

April 2024



# THE BIG ISLAND HAMGRAM

The newsletter of the Big Island Amateur Radio Club

## THE PRESIDENT'S

### CORNER



Thomas Avila,  
WH6GWL

## The Pepeekeo patrol

Here's the latest on the club's Pepeekeo repeater rehabilitation mission.



Shawn (WH6GXZ) and I have gone up and cleared an abandoned slab that we're able to use for our repeater setup and start extending our reach.

*Continued on Page 6*



## April 14 club meetings will be at HCCDA office

There will be a change in venue for our April 14 meetings in Hilo.

Vice President Les Hittner K0BAD announced that the Hawaii County Civil Defense Agency (HCCDA) office at 920 Uluani St. will be available from 12:30 to 4 p.m. on that day for our regular "second Sunday" event.

Plans are for the BIARC Board to meet from 1-2 p.m. The monthly club activity will begin at about 2:30 and end at 3:45. Zoom access will be provided, as usual.

Bill Hansen will present an approximately 45-minute presentation (2:30-3:15 p.m.). Treats and social time will run from 3:15-3:45, with cleanup from 3:45-4 p.m.

## Club volunteers install a new microwave antenna at Pepeekeo repeater site



On March 16, members of the Repeater and Digital Systems Committees installed a microwave antenna at the Pepeekeo repeater for the mesh project. Unable to get through the entry gate, the intrepid volunteers had to hike up to the repeater site.

**Photos by  
WH6GXZ and  
KH6EKD**



**KH6EJ-6-Pepeekeo-M2  
Node Console**  
Desc: Ubiquiti Loco M XW  
FW ver: 3.22.12.0  
Ch: -4  
SSID: AREDN-10-v3  
MAC: E0:63:DA:61:01:8D

The work crew, smiling after a successful mission. From left: Shawn WH6GXZ, Thomas WH6GWL, William NH6ET, and Gary WH6EPS.

*Continued on next page*





*From previous page:  
A microwave antenna for  
Pepeekeo repeater*



*On this cloudy day,  
William NH6ET  
installs the 2.4 Ghz  
microwave antenna.*

*Thomas WH6GWL inside the storage container  
housing the BIARC repeater.*



*The actual VHF repeater, with  
duplexers below.*



*Gary WH6EPS  
smiling at the  
successful mi-  
crowave installa-  
tion. Here he's  
testing the AR-  
EDN (Amateur  
Radio Emergen-  
cy Data Network)  
mesh.*

# Highlights from the March 10 BIARC program



*BIARC President Thomas Avila WH6GWL conducts monthly session, above, and discusses club's new Yaesu ATAS-120 antenna, just like the one at left.*



## 'Cold camping' tips

AH6J discussed "cold camping," and offered tips for heating water and food in fire-prone areas, or in situations when fires are not allowed.

There are all sorts of ways to ensure food and beverages in ample supply. As the Boy Scouts say: "be prepared; think ahead,"

## Lending Library

Jim WH6EMN said he will bring a list of BIARC Lending Library items to each club gathering, rather than continuing to lug and haul the very heavy library itself. Les K0BAD has prepared the updated inventory.

## New club T-shirts

Jim WH6EMN brought samples of BIARC logos on T-shirts we can order and said cost will be \$25 for printing two shirts, with shirts to be provided by the member. The initial fee covers creation of the personalized logo, so printing of additional shirts will cost less.



*William NH6ET noted that BIARC needs an antenna that can travel with its new radio and provide "everything you need." And the Yaesu ATAS-120 does just that.*

### More info from NH6ET:

*The newsletter article that I wrote when I compared an MFJ diplexer to a Comet diplexer was referenced in today's presentation at the meeting.*

*I was asked after the meeting by a few people where that article could be found.*

*If you'd like to (re)read it too, that article appeared in the February 2021 newsletter, before it held its present name of "The Hamgram." That issue can be found on the BIARC website at:*

[https://www.biarc.net/BIARC\\_newsletters/202102\\_BIARC\\_newsletter.pdf](https://www.biarc.net/BIARC_newsletters/202102_BIARC_newsletter.pdf)

*William - NH6ET, 3/10/24*

## Favorite topics: equipment, tips, and analysis

As always, there was time for lively discussion on favorite topics: equipment, and analysis, and questions and answers.

A major subject was the club's new Yaesu FT-991A radio .

Thomas WH6GWL talked about this radio, and some of its components. He demonstrated with his own equipment of the same model.

A main focus was the Yaesu ATAS-120 antenna, and tips for assembling and using it.

William NH6ET also discussed this antenna we got for the club's new radio and why we picked this work-horse unit.

He said we needed an antenna that can travel with the radio, etc. And with this particular design, you can use one antenna at one event "and have everything you need."





## Introducing the wonders of ham radio to younger folks

*Photos taken by David KH6CZ and Mark WH6FSA at Hilo Union School*



### **BIARC Education/Outreach Committee: April 2024**

In conjunction with the Hawaii Science and Technology Museum the BIARC Public Service and Communication Committee (PSCC) participated in interacting with four East Hawaii schools in 2023. The BIARC Education and Outreach Committee (E&OC) has now assumed the role of continuing that responsibility in 2024. Most recently, an event was held at the Hilo Union Elementary school on March 8. A further event is planned at the Keaau Elementary school on April 20 with more events to take place over the balance of the year. Continued collaboration with Museum and the broader Emergency



Preparation/EmComm community is under way.

The BIARC Team has consisted of BIARC members Jim Tatar (WH6EMN), Joe Rosenbaum (WH6JOE), Mark Watanabe (WH6FSA) and David Miller (KH6CZ). Les Hittner (K0BAD) has contributed advice and support including the BIARC tri-fold pamphlet while John Bush (WH6DLK) has recently brought digital radio, FT8, to the mix. Many of our members have donated "on air net" time with students.

BIARC's recently acquired Yaesu ft991a receiver has been introduced into our program this year. Also, a club banner was designed, purchased, and introduced into our program under the guidance of

Mark Watanabe. More initiatives are in process for future events. The E&OC program continues to be well received at all the events, and students' information has been collected for their further introduction to ham radio through Doug Wilson's training programs.

