

September 2016
Newsletter

Big Island Amateur Radio Club

Finding a source of interference can call for super sleuthing



President Bob Schneider, above, and Program Committee Co-Chair John Bush, below, discuss the many forms and foibles of interference. Listening, below: Richard and Barbara Darling, Wilbur Carlson.

The club's August 13 monthly meeting focused on interference, its many, many causes, quirky sources and devilish intrusions into the high-tech lives of our family and neighbors. The importance of diplomacy coupled with thorough diagnostics was emphasized by two program presenters, President Bob Schneider and John Bush.

Bob convened the meeting shortly after 2 p.m. at the Keaau Community Center. In facilitating the usual round of

self-introductions by those in attendance, Bob congratulated long-time BIARC member Wilbur Carlson, who will turn 88 this month.

Several items of old business were on the agenda:

Bob announced that Dean Manley invited all hams to his all-day annual picnic Aug. 20 at Coconut Island in Hilo, where he had reserved a pavilion from 8 a.m. to 6 p.m. The fun event always is a good opportunity for ragchewing up-close-and-

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**Photos by
Linda Quarberg**



August meeting: From previous page

personal.

He noted that the official Hurricane Season in the Pacific runs from June 1 to Nov. 1. "But remember," he added. "Hurricanes can't read." So be aware.

He talked about the Amateur Radio Parity Act legislation pending in Congress. It's "still very much alive," and the push is continuing to get the proposal passed by both houses of Congress before the "lame duck" nature of a presidential election season intrudes on decision-making. Otherwise, "we might have to wait a couple of years."

Robert Oliver reported on the club's NH7EJ contact count and score for our June Field Day at Wailoa Center. Members operating from the temporary QTH at Wailoa made 56 confirmed contacts, which were turned in to ARRL, and the final Field Day tally was a score of 110.

Treasurer Doug Wilson submitted his financial report by proxy: We now have 69 dues-paid-up (41 full, 24 family and 4 associate) members; \$1,443.89 in our checking account and \$13,932 in total assets (mostly equipment).

Hawaii QSO Bureau Manager Barbara Darling reported the bureau handled 1,597 QSL cards in July, for a year-to-date total of 5,688. The July tally included individual cards from hams in Canada, Germany, England and Ireland and three boxes of 2014 W1AW cards from 2014.

Bob encouraged BIARC members to help spread the word about ARES, the Amateur Radio Emergency Service, and join the group, which assists the island community with emergency communications when needed. The East Hawaii group meets at 8 a.m. on the last Saturday of each month at the Eden Roc Community Park and Firehouse. Directions to the center: When driving toward Volcano on Highway 11, turn left onto S. Kopua Road about a mile above Mountain View. Continue on the nicely paved country road for a couple of miles, or so, until you pass the Kopua Farm Lots, on the left. Enter Eden Roc and take the first left onto Painui (after the entry pillars). Proceed, then turn right on Road 8 (numbers are painted on pavement) and keep driving until you see pavilion on the left. All are welcome. Bring your coffee and a foldup chair. More info: Kim Fendt at wh6kim@gmail.com.

Bob reported that he met recently with Debbie Weeks, the new American Red Cross director working out of East Hawaii HQ on Ululani Street in downtown Hilo. They discussed how amateur radio operators work together with the Red Cross to provide emergency comms.

Bob then gave his presentation on "RFI: Radio Frequency Interference." The three components are "human aspects or political concerns"; "transmitter problems"; and "received interference." He illustrated his talk with examples of personal experiences and cases which have (for a time, at least) befuddled other hams. The lists are "almost endless," he said, on the topics of: interference that a neighbor hears, and why diplomacy is important, and "interference that we see or hear and where it is coming from." Many, many sources and many, many scenarios.

John called his talk "RF Interference 101" and said the more urbanized our living situations become, the more chances for problems. At the same time, he noted, cable TV (versus old rooftop antennas) and digital TV have helped block threats from many sources of interference. On the other hand: corrosion between two pieces of metal on a rooftop can act as "an oxide-type diode," cause interference gremlins to run amuck in a house, and create difficult-to-pinpoint sources of havoc in a multi-unit housing structure.

