

BIG ISLAND AMATEUR RADIO CLUB

Newsletter – Jan 2013

President's Message January 2013

What a great time we all had at the annual Christmas dinner held at the Keaau Community Hall. The food was outstanding, the hall was decorated beautifully and we all had a great time visiting with our fellow hams and their spouses. The new officers and directors were sworn in by Bob AH6J, our Section Manager. A beautiful gift basket was donated by Leigh WH6DZX. We had a drawing for this basket with the proceeds going toward the purchase of toothpaste and tooth brushes to go to Micronesia. I purchased 10 tubes of toothpaste and 20 tooth brushes this week and added them to the box to be sent. I mailed one box this past week with 20 tubes of toothpaste and 48 tooth brushes. This next box will be given to John KH6DLK and he will probably take it back with him in March when he returns to Micronesia. John is currently on the island of Falalop setting up computers in a high school, returning in a couple weeks, and in March will be returning to Micronesia to set up computers in an elementary school on the island of Woleai, Yap State. John has been setting up a ham radio station on Falalop Island and is planning on setting one up on Woleai also. Richard AH7G has been talking to John almost every evening and also with two of the hams on Federai Island.

As most of you know Richard and I will be leaving Hawaii on Christmas Eve, flying first to Florida to visit my daughter in Lake City. On January 5th we board the Amsterdam in Ft Lauderdale for a month cruise through the South Pacific, ending up in Auckland. We will be met there by Jim and Nancy Mills of Hilo (Associate members of BIARC) and we will spend almost six weeks touring the North and South Islands together. We are hoping to meet some hams that Richard has talked to on the radio and to see our friends Myrle (ZL2MIC) and Jim Campkin in New Plymouth. Myrle used to be a net control on the ANZA Net. We also have non-radio friends in Levin on the North Island that we are planning on visiting.

I would like to thank all those who helped with the Christmas party and all those who will be doing different jobs for BIARC and the QSL Bureau while we are away. I will try to send a message to Curt as we will have

access to a computer while on board the ship and also when in New Zealand.

May you all have a very Merry Christmas and a Happy Healthy New Year.
Barbara NH7FY



The Image at the Top of the Page

At the top of the page is a waterfall view of the spectrum at the low end of 40 meters at about 0300Z on 24 November during the recent CQ Worldwide CW contest. This spectrum was obtained from a broadband recording of the lowest 96 kHz of all bands 80 through 10 meters of the entire contest period made at the KH6LC CW Skimmer at the request of the CQ Worldwide Contest Committee. Hundreds of signals are visible. These recordings, made at multiple sites around the world, are used by the Committee in the evaluation of the logs submitted. The CW contest recordings filled 960 files of 515.3 MB each; the SSB contest recordings produced more than twice this amount of data.

Big Island Amateur Radio Club

P.O. Box 1938

Hilo, HI 96721

www.biarc.net

Officers

President	Barbara Darling NH7FY	982-9126
Vice Pres.	Doug Wilson KH7DQ	985-7540
Treasurer	Milt Nodacker AH6I	965-6471
Secretary	Leigh Critchlow WH6DZX	930-7330

Two Year Directors

John Buck KH7T	885-9718
Tracy Desa WH6DYR	345-9717
Glenn Kadota WH6DVB	967-7126
Mary Brewer WH6DYW	985-9595
John Bush KH6DLK/V63JB	935-5500
Rick Gardner WH6LU	968-7524

One Year Directors

Richard Darling AH7G	982-9126
Steven Jacquier WH6DPM	907-350-2122
Paul Ducasse WH7BR	985-9222
Darryl Koon AH6TQ	968-7106

Standing Committees

Service/Awards vacant		
Education	Milt Nodacker	AH6I
Emergency	Paul Ducasse	WH7BR
Equipment	Milt Nodacker	AH6I
Health&Welfare	Barbara Darling	NH7FY
Membership	Richard Darling	AH7G
Hospitality	Beau Mills	NH7WV
Newsletter	Curt Knight	AH6RE
Programs	Doug Wilson	KH7DQ
Repeater	Bob Schneider	AH6J
Webmaster	Curt Knight	AH6RE

Special Committees

Improvement	Vacant	
Field Day	Robert Oliver (969-9993)	NH6AH
Hamfest	Bob Schneider	AH6J
co-chair	Doug Wilson	KH7DQ
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 the Pizza Hut near the KTA in Puainako Shopping Center.

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.