### **BIARC E&OC Event Program, Future Planning:**

- Set up radio/communications equipment and conduct a "net" for third-party participants (students) under one of the BIARC members' licensed call signs, interacting with volunteer operators in the field via the Club's Repeater.
- Distribute handheld radios to demonstrate communications capabilities to students. Sign up parents, teachers, and students for Amateur Radio training and education.
- Engage groups in the broader community to build radio emergency communications capabilities. BIARC members wishing to participate in club Outreach are encouraged to contact David Miller, E&OC Chair, on the BIARC listserve.

# A bit of history about Parks on the Air events

Parks on the Air (POTA) is an international radiosport award program that encourages licensed amateur radio operators to visit, enjoy and operate portable equipment in a variety of parks and public lands, always respecting other park users and local regulations.

POTA issues awards to participants based on a wide range of criteria including the total number of radio contacts made, number made on each amateur radio band, and for different modes of communication including voice, Morse code or FT8.

The POTA movement began in the United States. It built on the surge of interest in portable radio operation caused by the ARRL hosting a one-year program called NPOTA in 2016 to celebrate the 100th anniversary of the National Park System.

A nonprofit organization was founded in 2018 to continue POTA on a permanent basis, since when it has been a popular method of community and student outreach, with events taking place both in parks and sometimes at other public events. The organization worked to expand worldwide and participation now occurs around the clock and around the world, in locations as diverse as the Caribbean, India, China and Europe. Park locations range from large national parks covering many square miles to small urban locations and islands.

## POTA X2 with potluck lunch set for April 21

1. Mackenzie State Recreation Area K-6406.
2. Lava Tree State Park K-6402. POT LUCK LUNCH @ Isaac Hale Beach Park, BASE CAMP. Hunt activators. HF, digital, SIMPLEX, Talk story about it at the APRIL BIARC meeting.

73,  
WH6GXZ

POTA: Isaac Hale Beach Park,  
SUN April 21 time: TBA  
13-101 Kalapana-Kapoho  
Beach Rd  
Latitude: 19.4224289 / 19° 25' 20" N Longitude: -  
154.8879908 / 154° 53' 16" W.  
Grid: BK29nk  
links to check out  
<https://tinyurl.com/Gridsqmap>  
<https://pota.app>  
WH6GXZ and other HAMS  
Activate or hunt other HAMS  
on 10,20,40m, and simplex...  
Try out your new antenna, rig  
or digital. Experiment and  
make contacts.

Amateur radio operators who set up a temporary station at a park are known as *activators*, while others who 'spot' and complete contacts with them are called *hunters*. Activations can take place on the initiative of an individual operator, or as part of organized group events such as Field Days.

Equipment used is typically small, battery operated, and



may have been constructed by the operator themselves. The radio may be hand-held, carried in a backpack or a 'go box', or it could be mounted in a vehicle, as permitted by the park operator.

Antennas may be small enough to form part of a hand-held unit for VHF and UHF operations, or be ground-spike or tripod-mounted temporary whips or loops for longer radio wavelengths. Where permitted by local regulations, kites, trees or lightweight masts and fishing poles are sometimes used to suspend wire antennas as high as possible to optimize performance.

In this way, with patience, skill, and good luck with propagation conditions, contacts can sometimes be made worldwide using radios little larger than a pack of playing cards, although some activators prefer to use higher power, more sophisticated and larger equipment.

Activators can signal their intent to be on the air in advance using the POTA website, so that hunters are ready for them.

Activators log all the contacts they make and upload them to the POTA website, which then allocates the rewards and shows league tables for everyone involved.

A successful activation requires a minimum of 10 contacts (QSOs) from a park in the designated list within a single UTC day (Zulu day).





Our new (old) concrete slab ...

## THE PRESIDENT'S CORNER

From Page 1



WH6GXZ, WH6GWL

There's more to do to the immediate area as far as removing brush and errant tree limbs.

Our next trip up to do more cleanup is scheduled for Wednesday

(4/10). If the weather permits it, I will be removing the old rusty lag bolts and prepping the slab for use.

We welcome others who'd like to assist with this extended mission.

If you're interested in helping with the project please reach out via email or the list serve.

I had planned on doing a tutorial on the Lilygo T-deck and going deeper into Meshtastic. With shipping to Hawaii being slow, I just received the GPS Modules needed to make a mesh network work without a cellphone.

I'll be posting my progress and possible tutorials on my personal YouTube channel @The Geekiest Guy.

I'll be using my channel to post tips and tutorials on future projects as well.

I have a list of potential programs that folks have brought to the table. I'll be bringing up the suggested programs with Les at the meeting. All credit goes to Joe WH6JOE, since he compiled said list. We'd like to show our people things they're interested in as well as things that are requested and offered.



In this month's test, we received 25 check-ins and 30 Siren Status Reports.

Unfortunately, Ainaloa's silence continues to echo through the airwaves, while Laupahoehoe Lookout (sounded for 1 minute) and Ookala sang a Siren's Song—a melody of rebirth that resonated loud and clear!

Let's give a special nod to HCCDA & HI-EMA for ensuring our island remains a fortress of operational sirens and safety. Also, a shoutout to those supporting the Big Island AllStar Network, which keeps growing stronger and stronger.

Mahalo for participating, and we eagerly anticipate hearing from you all next month!

Note: HI-EMA website <https://dod.hawaii.gov/hiema/> has an article on Tsunami Awareness Month (below).

73 and aloha,  
Bev (KH7LM)



## Gov proclaims Tsunami Awareness Month

HONOLULU — Governor Josh Green, M.D., has proclaimed April as Tsunami Awareness Month in Hawaii. In making the announcement on April 1, the governor was joined by emergency managers from across the state.

The proclamation highlighted the importance of Awareness, Education and Action in preparing for tsunamis.

"Tsunamis are life-changing events," said Green. "It is imperative to know what to do to protect lives and property from tsunamis. Being aware, educated and ready to take action will save lives."