Terms of interest (among many) used in his talk: "wall warts," "birdies," "square wave" and "common-mode chokes."

Bob said the ARRL Lab is the place where the specialists truly are making breakthroughs in cases of interference bugging individuals and communities across the nation.

Respectfully submitted,

Leigh Critchlow, Secretary pro tem

Definitions:

Wall wart: Transformer that converts AC to DC power. Sometimes has proprietary plug and is designed to output very specific voltages.

Birdie: Signal produced within a radio, typically by its microprocessor or related circuitry, that appears at specific intervals across the tuning dial of a receiver.

Square wave test: The theory is that it will illustrate frequency domain limitations of a device.

Common-mode choke: Where two coils are wound on a single core; useful for prevention of electromagnetic interference (EMI) and radio frequency interference (RFI) from power supply lines and for prevention of malfunctioning of electronic equipment.

Sign up now for September's Third Annual Grid Madness

Aulani Hui Amateur Repeater Club and event organizers are happy to announce the Third Annual Hawaiian Islands Grid Madness, an event for all hams in the State of Hawaii.

This VHF/UHF activity is designed for FUN, and to test your equipment, coverage and operating skills using simplex FM on 2 meters and 70 cm.

The idea is to contact as many stations as you can in as many Grid Squares as you can, using SIMPLEX ONLY. Enter in HT, Mobile, or Base class.

Mark your calendar for Sunday, Sept. 18, from 1300 to 1700 HST.

View/download the info packet from: <http://gridmadness.blogspot.com/>

"Even one contact gets you a certificate, if you send in your log," said coordinators.

"Please send in your log -- you will be helping to build a map of simplex paths for Hawaii!

And along with logs, photos would very much be appreciated.

Please send comments and questions to

AH6KO@arrl.net.

If you can, please help to make this event better spread the word via radio nets, meetings, newsletters, web sites, or just tell another ham! On the radio, you can provide the URL above, or just advise anyone interested to Google "Grid Madness".

Grid Squares: Find your 6-character Maidenhead Grid Square on the map at www.qrz.com/gridmapper.

Please consider using this event as part of your effort to mentor new hams, teach and practice emcomm procedures, or as an ontheair social event.

New this year: 1) Points for relay contacts; 2) Extra points for 70 cm and interisland contacts; 3) Exchange includes serial number; 4) Club Award to club with highest total designated score.

We will send an email in early September to all interested hams. Send email addresses to us at AH6KO@arrl.net.

Thanks and 73!

Stan AH6KO (Event Manager)
Eric Grabowski KH6CQ
(Aulani Hui ARC)

Amateur Radio investigation tracks down reason for RF interference field

Police in Evanston, Illinois, contacted the ARRL Lab, after an apparent interference source began plaguing wireless vehicle key fobs, cell phones, and other wireless electronics. Key fob owners found they could not open or start their vehicles remotely until their vehicles were towed at least a block away, nor were they able to call for help on their cell phones when problems occurred. The police turned to ARRL for help after striking out with the FCC, which told them it considered key fob malfunctions a problem for automakers, although the interference was affecting not just key fobs but cell phones -- a licensed radio service. ARRL Lab EMC Specialist Mike Gruber, W1MG, feels the FCC should have paid more attention.

This situation is indicative of what can happen as a result of insufficient FCC enforcement, especially with regard to electrical noise and noncompliant consumer devices," Gruber said.

Evanston authorities worried that a serious situation could develop if someone were unable to call 911, putting public safety at risk. They also were concerned that the RFI could be intentional and indicate some nefarious or illegal activity. Given the seriousness of this situation, Gruber contacted Central Division Director Kermit Carlson,

W9XA, to ask if he could look into the matter.

On June 2, Carlson met with an Evanston police officer, her sergeant, a local business owner, and the local alderman, and he quickly confirmed that the 600 block of Dempster Avenue in Evanston was plagued with an odd RFI problem. Carlson determined that the problem prevailed along a set of eight on-street parallel parking spots in the downtown commercial district of the North Chicago suburb.

