



December 2022

THE BIG ISLAND HAMGRAM

The newsletter of the Big Island Amateur Radio Club

THE PRESIDENT'S CORNER



K0BAD

Executive Board vital to success of BIARC

BIARC President Les Hittner, K0BAD, gave the following report at the November 12 general membership meeting on Zoom:

One of the largest struggles this year has been maintaining a full Executive Board. The changes began in the spring, and the most recent change was announced this month.

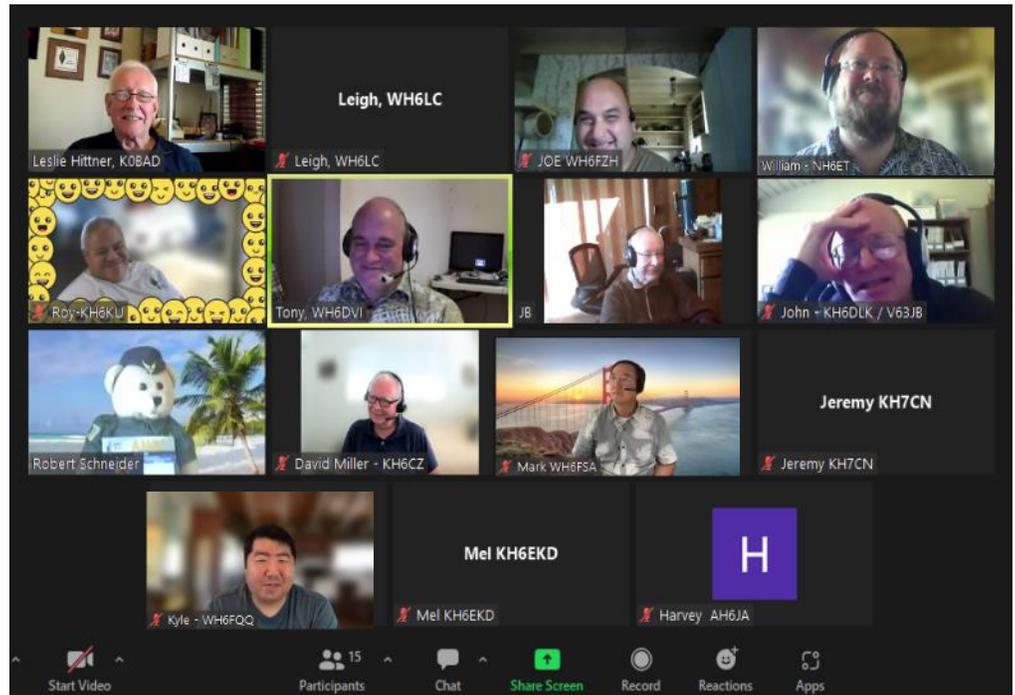
It is important to maintain a full board and it is important for BIARC members to volunteer to help the club in this way. Since the New Constitution and Bylaws were approved, the Executive Board has taken on the most important responsibilities that the club needs to fulfill:

1. Board members chair many of the Standing committees. This is not a requirement, but if other members do not step up – the buck falls upon the Executive Board.

2. The Executive Board builds relationships with other community organizations such as the HCCDA, VOAD, etc. in order to get our name out there and provide communications services when needed.

3. The Executive Board approves operating budgets and provides oversight to the funds that members pay in as dues.

Continued on Page 3



Election, reports, other club business handled at Nov. 12 membership meeting

The club's semi-annual membership meeting November 12 on Zoom included annual reports from President Les Hittner, K0BAD, and Treasurer Tony Kitchen, WH6DVI.

(See full reports on Pages 1-3.)

Elected unanimously to new terms on the BIARC Executive Board were Roy Kunishige, KH6KU; Joe Rosenbaum, WH6FZH; and Jim Huntley, WH6FQI.

Chairs of the BIARC Board standing committees also informed the membership of their respective activities during 2022.

