

THE BIG ISLAND HAMGRAM

The newsletter of the Big Island Amateur Radio Club

THE PRESIDENT'S



CORNER Alan Okinaka,

KH6ATU

Other countries: Of cultures, chow and comms

I recently made my first visit to Australia and New Zealand, and I felt the excitement of making new friends and acquaintances, discovering interesting places, and new flavors that would challenge my taste buds. However, the latter did not happen.

I now understand why we have Korean, Japanese, Indian, Chinese, Thai, Hawaiian, and Filipino restaurants here, but there are no Australian restaurants. Seems like the Australians did not spend much time creating good eats.

It was about the same in New Zealand, but I found the food better tasting there. But besides the Maori hangi cooking, which is similar to the Hawaiian imu cooking, I am not sure what we would call official "New Zealand cuisine."

But, enough about food. As I have done on other trips, my mind visited the culture of people in another country with different values and priorities.

I wondered if not understanding the culture and traditions of Australia and New Zealand would lead to conflicts and misunderstandings. I couldn't help thinking of the war between Ukraine and Russia. Did the war start because there was an erosion of understanding. This is probably naive of me to think it could be that simple.

But, this led me to think of amateur radio operators who cross international borders simply for the enjoyment of conversation with hams in foreign lands. Would I be further naive to think that ham radio communications could increase our understanding of other countries, and make a significant contribution towards attaining and maintaining world peace? An intriguing thought.



July 2023







Photos by Mark Watanabe, WH6FSA



The BIARC gang gathered Saturday, June 24, for the annual **Field Day** event at Hilo's Kuhio Kalanianaole Park. Chairman Joe Rosenbaum, WH6FZH, reports highlights on Page 2.

BIARC meeting info

The club now gets together on the second Sunday of the month at Kamana Senior Center at 127 Kamana St. in Hilo.

The Executive Board meets at noon, with the membership gathering following at 2 p.m. Zoom access is provided courtesy of Les Hittner, K0BAD, at: <u>https://us02web.zoom.us/j/5181360132?</u> pwd=bTVFTG5HZXowYVJ6OHpFcEV1dHJRUT09

BIARC Field Day

From previous page







Pop-up restaurant, with potluck goodies and onsite gourmet chefs WH7BR and WH6EPS.

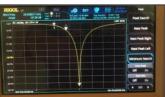
KH6KU scored a voice contact with the Johnson Space Center Amateur Radio Club, above. At right, WH6FZH offers a peek at some of the Field Day equipment.

About 30 people turned out for the BIARC Field Day, reported event chairman Joe Rosenbaum, WH6FZH, Results included 9 voice contacts (including one by Roy Kunishige, KH6KU, to the Johnson Space Center Amateur Radio Club. which also acts as an EOC); 26 FT8 contacts: two 6-meter contacts and one 220 mhz band contact. And during the main staged event of the day - The Fox Hunt - KH6KU emerged victorious in the direction-finding contest.

"To allow the use of multiple radios without receiver damage, and to mitigate the interference between the radios, we used three-stage stub filters on each to notch out the HF band of the other active HF radio, and/or the dedicated 6m radio," said Joe.

"Those then went through low pass filters on their way to the antennas to block out the 2M/1.25m/ 70cm GOTA station.

"Similarly, we used the high pass side of a diplexer to block the HF stations from





harming the GOTA station's receiver. We had up to 80dB of isolation between each of the radios," he explained.

Another popular activity was the Famous Field Day Food Tent. Folks brought potluck items to share, including freshly made fare from a couple of the club's top chefs – Gary Schwiter, WH6EPS, manning the hotdog grill and Paul Ducasse, WH7BR, presiding over his portable pizza oven.

"Paul made pizza at Field Day. He made the dough right there and we had fresh, wonderful pizza," said Joe. "Also, Hank made a nice clam chowder and other people brought along food for all of us." 2



WH6FQI photo

Roy Kunishige, KH6KU, winner of the fox hunt, proudly hoists the tupperware fox! At right, Avila Thomas, WH6GWL, also enjoys the moment.



Aloha 'oe, NH7FY, we will miss you

BIARC has lost a club stalwart and dear friend: Barbara Darling, NH7FY, passed away at age 88 on Saturday, June 24 – Field Day.

For more than two decades, she served BIARC in many ways, including multiple terms as president, and was one of the catalysts of public service out-

reach. She and her husband, Richard, AH7G, SK, joined BIARC early in the new millennium and were soon indispensable to ham operators in the 50th state and beyond.

