

BIG ISLAND AMATEUR RADIO CLUB



Newsletter – Jun 2013

President's Message June 2013

What a great celebration we had at the May meeting. Leigh WH6DZX has done an excellent job of describing the whole day in the secretary's minutes so I will not describe further. It was unbelievable how many guests we had there. John KH6DLK/V63JB and Richard AH7G were the receivers of the awards and both well deserved. Leigh is planning on doing a follow-up article for the Tribune, along with pictures. I would like to thank Darryl AH6TQ who showed up early and helped with all the set-up work. Also thanks to Leigh for staying after the meeting and helping clean up the refreshment area. There were others who helped too but these two deserve a special thanks from me.

Rob NH6V is out of the hospital and will be spending about six weeks with his Mom on Oahu. His address there is Rob Van Geen, 4389 Malia St., #402, Honolulu, HI 96821. Phone number is 808-734-1751. But remember his jaw is wired shut so he has difficulty talking. We are very happy that he is on the road to recovery.

Remember that Field Day is coming up in June, the weekend of the 22nd and 23rd. Please plan to show up and enjoy the camaraderie with your fellow hams. Robert NH6AH can use many hands to help. The planning session will be at the June meeting. The proclamation has been received from the mayor's office proclaiming the week of Field Day Ham Radio Week in Hawaii. Robert had an excellent article in the Tribune on May 18 about Field Day.

Ted NH6YK who has been teaching at the Kau High School for a number of years has signed a contract to spend two years teaching in South Korea. From the sounds of it he will be leaving Volcano the end of July, but he will return.....

I have been approached by quite a few members asking about another Tee shirt order. I have been to Creative Arts and have gotten the information regarding an order. See my

article regarding ordering and if you have any questions please give a call or send an E Mail.

Sounds as though the antenna making program was a big success, thanks to Gregg WH7FC and they are hoping to have some further projects in the future. Mahalo Gregg for sharing your talents with other hams.

I will keep this message short as I know there are other articles being sent in this month. Hope to see you at Field Day.

73, Barbara NH7FY President



Mark your calendars

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
Mary Brewer WH6DYW	985-9595
John Bush KH6DLK/V63JB	935-5500

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 Native Pasta and Steak in the Kea'au mall 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.

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)

Big Island Amateur Radio Club

May 11, 2013

General membership meeting minutes

Call to order: President Barbara Darling convened the meeting at 2 p.m., with 30 in attendance, including members, visiting hams and special guests. She noted that many more BIARC members had wanted to attend, but had been called away for a number of reasons, including a family moving day, a funeral, graduation activities and special training for area Community Emergency Response Teams, in which a number of the club's hams participate. Most of the special guests were here to honor BIARC's own John Bush, KH6DLK/V63JB, as he officially received the American Radio Relay League's 2012 International Humanitarian Award for his "efforts in the development of an electronic infrastructure, including electronic technologies and amateur radio, on the islands of Federai and Woleai in the Federated States of Micronesia."

Introductions: Celestine Ruwethin, a native of Yap now serving as captain of The Salvation Army Hilo Corps; Matthew Haleyalew, a Hilo resident born in Falalop, Ulithi Yap; Chet Dal Santo of Honolulu, Hawaii's district governor for Rotary International; Charlene Meyers of the Rotary Club of Volcano and the Volcano club's president, Roger Schweitzer, HAWAIIROG; educator David Rizor of Laupahoehoe; Tom English, WH6EBS, of Volcano, who has known Bush since they were kids; Mike Snedecor and Ruth Levin of Volcano.

