

Q-FIVER

The Official Newsletter of the OH-KY-IN Amateur Radio Society



The Music of Radio: **Stairway to Heaven**

By Justin Patrick Moore, KE8COY

This past July I was fortunate to be able to visit the island of Oahu in the state of Hawaii. My step-daughter Ilia left home for Oahu in the spring of 2016 to join her husband who at the Pearl Harbor base where he is serving with the Navy. My YL and I started saving for a chance to go visit not long after. Moving to Hawaii was especially exciting for the young couple as Ilia is part Hawaiian on her father's side. She had visited twice before, and now gets to live in a place where she can really connect to her Polynesian heritage. Most of our time on the island was spent hanging out with the kids, meeting their friends in the military, hiking, swimming, checking out sites, and learning more about Hawaii's rich history. I also kept my perked for anything I might learn about radio while I was there.

While thinking about different trails to hike my son-in-law told me about a spectacular hike and what was once the amazing site of a Naval radio station. That hike, called the Ha'iku stairs, or the Stairway to Heaven. Unfortunately that hike is currently illegal to go on. Folks who sneak on it early in the morning before the guards arrive may be rewarded on the way back down with an arrest or heavy fine, and I wasn't willing to pay those prices, as it might have put a cramp in our vacation. While not being allowed to take in the views at the top of the 3,922 stairs saved my legs from cramping, it did give me a research project for back home. I did get to see Pu'ukeahikahoe mountain and drive through the Hai'ku valley a number of times. The fact that there had once been a center fed dipole antenna strung between two mountains with the transmitting station nestled in the valley below filled me with wonder. The Stairway to Heaven trail took hikers, when they were allowed to go, up to the top of the 2,000 foot mountain where one side of the 7,500 foot long antenna was anchored. In 1942, as WWII raged in the Pacific, the U. S. Navy needed to communicate with fleet members active in distant theaters of operation. After the attacks on Pearl Harbor the existing station had proved to be highly vulnerable. The main radio station was only 4,000 yards from the shoreline with power supplied from overhead lines. Nor was the 600 foot tower at Lualualei deemed high enough to reach the desired destinations. A giant VLF sending station had to be built that could reach the waters of Australia, the Indian Ocean, and most crucially every submerged Allied submarine, especially those lurking in the bottom of Tokyo harbor.

So began construction of a top-secret high-powered experimental radio facility in the Ha'ikü valley. The natural amphitheater surrounded by 2000-foot-high ridges was considered an optimal spot. To gain access to the spot where the antenna was anchored a ladder-like stairway was constructed with much grueling and painstaking

(Continued on page 4)

2017 Board of Directors

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OH-KY-IN Repeaters

146.670 (-) Clifton

146.625 *(-) Withamsville

146.925 *(-) Colerain

443.7625 *(+5) Clifton

A CTCSS (PL) tone of 123.0 Hz is required for access to all OH-KY-IN repeaters. All repeaters also transmit a CTCSS (PL) tone of 123.0 Hz

** Fusion Repeater*

APRS on 144.390 mHz

K8SCH-10 Edgewood WIDEn

Packet on 145.010 mHz

K8SCH-7 Digipeater

For membership information, please contact Nathan Ciufo KA3MTT, 6323 Cinnamon Ridge Dr, Burlington KY 41005, (859) 586-2435 or Email membership@ohkyin.org. Renewals of Club Memberships are due by the end of March. Permission is hereby granted to any amateur radio group to quote or reprint from this publication, if proper source credit is given, unless permission is otherwise reserved.

THE Q-FIVER is now mailed & e-mailed, it's hoped, a week before the club meeting.

Normally copy deadline is the weekend before that. Please send your submissions for THE Q-FIVER (including notice of upgrades & callsign changes) to Brian K4BRI

These may be: snail-mailed to or dropped off at 6901 Backus Drive, Alexandria KY 41001 or telephoned to (859) 635-3095 any time



Oh-Ky-In Life Members

John Phelps N8JTP

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2017 Committee Chairs and Appointments

Newcomers/Elmers Net..... Robert Gulley AK3Q
Technical CommitteeBrian DeYoung, K4BRI
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Volunteer ExaminersBrian DeYoung K4BRI
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Education Michael Niehaus KD8ZLB
Repeater Control Ops Mgr Bruce Vanselow N8BV
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Special Publications Jo Haltermon KD4PYS
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WebMaster George Gardei N3VQW
Silent KeyBruce Vanselow N8BV
Tech Talk Net MgrBruce Vanselow N8BV
K8SCH QSL Mgr Bob Frey WA6EZV
TV/RFI Dick Arnett WB4SUV
HamFest Gary Coffey KB8MYC