Richard had been a ham since his teenage years in Panama. Barbara was newly licensed, and quickly getting into the groove.



NH7FY, SK

For many years, Barbara ran the Hawaii QSL Bureau, coordinating the processing of several hundred thousand QSL cards by the time she retired.

A major thrust of the couple's energy and devotion on the amateur radio front went to bridging the communication gap between islanders in remote communities in far--off Yap State in the Federated States of Micronesia and family members in Hawaii and on the U.S. mainland. The Keaau couple also sent a steady stream of school and hygiene supplies and ham radio equipment to the Micronesians over the years. The Darlings were the recipients of the ARRL 2016 International Humanitarian Award. The ARRL board cited the couple's support of past International Humanitarian Award winner John Bush, KH6DLK/V63JB, and their "significant material support" to his efforts in the Federated States of Micronesia.

Barbara Hess Darling was born in Kingston, Pa., worked in the banking industry and was a licensed practical nurse. She was a member of Hilo United Methodist Church.

Dodo Mortuary is handling funeral arrangements. Visitation will be from 9-10 a.m. Thursday, July 13, at the Dodo Mortuary Chapel, with a memorial service at 10 a.m. Graveside urn committal service will follow at Hawaii Veterans Cemetery No. 2.

Barbara is survived by children, David Robbins of Peru, Mass., Judith Delbene of Lake City, Fla., and Michael (Krystal) Robbins of Denison, Texas; stepchildren, Barbara (Steve) Naslund of Prescott, Ariz. and Richard (Ria) Darling of Stafford, Va.; brothers, Richard (Carla) Hess and Henry (Kathleen) Hess; sister, Nancy Allen; sister-in-law, Nancy Darling; six grandchildren and six great-grandchildren; cousins, nieces and nephews.



John Bush, at right, shares this photo of "The Three Musketeers" taken at "an earlier graduation celebration of our Micronesian community in Kona." Richard, AH7G, SK, and Barbara Darling, NH7FY, SK, were the recipients of the ARRL 2016 International Humanitarian Award. In announcing the honor, the ARRL board cited the couple's support of past International Humanitarian Award winner Bush, KH6DLK/V63JB, and their "significant material support" to his efforts in the Federated States of Micronesia.



Among our memories: Richard loved ice cream and Barbara was famous for her lilikoi jelly. And the couple was known for their stylish matching aloha wear.

Club president remembers NH7FY

BIARC President Alan Okinaka, KH6ATU, expresses the club's sympathy to Barbara's family on the mainland and noted she will be sorely missed here in Hawaii, as well.

"Barbara had a fun side which I had the privilege of knowing," said Alan. "She was devoted to making sure we had the Friday lunch at Pond's for ham operators and friends.

"With announcements on the morning net on Friday and text messages, she gathered us for an enjoyable lunch. "Her humor was always with us because she gave us perspectives on every topic that made us smile and bust out laughing.

"I still remember when I first chatted with Richard and Barbara at one of the BIARC meetings.

"I had just joined BIARC and mentioned that my call sign was difficult to remember: WH6FZD."

Barbara didn't skip a beat. She told Alan: "Five Zebras Dancing."

"Although I subsequently changed my call sign to KH6A-TU, I will never forget Five Zebras Dancing, and Barbara," he said.



At the June 11 club session at Kamana Center, William Polhemus, NH6ET, discusses the upcoming Field Day fox hunt and offers tips and techniques for success in pinpointing the location of the tricky little transmitter.

June meeting rundown

The June 11 monthly members' gathering was conducted by President Alan Okinaka, KH6ATU, from 2-4 p.m. at Kamana Senior Center in Hilo.

The main topic of discussion was the plan for BIAR-C's annual Field Day on Saturday, June 24. Venue: Kuhio Kalanianaole Park, with backup site to be nearby Reeds Bay.

William Polhemus, NH6ET, discussed the fox hunt to be held and offered tips for optimum participation and techniques and homebrew equipment tweaks that can bump up the odds of locating the hidden transmitter.

You can perform well with detection enhancement tools you can "whip together out of

your junk drawer," William explained, offering several examples ranging from pretty simple to a bit more hightech.

Tony Kitchen, WH6DVI, reported on recent steps forward relating to coordination of emcomms on the Big Island.

The goal is a cohesive network of amateur radio operators working together to provide communications to ensure public safety during times of crisis.

