Ultimate 3S beacon transmitter made 64,800 transmissions that resulted in 397,964 uploads to WSPRnet.org," Crampton said. The CG3EXP WSPR beacon -- which transmitted on 40, 30, and 20 meters -- provided an opportunity for the Amateur Radio community to follow the vessel's progress and share in the celebration.

However, the end of the voyage does not mean the end of the beacon's transmissions. Crampton said the CG3EXP beacon "will likely remain on the air as the Polar Prince returns to the east coast of Canada via the Panama Canal."

The deadline for Radio Amateurs of Canada (RAC) Canada C3 Expedition Award submissions is November 30. The purpose of the award was to track the voyage of the Polar Prince from Toronto to Victoria and to study radio propagation in the Arctic regions of Canada. Stations listened for WSPR signals from CG3EXP and recorded the 6-character Maidenhead grid square that was transmitted, as well as the location of the ship.

Mother, Daughter Radio Amateurs Active from Nepal

Kalpana Kharel, 9N1MM, and her daughter Tejaswita (Tehu), 9N1DX, both are active radio amateurs from Nepal's capital of Kathmandu. Husband and father Satish is 9N1AA.

Both women are operational on HF, mostly on RTTY and FT8. Kalpana Kharel is believed to be the first female Amateur Radio licensee from Nepal, and her daughter is the youngest ever to obtain a ham license there (American Jinny Beyer, 9N1RA, was active in the 1970s).

Tehu Kharel, who attends Rato Bangala School in Patan, Nepal, said on her QRZ.com profile that she is working to improve her Morse code skills.

"I was very keen to learn about ham radio since my childhood," she said there. "I always observed RTTY QSOs of my dad. So, I am more comfortable with digital modes."



Tejaswita (Tehu), 9N1DX, and her mom and dad are active radio amateurs in Nepal's capital of Kathmandu.

FCC Chairman Recognizes Amateur Radio in Praising those Assisting Puerto Rico

Wrapping up a recent 2-day visit to Puerto Rico, FCC Chairman Ajit Pai recognized Amateur Radio volunteers as he praised those who turned out to help the stricken commonwealth in the wake of Hurricane Maria.

"[T]he worst of tragedies can also bring out the best in people. I saw that firsthand during my 2 days in Puerto Rico," Pai said. "Everyone is pitching in: the people of Puerto Rico helping their neighbors, hardworking Federal Emergency Management Agency staff -- including communications personnel in Emergency Support Function #2 -- the dedicated regulators of the Puerto Rico Telecommunications Regulatory Board, and the FCC's own Roberto Mussenden, who has spent the past month away from his family on the mainland in order to help the island where he grew up."

"Additionally, Amateur Radio operators, broadcasters, cable operators, fixed wireless companies, wireline carriers, and mobile providers have stepped up to the plate, working overtime to connect the disconnected," Pai continued.

"All of this work reflects the ethos I saw on many signs and t-shirts during my time on the island: 'Puerto Rico Se Levanta' [Puerto Rico is Rising]."

Pai said recovering from Hurricane Maria will require an all-hands-on-deck effort, and the FCC "remains committed to doing everything we can to help restore communications networks as quickly as possible."

In October, the FCC granted ARRL's request to waive current Amateur Radio rules to permit data transmissions at a higher symbol rate than currently permitted, in order to facilitate hurricane relief communications between the continental US and Puerto Rico.

The temporary waiver will enable the use of PACTOR 3 and PACTOR 4.

"The path to recovery has met several challenges, most notably the lack of power and functional infrastructure," Pai said. "One thing is clear: overcoming these challenges won't be easy."

Red Cross Hails Partnership with ARRL Following Puerto Rico Deployment

The American Red Cross (ARC) recently thanked ARRL and its "Force of 50" hurricane recovery volunteers who deployed to Puerto Rico, and it suggested a new level of partnership now exists between the two organizations. ARC Senior Vice President for Disaster Cycle Services Harvey Johnson wrote ARRL President Rick Roderick, K5UR, and ARRL CEO Tom Gallagher, NY2RF, to express his organization's gratitude for "all your amazing volunteers for the unwavering commitment demonstrated during the response to this unprecedented disaster in Puerto Rico." Johnson said the team's actions "made a significant difference" in the lives of those affected.

