

October 2024



THE BIG ISLAND HAMGRAM

The newsletter of the Big Island Amateur Radio Club

BIARC to host 3-part Hilo event Saturday, Oct. 26

BIARC will participate in the SSB segment of the CQ World Wide DX Contest with an event on Saturday, October 26 from 8:30 a.m. till pau, at the latest at 5 p.m. The location is Wailoa State Park at the wedding pavilion.

"It will be potluck, so we will need people to bring

food, drinks, ice, coolers, tables, chairs, canopies, etc." says Operating Activities Committee Chair Joseph Rosenbaum, WH6JOE. (<https://cqww.com>)

At the same time, nearby at the park, club members will activate a POTA (Parks on the Air) event, said Roy

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BIARC Board needs you! Director slots open for 2025

At the BIARC September program, one main focus of discussion was on the upcoming election of our club leadership team for 2025.

The annual BIARC election will be at our November twice-a-year general membership meeting. Nominations are invited for the three BIARC Executive Board positions expiring at the end of the year and a fourth slot which has opened up following the resignation of longtime

board member Les Hittner, K0BAD.

William Polhemus, NH6ET, is chairing the ad hoc elections committee, assisted by BIARC Treasurer Tony Kitchen, WH6DVI.

"I want to extend the club's deepest gratitude to Les," said William. "Thank you very much for your years of service."

Members wanting to

Continued on next page

Tips: How to equip home station to operate on alternate power

As part of the ARRL September series on National Preparedness Month, coordinators included this article on a critical element for radio amateurs -- and especially Amateur Radio Emergency Service (ARES®) volunteers: their station.

Many hams have a home station from which we oper-

ate on a regular basis. Is your station set up to operate or have the ability to operate off the grid or on alternate power sources?

There are many ways to set this up to run on battery power and could even be done temporarily

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Steve Johnson, WD8DAS, the engineer-in-charge at WWVH on Kauai, will do an online presentation to BIARC at our October 13 meeting.

WWVH engineer-in-charge to give October presentation

Steve Johnston, WD8DAS, the engineer-in-charge at WWVH on Kauai, will do an online presentation to BIARC at our Sunday, October 13 monthly gathering at 2 p.m. at Kamauna Senior Center in Hilo.

WWVH is the U.S. National Institute of Standards and Technology's time and frequency station for Hawaii, Alaska and the Pacific.

The shortwave time standard station for the Pacific broadcasts on 2.5, 5, 10 and 15Mhz with highly accurate frequency and time signals, propagation (geomagnetic storm) bulletins and other special

Johnston has been a builder, repairer, and restorer of electronic equipment nearly all his life. He started by taking apart radios as a youngster and became a ham at age 13. He was active in school radio clubs, including University of Akron club station W8UPD in Ohio, and the international N.E.R.T. radio club.

All this ultimately led to his career as a broadcast engineer. In the rare hours not spent with radio he pursues other interests such writing, beekeeping, and history. Steve has been a ham since 1976 and lives near Madison with his wife, Christy. Steve has experimented on the 630-meter band (472-479 kHz). These projects demonstrated that ham operation using practical rigs and suburban-size antennas will work on this band. Visit <https://www.wd8das.net>.



Meet the Digirig & The Digirig LITE

See President's Corner

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Want a BIARC shirt with your call sign? Here's the new phone number to call

BIARC members wanting to have a plain T-shirt decorated with their call sign and the vintage club graphic art may contact silk screener Chris Martin at 808-938-8758.

This is a corrected phone number that replaces the number previously circulated.

3-part fun event Oct. 26 at Wailoa State Park

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Kunishige, KH6KU.

And Shawn Farley, WH6GXZ, chair of the BIARC Digital Systems Committee, said he and some other hams will be playing with antennas and plan to do some QRP (low wattage) transmitting. He said it will be a good chance for young hams to operate.

More information will be available at the next BIARC membership gathering at 2 p.m. Sunday, October 13, at Kamana Senior Center in Hilo.

Reminder: Frequency changed for HF nets on 40 meters in Hawaii

Please be advised that effective Sept. 5, all HF nets that have been operating on 7088 will now be held on 7090.

This change was made by general consensus to accommodate emergency communications in the special 40 meter sub-band, 7075-7100.

Please remember that in the case of an emergency, 7090 will be used for Watch Nets, dedicated to general amateur use, to provide situational awareness and to direct amateurs with specific needs to the appropriate frequency.

Thank you for your cooperation.

Aloha,
Joe
AH6T

ARRL Pacific Section Emergency
Coordinator



Pacific Section Manager Alan Maenchen, AD6E, toured the historic W1AW facility when he attended meetings at ARRL HQ. At right, is a 150-foot tower at W1AW.

AD6E attends training at W1AW

In mid September, Hawaii's Alan Maenchen, AD6E, was one of 13 ARRL Section Managers gathered for training at ARRL Headquarters in Newington, Connecticut. He also was able to sit in on the ARRL Section Emergency Coordinators quarterly meeting.

ARRL staff members gave the SMs a detailed overview of what the association does on a daily basis, and how the resources from HQ can serve members out in the sections.

The ARRL Field Organization is divided geographically into 71 sections. A key volunteer elected by members in each section is the Section Manager. These ARRL member-volunteers take a critical role in being the front line of the organization to members.

ARRL Field Service Manager Mike

It's BIARC election time

nominate themselves or another ham may contact William or Tony or reach out by sending an email to BIARC.board@gmail.com.

"Please reach out" to help the club by serving on the board, said President Thomas Avila, WH6GWL.

Tony also encouraged members to participate in the Saturday, September 14, Simulated Emergency Test. The SET will follow the scenario of a Category 4 hurricane hitting Hawaii. The mission is to get situational awareness into the Emergency Operations Center at the Hawaii County Civil Defense Agency using any means available.