Tony, who has been chairing the Public Service/Communications Committee, said he'd like to hand off control of that committee to someone else. David Miller, KH6CZ, volunteered to take over from Tony.

Les offered updates on the Education and Outreach Committee. Joe talked about the Operating Activities Committee and said additional members are needed.

Roy, BIARC Field Day chair, noted that the Winter Field Day will be held January 28-29 at the golf course in Kopua Farm

Lots, next to Eden Roc, courtesy of Sean Fendt, KH6SF.

William Polhemus, NH6ET, chair of the Voice Repeater Committee, discussed the various projects either planned or in the works. And he filled in for Jim/WH6FQI, who was off-island, in giving a report on the Digital Systems Committee.

He explained that the two groups work closely together, and that "there's a lot of work going on in these two committees."

He gave updates on an impressive list of projects, and explained that time

Continued on Page 2

Semi-annual membership meeting

From Page 1

frames are ever changing due to many factors, one of them being the ongoing delay in obtaining critical parts due to supply chain issues.

In other business, members voted to increase dues by 25 percent. It was noted that the annual BIARC dues have remained static for at least two decades. The intent is to use the additional money, in addition to funds already on hand, to entice members to attend meetings and to be more active in club activities. The membership voted to let the board use surplus funds for activities of greater scope.

Suggestions included raffling of equipment, providing airfare for guest speakers and more hands-on activities. Cited as a big hit a few years back was a J-pole building workshop at Keaau Community Center. The general membership will be asked to respond with program ideas.

And the members voted to request the board, at its discretion, to use money in the BIARC Humanitarian Fund to pay membership dues for an indigent ham.

BIARC 2022 Budget & Operating Statement

	<u>2022 Budget</u>	<u>Actual- 1/1/2022 To 11/12/2022</u>
Income:		
Dues	\$1,200.00	\$1,115.00
Repeater and general donations	\$1,000.00	\$709.00
Humanitarian Fund	\$300.00	\$395.00
PayPal Adjusted Donation		\$12.97
Total Income	<u>\$2,500.00</u>	<u>\$2,231.97</u>
Expenses:		
Club Liability Insurance	\$350.00	\$323.20
Club Equipment Insurance	\$250.00	\$186.85
Donations (PCC)	\$25.00	\$0.00
Equipment	\$950.00	\$384.14
Field Day	\$210.00	\$79.80
Annual Build Project	\$100.00	\$0.00
P. O. Box Fee	\$250.00	\$258.00
Humanitarian Awards	\$250.00	\$140.00
VOAD Dues	\$25.00	\$0.00
Office Supplies/Bank Fee/Misc.	\$40.00	\$33.16
Website Costs	\$50.00	\$12.16
Total Expenses	<u>\$2,500.00</u>	<u>\$1,417.31</u>
Excess (Deficit)		\$814.66
Bank of Hawaii Balance as of: 11/12/2022		
BOH Deposit Pending		\$80.00
Namecheap Balance		\$1.00
Paypal Account Balance		\$2,274.21
Total		<u>\$4,981.22</u>
Fund Balances: (11/12/2022)		
Repeater fund	\$2,287.69	
Humanitarian Fund	\$255.00	
Emergency Reserves	\$1,000.00	
General Fund	\$1,438.53	
Total Funds	<u>\$4,981.22</u>	

2022 Fund Summary 2022-09-09

File Edit View Insert Format Data Tools Extensions Help Last edited via on September 9

Repeater Fund Summary:

Year	BIARC Equipment Budget	Donations (Credit)	Equipment Purchases & Maintenance Costs	\$ Covered By Repeater Fund	Repeater Fund Balance
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	\$438.78	\$0.00	\$931.97
2021	\$600.00	\$1,595.00	\$1,548.28	\$948.28	\$1,578.89
2022	\$950.00	\$709.00	\$0.00		\$2,287.89

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

Humanitarian Fund:

Year	\$ Donated	Amount Spent	Balance
2022	\$395.00	\$140.00	\$255.00

Notes: This fund holds amounts donated.

