

R*adio* **A***mateur* **I***nformation* & **N***ews*



Ham Radio Is Radio-active in Humboldt County, and beyond . . .

Number 491

Welcome Readers

February 2018

News From The Willits Hams

Come celebrate 25 yrs of the coffee/breakfast group get together with us, starting at 10am in the back room of Lumberjacks, Willits. The coffee klatsch was started in March 1993 and other than occasionally changing meeting places and times is still going today. Come, order a nice breakfast and enjoy the conversation with fellow hams!

73, Joyce KJ6ZVS

HARC Swap Meet for our next Tuesday evening meeting, March 5 at 7:00PM. See you there!

Next Public Service event is the **Foggy Bottoms run** on Sunday, March 11th.

Humboldt Amateur Radio Club has started a net on the 145.470 repeater **Thursday evenings at 1900L**.

Humboldt Amateur Radio Club Minutes of Meeting - February 6, 2018

Officers Present: Anthony Wiese **KG6LHW** , Vice Pres./
Dan Eaton **KB6DE**, Secretary/
Jaye Inabnit **KE6SLS**, Newsletter Editor Pro Tem/
Jim Armstrong **KW6JIM**, Past President 2016-2017

Anthony called the meeting to order at 19:00 PST in the Eureka Municipal Auditorium (Muni) Meeting Room @ 406 11th St. (11th and E). Introductions were made and the log book was passed around. 18 members attended.

Health and Welfare: Our President, Peter Esko **W6IES** was not feeling well tonight. We wish him well.

Secretary Report: Dan's January 2nd minutes were reviewed. Marcy motioned to accept and Don Nelson **WA6NBG** seconded. The minutes were accepted unanimously.

Treasurer's Report: Marcy told us the Starting Balance was \$3144.00 and Ending Balance was \$2708.98. The expense was noted in the January minutes. The report was approved by all.

Old Business: Don N. clarified his suggestions last month about use of 220MHz. His point

was the frequency is little used here and because of this it would be especially valuable as a DATA only frequency in an emergency. Data only on 220MHz would leave the other bands open for use in voice mode. He listens from 18:30 to 19:30 PST Monday on 223.500 Simplex. Communicators this week were Carl Eggelston **KM6LIQ**, Howard Lang **KB6NN**, Jim, Kevin Bayless **KK6MPT**, Peter and John Olson **KG6MAR**. A HT antenna will not work; you will need a full-sized outside antenna.

New Business: Anthony told us there will be an ISS contact event on February 14th with a school. We can listen in on 145.600MHz.

EMCOMM Report: The next **EMCOMM event** is scheduled for **Saturday, February 17, 2018**. We will populate the Eureka Courthouse and four hospitals; Mad River in Arcata, St. Joseph in Eureka, Redwood Memorial in Fortuna and Jerold Phelps Community Hospital in Redway. Mad River has 3 HAMs on staff. *There will be an on-the-air meeting on Thursday February 15th to prepare for this event (19:00 on 146.700 MHz Far West).*

-Anthony suggested it is time to start planning the HARC EmComm trailer build project. We have gotten permission to park out trailer in a secured lot along side the Bloodmobile unit Joseph Hospital at 2524 Harrison. Carl volunteered the use of his property (3483 Harrison) as a work site and temporary storage place will we are working on the trailer. We will shoot for a build party sometime in March or April. Bring snacks.

Past Event Report: Don Campbell **KE6HEC**: The weather was good and the event went swimmingly for the Clam Beach Run on Jan. 27th. HARC folks used the Trinidad FD as the net control position again.

Future Events: **Feb.12th, 2nd Tuesday Workshop**; Jim: FT-8 and Anthony; LoTW

- Anthony told us there will be an ISS contact event on **February 14th** with a school. We can listen in on 145.600MHz
- **March 5th**, Meeting and **Swap Meet**. Jim says we should clean out the old trailer and include the unwanted items to the swap meet. There will be two Collins Radio units for sale too.
- **March 11th**, is the **Foggy Bottoms Milk Run** in Ferndale. Don C. says communicators will meet at 09:00 for a breakfast meeting at the Fern Bridge Café. Don C. will give us more details later.
- **March or April**; EmComm Trailer build party.
- Anthony will be hosting an accelerated "Gordo" style Technician class at the Blue Lake Rancheria. A special test session would be held here in **March**. The Rancheria facilities are officially an Evacuation Center and the community feels the need to have licensed communicators.
- Don C. told us the FWRA is planning a **Swap Meet and Pot Luck** at the next meeting in April, date to be announced (it will be a Sunday afternoon at *either* the Loleta Firefighters' Pavillion or at the Fortuna Fire Station according to Bernie Christen **WA6HZG**).