Of note: the Hawaii County Civil Defense Agency has formally committed to working with ARES.

Tony encourages volunteers, as stations and operators are needed in every area of Hawaii County.

Congressmen resubmit bill to remove private land use restrictions on ham radio

Congressmen Bill Johnson (OH-06) and Joe Courtney (CT-02) reintroduced a bill in the US House of Representatives on June 12 -- H.R.4006 — to remove private land use restrictions that prohibit, restrict, or impair the ability of Amateur Radio operators from operating and installing reasonable antennas on property that they own or control.

Similar legislation, H.R. 9670, was introduced by Johnson in 2022.

"I reintroduced the Amateur Radio Emergency Preparedness Act to remove barriers to disaster and emergency communications and training, and to promote education in STEM subjects related to critically needed wireless technology," Congressman Johnson said in a release. "Passage of this bill will promote developing and sustaining our nation's wireless future and facilitate and encourage amateur radio operations as a public benefit."

"As their actions during recent natural disasters such as Hurricane Sandy proved, amateur radio operators in Connecticut can be a critical component of disaster response and emergency management. It is in our communities' best interest that we give them the capabilities to operate at the highest level, and with the re-introduction of this bill, we've taken a strong step in that direction," said Congressman Courtney.

Hams invited to help with emcomms for Volcano's July 29 'Ohi'a Lehua Runs

Aloha:

Thanks again to all of you who helped out with radio communications at the 2022 Volcano's 'Ohi'a Lehua Runs. We have been asked again to provide radio communications for this year's event. Here are the particulars:

Date: Saturday, July 29, 2023 Location: Volcano Village Start/Finish area: Volcano School of Arts & Sciences (VSAS) - Old Volcano Road Campus Radio Operator Report Time: 6:15 a.m. at the NCS located at the VSAS campus. **Race start times:** Half Marathon - 7:00 a.m.; 5K 7:15 a.m. (4 hour cutoff - race ends at 11:00 a.m.)

Please let me know if you can participate as a radio operator in this year's race. Also, please be sure to **provide me your shirt size**.

This is a great opportunity to practice our radio skills and provide a needed service for our community. I hope you can join us! Thank you!

73 & Aloha Doug Wilson KH7DQ Ph. 985-9362

In a nutshell, here's an overview of the hobby of hams

President Alan Okinaka, KH6ATU, offers this synopsis of the hobby of amateur radio that he found online.

Amateur radio, also known as ham radio, is a hobby and service that uses designated radio frequencies for non-commercial exchange of messages, wireless experimentation, self-training, and emergency communications. Amateur radio operators, often called "hams," enjoy radio technology as a hobby. But it's also a service –a vital service that has saved lives when regular communication systems failed.

Hams use a variety of voice, text, image, and data communications modes over radio. They can communicate across town, around the world, or even into space. Ham radio can be used for:

- Personal recreation: Hams use their radios to talk to friends and family, make new contacts around the world, and participate in contests and other activities.
- Technical experimentation: Hams enjoy learning about and experimenting with radio technology. They have made many important contributions to the development of radio, including the development of new modes of communication and the invention of new radio equipment.
- Emergency communications: Hams are often called upon to provide emergency communications during disasters or other events when regular

communication systems are unavailable. They have played a vital role in providing communications during many major disasters, such as the 9/11 attacks and Hurricane Katrina.

Public service: Hams also volunteer their time to provide a variety of public service communications, such as weather monitoring, search and rescue, and event coordination. To operate a ham radio in the United States, you must pass an examination administered by the Federal Communications Commission (FCC). There are three levels of ham radio licenses: Technician, General, and Extra. The Technician license is the most basic license and allows you to operate on the most common ham radio frequencies. The General license allows you to operate on a wider range of frequencies and use more powerful radios. The Extra license is the highest level of ham radio license and allows you to operate on all ham radio frequencies and use the most powerful radios.

If you are interested in learning more about ham radio, there are many resources available online and in your community.

You can find a local ham radio club by visiting the ARRL website: <u>https://</u> www.arrl.org/find-a-club. The ARRL also offers a variety of resources for ham radio beginners, including books, magazines, and online courses.