"This mission marked an exciting new path for our two organizations with it being the first time we deployed ARRL volunteers to a Red Cross relief operation," Johnson wrote. "I continue to hear incredible stories about how the ARRL volunteers supported individuals, communities, and partner organizations during their time in Puerto Rico." ARRL and the American Red Cross have a long-standing memorandum of understanding (MOU) to cooperate in emergencies and disasters.

"It was a complex cooperation in an austere environment, and the mission certainly had its challenges," Johnson continued. "While we have much to learn from this new experience and areas to improve upon, we remain committed to working with you, ARRL, and your cadre of talented volunteers."

Johnson singled out for special praise ARRL Emergency Response Manager Mike Corey, K11U, "for his leadership in planning and managing the mission."

"Mike was fast acting and thoughtful, constantly working to make the mission effective through transparency and collaboration," Johnson said. "We simply could not have achieved the outcomes without him."

Johnson said the ARC looks forward to working together with ARRL to "serve those impacted by disasters."

ARRL Executive Committee Updated on Entry-Level License, Amateur Auxiliary

ARRL Executive Committee reviewed plans to implement recommendations of the Entry Level License Committee, when it met on October 14 in Hartford, Connecticut. At its July meeting, the ARRL Board of Directors called for work to go forward on a plan to pursue additional HF digital and phone privileges for Technician licensees. The Executive Committee was told that New England Director and Entry-Level License Committee Chair Tom Frenaye, K1KI, will work with ARRL General Counsel Chris Imlay, W3KD, and International Affairs Vice President Jay Bellows, K0QB, to develop the specifics of a proposal to the FCC requesting expanded frequency and mode privileges for Technicians. This will be completed in time for review by the full Board of Directors at its January meeting.

Frenaye explained that enhancing the Technician license would be "an immediate step that can take place with little FCC impact, since the question pool would not need to be changed." He pointed out, however, that this approach "does not rule out longer-term consideration of a new entry-level license." The Entry-Level License Committee had recommended both steps in its July report to the Board.

The Executive Committee also heard a brief report on the work of the ad hoc Amateur Auxiliary Study Committee, which has prepared the first draft of a new training manual. The Committee is awaiting feedback from the FCC on a proposed memorandum of understanding for the Amateur Auxiliary. The chair of the study panel, ARRL Second Vice President Brian Milesosky, N5ZGT, told the Executive Committee that several topics related to in-house management of the program still must be resolved, and the committee hopes to have the revised Amateur Auxiliary package ready for consideration by the ARRL Board of Directors at its January meeting.

The Executive Committee requested the Programs and Services Committee to undertake an evaluation of all ARRL membership program offerings, in coordination with the Administration and Finance

Committee. The action followed a recommendation from ARRL CEO Tom Gallagher, NY2RF. The Programs and Services Committee is to report back to the Executive Committee next fall.

In his CEO report, Gallagher highlighted the efforts of the "Force of 50," the ARRL Amateur Radio volunteers deployed to Puerto Rico, which, he told the Committee, were assembled and equipped within 48 hours of the initial request from the American Red Cross for volunteers.

President Rick Roderick, K5UR, who chaired the meeting, expressed pride in the League's efforts to provide hurricane relief to Puerto Rico and requested that Gallagher relay the Executive Committee's appreciation to the Headquarters staff for its efforts to assist with hurricane relief efforts.

Other Business

- The Executive Committee directed Gallagher, who serves as its Secretary, to call a special meeting of the ARRL Board of Directors this fall to consider recommendations from the Ethics and Elections Committee and related items.

- Executive Committee Member and Hudson Division Director Mike Lisenco, N2YBB, told the panel that the legislative team is continuing to work all avenues to secure passage and implementation of S. 1534, the Amateur Radio Parity Act of 2017.

- The Committee asked Imlay to work with ARRL resources to develop recommendations for possible deregulation of the Amateur Service rules. The Technology Advisory Council in August issued a Public Notice inviting comments identifying FCC technical rules that may be obsolete or ripe for change in light of current communication technologies.

- The committee directed Imlay to prepare and file a request for an FCC declaratory ruling, asking the Commission to correct discrepancies between Part 73, which regulates broadcasting, and Part 97, which governs Amateur Radio. §73.102.7(c) allows a broadcaster to retransmit an Amateur Service signal without the licensee's consent. §97.113(b) largely prohibits "any form of broadcasting," and prohibits amateur stations from engaging "in any activity related to program production or news gathering for broadcasting purposes," except in certain emergency situations.



Joe Taylor, K1JT.

