NORTH AMERICAN QRP CW CLUB

NAQCC NEWS

ISSUE 249 MARCH 2019

KEY CLICKS

- 15TH ANNIVERSARY CELEBRATION PLANS ADJUSTED. In past years we have put the special calls N1A, N2A, … N0A, on the air from all over the country to help celebrate our club anniversary each October. But when we applied for those callsigns this year our application was rejected. The 1x1 coordinator explained that due to past abuse by a few clubs who would try to "grab up all of the good calls" for major contests, they are no longer issuing multiple callsigns to a single club for events like ours. So we looked at several different options and decided that we will use the single call N3A and add portable designators to it for the different locations. Other than the minor annoyance of having to key /# as part of the call, this will have a very minimal impact on our operations and the celebration will be essentially the same as in past years. In two or three months we will start to recruit volunteers for our special stations so be watching for that announcement.

- UPDATED VERSIONS OF THE NAQCC SPRINTLOGGER ARE NOW AVAILABLE. Ron, AC2C, has just released *NAQCC SprintLogger version 01.00.04A.* Four different versions of this excellent logging software are available at https://groups.io/g/NAQCCSprintLogger or on our club website at http://www.naqcc.info/sprint_ac2clogger.html - Linux-32, Linux-64, Mac OSX, and Windows (7,8,10). There is also an older Windows XP version on the club webpage but it is no longer being supported or updated.

- W4DUC HITS 100-SPRINT LEVEL. In February Dave, W4DUK, joined a small group of NAQCC members who have participated in at least 100 of our regular monthly sprints! Dave has been given a keychain fob with his call on it, made by WB8LZG, to commemorate this fine achievement. http://www.naqcc.info/main_giveaways.html

- CHECK OUT OUR MONTHLY POLLS. Jerry, VE6CPP, puts up an interesting poll on our club website each month. You can cast your vote in the current poll and see past poll results using the links on the main club page http://www.naqcc.info/. The more people that cast a vote, the more interesting the results.

- THANK YOU FOR THE DONATIONS! A big "THANK YOU" goes out to everyone who has made a recent donation to the NAQCC treasury. The NAQCC has no membership dues and we depend on your generous donations to cover our operating expenses. If others would like to help out with a donation there are two ways that you can do it. The first way is to use *PayPal* to electronically send your contribution to Club Vice President John, N8ZYA, using the email found on the last page of this newsletter. To avoid any additional fees please be sure to check the box that says "*I'm sending money to family or friends*." Also please add a note indicating that this is a donation to the NAQCC and include your call sign. The second way to make a donation is to mail a check or money order made out to *The North American QRP CW Club* and send it to *John Smithson, 1529 Virginia St E, Charleston, WV 25311*. Assuming that we have your correct email address on file, your contribution will be acknowledged by email with a carbon copy sent to a second club officer as a "check and balance."

VOYAGER RADIO ANALYSIS BY RON, K4RHG

This isn't a typical article for us but it is certainly fascinating and describes possibly the ultimate in QRPpppp communications! Be sure to explore the many links that are provided. - Editor

NASA's New Voyager spacecraft was launched January 19, 2006 with a mission to explore Pluto and objects in the Kuiper Belt. On January 1, 2019 the spacecraft rendezvoused with Ultima Thule, the first object humankind has ever encountered in the Kuiper Belt. As New Voyager passed Ultima Thule the spacecraft was 6.62 billion kilometers from the earth. Radio signals took 6.13 hours to reach the earth. (Voyager 1 has travelled much farther, 21.7 billion kilometers, since it was launched in 1977, but did not pass near a known Kuiper Belt object.)

The radio technology used to transmit between the earth and New Horizon is incredible. It's interesting to compare these radio transmissions with a low-power transmission made by radio amateurs. We'll do this by calculating the radio link budget for New Voyage and a low power, long distance amateur radio transmission. A simplified link budget between a transmitter and a receiver can be calculated as follows:

$$P_{RX} = P_{TX} + G_{TX} - L_{FS} + G_{RX}$$

Where PRX is power at the receiver input (dBm), PTX is transmitter output power (dBm), GTX is the transmitter antenna gain relative to an isotropic antenna (dBi), LFS is the free space loss incurred by the signal propagating though space (dB), and GRX is the receiver antenna gain (dBi). There are other losses such as transmission line and connector losses, but they're relatively small so we won't consider them.

New Horizon uses a 2.1 meter high gain antenna (HGA) to communicate with NASA's Deep Space Network composed of a family of large dish antennas located in Goldstone, California; Madrid, Spain; and Canberra, Australia. For our analysis we'll only consider Goldstone. New Horizon's HGA has a beam width of only 0.3 degrees, slightly more than half the width of the moon, so must be precisely aimed towards earth.

Our amateur radio analysis is based on an actual April 26, 2015 exchange between K4RHG located in Naples, Florida and AX3MH in Briar Hill, Australia. These are the specifications needed to calculate the Link Budget:

Station	P_{tx}(w)	Freq (GHz)	Ant Radius (m)	Distance (km)
New Horizon	12	8.4	2.1	6.62 Billion
Goldstone	25,000	7.2	35	6.62 Billion
K4RHG => AX3MH	5	0.014	Long wire - 130 ft	15,477

We first convert P_{TX} measured in watts to dBm which is transmitter power measured in decibels relative to one milliwatt. That calculation is dBm = 10 · log (milliwatts). Computing we get 40.8 dBm for New Horizon, 74.0 dBm for Goldstone and 37.0 dBm for K4RHG.

Next we calculate the antenna gains where $dBi = 10 \cdot \log (4 \cdot \pi \cdot A_R \cdot \eta / \lambda^2)$. Here A_R is the physical aperture area of the antenna calculated as $\pi \cdot r^2$, η is the antenna's aperture efficiency assumed to be 0.7 for all antennas, and λ is the wavelength measured in meters. Note that gain decreases with the square of the wavelength, and hence increases with the square of the frequency. Computing we get 49.8 dBi for New Horizon and 72.9 dBi for Goldstone. K4RHG transmits into a simple long wire antenna with an estimated gain of 2.0 dBi. We'll also assume the same antenna is located in Australia.

Finally we calculate the free space loss. A radio signal emanating from a point source propagates through space as a spherical wave front. Since the surface area of a sphere is equal to $4 \cdot \pi \cdot r^2$ the signal is dispersed over a surface area proportional to the square of the distance from the source. This dispersion reduces the signal's intensity.

L_{FS} may be calculated as $20 \cdot \log (4 \cdot \pi \cdot d \cdot f/c)$ where d is the distance between the transmitter and receiver in meters, f the frequency in Hertz and c the speed of light in meters per second. Note that loss increases with frequency. This yields 306.01 dBi when Goldstone is transmitting to New Horizons, 307.35 dBi when New Horizons is transmitting to Goldstone, and 139.16 dBi when K4RHG is transmitting to AX3MH.

We can now calculate the link budgets and signal strength at the receiver input (assuming 50 ohm input impedance).

					—Signal at Rcvr Input —		
	P_{TX}	**G_{TX}**	**L_{FS}**	**G_{RX}**	**dBm**	**watts**	**microvolts**
Goldstone => New Horizon	40.79	49.81	-307.35	72.91	-109.3	1.2E-14	0.76
New Horizon => Goldstone	73.98	72.91	-306.01	49.81	-143.8	4.1E-18	0.01
K4RHG => AX3MH	36.99	2.0	-139.16	2.0	-98.2	1.5E-13	2.76

With the Goldstone site transmitting an estimated 25,000 watts the New Horizon receiver has it relatively easy with an input signal of 0.76 microvolts. Interestingly, that's well within the range of an Elecraft KX3 transceiver which has a measured input sensitivity of 0.09 microvolt using its preamplifier (assuming it could receive gigahertz signals which it can't). But as impressive as a 15,477 kilometer amateur radio exchange is running only five watts its signal strength at 2.76 microvolts is well above New Horizon's if my calculations are anywhere close to accurate.