## ~ 2024 BIARC Roster ~

### Executive Board officers and committee chairs

#### President

Thomas Avila, WH6GWL

#### Vice President

Les Hittner, K0BAD

#### Secretary

Joseph Rosenbaum, WH6JOE

#### Treasurer

Tony Kitchen, WH6DVI

#### At-Large directors

Mark Watanabe, WH6FSA, and  
David Miller, KH6CZ

#### KH6EJ station custodian

William Polhemus, NH6ET

#### Public Service/ Communications Committee

Chair Les Hittner, K0BAD

#### Operating Activities Committee

Chair John Bush, KH6DLK

#### Education and

#### Outreach Committee

Chair David Miller, KH6CZ

#### Programs Committee

Chair Les Hittner, K0BAD

#### Digital Systems Committee

Chair Shawn Farley, WH6GXZ

#### Voice Repeaters Committee

Chair William Polhemus, NH6ET

#### Meeting Refreshments

#### Committee

Chair Robert Schneider, AH6J

#### BIARC Hamgram

Editor Leigh Critchlow, WH6LC

*Club website: <https://biarc.net>*

## [HawaiiARES]

### Winlink practice

A new Winlink practice started April 1. Please check your Winlink account for instructions.

If you are not a member of this net and are interested in joining the Winlink practice, please send me a Winlink message (NH7IT). or email to [nh7it@arrl.net](mailto:nh7it@arrl.net).

To learn more about Winlink, check out <https://wavetalkers.com/resources/digital/winlink.php>  
-- Van NH7IT ASM-Pac

## Volunteer teaching, coaching and testing effort equals new Hawaii Island hams!

The 6-week Technician License Preparation Class ended on March 20, with 12 people completing the course. Many took their exam on-line and a few sat for the in-person exam session held on March 24 at the Kamana Senior Center.

The 6-week class was immediately followed by the Accelerated Technician License Preparation Class (2-days) on March 23-24.

"After the Accelerated Class, we had a potluck lunch that included LOTS of donuts, cookies, sandwiches and chips to get everyone ready for the exam!" reported coordinator Doug Wilson.



The exam was proctored by Doug (KH7DQ), Jim Tatar (WH6EMN), Linda Quarberg (WH6LQ) and David Miller (KH6CZ). Nine people took the in-person exam, and 7 of them passed!

"AND, of the 6 people taking the Accelerated Class, 4 passed their exam, making this a reasonable alternative to the 6-week version," said Doug.

"They had to do a fair amount of studying ahead of the class, but it seemed to be worth it!"

## Watch out for fake 'DocuSign' email falsely claiming to be from ARRL

We've had reports of receiving a "DocuSign" email for a document claiming to be from ARRL.

ARRL HQ informs us that those are a "phishing" scam. Do not open any such emails.

ARRL Pacific Section  
Section Manager  
Alan P Maenchen, AD6E  
[ad6e@arrl.org](mailto:ad6e@arrl.org)





Jim WH6EMN has donated this 1,000 watt tuner to start the ball rolling for a new auction to raise funds for a club storage space.

## WH6EMN donates 1,000 watt tuner to launch auction to raise money for new club storage facility; more items welcomed

"I have a 1,000 watt tuner I don't need and would like to auction it off with the proceeds going to the general fund. That will help pay for a storage place," said Jim Tatar WH6EMN. It's an LDG AT-1000ProII Auto-tuner. Also includes the power supply, jumper cable and install and operating manuals.

"It has spent its life on a 200W radio so it has not been abused or overdriven. Cost new is between \$500 and \$600," said EMN.

That's how it started. A new auction to benefit the club. Still fresh, the memories of the successful recent auction coordinated by Roy KH6KU, which raised funds for the club's new portable event radio ensemble.

So, if you have radio-related items you could spare, please consider donating them for this new endeavor. More discussion on the auction is invited at the March 14 membership session at the Hawaii County Civil Defense Agency HQ in Hilo.



The rear view of the donated LDG AT-1000ProII Autotuner.

## Brass Tacks

An in-depth look at a radio-related topic

### Understanding the Band Conditions Banner

Solar-Terrestrial Data - <http://www.n0nbh.com>

<p>25 Nov 2018 0336 GMT</p> <p>SFI 69 SN 14</p> <p>A 4 K 1/PIntry</p> <p>X-Ray &lt;A1.0</p> <p>304A 95.0 @ SEM</p> <p>Ptn Flx 0.17</p> <p>Elc Flx 12.90</p> <p>Aurora /n=</p> <p>Aur Lat No Rapor</p> <p>Bz 2.5 SW 359.6</p>	<p>VHF Conditions</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Item</th> <th>Status</th> </tr> </thead> <tbody> <tr><td>Aurora</td><td>Band Closed</td></tr> <tr><td>6n EsEU</td><td>Band Closed</td></tr> <tr><td>4n EsEU</td><td>Band Closed</td></tr> <tr><td>2n EsEU</td><td>Band Closed</td></tr> <tr><td>2n EsNA</td><td>Band Closed</td></tr> <tr><td>EHE Deg</td><td>Fair</td></tr> </tbody> </table> <p>MUF ES - SEASON BREAK</p> <p>MS 0 6 12 18 UTC MAX</p>	Item	Status	Aurora	Band Closed	6n EsEU	Band Closed	4n EsEU	Band Closed	2n EsEU	Band Closed	2n EsNA	Band Closed	EHE Deg	Fair	<p>HF Conditions</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Band</th> <th>Day</th> <th>Night</th> </tr> </thead> <tbody> <tr><td>80m-40m</td><td>Fair</td><td>Good</td></tr> <tr><td>30m-20m</td><td>Poor</td><td>Poor</td></tr> <tr><td>17m-15m</td><td>Poor</td><td>Poor</td></tr> <tr><td>12m-10m</td><td>Poor</td><td>Poor</td></tr> </tbody> </table> <p>Geomag Field VR QUIET</p> <p>Sig Noise Lvl 50-51</p> <p>MUF US Boulder NoRpt</p> <p>Solar Flare Prb 17%</p>	Band	Day	Night	80m-40m	Fair	Good	30m-20m	Poor	Poor	17m-15m	Poor	Poor	12m-10m	Poor	Poor
Item	Status																														
Aurora	Band Closed																														
6n EsEU	Band Closed																														
4n EsEU	Band Closed																														
2n EsEU	Band Closed																														
2n EsNA	Band Closed																														
EHE Deg	Fair																														
Band	Day	Night																													
80m-40m	Fair	Good																													
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17m-15m	Poor	Poor																													
12m-10m	Poor	Poor																													