New Digital Modes Changing Complexion of Bands and, Perhaps, of Ham Radio

The wave of software-based digital modes over the past several years has altered the atmosphere of the HF bands. Some suggest the popularity of modes that make it possible to contact stations neither operator can even hear has resulted in fewer CW and SSB signals on bands like 6 meters and 160 meters. Traditional modes require far more interaction and effort on the part of the operator; the newer digital modes, not so much. The recent advent of the still-beta "quick" FT8 mode, developed by Steve Franke, K9AN, and Joe Taylor, K1JT -- the "F" and the "T" in the mode's moniker -- has brought this to a head. Some now wonder if FT8 marks the end of an era and the start of a new, more minimalist age.

"We've been as surprised as anyone about the rapid uptake of FT8 for making QSOs on the HF bands," Taylor told ARRL. Rather than viewing FT8

as a total game-changer, he sees a dividing line between such digital modes and more traditional modes.

SSB and CW are general-purpose modes," Taylor asserted. "They are good for ragchewing, DXing, contesting, emergency communications, or whatever. FT8 and the other modes in WSJT-X are special-purpose modes. They are designed for making reliable, error-free contacts using very weak signals -- in particular, signals that may be too weak for the more traditional modes to be usable, or even too weak to hear."

Taylor notes that the information exchanged in most FT8, JT65, and other digital-mode contacts "is little more than the bare minimum for what's considered to be a valid contact." In addition to call signs and signal reports, stations may exchange grid squares and acknowledgments.

In his blog, Steve McDonald, VE7SL, compiled not only Ireland's posts, but some responses to it, although not identified by name or call sign.

One commenter suggested that the game-changing aspect of FT8 is that those who typically operate CW or SSB will gravitate to FT8.

"The amount of activity on the FT8 frequency of any band is phenomenal," the commenter observed. A few complained that no skill is involved in making contacts using computer-based digital modes.

Another suggested that FT8 is already falling victim to its own success, with too many stations crowding around the designated FT8 frequencies.

Others were more philosophical, with remarks along the lines of this one: "It is allowing people who have smaller stations the opportunity to get on and use their radios and a computer to make contacts they never would have been able to make. This is great for ham radio!"

Taylor would agree. As he sees it, FT8 won't replace modes such as CW or SSB. "Nevertheless, it's clear that -- at least in the short term -- many hams enjoy making rapid-fire minimal QSOs with other hams, all over the world, using modest ham equipment," he said. "For this purpose, FT8 shines."

Year-long NASA On The Air Event kicks off on Dec. 11

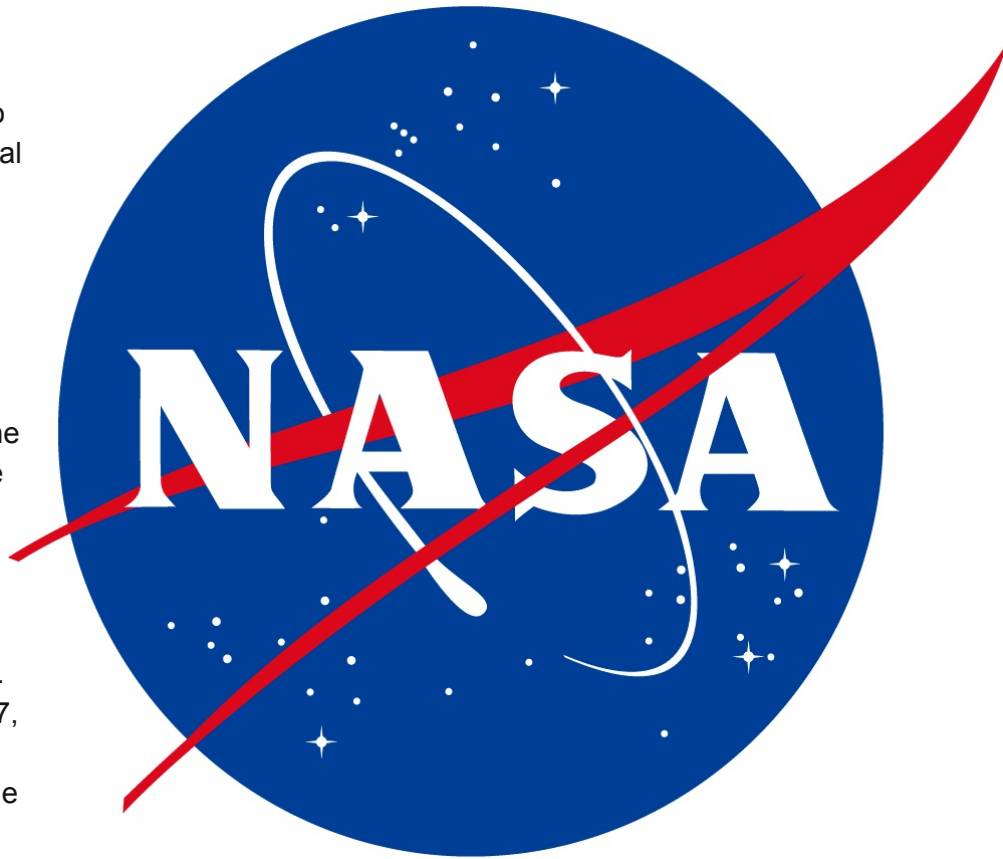
The Amateur Radio clubs at National Aeronautics and Space Administration (NASA) centers around the US have invited the Amateur Radio community to join the NASA On The Air (NOTA) special event. NOTA gets under way in December and continues through December 2018.