Carlson employed a Radar Engineers 240A Noise Signature Receiver and UHF Yagi antenna to survey the affected block. Since key fobs typically operate at around 315 MHz and 433 MHz, he looked on both frequencies. The survey identified several noise sources in the affected block, but in particular a strong signal in the middle of the block. The interference source turned out to be a recently replaced neon sign switching-mode power supply, which was generating a substantial signal within the on-street parking area just across the sidewalk, between 8 and 40 feet from the sign.

The problematic power supply interference also disabled Carlson's cell phone when he was within

See TRACKING on next page

Growth in New Amateur Radio Licensees Ahead of Last Year's Count

The ARRL Volunteer Examiner Coordinator (VEC) reports that 20,447 new US Amateur Radio licenses have been issued since January 1. That's nearly 1500 ahead of the number that had been issued by this time last year. At the present pace, the US is on track to exceed 30,000 new radio amateurs for the third straight year by the end of the year.

"While I am thrilled with this prospect, I'm also keenly aware that without some mentoring, these new hams' initial curiosity and enchantment may fade if they don't get on the air right away," said ARRL VEC Manager Maria Somma, AB1FM.

"Let's show these new hams what the magic is all about," she urged.

In addition, the ARRL VEC reports that upgrades are on track to reach nearly 11,000 by year's end.

TRACKING INTERFERENCE: From previous page

a few feet of the device. Carlson anticipated that further investigation would show that the harmful interference could disrupt licensed radio services in close proximity. The troublesome transformer was not replaced, but the building owner agreed to turn off the sign should problems arise.

Carlson called the Evanston case "a particularly alarming example of radio interference," especially since local authorities considered it a public safety matter. "This situation demonstrates the electromagnetic compatibility problems that are evolving in an atmosphere of noncompliant, unintentional RF-emitting devices," he said.

A return visit to the area with calibrated antennas and equipment capable of measuring the radiated signal strength with quasi-peak detection is planned for later this year. Since the initial visit, several other instances of unexplained key fob malfunctions have been reported in the Greater Chicago area.

**-- Thanks to Kermit Carlson, W9XA,
and Mike Gruber, W1MG**

It's HI QSO time!

The annual Hawaii QSO Party is next weekend, beginning Friday August 26th at 18:00 HT. Hawaii hams are encouraged to put KH6 stations on the air.

HQP is a low-key contest and can be an opportunity to "Elmer" new hams in operating HF. It's a chance to share HF stations with new hams and encourage them to get on HF.

The contest rules are at www.HawaiiQSOParty.org

ARRL Section Manager Joe Speroni shares the following information extracted from KH7U's contest note in the July SM Report.

The Hawaii QSO Party is a special contest giving local hams an opportunity to be the center of attention to the world. To make contacts with our special and somewhat rare QTH.

We get to be the focus for a while and can give back to fellow amateurs at the same time by confirming contacts with Hawaii. You don't need big antennas or high power to compete in this contest.

Eight Hawaii clubs sponsor the contest. They believe this provides a way for new operators the chance to learn from local, more experienced hams. Do your part. Provide your guidance or seek the help of other hams.

HQP runs from Friday, August 26, 6 PM, to Sunday, 6 PM, with stations allowed to operate up to a maximum of 18 hours.

Contacts can be made on 160, 80, 40, 20, 15, or 10 meters using CW, SSB or digital modes.

You may use your station or team up with someone and use theirs.

Here is an opportunity to help new hams get some HF experience. Invite new hams to operate as third-party operators under your guidance or with their call from your station.



Section Manager's Message

Aloha, Hawaii ARRL members,

As we look around the islands at our Amateurs' activities, it is amazing to find the breadth and depth of Hawaii Hams contributions.

Merv Schweigert (K9FD) is QRV on 630 meters from Molokai using the FCC-issued experimental call WH2XCR on CW and JT65 with remarkable results.

We have an ATV enthusiast in Maui, Jim Andrews (KH6HTV), actually a "snow bird" whose family spends winters in Maui. See Jim's story about ATV in Colorado and how it's integrated into EMCOMM.

Alan's (KH6/AD6E) Hawaii Internet CW Class of four students graduated this month. Take a look at his students' comments and consider joining his next class. Looks like it is a great way to learn CW!

Hawaii ARES is moving into the Internet. Clem (KH7HO), our SEC, reports a growing number of Hams are registering with their District Emergency Coordinators. Check out the ARES website at <http://www.HawaiiARES.info> and consider joining.