However, Uli Altvater (AG0X) and Coyle Schwab (N9WEX) pointed out in an earlier draft a free space loss model is inappropriate for earth-bound, amateur radio transmissions. A better analysis would use the excellent Voice of America Coverage Analysis Program located at http:www.voacap.com . This model predicts earth-based propagation based on transmitter power, antenna type, mode, frequency and atmospheric parameters. Assuming five watts, dipole antennas at 10 meters (the model doesn't support long wire antennas), 20 meters, CW, default atmospheric parameters and a transmission between Naples, Florida and Briar Hill, Australia on January 6, 2019 the model predicted a -122 dBm signal at the receiver input. This corresponds to 0.18 microvolt, just barely above the KX3's measured sensitivity. We can assume propagation was significantly better the day of the actual exchange.

The New Horizon transmitter only runs 12 watts so Goldstone, 6.62 billion miles distant, has a huge challenge receiving the tiny signal, about a millionth of a millionth of a millionth of a watt. New Horizon encodes data transmissions back to earth using turbo coding, a relatively new method now widely used in mobile communications. The code's redundancy expands signal bandwidth by a factor of six, but allows data rates approaching Shannon's theoretical channel capacity limit expressed as:

Bits per Second = Bandwidth $\cdot \log_2 (1 + (\text{Signal Power} / \text{Noise Power}))$

For example, a 10 kilohertz channel with a signal to noise ratio of one has a maximum theoretical bit rate of 10,000 bits per second. A signal to noise ratio of 0.05, more typical of a deep space probe, reduces the rate to 700 bits per second.

It's interesting that the bit transmission rates during New Horizon's entire mission can be closely estimated before launch since the variables used in the calculation are known. The largest factor, of course, is the Free Space Loss which is easily calculated for any point on the spacecraft's mission. NASA estimated the data rate upon reaching Ultima Thule would be about 800 bits per second. At that rate it will take about 20 months to transmit the data the spacecraft collected on its fly-by of Ultima Thule.

References:
The RF Telecommunications System for the New Horizons Mission to Pluto
The New Horizons Spacecraft
New Horizon Press Kit
NASA Deep Space Network website
Voice of America Coverage Analysis Program

Doing It In Style By Tom, VE4AKI

The CW mode is often considered the original digital mode and not because we send code with our fingers. The precise timing of the dots, dashes and spaces is inherent to the proper transmitting and receiving of the code we use. This may be so with machine generated code but we as mere mortals inject a certain amount of "style" into our sending. I ran headlong into this fact early in my "career" as a ham. Bear with me whileI relate a short story.

I was first licensed, in Canada, in the mid 1980's. The structure at that time was a two level one , Basic and Advanced. The exam consisted of some basic electronic theory, radio regulations and a code exam for sending and receiving the code at 10 WPM. I had learned the code with a combination of code tapes on cassettes [you remember those don't you?] and practice listening to W1AW. With a bit of a struggle I achieved my 10 WPM level and became active on the H.F. bands.

After a year of activity I became eligible to sit for the advanced level exam and felt that my code was up to par to give it a try. When I took the code test for the basic level it was administered by a Department of Transport inspector. Since that time the use of delegated examiners from the ham community had been introduced. The delegated examiners used the same department approved code tapes and texts for the test. After a year of H.F. activity these tapes sounded strange to me not like the code I heard on the air.

I struggled with the receiving test, three minutes of plain text, numbers and punctuation with a maximum of three errors. Three attempts were allowed. After two attempts where I came close but failed I was very frustrated. Then I had a bright idea. I approached the examiner with a request. I knew this examiner from the local club and my experience with the weekly cw net he was net control for. I was familiar with his sending style.

I asked him if he could, for my third attempt, send the text himself and not use the department code tape. He agreed and we dug up a code practice oscillator and key. He sent the department approved text which was carefully timed to insure it was at 15 WPM He nailed the sending and I nailed the receiving, a perfect score!

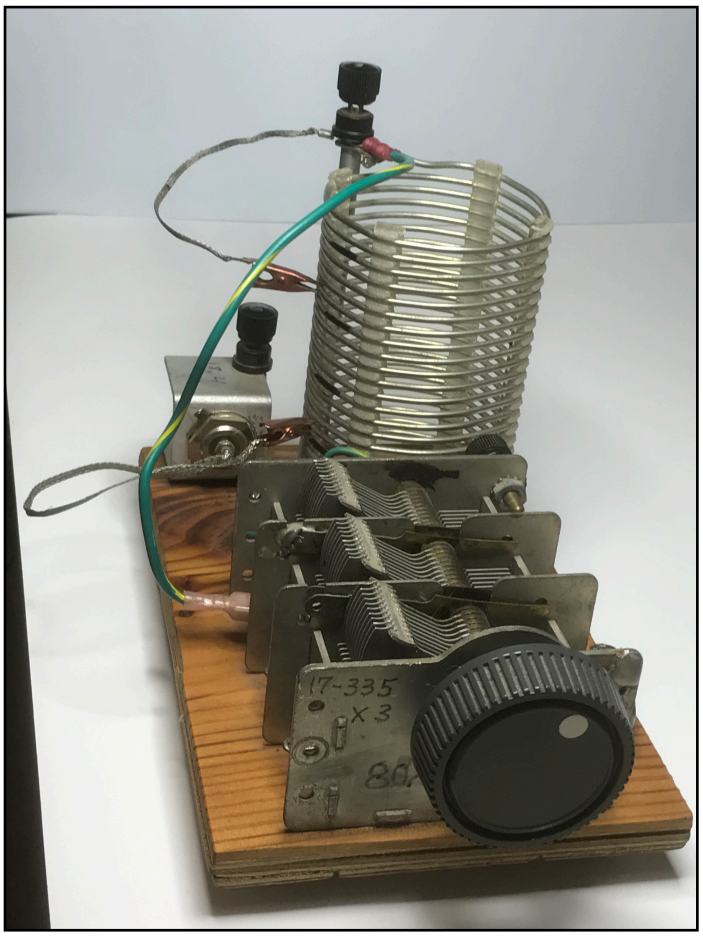
So what did I learn from this experience? Well, sending style can make a great deal of difference at the receiving end. It would probably be a good idea for all of us to record our own sending and give it a critical listen. Bad habits of poorly formed characters and irregular spacing can easily creep into our sending without our notice regardless of the type of key we use. Think of the guy at the other end. Does your style make it easier for him to copy?

Some years later I became a delegated examiner myself and produced my own code tapes to use during code examinations. This worked very well with the students I had and they told me they preferred my tapes over the tapes provided by the department.