Misc.: Jim was net control for the Thursday HARC Net at 19:00 on 145.470 MHz Simplex. He encourages all members to participate as Net Control to learn and practice this important skill. We can sign up for a week or a month, what ever fits our schedule.

- Anthony suggested that we could all work on a list of 20 things to keep on our persons or in our cars in case of emergency. We could start comparing lists in March.
- Anthony recommended the movie The Big Year with Steve Martin and Owen

Wilson. While the subject is bird watching, the parallel with NPOTA and other such events is obvious and entertaining.

Break and Raffle: Thanks to Don C. and Marcy for the cookies and juice. Raffle winners were Joyce Isherwood **KJØYCE**, John, Jim, Dexter Luther **AG6DA** and Charles Gannon **KK6MPU**. Thanks to Don N. for running the raffle.

Presentations: Carl Eggleston **KM6LIQ** showed the new “word Press” format website he designed and implemented. Anthony, Peter, Jaye and Howard have passwords as administrators. The site resides on Carl’s own server at HUMHOST but will be moved to another site later. Nets Info. has been updated and includes the preambles for Net Control folks to use. Calendar has been updated. Images and maps will be added later. R.A.I.N. past issues are available. There will be space for a HARC blog about our activities or radio topics. There is a FACEBOOK link. We will no longer use Yahoo because of security concerns. Our mailing list will be included once it is updated and rebuilt. The site needs a promotional paragraph or “mission statement.” We will need photos of our offices and board members.

- Jim showed his pictures and told stories about Quartzfest 2018 in January. Too much fun!

The meeting was adjourned at 21:07 PST.

Note to new or prospective Members:

The club has an informal lunch every Thursday, 11:30 at the Pantry Restaurant on Broadway in Eureka (next to the Motel 6). All are welcome.

Minutes submitted by Dan Eaton **KB6DE**

BITX40 v3 Semi-Kit

Don Cantrell, ND6T, Weaverville, Ca. USA, ND6T@ARRL.net

Although most of us build from scratch, kits have some advantages; all of the components are available, the layout is done, others have had it working, you just need to assemble it. Heathkit refined this to an art and many of us learned the basics of assembly and testing from their products. Now Ashhar Farhan, VU2ESE, has made a version of his BITX (BI-directional Transceiver) available to the world as a “semi-kit”, with control and transceiver boards pre-assembled and shipped with most of the external parts needed to build your own single band SSB transceiver.



This saves the builder the tedium of loading and soldering the board. He can install it in any form that he wishes, as a nice portable in a weather resistant case, or perhaps in a big solid cabinet for the shack.

He can spend his time dressing it up and adding features.

For a mere \$59 USD (about £46) the BITX40 is shipped to your door with the 4.5" x 5" printed circuit board, the "Raduino" VFO module, two 3-conductor 3.5mm audio jacks, a volume control with power switch, a 10K linear taper potentiometer (for tuning), a BNC antenna jack, a set of power connectors, an electret microphone element, a push button switch, and all of the connecting wires needed to wire it up (with plugs attached!). Not only that, but 8 brass stand-offs, mounting nuts and bolts included. The boards are all assembled and tested, just waiting for the drive to be set for the Power Amplifier.

The transceiver is the simple single-conversion superhet design originally conceived by Farhan more than a decade ago. During the ensuing years it has been constantly refined and is now a logically arranged, cleanly designed module with large-format surface-mount components on an uncrowded board. This is ideal for modification and servicing. There is nothing better for demonstrating theory to beginning hams and engineers. The board "reads" like a schematic. Signals flow in easily traceable directions through clearly identified components. Test probes have easy access to all parts of the circuitry, unlike most "through-hole" equipment. A real joy to explore.

The BITX was originally designed to use an analog VFO. In fact, the current model is delivered with everything needed to use it analogue fashion. A single-turn 10K pot controls the varactor-tuned VFO so you can enjoy the clean sound and simplicity. However, like the Epiphyte and other rigs that use analogue VFO, the operator needs to frequently re-touch the tuning to compensate for the drift. We are used to that, right? The problem is made larger by the huge available tuning range. That single turn for over 100 KHz makes for a fine touch, indeed!