The Hawaii QSO Party is this month, a chance to operate when other stations are pointing their antennas to Hawaii. Check out the

information about this event.

In August the main topic will be UHF/UHF simplex activities. Would you believe there are guys communicating Kauai-Kona on 2M regularly? More next month. I owe you reports on club FD outings too. I ran out of space this month.

We continue to look for local news about Amateur Radio activities in Hawaii. If you have anything you'd like to share, please pass it on.

Links to April-July SM reports at <http://www.arrl.org/Groups/view/pacific-section>.

Aloha and 73,
Joseph Speroni, AH0A
ARRL Pacific Section
(ah0a@arrl.org)

Good-Bye, Hara Arena! Dayton Hamvention Heads to Xenia

"X" marks the spot! After 52 years at Hara Arena and its entire 64-year history in the Greater Dayton area, Hamvention® announced on August 1 that it would relocate to the Greene County Fairgrounds in Xenia, Ohio. The new venue is about 16 miles east of downtown Dayton off US Route 35 and north of Xenia. On June 29, the Amateur Radio community was stunned to learn that Hara Arena would shut down at the end of August, leaving

Hamvention homeless -- at least until the recent big reveal.

Hamvention spokesperson Mike Kalter, W8CI, said: "We appreciate and value all the time and effort the many partners, in particular the Greene County Agricultural Society, the Greene County Board of Commissioners, and the Greene County Convention & Visitors Bureau, have put into helping Hamvention find the right venue to continue our long history here in the Miami Valley."

Hamvention General Chair Ron Cramer, KD8ENJ, said: "We look forward to a long and mutually prosperous relationship."

Hamvention chief spokesman and board member Mike Kalter, W8CI, said: "The key thing is that we plan to have a 5-star event," he said of Hamvention 2017. "We'll put a lot of time and energy into it."

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The ARRL Pacific Section  
webpage is at:

<http://www.arrl.org/Groups/view/pacific-section>

### ***FCC Proposes Rule Changes in Response to ARRL's "Symbol Rate" Petition, Seeks Comment***

The FCC has proposed to revise the Amateur Service Part 97 rules in response to the ARRL's so-called "Symbol Rate" Petition for Rule Making (RM-11708), filed in late 2013, and it has invited comments on its recommended changes. The Notice of Proposed Rule Making (NPRM) in WT Docket 16-239, released on July 28, had been making the rounds at the FCC since May. ARRL had asked the FCC to change the Part 97 rules to delete the symbol rate limit in §97.307(f) and replace it with a maximum bandwidth for data emissions of 2.8 kHz on amateur frequencies below 29.7 MHz.

While tentatively concluding that a specific bandwidth limitation for RTTY and data was not necessary, the FCC nonetheless invited comments on whether it should set emission bandwidth standards for Amateur Service MF/HF RTTY and data emissions. Under the current rules, "specified digital codes" in Part 97 may be used with a symbol rate that does not exceed 300 baud for frequencies below 28 MHz, with the exception of 60 meters, and 1200 baud in the 10 meter band. The baud rate limits were adopted in 1980, when the FCC amended Part 97 to specify ASCII as a permissible digital code.

Comments in the proceeding will be due 60 days after the date that the NPRM appears in the Federal Register.

### ***National Parks on the Air Update***

The ARRL National Parks on the

Air (NPOTA) program now is in its 8th month, and more than 440 of the 484 eligible NPS units have been activated, with over 540,000 QSOs confirmed in Logbook of The World. Despite a rough summer for propagation, plenty of Activators have been on the air, and it's not too late for you to become a new Activator or Chaser.

The 100th birthday of the National Park System is August 25, and several parks will be active during the Centennial week. See the NPOTA Facebook group for a list of stations active during the actual Centennial week, or to register your own activation.

Details about activations can be found on the NPOTA Activations calendar. Also follow NPOTA on Twitter (@ARRL\_NPOTA).

