

**Next
up:**

**BIARC
meets at
2 p.m.
Saturday,
Dec. 8,
at the
Keaau
Comm-
unity
Center**

Big Island Amateur Radio Club Newsletter December 2018



1924: First mobile radio telephone

Club traces cell phone heritage, plans Christmas social

Our annual elections and holiday party are set for 2 p.m. Saturday, Dec. 8, at the Keaau Community Center. BIARC will provide turkey and ham, and everyone attending is asked to augment the festive buffet with a potluck item. Pupus, desserts, side dishes, salads, etc. -- all are welcome.

At the November

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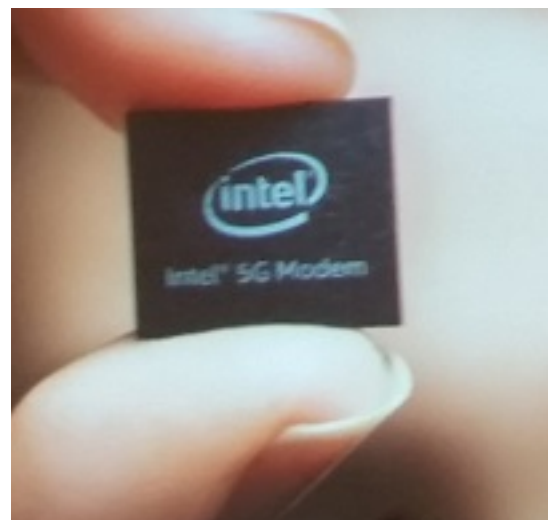


At November meeting, President Pascal Nelson highlights advances in mobile communication technology over the decades, from the first mobile radio telephone in 1924 -- a multi-component clunker with limited range -- to today's lightweight, miniaturized, high-power units.

-- Photos by Linda Quarberg, WH6LQ



Pre-cellular mobile phone, 1960-1975



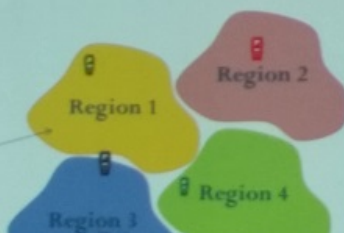
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meeting, President Pascal Nelson, AC7N, traced the history of wireless telecommunications, the Long Term Evolution (LTE) of GSM telecomms protocol. Accompanying photos by Linda Quarberg, WH6LQ, provide a taste of his informative talk for those who missed out.

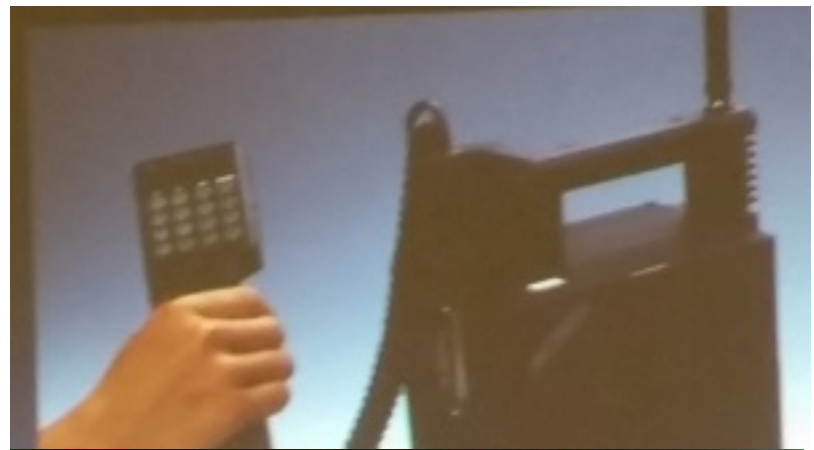
"Every system in the world is converging on LTE," noted Pascal.

History: Pre-Cellular System (3.1)

- The central station could reliably communicate with the mobile units up to a radius of approximately 25 miles (50 km).