Bush was nominated for the ARRL award by BIARC members Bob Schneider, AH6J, the Pacific Section manager for ARRL; Barbara, NH7FY, and Richard, AH7G, Darling; English and Meyers. Meyers and others thanked Bush for the tremendous amount of support he has given in the areas of literacy and computer technology to the Volcano School of Arts and Sciences, the area's public charter school. Bush, in turn, thanked the folks in Rotary and BIARC for invaluable assistance to his mission of augmenting communications and health care in his adopted home of the Federated States of Micronesia. He recounted how he asked Rotary, through Dal Santo, et al, for a few dictionaries and wound up with \$22,000 to outfit a new dispensary. He thanked Rizor for being his "professional mentor in the educational field." He thanked Richard Darling, AH7G, for tirelessly manning the radio nightly, doing phone patches, and now email, into Ulithi and Yap, thereby providing a "considerable amount of contact" and helping "Micronesians finally getting to talk to their own relatives in the U.S." This radio traffic relaying mission occurs at 8 p.m. seven days a week on 14.297 MHz, for those who'd like to listen in.

Announcements: Barbara reported on the conditions of three of our ham friends. Rob Van Geen, NH6V, recovering at Queen's Medical Center after an accident, is now recuperating at his mother's house, but can't really talk on the phone because his jaw is wired shut. Lloyd Cabral,

KH6LC, flew over to Honolulu on Thursday, May 9, to help get Rob out of the hospital and home to his mom's house. We have not gotten an update on the condition of Corky Kirk, W6ORS, but it looks like he'll be staying indefinitely at his daughter's home in California. Herb Vanderbeek, WY6G, now in his early 90s and one of the BIARC elder statesmen, has had surgery on cataracts in both eyes and, after a slight setback the second time around, is finding that things, literally, are looking good.

Next month's BIARC meeting, at 2 p.m. Saturday, June 8, will focus on planning for the annual Field Day, which will be from 6 a.m. Saturday, June 22, to 6 a.m. Sunday, June 23, at Wailoa Center on Piopio Street in Hilo, just mauka of Bayside Chevron, which is at the intersection of Pauahi Street and Kamehameha Avenue in downtown Hilo. Volunteers are needed to help plan, prepare for, and assist at the 24-hour event.

Presentation of awards: On behalf of the ARRL, Bob Schneider presented the first of the day's two special awards. This one went to Richard Darling for achieving an impressive milestone: his first 60 years as an amateur radio operator. The ARRL sent Richard a certificate acknowledging his six decades as a ham, a letter of congratulations and the official ARRL 60-year pin. "It's been the best 60 years of my life," said Richard, holding his award.

The second award, the day's main event, was presented to Bush by Schneider, along with a County Council certificate and personal congratulations conveyed via Bob from Mayor Billy Kenoi. The Humanitarian of the Year is a big deal inside and outside the world of ham radio. There's only one such award given each year, noted Bob, and the ARRL Board of Directors voted unanimously to give it to John.

"I'm extremely honored," said John, who had just gotten "home" on the Big Island after two and a half months in his "other home" in Micronesia, where his name as an adopted son, bestowed upon him by the senior chief, Francisco Mairal, of Falalop, Woleai, is Sawiyago Mwetangmwai, which means the following: Sawiyago is the man in the middle of the sailing canoe who answers the critical questions and also sees the future; Mwetangmwai means quick, crafty, and a sorcerer. He thanked the Darlings and a couple of anonymous BIARC members for their help with the Micronesian outreach effort. "I can't thank you enough for your generosity," he told the club and its special guests assembled for the occasion. "My position really has been one of arm twisting."

He explained that what seem to be small efforts on our part here "are enormous out there," in this "outer island of Yap State project." The area has "no resources" and its livelihood is strictly "a subsistence-based economy." For example: no manufactured kids' toys, no toothbrushes, no toothpaste and no preventive medicine. Definitely no

computers or software or communications equipment. At one time, there was Internet access, but the cost was prohibitive and the provider pulled out.

He designed the school computer system and server with all of the resources the kids would need, with years of National Geographic and Encyclopedia Britannica. It's a project that began in April of 2011 and is still moving forward. He next started putting up ham radio, and with help from friends back home on the Big Island, it's allowing communication where before there was none. In June of 2012, the Oceania Community Health dispensary was dedicated, but funds were not available to outfit the facility. That's when Chet and Charlene and the whole Rotary network kicked in.

"Teamwork" made it all possible, said John. Rotary clubs on three islands, and at the district and international levels, all helped out.