THE PRESIDENT'S CORNER

Continued from Page 1

This includes authorizing expenses to establish and maintain repeater and other club-owned Amateur Radio infrastructure.

Yes. Executive Board members are important to making BIARC the best darned ham club on the island.

Standing Committees

Standing Committees are the working groups of the club. Members of Standing Committees are going to repeater sites, testing new equipment prior to installation, scheduling Monthly Activity programs, introducing new digital systems to club members, publicizing club activities, providing reading and learning materials for club members, conducting license classes and testing sessions, publishing the Big Island Hamgram, setting up special operating activities such as Field Day, and building an EMCOMM relationship with other organizations.

If you are unhappy with how things are going, please consider becoming active in one of the BIARC Standing Committees.

If you are really happy with how things are going, please still consider becoming active in one of our BIARC Standing Committees.

COVID Challenges

This year has been a year of recovering from issues restricting our normal social interactions. We have resumed in-person meetings at the Keaau Community Center – when possible.

We may encounter conflicts from time-to-time as everyone gets used to BIARC being back (Like today, for instance).

Probably even more important is that many members remain uncomfortable with resuming in-person activities. For them, the board has attempted to maintain an in-room Zoom presence as well. This has been a bit of a challenge, but we are getting better at it through the use of multiple, clamp in microphones and easily moved cameras that can focus on speakers.

Our Holiday Party in December will be the first such event in two years (Saturday, December 10 from 2:00 pm to 4:00 pm – or even later. Look for more information on the party and please let Leigh, WH6LC, know as soon as possible if you will be able to attend. She is preparing an on-line registration application.

I Am Stepping Down

After working to write and approve the New BIARC Constitution and Bylaws and after sitting on the Executive Board for three years, I will be stepping down.

The most important factor in keeping a club like BIARC alive is the constant infusion of new thinking and new ideas. The structure we now have encourages that sort of infusion – but only if we do not become lifelong Executive Board politicians. Executive Board terms are intentionally staggered in a way that the club will not lose institutional memory because we never elect all of the Executive Board members at once.

Please consider running for the Executive Board – now or in the future. It has been fun and challenging – and I will continue to be active on at least one Standing Committee.

ARRL announcements

The Federal Emergency Management Agency (FEMA) Emergency Management Institute (EMI) has released a new online study course and exam, titled, Preparing the Nation for Space Weather Events. The course identifier is IS-66.

ARRL Director of Emergency Management Josh Johnston, KE5MHV, took the course and passed the exam. "This course provides some interesting insight into the federal government's role and response to space-weather events," Johnston said. He went on to say that the course "explains the levels of response the government uses in regard to [these] events. [It] would be a good training course for any ham to gain a better understanding of how space weather affects communications here on Earth." Johnston deemed the course useful and shared that it only takes about 2 hours to complete online. A FEMA student ID is required, and is free from the EMI website. -- *Thanks to ARES Letter Editor Rick Palm, K1CE, for the information contained in this story.*

#####

WXWarn 2.0, software that uses the National Weather Service (NWS) real-time weather data feed, is now available. The application constantly monitors NWS weather updates and displays user-selected alerts as they're issued. *WXWarn 2.0* can be configured to display a simple heads-up, unfolding weather conditions at the county, statewide, or regional level, or severe weather alerts for the entire US. *WXWarn 2.0* is useful for individual use, but also for volunteers supporting amateur radio emergency communications as part of the complement of resources they utilize. Developers and ARRL members Scott Davis, N3FJP; Kimberly Davis, KA3SEQ, and their son, Chris Davis, KB3KCN, report that the updated software is a complete recreation from the previous 1.8 version. They also state that it is operating-system agnostic and will run entirely in a browser. There is nothing to install, and it will even work on a phone, but Chrome or Firefox should be used for the best results. The latest version of *WXWarn* is available at <https://wxwarn.affirmatech.com>.