"We need to be the eyes and ears of the Civil Defense Agency," said Tony. Coordinators want every ham



Walters, W8ZY, serves as the point of contact for Section Managers.

"These folks have taken on a tremendous responsibility to serve ARRL members and ham radio in general.

"They're the ones who facilitate the work of ARRL in the field, and we want to make sure they have every tool available to them," said Walters.

After a day of hard work in the conference room, the group of volunteers activated W1AW, the Hiram Percy Maxim Memorial Station.

From Page 1

operator to be able to provide "boots on the ground reports" (sitreps) to Civil Defense.

It's important to be able to "observe in your communities where hazards lie" and to make sure emergency coordinators receive such vital information in a timely manner.

The club structure calls for seven directors. Three are elected each year for two-year terms, which are thereby staggered to ensure board continuity. The seventh member is not elected. This position is filled by the KH6EJ Station Custodian. Current trustee is NH6ET. Nominations can be made until the time of the election on Sunday, November 10, and also will be accepted at the meeting.

Meet the Digirig & The Digirig LITE

Hello again, fellow Hams. This month I would like to show you the handy little device I showed to the club during the last meeting. **The Digirig and The Digirig LITE**

These handle little devices have been used for digital communications like APRS, Winlink, JS8Call, and more as of late because of their compact size (the mobile version is literally the size of a 9 volt battery and the Lite version being about the size of a pack of chewing gum) and their ability to be used with any radio.

From a \$18 Baofeng to your \$1,000+ base station, these have become the popular choice not only because of the price point of only \$50 but the "Mobile" edition has the added capability of being used as a serial output device as well.

That means you can use the same unit to control your rig of choice AND use the same little box as a programmer for virtually any radio. As long as you have the right cable (most are available as pre-made, radio specific, interfaces right on the Digirig website as well as Amazon) you can get on the air with digital modes on the cheap. The community forum even has info on making your own interface cables so you can even save a couple of bucks.

I know a lot of newer radios, especially base stations, have a built in USB port, but having a small unit like this can help breathe a little life back into an old handheld or even an older

rig like my Kenwood TS130.

The Digirig does have a couple of options right off the bat. You can utilize CAT control and other options by changing the configuration on the built in board.

Folks have had options like this for quite some time but never in such a small, affordable package.

The Signalink has been a staple in the Ham radio community due to its rugged construction but they are mostly considered to be a "set it up on the desk and let it run option".

The Digirig Mobile only requires 3 wires, sometimes even just two. The USB C to your phone, tablet, or computer and the audio and serial cables to go straight to your radio.



(Pictured above is the Signalink USB soundcard and its size.)

THE PRESIDENT'S CORNER



Thomas Avila, WH6GWL



Roy KH6KU was using one of the newer Digirig Lite models with his Ipad to make FT8 contacts on his way to the last meeting.

As of Sunday the 30th of September I finally had a chance to take the General exam and passed. I look forward to finally being able to delve into using my Digirig and explore ALL of the digital modes.

For a great video on the size difference and a couple of other options please go check out The Tech Prepper on Youtube. www.youtube.com/@TheTechPrepper

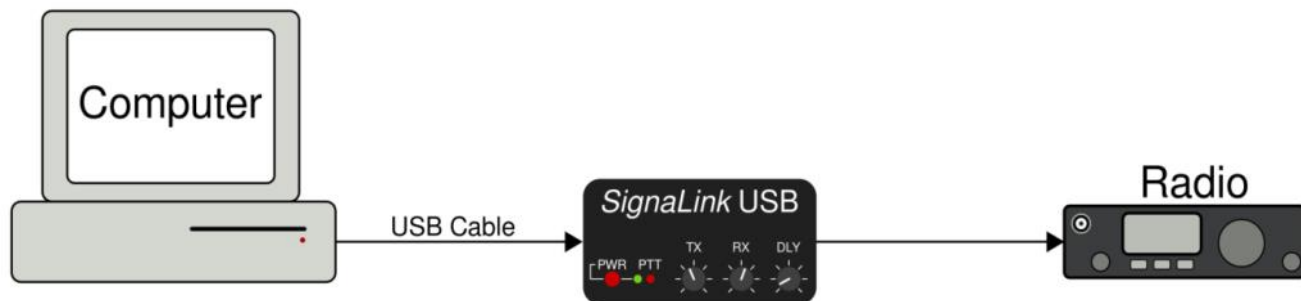
I hope this short explanation of the Digirig will help you folks get on the air and explore the digital modes as well. I will be doing a video on using this gear along with the New Xiegu X6200 I was just given.

You can find me on Youtube at www.youtube.com/@TheGeekiestGuy

Stay safe, stay cool, and get "Radio-active"

**-Thomas Avila
WH6GWL**

73



Hams respond as Hawaii threatened by three major storms

In late August, Hawaii's Big Island was threatened by three major tropical storms and amateur radio operators were prepared to assist as the threat grew more intense.

Russell Roberts, KH6JRM, Public Information Officer, Hawaii County, ARRL Pacific Section, said that beginning August 23, storm watches and warnings were being issued for tropical storms Hone, Gilma, and Hector, all churning off the island's southern coast.

By August 31 and September 1, Hone had become a Category 1 hurricane with winds over 75 miles per hour (MPH), occasional gusts to 100 MPH and heavy rain. Gilma was next as a Category 1, but later intensified to a Category 3 hurricane, dropping 28 inches of rain which flooded roads, along with high winds that brought down trees, power and communications lines.

"We had 3 Amateur Radio Emergency Service® (ARES®) operators on the net for about 24 hours beginning August 30 and they handled 41 contacts," said Roberts. "Some repeaters were out of fuel, so we switched to HF to pass traffic and assess the damage."

The storms never made landfall, and while there were no fatalities or injuries, the damage was severe. Nearly 30,000 residents were affected. Power was down for extended periods



and lots of cleanup and road repair projects followed.