ARES Emergency Net

Meets Saturday evening at 1900 HST on the 146.76 repeater. Backup is 146.76 simplex. All are welcome to check in.

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 KH6HPZ (103.5)
147.04+	Mauna Loa RACES KH6HPZ
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)

10-10 International Net



Each year, the 10-10 International Net, through the non-profit corporation 10-10 Scholarship Foundation, funds four \$1500 scholarships. These scholarships are administered by the Foundation for Amateur Radio (FAR). 10-10 members should encourage qualified college-bound amateur radio operators to take advantage of this opportunity.

Applicants must be licensed amateurs. There is no restriction on course of study, but applicants must intend to seek at least an Associate degree. Non-US students and Americans who intend to study overseas are also eligible. Completed applications must be received by FAR prior to April 15 of each year. Download an application from FAR's web site:

www.farweb.org

or request an application from FAR Scholarships, PO Box 911, Columbia, MD 21044-0911. Contact Irene NH7PE for local assistance with the application.

ARRL also has an extensive scholarship program. Information is available on the ARRL web site:

<http://www.arrl.org/scholarship-program>

Heads up, 10-10 members! The last day to send off your logs for the Anniversary QSO Party, and the Meet the Volunteers QSO Party is January 15.

For those who really plan ahead, the 10-10 International Net Winter Phone QSO Party will be held February 2 and 3. Check out www.ten-ten.org for more info.

Remember that the Aloha Chapter meets at 6:30PM HST on Monday evenings on 28.490 MHz, and there are daily nets at 1800Z on 28.380 and 28.800. Join us!

– Irene NH7PE

Kids Day 2013



Lloyd KH6LC wants to remind everyone of the upcoming ARRL Kids Day, which will be held Sunday, January 6, 2013 between 8AM and 2PM. Kids of all ages are welcome. Please contact Lloyd at 966-7782 if you're planning to attend.



How to Interpret Your Electric Meter Reading Mike Last NH7JT



With the high cost of electricity here on Hawai'i Island, wouldn't it be beneficial to know exactly how much power you're consuming at the moment; but without resorting to expensive power meters?

Well it can be done, with nothing more than a stopwatch.

Your meter is either analog (rotating disk), or a newer

digital one (no disk or dials.) It doesn't matter which, as I'll go through the procedure for both.

Analog meter

Note that the rotating horizontal disk has a blank mark on its edge. This is our index, or starting point. When the index is facing you, start the timing. If the disk is rotating slowly, time how many seconds it takes to make one revolution. If the disk is traveling rapidly, time how many seconds it takes to make a set number of revolutions; five, 10, 12, etc. Note: it is not the time for one revolution, but rather the total time for all the revolutions. Write down how many revolutions were 'clocked' (if more than one), along with how many seconds it took. On the faceplate of the meter will be a value for Kh. It will typically be 0.6, 1.8, 3.6, 7.2, or 14.4. Write down this number. Also on the faceplate or attached to the meter glass might be a note indicating, "Multiply all readings by ____" This will only apply if your electric service is at or above 400 amps. If no indication, the value is one (1).

Now put the numbers you've written into the following formula:

kilowatts = 3.6 times "A" times "B" times "C" divided by "D"

Where "A" is the Kh value; "B" is the multiplier (1 or as indicated); "C" is the number of revolutions observed (1 or more); "D" the number of seconds to record the total number of revolutions.

3.6 is the constant for analog meters.

Example 1. The meter shows a Kh value of 7.2; there is no multiplier indicated (so it is 1); the number of revolutions 'clocked' is 10 (the disk is really moving!); the total time is 27.3 seconds.

$$3.6 \times 7.2 \times 1 \times 10 = 259.2 \quad 259.2 / 27.3 = 9.5$$

9.5 is the average power demanded in kilowatts during the time the measurement was made. If this amount was continued, uninterrupted (neither increasing nor decreasing) for one hour, the energy consumed would be 9.5 kilowatt-hours. At the December 2012 residential rate of 37.0 cents (lowest tier), you'd be paying over \$3.50 for just this one hour of use.