### ***FCC Levies Fines on Radio Amateurs for Deliberate Interference***

The FCC has imposed fines on radio amateurs in California and Georgia after concluding they broke FCC rules and the Communications Act. The FCC Enforcement Bureau imposed a \$25,000 penalty on William F. Crowell, W6WBJ (ex-N6AYJ), of Diamond Spring, California, for intentionally interfering with the transmissions of other radio amateurs and transmitting prohibited communications, including music.

In a Forfeiture Order released on July 29, the FCC fined David J. Tolassi, W4BHV, of Ringgold, Georgia, \$1,000 for repeatedly failing to properly identify himself while transmitting.

### ***ARRL Expresses Support for All Activities that Strengthen Emergency Communications Infrastructure***

At its July 2016 meeting, the ARRL Board of Directors approved revisions concerning the management and governance of its National Traffic System (NTS) program. In response, some NTS participants have proposed to form a new organization with the stated purpose of engaging in current NTS activity, independent of ARRL. This action, in part, was a reaction to ARRL's announcement regarding the creation of an enhanced emergency communications plan, scheduled for implementation later this year. The ARRL plan will address the role of programs such as NTS, which can provide important capabilities to ARRL partner agencies, including the Federal Emergency Management Agency (FEMA), the American Red Cross, and The Salvation Army.

In a statement issued August 3 by ARRL, the League said it believes that the existing ARRL NTS program will rise to meet these new, demanding requirements; NTS resources are already well-established networks and have a long history of reliable operation.

"We encourage all NTS participants to be involved in current National Traffic System activities by continuing their existing assignments and duties," the statement said. "However, if NTS members wish to explore alternative programs like the one recently proposed, we do not wish to discourage that exploration."



The statement went on to say that it is ARRL's mission to support all activities that advance the art, science, and enjoyment of Amateur Radio.

The League "encourages any activity that strengthens the national emergency communications infrastructure, provides network redundancy, and refines and maintains the critical skills of radio amateurs who daily serve their communities with communication training activities and responses to local and regional emergencies," the statement concluded.

***Skyler Fennell, KD0WHB, is 2016 Bill Pasternak, WA6ITF, Memorial Young Ham of the Year***

Amateur Radio Newline has announced that 17-year-old Skyler Fennell, KD0WHB, an ARRL member from Denver, Colorado, is the 2016 Bill Pasternak, WA6ITF, Memorial Young Ham of the Year (YHOTY). The recent Denver School of the Arts honors graduate and Amateur Extra licensee was introduced to Amateur Radio when he was a high school freshman, but his interest in electronics began in 4th grade.

"After starting an Amateur Radio club at my high school, we all wanted to be part of a high-altitude balloon launch," he explained on his QRZ.com profile. "After fundraising, and a number of designs, we finally launched with the Edge of Space Sciences (EOSS)." He worked with the EOSS Amateur Radio-equipped balloon launches of the AB0BX STEM School Amateur Radio Club in nearby Littleton.

Skyler's interest in satellite

communication resulted in a revival of the Colorado Amateur Satellite Net; he became a net control operator and created a website for the net. He also has gained extensive experience designing and working on repeater systems, and introduced the AllStar Link system for one of the Rocky Mountain Radio League's repeaters. He became project manager for its 440 MHz repeater and helped put together an AllStar and EchoLink repeater for students. He was also involved in proposing and assisting in the construction of a VHF/UHF repeater at a remote mountaintop site and added an AllStar link to the system.

An Eagle Scout at 13, Skyler has combined his interests in cycling and Amateur Radio, assembling a bicycle mobile setup with VHF and UHF radios. He will be formally recognized as YHOTY during the Huntsville Hamfest.

***Fox-1B (RadFxSat) Nears Completion***

AMSAT-NA Vice President-Engineering Jerry Buxton, N0JY, reports that the Fox-1B CubeSat (RadFxSat -- Radiation Effects Satellite) flight unit has been assembled and has undergone various stages of testing before its current environmental (shock, vibration, thermal) testing in August for completion by early September. Launch is scheduled for January 20.

Fox 1B is a joint mission by AMSAT and the Institute for Space and Defense Electronics at Vanderbilt University.