"We were very fortunate," said Roberts. "There was concern a fire warning would need to be issued for several parts of the island. But the approaching weather brought rain and lowered temperatures."

ARES SET keeps stations busy as hams train via simulated emergency

Amateur Radio stations island-wide participated in the 2024 ARES SET on Saturday, September 14. Stations were invited to submit realistic Situation Reports from their area, based on a simulated category 4 hurricane.

Stations transmitted via VHF, HF on 40 meters, and Winlink modes via the tactical call sign HCCDA. Some Requests for Assistance (RFA) were also received. In one case, the Net Control Stations were able to pinpoint the location of a mobile station, even though he wasn't able to give us his street or cross street. We used off-line electronic maps, and a customized geolocation app, to determine his latitude and longitude and forward his message to the tactical call sign HCCDA.

His report was concerning an impassable road due to flooding. Had it been a real world event this capability is essential.

The frequencies and modes we test with are the basis for what we would do during an actual event. However, we all recognize that frequencies and modes may need

to change based upon the circumstances that unfold. The key to making Emergency Communications work is knowing stations who you are able to connect with, and staying up to date on the frequencies and modes where they are likely and able to operate.

ARES DEC's, hubs, and relays may take initiative to determine what works in their current situation, and forward updates to Hawaii County Civil Defense through ACS, using whatever means is available. Without frequently tested RF communication pathways, making this work is problematic.

As we each improve our stations, and local communication plans, we increase our chances to pass messages. Sharing your local plans with stations in your community, as well as with ARES leadership and ACS operators increases everyone's chances for success.

When the grid is down, and the internet and phones are out, our goal is to get messages to any operational Winlink gateway, or via a voice frequency monitored by an

ACS operator. [Typically this is 40, 80, or 2 meters, or via Winlink tactical call HCCDA.] Winlink is also a great way to get health and welfare messages out to friends and family. However, all methods remain on the table. Transmitting a health and welfare message on HF SSB via voice mode to a station outside of the impacted area who can pass your message to the intended recipient can work equally well. ACS operators are the pathway to the Hawaii County Civil Defense agency. Other stations are encouraged to assist in any way they are able, including the handling of health and welfare messages.

We encourage all stations with off grid power and the ability to use HF or Winlink to join your local net or start one if there is none in your area. If you already have a local net control station in your area, volunteer as a relief operator, scribe, or act as relay. Participating via nets and exercises lets us find out what works, and helps us all to identify where we need to improve.



WH6HAA



WH6FSA

Update on recent Education/Outreach Committee activity

The BIARC E&OC has the routine down for the Puna school Outreach events. Eight under our belt this year, so far. They have been productive and enjoyable, and we have had good participation from both the attendees and BIARC E&OC.

Our equipment cache is full of radios, batteries are charged, and thanks to everyone, we have an excellent supply of BIARC tri-fold (Les and Jim) and ARRL/ARES (Tony) material to hand out. We also have the BIARC banner that we fly at every school event. So, we are prepared for most situations. More support on the repeater side is always appreciated. We plan to set up half-hour segments for net operators who want to support our future activity.

We continue to tailor our outreach to the requirements of the East Hawaii schools and groups. The school program is oriented toward the elementary school community in conjunction with the Hawaii Museum of Technology and Science. Over the summer, we have also engaged with the YMCA in its Summer Activity program. Our usual BIARC

cadre is in action at any given time:

- Jim WH6EMN
- Mark WH6FSA
- Joe WH6JOE
- Fred WH6HAA
- as well as all those who jump in on the Kulani receiver to handle voice traffic.

We have signed up to continue the Museum program with the Museum into 2025. A schedule for the balance of 2024 into 2025 is included in our update. Also, a new addition is being added to our agenda. The BIARC E&OC was approached recently at the EB DeSilva school event to participate in an upcoming event at the Mountain View School. Since then, the date has been confirmed as October 15 in the late afternoon. The sponsors are Communications, Education and Engagement, Gemini North. We've been in contact with their representative, and we've been added to the participant list. More information and an updated E&OC event schedule will be forthcoming.

We were welcomed at the Keau School event in August and the EB De Silva School earlier this month with very good participation levels. Jim introduced some new popular FRS radios, and we enjoyed both events. The student, parent, and teacher participation was excellent, with Joe, Mark, Fred, and me in attendance for BIARC.

We will be recruiting willing BIARC Repeater operators for future events. We anticipate a 16:00 to 18:00 period with 4 of our operators on the club repeater at 146.760 MHz—half-hour time slots so nobody is overwhelmed. Thanks to Linda, Leigh, Paul, William,



WH6JOE, WH6HAA, and KH6CZ

Shawn, and others who have helped with this effort.

73,
David Miller
BIARC E&OC Chair

Schedule - Education & Outreach Committee

- Recent E&OC 2024 Activity
- July 16 — YMCA Summer Program event, Hilo YMCA.
- August 20 — Keau School Science Fair with the Hawaii Science and Technology Museum.
- September 11 — EB De Silva School

Future E&OC 2024/2025 Planned Activity

- Additional BIARC event participation is scheduled through the balance of 2024 and into 2025.
- Mountain View Elementary —
- Tuesday, October 15th 5:00-7:00 pm 2024
- Waiakeawaena Elementary - Friday, November 15th 5:00-7:00 pm 2024
- Waiakea Elementary - Wednesday, December 11th 5:00-7:00 pm 2024
- Kaumana Elementary - Wednesday, February 5th 5:00-6:30 pm 2025
- Hilo Union Elementary - Friday, March 7th 9:30-11:30 am 2025



KH6CZ

Calling all hams:

Celebrate centennial of 'Dawn of Mass Global Communication'

Celebrating the Dawn of Mass Global Communication, a centenary event, will be re-enacted in October 2024, by amateur radio operators in New Zealand and the United Kingdom.