Example 2. The meter shows a Kh value of 1.8; there is no multiplier indicated (so it is 1); the number of revolutions 'clocked' is 1 (the disk is moving slowly); the total time is 14.6 seconds.

$$3.6 \times 1.8 \times 1 \times 1 = 6.48 \quad 6.48 / 14.6 = 0.44$$

Example 3. The meter shows a Kh value of 0.6; there is a multiplier of 40; the number of revolutions 'clocked' is

5 (the disk is moving quickly); the total time is 24.6 seconds.

$$3.6 \times 0.6 \times 40 \times 5 = 432.0 \quad 432.0 / 24.6 = 17.6$$

Digital meter

Almost the same as analog, except as follows-

1. In place of the disk are three vertical bars (or three arrows) somewhere on the meter face. The repeating sequence is that the first bar (on left) will be shown, followed by both the first and second bars, then all three, next the first one will disappear, then the second, and finally the third. After a while when none are visible, the first bar will appear and the sequence will repeat. Note: The speed which this happens might be very slow, depending of the demand. Here's what you will see:

none - #1 - #1 and #2 - #1 and #2 and #3 - #2 and #3 - #3 - none - #1 - etc

It doesn't matter at what point you start timing, since one complete cycle is exactly the same as a rotating disk making one complete revolution.

2. The meter constant is 21.6 (not 3.6).

Now do the same "clocking" and calculations as shown for the analog meter. That is:

kilowatts = 21.6 times "A" times "B" times "C" divided by "D"

Where "A" is the Kh value (usually 1.0); "B" is the multiplier (1 or as indicated); "C" is the number of cycles observed (1 or more); "D" the number of seconds to record the total number of cycles.

21.6 is the constant for digital meters.

This is a very accurate means of determining at what rate you are using electricity.

Questions? Comments? Clarification? Contact the author at 929-8422

Aloha.

Mike Last
de NH7JT, 73

BIARC Radio Contest News

Conditions were very good for this year's CQ Worldwide CW contest. The crew at KH6LC made 9383 QSOs total and worked 123 DXCC countries in 39 zones on 20 meters alone. 80 meters was unusually good, with very low noise level and good propagation into Europe. The band summary tells the tale:

Operator(s) : AH6RE, KH6KM, KH6LC, KH7Y, KX7M, N6DA, NH7O

Band	QSOs	Pts	Zone	Country
1.8	290	855	11	10
3.5	1211	3597	30	59
7	1688	5016	34	87
14	2013	5973	39	123
21	2113	6266	34	95
28	2068	6098	34	71
Total	9383	27805	182	445
Score : 17,433,735				



Kelly KH6KM and Lloyd KH6LC watch Denny KX7M making the last few contacts on 10 meters

KH6LC was also active in the ARRL 160 meter contest, making 326 contacts in 67 ARRL sections and 5 DXCC entities (apart from the US and Canada) in spite of very bad conditions for a total of 51696 points. It appears that this might be the top score in the Non-US multi-operator high power category.

Future Meeting Speakers

Here is the schedule of speakers for upcoming BIARC meetings. Members are cautioned, though, that the date of the Hamfest is still under discussion, so this schedule may need to be altered.

- 1/12/2013, Denise Laitinen, Wild Fire Safety in the Community
- 2/9/2013, Christian Veillet, Canada-France-Hawaii-Telescope
- 3/9/2013, Milt Nodacker, Why is it called a Superhetrorodyne?
- 4/13/2013, Lopaka Lee, USGS HVNP Overview
- 5/11/2013, John Bush, Antenna Rights
- 6/8/2013, No speaker - prep for Field Day
- 7/13/2013, Paul Agamata, Echolink, Skype, Allstar Link Network & other systems
- 8/10/2013, No speaker - QSO Party
- 9/14/2013, John Bush, Ulithi Update
- 10/12/2013, No meeting - Hamfest
- 11/9/2013, Bob Schneider, ARRL
- 12/14/2013, No speaker - Christmas dinner



BIARC 2013 officers and directors – thanks Peggy KE6TIS

URGENT REQUEST
Backup for V63 communications

Required – Phone patch enabled radio station with good Receive and Transmit capabilities (200 to 500 watts output into beam or wire antenna help control the frequency). Telephone with all USA calling ability helps keep the long distance costs eliminated. If all else fails, use anything that works.

Task - Provide phone patch service between Federai Island on Ulithi Atoll, Micronesia and USA. Work with John Bush KH6DLK/V63JB to coordinate activities.

When - Daily, or per schedules worked out with V63YWR (William) and/or V63YAH (Albert) using the frequency 14.297.00 at 9:00 PM (HST) or 0700 GMT beginning Christmas Eve 9:00PM local or next evening, if possible.

Frequency of 14.297.00 plus or minus QRM/QRN, of course!

Reason – Travel by Richard (AH7G)and Barbara (NH7FY). Contact Richard at 982-9126