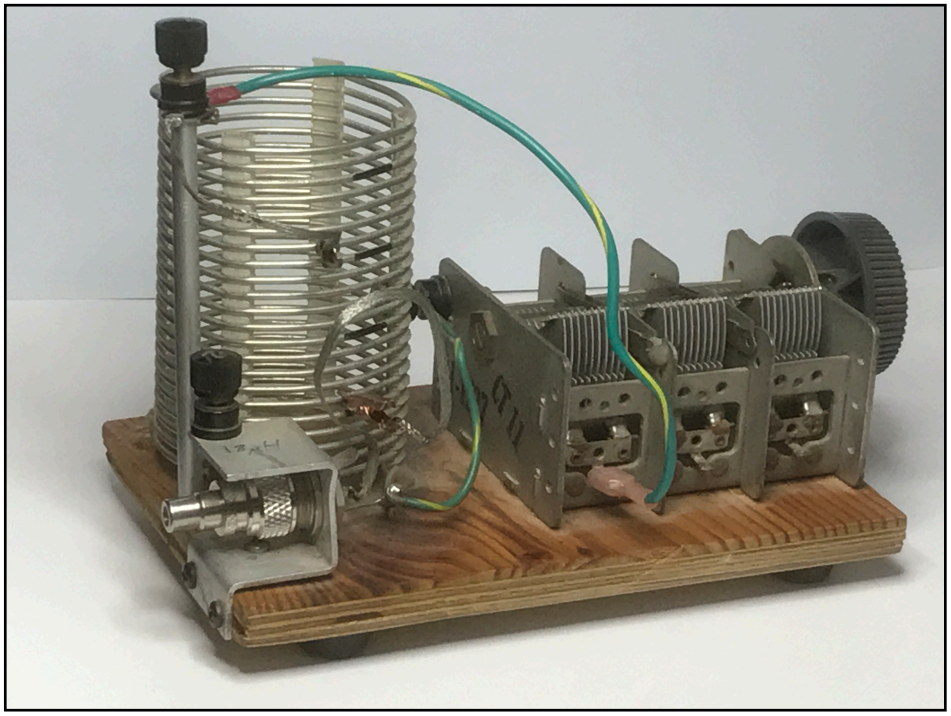
80/160 Antenna Tuner By Gene, N5GW

The schematics in this article are used with permission from the ARRL. - Editor

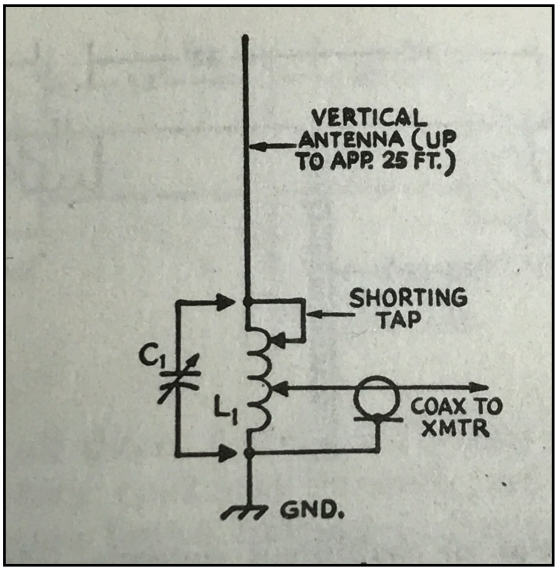
In this age of declining solar activity, 20 & 40 meters close shortly after sunset , leaving hf QRPers with only 80 & 160 meters. Unfortunately really good antennas for these lower bands involve large size and great height, beyond the reach of most of us. However a properly constructed compromise antenna can be capable of reasonable performance. This can be a simple end fed wire as long and as vertical as you can manage. Indeed if you already have erected a dipole type of antenna, you can use it as a low band antenna, even if it has a balun or traps. Simply end feed the transmission line against a few ground rods, radials in your flower bed, or even a metal roof and you can make 80/160M contacts. Such a set-up requires a simple tuner consisting of an air-wound inductor and a variable capacitor.

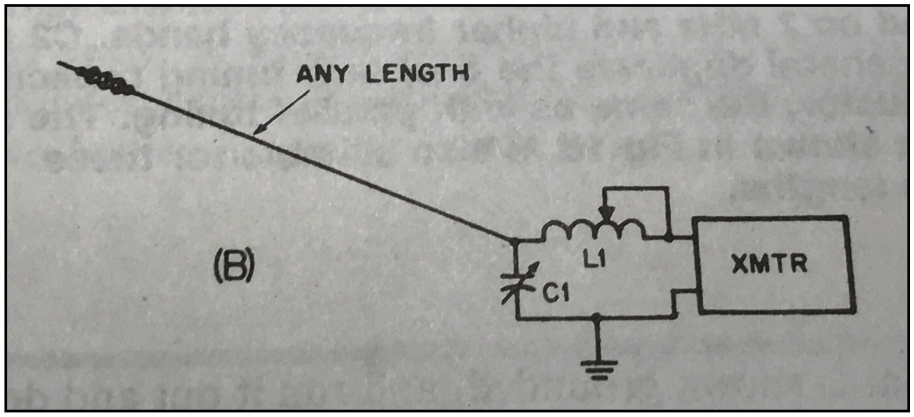


Such a tuner is shown in the first two pics. The variable inductor is 17 microhenries, although 24 microhenries would be more ideal for short 160M antennas. A 3-gang capacitor can supply nearly 1000 pF. The top black screw connector is for the end fed antenna wire; the ground wire goes to the bottom connector. A tap clip at the top of the coil sets the inductance, and the bottom tap sets the feedpoint impedance. Jumpers allow using one, two or all three capacitor sections.



If your dipole feedline or random wire is less than a quarter wavelength (67 ft. for 80M & 135 ft. for 160M) series tuning can be employed using the inductor alone as shown in the third pic (courtesy ARRL). Indeed if this is the setup you will be using, your tuner can consist of simply an airwound inductor. For other antenna lengths the parallel capacitor will probably be needed. Alternatively, a reversible L network configuration can be employed as in the fourth pic (courtesy ARRL).





MEMBER SPOTLIGHT

Each month one of our members is randomly selected and asked to share their ham radio biography with all of us. Questions or comments should go to Paul, KD2MX.

DISCLAIMER: Any views expressed in this section are those of the submitting member and may or may not be those of the NAQCC or its officers.

LOU AXEMAN JR., N8LA, #2358

My intense general interest in radio began in early 1948 at the age of four when a severe ear infection, rendering me temporarily nearly deaf, required me to press my ear against the speaker cloth of our console radio to hear my favorite programs.

My interest in ham radio began in 1956 as I attended some license training sessions held by Ben Hassel, W8VPC (SK), a "proto Elmer." That year, a friend and I purchased Heathkit AR-3 receiver kits. His kit, soldered with a soldering gun, worked fine when aligned by Jack Saller, ex-K8DBV (SK), while mine, soldered with a woodburning iron, would not work despite Jack's best efforts. Jack also became a "proto Elmer" when, in my presence, he worked "across the pond" (Lake Michigan) from Michigan to Wisconsin with his DX-35 and Command Set. My 9th grade science teacher, Gil Pearsall W8HEZ (SK), became another "proto Elmer" when, with a code practice oscillator in class, he sent "CQ DE W8HEZ" that I, having memorized the code characters, verbally translated.

However, since my "people skills" left much to be desired, I never aggressively pursued social relations with these "proto Elmers" nor with my school mates who were hams. I did purchase the 1957 edition of the ARRL Radio Amateur's Handbook, peruse the Electrical Laws and Circuits chapter, and drool over the ads in the Catalog Section (136 pages!)

Amateur radio then went to a "back burner" with me until 1976 when a fellow G.M. employee, Jim Blake, then WB8YSC, became my actual Elmer by tutoring me and administering my novice exam. Hal Bell, WA8LAY (SK) became an "auxiliary Elmer" when I attended one of his license training classes while being tutored by Jim. Upon passing the novice exam, I purchased a TS-520 and awaited my license. It arrived, with the call WD8DNZ, in late November 1976.

I cut a dipole for the 15-meter novice band, hung it in a second floor bedroom, and got on the air, making my first contact on December 2, 1976 UTC. In 1978, by then N8LA, I attended the second meeting of the newly formed Michigan QRP Club, founded by Ralph Burch, W8LCU (SK), and was assigned the membership number MI0078. This began my real interest in QRP. I picked up a used HW-8 and, guided by Ralph, installed an SO-239 and 8 ohm audio transformer in it. Every QRP contact with it thrilled me and inspired my 1981 purchase of a new TenTec Argonaut 515.

After decades of QRP contacts and life's ups and downs, I relocated to St. Louis, MO from East Lansing, MI where my dear XYL, Kathy, and I married in 2000. I was relatively inactive until 2010 when Jim Cline, KC0DTD, helped me realize that I could have a shack in our laundry room with an antenna around the roof parapet of our condo complex fed through the shack window and up the shaft outside it.

My favorite ham radio sub activities are some contests: ARRL International DX CW; first place QRP Single Op, Section 2011, Division 2015; ARRL 10 Meter CW; first place QRP Single Op, Division 2013, Section 2015; ARRL 160 Meter CW; first place Section 2013; and last but not least, NAQCC Sprint; second place 0 Division straight key simple wire antenna a few times! I also rag chew and will pause in a contest to rag chew anytime.

All of my QRP contacts are memorable, especially those with NAQCC members. One memorable QRP contact occurred in the NAQCC Milliwatt Sprint on June 19, 2014 UTC. Using a Two Tinned Tuna transmitter at 250 milliwatts and a Neophythe receiver, I called CQ for the entire two hours of the Sprint, only making one contact. That contact was with Lawrence, AD0BI, who was using a KX1 at one watt to an inside antenna around the ceiling of his fourth floor condo one block from me. Before that contact, we were unaware of each other but have become great friends since then.

