

Big Island Amateur Radio Club



Newsletter – September 2010

BIARC September Meeting to be held at Wailoa State Park

In recent years, the August BIARC meeting has been held at Wailoa State Park in conjunction with the Hilo Amateur Radio Club. The joint meeting has involved both a potluck lunch and a hamfest.

This year, the joint meeting is being held on September 11 rather than in August. Russian hams Oleg Borodin RV3GM and Olga Borodina RA3GKB, who are visiting September 2-14, will be the guests of honor. Oleg, founder of the Russian QRP Club, will be the speaker. Oleg spoke at the Dayton Hamvention in May, 2009, and was very well received.

This will be an all-day event, with potluck lunch around 11:00 a.m. As usual, come prepared to buy, sell, or swap ham-related equipment and other items.

The meeting will be held at the farthest-to-the-right shelter house inside the Manono Street park entrance.

Big Island Amateur Radio Club Board Meeting of August 14,2010

The board meeting was called to order at 1:12 p.m. by club president Paul Ducasse WH7BR. Nine of the 15 board members were present.

The treasurer reported a balance of \$2,719.90, subject to audit. Membership stands at 93 members, including two new members who joined today.

Committee Reports:

Repeater committee:

- 1) Paul Ducasse reported that the club will receive at least one, and possibly up to three, Daniels VHF repeaters that can be used as part of the BIWARN system and ARES (Amateur

Radio Emergency Service). The repeaters are being surveyed (surplused) from the Federal Government as part of its nationwide transition to P25 Digital Narrowband-capable radio systems. These Daniels repeaters are known for their reliability, low power consumption (usually operating at remote locations on solar power), and for their excellent receivers. The repeaters will need to be converted to ham VHF (two meter) frequencies.

- 2) Paul Agamata WH6FM requested funding for a new high-gain yagi UHF antenna for the Naalehu repeater, plus other needs for Naalehu. He estimated the antenna cost at \$200 to \$250. It was moved, seconded, and passed that the board appropriate up to \$500 for the yagi and a link UHF radio for Naalehu. Paul said that he hopes to keep the total cost below \$250.

Web site: Nothing new.

Health and Welfare: Barbara Darling NH7FY reported that Helen Benardella, widow of the late Fred Benardella KH6FI, wishes to sell Fred's amateur radio equipment, including his tower. She lives in Eden Roc. Contact Barbara for contact information. [Lloyd KH6LC and Curt AH6RE are the contact points -ed]

Newletter: Curt Knight AH6RE requested that all submissions be in before the 20th of the month.

QSL Bureau: Barbara Darling reported an additional 500 cards for the month of July, bringing the total for the year to 9,500, including 4,000 of the rare Japanese cards that were sent to her directly from Japan.

Old Business: None.

New Business and Announcements:

- 1) Milt Nodacker AH6I (recently relocated to Hawaiian Beaches from Idaho) will be holding a 6-week Technician class at the Orchidland LDS (Mormon) church starting September 8 and ending October 13. He plans to test on either Saturday, October 16, or Wednesday, October 20. He asks for a \$5.00 donation to defray the cost of printed materials. Milt can be contacted at 965-6471 or 989-9482
- 2) The last Volcano Wilderness Marathon, within Volcanoes National Park, was held several years ago, before the National Park Service banned the run from the park. BIARC had supported the "Rim Run" with radio communications for many years. This year, the first Volcano Forest Run, a half-marathon, will be held within Volcano village on August 21. BIARC has been asked to provide radio communications at one base station, six aid stations, and for one mobile Aid Van. The first runners will start at 7:00 a.m. Radio operators will need to be at their stations no later than 6:30. The base station will be located ½ mile up Wright Road in Volcano, at the Cooper Recreation Center. This

announcement elicited that last two of the eight needed volunteers. Each volunteer will receive a commemorative race T-shirt.