Fear not! The BITX40 now includes a spectacular answer, the Raduino. The name is a combination of "Radio" and "Arduino". If you haven't met the Arduino line of microcontroller boards then you are in for a treat. They are widely available at give-away prices, plug into a usb port on your computer, and are easily programmed using free software. They are like a Swiss army knife, an electronic multi-tool, limited only by your imagination. The Raduino employs the thumb-sized Arduino Nano to control a tiny (yet powerful) Silicon Labs Si5351 three-output synthesizer and a two line 16 character LCD display in a single VFO module. Rock stable, clean output, and reliable. Having a tiny computer in the module makes it possible to configure it do work the way that *you* want it to. It is fast, uses little power, and has extra pins to add a bounty of features.

To use the Raduino as the VFO, one re-uses the tuning pot for control, disconnecting one end of the original VFO inductor, and plugging the output of the Raduino into a jack labelled "DDS". The Raduino comes already programmed for a unique tuning solution using the pot to tune 50 KHz portions but reserving spaces at each end where the same knob can step up or down in 10 KHz increments. A plethora of features is provided by the original software (written by Farhan and is, in itself, a course in programming) that includes two VFOs, RIT, CW, calibration, and memory operation.

Want to try different software? Other tuning modes? Want to add features? There are scores of choices available free from the Internet. Join the BITX20 group at <https://groups.io/g/BITX20> for a very active (and talented) group just waiting to help and answer questions. Read the postings on <http://bitxhacks.blogspot.com/> for ideas. Go to <http://nd6t.com> for several ways to personalize it easily. Doesn't work like you think that it should? Then program your own "sketch" (the Arduino name for software). It's easier than you think. Remember that you can reload the old program at any time.

The radio module uses mostly discrete components. Even the mixers use hand-wound toroids. The transmit output transistor is an IRF510 and has a separate DC power input jack so that if you want to run more than the 5 to 7 watts PEP that 12 volts provides, you can connect up to 25 volts and run 20 watts. If you do run higher power then be advised to use a larger heat sink than what is provided.

Knobs, speaker, or headphones are not included. You would want to use styles and sizes appropriate for your enclosure anyway. This is an advantage over most kits in this respect. You buy the pre-tested works and give it form.

The 4 crystal Cohn IF filter yields good sideband suppression while maintaining clear audio performance and selectivity. The crystals are hand-picked and matched before installation. For a single conversion receiver, there are few spurious signals. It is very quiet without the usual NE602 mixers, yet quite sensitive.

Overall, an incredible value. A true single sideband transceiver, complete with configurable digital control (or not!) for less than many most CW only sets. All of the drudgery of basic assembly is done for you. All that remains is to individualize it and have fun.

Check it out at: www.hfsignals.com

de ND6T

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Jaye Inabnit ke6sls, ke6sls@arrl.net

For more information, please visit our website <http://www.humboldt-arc.org>
or write to:

Humboldt Amateur Radio Club
BOX 5251
Eureka, CA 95502-5251

SK Ham Gear Sale

Paul KE6NVU was an ORCA DIGITAL NET founding member. We'll add items to this page periodically as we inventory and dismantle his station. It will take some time. Please check the page regularly to see what's new and what's gone. We will list a value for each item as quickly as we can.

<http://orcadigitalnet.com/sk-sale/>

You can make an offer by email at any time. Every radio was working correctly when the station was closed. All items sold as-is. Paul had the most extensive station in Curry County, OR with lots of test

equipment, accessories, and antennas. Pick-up in Brookings,OR is preferred. Some item will require maximum packing before shipping. Professional packing and shipping is available at buyer's expense. Questions/Offer, Contact: ncs@orcadigitalnet.com with 'SK-SALE – Item' in the Subject.

Anticipated New Building Won't Be Ready for Hamvention 2018 But Flea Market Could Expand

Due to circumstances beyond their control, [Hamvention](#)[®] 2018 organizers are reluctantly walking back an earlier announcement that a new building would be available for this year's event at the Greene County Fairgrounds and Expo Center in Xenia, Ohio.

"Despite all of the best efforts and intentions by Greene County, the Greene County Agricultural Society, and Hamvention, we have learned the anticipated new building will not be constructed in time for Hamvention 2018," Hamvention General Chair Ron Cramer, KD8ENJ, said. "The prefab sections bid on and architecturally required are currently backlogged. We expect construction to be delayed until after



our show and the Greene County Fair." Cramer said construction should be completed this year in time for Hamvention 2019. "We regret this; however, it is well out of our control," Cramer said.