The first trans-global two-way radio communication was achieved on October 18, 1924, by amateur radio operators Frank Bell, 4AA, a sheep farmer in Shag Valley, South Island New Zealand, and Cecil Goyder, 2SZ, a student operating from Mill Hill School, North London.

Two special callsigns will be in operation for this year's event. At Mill Hill and Shag Valley stations on October 18, radio amateurs will recreate and re-enact the first contact, hopefully on a frequency close to that used in 1924.

In addition, two other amateur radio stations with callsigns reflecting the centenary will be active:

GB2NZ is being operated from Sept. 29 - Oct. 26 from a

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number of United Kingdom locations.

ZM1ØØDX is being operated from early September - December 26 from a number of New Zealand locations on CW, SSB, and a number of other modes.

Awards and QSL cards will be available for those who make contact with these special stations. For additional information visit <http://www.gb2nz.com> or <https://www.zl4aa.org.nz>.

Grid Madness draws smaller, but enthusiastic and energetic, turnout for September 22 event

Hawaii's favorite Sunday afternoon simplex contest – Grid Madness – didn't draw the crowd of some previous years, but those who were able to join in the hunt reported a good time was had by all.

Although the official tabulated results weren't available by this month's Hamgram press time, look for them in the November newsletter, courtesy of this year's event sponsor, the nice folks of the Emergency Amateur Radio Club of Hawai'i, on Oahu.

In the meantime, here are some reactions from a few of the participants in the Sept. 22 event.

"Participation appears to be significantly lower than past years. Oahu alone only had 4 participants," said Steve Kawamae, KH6WG, president of the EARC.

"Huge shout out to Maui and Hawaii islands for embracing and practicing simplex. I don't know the reason for low turnout but hopefully next year will improve," said KH6WG. "The work is yet to come. Thanks to AH6KO and KH6RDO for all the help in sorting out the details of analyzing the logs. Results are forthcoming."

At the suggestion of Darrell, KH6RDO, a Hamgram request was made for some feedback from BIARC members who were active in the chase for grid square simplex contacts. Here are some comments on how, and what, folks did.

Mel/KH6EKD:

"I operated from my home QTH while Gary

Hawaiian Islands Grid Madness 2024

Year of the Dragon



**A VHF/UHF Simplex Event
Sunday, September 22nd 2024 from 1300 to 1700 HST**

KH6GM drove around to different grids in his truck. From each of his locations we operated both VHF and UHF for extra points.

"We both were able to contact Haleakala for off-island points, but I could not get a relay into Oahu.

"Was fun overall."

Stan/AH6KO:

"It seemed like participation was down a little bit here in the Hilo/Puna area. But lots of enthusiasm, and I actually made more contacts than last year (43 vs 29). The bands were active for the full four hours.

Darrell/KH6RDO:

"As far as I could see, there were several base stations running in East Hawaii. They include KH7CN, WH6DVI, AH6Jj, KH6KU, WH6GRW, KH6EKD, WH6FQQ from what I heard on the radio & what I got from KH6GM. Mobiles were AH6KO, KH6GM. Portables were

WH6GZZ and KH6RDO.

"On Maui, WH6GVN & KH6LOL wrote that they were going to be up Haleakala as mobiles and work their way down.

"Up north, KH6GM was mobile and made contact with KH6EKD base and WH6GVN on Maui while driving up the coast.

"In East Hawaii, AH6KO was mobile around Puna and upper Hilo. WH6GZZ was portable at his house. I started up Honomu but couldn't get anything with the portable. I started to make contacts at the top of Pepeekeo then moved slowly into town, stopping at Papaikou, Wainaku, Paukaa, airport, and Kauamana."

"WH6FQQ and WH6GZZ went QRT around 3:30 p.m., because I didn't hear them on from that time. AH6J showed up late, about 4:30 p.m."



WH6LQ photos

LB (WH6GGO) generously donated five new Yaesu FT-65 radios and they were given to those who passed their exam through a drawing held at the end of the testing session. Above, the lucky winners and BIARC support crew. At right, LB presents generous donation of the radios to Doug Wilson, KH7DQ, coordinator of training classes and testing for amateur radio licenses.

It takes a village to raise a new ham

"The Technician License Preparation classes (Zoom and Accelerated) were concluded at the end of September, followed by the an exam session on Sept. 29.

"Ten people out of eleven who took the exam, passed, with one candidate missing only one question! We had nearly a 100% pass rate at this session," said coordinator Doug Wilson (KH7DQ).

Eight people earned their Technician license and two earned a General class license.

LB (WH6GGO) generously donated five new Yaesu FT-65 radios

and they were given to those who passed their exam through a drawing held at the end of the testing session.

"Thank you very much, LB! We are sure that the new hams who received these radios will be motivated to get "radio active" soon!

"A big mahalo to Jim Tatar (WH6EMN) for helping to teach both Technician License Preparation classes. Also, mahalo to Linda Quarberg (WH6LQ), Bob Schneider (AH6J), David Mil-



ler (KH6CZ) and Wayne Bordan (WH6FTG) for helping with Volunteer Examiner (VE) duties for this exam session."

Please stay radioactive and join in future nets, exercises, events

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If you do not have Winlink capabilities or cannot reach an ACS operator on HF, then relay into your local hub or to a relay station in your area that can forward your message. I cannot stress enough how important it is for each of us to practice these skills regularly, especially via simplex modes.

We need more hubs and relay stations in every community to participate. Without them, operators

may not be able to get their message to an ACS operator to relay critical information. I wish to express my gratitude to everyone who participated. Please stay radioactive, and continue to participate in future nets, exercises, and events.