August Calendar

- Tue Aug 1 7:30 PM Club Meeting in St Bernard—Topic: Balun Baloney by Dave Core
 Wed Aug 2 9:00 PM Tech Talk, NCS Robert AK3Q
 Thu Aug 3 9:00 AM ARDF Championship event—Sprints at England-Idlewild park in Burlington, KY
 Fri Aug 4 9:00 AM ARDF Championship event—Fox OR at Mitchell Memorial Forest
 Sat Aug 5 9:00 AM ARDF Championship event—Classic 2M at Miami Whitewater Forest
 Sun Aug 6 9:00 AM ARDF Championship event—Classic 80M at Miami Whitewater Forest
 6:30 PM Newcomers/Elmers Net, 146.67,
 Topic: [Understanding HTs and Mobiles](#) —NCS Robert AK3Q
 Wed Aug 9 9:00 PM Tech Talk, NCS Brian K4BRI
 Sat Aug 12 1:00 PM Brunch Bunch at [RiverWatch, 1 Walnut Street, Lawrenceburg, Indiana, 47025](#)
 Sun Aug 13 6:30 PM Newcomers/Elmers Net, 146.67,
 Topic: [YouTube Gems and Other Web Resources](#) —NCS Robert AK3Q
 Wed Aug 16 9:00 PM Tech Talk, NCS Dale, KC8HQS
 Sun Aug 20 6:30 PM Newcomers/Elmers Net, 146.67,
 Topic: [Kits for Building/Experimenting](#) —NCS Robert AK3Q
 Tue Aug 22 7:00 PM Board of Directors meeting at My Neighbor’s place –3150 Harrison Ave.
 Wed Aug 23 9:00 PM Tech Talk, NCS George N3VQW
 Sun Aug 27 6:30 PM Newcomers/Elmers Net, 146.67,
 Topic: [Pushing your Limits/Expanding your Horizons](#)
 —NCS Robert AK3Q
 Wed Aug 30 9:00 PM Tech Talk

(Continued from page 1)

ing effort. Other anchors were also placed on cliff ridges, with wires running to the transmitter. A copper grid system was installed on the floor of the valley to help conduct signals. After more than a year of this work, the station was commissioned in 1943 where it served as the primary long-range communication system to the end of the war.

Even with a badass antenna system the Navy needed a similarly capable transmitter to get their signals to the destination. They needed something that was more powerful than the vacuum tube technology of the time was able to give. What they decided on was a bit of older tech in the form of the Alexanderson alternator a rotating machine that generates high frequency alternating current invented in 1904. It was one of the first devices capable of creating the continuous radio waves needed for amplitude modulation. At the beginning of WWII the Navy had taken control of the of RCA's American Marconi Station at Marion, Massachusetts, where there were two Alexanderson alternators. One of these was purchased and shipped to the Hawaii.



With everything in place the Ha'iku VLF station operated at a frequency of 22.3 kHz and wavelength of 13,443 meters. It's powerful signal was capable of long distance travel and could penetrate obstacles such as mountains and water. The site continued to be of use in military communications until 1958. Besides the anchor to the antenna a Communications Control Link was used there by the military for VHF communications on the island, and the Air Force had a microwave relay station there until 1963.

After five years of dormancy the site was eventually repurposed as part of the Omega navigation system. Following on the heels of other radio navigation systems such as LORAN, Omega was the first truly global-range radio navigation system. It was operated by the U.S. with six partner nations. Ships and aircraft were able to determine their position using VLF signals in the range of 10 to 14 kHz that were transmitted by a network of beacons to onboard receiver units. The Ha'iku valley station was reopened and retooled by the Coast Guard in 1968. The whole system became operational around 1971 until it was shut down in 1997 with the advent of GPS. (For satellite buffs the U.S. Air Force Space Command operates a satellite tracking station on another side of the island. I saw some dishes and domes while hiking along the coast in that area. Having no clearances I didn't try to go up through the guarded gate!)

The closing of the Stairway to Heaven to the public seems to be mostly a matter of funding, politics, and environmental concern. Posted on the friends of Hai'ku website (haiku.org) was the following: "April 23rd 2017

(Continued on page 5)

that the Honolulu Board of Water Supply (BWS) announced in an Environmental Impact Statement Preparation Notice (EISPN) that it plans to tear out the Ha'ikū Stairs. This notice (see link) triggers a 30-day comment period, during which time the public can express their opinions on the project. Of particular importance is identifying issues not mentioned in the EISPN that you feel should be discussed in the EIS. The BWS is required to address in the EIS all relevant issues brought up during this comment period." etc. etc.