## Want some tips on how to read the Band Conditions Banner?

During a recent BIARC Morning Net, WH6JOE shared info on a terrific article on understanding band conditions he had found in the December 2018 newsletter of the **Utah Valley Amateur Radio Club, K7UVA**, by Noji Ratzlaff, **KNØJI**.

Just Google the club name, and there is easy access to the info on its website.

The above graphic of Solar-Terrestrial Data is created and produced by Paul Herrman, **NØNBH**, and Ratzlaff refers to it as the Band Conditions Banner.

"Many of us have seen this on websites, Facebook group pages, and even in magazines. But it occurs to me that most of us find much of the information presented on the banner over our heads.

"While not all of the banner information is immediately relevant, I'd like to take a few minutes to decipher the contents, based on the field names it presents ...," said the author.

NØNBH

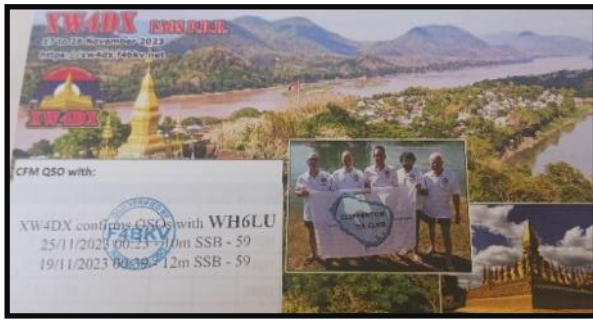
Paul L Herrman  
Sierra Vista, Arizona USA (DM41um)  
Solar Data Banners & Widgets  
UTC: Wed 27 Mar 2024 - 21:11:27  
[n0nbh@n0nbh.com](mailto:n0nbh@n0nbh.com)

HF Propagation Tools and Solar Data are now on multiple pages for faster loading

- Use the buttons at the top and bottom of the page to navigate, or use the following links:
- For Online MUF/LOF HF Propagation Prediction Tool, and conversion tools [click here](#)
- For NOAA's SWPC WSA Enfil Central Mass Ejection (CME) Solar Wind Prediction Model [click here](#)
- For Understanding Using Solar-Terrestrial Data, Solar Images, and HF Tutorials [click here](#)
- For current Space Weather and HF Propagation Conditions, and MUF Maps [click here](#)
- pdf presentation that contains tutorials and information on understanding radio propagation, and how to use all the data contained in the solar panels. You can download from [this link](#).
- pdf presentation that contains detailed instructions on adding a banner to your www.qrz.com BIO page. You can download from [this link](#).

Displaying Solar-Terrestrial Data Panels on your site, computer, or other personal device





## LAOS 10m QSL CARD

Rick WH6LU offers a peek at one of his recent QSL cards to encourage more hams to explore the wonders of HF. And, remember: 10 meters is open to Technician-level licensees.

## CLASSIFIEDS

Lloyd Cabral, KH6LC  
808-333-6555  
[KH6LC@hotmail.com](mailto:KH6LC@hotmail.com)

For sale by owner:

- 1.) Tower. 90' Rohn 45, base & rotor plates, top guys are PhilyStrand, Complete. \$1000.
- 2.) HF Amp. Commander HF-2500, 160-10, Manual, Legal Limit, Excellent condx. \$1000.
- 3.) Yaesu FTDX-3000, CW filter, Box, Mic, Manual, Excellent condx. \$800.
- 4.) Yaesu FT-1000MP, both receivers loaded with INRAD CW filters, excellent. \$800.
- 5.) Tower. Telex Hy-Gain HG54HD, freestanding crank-up, excellent. Engineering Specs online. Easy to permit. \$200.
- 6.) Geochron Clock. Original model, Black, Surface mount or recess in wall. Looks great, works but needs a little help. \$100.
- 7.) A large crate of monoband HF yagis. Crate is about 18"x24"x 12Ft. As I recall, there's two 40 meter yagis, and one each, a huge 20m antenna, 15 & 10 meter yagis and maybe more. Assemble or use to build whatever you'd like. The aluminum alone is worth more than the \$200.

## International Marconi Day 2024

This year, International Marconi Day (IMD) is on April 27. Italian inventor and electrical engineer Guglielmo Giovanni Maria Marconi was born on April 25, 1874, and is credited for inventing the radiotelegraph system, creating Marconi's law, and sending the first wireless transmission over the open sea.

IMD was created to honor Marconi and is hosted annually by the [Cornish Radio Amateur Club](#), GX4CRC. The purpose of the day is for amateur radio enthusiasts around the world to contact historic Marconi sites using communication techniques similar to those that he would have used.

The 24-hour event will operate from 0000 UTC to 2359 UTC, and registration is required. Participants can register at [GX4CRC's registration web page](#).

Stations in the United States, including Marconi Cape Cod Radio Club, KM1CC, in Massachusetts, are already registering for the event. KM1CC hosts several on-air events each year to keep the accomplishments and story of Marconi and his wireless station site in South Wellfleet alive. In 1975, the Wellfleet station was listed as a National Historic Landmark on the National Register of Historic Places and is now part of Cape Cod National Seashore, a unit of the National Park Service. When possible, KM1CC sets up a temporary radio station inside the park. More information about KM1CC is available on their [Facebook page](#).