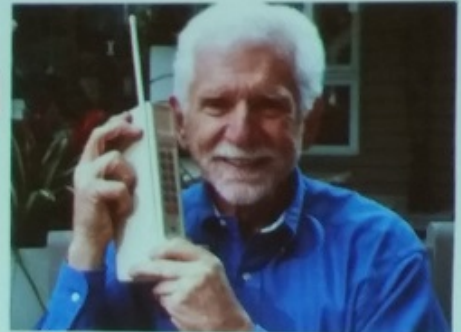


Colored area indicates the coverage area of the central transmitter in the corresponding



Marty Cooper: Cellphone Inventor



- 1973
- Motorola DynaTAC prototype
- Weighed nearly two kilos
- Cost approximately \$1 million for Motorola to produce.
- 20 minutes battery life



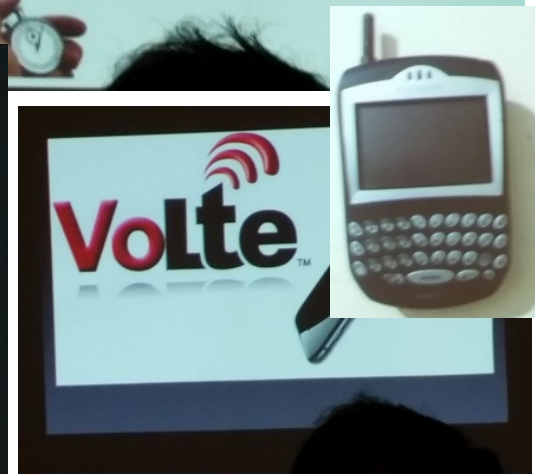
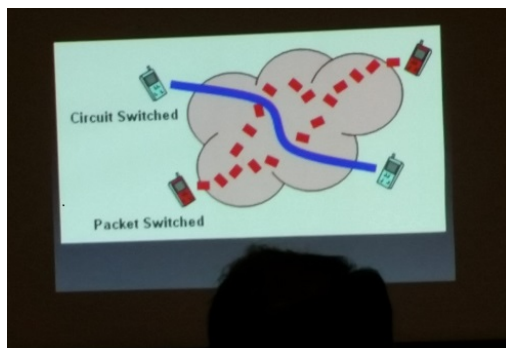

Not a problem because you could not hold it up for twenty minutes; it was so heavy.

(http://panath.com)

History: Pre-Cellular (2) Car Phone




Now—from your car—you can place or receive calls from any place in the world with General Electric's Simultaneous Duplex Mobile Telephone.




Motorola's DynaTAC

First commercially available cell phone in 1983



- Weighed about 2 lbs (1 Kg)
- 10 inches high, making it larger than some Chihuahuas
- Battery life: 30 minutes of talk time
- \$4,000





1G, 2G, 3G, 4G, 5G ...
and (only in Hawaii)
we've got:

7G

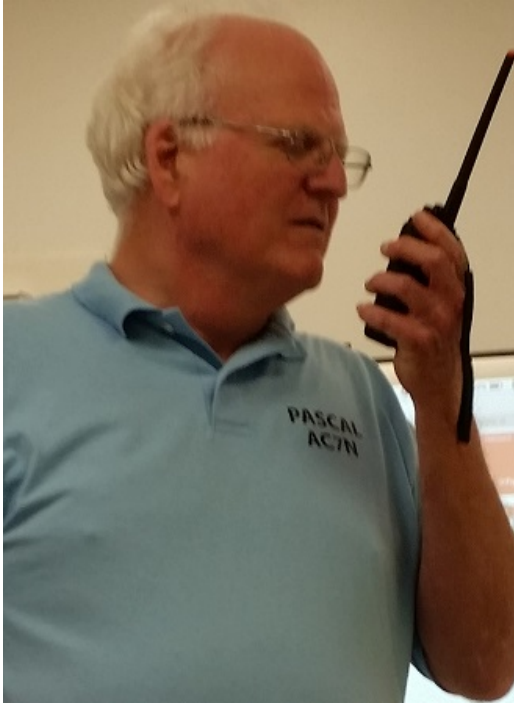
That's AH7G, our own Richard Darling, who treated members to ice cream and cookies in early celebration of his 85th birthday on Nov. 30. Paul Ducasse snapped this photo of Richard and Barbara, NH7FY, during the ice cream interlude at the November meeting.

***Photo by Paul Ducasse,
WH7BR***



The President's Paragraphs

**Pascal
Nelson,
AC7N**



listen. It's been a rough year for some of us.