While the access to this historic radio site remains uncertain a good deal of further information about the operations have been preserved. Much of the preserved information is thanks to silent key Thorn Mayes who worked under the following call signs W6AX, W9AX, 6BDQ, 6AX, K6BI, K2CE, and W1CX on the west coast in the early days of our hobby. After retiring from his a manage position with GE, Mayes became an avid collector of antique electronic gear (prior to 1922), books and magazines, as well as recording the history of early wireless in the United States. Before his death he had compiled a good deal of information about the Hai'ku stairs, some of which can be The Perham Collection of Early Electronics at History San José, and also in the following article on radio ops in Hawaii: <http://www.navy-radio.com/commsta/todd-hawaii-01.pdf>

History is all around us. We just have to pay attention and keep the aerials of optimism raised and ready to receive the signal.

Sources:

<http://www.navy-radio.com/commsta/todd-hawaii-01.pdf>

<http://www.htmclub.org/wp-content/uploads/2015/06/History-of-the-Stairs.pdf>

<https://www.haikustairs.org/building-the-stairs>

[https://en.wikipedia.org/wiki/Omega_\(navigation_system\)](https://en.wikipedia.org/wiki/Omega_(navigation_system))

https://en.wikipedia.org/wiki/Alexanderson_alternator

<http://perhamcollection.historysanjose.org/people-companies/thorn-mayes/>

July 11h 2017 Meeting (Picnic)

The OH-KY-IN's annual summer picnic was held at Ross Park, St. Bernard, on Tuesday July 11. It was sparsely attended. There was no meeting. There was plenty of good food, thanks to Chef Robert and food brought by those attending. There was split-the-pot with \$50.00 worth of tickets sold. Mike, KC8IVR won \$25.00.

Fred Schneider, K9OHE Secretary.

July 25th Board Meeting Minutes

The meeting was called to order at 6:58 PM. All members of the Board of Directors were in attendance.

There were no Minutes of the June meeting. They will be prepared.

The last recalled membership number: 106.

Treasurer's Reports: The Final June report was distributed with brief explanation. The Preliminary Report for July was distributed. There was brief discussion. It was noted that the receipts from Red, White and Blue Ash were very good. Thanks to those who participated.

Technical Committee: The 146.625 repeater is off the air. The Arcom repeater controller was fried by a lightning strike; a replacement will be needed. The 440 repeater can be put on the air without a controller. A new antenna may be needed. It could run in the only digital mode. A new antenna may be needed. The 146.670 repeater may need a new antenna. A climber can be secured. Work can be done only Tuesdays, Wednesdays or Thursdays before noon to accommodate WLWT availability. A climber company for Northeast Ohio is the only climber found; a proposal was reviewed. The proposed new antenna was discussed, an aluminum one piece pole with 4 half wave antennas mounted on the pole. A new jumper cable will be installed. Possible testing of the the hard line was discussed. It was moved, seconded that up to \$5000 be approved for this project, subject to approval by the club's membership at the August meeting. The 146.925 repeater needs to be removed from the site due to K-2 Towers loss of their ground lease. Removal should be done soon, as K-2's representative could not be reached. The tower and building should be removed soon. The site will be reoccupied by the land owner. Talks are underway with a view to locating this repeater on the new Delhi Township Fire Department tower. If this occurs, some coverage to the north will be lost, but coverage to the west along the Ohio River and western Hamilton County will be increased.

Programs. Robert, AK3Q, reported that he has arranged these programs: August – Baluns; September – Winlink; October – Digital Scanners, etc.

Rocky is keeping the web site up to date and improving it.

There was no Old or New Business. There was brief discussion of the July club picnic.

The meeting adjourned at 8:43 PM.

Respectfully submitted, Fred Schneider K9OHE Secretary

Red White and Blue Ash

It was a great day and evening for the 2017 Red White & Blue Ash.

We had more workers this year as compared to our previous 9 years of working a beer and wine booth at this event. That obviously paid off!!

Our tip jars alone provided the club with a whopping \$600.41 The best take from our tip jars from previous years was \$409.50 and of course we thought that was fantastic.