Wireless EV charging could pose threat to AM reception

New medium-frequency interference concerns are raised by Xperi

BY RANDY J. STINE

(Published November 18, 2022)

Consumers are eager to cut the cord on their electronics charging devices, a trend that could soon benefit drivers of electric vehicles (EVs).

HD Radio developer and licensing company Xperi is seeking to raise awareness about a potential new threat to AM radio broadcast reception: the proposed introduction of wireless power transfer systems for electric vehicle charging, or WPT-EV, that use switching frequencies

that generate harmonics in the lower AM band.

Xperi recently filed comments about this concern in response to a notice of inquiry at the FCC about radio receiver performance. It hopes to raise awareness and also believes its HD Radio technology can be of help.

Interference to AM from unintentional radiators including low-cost switching power supplies in EVs is a concern, even before the question of wireless charging comes into the discussion.

EV sales are rising across the globe, and the United States has set a lofty goal that half of new vehicles sold are to be electric by 2030, according to the National Association of Broadcasters. With that comes growing concern over noise on the AM band in EVs.

The electromagnetic interference from EV motors to AM radio signals is well established, and some carmakers have pared AM radio from dashboards because of concerns over audio quality.

“Seemingly inexorable”

Now wireless EV charging systems are being proposed by several developers and being considered by international standard setting organizations.

“This topic has been heavily discussed within ITU [the International Telecommunication Union]. As WPT-EV engineers design more efficient ways to transmit power, the seemingly inexorable increase in AM-band noise floors can be expected to continue,” Xperi told the FCC.

The ITU is the United Nations specialized agency for information and communication technologies. In 2019 it reported on various wireless power transmission applications in use around the world.

The group noted the frequencies expected to be used for WPT for

electric vehicle charging could affect a large number of radio services.

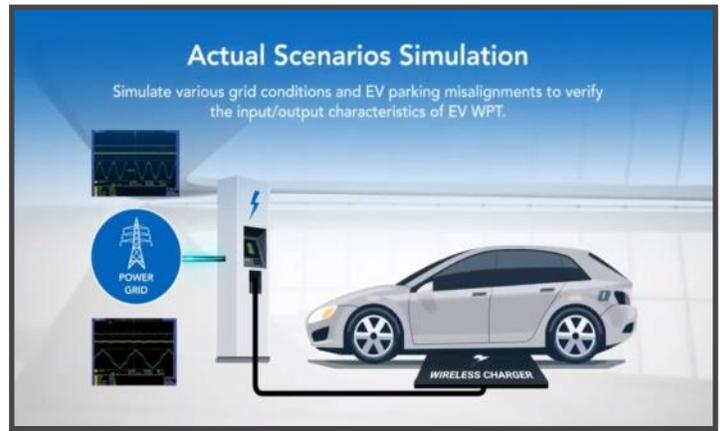
“The impact can be on the same frequency, adjacent frequencies or frequencies with larger separations,” ITU said.

The frequency range for those WPT systems are often around 85 kHz, according to ITU, which “does not overlap with any broadcasting band, and so it is only harmonic emissions from such systems that would have any impact. It may also be that harmonics are used in the power transfer process.”

But ITU wrote that WPT-EV is expected to produce harmonics in the bands 148.5-283.5 kHz, 525-1705 kHz and 2300-26100 kHz and can interfere with the reception of LF, MF and HF sound broadcasting.

Xperi in the past has been among those calling for better control overall of manmade electromagnetic interference. (It has also expressed concerns about LED lighting interfering with lower-level FM signals.)

The proposed wireless EV chargers provide no shielding from EMI, according to Xperi. EMI can be suppressed in EVs using mitigation techniques such as shielding cables and electric motors and installing filters, but that might not work in the case of wireless EV charging pads,



An image from a video by Chroma Systems Solutions explaining the concept of EV wireless charging. (Learn more at www.chromausa.com.)

according to Xperi officials.