I own too many QRP and QRO rigs, keys, and bugs to list, but one of my favorite keys is TOCK (Tricked Out Crappier Key.) It has a plastic base with a large piece broken out of its rear, a U-shaped piece of metal with small holes to hold its lever, a ballpoint pen spring, and a knob that screws into a headless screw that screws into its lever. With this key plugged into my KX3, with Begali Adventure paddles attached but not plugged into it, I won first place in this Division in the 2015 ARRL International DX CW Contest!

Other hobbies include growing food plants and irises, reading, bicycling, and talking back to the radio and TV. One other hobby closely related to CW is American Morse, formerly used over wires by railroads and Western Union. Most Saturdays between 1:00 p.m. and 2:00 p.m. Central time, a number of us gather in Ferguson, MO with our Morse Telegraph Club Chapter President Derek Cohn, WB0TUA, for online American Morse Code chats with other club members.

I was employed as an hourly autoworker for 30 years (four years on the line and 26 years in skilled trades.) My loving XYL is Kathy, former English Department head at Clayton High School in suburban St. Louis, whose almost infinite patience I try nearly every day. Our daughters/step daughters are Lorraine Axeman, KA8LDJ, former researcher for Jeopadry!, and Carmela Axeman Bracco who has a

Master's Degree in teaching the Learning Disabled and is certified to teach the Emotionally Impaired as well. Our cat children are Grace and Joy in heaven and Hope who is still with us.

Finally, the person who built the AR-3 that worked never became a ham. He had to console himself by earning a Ph.D. in physics from Harvard along with a person named Joe Taylor who, I believe, is a ham who dabbles in QRP modes.

NAQCC SPRINTS

CURRENT MONTH'S SPRINT: Our sprint this month will be March 21 from 0030-0230 UTC. That's the evening of Wednesday the 20th here in North America. Please notice the time adjustment due to DST. In most locations it will be your same local time as always. Complete information about can be found at http://www.naqcc.info/sprint/sprint201903.html.

Complete sprint rules and instructions on how to submit your log can be found at http://naqcc.info/sprint_rules.html. On that page you will also find information about the different computer loggers that are supported for our sprints. The membership data files for those supported loggers can be downloaded at http://naqcc.info/contests.html. **Please be sure to always get the latest membership data for your logger about a day before the sprint.** A complete schedule for our upcoming sprints can be found at http://naqcc.info/sprint_sked.html.

LAST MONTH'S SPRINT RESULTS: In February 102 participants submitted logs contains a total of 855 QSOs. Conditions were rough on both 20 and 40 meters and 80 was definitely the place to be for this sprint. Complete sprint results, including some great soapbox comments, can be found at http://www.naqcc.info/sprint/sprint201902.html. High scores can be seen in the tables on the next page.

We would especially like to welcome our first-time sprint loggers and hope that they will return to participate often: AC6ZM KB1GEO KE4QZB KT3R N3LPJ N5MHI N9VJ

PLAN YOUR PARTICIPATION: Remember that regular participation in both our sprints and challenges will qualify you for the great prize drawing in our anniversary celebration in October.

SWA STRAIGHT KEY CATEGORY			
Division	**1st**	**2nd**	**3rd**
W1	KN1H	W1PQO	WB1GYZ
W2	W2SH	W2JEK	KA2KGP
W3	KD3CA	N3LPJ	KT3R
W4	WH6LE	K4JPN	WG8Y
W5	N5GW	WB5UAA	-
W6	W6UG	-	-
W7	KC7DM	WB7EUX	-
W8	AB8RL	AJ8S	W8BUD
W9	W9CC	N8HWV	KA9FQG WB9HFK (TIE)
W0	N0AR	NN0SS	N0TA
Canada	VA3NU	-	-
DX	-	-	-

SWA BUG CATEGORY			
Division	**1st**	**2nd**	**3rd**
W1	NF1U	K1IX	-
W2	-	-	-
W3	-	-	-
W4	KJ4R	K3RLL	-
W5	NF5U	K5GQ	-
W6	-	-	-
W7	-	-	-
W8	K8NGW	N8XMS	-
W9	AA9L	-	-
W0	KD0V	-	-
Canada	VE1AHX	-	-
DX	-	-	-

SWA KEYER/KEYBOARD CATEGORY			
Division	**1st**	**2nd**	**3rd**
W1	N2CN	KB1M	-
W2	WA1GWH	N2ESE	WB2LQF
W3	K3WWP	-	-
W4	K2YGM/4	N4MJ	W4OEP
W5	WI5H	K5MBA	N5MHI
W6	-	-	-
W7	K7MK AA7CU (TIE)	-	-
W8	K3CTN	WA8SAN	WB8LZG
W9	N9SE	-	-
W0	WZ0W	K0EW NO2D (TIE)	-
Canada	VE3DQN	-	-
DX	-	-	-

GAIN CATEGORY			
KEY	**1st**	**2nd**	**3rd**
SK	-	-	-
BUG	-	-	-
K/K	-	-	-

FIRST TIME ENTRANT HIGH SCORE			
KEY	**1st**	**2nd**	**3rd**
SK	N3LPJ	KT3R	KE4QZB
BUG	-	-	-
K/K	AC6ZM	N5MHI	

SPRINT PRIZE DRAWING WINNER
W9CC

	Current Month	Previous Month	All-Time Record	Record Date
Logs	102	91	217	4/17
Participants	144	131	269	2/13
Total QSOs	855	1159	3154	4/17
Hour 1 QSOs	425	625	1704	4/17
Hour 2 QSOs	430	534	1450	4/17
20m QSOs	0	9	1232	8/13
40m QSOs	300	628	2203	4/17
80m QSOs	555	522	1417	2/13
Avg QSOs/Station	8.4	12.7	19.3	9/11

SPRINT HONOR ROLL: We honor the following members for their outstanding participation over the years in our regular sprints. Exact counts can be seen at http://naqcc.info/sprint_dates.html.

NUMBER OF SPRINTS	MEMBERS
50+	NU7T(SK) KB8FE KQ1P NQ2W WY3H AA7CU N8QY K9OSC KB0ETU K6CSL K9EYT N5GW AK3X K2YGM KC2EGL VE5BCS(SK) N8LA KN1H K4ORD KF7WNS N4MJ WK6L KD3CA AB8FJ N2CN
75+	K4NVJ KE5YUM KB3AAG WB8ENE K4KRW N2ESE VE3FUJ WX4RM WA8SAN NO2D N0TA WG8Y N8BB AA9L NA4O WD0K K6MGO K9FQG
100+	K4BAI KU4A KD2MX NF8M K4JPN K3RLL K1IEE KD0V WA2JSG N4FI W4DUK
125+	W9CC W2SH WB8LZG N8XMS
150+	W2JEK KA2KGP K3WWP

NAQCC CHALLENGES

CURRENT MONTH'S CHALLENGE: Our challenge this month is our annual home-brew gear challenge with a goal of making 25 QRP/CW contacts that include at least 6 different states or DX entities. Our definition of what home-brew gear is allowed is fairly broad and this year we are including personally modified military gear in the list. Complete details can be found at http://naqcc.info/challenges/challenges201903.html.

NEXT MONTH'S CHALLENGE: The April challenge will be an alphabet challenge with a list of commonly used phrases that have obscure, but interesting, origins. Details can be found at http://www.naqcc.info/challenges/challenges201904.html.

Complete information about our challenges including a helpful tutorial on how to organize your work for an alphabet challenge can be found at http://naqcc.info/challenges.html. Detailed general rules for our challenges can be found at http://naqcc.info/challenges_rules.html.

LAST MONTH'S CHALLENGE: The deadline for submissions for our February "Making A Baseball" alphabet challenge is still a few days away but preliminary results can be seen at http://www.naqcc.info/challenges/challenges201902.html. Final results will also be available there shortly after the 10th of the month.

PLAN YOUR PARTICIPATION: Remember that regular participation in both our sprints and challenges will qualify you for the great prize drawing in our anniversary celebration in October.

CHALLENGE HONOR ROLL: We honor the following members for their outstanding participation over the years in our monthly challenges. Exact counts can be seen at http://www.naqcc.info/challenges_schedule.html.