73,
Tony Kitchen, WH6DVI
ARRL, Pacific Section

ARES Assistant Section Emergency Coordinator

Hawaii Island Siren Report: October 1, 2024

Location	Observer	Mode	Status	Notes
NOT WORKING				
Ainaloa (HA910)	WH6HAF	Allstar	Not Working	Big Island ARES Group
Ainaloa (HA910)	WH6DVI	Mauna Kea	Not Working	
Kehana Beach (HA916)	KH6AQ	Email	Not Working	
WORKING				
Ainako Park (HA117)	WH6FDE	Email	Working	
Ainako Park (HA117)	WH6FSA	Mauna Kea	Working	
Banyan / Kam (HA104)	KH6ATU	Allstar	Working	
Captain Cook (HA702)	WH6WF	Text	Working	
Downtown Federal Bldg (HA107)	WH6FDE	Email	Working	
Hakalau (HA113)	WH6ECX	Email	Working	
Hawaiian Beaches Park #1 (HA907)	KH7LM	Text	Working	
Honoapu (HA802)	WH6HC	Allstar	Working	
Honokahau Boat Harbor Kona (HA610)	NH6SP	Allstar	Working	
Honomu (HA111)	KH6RDO	Allstar	Working	
HOVE Reef Blvd #3 (HA809)	WH6FC	Allstar	Working	
HPP #2 4th & Awapuhi (HA912)	WH6HAA	Mauna Kea	Working	
HPP #1 Paradise / Ala Kai (HA925)	KH6CZ	Mauna Kea	Working	
Kaumana School (HA125)	WH6FDE	Email	Working	
Kawaihae Harbor (HA407)	WH6EHJ	Mauna Kea	Working	
Kamehameha Park Kohala (HA503)	WH7WZ	Text	Working	
Laupahoehoe Lookout (HA201)	WH6FSE	Allstar	Working	
Laupahoehoe Point (HA202)	WH6FSI	Allstar	Working	
Lelewi (HA101)	KI6HBZ	Mauna Kea	Working	
Naalehu (HA801)	WH6HC	Allstar	Working	
NELHA Kona (HA611)	WH6GTD	Text	Working	
Old Kona Airport (HA609)	KH7MS	Email	Working	
Ookala (HA304)	WH6GDC	Allstar	Working	
Paaui (HA301)	AH6JA	Email	Working	
Pahala (HA804)	WH7BR	Allstar	Working	
Paukaa (HA115)	AH6JA	Email	Working	
Puako General Store #1 (HA405)	WH6EHJ	Mauna Kea	Working	
Punaluu / Sea Mountain (HA803)	AJ0T	Allstar	Working	
State Building (HA116)	WH6FDE	Email	Working	
Waiaka Bridge Kamuela (HA402)	WH6EHJ	Mauna Kea	Working	
Waikamalo Park Ninole (HA123)	WH6FIQ	Allstar	Working	
Waimea Park Kamuela (HA401)	WH6EHJ	Mauna Kea	Working	
Kaumana iipipolena Rd (HA108)	WH6FDE	Email	Working	



RatPack video presentations are worth watching

I've received several requests for the recording of the RatPack presentation on HF operations. I don't know if this is that particular video, but if not, it's close.

<https://www.youtube.com/watch?v=cjZZjfkYPak>

This is a four part series. That is the first. Others can be found below.

I didn't know about this site which has a LOT of great video presentations on all sorts of subjects:

<https://www.k8zt.com/>

or more specifically: <https://tinyurl.com/ynxan5x9>

For additional RatPack info: <https://www.ratpac.us/>

*Aloha, Alan AD6E / KH6TU
ARRL Pacific Section Manager*

**BIARC Executive Board Regular Meeting
September 8, 2024
Kamana Senior Center**

The meeting was called to order at 12:01 pm by Board President Thomas Avila. A quorum of 6 board members were present.

Attendance:

Board members: Thomas Avila, Les Hittner, Tony Kitchen, William Polhemus, David Miller and Joseph Rosenbaum. Mark Watanabe joined the meeting at 12:04.

Secretary's Report and Minutes:

William moved and Tony seconded to approve the August 2024 Secretary's report. Motion passed.

Treasurer's Report:

No written report. We received a donation of \$96.25 from a member. The only expense this month was for the Google Workspace premium meeting features, which is an ongoing monthly expense.*The board will approve the August Treasurer's report at the October meeting.*

Committee Reports:

Digital Systems:

See report. The FCC (Federal Communications Commission) has clarified their position on linked GMRS repeaters. GMRS repeaters cannot be linked and William (Club Trustee) recommended that the club not engage in any research and development or deployment of linked GMRS repeaters. Discussion was held about possibly pursuing GMRS as an option for our partners, such as the C.E.R.T. (Community Emergency Response Teams.) We can assist them and possibly assist our agency partners, such as the Hawaii County Civil Defense Agency with setting up and operating a GMRS system.

Discussion was held on Biarc's Winlink RMS station that is in the custody of David Miller. David has agreed to host the station at his house. A work party will install and set-up the station with an antenna.

Discussion was held on the AllStar system with individual nodes and hubs. Also discussed was possible uses for our partners and how it would be of interest to our education partners, both K-12 and university levels. This system can also act as a fail-over for the local linked repeater system. Two reasons to explore this solution is to experiment and to solve the problem of the Big Island Monthly Siren Net having bad performance during current standalone linking, using the current standalone Hawaii County hub. There is a need for linking solutions in general. Eventually we would like to see repeaters island-wide and possibly state-wide linked to have larger nets.

The Digital Systems Committee will collaborate with the Voice Repeater committee to explore options through local partnerships to possibly avoid the expense of dynamic linking. William moved and Tony seconded to refer this matter to their respective committees to research. Motion passed.

Education and Outreach:

See report.

Discussion was held on future Education and Outreach events to set-up FT8 and PSK Reporter to show students visually where around the world our signal is being received.

Operating Activities:

William moved and Tony seconded to authorize up to \$75 for refreshments and consumable supplies for the CQWW SSB contest. Motion passed.

William moved and Les seconded to authorize up to \$35, inclusive of taxes, for the purchase of an Anderson Powerpole connector board for the club's field deployable station battery. Motion passed.

