



# Fall 2023 Newsletter



A home-brew key build by Don VE3IDS



## A Family Bond Built on Dots & Dashes: How a Father-Daughter Team Conquers the Code

At just nine years old, Nova has already achieved something that many adults have never even attempted. She has learned the language of morse code and made her first on-air QSO. It all started when her dad (me) jumped into amateur radio with both feet. Fascinated with listening to the dits and dahs I made, she asked me what it was for. I explained that it was a way to communicate with people all over the world using a simple handheld lever, commonly known as a straight key. Nova was never one to shy away from a challenge, so when I suggested she give it a try she was more than up for learning the language of dots and dashes. She started off slow, practising just a few letters with me each day. It was sometimes a frustrating process as she went back and forth between a reference chart and her key trying to recall how many of each dit and dah made up the character. Discouraged by the anemic progress both of us were making, I set to work to find a resource that could assist us in learning this new language.

Enter the Long Island CW Club. Founded in 2009, the Long Island CW Club (LICW) is a vibrant community of amateur radio enthusiasts that meets virtually every week on Zoom to practice and improve each others CW skills, learn from each other, and have fun while doing so. Part of LICW's base curriculum is about hearing the "music" of morse, the unique sound of each character and not the separate dots and dashes. Nova and I joined in on the weekly kids program and it wasn't long before the music of Morse began to come together for us.

The following weeks, in between classes and daily family activities, we would "code talk" with each other and her younger brother, sending



simple messages keeping the code fresh in our minds. As the classes continued Nova was introduced to the standard POTA QSO protocol, something she was already familiar with from listening in on my CW POTA adventures. On one particular Tuesday evening following class, I asked her if she wanted to try it out on the air with someone. I had already contacted a friend that was a few hours away and had things set up for her as a "sked" - short for scheduled contact - if she was willing. She was!

Following me down to the shack, Nova took her seat in front of the radio, with my Navy Flameproof key sitting ominously in front of her awaiting her hand. She watched patiently as I tuned in a frequency and we listened for the call. Then we heard it...dididi DAH dit dididi DAH DAH...her heart raced as she heard the dits and dahs of my call sign through the speaker of the radio.

With shaking hands, she tapped out my call sign on the key and to her delight, a voice came back answering her call. Over the next couple minutes, Nova conversed with someone she'd never met, but with whom she already shared a common language. They traded standard POTA information (RST, QTH) and their names so they both knew who they were speaking with. And before she knew it, Nova had completed her very first on-air QSO.



Needless to say, Nova was over the moon. She couldn't believe she was able to communicate with someone so far away using nothing but a few simple taps and clicks of a key. Now that she's made her first QSO, Nova is more hooked on amateur radio than ever before. She spends time during the weekends practising her morse code and continues to attend the LICW Kids program with me. She's even given the LICW club permission to onboard me as one of the kids program instructors, under the condition she gets to attend my sessions!

For Nova, amateur radio has become more than just a hobby – it's a passion. And **who** knows? Maybe one day we'll be reading about her again, this time as a seasoned operator who's pushing

the boundaries of what's possible on the airwaves.

As for me, I couldn't be prouder. Seeing my daughter take on a new challenge and thrive in it was a moment I'll never forget. Nova is a shining example of what can happen when you're willing to step out of your comfort zone and try something new.

**73 DE VE3NGN dit dit**



## THE LICW MORSE PRACTICE PAGE Why and how it was developed

As all good stories start: In the beginning the LICW Club used the G4FON program for instructing Morse Code in class and for student practice. This was a fine program that was developed by Mr. Ray Burlingame G4FON in England and who provided it for free to anyone who wanted to use it. Unfortunately, Mr. Burlingame recently passed away and despite the gracious help from his widow, we were unable to find the source code for updates and modifications.

About this same time, Bob K4RLC was researching how Morse Code was taught in the 1930's and 40's. Howard WB2UZE, one of the Club's founders asked Mike N1CC to look into how the Club training program was structured and whether there were better methods that should be looked at. Bob helped Mike source the 1936 Ludwig Koch report and had it professionally transcribed into English. He also sourced the 1919 article by Otto Lipmann. Mike also read works by Biegel, Keller, Taylor and others. Based on the research and input from many Club members, it was determined that Morse Code should be taught at a character speed of 12 word per minute (wpm). It was also determined that the best way to introduce the characters was by looking at which ones were used most frequently during real QSOs. These requirements were addressed by the core curriculum development team of Mike N1CC, David VK5PL, and me and would become what is now known as the Beginners Carousel. This created a problem for using the G4FON program, as its lowest character speed was 20 wpm and it used a different set of characters for its lessons. Obviously, we needed a different solution. Our first attempt to address these issues was to create hundreds of text files that could be played on CW Player, another Morse Code program. We

were well into that process when Randy KN4YRM began posting about his personal CW Player on our groups.io page. Randy is a professional software developer and had adapted the SC Phillips Morse-Pro Library for his unique practice requirements. Randy wanted to practice CW daily by having headline news played in CW and also wanted a way to easily flag the characters he missed for follow-on practice. Luckily for us, he wanted to give back to the LICW Club and Amateur Radio and joined the core development group.

After a lot of time and effort by Randy and others, an initial version of the LICW Morse Practice Page (MPP) was created. Randy was careful to write the code in a language which could be maintained and modified by future developers. It was also a browser-based program so it was much easier to use across all the various operating systems. Another nice feature was that content could be added by the core team without specialized programming skills. This would turn out to be a major factor in the MPP's ongoing development. The first official use of the MPP was during the introduction of the Experimental Beginner's training program in early 2022. At this time, the driving concern was to get it up and running for the Beginner's 1 and Beginner's 2 training sessions. If you go back and look at it at that time, it does not look a lot different except that it only had content for BC1 and BC2, but most of the basic programming was already included. It should also be noted that there are hundreds of text files hidden in the background that needed to be created, tested, and modified just to get these two training levels going.