Hawaii Ham Radio classes via Zoom

Class Type Days / Times Dates Status

Technician — Mondays 6 pm to 8 pm 7/31/23 -9/18/23 Planned

Technician — Mondays 6 pm to 8 pm 10/16/23 -11/27/23 Planned

*To sign up, contact: Steve Kawamae: skawamae@ gmail.com

Volcano VERT Radio Check Net held on second Saturday of the month

Coordinator and net controller Doug Wilson, KH7DQ, invites all licensed amateur radio operators to participate in the Volcano VERT Radio Check Net on the second Saturday of each month.

The net starts promptly at 9 a.m. on the Volcano Repeater; 147.260 MHz; (pl 103.5 <u>on the input only, i.e., transmit only</u>).

"At the end of the regular two-round format on the Volcano Repeater, we will QSY to our alternate repeater **442.150 MHz (Kulani Mauka; pl 100.0)** for roll call and signal reports. We will then close this portion of the Net and QSY to the Volcano VERT **146.490 MHz** simplex frequency," said Doug.

"On our Volcano VERT simplex frequency (146.490

MHz) we will do a roll call and exchange signal reports with each station until all stations on this frequency have been contacted. This will conclude the Volcano VERT Radio Check Net.

"The purpose of this net is to 1) check our equipment, 2) test your ability to reach the Volcano Repeater, 3) check signals from various locations in the Volcano area and the East side of Hawaii Island, 4) have a short open discussion in a "normal" two-round net format, and 5) practice switching to our alternate emergency frequencies.

"Everyone should make sure that their radios are programmed with the above frequencies, offsets and pl tones."

HamAds

From: Jeremy Punsalan, KH7CN

PACKAGE DEALS FOR SALE

<u>Yaesu</u> FT-710 AESS, in excellent condition with original box and accessories, received new from HRO in December 2022

<u>Radio Shack</u> 13.8v 25 amp power supply, VG condition

\$800 for the package

Kenwood TS-570D, VG condition with hand mic and manual in original box, MARS modified for 60m

Kenwood PS-430 power supply, VG condition in original box with schematic Kenwood MC-60 desk mic, VG condition in original box

<u>Kenwood</u> MC-90 desk mic with Pyle replacement mic on original desk stand, VG condition in original box

<u>Kenwood</u> SP-820 base speaker with cable and service manual, VG condition \$500 for the package

INDIVIDUAL EQUIPMENT FOR SALE

<u>Kenwood</u> SP-990 base speaker, excellent condition with cable in original box \$200

<u>Kenwood</u> SP-890 base speaker, excellent condition with cable in original box \$100

<u>Pyramid</u> PSV500 50 amp variable 12-15v power supply, VG condition in original box. \$50

All equipment works great. Operated indoors only by a non smoker/no pets shack.

ALL PRICES ARE FIRM. SERIOUS INQUIRIES ONLY, PLEASE. ALL SALES FINAL. LOCAL PICKUPS ONLY. Contact me via email at <u>kh7cn@yahoo.com</u> Mahalo for looking, Jeremy KH7CN.

Pyramid 12-15v 50 amp power supply, \$50.



Yaesu FT-710 AESS with power supply, \$800; two pics of same transceiver, in box/open box.





Kenwood SP-890 speaker, \$100; and Kenwood SP-990 speaker, \$200.



Kenwood TS-570D with power supply, (2)desk mics and speaker, \$500.

From ARRL Newsletter

The Radio Society of Great Britain (RSGB) has received a generous donation of King Hussein of Jordan's UK amateur radio equipment.

Queen Noor of Jordan chose to donate the UK amateur radio equipment to the Society.

King Hussein, JY1 (SK), who died in 1999, was a prolific radio amateur who made contacts with many hams from around the world.

He was known for operating modestly, never announcing himself as King Hussein, but opting to go by "Hussein from Jordan" instead.

A permanent display is being organized at the RSGB National Radio Centre at Bletchley Park.

[HI-ARES] video from FEMA director on Amateur Radio EmComms

From Tony Kitchen, WH6DVI

Joe Speroni, AH0A, our ARRL Section Manager, asked me to re-send the following link to the video presentation from Craig Fugate, KK4INZ.

Mr. Fugate is the director of FEMA. His message was directed to emergency managers nationwide.

Starting at about the middle of the video of this presentation he focuses on the Amateur Radio Service, its role in EmComms, and how it fits together with the governmental side of emergency management.

https://www.youtube.com/watch? v=z0zk_jr4E7s_

BIARC EXECUTIVE BOARD MEETING

BEGIN MEETING:

 The meeting was called to order at 12:02 pm on Sunday, June 11, by Board President Alan Okinaka. Venue was the Kamana Senior Center in Hilo.