As for ham radio, we experienced downed repeaters due to the lava, extended readiness alerts, and lots of situation reports and sharing of our struggles and successes. The BIARC Kulani repeater has been a valuable and well-used resource during these challenging times.

HF radio is very dependent on solar activity, and 2018 has been about as sparse in solar activity as it can get. The skeds to V63JB in Micronesia have gotten more and more difficult, but digital modes have proven their worth many times over. As bad as it has been for HF propagation, often a contest magically seems to open up the bands, when we suddenly see the waterfall full of signals.

We've come through a lot in the last year. The BIARC community has been a bright spot in an otherwise often difficult and uncertain period. Thank you for your technical curiosity, your operating enthusiasm, and your situational awareness on behalf of us all.

Let's look forward to a great 2019.

And - Sol, if you're listening, how about some spots? We're ready for good DX again.

Remember - axial tilt is the reason for the season(s).

**Aloha,
Pascal AC7N**

'tis the season ...

Merry Christmas.

Happy Holidays.

Seasons Greetings.

Happy Hanukkah.

Joyous Solstice.

It's that time of year!

2018 is nearly over - an "interesting" year, by all measures. Pele had her say, and we had to

Just a few minutes, once a month ...

All amateur radio operators are asked to help coordinators of a statewide emergency communications repeater by reserving a few lunchtime minutes on the first Saturday of each month to check in to the repeater.

"Please check in on the Hawaii State VOAD repeater, 146.72 MHz (PL



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100.0 Hz) Maunakea on the first Saturday, 1200-1300 HST," said Kevin Bogan, AH6QO ASM Hawaii State VOAD ARRL/ARES Liaison.

The Hawaii Voluntary

Organizations Active in Disaster (VOAD) is the forum where organizations share knowledge and resources throughout the disaster cycle (preparation, response, and recovery) to help disaster survivors and their communities.

See VOAD on Page 9



Club gets overview of mobile telephone history at November meeting.

-- Photo by Linda Quarberg

Big Island Amateur Radio Club meeting minutes Saturday, November 10, 2018

The meeting was called to order by President Pascal Nelson, AC7N, at 1401.

Pascal welcomed the following new members:

Chuck Epperson, AH6SC

Monthly News and Activities

Chuck, AH6SC, announced that the O'ahu Swapmeet will be held from 10:00 am to 2:00 pm on Saturday, December 01, 2018 at the Fleet Reserve Facility.

Barbara, NH7FY: The ice cream today is to celebrate Richard's (AH7G) 85th birthday.

Barbara, NH7FY, also announced that Gene Johnson, KH6A, has equipment and parts to give away. He is moving back to the mainland because of health concerns. His address: 154 Pua Alani Drive in Hilo. K2OPT stated that he has picked up the remaining items and that they would be on display in the adjacent room during the meeting break.

Pascal, AC7N, congratulated Leigh, WH6LC, on yet another great newsletter.

Pascal, AC7N, introduced Nanda, KE7LWN, from Battle Ground, WA.

William, NH6ET, announced that Motorola was looking to fill a Field Technician position on the island. Interested persons were asked

to contact Bill. Bill also had a length of LMR-600 with N-connectors to give away. Leslie, K0BAD, took the coax off his hands.

John Buck, KH7T, noted that a problem with the Girl Scout Camp repeater failures when on emergency power were isolated to RF getting into the combined AC/battery supply when it was operating on emergency power. A choke and bypass capacitors were added and the system appears to be working correctly now.

Peggy, NE6TIS, stated that Cory, KN6ZU, continues to improve and visits Life-Care for Physical Therapy.

Treasurer's Report (End of month – October 2018):

Bank: \$ 1943.06 – identical to that reported in October.

Nominations for Club Offices:

Pascal, AC7N, opened the floor for nominations. The following current officers will continue for a second year or were self-nominated from the floor:

President: Pascal Nelson, AC7N (year 2)

Vice President: William Polhemus, NH6ET (self-nominated)

Secretary: Leslie Hittner, K0BAD (year 2)

Treasurer: Tony Kitchen, WH6DVI (self-nominated)

Other board members this year were as follows:

Gary Schwiter, WH6EPS (past president– year 1)

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MINUTES: From previous page

Cory Allen, KN6ZU (year 1)
Barbara Darling, NH7FY (year 2)
Kim Fendt, WH6KIM (year-2)
Bill Hanson, N0CAN (year 2)
John Bush, KH6DLK (year 1)
Bob Schneider, AH6J (year 2)

The following members were nominated to positions on the board from the floor:

Mel Uchida, KH6EKD
James Huntley, WH6FQI
Hank Kaul, KH6HAK
Peggy Gentle, KE6TIS

Pascal, AC7N, announced that elections will be held at the Christmas Party in December.