The next article will address how it was modified to meet the needs of the ever- changing Beginners Carousel curriculum. See you then.  
Tom AB5TN



## Member Profile

I was always interested in electrical "stuff" and I got my BSEE from St. Louis University in 1970. I had a novice license back in the 1960's but never pursued it. After I retired, I decided to get back into Ham Radio and got my Extra class licence in May of 2019. I wanted to learn CW so joined the LICW club and have never looked back.

Email: AB5TN48@GMAIL.COM



Tom Noller AB5TN



## SLOW SPEED TRAFFIC NETS

**Edward Conway**

N2GSL- Class Extra

QTH- Baldwin, NY on Long Island

Ham since 1986

Age- 67

Joined LICW Jan 2019 - Member NR 97

Current radios include Icom IC-718, Yaesu FT-891, Venus SW-3B, LNR MTB-3B.

Belong to – LICW, SKCC, NAQCC, 30CW, FISTS, NARC, LIMARC

Currently I enjoy hunting and activating Parks on The Air and making SKCC contacts. I find using QRP power surprisingly rewarding. Antennas at home currently are a doublet fed with window line and 80m EFHW.

I am retired from manufacturing where I wore many hats. I have designed assembly stations and programmed machines to make and measure fine pitch gears. I have been a site quality manager as well as an ISO internal auditor.

*73,  
Ed Conway  
N2GSL*



## Members profile

### KC9YL Anne

I'm from a town of 700 in northeast Wisconsin, I've been a ham since 2011 and enjoy DXing and contesting. Other hobbies include tatting (NOT



tattooing!), playing ukulele, pickleball and harmonica. I also volunteer at the local Historical Society and enjoy power-walking (4 miles/day). Some of my favorite ham radio events include activating special event stations at the Oshkosh EAA Air venture in July and the Cobia Club operation aboard the USS Cobia World War II submarine for the Museum Ships on the Air and Veteran's Day. I have a Cushcraft A4S with the 40m add-on atop a 34' tower, as well as a G5RV-Jr about 12' up on a good day. My HF rig is a Kenwood 570D, and I am looking to replace it with a more modern rig one of these days. The LICW ladies group has evolved over time - originally organized in 2020 as an instructional B1 class, where Leann W4LEA led the ladies through the basics of the CW characters. I joined the group in June, and I would take members who were more experienced into the breakout room, where we would work on improving our head copy and sending using various drills and activities. After several months, Leann moved out of state, my schedules changed, and I put the group on summer hiatus.

It became clear that LICW didn't need an *instructional* class exclusively catered to YLs, so the idea of the Open House was born, which I moderate. We resumed our weekly gatherings in Fall 2021. We have about a half-dozen 'regulars' each week, but welcome any YLs who care to

stop by. We answer questions, share tips & tricks, and offer suggestions and encouragement when necessary. I send out weekly recaps to all of the LICW YLs, where I document our discussions and include upcoming events/contests.

*Anne Dirkman*

*KC9YL*

*See you on the air!!!*

*73*



*kilo-charlie-nine-yankee-lima*

..- -.. -... ..- -..

*CWOPS #3070 - SKCC #23183T - LICW #628*



## WHY MORSERINO

There are two primary learning curves involved with the mastery of CW. Each are critical to smooth conversation with Morse Code. First, you must develop instant character recognition (ICR). Not an easy feat, but very rewarding. LICW classes are the key, but having an ICR training device provides 24/7 opportunities.

Willi Kraml (Morserino designer/manufacturer) worked with LICW instructors to provide a dynamic LICW Carousel with Koch Trainer. It duplicates class structure and is easy to access.

<https://groups.io/g/LongIslandCWClub/files/Morserino%20White%20Papers/LICW%20CARO%20USEL%20WITH%20KOCH%20TRAINER%2003%202023.PDF>

Second, it is imperative that your fist is sharp & accurate. Most operators are convinced that their sending is excellent. Not so. What you think you hear is not always what the recipient hears. Practice sending as much as you do receiving. Both are equally critical.

This is where the Morserino shines. Willi has programmed it such that only properly spaced signals are acceptable. There is no adjustment for errors. The OLED display will quickly show a \* when the character is incorrect.

I practice several times each week utilizing the CW KEYER function set at a fast speed (WPM). Gradually, I work the speed down to a level where my "fist" is almost 100% correct.

<https://www.youtube.com/watch?v=BUC4fi04XpY>

The above just scratches the surface of what the Morserino can do. In future issues, we will cover kit assembly, WIFI setup, Echo Trainer, LoRa, etc. The objective is to explain how the Morserino can make you a better CW operator.  
RESOURCES:

MORSERINO WEBSITE:  
<http://www.morserino.info>

A wealth of info is located at LICW Drop Box folder 19

White papers are available in the LICW Groups.io to download or print.

LICW TRAINING: Sun 10:00 AM ET (1400 UTC): Morserino Users Group, with Roger N3GE - Zoom A



## The Doctor is in - BIO

First licensed as WN1JXR in 1967. Amateur Radio lead me to pursue a career in Electrical Engineering, earning BSEE and MSEE degrees from the Univ. of R.I. I have worked for Raytheon Co. on RADAR Systems for 42 years as a Senior Principal RF/uW Design Engineer. Retired end 2019. ARRL Western Mass. Section, Assistant Section Manager ARRL Western Mass. Section, Section Technical Coordinator / Specialist Long Island CW Club Leader for the “Doctor Is In” Forum and Co-Leader for the “Elmer 101” Forum and the “Antenna” Forum.

I’m not a Contester or chase DX, but just a “Rag Chew” QSO operator. I’m mostly a CW Operator, enjoy QRP Operation. One of the founding members of the NE QRP Club.

I also enjoy refurbishing and operating the old “hollow state” boat anchor tube rigs from the 40’s, 50’s and 60’s. Enjoy teaching ham radio license classes and giving talks and seminars on Antennas, Transmission Lines, and Antenna Modelling, Circuit Modelling and Vector Network Analyzer antenna measurements. Enjoy introducing new Ham operators to CW. The first digital mode!