- 3) The Hawaii QSO Party will be (was) held August 27-28, 2010. This is an annual event sponsored by the Ko'olau Amateur Radio Club (KARC). Joe Speroni AH0A gave a nice presentation about this event at the July BIARC meeting. As a general reference for future years, information and rules can be found at the KARC website, <http://karc.net>.
- 4) The annual October Waimea hamfest will be held Saturday, October 23 at the Community Center in the Waimea Park. The park is located along the north side of the road, to the northwest of the traffic signal by Parker Center. Testing is planned.

The board meeting was adjourned at 1:41 p.m.

Regular BIARC Club Meeting of August 14, 2010

The regular meeting was called to order at 2:03 by club president Paul Ducasse WH7BR. Twenty-five hams were present, plus two young future hams. After introductions, Milt announced his Technician training class, and Robert Oliver NH6AH announced that the Hilo Medical Center (HMC) still needs volunteers. Also, HMC is providing volunteer training for those who will be functioning in the hospital environment.

The meeting then proceeded with the program for the month, presented by Eran Agmon of Honolulu, originally Israeli 4X1AI and now Hawaii WH6R. His primary ham interests are DXing and contesting. His presentation concerned antenna fundamentals. What follows are some of the highlights.

First, Eran is a strong fan of the saltwater vertical, a $\frac{1}{4}$ wave dipole located within 30 feet of salt water. As a ground plane, salt water is 1,000 times more conductive than the ground, but 1,000 times less conductive than copper. In addition to the conductivity of the ground plane, the saltwater vertical's radiation pattern is much more advantageous than is the usual ground plane's pattern. The ideal for long distance is a lobe centered one to four degrees above horizontal. The radiation pattern of the saltwater vertical is much closer to this than is the pattern of a usual ground plane vertical. The combined effects of ground plane conductivity and more optimal radiation pattern produces exceptionally good signals.

Second, Eran noted that a vertical half-wave vertical has a much lower ground loss than does a quarter-wave vertical. The reason is that the antenna impedance and the ground loss add in series. At a 1:1 SWR, a quarter wave vertical has an impedance of 33 ohms with a ground impedance of at least 20 ohms. Ground impedance can be decreased by elevating the ground radials above ground level, rather than placing them on the surface or slightly below ground level. However, no placement of ground radials on the quarter-wave

vertical can compete with the efficiencies achievable by the half-wave vertical.

The reason the half-wave vertical is so much more efficient is because input impedance is around 2500 ohms rather than 33 ohms. The input point is at the point of maximum dipole voltage rather than maximum dipole current and minimum voltage, as is the case with a center-fed dipole or a quarter-wave vertical. Even added to a very high 200-ohm ground loss, antenna efficiency is still greater than 90 percent. To match 50-ohm coax with the 2500 ohm antenna input impedance, one places an inductor in series with the center conductor of the coax, with a capacitor between the center conductor and the shield. A two to three foot screen can be attached to the shield to improve performance and reduce noise.

Third, a good SWR reading is not always an indicator of an efficiently radiating antenna. SWR measures the power returned to the transmitter/amplifier relative to that sent out to the antenna. At an SWR of 2:1, 10% of transmitter power is reflected by the antenna. At an SWR of 3:1, 25% is reflected by the antenna. However, these numbers do not take coaxial cable losses into consideration. A lossy cable will reduce the power delivered to the antenna, and will also reduce the power reflected by the antenna back toward the transmitter. With lossy coax, the SWR will indicate antenna transmission efficiency that is well in excess of the real efficiency, although the reduced reflected signal received by the transmitter will make the transmitter happy.

The business meeting broke for refreshments at 3:30, and resumed at 3:46 for brief discussions of business. Business already transacted or discussed at the board meeting is not repeated in these minutes.

The secretary's minutes were approved as not printed in the August newsletter, the secretary having not submitted the minutes in time for publication.

Health and Welfare: Gloria Whitely, widow of ham Les Whitely and lifetime BIARC member, is still "hanging in" at Life Care Center. Kile Golden WH6FB, who suffered a stroke last fall, is home after prolonged hospitalization and a subsequent stay at the Yukio Okutsu Veterans' Home in Hilo, but is now having some difficulties with balance. He is having some problems with falling.