The meeting broke for pupus at 1438 and the meeting resumed at 1502.

Leslie, K0BAD, moved and Barbara, NH7FY, seconded that the slate of officers and board members be approved by unanimous consent at the December. 2018, Christmas Party. The motion passed.

The VEC Test session being held in the room adjacent to the meeting room was completed and Technician, General, and Extra Class licenses were granted.

The meeting was adjourned and the program presentation began.

A program about Long Term Evolution (LTE) of the Global Systems for Mobile (GSM) Telecommunications Protocol (cellphone network: 1G, 2G, 3G, 4G, and 5G, where "G" refers to the generation in the evolutionary development) was presented by Pascal Nelson, AC7N.

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



Paul Daryl, WH6EXL; Darrell Asuka, KH6RDO; and BIARC Repeater Committee Chair Gary Schwiter, WH6EPS, took time off from their busy lives to cut the grass and otherwise spruce up the grounds of the Pepekeo Repeater. The work party trek on Nov. 5 continued an ongoing series of upgrades for the repeater, including installation of an RF filter, a preamp, 12v batteries and charger, etc.

TLC for Pepeekeo Repeater



Photos by Gary Schwiter, WH6EPS

News flashes:

Grid Madness uniform?

T-shirt design ideas invited

Darrell KH6RDO and Stan AH6KO are working on a possible T-shirt for the 2019 Grid Madness.

They are asking for creative kokua from their extended ohana.

"We are not graphic design experts, so we're looking for anyone that has an interest to help with our design-in-progress," explained Stan.

Please email any ideas or suggestions to AH6KO@arrrl.net.

Congratulations to all new amateur radio licensees

Volunteer Examiner coordinator Doug Wilson, KH7DQ, reports that the following folks got new licenses at testing during the November BIARC meeting.

Marvin Kitchen (WH6DVI) passed his General exam.

Roy Kunishige (WH6FYK) passed his Technician and General exams.

Dennis Marshall (WH6FIO) passed his Amateur Extra exam.

Joe Scarola (WH6FWE) passed his General and Amateur Extra exams.

Calling all hams: Volunteers needed to kokua with Hilo Marathon comms

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, 2019.

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. and the first race starts at 6 a.m.

Interested? Contact comms coordinator Sean Fendt, KH6SF, at 430-1884, email sean@sfendt.net.

Kohala Hamakua RC Hamfest is Feb. 2

The Big Island of Hawaii International Swap Meet will be presented by the Kohala Hamakua Radio Club on Saturday, Feb. 2, at the Waimea Community Center, next to the ballfield off Mamalahoa Highway in Waimea.

There will be a \$10 fee per table per seller. Admission will be \$5 per person.

Schedule: 8 a.m. breakfast at nearby Hawaiian Style Cafe; 9 a.m. vendor setup; 9:30 a.m. doors open to the public (Be sure to get your raffle tickets for the "Big ticket items"); 10:30-11:30 a.m. EMCOMM forum, with presentations in adjoining room; 12 noon, swap meet closes; 1 p.m. VE testing (a good time to upgrade your license); 2 p.m., event comes to a close.

"This year we are planning to have a forum about emergency communications on Hawaii Island. We will have guest speakers and round table discussions," said spokesman Steve Milner, WH6N. "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."

Persons desiring to test for initial license or upgrade need to bring a current drivers' license or passport, a copy of their current FCC license or CSCE if applicable, and \$15 in exact change (ARRL fee for 2018). Any questions, please call Milner, ARRL VE, at 808-938-8437 before the test date.

There will be surprise giveaways throughout the day.

"Please note that 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," he said.

Talk in 146.940 Maui Repeater, 147.32 Waimea, and 443.650 (100 Hz tone) Kona.