73’s Greg WA1JXR dit dit



## LICW “The Doctor Is In” Forum

Back in January of 2021, Howard WB2UZE contacted me asking if I would take over the Basic Electronics Theory Forum. This Forum was given by John W2XS. John had decided to take a well-deserved break from teaching the class. As a retired Electrical Engineer Howard felt I would be a good fit to take over.

I reviewed the material from John’s class in the drop box and found John had done an amazing job running this class. I could not think of anything I would change or add and since all this material is in the LICW drop box that there was little point in me repeating all the material. I thought about it for a bit and recalled that as the education committee lead for our local radio club, I had done a weekly one hour session on the clubs local 2M repeater called “The Doctor Is In”. This was inspired by the ARRL QST article and Podcast of the same name.

The Forum is intended as a place where LICW members can come and ask questions technical in nature about various Ham Radio topics. Pretty much anything Ham Radio related is fair game. Since the inception of the forum we have covered a wide variety of topics. Here is a sample of some of the topics we have covered.

- Introduction to Inductors and Capacitors and Parallel Resonant Circuits
- Introduction to Amplitude Modulation and Crystal Radio
- TRF Receiver and Superheterodyne Receiver
- HF Horizontal Loop Antenna design and Simulation with EZNEC
- Understanding Impedance and Transmission Lines
- Baluns, What They Do and How They Do It
- Antenna Radiation and Propagation,
- Computer Circuit Modeling Software
- Understanding the Transistor, Amplifiers Class A, B, AB and C





- Understanding Transmitters Part 1
- Understanding Transmitters Part 2
- Limiter and Clipper Circuits, Microphone Types and Specifications
- Elmac PMR-6A Receiver Reverse Engineering and Design of Modern Power Supply
- Vacuum Tubes, How They Work and How They are Built
- Vacuum Tube Testers and Testing Vacuum Tubes
- The 43 Foot Vertical Antenna, Inexpensive Tube Testers
- SWR and Coax length, Test Equipment in the Shack TinySA NanoVNA MFJ Analyzer Frequency Counter
- ELMAC PMR-6A Power Supply Update, - National HRO-5 RX Update, Coax and SWR, Test Equipment
- Oscilloscopes, How they work, Minimum Requirements, Low Cost Models
- Introduction to Inductors and Toroids. Review of Data Sheet for Amidon material 31 and 43

If there is a presentation or a special topic then I usually record the session. If the forum is just open forum question and answer I usually do not record the session. The Dr Is In forum can be found in LICW Dropbox # 35.

As you can see from the topics the sessions tend to be a little on the technical side. This probably mostly due to the fact that I am a retired Electrical Engineer, but I think interesting to the average Ham Operator.

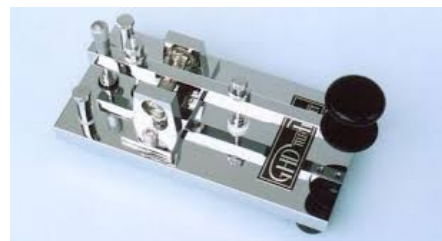
We also spent a number of weeks going over topics covered in the ARRL QEX magazine articles by Eric KL7AJ called Self-Paced Essays on Electrical Engineering. This series of articles started back in year 2000 so we went back and covered all the topics up to the present.

So if you have a question or a topic you would like to discuss or find out more about stop in on

Monday nights 7PM EST on Zoom B and ask your question or topic or you can send me an e-mail at wa1jxr@comcast.net and I will be glad to spend some time and discuss it with you.

Hope to see you all on Monday nights.

73 Greg WA1JXR



### Boat Anchors

Every Saturday at 1100 EST we have the Boat Anchor forum. We have been very lucky to attract some of the most well known vintage gear enthusiasts who all like to share the knowledge and experience. The result has been a very congenial group ranging from 20-40 members each time that enjoy each other's company. The forum has managed to stay alive for the past 3 years with new speakers each week, which frankly is not an easy task. All the previous presentations have been recorded and are in Club drop box folder 09 by year. Every second Saturday of the month we now have open forums where attendees will commune and discuss whatever they like. Here is the line up of presentations for the balance of the year:

10/7/2023 Daniel K6YIC



As you can see there is a very interesting line up and we welcome all members to attend. Even if vintage gear is not your passion, there is something for everyone in these presentations. So hope to see you there.

73 Howard



## PROFILE OF A LONG ISLAND CW CLUB OPERATOR

By Terry Jackson, WB0JRH

“The only thing worse than being blind is having sight but no vision.” – Helen Keller

LICW Club member Jenna Hurley (N4JEH) has faced complex challenges to achieve her personal goals, and she reminds us to utilize our goals and visions to meet challenges head-on.

“I am most proud of being able to overcome challenges as a visually impaired person to live in this world, like finally being able to pour my glass of milk without spilling any on the table,” said Hurley. The most minor things mean a lot to her. At seven, Hurley was adopted from an orphanage for the blind named Bethel China in Beijing by an American family. Today, she is eighteen years old. She has seven siblings, five adopted and two biological. Two siblings, Avery (K4VRY) and AJ (K04ZRP), are licensed ham radio operators. Both are working to improve

their CW skills. Hurley currently lives with her father and three brothers in Trussville, Alabama. Hurley became a proficient, high-speed (QRQ) CW operator in one year.

At eighteen years old, she can send CW at 50 WPM and copy CW at 60 WPM with excellent proficiency. After decades of practice, most of us can only dream of achieving these blazing speeds. Looking into Hurley’s past may shed some light on how she became proficient in CW within a year. “I learned the alphabet in just two days,” says Hurley, and I immerse myself in CW and practice for one or two hours a day.” A typical practice session includes getting on V Band for some sending and QSO practice with friends, then on to LCWO to explore what can be copied. Hurley immerses herself in CW by tapping on her desk about the things around her or whatever comes to mind. She will repeat this practice several times a day.