Wireless charging uses the principle of electromagnetic induction to transmit electrical power through the air as a magnetic field, which allows car owners to cut the cord, according to Plugless Power, a developer of autonomous charging. The process is sometimes referred to as wireless inductive charging.

Nearly every electric car maker has plans for hands-free EV charging, according to observers familiar with developments in this area. EV buyers are already being given the option for built-in wireless charging.

Just how commonplace wireless EV charging might become is only limited by the imagination, according to some vehicle developers. One has described a future in which specific lanes on the freeway contain charging pads, over which EV vehicles drive to charge while in motion.

ITU interest

Ashruf El-Dinary, senior VP for radio technology solutions at Xperi, said the potential impact of noise from wireless charging has fallen under the radar in the United States.

“However, it’s being actively discussed within ITU and on a number of different fronts, from small chargers for phone and electronics but also on these larger concepts with wireless charging pads for the home or office and even the wireless charging networks built into streets for EV buses and other vehicles,” El-Dinary said.

“This is still a new industry that is growing. And with the

Biden administration infrastructure plans to build out EV charging networks in place, the companies behind wireless charging are feeling empowered to put forward these new concepts looking for some regulatory help.”

El-Dinary and others believe FCC rules covering unintentional radiators should be given a role here. “Then ultimately any future technology would have to follow regulations under the FCC. They are in charge of protecting the AM band,” he said.

There are a number of the wireless charging technologies being proposed, El-Dinary said, any of which will affect AM broadcasters by potentially adding to the noise floor.

“Some of these are pretty high power, and in order to do that they need a higher modulation frequency for coupling. And it’s not so much the fundamental frequency, but the harmonics generated by the wireless charging systems that is a concern to many. Some of the reports are showing that noise is being generated up within 500, 600 and 700 kHz, which will have a direct impact on the lower end of the AM band.”

El-Dinary believes this isn’t so much an issue with shielding of the receiver in EVs but rather the radiation from the wireless charging systems being picked up by the antenna of the car, which is then directly coupled into the tuner.

AM reception faces threat from wireless EV charging

From previous page

He said the National Radio Systems Committee has started some paper studies and NAB is keeping abreast of the situation. "The radio broadcast industry needs to be aware of the wireless charging issue and watching developments closely," El-Dinary said.

[Related: "DTS AutoStage Lands Four New Car Partners"]

Part 18

According to Bob Weller, senior VP for spectrum policy at NAB, the EV problem is not a doomsday scenario for AM but yet another step in the further erosion of AM broadcast quality and an example of the creeping noise floor threatening the senior band.

"We've told the FCC they need to address the growing noise floor, especially in the AM band. We've made specific recommendations to protect the AM band from Part 18 equipment, which in most cases include wireless charging systems. The rules are already very explicit that these devices have no spectrum rights. They are not allowed to interfere with licensed broadcasts," Weller said.

It isn't just car receivers that may suffer interference.

"It might be less of a threat to car receivers and an even a bigger concern to radios on the bedside table or other fixed receivers around the home," Weller continued.

"Most often a car will be parked when being charged even with a wireless charger. Not too much listening happens in a parked car at the home or office," he said. "But if eventually there are millions and millions of these wireless EV chargers, then it becomes more of a concern."

Weller said government regulators are balancing consumers' insatiable demand for wireless charging devices with the consequences of wireless charging on radio broadcasters.

"Consumers have expectations that everything can be wireless, and they want items to charge quickly. There will be interference issues with AM broadcasters if there are not adequate limits placed upon manufacturers of the wireless chargers at the manufacturing stage. Once a large number of these things are deployed, it will be too late to manage it." To further complicate things, Weller says FCC Part 18 rules do not limit power levels of wireless charging devices.

"Consumer charging systems are like 10 kW, which seems like a lot of power, but the proposed public transit wireless charging systems are ten times that. But the way we need to get at the interference issue is by limiting the level of the harmonics rather than the fundamental power," he said.