"And Chet said: 'We can get you the money, but you have to join Rotary,'" recalled John. Rotary embodies the same fine focus as the amateur radio community worldwide, he noted, meeting the three vital criteria of sustainability, self-sufficiency and being technologically responsible.

John said there are "four legs of the chair" that contribute to the support, comfort and viability of modern-day Micronesians. They are:

- 1) Medicine: Local medicine is good, but it's important to move toward preventive medicine "so we don't have so many funerals to attend";
- 2) Education: Teachers are doing a great job, but are hampered by a lack of resources. The bilingual nature of island classrooms comes into play, as does the content of textbooks, which, having come from the U.S., are filled with such elements as trains and fall leaves, for example: Things totally out of context to isle students. "Education is the lynchpin of success," said John, and by expanding their horizons via schooling, the young folks will acquire a "global perspective" that will serve them well in this 21st-century world. Bush said they've found success in "integrating technology tools into the curriculum."
- 3) Communications: There isn't much, and what there is doesn't work very well. As ham radio has been introduced, it has opened up opportunities for meeting such personal needs as communicating with relatives far away, and with medical care. "Communications is critical," he said. There is nothing else, and amateur radio "truly is a lifeline."

"Ham radio has been wildly successful," he said.

- 4) Transportation: The "gas situation is a nagging problem." In some areas, the sailing canoe is a lost piece of island culture and islanders rely on power boats. No gas, no fish. In other areas, the canoes are still a key part of a vibrant culture. In all areas, John said, it's vital that outside assistance be beneficial and help support and build back island culture, not damage it further.

Chet, Hawaii's top Rotarian, said Rotary always is looking

for projects that are sustainable in nature and will help a community. He offered an example of how a Rotary International grant can be achieved: Say, Hawaii Rotary clubs come up with \$5,000. The district-level Rotary entity will match that two-to-one, meaning that there's now \$15,000. Rotary International will match that one-to-one, equaling \$30,000.

"So, for \$5,000, we can get a \$30,000 grant, and that would put a ham radio in every school in Outer Islands Yap State."

With the strains of gentle songs in the Woleaian language filling the room, John then showed a slide show of his second island home, its people with dictionaries sent by Volcano Rotarians; Mac and Dell PC computer equipment being unloaded from big boxes; families at work and play; students studying and learning about computers and ham radio; lovely island scenery and smiles, and insight into a lifestyle at once far-removed from, and yet much the same as, our own life on a little bit wider, much taller island with cars, cruise ships and Costco.

After John's presentation, he received another acknowledgement of his volunteer work in the Pacific. Bill Hanson, N0CAN, read a letter from his boss, Hawaii County Civil Defense Director Darryl Oliveira, congratulating John on his ARRL International Humanitarian Award and praising him for his work in helping to "bridge critical communications gaps."

"As you are well aware, the ability of communities to receive and share information during times of crisis or disaster is critical and in many cases could result in the difference between life and death," wrote the Civil Defense chief. "Through your efforts and contributions you have helped to bridge critical communication gaps and have made tremendous strides with improving the emergency communication capabilities of many rural areas across the Pacific and here at home on the Island of Hawaii.

"These efforts will greatly improve and enhance the safety and welfare of the many people who live in areas that do not have basic communications infrastructure," said Oliveira. "... Thank you for your service, sacrifices and personal commitment to improving the safety and welfare of the many communities you have assisted."

Business meeting: Secretary's minutes of previous meeting were approved as circulated in the BIARC newsletter.

Treasurer Milt Nodacker, AH6I, said end-of-April bank balance was \$4,843, with some activity in and out since then. Education Committee Chair Milt said new Technician license class starts June 13 at the LDS church on Kilauea Avenue in Hilo. The next testing session, for all levels of amateur radio license, will be at 1 p.m. Saturday, June 22, during Field Day at Wailoa Center. Bob, AH6J, announced that Milt has been promoted to head VE.