When Hurley was asked what music we might hear while riding in a car with her, she said, “I like many of Mozart’s piano sonatas, along with Bach’s orchestral masterpieces. She shared that she learned some tunes on a piano at the orphanage where she lived as a child. She also began playing the ukulele in 2016. Hurley sees her background and love for music as an advantage for learning CW. Timing is one of the most essential elements of music and CW.

Hurley receives spoken language and almost instantly translates it into meaningful ideas and thoughts. “That is what I do with CW,” explains Hurley. “As I am copying, I am processing what I just heard into ideas, rather than ‘deciphering’ each letter or word and then attempting to keep them all glued together until the end of the message. Finally, I try to make sense of it all.” Learning foreign languages has been a long-time fascination for Hurley. After ten years of being

dormant, she remains somewhat knowledgeable in her first language, Chinese. She also knows some German and French. CW is life-changing for Hurley. She has found new ways of communicating and learning new skills through language. Hurley says, “I enjoy playing around with different languages, and now since I have mastered the code, that has enlightened me to new ways that could help me improve skills in other areas.”

Braille is a tactile reading and writing system for the blind and visually impaired. Says Hurley, “It is a tool that helps us live independently in a world where we are surrounded by challenges that seem like nothing to the sighted community.” Unfortunately, similarities between CW and braille do not exist. Hurley responded to a question about whom she would like to sit down with, dead or alive if given the opportunity. “Samuel Morse,” quipped Hurley, “and I would ask him how he came up with Morse Code in the first place and if he expected it to be used like it is today.”

Anyone who knows Hurley would agree she is comfortable communicating and socializing with others. “I find some way to remain very positive and friendly to myself and those around me. I believe this kind of personality has led to some great successes with relationships and making new friends through CW,” said Hurley. Hurley found a way to put herself in the ‘learning zone.’ Head Copy does not come easy for most CW operators. Hurley is no exception, although she found a way to improve her head copy by rag-chewing through long conversational QSOs, exposing herself to the code. “This is a fun way to improve head copy and make new friends,” said Hurley.

Reaching the stars is easy for Hurley. She would eventually like to be proficient at 80 WPM. “Funny thing,” she said, “when I first began, I

thought 20 WPM was an impossible speed. I moved my goal speed to 30 WPM, again thinking it was impossible. Now I am over 50 WPM and wondering what is next.”

Hurley quickly credits her father, David Hurley (KO4WSU), for his impact on her life. “He has introduced me to things that just flat blow my mind,” said Hurley, “He has always been a very loving and helpful father to me, and I would not be where I am without him.” David introduced Hurley to ham radio and all the cool things that can be done within the hobby. CW came out on top and had her hooked from the beginning. When asked if she began her ham radio hobby talking on SSB, she responded, “CW ALL THE WAY.”

Hurley’s most interesting CW contact is with her best friend Gunner (KK7DEU), who is also very deep into learning CW and QRQ. “Things got a bit crazy,” says Hurley. They challenged each other to see how fast they could send the alphabet and copy each other. By the end, both were flying around 60 WPM. That QSO inspired Hurley to reach out and strive to be the very best operator she can be. “We made many mistakes, but that does not matter,” said Hurley with a smile.

Hurley and Gunner have a YouTube channel called QRQ Maniacs. Here is where they post fun CW QRQ content, such as jokes, short stories, and other CW-related stuff. Hurley sees herself as a total computer geek. She hopes to pursue computer science when the timing is right. She enjoys web design programming with HTML, CSS, and JavaScript. She further enjoys playing around with the electronic aspects of Raspberry Pi. Being home-schooled for ten years has been favorable for Hurley, providing the flexibility to learn things she would not get out of a public school. This includes braille and how to adapt to surroundings with visual impairment.



Teaching CW has been a positive experience for Hurley. She teaches a head copy class with an emphasis on phonics. The class meets every Thursday at 6:00 PM CDT in Zoom A. She is inspired to share her love for CW and help as many people as possible to achieve head copy in a fun and motivating atmosphere. Everyone is welcome in the class. You will find several CW keys scattered around on Hurley's desk. She enjoys playing with all of them, including a 1980s Vibroplex Vibrokeyer, a Vibroplex Original Bug from 1969 that was her 18th birthday present from her father, a 3D-printed straight key from CW Morse, a red dual lever paddle, and a touch paddle.

Hurley's learning path for copying and sending CW differs from most learners. She is self-taught, a majority of what she knows today. Her learning experience, combined with standard procedures, has resulted in a unique teaching experience we can all benefit from. Many CW operators wonder how a blind person can operate a CW radio station. Hurley takes the mystery out of that for us. She uses a unique screen reader program that verbally speaks items on the computer screen. Navigating around the screen is used with keyboard commands. "A screen reader cursor, like a mouse cursor, moves to different parts of the screen. Wherever this cursor lands, the screen reader will speak whatever text is found within this square-like cursor, like a button, for example," says Hurley. Some rigs are more adaptable for the blind than others. Kenwood appears to have more accessible features, including frequency readout, menu item readout, tactile markings on physical buttons, etc. "On Icom rigs, the only thing I have noted to be accessible is the speech button that speaks the S-meter and what frequency you are on. I hit this button a lot," said Hurley.

Jenna Hurley has the admiration and support of all her friends, family, and instructors, along with

students and staff at LICW Club. You need not look far to recognize the CW Community's admiration and love for Jenna.

Following are personal thoughts about Jenna from a small sampling of LICW Club members. Mike Padron (N1CC) – Jenna's relaxed and non-pretentious personality puts everyone at ease. Her excitement about Morse Code is infectious, and her life story is inspirational. Jenna is a joy to be around. If only I could get her to stop calling me Cubic Centimeter. Catherine Goodrich (W4CMG) – I first met Jenna in the kid's class as I was coming on as an instructor, and she was getting ready to move onto teaching the adult classes. She didn't need teaching as she was already sending and copying at speeds my fingers and ears still dream of. Jenna always brought extra fun to the class and was willing to help the kids' instructors. I have also worked Jenna on the air in SKCC events and the Wednesday CWTs several times. It's always fun, and we take the time for a (very) quick personal greeting or 73 at the end of the contest exchange. I have Jenna's very nice QSL card for our first exchange, with an additional hand-crafted message card in braille. Very special !