***Hiram Percy Maxim Award Winner Chris Brault, KD8YVJ, operating W1AW/4 at the 2016 Orlando Hamcation.***

***Hiram Percy Maxim Award goes to Chris Brault, 13***

The winner of the 2015 Hiram Percy Maxim Award is 13-year-old Christopher "Chris" Brault, KD8YVJ. He has been licensed since 2014 and active in a wide range of Amateur Radio-related activities, including antenna building and bicycle mobile operation.

Brault, of Liberty Township, Ohio, is active in the recruitment and training of new amateurs by participating in such events as Jamboree On The Air (JOTA) and activities at the West Chester Amateur Radio Association/Voice of America Museum (WC8VOA), where he serves as a volunteer.

Brault was involved in developing an Amateur Radio on the International Space Station (ARISS) contact proposal, in cooperation with iSPACE and the WCARA/VOA Museum.

## **Chatham Marconi Maritime Center Acquires "Creed Machine" from Georgia Radio Amateur**

ARRL member Gene Greneker, K4MOG, of Powder Springs, Georgia, recently fulfilled a dream for the Chatham Marconi Maritime Center museum -- formerly WCC on Cape Cod -- to add an important artifact to its collection. Greneker spotted a brief item in QST last year seeking a so-called "Creed machine" for the museum. While most ship-to-shore station traffic was conducted by skilled Morse operators at their keys, the Creed machine -- or keyer -- read a punched tape prepared in advance that generated one-way Morse code broadcasts to ships at sea.

"We have searched continuously for roughly 10 years for this artifact, following leads with historians, other museums, archivists, ham radio operators, collectors, and any other possible leads," said Chatham Marconi Maritime Center Operations Manager Dorothy Bassett. The mention in QST, resulting from a visit to the museum by ARRL Lab staffer Mike Gruber, W1MG, did the trick. Greneker spotted it and let Bassett know he had what she was seeking.

"Our members and supporters raised the funds, and we were able to purchase the Creed machine, a custom table, and an entire exhibit to showcase this item and how it worked with our Kleinschmidt machine," Bassett recounted. The Kleinschmidt machine -- or "Klein" -- refers to the equipment used to create the punched "Wheatstone" tape, the narrow ribbon of heavy, perforated paper read by the Creed keyer.

Bassett said that once the exhibit is complete, the museum plans to install a button that visitors can push to start the machine, "so guests will get to hear the Creed working, see the tape move, and watch the pins and mechanics in action."

Greneker said the Creed machine is a



The Creed keyer with a Kleinschmidt punched-tape generator.

***[Chatham Marconi  
Maritime Center photo]***

rare find for a collector, and he obtained his when he and Fred Dorsey, WA4TDC, bought an entire lot of equipment that had been installed at WOE in Lantana, Florida. "Most of these stations only had one keyer to broadcast the traffic lists on the hour, and these were cut with the Wheatstone perforator," Greneker told Bassett. "Given that there were not that many shore-to-ship stations, not many Creed keyers were ever manufactured." Greneker said the machines were assembled by hand and expensive to purchase. He speculated that the Creed machine he donated may once have been at WCC.

"RCA was famous for taking old equipment from the flagship station (WCC) and sending it to the smaller stations when they needed some item. The flagship station then got the new replacement equipment," he explained. Greneker explained that when shore station operators such as RCA closed those facilities, "the entire station was loaded up and carried to the dump, making the keyers almost impossible to find today."

"This piece is very special to us," Bassett said, "and I can't thank the ARRL enough for running the ad that secured procurement."



# ARRL Encourages Comprehensive Noise Floor Study

Anticipating an FCC Technological Advisory Council (TAC) investigation into changes and trends in the radio spectrum noise floor, ARRL has asserted that such a study is long overdue. In part, the study would determine if there is an increasing noise problem. The FCC Office of Engineering and Technology (OET) announced plans for the TAC study in mid-June and invited comments and answers to questions that the TAC posed concerning the methodologies for such a study. The League's comments also praised the TAC -- an advisory group to the FCC -- for tackling the issue and expressed the hope that the noise study might, for the first time, provide a useful, objective basis for spectrum overlays and other future allocation decisions. ARRL allowed that while a noise floor problem exists, "The magnitude of this problem and the extent of it in the 21st century is virtually unknown."