NUMBER OF CHALLENGES	MEMBERS
25+	N9SE KU4A K9OSC KD0V WA2FBN WI5H PA9CW NF1U WY3H N1JI VE3HUR G3JFS N1LU KJ4R KD2MX AK3X VE3DQN KA5PVB
50+	PA0XAW VE3FUJ NU7T(SK)
75+	K1YAN
100+	K1IEE
125+	N8XMS W2JEK
150+	K3WWP

NAQCC AWARDS

We have an extensive list of awards that you can earn. Complete details can be found at http://naqcc.info/awards.html.

FEATURED AWARD: 30-30 AWARD

Our 30-30 award is designed to promote the possibly underused 30-meter band. To qualify for this award you need to make 30 QRP/CW 30-meter QSOs during a single calendar month. You can find complete details about this award at http://www.naqcc.info/awards_magnum.html. (The QSOs that you make for this month's challenge can certainly be used for this award as well.)

RECENTLY ISSUED AWARDS:

None

NAQCC QRS/QRQ NETS

We have a number of nets (QRS = slow speed, QRQ = higher speed) designed to help people build up their CW operating skills. Complete information about these nets can be found at http://naqcc.info/cw_nets.html. Questions should be directed to Net Manager Wayne, NQ0RP.

NAQCC NET SCHEDULE

Net	Local Time	UTC	Freq +/-	Primary NCS
FarnsWord QRQ Round Table Nets (FRN)	Sunday 5:00 PM PDT 6:00 PM PDT 9:30 PM PT	Monday 0000 Z 0100 Z 0430 Z	5348 KHz ch2 7046 KHz 3556 KHz	60m JB, NR5NN (in CA) 80m Rick, N6IET (in CA)
East Texas QRS Net (ETN)	Monday 7 PM CDT	Tuesday 0000 Z	3564 KHz	Allen, KA5TJS (in TX)
Midwest QRS Net (MWN)	Monday 7:30 PM CDT	Tuesday 0030 Z	7031 KHz	Bob, W0CC (in KS)
Rocky Mtn Regional/Continental 20/40 QRS Nets (RMRc)	Tues & Thurs 4:00/4:30 PM MD	Tues & Thurs 2200/2230 Z	14060/7062.5 KHz	Dale, WC7S (in WY)
Virginia QRS Net (VAN)	Wednesday 8:00 PM EDT	Thursday 0000 Z	7035 KHz	Jeff. K9VEG (in VA)
Pacific Northwest 80 m QRS Net (PNW80)	Thursday 4 PM PDT	Thursday 2300 Z	3556.5 KHz	Stewart, KE7LKW (in WA)

Note: On the rare occasions that there is a conflict between one of our scheduled nets and one of our regular sprints the sprint will take precedence.

NET CONTROL STATION REPORTS

NAQCC FarnsWord QRQ Round Table Nets (FRN)
Sunday evenings 5:00 PM PT, which is Monday 0000 UTC, on 5348 kHz (Ch 2)*
Sunday evenings 6:00 PM PT, which is Monday 0100 UTC, on 7046 kHz +/-
Sunday evenings 9:30 PM PT, which is Monday 0430 UTC, on 3556 kHz +/-
60m NCS - JB NR5NN (California); 80m NCS - Rick N6IET (California)

*Please note that in case we lose NVIS on 60 meters before we're ready to QRT, we'll QSY to 80 meters at 3555.5 kHz± for the remainder of the early session. That has been working pretty well!

JB and I are sticking our necks out regarding adding a 40-meter FRN, once again. We're going to try having it just before sunset this month in hopes of snagging a few outlying former participants before the band really goes long. But it might turn out that it works better after sunset or around 7pm PDT. The sunset times are changing quickly near the equinox, so this schedule is likely to change at the beginning of April. We're not likely to enjoy NVIS propagation on 40 meters, no matter what time we meet, so the format of the net will be more like the NCS working each station one at a time for a single round of check-ins. And we might have to hand the conch (NCS) to one of the outlying stations who can hear the rest of us.

Below are the QNS reports for the months of January and February (since I missed the deadline for the February Newsletter). Dates and times are UTC.

Jan 7 - 5348 kHz, FRN/60 Early session - 0000-0045z
QNS (8) NR5NN/m NCS, N6IET co-NCS, K6GVG, AI6SL, KW6G, KE6EE, K0DTJ, W7SAG
Jan 7 - 3555.5 kHz, FRN/80 Early session - 0047-0121z
QNS (7) NR5NN/m co-NCS, N6IET co-NCS, AI6SL, K6GVG, KE6EE, K6JJR, N6KIX
Jan 7 - 3556 kHz, FRN/80 Late session - 0430-0517z
QNS (6) N6IET NCS, K0DTJ, KE6EE, KW6G, K6GVG, AI6SL

Jan 14 - 5348 kHz, FRN/60 Early session - 0000z - 0025z
QNS (5) NR5NN, N6IET, AI6SL, N6KIX, K6GVG
Jan 14 - 3555.5 kHz, FRN/80 Early session - 0025z - 0100z
QNS (5) NR5NN, N6IET, AI6SL K6GVG, WI60
Jan 14 - 7055.5 kHz FRN/40 Experiment - 0415z-0430z
QNS (2/4) NR5NN KW6G, (KE6EE, AI6SL)
Jan 14, FRN/80 Late session - 3556 kHz, 0430-0447z
QNS (4) Rick N6IET, JB NR5NN, Wolf AI6SL, Charles KW6G
Jan 14, FRN/160 Experiment - 1815.5 kHz, 0450-0510z
QNS (3) JB NR5NN, Rich N6IET, Roy K6GVG

Jan 20, FRN/60 Early session - 5348 kHz, 0000 - 0100z
QNS (7) NR5NN, N6IET, K6GVG, AI6SL, W7SAG, K0DTJ, KW6G
Jan 20, FRN/40 Early session - 7055.5 kHz, 0100 - 0145z
QNS (8) NR5NN, W7SAG N6IET, K6GVG N7HRK/m, AI6SL, KW6G, K6JJR
Jan 20m FRN/80 Late session - 3556 kHz, 0430-0505z; fxF2 = 2.88 MHz
QNS (5) N6IET NCS, KE6EE, KW6G, AI6SL, K7KY

Jan 28, FRN/60/80 Early session - 5348/3555.5 kHz, 0000-0100z
QNS (7) NR5NN, K6GVG, K6JJR, N6IET, W7SAG, AI6SL, KE6EE
Jan 28 FRN/80 Late session - 3556 kHz, 0430-0517z; fxF2 = 3.03 -> 3.30 MHz
QNS (6) N6IET NCS, N6KIX, AI6SL, K0DTJ, K6GVG, KW6G

Feb 04, Super Bowl Sunday - no nets.

Feb 11, FRN/60 Early session - 5348 kHz, 0000-0100z
QNS (8) NR5NN, N6IET, AI6SL, KW6G, W7SAG, KE6EE, K6GVG, WI6O
Feb 11, FRN/80 Late session - 3556 kHz, 0430-0500z
QNS (6), N6KIX, N6IET, K6GVG, AI6SL, KW6G, NR5NN

Feb 18, FRN/60/80 Early session - 5348/3555.5 kHz, 0000-0015/0016-0106z
QNS (6) NR5NN NCS, N6IET co-NCS, AI6SL, K6GVG, KW6G, K6JJR
Feb 18, FRN/80 Late session - 3555.5 kHz, 0430-0520z
QNS (5) N6IET NCS, AI6SL, K6GVG, K0DTJ co-NCS, WI6O

Feb 25, FRN/60/80 Early session - 5348/3555.5 kHz, 0000-0025z/0027-0107z
QNS (7/9) NR5NN NCS, N6KIX, N6GVG, N6IET, KE6EE, WI6O, KW6G, (AI6SL, W7SAG)
Feb 25, FRN/80 Late session - 3555.5 kHz, 0430-0514z; fxF2 = 3.3 MHz at 0445z
QNS (6) N6IET NCS, AI6U, KW6G, K0DTJ, KE6EE, NR5NN

Commentary

We're all having lots of fun chasing NVIS and often relaying to stations too close or too far to copy each other. We're hoping that we've reached the bottom of the 11-year sunspot cycle. We've experimented with both 160 meters and 40 meters. I finally have a great 160-meter rooftop dipole (occasionally), but the season for 160 is pretty much over until next fall.