"This is an island-wide event, so be sure to tell all your radio friends. See you there!" For more information, contact Milner at wh6n@arrrl.net.

The Section Manager's Report

Aloha all,

Many Hawaii hams have interesting projects that may be of interest to others and even a solution to a problem we have. I've asked members to share their activities. If you have a pet project you'd like to share please drop me an email at ah0a@arrl.org. Hearing from a local ham in our time zone may make it easier for others to profit from your accomplishments.

Pascal Nelson (AC7N) on the Big Island has been testing a configuration of a Raspberry Pi with a software modem package to operate Winlink ARDOP on HF without a Windows PC. It offers better portability and a good emulation of Winlink RMS Express. Here's his report and information on implementing it.

"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 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 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"

Follow us on social media for other reports on Hawaii Amateur Radio.

<http://hawaiiarrl.info/stories/2018/ARRLHawaii-SocialMedia.pdf>

**ARRL Pacific Section
Section Manager: Joseph Speroni, AH0A
ah0a@arrl.org**

Free CW class starts online in January

Hi all,

Alan (AD6E/KH6TU) reminds that his next CW class is already enrolling students. The class is free. It is a great course -- a chance to acquire a new skill with a 1-on-1 instructor.

Here's the announcement:

"The next CW class of the CW Academy will be held Jan-Feb 2019.

This is an on-line video chat meeting twice a week for eight weeks, most likely Monday and Thursday at 6pm HST 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.

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 is required for Level 1. Levels 2 and 3 classes improve CW proficiency.

More information here:

<https://cwops.org/cw-academy-2/>

Sign up here:

<https://cwops.org/cw-academy-2/cw-academy-student-sign-up/>

**ARRL Pacific Section
Section Manager: Joseph
Speroni, AH0A
ah0a@arrl.org**

Norman Paik, NH7CT, SK

Norm was born in New York City on December 18, 1934 and died in the Yukio Okutsu Veterans Home on November 28, 2018. He attended public schools in Boston and attended MIT. He spent a couple years in the U.S. Army. He was an Electronic Engineer. He was the founder of N.H. Research Inc., Santa Ana, California. He sold the business and retired in 1978. He and his wife Kathleen owned a home on Virgin Gorda in the British Virgin Islands for 27 years. Since Norm was interested in sailing and fishing they moved their sail boat to Virgin Gorda



Norm Paik, above, and with wife, Kathleen, below.

**Photos by
Barbara Darling,
NH7FY**



and sailed to most of the Caribbean Islands over a 25 year period.

Norm and Kathleen were very interested in traveling so have been all over the world. They sold their home on Virgin Gorda and their California home and moved to Hawaiian Paradise Park in 2000.

Barbara Darling reports that Norm got his present call sign, NH7CT, after moving here, but had a prior call of WA6JDA which he got in 1959. He was a ham for 59 years.

Norm is survived by his wife Kathleen, a brother William in California and son Russell in Texas. He is predeceased by a daughter, Catherine.

Norm and Kathleen have been members of BIARC since arriving here.

Just what is VOAD, and how can we help?

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Prior to the December exercise, Bogan noted that the tests conducted in October and November 2018 were successful. However, there appears to be a problem with encoding the outgoing signal with the CTCSS tone. This does not substantially impact the use of the repeater. Plans are underway to take care of



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this issue.

"The Dec. 1 test and the next few months are important because we are heading into the period of winter storms and must ensure that the repeater

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remains operational," he explained. The repeater is turned on for the one hour test each first Saturday, then turned off again.

"It needs to be tested on a monthly basis to continue to map out coverage and discover what minimal conditions are required to maintain communications on the repeater and to insure that it is operational," said Bogan. "Please help us map the extent of coverage of the Maunakea repeater by checking in on the HSVOD net from as many locations as possible.

"This is an emcomm repeater, so please use best practices as given by the NCS when operating on the repeater."

This repeater serves the member agencies (e.g., East Hawaii VOD, American Red Cross, The Salvation Army, Hawaii Pacific Baptist Convention, Team Rubicon, ARES and more, and their partners (e.g., HI-EMA, HCCDA, MEMA, etc.)

To find out more About Hawaii VOD, email hawaiiastatevod@gmail.com or visit the website <https://hivod.communityos.org>.