[Related: "Why Are Some Automakers Ditching AM Radio?"]

Robust signal

Xperi believes its own technology can be of use with this issue and suggested that the FCC might want to consider a requirement

AM Frequencies

AM Frequencies

AM activity is found on and around the frequencies below, grouped to minimize friction with incompatible modes.

All Frequencies in MHz

160 Meters: 1.885, 1.900, 1.945, 1.985

75 Meters: 3.825, 3.870 (West Coast), 3.880, 3.885

40 Meters: 7.290, 7.295

20 Meters: 14.286

17 Meters: 18.150

15 Meters: 21.285, 21.425

10 Meters: 29.000-29.200

6 Meters: 50.4 (generally), 50.250 Northern CO

2 Meters: 144.4 (Northwest)
144.425 (Massachusetts)
144.28 (NYC-Long Island)
144.45 (California)



that car radios have digital radios. "The digital IBOC modulation used in the HD Radio system provides a significant level of noise immunity," it wrote.

"As more radio stations convert to digital operations, a minimum product requirement including digital radio capabilities for car and portable AM/FM radio products will ensure continued efficient use of the AM/FM band and the services they provide."

El-Dinary says all-digital AM operations offer increased signal robustness and additional protection from unintended radiators. "We have found that all-digital AM is very robust and the reception within EVs is that an all-digital station has excellent coverage while the equivalent AM analog terrestrial station is subject to interference from the car itself," El-Dinary said.

Xperi says while it is possible for WPT-EV and LED interference to overcome digital broadcast signals under appropriate conditions, the "robust OFDM [orthogonal frequency division multiplexing] carriers, signal processing and forward error correction employed in the IBOC standard provide digital radio services with enhanced noise immunity."

Radio World's attempts to reach Ford and General Motors representatives for comment on the proposed wireless EV charging systems were unsuccessful.

Randy J. Stine has spent the past 40 years working in audio production and broadcast radio news. He joined Radio World in 1997 and covers new technology and regulatory issues. He has a B.A. in journalism from Michigan State University.



SKYWARN Recognition Day held on December 3

The annual SKYWARN Recognition Day (SRD) on-the-air activity was held Saturday, December 3, from 0000 to 2400 UTC. For US time zones, activity began on the evening of Friday, December 2, 2022.

SKYWARN Recognition Day was developed in 1999 by the National Weather Service (NWS) and ARRL The National Association for Amateur Radio[®] to honor the contributions that SKYWARN volunteers make to the NWS mission -- the protection of life and property during threatening weather.

During the SKYWARN special event, hams operated from several NWS offices, as well as from their mobile, home, and club stations. "The relationship between amateur radio operators and the NWS is extremely important for relaying information during storms of any type," said ARRL Director of Emergency Management Josh Johnston, KE5MHV.

"SKYWARN is a perfect example of the value of hams working together with government partners during times of disaster."



The SKYWARN Storm Spotter Program has been a mechanism used by the NWS for years to educate people on what to watch for during weather events and to provide a source for information to the NWS offices. Program courses provide information on reportable criteria for cloud formations, and even what to look for during the formation of supercells that may cause tornadoes or other potentially dangerous weather events.

For information about SKYWARN spotter courses, which are available to anyone around the country or online, visit <https://www.weather.gov/skywarn/>.

All amateur radio stations and SKYWARN spotters that register will receive an SRD number to their email address once registered. Information about participating, registration, and a Spotter Recognition Map is available at <https://www.weather.gov/crh/skywarnrecognition>.

The cover photo from the Facebook page of Ellen White, W1YL, SK.

Trail-blazing Ellen White, W1YL, dies at 95

Ellen White, W1YL, of Brandon, Florida, passed away recently at age 95. White became a radio amateur in 1946 and devoted more than 75 years of her life to ham radio, including more than 25 years on the headquarters staff for ARRL.