## 2024 ARRL Field Day Theme: Be Radio Active

The theme for 2024 ARRL Field Day is "Be Radio Active." The event will run on June 22 - 23, and it will be one-part contest, one-part emergency communications exercise, and one-part open house -- and a great time. The theme encourages radio amateurs to take advantage of the peak of Solar Cycle 25, which we are nearing. Activity this year is likely to be extremely high thanks to favorable solar conditions. The upper HF bands, such as 15 and 10 meters, should benefit most from the Cycle's peak.

There are resources available already for clubs and individuals to make their Field Day plans. ARRL will publish more information and tools so that hams can make the most of the event as it draws near. Amateurs interested in learning more are invited to join the [Field Day Facebook](#) group to connect with others who are planning for the big weekend.

Find links to all of the resources on the ARRL Field Day web page at [www.arrl.org/field-day](http://www.arrl.org/field-day).





# BIARC Executive Board Regular Meeting

March 10, 2024

Kamana Senior Center

*(Note: these are draft minutes, subject to board approval)*

The meeting was called to order at 12:13 pm by Board President Thomas Avila. A quorum of 7 board members was present.

## Attendance:

- Board members: Thomas Avila, Les Hittner, Tony Kitchen, Joseph Rosenbaum, William Polhemus, David Miller and Mark Watanabe.

## Secretary's Report and Minutes:

- William moved to approve the minutes distributed previously via email and in the Hamgram. Les was the second. Motion passed.

## Treasurer's Report:

- Year to date we have 50 paid members. Since the last report. We disbursed \$74.47 for reimbursement of holiday party expenses. The financial statement and fund summary as of 3/9/24 are attached

## Education and Outreach:

- On March 8, we had another successful presentation at Hilo Union Elementary School for their science event.
- See attached report.

## Operating Activities:

- Update on quarterly workshops: Due to difficulty in securing a location, William will host the workshops at his guest house, sometime after April. (The workshops will focus on testing radios)
- A few members had a successful POTA (Parks on the Air) activation at Volcanoes National Park on March 3<sup>rd</sup>. There are future POTA activations in the works.

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- The gateway we're building to provide remote access to the Kulani Cone (146.760 with a tone of 100 and a -600 offset) repeater will need a second radio which will point to the 70 cm repeater that's going to cover Saddle Rd, which will link it to Kulani, so Kulani will have a 70 cm UHF repeater that links for going over Saddle Rd. We are looking at replacing the UHF repeater with a 2 meter repeater with a much higher gain antenna to provide better coverage down to lower altitudes and augment the coverage we don't have from Maunakea to reach Oahu.
- Frank Roff, KH6BFD, a Kona station has been added to the Voice Repeater Committees. We are exploring linking his repeaters into BIARC's systems.
- Status update on the Iolehaehae project: William met with Talmadge Magno, Director of Civil Defense. They discussed the approval William has to put equipment at the Iolehaehae site on flank of Mauna Kea, mauka of Laupahoehoe. Mr. Magno is also supportive of amending the scope for William's project to include VOAD which would open up a possible microwave link to Haleakala. This falls under our existing Memorandum of Understanding we have with Civil Defense. The project scope currently includes a tower donated to BIARC by Hawaii Community College, University of Hawaii. That tower will go up and there is an existing tower foundation we can use. We may need to request funding for microwave transmitter, antennas, batteries, etc. from VOAD.

## Public Service Communications:

- Tony Kitchen noted the roles of various PSCC members, including David Miller acting as the BIARC representative and Tony acting as the ARES representative to VOAD. Within VOAD there has been an on-going conversation about how groups might work together.
- Tony moved that the BIARC Executive Board form a special committee, consisting of members representing the PSCC, Voice Repeaters, and Digital Systems committee to explore plans and options for working together with Hawaii VOAD, ARES, and other stakeholders in the amateur radio community towards the establishment of a statewide linked repeater system for the purpose of emergency communications and EmComm training.

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## Programs:

- Thomas did a presentation on the ATAS 120 antenna (the same one the club has.)
- The April program will be on Meshtastic. Les will coordinate with HC CDA to schedule our meeting at the EOC.
- William has a presentation on using the NanoVNA to do sweeps. (May. William will transfer AV equipment to Les, as he will not be present for the April meeting.)

## Voice Repeaters:

- Bill Ockert, NDOB and William went to the Mauna Loa tower. Bill will be working on the beacons put there from a tropo group in California. (California Pacific Amateur Radio Club, KH6HME) Bill will be making improvements to the system. There will be coordination with the beacon club because they have a 2 meter transmitter up there and we need to make sure we avoid interference and damage to equipment. We will need filtering there for the inter-modulation. This filtering between the two transmitters will help to get rid of the spurs from the 2 meter beacon. William also removed the BIARC repeater that had been converted for public safety use. About a year ago the club supported the Hawaii County Fire Department's request to deploy a repeater on a public safety frequency, because the Mauna Loa observatory trunked radio site (P25) was inoperable as the power and network connectivity were cut off due to the lava event. This left the area of Saddle Road and specifically Fire Station 50, which is manned by the US Army's Fire Department without radio communications. They are now on a temporary solution and the second temporary repeater we installed at the compound is still in use but the one at the Mauna Loa site is no longer needed. That repeater had started putting an alarm tone over the air so William removed it completely so he could bench test it. In its place he put the Yaesu DR1X repeater he had removed from the Peepekeo site. The frequency is 442.575 with a pl tone of 100 and a positive 5 MHz offset. This will be experimental for the time being, not a permanent solution.