Denis O'Brien (N2JFF) – I first heard about Jenna when she attended the QRQ class. I was very impressed at how fast and precise her sending was at high speeds. A few weeks later, I had a random contact with Jenna on 20M, and she was sending on a straight key at about 20 WPM. We had a long rag chew QSO, and her sending was just as precise as her paddle.

Jerry Pyle (WB7S) - I have only known two other blind folks, and they both did amazing things with their lives. They both seemed to possess a sixth sense. That said, I believe Jenna is also one with a sixth sense. She has shown me that despite her disability, she can accomplish amazing things.



She inspired me to work harder at head copy and to have fun with CW on the air.

Howard Bernstein (WB2UZE) – Jenna came to LICW first in our kid’s program in the spring of 2022 with about half the characters down, which she self-taught. Within a few months, she was proficient with head copy in the 20 WPM range. It was such a rapid rise in CW proficiency that she could teach at CWops within the following months and then with Terry WB0JRH in an LICW head copy class. It is uncommon for a person to learn CDW so rapidly and at the same time pass on this knowledge to others, especially being a young adult. We are delighted to have Jenna as a member and instructor to LICW and the overall CW community. Hurley is taking classes at the Alabama Institute for the Deaf and Blind (AIDB) in Talladega, Alabama, rated as the world’s most comprehensive center for educating and working with the blind and other disabilities.

She is learning a lot about developing mobility and navigational skills as well as assistive technical skills on the computer. “I am learning to recognize landmarks in my path, such as a drinking fountain,” says Hurley, “and the proper use of a cane.” “The only disability in life is a bad attitude” – Scott Hamilton

As you have heard throughout this interview, Hurley found a path to remain positive and friendly to herself and those around her. She has a phenomenal attitude, and the results confirm it. She is highly respected by anyone who knows her, young and old.

Hurley invites each of you to her head copy class on Thursdays at 6:00 PM CDT in Zoom A. All CW skill levels are welcome to join this class for a fun and educational experience. Follow Hurley’s plan, and you will become the best operator you can be.

Thanks, Jenna, for allowing me to delve into your life as a CW operator. You, indeed, are an inspiration to those who know you. You are an impressive and exciting young woman. Your upbeat personality and determination are contagious. I am proud to call you a friend.

**Terry Jackson, WB0JRH**

**This is Jenna and Gunner at their first POTA activation.**



## New Member profile

My name is Thomas Cort, and I joined LICW in August of 2023. However, my CW journey started many years earlier. In middle school, I was active in the Ham Radio Club at Barre Town School which was run by Phil Acebo (KA1YUB). When I made a contact with a station in Georgia from Vermont, under Mr Acebo's supervision, I was hooked and decided to pursue getting an amateur radio license. Back then the FCC had a 5 WPM code test in addition to the written test for the novice license.

I went to my local Radio Shack and purchased Gordon West audio cassettes for learning CW. I studied and prepared for my tests. At the Milton hamfest in 1999, I took both tests and failed the code test by one letter. I continued studying and attempted the test again at the Red Cross in Burlington, VT.

Again, I failed the code test by one letter. I was persistent and tried again when the Central Vermont Amateur Radio Club held a VE session in the fall. I finally passed the code test. About ten years later, I made my first CW contact on the air. I used a QSO template from a book and started the QSO with GA OM (Good Afternoon Old Man) only to find out the other operator's name was Sarah. I was so embarrassed, but it taught me a valuable lesson: CW is the ultimate equalizer; there is no age, race, gender, class, ethnicity, etc when you're meeting and communicating with someone on the air, just dits and dahs. I've since fallen in love with CW, and I joined LICW to take my CW skills to the next level. If you take anything from my story, it's that being persistent will eventually pay off and get you to where you want to be.

Tom VA2NW LICW 4896

## Member profile

My name is Lidiette. I have been a ham since 2022. I am a mother of two small children and married to KO4DVG. My 5 year old tends to be next to me during my zoom classes and some of you may have already met her. I would like to share my ham story.

Here it is:

On March 14, 2022, I went to my local radio club to take my Technician License test. However, it took two years to be convinced by my husband to become a ham. Four weeks after I got my Technician License I decided to take the General Exam.

I was very excited to get my General License but at the same time saddened because due to personal financial priorities hindered me from getting an HF radio.

In the search for a way to connect with others I discovered a group of like-minded YLs (Young Ladies) on the Indian Conference channel on Echolink. This amazing group of women with a different spectrum of ham radio experience lifted my ham spirit. A few weeks after joining the YL Indian group on Echolink I was given the opportunity to be net controller. It has been a nice way to learn more about the ham world.

On March 10, 2023, I finally made my first HF contact at my local radio club. I was elated! After a few visits to the radio club's ham shack, I decided to get my Extra License. I did not like being restricted of using certain frequencies in certain bands.

On April 14, 2023, I got my Extra License. Be aware that not because I got my Extra License I am the most knowledgeable or experienced ham. It took me three weeks to study (or should I



confess memorize the questions and answers). Now it is when I am learning and understanding many ham related stuffs. However, I have a lot to learn and understand.

On May 27, 2023, my husband installed my Diamond vertical antenna BB7V and set up the ICOM-7300 that he gifted me. Trying to decide which ham radio frequencies to tune into was quite an adventure, but hearing Morse code for the first time over the air was thrilling. The sound of dits and dahs was music to my ears even without understanding the meaning of each sound. That is when I decided to start searching for an online course that would guide me how to learn Morse code.

During my online search I found the Long Island CW Club. I really liked what I read on the LICW website. Therefore, on June 14, 2023, I joined the Long Island CW Club. A few days later I attended my first BC1 class with instructor Jim (N0IPA). I felt very welcomed. Twenty-one days later I made my first QSO with instructor Randy (KB4QQJ). I was terrified but excited too.