Since 1966, she had been an active member of the First Class CW Operators' Club. She was FOC member #875.

White learned Morse Code in high school and, over her many decades on the air, only rarely operated in any other mode but CW. "Ellen loved CW, contesting, and DXing," said Rosalie White, K1STO (no relation), former ARRL Field & Educational Services manager.

In the 1940s, radio broadcast station KPOA on Oahu hired her (then KH6QI) as station engineer in a day when such a position was unheard of for a woman.

Later, she also served as a radio broadcast engineer in San Diego and was elected the area's ARRL section (communications) manager.

In the 1940s, Ellen and her husband, Bob White, earned First Class Radiotelephone and Second Class Radiotelegraph commercial licenses. Other credentials and worldwide service to amateur radio followed for the couple.

At its meeting in January 1978,

the ARRL Board of Directors adopted a resolution recognizing White and her husband, W1CW (SK), after having "completed a quarter-century of faithful service to the American Radio Relay League." The resolution noted that Ellen White had "built a reputation for thoroughness and objectivity on a mountain of contest logs," and celebrated her "intelligent and creative work as Deputy Communications Manager."

White was admired by the worldwide amateur radio community. In 2019, she was the sole US radio amateur to be awarded the Russian E.T. Krenkel Medal, a prestigious award granted to individuals and organizations for outstanding global contributions to amateur radio.

Director of ARRL's Publications and Editorial Department Becky Schoenfeld, W1BXY, reflected on the news of White's passing:

"Ellen was a trailblazing woman in amateur radio. She and I corresponded over the years [before] finally meeting up at Orlando HamCation® in 2020.

"Ellen often marveled at how much farther women had come in the ham radio hobby, service, and community since she got her start. Every time I talked to her, I thanked her for paving the way," said Schoenfeld.

The results are in

Darrell Asuka, KH6RDO, provides this breakdown of the Hawaii stations participating in this year's June 25-26 ARRL Field Day. He offered a comment about the 2021 club results for comparison, along with several points on Field Day:

- a. ARRL made a permanent change in the rules where a home station on commercial power gets points for all contacts made. Previously, a home station would receive points only when communicating with an off grid station (solar, generator, battery) or an EOC.
- b. When sending your log, if you state your club affiliation, the points you get will go to the club score.

Note: Maui ARC has 2 contest stations as club members, AH6SZ and KH6CJJ. These stations submit logs to Log of the World (LOTW) and show up in various contests. BIARC has AH6KO as a contest station specializing in CW.

2022 ARRL Field Day Results and Comments

ARRL just released the final scores for the 2022 Field Day event.

This year, we had the same amount of participants statewide as in 2021, although they were different stations. In Hawaii, we had a total of 11 stations and 5 clubs participating. BIARC (KH6EJ), Maui ARC (KH6RS), Honolulu EARC (KH6CE), Koolau ARC (KH6J), and a new club, NCTAMS (KH6UL) are represented. Individual stations NH6V with dual operator KH6AQ, AH6SZ (Maui ARC), WH7T, KH7O, AB8TN, KH6HAK (BIARC), and KH6RDO (BIARC) participated, adding to the affiliated club score.

This year BIARC has regained the #1 Hawaii club status again for Field Day after losing the status to Maui ARC in 2021. This year BIARC scores 1624 points followed by Maui ARC with 966 points, then NCTAMS with 706 points, Honolulu EARC with 600 points, and finally Koolau ARC with 398 points.

The 2021 club stats were Maui ARC with 3873 points, BIARC with 2590 points, Honolulu EARC with 584 points, and finally Koolau ARC with 476 points.