Quorum:

 Board members: Alan Okinaka, William Polhemus, Tony Kitchen, James Huntley, David Miller, Roy Kunishige and Joseph Rosenbaum

Secretary's report and minutes:

 William moved and Roy seconded to approve both the May 2023 executive board minutes and the general membership meeting minutes. Motion passed.

Treasurer's Report:

• William moved and Joe seconded to approve the treasurer's report, subject to audit. Motion passed.

Public Service Communications Report:

See attached addendum. William moved and Jim seconded to authorize the PSCC committee as needed to reach out to organizations such as the Boy Scouts of America and the Keiki museum on behalf of the club to set-up programs such as the demonstration held at Hilo Union Elementary school in May. Motion passed.

Operating Activities:

• This month has been spent organizing Field Day.

Programs and Digital Systems:

See attached addendum

Repeater Committee:

No change from last month's update.

Education and outreach:

No report.

New Business:

- William moved and Joe seconded that the board authorize the repeater committee to spend not more than \$400 out of the infrastructure fund to create the gateway for the linking system to allow members that are convalescing or on vacation access to the Kulani Cone repeater, and other repeaters as they get linked, as per the General Membership's directive to the board. Motion passed.
- William moved and Tony seconded that the board create an ad-hoc committee to explore the purchase of an all

band, all mode radio along with other necessary purchases such as a case, etc. This committee will bring pricing and other relevant information to the board and will reach out to members for donations of a power supply and other related equipment. Roy will be chair and Jim will also be on this committee.

 William moved and Tony seconded that we take the proceeds that we received from the auction (\$1,025) and earmark that for purchases recommended by the ad-hoc committee and also authorize an expenditure out of the equipment fund for any costs above what was received in auction. Motion passed.

There being no further business, Alan closed the meeting at 1:40 pm. The next meeting will be on July 9 at the Kamana Senior Center in Hilo. The board meeting will be at noon and 2pm for the club meeting.

Respectfully submitted, Joseph Rosenbaum, Secretary Lots of hard work, discussion, listening, training, camaraderie and heart-felt aloha go into successful emergency communications planning sessions for Hawaii County



ARES Report: May-June 2023

On May 30, Magno Talmadge and Bill Hanson met with KH7DQ and WH6DVI to discuss how ACS and ARES can work together with Civil Defense in support of CERTs and develop plans to facilitate Emergency Communications Islandwide. The discussion was wide-ranging and included topics such as the hub, spoke, and relay model used by ARES and Amateur Radio Stations to forward messages to ACS, and the ability of ARES members to help train and support CERTs in emergency communications. We discussed the potential for both ARES and the Amateur Radio clubs to implement, support, and make available repeater infrastructure, digipeaters, and Winlink Gateway stations as part of a comprehensive EMCOMM plan. The presentation on methods of using GPS-enabled Winlink to create near real-time maps which display locations and information from Situation Reports (SITREPs) and Requests for Assistance (RFAs) has received the full support of the HC CDA. This resulted in an invitation for ARES to meet with the CERT admin team, and CERT team leads and participate in the Resiliency Hub Summit on June 7th-10th.

On June 1st, WH6DVI met with the CERT Admin team at the Hawaii County EOC. The plans presented received the support of CERT and Civil Defense in Hawaii County. We are developing a standardized equipment list and exploring methods to raise funds for the deployment of radio email capabilities to teams islandwide. A few different solutions are in the pipeline. The plans depend on the area each team covers, the terrain, and the distance between each CERT and the EOC. One promising option is the installation of a VHF VARA digipeater near the summit of Haleakala, Maui. A small team of ARES members statewide have been trained on a system developed by CERTs in Walnut Creek, CA. This combination of hardware and software enables stand-alone, mobile RMS Relay stations to receive and forward information between field teams to their local Incident Command Post (ICP), where it is stored and can be viewed on an interactive map and forwarded for use by the EOC. These plans were presented to the CERT leads at the Gilbert Kahela Recreation area on Saturday, June 3rd. Initial training with the Orchidland CERT team began on June 10th.