We're adding a tentative FRN/40 (see schedule above). Check the website at http://naqcc.info/cw_nets.html in case we decide to change the time for FRN/40 to a later time.

72, 73 and 77,
Rick N6IET (and JB NR5NN by proxy)
JB NR5NN

==========

NAQCC East Texas QRS Net (ETN)
Monday evenings 7:00 PM CT, which is Tuesday 0100 UTC, on 3561 kHz +/-
Main NCS - Allen KA5TJS (Texas)

2019-2-5 QNI (3) NCS KA5TJS KE5YUM WA5IEK
2019-2-12 QNI(2) NCS KA5TJS WA5IEK Well the band was not very good tonight. Had Greg from MS 569 QRP for a nice chat. Nothing else heard here in ETX tonight.
2019-2-19 QNI(4) NCS KA5TJS KE5YGA WA5IEK KG5GGI The band was is good shape and had great copy on all and everyone heard everyone else tonight. Tony KG5GGI is not a member and first time check in. Great signal from central TX.

Allen KA5TJS

==========

NAQCC Rocky Mountain Regional/Continental QRS Nets (RMRc)
Tuesday/Thursday at 4:00 PM MT, which is Tuesday/Thursday 2300 UTC, on 14060 kHz
Tuesday/Thursday at 4:30 PM MT, which is Tuesday/Thursday 2330 UTC, on 7062.5 kHz.
Main NCS - Dale WC7S (Wyoming)

No Report

==========

NAQCC MIDWEST QRS Net (MWN)
Monday evenings 7:30 PM CT, which is Tuesday 01:30 UTC, on 7031 kHz +/-
Main NCS - Bob W0CC

2019-2-4 QNI (1) NCS W0CC - QSN 4-5. A lot of stations on the air, many QSB and many with very wide signals that could be easily filtered.Unfortunately, had to switch between 7.031 and 7.03130 because of QRM.
2019-2-11 QNI (1) NCS W0CC - QRN-8 No Stations near frequency.
2019-2-18 QNI (1) NCS W0CC - QRN-4 A lot of stations chasing DX from 7.001-7.026 but no one around 7.031. Next week.
2019-2-25 QNI (1) NCS W0CC S-7 QRN. Several stations active around 7.031, all in QSO. Next week will be the week for Net check-ins!

==========

NAQCC Virginia QRS Net (VAN)
Wednesday evenings 8:00 PM ET Which is Thursday 01:00 UTC, 7035 KHz +/-
Main NCS - Jeff K9VEG

No Takers for the month of February.
Jeff K9VEG

==========

NAQCC Pacific Northwest QRS 80 Meter Net (PNW80)
Thursday evenings 7:00 PM PT, which is Friday 0300 UTC on 3556.5 kHz.
Main NCS - Stewart KE7LKW (Washington State)

2019-02-01 QNI (5) NCS KE7LKW, KG7JEB, W7ANM, WB4SPB, K7JUV.
2019-02-08 QNI (6) NCS KE7LKW, KG7JEB, W7ANM, WB4SPB, K7JUV, KB7MA.
2019-02-15 QNI (6) NCS KE7LKW. KG7JEB, WB4SPB, N7TB, W7ANM, AD7BP.
2019-02-22 QNI (6) NCS KE7LKW. KG7JEB, WB4SPB, K7JUV, W7ANM, AD7BP.

Stewart KE7LKW, Randy WB4SPB, George WB4SPB
==========

HAM QUIPS

Dick Sylvan, W9CBT, #2062, has been a QRP/CW operator for a long time. He is also a very accomplished ham radio cartoonist and his work has appeared previously in the K9YA Telegraph newsletter. His book "HI HI - A Collection of Ham Radio Cartoons" is available at www.lulu.com.

NAQCC Chapter News

The North American QRP CW Club currently has nine local chapters - Western Pennsylvania, West Virginia, West Florida, Central Texas, Illowa, Delmarva, Downeast Maine, Long Island, and Florida - but we would be more than happy to expand on that list. Chapters are more or less independent local gatherings organized by NAQCC members in a geographical area and subject to a list of guidelines from the NAQCC. They provide opportunities to have fun and to promote our parallel passions of QRP and CW. If you are interested in forming a local chapter please contact Club President Paul, N8XMS.

If your chapter is planning a portable operation activity and would like to have it promoted on the club email list or in the newsletter, send an email with the subject “NAQCC Portable Operation” and with the exact wording of the announcement to Vice President John, N8ZYA, at the email address listed on the last page about a week before the operation. Please be sure to include the UTC time for the event and not just the local time.

A report about your chapter activity should appear here. Please send them to KD2MX or N8XMS at the email addresses listed on the last page.

NAQCC chapters located in the United States are welcome to use the NAQCC Club call, N3AQC for their special operations. Please contact call sign trustee Paul, N8XMS, to schedule the use of N3AQC.

Chapter Reports Begin On The Next Page

NAQCC LONG ISLAND CHAPTER

Items in this section are from the Long Island Chapter unless otherwise credited. Questions and comments should go to Howard, WB2UZE.

We started off on February 15 as per usual at the Atlantis Diner in West Islip and 4 of us had good eats and conversation. We then headed out to Robert Moses State Park Field 5 under a cloudy day with 44F temperature. All week there was the threat of rain so it was nice to be dry. The usual photo going over the Causeway Bridge to document the weather conditions was taken and a video coming back over the bridge as it started to get nice about 4 pm. The wind gusts at the beach were high and the surf was rough so putting up an antenna was not exactly pleasant, but everyone got done with their antennas in about 20 minutes and began operation from their cars.

Here are the set ups for that day:

John W2XS: Jackite pole 28 ft Inv. Vee end fed with twin lead, and KX2 5W. John stayed on 40m and did well and likes to ragchew as opposed to chasing DX.

Mike N2PPI: Tarheel Screwdriver Antenna on his car with FT891 5W. Mike took his lunch break from work with us, to support the Club. His antenna is a very a fast set up.

Bill W2IIT: FT817 5W and an inverted Vee. We did a test run on his antenna and got out to NM, PJ5 and 9A7 and he was receiving DX very strongly especially before the CQ WW contest weekend as there were many signals. Bill later switched to his bumper mounted whip antenna.

Walt KA2CAQ: 102 inch whip and Wolf River Coil with Small Wonders Lab DSW2 5W, 40m only. Walt's rig is interesting as its the size of about 3 cigarette packs and has no visible tuning readout. You press a button and the frequency readout is in CW. This little radio receives and operates very well which is amazing considering its simplicity and size.

Russ N2FRB: IC706 Mark 2 to a homebrew bumper mounted vertical that got out very well to the Caribbean.

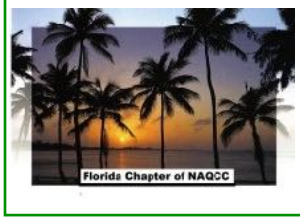
Helpful Ops without rigs: Walt W2TE, Bob KD2NFS and Howard WB2UZE. Nick KF2P and grandson came down for a visit and Nick worked us later from home.

Narrative:

We had a smaller turnout surprisingly than the one in January that took place in freezing weather, so maybe we have some QRP polarbears?? We had no issues this time with inter-QRM as one car was able to work one band and the particular cars that showed up this time are coincidentally the ones with set ups that are not really affected as much by inter-QRM. We also spread out a bit further this time. Member Bob K2YGM who is now portable in Florida, texted for a QSO and we met up on 20m and we were both S8. It is fun to work other members portable to portable

There are 19 photos and 8 videos in the Club file: https://tinyurl.com/CW-CLUB-FILES under QRP outings (file best viewed in Chrome), always thanks to Ron KE2UK.

NAQCC FLORIDA CHAPTER



Items in this section are from the Florida Chapter unless otherwise credited. Questions and comments should go to Steve, WB4OMM.

The Florida Chapter website is http://wb40mm.com/naqcc-fl-chapter.

NAQCC-FL Monthly Field Op February 15, 2019
Gemini Springs Park 37 Dirksen Drive, DeBary FL

Located on 221 acres at the SW corner of Volusia County Florida is Gemini Springs County Park. This scenic refuge offers boardwalks, camping, canoeing, horseback riding, a large and comfortable pavilion suitable for radio operations, restrooms, a nature trail, an abundance of liquid ground plane complete with man-eating creatures and a dog park.