Repeater Committee Chair Bob said he and Bill Hanson took a field trip to South Point to photograph a potential repeater site. Also, on Tuesday, May 7, the noon-1 p.m. test

of the Mauna Kea repeater proved "very successful." John Buck, KH7T, said progress toward getting a new repeater on the side of Mauna Kea is coming along, with some problem getting Parker Ranch approval. Bob said it's relatively easy to physically install a new repeater; it's the paperwork and approvals that always prove to be the hard part.

Discussion on the overall health of the East Hawaii repeater system followed, after a request from Tom English, WH6EBS, for clarification about the trouble with availability of the 72 repeater. Bob explained that the agreement between the University of Hawaii, VOAD (Voluntary Organizations Active in Disaster) and the American Red Cross restricts use of the repeater to a one-hour test each month or when the governor issues a disaster declaration. Bob said he'd rather have the rules say the repeater can be used when the Civil Defense Agency or the mayor declare a state of emergency. "That's the practical way of doing it," said Bob, but it's not what the agreement states.

Gregg Datlof, WH7FC, said he and Rick Gardner, WH6LU, recently created the new ham organization PERC, the Puna Emergency Radio Club, in response to this ongoing issue. He noted that Kulani is the only high-level (open) machine on the east side of the island dedicated to voice traffic, with a low-level repeater in Pepeekeo. He said it's a waste of time to try to redo the VOAD agreement, when it's easier just to "put up a new machine." And that is the focus of PERC: to get more repeaters up and running and to develop a network of trained hams experienced in radio relay and ready to go in a time of disaster when ham radio is the only communications method still viable. The PERC group is open to all, with info at PERC-5-0 on Yahoo Groups, or by contacting Gregg or Rick. The PERC net is on the air at 7 p.m. Wednesdays at 146.52, the simplex national frequency.

QSL Bureau: Barbara, the committee chair, reported that 1,934 QSL cards were received in the last month from Australia, Japan, Norway, Brazil and the Ukraine, for a year-to-date total of 7,280.

Antenna-building workshop: Gregg reported on the April 27 antenna-building workshop held at the Keaau Community Center, where the group built about 20 slim-jim J-poles. He said he'd like to have a similar gathering every three months. In the meantime, with supplies left over from the workshop, he will build about 20 more of the nifty rollup antennas and donate them to the club to sell at the swap meet. If anyone wants to build one, give him a call. You can hook up with Gregg and he'll help you build it.

Unfinished business: Barbara said upon further research, in response to a ham involved with a K3J event more than a decade ago, the pertinent logs are not available. They apparently were discarded when the late Ron Phillips' house was cleaned after his death.

Swap meet: Kona club will host the swap meet in Waimea in October. More details later.

T-shirts: Barbara said she has had queries about a new T-

shirt order. We need a minimum of 36 to place an order. Let her know if you are interested.

Field Day: Chairman Robert Oliver, NH6AH, discussed this year's project, the building of individual band rejector coax filters to allow two stations to operate on the same band. He has put together a list of the necessary components and estimates the project will cost about \$500, plus shipping, but less if club member(s) would volunteer to build the stubs for the setup. Bob said, "we'll get a long-term life" out of the filters, which would serve the club well for more than 10 years. We need the new setup, to allow us to operate two transmitters at the annual Field Day, and the new equipment will be good for the club in the long run. He asked for volunteers to help him build the filters.

Adjournment: Barbara ended the meeting at 4:22 p.m.

Next meeting: 2 p.m. Saturday, June 8, at Keaau Community Center.

Respectfully submitted,
Leigh Critchlow, WH6DZX
Secretary



Five Meeting photos below by Tom English, WH6EBS



Matthew Haleylew, at left, a Hilo resident born in Falalop, Ulithi Yap; Chet Dal Santo of Honolulu, Hawaii's district governor for Rotary International; John Bush, KH6DLK/V63JB, and Celestine Ruwethin, a native of Yap now serving as captain of The Salvation Army Hilo Corps.



John Bush, KH6DLK/V63JB, receives ARRL International Humanitarian Award for 2012 from Bob Schneider, AH6J, the Pacific Section manager for ARRL.