Then on July 7th our commission check arrived in the amount of \$1630.54

\$1630.54 Commission

600.41 Tips

\$2230.95 Total deposited in the club treasury

A real BIG thank you goes to the following workers:

N8JTP WD8JAW KD8SOH KD8ILY K4BRI KJ4ZKC KD8PAT KE8FBT NC8V N8BV
KELLI MATT

The \$2230.95 total income this year made 2017 a record income year for the club from working the Red White & Blue Ash event. We all worked together extremely well and with the extra help this year we were able to provide the workers with a break when needed as still be able to serve our customers very quickly. Thanks again guys and expect me to be contacting you to see if you can help out with next years Red White & Blue Ash.

73, Bruce N8BV



Brunch Bunch

The Brunch Bunch is going way out west in August!

I know, it might be a little bit of a drive for most of us but I think you'll find that it is well worth it.

The next Brunch Bunch will be held Saturday, August 12th, at 1pm. The location for August is RiverWatch Floating Restaurant & Bar in Lawrenceburg, Indiana. RiverWatch is located at 1 Walnut Street, Lawrenceburg, Indiana, 47025. From US 50 just follow Walnut Street all the way to the end at the river and park in the free Ivy Tech parking garage.

"Are you ready to take a vacation? You dont have to go far; just come to RiverWatch Floating Restaurant & Bar! Located in Lawrenceburg, Indiana, we are a Key West themed restaurant that delivers an island ambiance and a beautiful view of the Ohio River while you eat delicious food and sip on frosty drinks. At RiverWatch, the only thing we overlook is the water!"

RiverWatch is much like Cabana on the River except that it is actually floating on the Ohio river. They have both outdoor seating as well as indoor air conditioned seating.

For a look at the RiverWatch menu as well as a map go to:

www.riverwatchinc.com

Remember that the Brunch Bunch always meets the second Saturday of every month at 1pm at a location to be announced each month. If you can't join us this month, maybe you'll be available to join us in the months ahead.

I'm always looking for suggestions on what restaurant you think might be a good place for the Brunch Bunch to visit soon.

73,Bruce, N8BV

Ohio State Parks on the Air

Come join OH-KY-IN this September at East Fork State park for the

2017 Ohio State Parks on the Air

When : Saturday, Sept 9, 2017

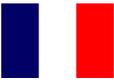
Where : East Fork State Park, Turkey Ridge Shelter

Times : Be there at 8:00 for setup, Contest runs from 10:00 AM to 6:00 PM

Please let George, N3VQW know if you plan to be there.

Email: ggardei@msn.com, Cell: 513-410-3406, or send a NTS radiogram.

August 2017 DX Spots de KA3MTT

Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1 OY - Faroe Is thru 8-10 ----- HC8 - Galapagos thru 8-31	2	3 JD1BOI - Ogasawara thru 8-12 ----- 4L0GF - Georgia thru 8-13	4	5 GJ4PVM - Jersey thru 8-11 
6	7 AD8RA - Ascension I ----- E51GHS - S Cook Is thru 8-25	8	9 KL7 - Alaska thru 8-28 	10	11	12 OJ0 - Market Reef thru 8-19 
13	14	15 TX5EG - Fr Polynesia Thru 9-5 	16	17 KH9 - Wake I thru 8-17 ----- A35JP - Tonga thru 8-22	18 7P8 - Lesotho thru 8-21 	19
20	21 V7 - Marshall Is thru 8-21 ----- Z38 - Macedonia thru 8-25	22	23 V7 - Marshall Is 	24	25 ZA - Albania thru 8-29 	26
27	28 V63KS - Micronesia thru 9-4 	29 4O7GXB - Montenegro Thru 9-3 ----- YJ0AT - Vanuatu thru 9-14	30	31		

OH-KY-IN Amateur Radio Society

Regular monthly meetings are held the first Tuesday of each month at 7:30PM local time at the St Bernard Recreation Hall, 120 Washington Avenue (corner Washington & Tower Aves) in St Bernard, just east of Vine St. Please come in the doors at street level, facing the high school. Visitors are ALWAYS welcome!

The next meeting of the Oh-Ky-In Amateur Radio Society will be Tuesday, August 1st at 7:30 PM

Program: Balun Baloney
by Dave Core K8WDA

During the business part of the meeting members will be asked to approve the expenditure of up to \$5,000.00 for a new antenna, connector antenna coax line between the top of the hardline and the antenna, the cost of the climbers, and miscellaneous hardware at the 146.670 repeater site. After the short presentation of the need for this expense, there will be ample time for questions before voting.

OH-KY-IN Amateur Radio Society

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PLEASE
PLACE
STAMP
HERE