John KD4JS and Nikki KM4SBQ

With a break in the bitter winter weather that has plunged our corner of Florida into 50 degree days, today we were blessed with an abundance of sunshine and temperatures in the mid 70s. The warmer attired shown below reflects the arrival temperatures way down into the upper 60s.

K3RLL KM4SBQ Bailey KD4JS

About 10 AM, John KD4JS #8019 along with his able assistant "Bailey", Nikki KM4SBQ and Don K3RLL #1905 convened at the comfortable pavilion overlooking the liquid ground plane water shown above.

Our equipment today was comprised of a KX3, leading to our 31' Unun fed vertical wire on telescoping pole. We managed to log a total of ONE contact today with KA4UPI #6124 in East Dublin GA before our one and only battery gave up the ghost. But KD4JS, the engineer in the group, rigged up a temporary charging station from his automobile that unfortunately only resuscitated our now lone power source for only a minute or two.

Despite the less than promising propagation report on QRZ this morning, we seemed to be getting out as shown on this Reverse Beacon Report:

de	dx	freq	snr	time
W8WWV	K3RLL	7061.0	15 dB	1502z 15 Feb
WZ7I-3	K3RLL	7061.0	4 dB	1458z 15 Feb
W4KAZ	K3RLL	7061.0	7 dB	1457z 15 Feb
AA4VV	K3RLL	7061.0	10 dB	1456z 15 Feb

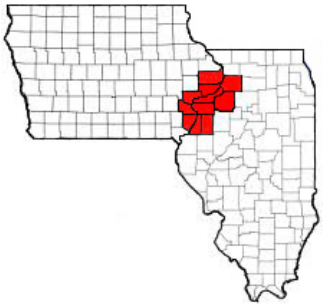
KD4JS' UNUSCCESSFUL BATTERY RESUSCITATION

With no other obvious options, we packed up and enjoyed good fellowship in this beautiful park for the rest of the morning in honor of our northern friends unable to do so today.

It's a safe bet we will be bringing along at least one extra battery for our March field event.
Hope to hear you then.

.... NAQCC-FL

NAQCC ILLOWA CHAPTER



Items in this section are from the Illowa Chapter unless otherwise credited. Questions and comments should go to Tim, N9BIL.

The Illowa Chapter operates in the “Quad Cities” area of Davenport, IA / Moline, IL.

The Illowa Chapter website is at https://sites.google.com/site/naqccillowa2/.

The Illowa group had a monthly chapter meeting on February 21st at the Bettendorf Village Inn. In attendance were Tim - N9BIL, Matt - N9MAT, NI9M – Dave and Peter - NN9K.

We discussed several operating events. First, we reviewed our Winter Field Day operations at NI9M’s QTH with an emphasis on fine tuning our DC power source and the use of solar panels to charge our batteries. Also discussed were our plans for this year’s Field Day, Skeeter Hunt and other local portable operations.

We also had a chance to discuss equipment. We discussed overall station configurations including antenna projects, like the Norcal Doublet and adding low pass filters, from Pacific Antenna, to our contest station set up. N9BIL also brought a newly constructed “Jeeves Multiplier Bell” for the group to review and discussed how it could be added to our multi-op configuration for announcing newly worked contest multipliers. This is a project originally designed by M1DST.

Our next meeting will be held on Thursday, March 14th at 7:00pm at the Moline Village Inn.

NAQCC WESTERN PENNSYLVANIA CHAPTER

Items in this section are from the Western Pennsylvania Chapter unless otherwise credited. Questions and comments should go to John, K3WWP.

No report available.

NAQCC WEST FLORIDA CHAPTER

Items in this section are from the West Florida Chapter unless otherwise credited. Questions and comments should go to Ron, N9EE.

The chapter's web site is at https://www.facebook.com/groups/967110089994401/.

No report available.

NAQCC WEST VIRGINIA CHAPTER

Items in this section are from the West Virginia Chapter unless otherwise credited. Questions and comments should go to John, N8ZYA.

The chapter's web site is at http://n8zyaradioblog.blogspot.com/.

No report available.

CENTRAL TEXAS CHAPTER

Items in this section are from the Central Texas Chapter unless otherwise credited. Questions and comments should be directed to Danny, N5DRG.

The chapter is located in the Austin, TX area and maintains a website at http://www.naqcc-centraltexas.net/index.html.

No report available.

DELMARVA CHAPTER

Items in this section are from the Delmarva Chapter unless otherwise credited. Questions and comments should be directed to Bill, N3IOD.

The chapter is located in the Delaware-Maryland-Virginia area.

No report available.

DOWNEAST MAINE CHAPTER

Items in this section are from the Downeast Maine Chapter unless otherwise credited. Questions and comments should be directed to Jeff, KA1DBE.

The chapter is located in the Hancock and Washington counties area of Maine.

No report available.

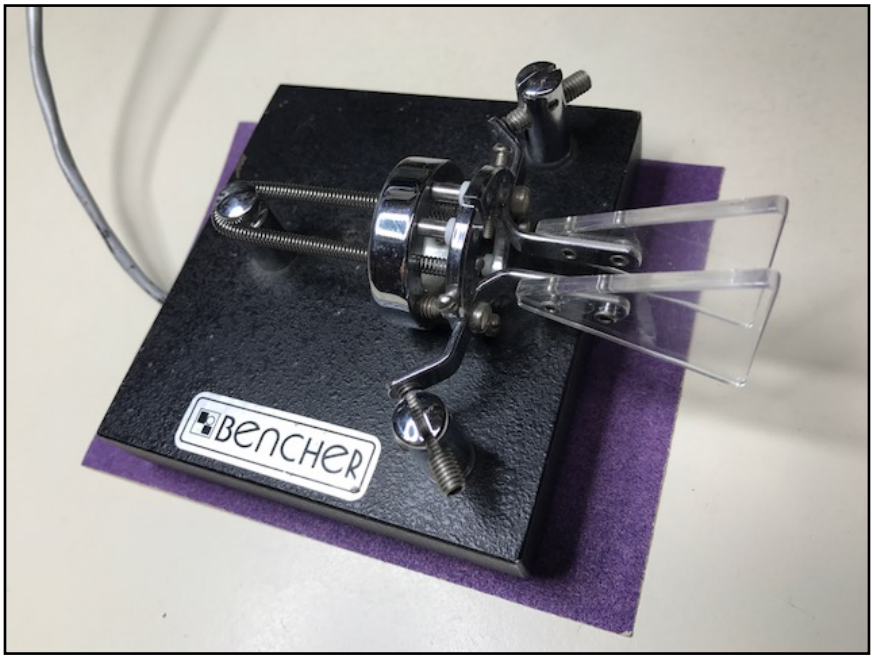
MEMBER SUBMISSIONS

This section is a forum for you to tell other members what you've been up to on the ham bands or to submit a short article dealing with some aspects of CW and QRP operation or equipment. Just about anything that would be of interest to our members would be welcomed. Send your items to our News Editor Paul, KD2MX.

DISCLAIMER: Any views expressed in this section are those of the submitting member and may or may not be those of the NAQCC or its officers.

From Gene, N5GW, #5353 —

While using my iambic key, I noticed it would occasionally slide around on the smooth table top. I found this was due to the rubber feet having hardened with age. The problem was solved by an old trick of placing the key on a square of fine sandpaper as shown in the photo. I used the kind that has the back surface coated with a gummy substance. My key is now completely stable.



From Chuck, N8NK, #7519 —

Very few hams have an antenna that's anywhere near ideal, and some wonder if they can have much fun with only a minimal antenna. I haven't been able to do our Sprints in a while due to cardiac surgery and hopefully recovery. But tonight I took a look at the Sprint results for February and was impressed by the antenna descriptions of the other folks in my category (SWA, keyer). So let's take a look:

"Inverted L @ 30'"
"End fed wire @ 25'"
"Dipoles @ 30'"
"40M dipole @ 25'"

And in reading the sprint soapbox, I really had to smile at the antenna description of member K3RLL: "… to HOA restricted black vertical put up only after dark." (by the way, a Sprint never felt like a Sprint unless I worked 'RLL'!) That antenna – and ham radio spirit – say it all.