"The TAC and the leadership in this study initiative are to be congratulated for finally undertaking what has been universally determined to be necessary for well more than 2 decades," ARRL said. "The Commission should not have made spectrum management decisions without this noise information, and it is unfortunate that the initiative has been delayed this long."

The ARRL said League members could be of use in gathering data for the TAC noise study, but advised that any urgency in initiating the study "be tempered by the prerequisite need to develop a standardized and valid methodology for conducting the study," in order to "obtain quantitative data regarding the noise floor in various environments and trends over time," ARRL said.

ARRL said the focus of the TAC noise study "should be an accurate determination of what noise levels exist in as wide a range of indoor and outdoor environments as possible. It should, to the extent possible, determine what types of noise are being found: Broadband, non-specific noise; broad noise spectral peaks; broadband digital noise; and noise occurring on discrete frequencies."

## Briefs:

Bob, K4UEE, Erling, LA6VM and Ralph, KØIR have begun work on a **DXpedition to Bouvet** in early 2018. There are some spots available, but be prepared for a physically and financially challenging (\$15,000 per person outlay), but rewarding adventure.

### Of interest:

<http://www.digitaltrends.com/mobile/fcc-radio-wave-noise-floor/>

<http://www.digitaltrends.com/cool-tech/air-force-plasma-bomb-radio-communications/>

**Alaska's High-Frequency Active Auroral Research** Program (HAARP) facility will reopen in 2017. The sprawling facility now is under the ownership of the University of Alaska Fairbanks (UAF), and the UAF Geophysical Institute is preparing HAARP for a new sponsored research campaign next year.

**The US Amateur Radio on the International Space Station (ARISS)** team will host the ARISS-International "face-to-face" summit in the Houston, Texas, area this fall. A highlight of the Nov. 15-18 gathering will be a tour of NASA Johnson Space Center (JSC) across the street from the meeting site in Nassau Bay.

**Tuskegee Airman and Congressional Gold Medal** recipient Julius T. Freeman, KB2OFY, of Spring Garden, New York, died on July 22 after suffering a heart attack. He was 89. Originally from Lexington, Kentucky, Freeman served during World War II as a medic with the famed 332nd Tuskegee Airmen. He was a frequent speaker at schools and civic organizations.

**ARRL Field Day 2016 List of Logs** Received Now Available: The list of Logs Received for ARRL Field Day 2016 now is available. It includes all logs -- paper and electronic -- as well as all entries classified as check logs, typically due to incomplete information. ARRL received more than 2700 ARRL Field Day logs for 2016.

## **FEMA Teaming with Amateur Radio Clubs to Present Preparedness Information**

September is National Preparedness Month. As part of its focus on educating and getting prepared, FEMA is offering a "Family Emergency Communications Plan," which helps families work out their communication strategies in the event of an emergency. ARRL is partnering with FEMA to offer this material to interested Amateur Radio clubs that are willing to present it in their localities during National Preparedness Month.

While the FEMA presentation focuses on the Family Communications Plan and doesn't specifically mention ham radio, the material offers Amateur Radio clubs a great opportunity to raise their visibility in their communities.

A webinar with FEMA Region 1 Preparedness Liaison Sara Varela will take place on Tuesday, August 23, at 8 PM EDT (Wednesday, August 24, at 0000 UTC), to offer background and training for any club wishing to present FEMA's Family Emergency Communications Plan material in September. Registration is requested.

Presentation of the FEMA material to local communities should take approximately 1 hour. It will include a PowerPoint presentation and links to worksheets that families can discuss and fill out together.

Clubs are free to offer additional presentations on their activities following the program covering the FEMA material.

## ***Now Free of HAARP, US Air Force Still Wants to Tinker with the Ionosphere***

A lot of radio amateurs bemoaning the recent spate of poor HF conditions would love to have a way to improve propagation -- perhaps without even having to rely on the whims of the Sun. The US Department of Defense has been thinking along the same lines. An August 9 article in New Scientist reports that the US Air Force is exploring a plan to bombard Earth's upper atmosphere with ionized gas dispersed from CubeSats. According to the New Scientist article by David Hambling, the Air Force hopes to improve long-distance radio communication by "detonating plasma bombs" in the upper atmosphere, and the military branch has contracted with corporate and university researchers to figure out how to make this a reality.