This year's breakdown points by station, number of contacts made, and score:

KH6CE EARC	23	600
KH6J Koolau	73	398
KH6EJ BIARC	40	662
KH6RS MARC		200
KH6UL NCTAMS	278	706
NH6V	568	2620
AH6SZ MARC	179	766
WH7T	88	402
KH7O	70	330
AB8TN	6	182
KH6HAK BIARC	1	252
KH6RDO BIARC	190	910



BIARC Executive Board Meeting

November 12, 2022

A Begin Meeting

● Call to Order –

- The meeting was called to order at 12:02 by Board President Leslie Hittner.

● Quorum Call

- A quorum is assumed to be present. Members not enumerated explicitly on the recording recording.

● Secretary's Report and Minutes

- Tony **moved** and William **seconded** that the October BIARC Board Minutes be approved as published. Motion **passed**.

● Treasurer's Report

- Tony stated there were no expense or income since the last report.
- William **moved** and Joe. **seconded** that the treasurers report be approved as submitted, subject to audit. Motion **passed**.

B Members Present

- None mentioned on the recording..

C Committee Reports

● Digital Systems verbal report.

- No report.

● Education and Outreach

- No report.

● Operating Activities

- No report
- No report

● Programs

- No report

● Repeater Committee

- William is proposing, once the linking of the '76 and '88 repeaters is implemented using the Raspberry PI units. He proposes we allow on a

Continued on next page

From previous page

subscription basis the ability to access the repeaters via EchoLink or other software. The subscription fee is your annual membership fee for the club. This would restrict access from random people jumping on to make Hawaii contacts. This will be referred to the voice repeater committee.

- William **moved** and Tony **seconded** that we refer to the repeater committee a request to explore a white listable gateway to the BIARC linked repeater system. Motion **passed**.

D Old Business

- Club storage
 - William thought he had a storage locker for \$65 a month, but someone rented it prior to this meeting. Additionally, they raised the price to \$99 a month, which is beyond what we can afford or are willing to pay. The search will continue.
- Nominating Committee Report
 - We received a set of three nominations for this meeting. Joe, WH6FZH, to continue on in the seat he was temporary filling now, Roy, KH6KU, has agreed to be nominated to rejoin the board. Jim Sugg would like to continue in the at large position. We will ask at the Club meeting if there are any additional nominations.

E New Business

- Gary, WH6EPS, has officially resigned from the board due to personal reasons. We appreciate all he does for the club.
- Discussion of semi-annual business meeting agenda.
- William **moved** and Jim S **seconded** that a not to exceed limit of \$130 for Christmans party purchases be authorized. Motion **passed** unanimously.
- Tony **moved** and Joe **seconded** that Roy fill the position vacated by Gary until the new board positions are seated.. Motion **passed**.

There being no further business, Les adjourned the meeting.

Respectfully Submitted,

James R. Huntley, Secretary

The Original Big Island of Hawaii

International Swap Meet / Ham Fest

The Big Island of Hawaii International Swap meet will be Saturday January 28, 2023, at the Waimea Community Center, next to the ball field off Mamalahoa Highway in Waimea (Kamuela).

There will be a \$10.00 donation per table per seller.

There will be a \$5.00 donation per attendee at time of registration.

One raffle ticket included with registration. Additional tickets \$1.00.

Schedule:

8:00 am - breakfast at Hawaiian Style Cafe

9:00 am - vendor setup

9:30 am - Doors open to public. Be sure to get your raffle tickets for the "Big ticket item"

12:30 pm – AMSAT Presentation

2:00 pm - Event ends

Guest Speaker this year:

Our guest speaker is Craig Bledsoe, KL7H. He will be giving a situation report and demonstration of AMSAT. In addition, he will talk about his work in restoring tube radios which are donated to scouts.

Information:

There will be surprise giveaways throughout the day.

Please note: This is a non-commercial event that promotes the trading of equipment and information between hams and the general public and to promote the open exchange of exploring Ham radio as a hobby.

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

This is an event sponsored by the Kohala Hamakua Radio Club (KHRC).

This is an Island wide event, be sure to tell all your radio friends.

For more information contact: Steve Milner – wh6n@arrl.net