While living in a 2nd floor apartment in Seattle, I easily worked 47 states and dozens of countries, as well as all continents but Antarctica. This with only a 40' non-resonant dipole, fed with homebrew ladder line, connected to a homebrew Z match, strung from living room corner to bedroom corner, about 1' below the ceiling. I easily worked Japan and Australia with less than a watt. All I had to use was a cranky old Heathkit SB-101, crippled enough to run QRP! And I only operated about an hour or two a week. My rig consumed 150+ watts for every watt radiated! Sorry, planet Earth.

Anything is truly possible while using QRP power levels and a VERY reasonable antenna. Even an indoor one. My past experiences and the results of our Sprints prove that.

Now if I may offer a critique of our club:

I feel that there is far too a strong of an emphasis placed on using a straight key. Straight keys are amazing devices for sure. They are beautiful. But I feel that the main emphasis should be on the use of Morse code as a very effective – and FUN – form of communication. And I feel that this would be a great start for our club:

Encourage members to share their experiences in learning our beloved code. I'd love to hear their stories! I'd love to know how Morse code impacted and enriched their lives and how they learned it. I want to know more about the 'people-aspect' than what hardware is used to form the characters. I'd love to see a feature once in a while on this! I'd LOVE to hear your stories, my fellow member brothers and sisters!

And not to be a broken record and remain in the same groove – but I feel that there should be no distinction in our Sprints based on mode of character generation. There should be no 'penalty' if you cannot pound brass. What if you can copy (and send) flawlessly at 35 WPM but cannot pound brass anymore? If the NAQCC prefers to list participants separately then I suggest eliminating the point disparity. Even better would be to remove this distinction completely. Or if you must, keep it, but list it in a column for that – with no point penalty. Let's be honest: it's a penalty.

Thank you NAQCC for the fun and thank you to those who make this wonderful club possible. I can't imagine the amount of work, dedication and sacrifice that it takes.

Come on members – you have stories to tell. Please share them!

Chuck, N8NK
Proud Member #7519

From Neil, W2NDG, #9695 —

The radio kit guide can be found at http://radiokitguide.com

What I'm currently building:
--NEW VERSION 5.0 uBITX board (pre assembled, needs to be wired up)
--MMM+ 40 M Transmitter from QRPGuys.com (designed to go with the above receiver) STARTING
--A Weber Tri-Bander from QRPKits.com
--JackAl board for uBITX (Parts Received, starting build)
--QCX from Hans Summers
--Slop Bucket II from Steve Weber (surface mount. need some practice first on something else)

Kit building has started again. I've been working at the dining room table on a giant cookie sheet to protect the table, and catch parts. I use a generic weller style iron with a temp control, or a weller battery operated iron. I love the battery one, even though I have to change the batteries often. I have a TON of AA batteries anyway. Headgear magnifiers with a headlamp are a must. For surface mount I have been using the weller with a tiny tip and moving parts with a small item from the Dental industry called a Pin-n-Stic. These look like little Q-Tips but instead of cotton on the end, they have a ball of something like post-it adhesive. Orthodontists use them to pick up brackets. https://goo.gl/ZY3ZRu

Upcoming Talks:
I'm still looking for some other venues now that I've moved out of the NYC Metro Area.
If you are in an organization looking for presentations on: Computers in general, Intro to SDR, Linux, Linux for Ham Radio, Raspberry Pi, Kit Building, Digital Modes, (or suggest a new one), contact me for availability. neil(at)neilgoldstein(dot)com.

New and notable:
--Hans Summers is inching closer to the release of the much anticipated QSX kit. Watch QRP-LABS for announcements. https://qrp-labs.com/qsx.html
--The SDR CUBE, was supposed to be available again on Jan 15. They now seem to be restocking some parts and expect to begin shipping again the end of February. The mini kit version is quite a bargain. Check out the listing for Midnight Design Solutions in the guide for more info. (Still waiting for the order link to become active as of this writing) . http://www.sdr-cube.com/ordering.html
--HF Signals is shipping a new version 5 of the uBITX board, which is supposed to have less issues with spurs and harmonics. Stay tuned. I have received mine already and will be swapping it with my version 3. http://www.hfsignals.com/index.php/ubitx/
--Special mention goes out this month to Third Planet Solar. TPS makes a number of QRP kit accessories, but the ones I want to talk about are the enhancements and replacement parts for the Heathkit QRP rigs: HW7 and HW8. TPS makes several items that turn these rigs into nice little performers, and/or replace hard to find parts. Check them out as well as their line of other QRP accessories. https://kc9on.com/product-category/qrp-accessory-kits/

NAQCC Club Information

Statement Of Purpose

From NAQCC President Paul Huff, N8XMS

Amateur radio has something for everyone. SSB, FM, AM, the digital modes, and QRO power levels all have their place in this great hobby and we certainly recognize the importance of these modes as well as the enjoyment that they give to many. But for a growing number of hams the challenge of *"doing the most with the least"* makes QRP (and QRPp) CW operating the greatest thrill available in amateur radio, and the North American QRP CW Club exists to promote this exciting facet of the hobby. As part of our focus we also encourage, but do not limit operators to, the use of simple wire antennas.

The NAQCC provides numerous opportunities for hams to enjoy QRP/CW operating. For contester types we have a popular monthly 2-hour sprint that runs at relatively low CW speeds and at a fairly relaxed pace. Three special sprints also take place during the year for 160-meter and QRPp operators. For a month-long activity we offer our members a Monthly Challenge that can be anything from forming a list of words from the calls of stations worked, to making a prescribed number of contacts using home-brew gear. There is also an extensive awards program to recognize the significant QRP/CW accomplishments of our members.

We also serve as a resource for people who are just getting started in QRP and/or CW. Our slow-speed CW nets are a great place for beginners to practice Morse code under real on-air conditions. Beginners will also find a wealth of helpful information on our club website and we are more than willing to try to answer any questions about QRP and CW that you might have. An extensive monthly newsletter is filled with useful projects and news from fellow QRPers.

A number of local NAQCC Chapters offer opportunities to get together for in person socializing and QRP/CW activities. Portable operations are especially popular with the local chapters.

Whether you are a veteran ham radio operator who is looking for a new challenge in the hobby, or a beginner who is intrigued by the possibilities of QRP/CW communication, we cordially invite you to join us. Membership is free and the benefits and fun are significant.

The North American QRP CW Club was founded in 2004 by WY3H and K3WWP and now has over 9500 members world wide. Membership is free and anyone interested in CW/QRP operating is welcome. Complete information about the NAQCC, including a membership application, activities schedule, and useful resources, can be found on our website at http://www.naqcc.info/. Inquires can also be sent to

Club President Paul Huff, N8XMS
9928 Eckles
Livonia, MI 48150
USA

Additional contact information can be found on the next page.

NAQCC CONTACTS		
NAQCC President Newsletter Editor	Paul - N8XMS	paul142857@gmail.com
NAQCC Vice President West Virginia Chapter	John - N8ZYA	jspiker58@gmail.com
Delmarva Chapter	Bill - N3IOD	william.hammond@mchsi.com
Downeast Maine Chapter	Jeff - KA1DBE	ka1dbe@arrl.net
Florida Chapter	Steve - WB4OMM	wb4omm@arrl.org
Western Pennsylvania Chapter	John - K3WWP	jsk3wwp@windstream.net
Central Texas Chapter	Danny - N5DRG	n5drg@naqcc-centraltexas.net
Illowa Chapter	Tim - N9BIL	n9bil@arrl.net
West Florida Chapter	Ron - N9EE	n9ee@tampabay.rr.com
Long Island Chapter	Howard - WB2UZE	wb2uze@yahoo.com
Help For Beginners	Brion - VE3FUJ	ve3fuj@wightman.ca
Member Submissions Member Spotlight	Paul - KD2MX	kd2mx@arrl.net
Facebook Page Manager	Jerry - K4KBL	digilink@gmail.com
NAQCC CW Nets	Wayne - NQ0RP	wayne.dillon@gmail.com

NOTE: These email address are not automatic links.
They are given here in graphic form to avoid harvesting by spambots.