The US Air Force is no stranger to ionospheric tinkering, having just last year transferred the High Frequency Active Auroral Research Project (HAARP) facility to the University of Alaska Fairbanks (UAF), which hopes to restart it next year. HAARP's super-power RF in the high-frequency spectrum has been used to stimulate the ionosphere and create a plasma cloud that could support HF radio propagation; it also has been used to study how the ionosphere functions.

The trick with using CubeSats to disperse ionizing gas above Earth is coming up with a plasma generator small enough to fit within a CubeSat, and controlling how the plasma will disperse. New Scientist said General Sciences of Souderton, Pennsylvania, and Enig Associates of Bethesda, Maryland, are working with scientists at Drexel University and at the University of Maryland, respectively, on separate methods to produce plasma.

The New Scientist article said the better approach will be selected for a second phase, which will involve testing plasma generators in vacuum chambers and exploratory space flights.

## **Amateur Radio has key role in major FEMA quake disaster exercise**

Upward of 500 Amateur Radio volunteers in Washington, Oregon and Idaho played a major role in the June 6-10 Cascadia Rising 2016 Federal Emergency Management Agency exercise. In the scenario, a magnitude 9.0 earthquake and consequent tsunami had blacked out all conventional communication channels in the Pacific Northwest.



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

The world of HF radio is open to all licensed amateur radio operators, including Technicians, on the 10-meter amateur radio band.

From the website of Ten-Ten International, here are the basic answers to the overriding question:

Just what is the Ten-Ten International Net?

The Ten-Ten International Net, Inc. was formed back in 1962 as the Ten-Ten Net of Southern California. Its purpose was to promote activity and good operating practice on the ten meter amateur band.

During the first few years the organization grew slowly, but by 1975 there were 10,000 members, and the word "International" had crept into the name.

To date, there have now been more than 75,000 10-10 numbers issued world wide.

# *The 10-10 Connection*

with NH7PE,

## **10-10 Aloha Chapter**

No 10-10 QSO parties are scheduled in September for the Ten-Ten International Net.

It is a good month to prepare for the winter contest season. The ARRL 10-Meter Contest will be Dec. 10-11. Propagation may be poor on SSB, so practice CW and make some points with CW on 10 Meters.

You can practice during the Ten-Ten Fall CW QSO Party Oct. 15-16, too. Oct. 10 (note the date of 10/10) will be the Sprint QSO Party, a 24-hour event. An award will be given for working all 10 USA Call Districts. Be sure to postmark your paper log no later than Oct. 25.

September is a good time to think of supporting the 10-10 International Net Scholarship Foundation. For 2017, the foundation will award five \$2,000 scholarships. It is a 501(c)3 tax-exempt organization and contributions, therefore, are tax-deductible. If you have an employer matching program, please let coordinators know. Why not consider a donation as a group or as an individual in memory of a fellow ham or other loved one?

On a related topic, I encourage folks to check out the FISTS CW Club, the International Morse Preservation Society, Americas Chapter. You can get involved, no matter what your "speed" of CW comprehension or transmitting skills. FISTS activities are close to: "58" (3.558, 7.058, 14.058, 21.058 and 28.058 MHz.

### \*\*\*\*\***2016 BIARC leadership**\*\*\*\*\*

**President** Bob Schneider, AH6J; **Vice President** Peggy Gentle, KE6TIS; **Secretary** Beau Mills, NH7WV; **Treasurer** Doug Wilson, KH7DQ; **Directors** Bill Hanson, N0CAN; Barbara Darling, NH7FY; Richard Darling, AH6G; Ted Brattstrom, NH6YK, immediate past-president; and returning Directors Gus Treewater, K2GT; Dennis McCartin, WH6ELY, and Paul Ducasse, WH7BR. **Program Committee:** Co-chairs John Bush, KH6DLK, and Les Hittner, K0BAD. **Repeater Committee:** Chair Bill Hanson, N0CAN, with Paul Ducasse, WH7BR; Paul Agamata, WH6FM; Bob Schneider, AH6J; and Lopaka Lee, WH6DYN. **Field Day Committee:** Chair Peggy Gentle, KE6TIS, with Robert Oliver, NH6AH.