On the plus side, he continued, Hamvention 2018 will have more room for inside exhibits, with the addition of the vacated Furniture Building, and the Flea Market may gain new space as well.

"After consultation with professionals, we are in the process of solving the mud issue in the Flea Market area," Cramer said. "We anticipate work to start as soon as weather allows. We are rearranging the soccer field parking to eliminate use of the low areas where we had problems last year."



A revised exit plan and additional off-site parking are also in the works, along with easy-to-use maps to help visitors navigate. Parking and shuttles will be free. Talk-in also has new equipment and a taller tower to extend its reach.

"There are many new ideas we are working on to make your stay with us more enjoyable," Cramer added. "Keep watching our [website](#) for updates." -- *Thanks to Hamvention General Chair Ron Cramer, KD8ENJ*

"Awesome" Activity for the 2018 ARRL International Grid Chase

"On-the-air activity for the 2018 ARRL International Grid Chase ([IGC](#)) has been awesome!" ARRL Contest Branch Manager Bart Jahnke, W9JJ, said this week. "The year also began with DXpeditions, as well as several contests at both HF and VHF, to boost numbers. Facebook and social media ([Facebook](#), [Twitter](#) #ICG) are abuzz with chatter about the event, the excitement, the grids worked."



Jahnke said the statistics show the highest overall activity on 40 and 20 meters -- not surprising in the winter -- and especially strong *digital* activity. He expects phone and CW activity to perk up this month and next, with the ARRL International DX Contest CW weekend February 17 - 18, and the phone weekend March 3 - 4. He also anticipates that February's statistics will come on strong as participants re-work January grid squares to boost their February scores. As of the January activity upload deadline of February 10 at 2359 UTC, some 23,300 station sites were active in the IGC.

"The [leader board](#) reporting system continues to evolve, with much helpful participant feedback," Jahnke said. That user input is improving how ARRL reports participation.

"From the statistics, it's clear that during this period of low sunspots and low winter E-skip and F2, most of the activity on the mid-to-lower bands is digital modes," Jahnke said. "As we get into the summer E-skip season, we expect to see activity above 15 meters begin its ascent in the totals."

Jahnke said it's apparent that participants are taking advantage of CW (and FT8 and other digital modes) on HF to overcome some of the weakened propagation on the low- to medium-frequency bands, and of FT8, JT65, and FSK144/MSK144 on 6 meters and above to rack up impressive totals. "Not to be outdone, in comparison to overall band totals, phone contacts on 80, 40, 20, and 17 meters are strong, and 2-meter and 70-centimeter contacts were strong in January as well," Jahnke added. Several contests in January, including the ARRL RTTY Roundup and ARRL January VHF Contest contributed to these strong phone and digital numbers.



The waterfront campsite of Kent O'Sell, K7CAR, in DM25 in Nevada.

During January, IGC-eligible contacts matched in Logbook of The World (LoTW) topped 22,000 on 40 meters and 23,000 on 20 meters -- the two bands with the greatest activity -- with nearly half the contacts being made on digital modes in both bands. On the new 630-meter band, 31 IGC-eligible contacts turned up in LoTW.

Stuff for Cheap!

I have declared an old project dead and all the parts are being polled out of stock. One of the parts is about 100 10' - 1 7/8" OD - 3/8" wall fiberglass poles. Lots of them have small holes machined in them. Yellow and Grey colors. Basically, I have a whole lot of antenna masts. Who wants some! Contact Carl at carl@km6liq.com

I am Looking for a kpc3 or a kpc3+ Kantronics TNC to replace an older rig in my shack. If you have one of these two units, I could like to see if we can horse trade. Contact Jaye at ke6sls@arrl.net

Sisterhood of Amateur Radio Supports Girl Scouts in Obtaining Radio Wireless Patch

The Sisterhood of Amateur Radio ([SOAR](#)), in conjunction with the Girl Scout Council of Southern Nevada, hosted a Radio and Wireless Tech Field Day on February 3 in Las Vegas, Nevada, for more than 60 girls and their adult chaperones.