I am still studying the sound of the characters and trying to become proficient. I notice that each week I grasp more and more. I always keep in mind what one of LICW instructors [Mike (N2PPI)] advised me “there will be good and bad days in CW”. I don’t dwell on my bad CW moments. I like to learn from those bad moments and make them a success story.

My two-bedroom townhouse has already reached its capacity to add more furniture. For that reason, my simple ham shack setup is on top of a storage cube organizer located next to my dining room table. I use a 3D printed straight key along with my kids’ \$10 headset.

Do I want a nicer headset, a nicer key, a better antenna, an amplifier and so on and so on? Of

course! But as I pursue my radio passion I have to gracefully balance the most important role — that of a mother. Simplicity has not stopped me from making radio contacts.

The world of amateur radio is not just about the technology that we use but about the human connection that transcend frequencies and distances.

Thanks for reading and if you hear me on the air please QRS.

73 KQ3Q



## New Member profile

My first Novice call sign was KN6QQB in 1956 then moved up to General and dropped the "N". I joined the US Army in 1959 and spent time in Germany as DL4TU and chief operator at club station DL5AU (Augsburg Germany). I lived in the midwest for a while so changed my call to W9JWD. Upon return to California I was issued W6LEN in 1969. I am a native Californian but I have operated from XE, 4U1ITU and also from HV3SJ.

After retiring from Grumman Aircraft, I now have all the time in the world to chase DX and contest (mostly cherry picking). I moved in to an "over 55" community so we couldn't put up big antennas or run high power, so sufficed running 100 watts (Icom IC-7610) and a vertical. I am still able to work my share of DX and have fun in contests and also active in the WWFF/ KFF parks and POTA using my Icom IC-7300 as my portable radio.



Recently added an Yaseu 891 as back up portable, an excellent radio, but then, so is the IC-7300.

**73 Jess W6LEN**





## Code Buddy Sked Roster

We currently have 46 LICW Members on the Code Buddy Sked Roster. If you would like to be added to the Roster, please read the Information Document in Dropbox 80 and email me the requested information.

We have members ranging from BC1 level to very advanced cw operators. When you are added to the Roster you look for other ops at your cw skill level and contact them to set up a regular schedule to practice sending & receiving. These are not mentor-student sessions. Rather student-student sessions working together to help each other advance.

Some sessions will be private Zoom sessions, on the air practice, Vband sessions or any other resource you both have access to.

From Kathleen KK6CN;

I've made good use of the Code Buddy Sked Roster and I highly recommend it for improving head sending and head copy skills. I'm not necessarily much faster (other things get in the way), but I'm certainly more confident and a better CW operator, overall. What keeps me wanting to keep it up is I really enjoy meeting with my buddies; sending stories, copying stories and getting to know each other.

Between Zoom and on air QSOs:

Ongoing Weekly Code Buddies (100% zoom except for when Bill has insomnia and is up at 2:30 am and it's only 11:30 pm my time):

Bill - N2FZ

John – AF4PD

Here are some others with whom I've had regular or occasional QSOs (Zoom and/or on air). With some of these we've tried to make a regular thing out of it, but even with the best of intentions, propagation, QSB, QRN and life cause them to fizzle.

Wayne - KN6EY (our Master Code Buddy!)

Al – Ag5GW, Steve – W4GSN, Carol – K6NF , Brian – W4BIT, Dave – ND4K, Bill – K6WIL, Jim – K4SSN, Tom - W0FN

Tommy - OZ1THC (just had our first one on 8/26)

Jacques – KN6VVQ

From Wayne KN6EY;

Before we started the Code Buddy Sked Roster I would get on the air & send CQs out but really hoped no one would answer me. I would check the RBN & various SDR beacon stations to see if my signal was going out & it usually was.

After getting better at ICR & code buddy practice I had the confidence to get on the air knowing that I did not have to copy every character perfectly. If I miss something I can either let it go or ask for a repeat. Also, I am no longer afraid to get the dreaded ..--.. (?).

At present I have 3 regular code buddies:

John KB1CSI We meet on Zoom

Mike K7MNF We meet on Zoom but are going to try for on the air qso Bill K6WIL We have on the air qsos when the propagation gods favor us I have had other code buddies but because of equipment issues, summer schedules with family we are not meeting right now.

The idea behind the LICW Code Buddy & LICW Challenge On-the-Air-Meet Up on Monday, Tuesday, Thursday & Friday is to give all LICW members but especially our newer more timid & shy ops a place to get their feet wet by getting on the air with friendly people who will be considerate of their slower speed operating.

If you have any questions about the Code Buddy Sked Roster or the On-the-Air-Meet Up send me an email. I will answer by email or if you would like to meet on Zoom let me know.

73 Wayne KN6EY LICW#1922



### LICW Antenna Forum

Each Sunday morning at 11AM EST, a number of LICW Hams gather in ZOOM “A” to talk about Antennas (see below):

The Antenna Forum organizing team consists of Greg WA1JXR, Rachael M1AYZ and Kim N8FNC.

Our original intention was to ‘Host’ speakers on various antenna topics each week, and occasionally to pause and field questions from our members on their specific antenna concerns. As time went by, finding speakers on ‘new’ antenna topics became more difficult but, we found that most members wanted, and needed, to talk about their own antenna problems. As a result, we now only occasionally ‘interrupt’ our personal antenna discussions to host a speaker. “My God, it’s full of stars!”

Just as Bowman in Sir Arthur C. Clerk’s novel ‘2001: A Space Odyssey’ found he was looking through a doorway to an infinitely large space, the Antenna

Forum finally understood a few factors:

- Every antenna installation is unique,
- It’s not just the ‘Antenna’ that counts,
- Grounds and ground references are critical,
- SWR is not the whole story,
- Feed lines can make a world of difference,
- Etc.