The Hawaii VOD is the state chapter of the National VOD. VOD consists of nonprofits,

faith-based, and community organizations, as well as government and private sector partners that voluntarily choose to provide some form of disaster-related services throughout the state.

The role of Hawaii VOD is to bring organizations together and enable them to understand each other and work together before during and after a disaster.

In addition to the State VOD based in Honolulu, there is the Maui VOD, Kaua'i VOD, and East Hawaii VOD.

The members of Hawaii VOD adhere to the four principles established by the National VOD. These are referred to as the 4C's:

- *Cooperation
- *Communication
- *Coordination
- *Collaboration

These principles serve as the foundation for the Hawaii VOD as it collaborates with local, regional and national partners to coordinate disaster preparedness, response, and recovery.

Members of the Hawaii VOD form a coalition of nonprofit, faith-based, and community organizations that respond to disasters as part of their overall mission.



Irene NH7PE



Upcoming 10-10 events

Tue Jan 01, 2019 00:00
10-10 Anniversary
Tue Jan 01, 2019 00:00
10-10 Meet the Volunteers

Aloha Chapter

Ten-Ten International

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

Aloha, fellow amateur radio operators: Don't forget the special FREE offer for any ham interested in Morse Code -- at any level.

A free two-year membership, or extension of a current or lapsed membership, is offered by the Americas Chapter of the FISTS CW Club, reports club membership manager Dennis K6DF. Current members automatically receive the extension. Others need to send a request to membership@fistsna.org or Americas Chapter, FISTS CW Club, 300 Town Center, Suite 2370, Southfield MI 48075.

December is Youngsters on the Air Month

December is Youngsters on the Air (YOTA) Month. Listen for stations on the air with YOTA as the call sign suffix.

"The idea for this is to show the Amateur Radio hobby to young people and to encourage youngsters to be active on the amateur bands," said Tomi Varro, HA9T. "This is a great moment to show Amateur Radio to the world and to invite newcomers."

YOTA is primarily an International Amateur Radio Union (IARU) Region 1 (Europe and Africa) activity, but youngsters from the US in Region 2 (the Americas) have attended YOTA summer camps, which are held in a different country each year. Varro said both licensed and unlicensed youth will be making contacts.

"Be helpful on the bands -- maybe these



Otava, OH3OT (right), and Vilma, OH2VT, working as OF2YOTA during YOTA Month in December 2017. [Photo courtesy of YOTA]

young operators are just making their first-ever contacts," he advised.

YOTA stations are, in general, operated by individuals 25 or younger. The operating event takes place for the entire month of December UTC.

As part of YOTA month, Bob Johnson, W9XY, and Ken Claerbout, K4ZW, will travel to Ethiopia to team up with the club

at the Addis Ababa University, Institute of Technology and club station ET3AA. Z39YOTA will be on the air from Macedonia from the Zheleznicar club.

The Ham Radio World Club's WK1DS/YOTA will be on the air from the US. Logs and a chart of all participating stations are on the YOTA website. For more updates, visit YOTA's Facebook page.

AMSAT applauds Qatar Amateur Radio Society

AMSAT-NA has congratulated AMSAT-DL (Germany) and the Qatar Amateur Radio Society (QARS) for their roles in the successful launch on November 15 of the Es'hail-2 satellite, which carried AMSAT-DL's Phase 4-A transponder aloft. Es'hail-2 will be the first geostationary satellite to sport an Amateur Radio transponder. Launched from Cape Canaveral on a SpaceX Falcon 9 vehicle, Es'hail will be capable of linking radio amateurs from Brazil to Thailand, although it's unlikely to be accessible from North America with typical Amateur Radio satellite gear.

"I applaud the Qatar



Amateur Radio Society (QARS) and AMSAT-DL's achievement, the result of 6 years of work," AMSAT President Joe Spier, K6WAO, said. "To be a first at something in space is indeed a rare, rare honor. It is this type of honor that AMSATs around the world work on every day."

AMSAT-DL will commission the Amateur Radio transponder ground station in Doha, with the Es'hailSat control team. AMSAT-DL will announce when the transponders are available for use. -- **Thanks to AMSAT News Service; Southgate Amateur Radio News**