ARRL began offering its [Radio and Wireless Technology Patch Program](#) for Girl Scouts in 2016. The program defines the requirements for Girl Scouts to earn the patch at the Brownie, Junior, Cadette, Senior, and Ambassador levels and provides a platform for participants to learn about wireless technology, including Amateur Radio, and to inspire girls to learn the fundamentals of radio communication and wireless technology. It also prompts participants to take action in their communities to apply their newfound knowledge to connect people, provide safety, and to kindle an interest in science, technology, engineering, and math (STEM) subjects and careers.



In addition to hands-on activities, the Girl Scouts in Las Vegas also learned about emergency and public service communications, and explored ways wireless technology is used in everyday life and in the workplace. The SOAR participants enthusiastically shared what it means to be an Amateur Radio operator and demonstrated how they can communicate around the world via Amateur Radio.

"As a girl-led and girl-focused organization, Girl Scouts of Southern Nevada understands the importance of providing science and engineering educational programming to girls of all ages," said

Linda Bridges, Chief of Communications for Girl Scouts of Southern Nevada. "By partnering with SOAR, we look forward to inspiring all Girl Scouts to pursue a lifelong love of communication and global goodwill."



Highlights of the event were spelling out their name in Morse

code and hearing it via a code practice oscillator, learning about antenna directivity and participating in a foxhunt, and actually talking on the radio as well as using Voice over Internet Protocol (VoIP) modes.

Todd Wilson, WH6DWF, coordinated the *ISLANDS* Conference Server, IRLP 9256, the StarLink System Hub 357087, and DODROPIN 355800, and AllStar, illustrating how Amateur Radio can be used on a tablet or a smart phone, in addition to traditional radio equipment.

ARRL Nevada Section Manager John Bigley, N7UR, expressed appreciation for "the contribution of all the participants who took time out of their day to speak to the girls to demonstrate to these young girls what Amateur Radio can do to connect people around the world." -- *Thanks to John Bigley, N7UR, and Nevada Section PIO Cathy Etheredge, N7HVN*

Maryellen Gibson kf6kad SK

Most of the seasoned hams new my mommy was also a ham while she lived here in Humboldt county. Sadly, she passed away Sunday February 11, 2018 in Coeur d Alene, Idaho. Maryellen was 78 years old. She will always be missed and loved. RIP Mom.

Jaye ke6sls

Amateur Radio License Exam Sessions

Sponsor: Humboldt ARC

Date: Mar 17 2018

Time: 10:00 AM (Walk-ins allowed)

Contact: Irma D. Ruegg

(707) 601-7520

Email: hamradio1991@hotmail.com

VEC: ARRL/VEC

Location: Fire Dept (Classrooms)

6th & C Street

Eureka CA 95501

Sponsor: Un-sponsored

Date: Apr 21 2018

Time: 10:00 AM (Walk-ins allowed)

Contact: Daniel R. Martin

(707) 768-9147

Email: Dan.AG6JW@gmail.com

VEC: ARRL/VEC

Location: Fortuna Volunteer fire Dept

320 S Fortuna Blvd

Fortuna CA 95547

RAIN
Box 5251
Eureka, California, 95502-5251

North Coast Nets

Sunday	0800	North coast emergency net	3.855 MHz LSB
Monday	1830	Humboldt County HF emergency net	3.955 MHz LSB
Monday	1845	Humboldt HF Digital emergency net	3.581 USB MFSK32
Monday	1900	Arcata Emergency simplex net	146.430 MHz
Monday	1900	Eel River Emergency net	147.090 PL103.5
Monday	1900	Eureka Emergency simplex net	146.460 MHz
Monday	1900	Southern Humboldt Emergency net	146.790 PL 103.5
Monday	1915	Eureka & north UHF Emergency net	444.400 +5000 PL103.5
Monday	1930	Humboldt county Emergency net (nearest FWRA repeater to you)	146.700 PL1031.5 147.000 PL1031.5 146.760 PL1031.5 146.610 PL1031.5
Monday	1930	Humboldt HF Digital emergency net	3.581 USB MFSK32
Monday	1945	Humboldt County HF emergency net	3.955 MHz LSB
Monday	2000	California State net	3.992 MHz LSB
Tuesday	1930	ORCA digital operations net	3.581 MHz USB
Tuesday	1930	California-Mendocino net	3.915 MHz LSB
Wednesday	1000	California State net	7.230 MHz LSB
Wednesday	1930	FWRA net	146.760 PL103.5



[humboldt-arc.org](http://www.humboldt-arc.org)