WH6DVI and KH7DQ met with the majority of the Civil Defense staff as well as staff from Vibrant Hawaii (https://www.vibranthawaii.org/hubs) and volunteers from the Resiliency Hubs and other organizations islandwide from June 7th through 10th at the Kilauea Military Camp. The 3-day summit included a wide variety of discussions, training, and exercises. This event was a Table Top Exercise (TTX) which included an exercise where over 100 RFAs and SITREPs were submitted in a short period of time. These discussions and exercises helped us to understand and streamline communication between those volunteering at Resiliency Hubs, VOAD, Team Rubicon, Civil Defense, and other organizations. The focus was on providing support both within and between communities by sharing our resources and expertise. We were blessed by the Presence of Madam Pele who showed up the morning we arrived and provided everyone with spectacular views and photo opportunities. I would like to thank Vibrant Hawaii, Civil Defense, and all the volunteers at the resilience hubs for the productive exercises, discussions, and heart-felt aloha that were abundant at this summit.

Tony Kitchen, WH6DVI

BIARC Digital Committee Report for June 2023 Board meeting

The only activity of the Digital Committee was our last minute decision to visit the MaunaLoa site to repair the WSPR transmitter. Given the close proximity of the transmitter to a 110 Vac outlet, GaryWH6EPS suggested not replacing the buck converter and just using a USB ac adapter with a ten foot Micro-USB cable. We elected to do this due to the simplicity and easily obtainable parts. After installation and time for the GPS to sync up, the unit began transmitting and has been work good since then.

Jim Huntley Digital Committee Chair

BIARC Program Committee Report for June 2023 Board meeting

This months program will be a presentation by William NH6ET on techniques to use during a fox hunt. He will be focusing on locating the source when you are relative close to the fox. A future presentation will be on direction finding from larger distances. The July presentation will be part field day after action review and a presentation on what was learned during a recent Winlink/GIS mapping course and how it can be used by CERT.

Jim Huntley Program Committee Chair

BIARC Public Service Communications Committee

May 2023 Report to the BIARC Executive Board

PSCC Committee meeting

No Committee meeting was held this month.

David Miller, PSCC Chair

Science Day at the Hilo Union Elementary School

BIARC was invited by the Science Museum to participate in the May 19 Science Day at the Hilo Union Elementary School in Hilo. Joe Rosenbaum (WH6FZH), James Tatar (WH6EMN) and David Miller (KH6CZ) set up at the school with a selection of ham radio gear and conducted an informal third-party net on the Club's Kulani repeater. Several of our members (NH6ET, WH6EBS, WH6DCC, WH6DEL, WH6LQ, KH6KU, WH6LC) enthusiastically joined in from locations throughout East Hawaii. More than a hundred students interacted with BIARC members on hand and with those on the net. Handheld radios were also used within the school grounds. We were told that we would be invited back. The new BIARC Tri-fold was widely distributed. See the May issue of the BIARC Hamgram for more information.

David Miller, PSCC Chair

Proposed Keiki Museum and Boy Scout Contacts

Joe Rosenbaum's neighbor/friend is the foreman of the Keiki Museum. Joe told him about BIARC going to Hilo Union and about the presentation with the kids. He recommends we contact the museum to arrange an event. The museum has structured classrooms in the back area, and antennas can be set up.

The link to the museum website:

http://hawaiikeikimuseum.com/

David Miller, PSCC Chair

[HawaiiARES] biweekly Winlink practice

Aloha, HI ARES members: A new Winlink practice started May 29. Please check your Winlink account for the 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).

If you want to learn more about Winlink, check out https://wavetalkers.com/ resources/digital/ winlink.php

-- Van NH7IT ASEC-Pac

~ 2023 BIARC Roster ~

Executive Board officers and committee chairs President Alan Okinaka, KH6ATU Vice President James Huntley, WH6FQI Secretary Joseph Rosenbaum, WH6FZH Treasurer Tony Kitchen, WH6DVI **At-Large directors** Roy Kunishige, KH6KU, and David Miller, KH6CZ KH6EJ station custodian William Polhemus, NH6ET Public Service/ **Communications Committee** Chair David Miller, KH6CZ

Operating Activities Committee Chair John Bush, KH6DLK Education and **Outreach Committee** Chair Leslie Hittner, K0BAD **Programs Committee** Chair James Huntley, WH6FQI **Digital Systems Committee** Chair James Huntley, WH6FQI Voice Repeaters Committee Chair William Polhemus, NH6ET **Meeting Refreshments** Committee Chair Robert Schneider, AH6J **BIARC Hamgram** Editor Leigh Critchlow, WH6LC Club website: <u>https://biarc.net</u>