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- Les seconded the motion. Discussion was held covering the following topics:
  - Clarification was made that this would be an Ad hoc Committee, under the Executive Board.
  - Elimination of the duplication of efforts via defining the potential roles of each group. i.e. BIARC taking the role of technical lead, especially in relation to the Big Island system and backbone linking, with VOAD taking the lead on the coordination side, especially on Oahu via the development of an SOG relating to stations that may link into the backbone on other islands.
  - VOAD would not be setting technical hardware and linking standards.
  - Stakeholders outside of BIARC and the amateur radio community were discussed. No additional amendments were made at this time.
  - The vote was called: William voted no, Thomas abstained. The motion passed.
- Tony volunteered to lead the special ad hoc committee. He was confirmed as the chair.
- Les contacted organizations (East Hawaii Kiwanis parking patrol for 'Imiloa, and Hilo International Marathon.) Les will continue to explore options in coordination with the PSCC in order to make further recommendations.
- See the PSCC written report. (Attached)

## Old Business:

- Topic: Permanent storage. To date, we have been unable to find a storage location under the budgeted \$100/month. Les moved and Joe seconded to authorize William to initiate a contract with a storage facility on behalf of BIARC for a unit costing up to \$80/month, including taxes. We discussed options on how BIARC could afford this expense. Motion Passed.
- Fire Department location update: The final approval has not been secured. BIARC will complete a member survey before making a decision before determining if the meeting date should be moved back to Saturday.

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Continued on next page



**Executive Board minutes, from previous page**

**New Business:**

- Tony has reviewed the ARRL website for insurance coverage. They put a cap of fifteen thousand dollars on equipment, which we are likely to run up against. Our equipment policy expires at the end of March and our liability insurance expires on June 10<sup>th</sup>, 2024.
- Tony will continue to look at other plans. Tony moved and William seconded to postpone entering into a new insurance policy. Motion passed with Les voting no. The board will discuss options at the April meeting.
- William met with Civil Defense about some of the club's ongoing projects. Everything was put on hold when Scott ? became radio systems manager for Civil Defense. No approvals on our project(s) and others. At this time, we are not sure if we will be able to install the microwave radio link at Kulani Cone. Almost all of the hardware is on hand for this project, just need a few items from a hardware store. Access to the Kulani Cone tower site has been restored through the prison, not through the back gate. All work party members need to pass a background test from the prison. Only sponsored people are able to go. William and Paul Ducasse are the only ones currently with permission. Need to get approval and sponsorship for others.
- Tony and Thomas will collaborate on a member survey for preferred meeting days.
- William asked for permission from the board to ask VOAD to fund the microwave radios, antennas and ancillaries such as batteries, solar components, etc.
- David offered BIARC a donation of the RMS station Jim Huntley left him. Les moved to accept the donation and Tony was the second. Motion passed. David will host it and provide around the clock power to the gateway and cover it under his homeowners insurance.

The board also discussed the standing policy that committee chairs are confirmed by the board and chairs can have members join the committee without board action. The board can remove committee members for cause. When someone joins a committee, that information needs to be sent to the Secretary and website content manager, in writing.

Bob (AH6J) and his wife Esther entered the room at 12:55pm.  
Jim (WH6EMN) entered at 1:03 pm.

**Next Meetings:**

The next meeting will be at the Hawaii County Civil Defense building located at 920 Ululani Street, Hilo, HI 96720. The board meeting will start sometime after 12:30 pm and the club meeting will be at 2:30 pm. Both meetings will be in-person and on Zoom.

**Adjournment:**

Tony moved to adjourn and Les seconded. Motion passed. There being no further business Thomas closed the meeting at 1:48 pm.

Respectfully submitted,  
Joseph Rosenbaum,  
Secretary

The BIARC channel on Youtube is: <https://www.youtube.com/@BigIslandAmateurRadio-Club>

BIARC Operating Statement

	<u>2024 Budget (Proposed)</u>	<u>Actual* - As of 03/9/24</u>
<b>Income:</b>		
Dues	\$1,300.00	\$1,137.50
Repeater and general Donations	\$400.00	\$324.25
Humanitarian Donations	\$100.00	\$6.25
PayPal Convenience Fees	\$26.00	\$16.25
<b>Total Income</b>	<b>\$1,826.00</b>	<b>\$1,484.25</b>
<b>Disbursements:</b>		
Club Liability Insurance	\$350.00	\$0.00
Club Equipment Insurance***		\$0.00
Equipment	\$400.00	\$0.00
Club Activities	\$400.00	\$74.47
P. O. Box Fee	\$280.00	\$0.00
Humanitarian Awards	\$100.00	\$0.00
VOAD Dues	\$25.00	\$25.00
Printing/Publicity	\$170.00	\$157.82
Office Supplies/Bank Fee/Misc.	\$40.00	\$0.00
Website Costs	\$48.00	\$0.00
Paypal Transaction Fees**	\$13.00	\$11.49
<b>Total Expenses</b>	<b>\$1,826.00</b>	<b>\$268.78</b>
<b>Net (Income - Expenses)</b>		<b>\$1,215.47</b>
<b>Account Balances:</b> as of: 3/9/2024		
BOH checking Account		\$4,135.82
Namecheap Balance (Website)		\$1.00
Paypal Account Balance		\$1,084.65
<b>Total</b>		<b>\$5,221.47</b>
<b>Fund Balances: (3/9/2024)</b>		
Infrastructure fund	\$2,500.85	
Humanitarian Fund	\$420.00	
Emergency Reserves	\$1,000.00	
General Fund	\$1,300.62	
<b>Total Funds</b>	<b>\$5,221.47</b>	

\* Income figures show dues payments and donations made for the 2024 dues year.  
\*\* Budget estimate based on 20% Transactions via PayPal, with fees averaging 4.65%  
\*\*\*Note:2023 equipment insurance cost was \$186.85.

BIARC - Donation Funds Summary

Fund Summary:  
As of: 3/9/2024

Year	<u>BIARC Equipment Budget</u>	<u>Donations (Credit)</u>	<u>Equipment Purchases &amp; Maintenance Costs</u>	<u>\$ Covered By Repeater Fund</u>	<u>Repeater Fund Balance</u>
2017	\$600.00	\$273.00	\$932.75	\$332.75	-\$59.75
2018	\$1,000.00	\$235.00	\$266.98	\$0.00	\$175.25
2019	\$500.00	\$255.00	None	\$0.00	\$430.25
2020	\$500.00	\$501.72	\$436.78	\$0.00	\$931.97
2021	\$600.00	\$1,595.00	\$1,548.28	\$948.28	\$1,578.69
2022	\$950.00	\$729.00	\$0.00	\$0.00	\$2,307.69
2023	\$950.00	\$455.75	2626.92*	\$586.84	\$2,176.60
2024		\$324.25	\$0.00		\$2,500.85

Notes: This fund holds amounts donated to be used for repeater maintenance & upgrades.