In addition to being the agency's 60th anniversary, 2018 will mark 50 years since NASA orbited the first human around the moon, and 20 years since the first elements of the International Space Station (ISS) were launched into low-Earth orbit.

The Marshall Space Flight Center's NN4SA is one of the NASA Center stations that will be active during NOTA. Starting on Monday, December 11, 2017, Amateur Radio club stations at various NASA centers and facilities will be on the air with special event operations to celebrate these monumental achievements, as well as current milestones. Some clubs will offer commemorative QSL cards, and a special certificate will be available indicating the number of NASA club stations worked on various bands and modes.

"We plan to have a web-based system for you to check your points total and download a printable certificate at the end of the event in December 2018," the NASA announcement said. "Points will be awarded for each center worked on each band and mode (phone, CW, digital, and 'space' modes -- satellites, meteor scatter, EME, ISS APRS)." That would, of course, include contacts with any of the Amateur Radio stations on the ISS.

Key anniversaries during NOTA include



the 45th anniversary of Apollo 17 on December 11, 2017, which kicks off the event; NASA's founding on July 29, 1958; the 20th anniversary of the ISS first element launch on November 20, 1998; the 20th anniversary of the ISS Node 1 Launch on December 4, 1998, and the 50th anniversary of Apollo 8 -- launched on December 21, 1968, and returned on December 27 -- marking the end of the event.

More information is on the NASA On The Air website. Participating Amateur Radio clubs and the NOTA event are independent of -- and not officially sponsored by -- NASA. -- ***Thanks to Rob Suggs, KB5EZ, NASA Marshall Space Flight Center Amateur Radio Club (NN4SA), and Kevin Zari, KK4YEL, NASA Kennedy Space Center Amateur Radio Club (N1KSC).***



Ten Ten International

You have to make contacts to get results!



Irene Kubica, NH7PE, is an avid participant in 10-meter activity and encourages hams at all levels to join in the fun.

Upcoming events

Mon Jan 01, 2018 00:00

[10-10 Anniversary](#)

Mon Jan 01, 2018 00:00

[10-10 Meet the Volunteers](#)

The 10-10 Connection

with NH7PE,

10-10 Aloha Chapter



Have a hankering for rag-chewing?

Check into the daily (except Sunday) SSB nets at 8 a.m. HST on 28.380 and 28.800MHz. They are called from Illinois, California, Arizona, Florida, North Carolina and Michigan. Try them out.

Remember: You have to make contacts to get results!

*Be sure to check
www.ten-ten.org for
details*

Ten-Ten International QSO Parties

For those who join in the Ten-Ten QSO Parties, remember: You can assign your score to the Aloha Chapter. Logs must be postmarked no later than 15 days after the respective QSO Party.

To see what's open on 10 meters, listen to the beacons from 28.175-28.300 so you will know where DX is coming from.

The Ten-Ten International News has reprinted several antenna articles by L.B. Cebik (SK), W4RNL #41159.

Ten-Ten International pins are available for purchase at \$2 each. See www.ten-ten.org for details.

CW news: FISTS Get Your Feet Wet Activity Day! Every third Sunday from 0001 to 2400 UTC on 80 and 40 meters (3.558-7.110 MHz): exchange name, QTH, FIST #, RST.