Programs:

Shawn (WH6GXZ) spoke about operating QRP at the CQWW SSB contest. Tony talked about the ARES (Amateur Radio Emergency Service) SET (Simulated Emergency Test.) Joe talked about the upcoming CQWW SSB contest. There was a Discord discussion and William discussed the repeater gateway. We also had a show-and-tell with the RMS Winlink Gateway.

The October program will be a presentation on the WWVH(<https://tf.nist.gov/stations/wwvh.htm>) radio station with the Chief engineer, Steve Johnston.

William priced out the parts necessary for a future build project. It's a RIG runner style DC distribution box or a power supply with multiple Anderson Powerpoles to plug rigs into.

Public Service Communications:

No report.

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Voice Repeaters:

See report. The Voice Repeater committee is no longer holding meetings, they are collaborating continuously on the club's Discord server. The Voice Repeater committee sometimes collaborates with the Digital Systems committee where they operate as one functional committee.

The next step in the repeater linking project is to connect the Peepekeo, Kulani Cone and Mauna Loa repeaters together with a new and improved version of the gateway configuration using AllStarLink(<https://www.allstarlink.org/>) free. William moved and Tony seconded to open up the club Discord server for all members. Motion passed.

Les moved and Tony seconded that the board acknowledge that the Trustee has full control of the repeaters operation. Motion passed.

Old Business:

We are awaiting the arrival of an anonymous donation of radio related equipment that Tony will inventory and store until needed on behalf of the club.

New Business:

William moved and Les seconded to allow associated entities the use of our content, to include photos, videos and writings under a common content share alike license. Motion passed.

Discussion was held regarding marketing with ARES for publicizing exercises, etc.

Discussion was held on standard authorization to run ARES nets on BIARC infrastructure whenever a NWS (National Weather Service) watch or higher is issued or observed. The club Trustee will monitor. There will be blanket approval for ARES to run nets on club infrastructure during real world events with a watch level or above issued or observed. Ares will need to coordinate and request repeater use for ARES trainings.

Other Business:

The Education and Outreach committee has requested the use of the Kulani Cone and other club repeaters for education events. William approved the request.

Les Hittner(K0BAD) will resign his position as Vice-President at the membership meeting in november.

Tony moved to adjourn at 1:57 pm. Motion failed. William and Tony updated the board on the election committee and the status of received nominations. So far there has been one nomination(Joseph Rosenbaum, WH6JOE) which leaves three open positions. William moved and Tony seconded to adjourn at 1:59 pm. Motion passed.

Next Meetings:

The next meeting will be held on October 13, 2024 at the Kamana Senior Center in Hilo. The Executive Board meeting will be at 12:00 pm and the club activity will be at 2 pm. There being no further business Thomas closed the meeting at 2:00 pm.

*Respectfully submitted,
Joseph Rosenbaum,
Secretary*

~ 2024 BIARC Roster ~

Executive Board officers and committee chairs	Operating Activities Committee
President Thomas Avila, WH6GWL	Chair Joseph Rosenbaum, WH6JOE
Vice President Les Hittner, K0BAD	Education and Outreach Committee Chair David Miller, KH6CZ
Secretary Joseph Rosenbaum, WH6JOE	Programs Committee Chair Les Hittner, K0BAD
Treasurer Tony Kitchen, WH6DVI	Digital Systems Committee Chair Shawn Farley, WH6GXZ
At-Large directors Mark Watanabe, WH6FSA, and David Miller, KH6CZ	Voice Repeaters Committee Chair William Polhemus, NH6ET
KH6EJ station custodian William Polhemus, NH6ET	Meeting Refreshments Committee Chair Robert Schneider, AH6J
Public Service/ Communications Committee Chair Les Hittner, K0BAD	BIARC Hamgram Editor Leigh Critchlow, WH6LC
	Club website: https://biarc.net

BIARC Voice Repeaters Committee update

Big Island Amateur Radio Club - Voice Repeaters Committee Report

Chair: William Polhemus – NH6ET

Date: 07-SEP-2024

Subject: Voice Repeaters Committee Activities Update

Since the last meeting, the Voice Repeaters Committee has been involved in several key projects aimed at improving and maintaining the club's repeater network. These include the ongoing development and testing of a **Radio over IP (RoIP) gateway** for the **Kulani repeater**, progress on the **Mauna Loa E-Power** and **Pepeekeo E-Power** projects, as well as response to emergency communications needs during **Hurricane Hone**. While some projects have been temporarily paused due to my absence from the island, others have advanced significantly, and I am seeking guidance from the board on certain operational decisions and future planning.

Project Overview:

The RoIP gateway is designed to provide club members with remote access to the Kulani repeater, particularly for those who are traveling, recovering from illness, or otherwise unable to reach the repeater by radio. This system allows members to participate in club activities and communications through internet-based methods, ensuring continued involvement regardless of physical location or limitations in radio accessibility.

Current Status:

- **Gateway Configuration and ID Handling:**
 - A configuration has been developed that eliminates the "ping-pong" issue by allowing the gateway to ID only during AllStarLink (ASL) keyups. This was achieved by setting a Morse null value for the ID recording, preventing it from being transmitted when the **idtime** timer expires.
 - The ID has been updated to use a **very fast voice announcement** of the club's callsign in the squelch tail of each transmission. This new method significantly reduces the total tail delay from 7 seconds to around 2 seconds, improving efficiency while still meeting legal requirements.
 - The **hidden timer issue** for ID handling will become **moot** when the gateway is rebuilt to use the **DR-1X repeater**, as the ID handling will be shifted to the DR-1X controller.
- **Allowlist and Whitelist Features:**
 - A system for managing connection permissions by node number and callsign has been implemented. The new **allowlist** focuses on node numbers, while the **whitelist** includes callsigns for additional security and flexibility. This configuration has successfully allowed selected users to connect during the beta phase.
 - Current beta testers include members of the Voice Repeaters Committee, the Digital Systems Committee, and the Board. The system is being further refined with plans for future daily updates from the club's membership roster.
- **Squelch Tail and Courtesy Tone Optimization:**
 - The squelch tail has been shortened to minimize additional delay, and the courtesy tone has been reduced to 100ms for a more efficient transition between transmissions. Efforts continue to resolve the issue of quick keys not reopening the squelch on the gateway URIx.
- **Access and App Testing:**
 - The **RepeaterPhone app** on iOS devices and the **DV-Switch app** on Android devices have been fully tested and are **vettted and approved** for use with the RoIP gateway.
 - The **LAXRpt app** on Windows and the **Droid-Star app** on Android are still being tested to ensure compatibility and reliability with the gateway.
- **IAX Client Setup:**