Humanitarian Fund:

Year	<u>\$ Donated</u>	<u>Amount Spent</u>	<u>Balance</u>
2022	\$395.00	\$140.00	\$255.00
2023	\$158.75	0	\$413.75
2024	\$6.25		\$420.00

Notes: This fund holds amounts donated.

\* Of the \$2626.92 spent on equipment in 2023, \$586.84 was paid for out of the repeater fund, for equipment purchased for and to be used at the Kulani and Pepeekeo repeater sites.



# BIARC Public Service Communications Committee Report March 9, 2024

This meeting was scheduled at the request of Tony Kitchen to update this committee and the BIARC Board of Directors about upcoming changes in the VOAD Repeater on Maunakea and for other purposes.

## • ARRL Pacific Section & ARES Update:

- o Alan Manchen, ADGE has been elected to the position of ARRL, Pacific Section Manager.
- o Alan maintains the appointment of Joe Tabrah, AH6T as our Section Emergency Coordinator, Tony Kitchen, WH6DVI as an Assistant Section Emergency Coordinator, and others. (See the ARRL webpage at <https://www.arrl.org/sections/view/pacific-section>)
- o ARES continues to look for someone to volunteer for the north BI DEC position.
- o Kevin Bogan, AH6QO has been appointed as the ARES Skywarn Ham Coordinator with the National Weather Service, Honolulu Field Office Skywarn program. Kevin is also appointed as the District Emergency Coordinator (DEC) for South Oahu.
- o Alan is a resident of Maui, Joe and Kevin live on Oahu. The BIARC PSCC congratulates each of them and would like to express our support.

## • Changes resulting from the Board-approved transfer of responsibilities to the Education and Outreach Committee:

- o The Hawaii Science and History Museum/School Science events are now being coordinated by BIARC's Education and Outreach Committee. Chair/POC: David Miller, KH6CZ.
- o Committee chairmanships and memberships may be affected by this change in responsibility.

## • Other information updates:

- o **Hawaii County Civil Defense.**
  - Tony Kitchen, WH6DVI met with HC CDA staff on Friday, March 1st. Civil defense wishes to continue the collaboration with the Amateur Radio Community through various initiatives, which include ACS and coordinating with BIARC and VOAD.
  - We discussed the inclusion of Amateur Radio Stations islandwide in the potential activation of the County's Amateur Radio Repeater on Maunakea, once it is online. All FCC-licensed amateur radio

operators will have the opportunity to participate. More details on how this works will be available at a future time.

## Hawaii VOAD

- BIARC and ARES are both members of Hawaii Island VOAD. All individuals who are members of any VOAD organization have the opportunity to establish emergency communications to Hawaii VOAD and Emergency Management Agencies via multiple pathways. In blue sky conditions coordinate through David Miller, KH6CZ for BIARC, and Tony Kitchen, WH6DVI for ARES. In black sky conditions, this happens as defined in the ICS-205 communications plan for the incident. The communication plan is coordinated through VOAD, ARES, and the agencies involved.
- Any person who is a member of any VOAD member organization has the opportunity to participate in VOAD general meetings and Working Groups. Send Email to [David.Miller@hawaiistatevoad.org](mailto:David.Miller@hawaiistatevoad.org) or [Tony.Kitchen@hawaiistatevoad.org](mailto:Tony.Kitchen@hawaiistatevoad.org) for more information.
- Hawaii Island VOAD leadership met with HC CDA and is exploring how to best facilitate the coordination of disaster response and communication activities during an incident where any service from our members may be needed.
- The removal of the Hawaii VOAD repeater on Maunakea has now been pushed back to March 19th, due to complications related to the permitting of the removal of the CSO radio telescope.
- The Hawaii VOAD Communications Working Group wishes to reach out to BIARC, ARES, and others to plan, coordinate, and establish a statewide radio communications network through a system of linked repeaters. They have asked BIARC to engage as one of the primary stakeholders through a collaborative effort involving linked repeaters in Hawaii County, with possible links to Maui and Oahu.
- Tony Kitchen noted that because of the importance of a whole community approach to disaster communications, it is vital that PSCC, Voice Repeaters, and Digital Systems Committees work together with Hawaii VOAD, ARES, and other relevant stakeholders to explore agreements, technical specifications, and standard operating guidelines related to the development and implementation of such a shared statewide linked digital network and voice repeater system, which will be called the HiWARN system. (Hawaii Wide Area Radio Network) The chair of each committee should be asked to make assignments relevant to their role in its development by making recommendations to the

executive board as needed to plan and implement infrastructure, explore relationships, and develop agreements between groups.

Therefore I (Tony Kitchen) move that the PSCC recommends that the BIARC Executive Board form a special committee, consisting of members representing the PSCC, Voice Repeaters, and Digital Systems committee to explore plans and options for working together with Hawaii VOAD, ARES, and other stakeholders in the statewide linked repeater system for emergency communications and EmComm training. The motion was **seconded** by David Miller.

The motion **passed** and that recommendation shall be made to the BIARC Executive Board on Sunday, March 10, 2024.

## • National Weather Service, Skywarn Ham Program:

Kevin Bogan, AH6QO has been appointed as the ASEC ARES coordinator (Skywarn HAM Coordinator for the State of Hawaii) working with the Skywarn HAMS effort in support of the NWS Skywarn program. Skywarn is a program of the National Weather Service (NWS). Normal Severe Weather Reports (SWR) are called in by telephone. When requested by NWS, Skywarn HAMS is activated to assist in passing the SWR into NWS. Kevin is the POC for Skywarn HAMS and is directed by the NWS POC, the Warning Coordination Meteorologist. Amateur Radio operator training related to the Skywarn HAM program will be developed by AH6QO and deployed statewide.