Time and again that first point about the unique features of each QTH location, the bands to be used, where an adequate ground can be found, how much power is planned, what type of antenna is possible given space available, nearby trees or buildings to use as tie points, how often do the HOA patrol?...All these and more contribute to an always interesting and informative exchange of information among everyone on line. When new topics arise, usually someone in the group has had experience with it. Speaking of HOA antennas, check out the Drop Box

(22) for the presentations on impossible to see HOA proof antennas. Some are in plain sight and literally invisible, even when you know where to look.

Equipment & ‘things’:

It seems that Ham equipment, and especially stuff related to antennas can be a never-ending Pandora’s Box of ‘What is that, what is it good for, should I make my own, or buy it, is there a kit for it, and is there a YouTube video about that?’ (Whatever ‘that’ happens to be today.).

Most often than not, one ‘regular’ member of the group that gathers for the Forum on Sunday at 11AM on ZOOM ‘A’ either has one, has used one, and has a story to tell about their success or failures. If there is an internet source of information, we can usually count on Grant KG4SDR, one of our ‘regulars’, to post it in the Chat for us all. Build it and Find Out!

I have always believed that: after initial research (reading what you can find about the ‘what-ever-that-thing-is’ item), attempting to build your own with minimal cost in materials (raid your junk box) and running into at least one of the corollaries of Murphy’s Law (“Anything that can happen, will happen.”) i.e. (something usually goes wrong with the first try of anything), will result in one of at least three outcomes’ results: You now know a LOT more about the widget than you did before. You probably understand more about RF and its relationship to the equipment, and If you finally decide to purchase a kit or manufactured version, you know enough to make a more ‘informed’ decision. “Experience trumps logic” is not just a casual saying. In Amateur Radio it should be a guidepost for any of your activities.

Caution:

The ‘experiences’ of some of our members have driven home the point that many of us (most?) are getting to an age when we should not be climbing



trees, crawling up on roofs, or scaling antenna towers, or (as with one of our members) not being careful enough when walking in our own yard if it is on a slope and we are laying out ground radials.

Leave that to the professionals.

Their fee is less than your trip to the hospital! (Of course, shortly after writing this, I was on our roof, just to prove I can't take my own advice.)

The Team:

The 'lead' folks that keep the Forum running I mentioned earlier, but here is a bit of background: Greg WA1JXR, is a retired Raytheon radar engineer who also runs 'The Doctor is In' forum and co-hosts the 'Elmers' group. Greg lives on the East coast of the US and actively participates in local Ham events. Greg also plays the 'stand up base' with his local band.

Rachael M1AYG is a retired Magnetics Research Scientist and tells us that she has signed the 'Official Secrets' act in the UK, so some projects are avoided. Rachael also hosts the 8AM EST CW Practice group on Mondays and Fridays in ZOOM A.

She lives in Northern Great Britain and is an avid cyclist on her 'Brompton' folding bike and is

"always fiddling with antennas".

Kim N8FNC is a retired EMC (Electromagnetic Compatibility) test engineer. He is also a team member for the Slow CW Net Class on Tuesday evenings along with the lead, Ed N2GSL, Lane WK4WC and Rob W2ITT. The team also conducts the V-Band open forum for practicing traffic net protocols on Friday evenings. Kim is a licensed private pilot, PADDY certified scuba diver, teaches STEM classes at the local library and plays classical guitar in his 'spare' time.

Check the LICW calendar for day and time details on all classes and forums.

POTA & SOTA Forum:

While we like to see folks join us for the Antenna discussions, I also want to direct interested Hams to the Saturday AM "Portable Operations Forum" when it comes back online on September 30th. While our Sunday 'Antenna Forum' tends to focus on fixed QTH sites and associated antenna types, the Portable Operations Forum has many outside speakers, and they present a diverse range of light weight (suitable for backpacking) antenna topics.

Check them out and I believe you will be pleasantly entertained and informed.

73 N8FNC AR



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**Dots, Dashes, and Discovery:  
My First CW QSO  
Ryan KG7QGB**

First QSO 8/8/2023

For as long as I can remember, the world of amateur radio has always beckoned me. My brother and I harbored dreams of procuring our ham licenses as young adults. However, Morse code - or CW as we ham enthusiasts refer to it - was the daunting barricade that prevented us from realizing that dream. Though the Morse code requirement was eventually lifted, it took me another 9 years to muster up the courage and get my license. To this day, my brother hasn't taken the leap alongside me, though I encourage him regularly.

Enter the Covid pandemic, a time that handed many of us vast expanses of free time. An eternal learner, I turned to my phone and embarked on a self-imposed Morse code challenge. For two years, I persisted with various apps, trying to decipher the dots and dashes, longing for the day I could effortlessly converse using CW. To say the least, it was a painful experience. Then, one day, as I was watching a Ham Radio Crash Course video, I briefly heard a mention of a CW club by the name of, the Long Island CW club. Joining this community was a revelation. In a mere six weeks within the LICW club, I felt more progress and connection than in the two solo years I had spent trying to master CW and its rhythmic language.

As I neared the end of the Beginners Carousel 1 (BC1), I often tuned into Morse transmissions and forum discussions to immerse myself in the rhythm. It was during one of these sessions that I heard Jim (N0IPA, LICW#588i) and Dale (W7HLO, LICW#2356) attempting to establish contact. Given that Dale was virtually in my backyard - him in Washington state and me in

Oregon - the signal was clear as day. On a whim, I mentioned my ability to pick up Dale's transmission. The inevitable question followed: did I want to try and establish a QSO? To say I was nervous would be an understatement. Though I was familiar with the Morse code letters, the live experience of communicating via CW was entirely new territory. With a racing heart and clammy hands, I donned my headphones and turned up the volume. The unmistakable rhythm of my callsign, KG7QGB, echoed in dits and dahs, marking the beginning of my very first CW QSO.

The experience was both exhilarating and humbling. I realized that, beyond the dits and dahs, CW is about connecting with fellow enthusiasts, about challenging oneself, and about being part of a community that celebrates continuous learning.

To the LICW club and all my fellow ham radio enthusiasts: thank you for guiding me on this incredible journey. For those on the fence about CW - every dit and dah is a step towards a new connection.