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- IAX client connections have been configured and successfully bench-tested. Several users, including W1GEP/S, have offered assistance with further testing and setup for additional members.
- **DR-1X Firmware Update:**
 - The Yaesu DR-1X repeaters will soon be updated to the latest firmware, allowing them to ID without sending the CTCSS tone. Roy, KH6KU, has provided the necessary SCU-20 cable for the firmware upgrade, which will be completed as time allows. Once the update is done, the gateway will be rebuilt with a new interface cable for integration with the DR-1X repeater.
- **Remote Monitoring and Control:**
 - **Remote monitoring and control** of the RoIP gateway has been **fully implemented**, allowing for **full-time testing and administration**. The gateway can now be remotely accessed for management and control, ensuring smooth operation and timely intervention when needed.
- **Further Developments:**
 - Scripts have been created to automate the process of adding callsigns from the BIARC membership list to the allowlist. Work is ongoing to find an efficient way to retrieve this data from an online repository, minimizing the need for manual updates.

Hurricane Hone Gateway Usage:

The **gateway** was made available to all club members during **Hurricane Hone**. Unfortunately, the two users who would have made use of it, the **ARES Net Control Stations**, were unable to do so because their **internet access went down** when their power went out.

ARES Repeater Usage and Clarification:

During **Hurricane Hone**, **Tony Kitchen, WH6DVI**, on behalf of **ARES**, requested to use the **Kulani and Pepeekeo repeaters** for nets to collect ACS-SitReps related to weather and damage reports. As the Station Trustee, I approved this request. The **ARES nets** were brief, occurring for approximately 5-10 minutes at the top of the hour, with monitoring of the repeaters the rest of the time.

It is important to clarify that the **Kulani and Pepeekeo repeaters** were open to regular amateur radio traffic throughout the event. A misunderstanding about this was corrected with an announcement mid-day. Most operators appeared to stay off the repeaters, likely to ensure they were available for emergency use or due to dealing with power outages themselves. There may be future opportunities to coordinate health and welfare nets at the bottom of the hour, providing general updates and message handling not related to agency partners.

I am also seeking guidance from the board regarding the approval I gave and their observations of the actual use of the repeaters, as well as how to respond to similar requests in the future.

Mauna Loa E-Power Project:

The **Mauna Loa E-Power** project has made progress with the completion of the integration of a **battery pack** donated by Jim, N1FQI, and a **UPS** donated by Gary, W1GEP/S. This system is now ready to be deployed to the Mauna Loa site. Its **primary purpose** is to maintain the operation of the **WSPR node**, but it will also **protect and support** the collocated UHF repeater until a larger UPS can be refurbished and installed at the site.

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The smaller UPS is expected to hold up the site for a few hours under normal usage conditions, and potentially only an hour if the repeater is heavily used. The **larger UPS**, which has already been sourced, is expected to keep the site running for **a day or more** once refurbished and deployed by a work party.

Pepeekeo E-Power Project:

The **Pepeekeo repeater** was observed to have gone off the air after several hours of operation during the **Hurricane Hone** power outages. As noted in a previous update, I (William) have sourced a second **large UPS** that is awaiting a work party to refurbish and deploy to the site. Once installed, this UPS should significantly increase the time that the repeater can be held up during power outages, providing more reliable operation in the future.

Projects with No Recent Action:

The following projects have had **no action** since the last report, largely because I (William) have been off-island and unable to facilitate them:

- **Kulani - Pepeekeo Link Microwave Radio Installations**
 - **Kulani Receive Antenna Project**
 - **Naalehu Simulcast**
 - **Lower Puna Simulcast**
 - **Mauna Loa VHF Repeater**
-

The gateway project has made significant progress in providing remote access to the club's repeater for members in various locations, improving participation and engagement. We will continue to update the Executive Board as developments progress.

Big Island Amateur Radio Club - Digital Committee Report

Chair: Shawn Farley WH6GXZ

Date: 08-SEP-2024

Subject: Digital proposals and collaboration with Repeater committee.

Activities:

- 1. Members of digital committee participated in the “beta testing” of the Kulani gateway.**
- 2. GMRS linking project is on hold. Club needs to define the when and why to link GMRS radios. The popular architecture would be similar to GMRS live.**
- 3. Meshtastic. I’ve got Meshtastic “a linux variant” running on a Pi 4 with a SX1262 LoRa HAT. Getting a Heltec Mesh Node T114 to build and connect to the other node.**
- 4. Allstar link 3.0, Allmon3. I’ve been building this environment in the cloud on VM servers and on a variety of Raspberry Pi’s.**

Projects that need help.

- 1. Pepeekeo linking project.**
- 2. Mechtastic on a tower like Kulani or Pepeekeo**
- 3. Allstar BIARC HUB.**
- 4. BIARCS WINKLINK system that Jim built.**
- 5. RF on Arden mesh.**

Projects that require access to towers like Kulani or Pepeekeo require coordination with the repeater committee. Both committee often need to coordinate together for the common good.