Ron Phillips AH6HN announced that the Hawaii DX Association is rejuvenating and is looking for interest. The association offers several levels of awards of DX achievements. Peter Yoes KH7HI has agreed to become the new president.

The meeting was adjourned at 3:46, with the September meeting being scheduled for Wailoa State Park on September 11.

Respectfully submitted,
Dave Broyles KH7SO, secretary

Big Island Amateur Radio Club

P.O. Box 1938
Hilo, HI 96721

www.biarc.net

Officers

President	Paul Ducasse WH7BR	985-9222
Vice President	Tom Thornton AH6ZZ	754-7412
Treasurer	Curt Knight AH6RE	966-8304
Secretary	David Broyles KH7SO	854-0362

One Year Directors

Beau Mills NH7WV	968-1271
Richard Fetchen KH6WE	982-7426
Kile Golden WH7FB	982-6782
Elizabeth Yoes WH7CU	965-5429
Chuck Epperson AH6SC	966-4698

Two Year Directors

Richard Darling AH7G	982-9126
Ron Phillips AH6HN	982-6513
Rick Frazier AH7H	985-9169
Bob Schneider AH6J	966-8146
Lloyd Cabral KH6LC	966-7782
Peter Yoes KH7HI	965-5429

Standing Committees

Service/Awards	Ron Phillips	AH6HN
Education	Harvey Motomura	AH6JA
Emergency Coord.	Vacant	
Equipment	Vacant	
Health&Welfare	Barbara Darling	NH7FY
Hospitality	Kile Golden	WH7FB
Newsletter	Curt Knight	AH6RE
Programs	Tom Thornton	AH6ZZ
Repeater	Ron Phillips	AH6HN
Webmaster	Curt Knight	AH6RE

Special Committees

Christmas Party	Committee	
Improvement	Ron Phillips	AH6HN
Field Day	Peter Yoes	KH7HI
Hamfest	Bob Schneider	AH6J
co-chair	John Buck	KH7T
QSL Bureau	Barbara Darling	NH7FY

Meetings and Get-Togethers

Membership meetings – Second Saturday of each month at 2PM at the Kea'au Community Center

Board Meetings – will be held every other month 1 hour prior to the general membership meeting at the same location as the general meeting (January, March, May, July, September, November).

Friday Lunches – A group meets for lunch every Friday at 11:30 at Hokulani's Steak House in the mall at Kea'au near the Post Office.

East Hawai'i Net

The East Hawai'i Net meets on Monday, Wednesday, and Friday mornings at 8AM HST on the 146.76 MHz repeater.

BIWARN accessible Repeaters

Repeaters in bold font are BIWARN/MCDA linked. When operating over a link, remember to leave extra time in each transmission for the link to be established. The number in parentheses is the tone access frequency.

145.29-	HOVE-Ka'u WH6FC (100)
146.66-	HOVE (100)
146.68-	Kea'au limited area KH6EJ
146.76-	Kulani KH6EJ
146.82-	Mauna Loa ARES KH6EJ
146.88-	Pepe'ekeo KH6EJ (may be linked)
146.92-	Ka'u PD KH6EJ
146.94-	Haleakala Maui KH6RS (110.9)
147.02+	Haleakala Maui RACES AH6JA
147.04+	Mauna Loa RACES AH6JA
147.16+	Kona (Hualalai) WH6DEW (100)
147.32+	Waimea Hospital NH7HI (100)
147.38+	Waimea East KH7T experimental
442.35+	Ka'anapali Maui (136.5)
442.5+	Kea'au KH6EJ
443.40+	Ocean View KH7MS (77.0)
443.40+	Kona KH7MS (100.0)
443.65+	Ocean View Hub
444.225+	Haleakala Maui KH6RS (110.9)
444.45+	Parker Ranch KH6EJ (88.5)
444.9+	Hilo WH6FM WIN system (100)
444.775+	Hilo WH6FM XO system (123)