## • Other Items:

- o The Volcano Oh'a Lehua Runs have been scheduled for July 27, 2024. Those who are interested in assisting with radio communications for the race please contact Doug Wilson.
- o The committee members ask that the chairmanships and memberships of both the Public Service Communications and the Education and Outreach Committees be readdressed and clarified.

Respectfully Submitted by:  
**Les Hittner, K0BAD**  
**BIARC PSCC Chair**

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## Big Island Amateur Radio Club Education and Outreach Committee Report – March 10, 2024

### BIARC Education and Outreach Committee

The **Education and Outreach Committee** is constituted BIARC Executive Board and is charged with public education and outreach in support of the Club's **Goals and Objectives**:

**Engage** and Collaborate with the Amateur Radio community.

**Present** Amateur Radio to the community positively.

**Pursue** activities and agreements that lead to educational and collaborative success.

E&OC and PSCC – Chairmanship of the E&OC and PSCC Committees were re-assigned at the BIARC Executive Meeting of February 17, 2024.

Membership, Objectives and Responsibilities are under review.

### Hawaii Volunteer Organizations Active in Disaster

BIARC representative and association with HVOAD under review.

### Hawaii Science and Technology Museum

The E&OC continues to engage with **the Hawaii Science and Technology Museum** to participate in interactive events with Elementary and High School children in East Hawaii. The Hawaii Science and Technology Museum is an educational non-profit, federally recognized 501(c)(3) public charity dedicated to Science, Technology, Engineering and Math education on the Island of Hawaii. The PSCC participated with four schools in 2023 and the E&OC has continued with this responsibility in 2024. Most recently, an event was held at the Hilo Union Elementary school on March 8, 2024. A further event is planned at the Keaau Elementary school in April. The BIARC Team has consisted of Jim Tatar, Joe Rosenbaum, Mark Watanabe and David Miller. John Bush has recently brought digital radio to the mix while many of our members have donated "on air" time with students.

The club's ft991a receiver has been introduced into our program this year. Also, a club banner was designed, purchased, and introduced into our program. More initiatives are in process for future events.

The E&OC program continues to be well received at all the events this year and interested students' information has been collected for their introduction to ham radio through Doug Wilson's training programs.

### E&OC Event Program and Future Planning:

Set up radio/communications equipment and conduct run a "net" for third-party participants (students) under one of the BIARC members licensed call signs, interacting with volunteer operators in the field via the Club's Repeater.

Distribute handheld radios to demonstrate communications capabilities to students.

Sign up parents, teachers, and students for Amateur Radio training.

Engage groups in the broader community to build radio emergency communications capabilities.

David Miller  
**BIARC Education and Outreach Committee**





# ARRL

The National Association for  
Amateur Radio®

## Dayton Hamvention® 2024 Award Winners Announced

The recipients of the 2024 Hamvention Awards were announced on March 8, 2024.

### Special Achievement Award: Anthony Luscre, K8ZT

Luscre is from near Akron, Ohio, and he was first licensed in 1981. He has been a low-power operator, contester, and teacher throughout his amateur radio career. He received his Amateur Extra-class license in 2000. Luscre is active on HF and VHF/UHF, and he operates on CW, phone, and digital modes. His low-power contacts now top 115,000. Between licensing classes, club programs, webinars, hamfests, conferences, youth and school radio demonstrations, and other in-person and online talks, Luscre has presented more than 500 sessions since the beginning of the COVID-19 pandemic. He has presented multiple times for Contest University, the QSO Today Virtual Ham Expo, and Dayton Hamvention®. He holds a weekly class, "The Joy of Operating," for the Long Island CW Club. Anthony serves as the ARRL Ohio Section Youth Coordinator and he is an officer in the [Cuyahoga Falls Amateur Radio Club](#).



Anthony Luscre, K8ZT. [Photo courtesy of Hamvention®]

### Amateur of The Year Award: Edward Engleman, KG8CX

Engleman, KG8CX, is from Menominee, Michigan. He is the co-founder of the [Young Amateurs Communications Ham Team](#) (YACHT). He was first licensed in 1991 and received his Amateur Extra-class license in 2000. He has been a member of ARRL since 1991. Engleman serves his home club, the Marinette & Menominee Amateur Radio Club, as a volunteer examiner. Engleman's 33-year background as an elementary educator and principal was instrumental in developing the talents he now uses in his work with young amateurs.



Edward Engleman, KG8CX. [Photo courtesy of Hamvention®]

### Technical Achievement Award: Ward Silver, N0AX

For the past 15 years, Silver has been the Lead Editor of *The ARRL Handbook* and *The ARRL Antenna Book*, and he was a primary author of all three ARRL license manuals and study guides from 2004 until his retirement in 2023.

As an electrical engineer, he designed microprocessor-based products and medical devices for 20 years before beginning a second career as a teacher and writer. Licensed since 1972, he is a co-founder of the World Radiosport Team Championships and was inducted into the CQ Contest Hall of Fame in 2015, with numerous top scores and records. He is President of the [Yasme Foundation](#), and he is also a board member of the Ham Radio Science Citizen Investigation ([HamSci](#)) collaborative research group. Silver's primary interests in amateur radio include radiosport, antenna design, and supporting his local emergency response team.



Ward Silver, N0AX [Photo courtesy of Hamvention®]

### Club of the Year Award: The Young Ladies' Radio League (YLRL)

The [Young Ladies' Radio League](#), Inc. (YLRL), is proud to be celebrating its 85th anniversary this year. With members from all over the world, the organization has been involved in everything from contests, to emergency events, to helping new hams get licensed and on the air, as well as everything in between.

Established in 1939, YLRL has been found at hamfests and conventions all over the world. The club is proud to have had a booth at Hamvention® every year since the 1950s and a YL Forum since the 1960s. "Women helping women in amateur radio" is a mission statement for this organization, but there are also contest and award opportunities for the OMs who support their YLs. YLRL has the motto "QRV -- I am ready," as they are always ready to assist in the radio community.



The Young Ladies' Radio League at their Convention in Washington state in 2014. [Photo courtesy of Hamvention®]