Proposals

- 1. Consider merging committees to an “infrastructure committee”. A chair, and two sub-chairs...**
- 2. BIARC ALLSTAR HUB = about \$100.00 a year.**
- 3. Server running VM instances, networked and staged at Pepeekeo. Used for both committees for development and deployment of HAM based digital/analog technologies.**
- 4. Meshatastic repeater at Pepeekeo. This has been discussed in the past. I propose we aim for 915mhz range.**
- 5. Happy: HAPs and nodes. Do you have an outdated Microtek HAP and a Raspberry pi running an ALLSTAR node. Do you want to run management software like Allmon3, Supermon, WPSD, a hot spot. Idea: Form a sud-group to help others members get there system updated and connected**
There’s more... Mahalo and 73, Shawn Farley WH6GXZ

National Preparedness Month goal: Keep hams, families safe

September was National Preparedness Month. In coordination with its partners at the Federal Emergency Management Agency (FEMA), the ARRL Amateur Radio Emergency Service® (ARES®) produced a series of weekly articles to help radio amateurs and their families stay safe.

See stories at <https://www.arrl.org/news/>

For a ham or any other public safety responder, whether paid or volunteer, it is not uncommon to be called out to provide assistance during disasters.

We often do not know when we will be called or exactly what the call will involve. We also do not know how long we may be deployed.

In one article, ARRL focused on our go kit and the tools we should have to deploy as an amateur radio volunteer.

But have we made sure our family is prepared for these times, whether we are deployed or will be staying home?

As the theme of this observance suggests, ARRL Director of Emergency Management Josh Johnston, KE5MHV, says it comes down to being prepared.

“Make a plan with your family and ensure basic supplies are available including water, food and first aid capabilities.

“Do you have a generator or alternate power capabilities and do your family members know how to use it? Have a communications plan, including backup communications, with family members and friends,” he said.

Johnston says to ensure your family knows where to go if they must evacuate for some reason. Always remember your family and your health and safety should always come first.

“Remember that there may be a time that you are the victim. There may be a time that you must turn down a request for assistance because you must take care of your family first. Ask if you can be put in a slot later down the roster to allow time to get your family to safety or have everything settled to ensure your family is cared for before deployment,” said Johnston.

ARRL recognizes the tremendous work ham radio volunteers put into serving their communities.

“If your mind is not on the mission, you may be putting yourself and others at risk. Therefore, you should ensure your family’s wellbeing before, during and after a major event,” Johnston continued.

Learn about how to become an ARES Volunteer on the ARRL website at www.arrl.org/ares.

Learn more about how to keep your family safe at www.ready.gov.

Emergency Prep Kit Checklist

It's hard to think clearly during an emergency, and the last thing you want to do is leave something important behind. Use this checklist to gather essential items and prepare today for what might happen tomorrow.

IN CASE OF EMERGENCY, HAVE THESE ITEMS READY

- Food and Water**
A 3-day supply of water and food. Include 1 gallon of water per person per day and non-perishable food items like energy bars, cereal, dried fruit, nuts, peanut butter, and canned meats.
- Utensils**
Eating utensils, plates, cups, bowls, a can opener, and paper towels.
- Clothing**
A change of clothes for each person, rain gear, extra shoes, and waterproof boots.
- Day-to-Day Living Items**
Garbage bags, toilet paper, matches in a waterproof container, a multipurpose tool, dust masks, duct tape, plastic sheeting, Mylar® blankets, a whistle, local maps, and bleach.
- Personal Items**
Toiletries, an extra pair of glasses/contact lenses, tweezers, and nail clippers.
- First Aid Kit**
Sterile gloves and dressings, bandages, soap, antibacterial towels, hand sanitizer, burn ointment, antibiotic ointment, eye wash, and a thermometer.
- Medications**
A 3-day supply of prescription medications, pain relievers, cold and sinus relief, anti-diarrhea medicine, antacids, and laxatives.
- Devices**
A cell phone, a charging cord, a portable charger or battery pack, a hand-crank radio, an LED flashlight with extra batteries, and a headlamp.
- Important Documents**
Copies of birth certificates, driver's licenses, insurance cards, medication lists, medical records, proofs of address, passports, wills, bank records, marriage licenses, adoption papers, and emergency contact lists.
- Cash**
Small denominations and change.

ADDITIONAL ITEMS

- For Babies**
Diapers, baby wipes, baby powder, diaper rash cream, baby wash and lotion, formula, baby food, bottles, bibs, burp rags, pacifiers, teething tablets or gel, and blankets.
- For Seniors**
Medications, hearing aids and batteries, extra eyeglasses, syringes, portable oxygen, mobility supplies, and contact information for doctors and caregivers.
- For Children**
Books, toys, puzzles, crayons, and comfort items.
- Ham Radio Gear**
A handheld, a mobile radio, chargers, extra batteries, antennas, power cords, and a laptop.



Alternate power for station

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if you don't have a permanent battery backup situation.

ARRL Director of Emergency Management Josh Johnston, KE5MHV, says it is easier than ever to have a backup. “With the new batteries out there, and solar technology both improving in quality and decreasing in price, building a resilient station is no longer difficult or expensive,” he said. Johnston encourages ham radio operators to think about powering more than just the radio on an alternate power source. “Do you have lights that could run off the battery source? Do you have an alternate power source for your computer? What about your internet connection? Is there a backup for it?” he asked.

Johnston says backup generators are great but sometimes are only fed to certain circuits in your home. Amateurs should test their ham station to ensure that it is powered by the generator. If the whole house system does not power the station, a portable generator could be an option. The key is to test the system under blue sky conditions to ensure it works, check for RF noise, and potential power drop.

Having backup antennas is also crucial. “Especially if we are dealing with storms, it may be useful to have alternate antennas on hand, especially for HF and VHF,” said Johnston.

Other stories include:

- <https://www.arrl.org/news/national-preparedness-month-ensuring-family-safety>
- <https://www.arrl.org/news/resilience-through-amateur-radio-for-national-preparedness-month>
- <https://www.arrl.org/news/national-preparedness-month-have-a-go-kit>