Paul Lieb KH6HME

New 2 meter Land Distance Record

Congratulations to club member Paul Lieb KH6HME. On June 24, 2010 Paul set a land distance record for his contact on 2M (144.170) with XE2HWB L. Bernardo Gonzalez of La Paz, Baja California Sur, Mexico. The distance was 2,905 miles. That is one mighty long distance on 2 Meters!!!! -Barbara NH7FY



Technician Exam Prep Class

An amateur radio technician Exam Prep class will begin Wednesday 8 September at 6:30 PM in the LDS (Mormon) Church at Orchidland and Highway 130. I'm planning 6 weeks of class ending 13 October, and will arrange for a test on either 16 October, or Wednesday 20 October. There is no charge for the class, a donation of \$5 is requested to help with the cost of printed materials provided. Milt, AH6I - Phone : 965-6471 or 989-9482

Additions and Corrections

In the August issue the picture of NH7ZE climbing the tower was by Robert NH6AH. Thanks, Robert, for contributing your Field Day pictures.

On Field Day, Fred KH7Y used his NH6P call, and the full list of operators included KH7DX, KH7BB, WH7XM, KH6RC, KH6EL, and KH7Y. They made 601 CW contacts and 712 SSB contacts.

More Recent Contest News

Last month I neglected to mention that Fred KH7Y, using the call NH6P, was first in Oceania in the single band 15 meter category of the CQ WPX with 5.5 M points.

The results of the 2010 ARRL International DX CW contest have been announced and KH6LC made third place worldwide in the DX / High Power / Multi-Multi category with 6,682,245 points, 6675 contacts, and 335 multipliers. Lloyd had up to four stations operating simultaneously. Operators for this effort were: KH6LC, AH6RE, K0AV, KH7Y, N6DA, N6KB, NH6V, W6NV, and W6SC.



ARRL DX CW Crew at KH6LC – margarita time



Rob NH6V operating at KH6LC

In another record setting event, Rob NH6V operating at KH6LC for the ARRL DX SSB contest was first in the world and broke the 20 year old Oceania record in the single-operator single-band 80 meter category.



This Month's Banner Picture

The banner picture this month is similar to last month's except that it was taken on a clear day, August 12, when Mauna Kea was visible. The Mauna Kea summit is about 31 miles from the location where the picture was taken. The smaller peak is Kulani Cone 8.1 miles away. The tower carrying the BIARC repeater antenna is visible.



Fred Benardella KH6FI (SK) Equipment Sale

Fred was a member and director of BIARC. His entire station, with equipment for 160m through 23cm, is now for sale. All items plus shipping.

Most of the gear comes with a manual.

1. Icom IC-756 ProII, box, mic, manual.....asking \$1500.00
2. Drake L4B amp with power supply\$700.00
3. MFJ Versa Tuner III (two)....\$150.00 each
4. Heathkit HW-8 QRP\$offer
MFJ QRP Tuner
Radio Shack audio DSP
5. Dentron Clipperton L amp\$600.
6. MFJ Iambic paddle... ...\$25.00
7. Kenwood TL-922A amp... This amp is apparently not in working condition. A note inside indicates that the bandswitch, ALC circuit, and other parts need to be replaced.....\$offer
8. Ameritron AL-811 amp..... This amp may not be in working condition. There is evidence of repairs inside, one loose wire and resistor, and one bad tube. \$ 500.00
9. Astron SS-30M 30 amp DC supply...\$ 50.00
10. Yaesu FT-736R transceiver. Covers 6m, 2m, 70cm, and 23cm bands.... \$700.00

11. ARR receive preamps, 1 VHF, 1 UHF.....\$ 25.00 each
12. RF Concepts RFC 2-317 VHF amp brick 30/170w\$ 150.00
13. RF Concepts RFC 4-310 UHF amp brick 30/100w \$150.00
14. Mirage A1015G 6 meter amp brick 10/150w \$150.00

Items 10, 11, 12, 13, and 14 together: \$1000 (cheap!)