Charlene Meyers of the Rotary Club of Volcano congratulates John Bush, KH6DLK/V63JB.



John Bush, KH6DLK/V63JB, listens as Bill Hanson, N0CAN, reads a letter from his boss, Hawaii County Civil Defense Director Darryl Oliveira, congratulating John on his ARRL International Humanitarian Award and praising him for his work in helping to "bridge critical communications gaps."



On behalf of the ARRL, Bob Schneider presented the first of the day's two special awards to Richard Darling, AH7G, for achieving an impressive milestone: his first 60 years as an amateur radio operator. The ARRL sent Richard a certificate acknowledging his six decades as a ham, a letter of congratulations and the official ARRL 60-year pin. "It's been the best 60 years of my life," said Richard. Here he inspects the award as President Barbara Darling, NH7FY, looks on.



BIARC "T" Shirt Order 2013

I have been asked to do another order of tee/polo shirts this year as we have quite a few new hams in the area requesting shirts. It will depend on whether we can get an order for 36 shirts as this is the minimum order. I will have pictures of the shirts at the next meeting and also Field Day, if the order hasn't been completed by then. If you want to order shirts or have any questions you can E Mail me at NH7FY@yahoo.com or call me at 982-9126. There will be a

shipping charge of \$5.35 for one shirt or \$11.35 for more than one if you live out of the area. It will take three weeks for delivery, after the order has been placed. We are limited to light colors so that our logo will print properly. The large colored logo is on the back, a small black logo on the front (on the pocket or pocket area) and your call sign above the small logo. (You can request that the large logo on the back be omitted). There are three styles for men and two for women. (Most of the women ordered men's shirts last time)

Men's Tee Type A: Tee shirt with pocket. Sizes Small through 5X. Colors are white, ash grey, light blue, safety green, safety orange, sand and sport grey. Price \$12.50

Men's Polo Type B: Polo shirt with collar, two buttons and pocket. Sizes small through 5X. Colors are white, ash grey, light blue, safety green, safety orange and oxford grey. Price \$17.71

Men's Polo Type C: Polo shirt, two buttons and NO pocket. Sizes small through 5X. Colors are white, ash grey, light blue, safety green, safety orange, oxford grey, gold and sandstone. Price \$16.67

Women's Polo Type D: Polo shirt with Johnny collar and NO pocket. Sizes small through 2X. Colors are white, classic pink, light blue and oxford. Price \$16.67

Women's Tee Type E: Scoop neck tee shirt with NO pocket. Sizes small through 2X. Colors are white, charity pink, violet. Price \$11.46

If paying by check make the check out to BIARC and mark on the message line "Tee Shirt Order"

Thank you, Barbara NH7FY



Rob NH6V is out of the hospital. See the President's report for more information.

Field Day Proposal

As Field Day Chair, I propose that the club finance the cost of materials for "stub" filter system for two stations, Phone and CW.

Most hams don't usually have the need for one, but our club on field day needs them because other contest stations use them.

Here are the reasons which we may view the proposed, and also a pictorial schematic diagram of the individual that would fit in a plastic box.

1. Having participate in BIARC Field Day for many years the idea of operating two stations on the same HF Band has not been possible.

Only once in the past KH6HB had a stub filter system together years ago.

2. If the club owned the a filter system set up we could experience an improvement in our point score dramatically. It will pay for itself in points score.

3. Investment in a coaxial stub system is a low cost item. The construction cost is small. All the coaxial stubs needed are commercially available now, see www.qth.com/topten/Stubs.

4. The Coaxial Stub System proposed can be visualized similar to a repeater station duplexer. For technical information see "Lines used as Circuit Elements" as described in the ARRL Antenna Book 20th. Edition page 24-14 covers how coaxial cable can be used as tuned circuits known as "stub matching." I have a copy of W2VJN's book "Managing Inter-station interference, Coaxial Stubs and Filters" which supplies the real circuits that we need to use to build the filter unit.