15. two Daiwa CN-220 SWR bridges. \$25.00 each
16. Johnson 6N2 Thunderbolt amplifier. This piece is a collector's item, in great condition. \$1000 plus shipping.
17. HBX tower, HAM-M rotator, 3 element Cushcraft triband yagi, 6 el 6 meter yagi.... \$300 as-is, where-is. Contact Lloyd KH6LC for possible removal assistance
18. Long yagi for 2 meters..... \$50.

There is also a quantity of small items, cables, and antenna parts, too much to list individually.

Note: The package deal for items 10-14 will take precedence over selling them individually, and, the purchasers of the transceivers will get first option on the power supplies that go with them.

For more information, to arrange to view this equipment, or to make offers contact either Lloyd KH6LC (966-7782, kh6lc@arrl.net) or Curt AH6RE (966-8304, ah6re@arrl.net).



6N2 Thunderbolt!

BIARC September 2010 President's Message

Well, the first annual Volcano Forest Run was a resounding success thanks in part to BIARC members who provided radio communications for the event. BIARC members Sean Stueber (NH7SA), Paul Agamata (WH6FM), Chris Matsuno (WH6KBR), Tom Thornton (AH6ZZ), Blake Stene (KH7MS), Laney Azevedo (WH7WX), Miit Nodacker (AH6I), and Paul Ducasse (WH7BR) were up at "O-dark-thirty" and at their stations before the first runners took off at 7a.m. Most of the BIARC members were from the "lowlands" of Hilo, Pepeekeo, Puna, and Oceanview, and were glad they brought their winter jackets for the "clime" of Volcano! As it turned out it was a spectacularly beautiful morning with not a cloud in the sky and not a drop of liquid sunshine that Volcano is famous for. All of the ½ marathon runners and the 10K runners made it to the finish line without incident. Communications was through the Kulani radio repeater which is part of the BIWARN system on the Big Island and Maui. A special thanks to all the BIARC members who helped make the event a success and a fun day!

After the Volcano Forest Run, BIARC members Paul Agamata (WH6FM), Chris Matsuno (WH6KBR), Blake Stene (KH7MS), and Paul Ducasse (WH7BR) went and re-installed the repeater at Naalehu. Paul Agamata performed some major surgery on the repeater and was able to get the repeater and duplexer operating within specifications. So now you travelers on that lonely stretch of Highway 11 between mile marker (mm) 30 and mm 69 will have radio coverage into the BIWARN system.

Remember the Hawaii QSO party, an HF operating event and contest is coming up on August 27 to 29, 2010. Even if you only want to operate for one hour you are welcome. You can make contacts on phone, CW, RTTY, and/or PSK! It's a rare time for Hams around the world to concentrate on working Hawaii. For those of you who complain that Hams have their antennas pointed in the wrong direction on Field Day, well here's your chance as Hams will have their antennas pointed towards Hawaii! For rules and more information go to <http://karc.net>. Hope to hear you on the air!

Our normal September meeting will be a joint meeting with the Hilo Radio Club and will be held at the Wailoa Park picnic shelter where we have held joint meetings before. It will be a potluck lunch event to be followed by a guest speaker Oleg Borodin RV3GM, a BIARC member, who is a Ham from Russia who Dean Manley met on a QRP event in Russia a number of years ago. So put Saturday September 11, 2010 on your calendar for the joint BIARC/HRC meeting event!

Remember the annual "Hamfest" in Waimea is coming up in October! It's a great time to sell/trade ham gear! We have a number of guest speakers lined up for our November meeting and then our annual Christmas luncheon meeting is in December where our new 2011 BIARC club officers will start a new year of Ham radio fun! I look forward to seeing you at all the upcoming meetings and events. --Paul Ducasse, BIARC President

Big Island Amateur Radio Club

PO Box 1938

Hilo, HI 96721