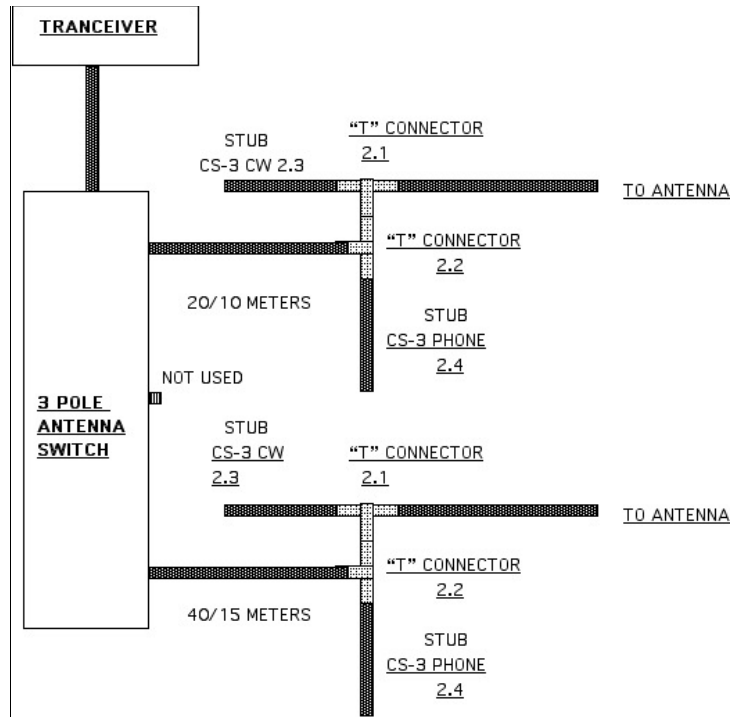
5. 2 UNITS - BAND REJECT COAXIAL FILTER COST LIST
each UNIT COVERS COVERS 40, 20, 15, & 10 METERS

Antenna Switch (2) (2x\$18.95) = \$37.90
 "T" Coax Connector (8) 2 per packet 2x\$10.75) = \$43.00
 CS3-CW (tuned = + \$5) (2 SETS) 2x(\$5 + \$45=\$50) = \$200.00
 CS#-Phone (tuned = + \$5) (2 SETS) 2x(\$5 + \$45=\$50) = \$200.00
 BOX /CONTAINER (2) = \$20.00
 LINK COAX CABLE 4FEET (2) = \$20.00

TOTAL COST FOR TWO UNITS..... = \$520.90

Construction of our units takes time for delivery of order for these parts so an early vote by the board of directors. Financing would insure progress on this matter so that we will have it ready for our Field Day event.

Sincerely, Robert, NH6AH



INDIVIDUAL BAND REJECT COAXIAL FILTER SCHEMATIC

NTS

DRAWING BY NH6AH 5-19-2013



10-10 International Net

Ten-Ten International Net will have its Open Season (PSK) QSO Party for 48 hours beginning 2PM Friday, May 31 HST.

The Spirit of 76 QSO Party is a seven day event centered on July 4. This year, it will be from 0001 UTC Monday July 1 through 2359 UTC Sunday July 7. Make as many contacts as you can during this week using six modes. Try CW near 28.050, RTTY near 28.086, PSK near 28.120, USB near 28.345, AM near 29.000 and FM near 29.600. Scoring is 2

points for members and 1 point for non-members. See www.ten-ten.org for more information.

Check the web site for information about scheduled DX and portable operations this summer.

Listen for beacons between 28.175 and 28.300, especially 28.200 to see what DX paths are open.

There are about 80 chapters of 10-10 International Net that meet at various times during the week. Check the web site for complete information. The Aloha chapter net is called at 6:30 PM HST Monday evenings, and the Ali'i chapter net from Kaua'i runs at noon on Saturday.



One BIARC T-shirt Ownership Benefit



Richard AH7G, Debbie KI4CVS, Shannon K4GLM and Barbara NH7FY. Barbara and Richard met Debbie and Shannon at the McDonalds in Alachua, FL thanks to the BIARC shirts.