Happy QSO-ing and 73!



## My First CW QSO

Joy N6GO

First QSO 8/28/2023

I had been lurking around in the background of Discord for a day or so. I had downloaded Discord months ago when I first joined LICW but didn't really know how to use it. I had also heard about the "licw challenge" and saw it on the discord menu yesterday so I thought I would take a look. From the comments on Discord, it looked like people were really low key and encouraging so I took the leap and sent my first message in discord to Dave N5DCH in NM. Dave had been trying to make a contact with someone else but Dave couldn't hear him. I sent Dave a message asking if I could try a contact with him. We settled on a frequency and after calling QRL (I think that's right), I called CQ and Dave N5DCH came back to me. I was going partly by the script given to me by Jim N0IPA the week before and partly by the seat of my pants. We traded the necessary info and finished the QSO. Since I don't really know how to end a call, I just used the way I have heard on SOTA QSOs. It seemed to work.

A little while later I made my second contact with one of the sending instructors, Randy KB4QQJ. I think it went pretty well.

I am anxious to learn CW so I can make DX contacts with my 100 w station and a fan dipole. I know CW is much more efficient than SSB. Even though I have made some nice SSB contacts from the SF bay area to South Africa, Australia and NZ I know I can do better with CW.

I currently work portable with a group of friends on Fridays at a park near the San Francisco bay. Because of being near the salt water we are reliably contact Japan,NZ and parts of Europe on SSB. One in our group is a CW only op and he is able to get many more DX stations than we

can on SSB. So, my goal is to work DX with 10 W or less from the park. It's doable, but I need to be confident in my CW skills.

Decoding call signs is my next goal. It's a work in progress and it always will be. You can always get better. Thanks to the many and varied classes licw offers it looks like I am going to have fun for a very long time.



## Defining Proficiency in CW

### Quentin K7DRQ

When an amateur radio operator begins to learn CW, they are faced with a number of major challenges. While Morse code has been called “the original digital mode”, an “alphabet”, and even “its own language”, the truth is that all of these are correct to some degree. This places learners of Morse code somewhere between human modulator-demodulator, cryptographer, and linguist.

Those who succeed in learning CW, however we wish to define success, find themselves able to send and receive information using only the modulation of a single, pure tone. That information varies enormously depending on the operator’s desired application, but it spans from a minimal contest’s “this is who I am, I hear you well” to full-blown conversations that can last an hour or more.

As with all aspects, all modes, and all flavors of radio, the point of it all is communication of information. It’s relatively easy to communicate over SSB, as it extends our everyday mode of communication : speech. Digital modes can allow more or less information to be communicated, depending on the mode, but these modes require some amount of technical knowledge and capabilities, and so they have a bit more of a learning curve. Once you know how to use these digital modes, however, you can converse; you can communicate whatever you like. I would argue that this is even more true of CW, where the operator has a lot to learn, and a number of skills to acquire, before they can comfortably communicate.

What does it mean to be comfortable in communication ? Much like speaking another language, “comfort” comes with comprehension

and ease of expression. It comes with decreased hesitation, when things become fluid. It comes with fluency.

A fluent CW operator makes communication seem effortless. They nod along as the dits and dahs come in over the air and, when it’s their turn, transmit their reply with confidence, knowing they will be understood. The exchange flows, meaningful information is shared, and traffic is closed with a dit-dit. This paradigm applies equally well to rapid-fire contests as to marathon ragchews.

For me, proficiency in CW therefore comes when things become more natural. Rather than a halting, confused exchange requiring significant mental efforts to translate sounds into letters, then words, then eventually meaning, a natural and fluid exchange is one that is undemanding. It’s like speaking. This “proficiency” has become my goal in learning CW : to have it feel like having a verbal conversation. It’s been a real adventure.

A lot of the work we do in LICW’s Advanced classes focuses on making things feel more natural, more fluid. We do a lot of head-sending, ensuring we can “speak” without having to think too hard about what we want to convey. Closely related to this is head-copying, which is admittedly a whole slew of skills and techniques to overcome a plethora of limitations that arise in the brain : short- and long-term buffers for building words and sentences, context cues for facilitating word recognition and error-correction, a gentle focus that allows us to copy while under difficult conditions or through mistakes, and of course a good grasp of instant character recognition, which really reduces the strain on all that neural processing.

Our Beginner’s curriculum develops operators who know their full alphabet and understand



general CW protocol. They have learned some of Morse code's specific jargon and can engage in short QSOs at 12 words per minute. They are part linguist, part cryptographer, and part human modem. The primary goal of the new Intermediate curriculum is to help these operators communicate more naturally and more fluidly. It is to turn CW from an exercise in letter-by-letter translation and manual look-up tables into another spoken language, in which the operator can be conversant and fluent. The idea is to make communicating in Morse code feel natural. We are working hard to develop this new Intermediate curriculum, and hope it will have the same impact that our new BC curriculum has already demonstrated.

Regardless of whether you enjoy contesting, DXing, ragchewing, or any other aspect of the hobby, being able to do so fluidly seems like a great target – and what is more fluid, more natural, than a simple spoken conversation ?

### Bio

Quentin K7DRQ was born in France, and has lived in six different countries. He was first drawn to CW in 2019 because of its simplicity and versatility, on a home station or operating QRP in the field. Now, CW is one of his real passions, alongside cooking and learning about the natural world. Quentin is LICW's Lead Instructor.

K7DRQ working the CW station at Field Day 2023.



## Notes from Essential Operating Subjects Sessions

- Tuesdays with Anthony Luscre, K8ZT
- Thursdays with Catherine Goodrich, W4CMG

By Anthony, K8ZT (k8zt73@gmail.com)  
What in the world are Essential Operating Subjects?

When you are looking through the extensive and sometimes overwhelming schedule of LICW Classes, you may see Cathy's or my sessions listed as Essential Operating Subjects and wonder, "What in the world is that?" In this article, I will try and answer that question. Unfortunately, it is not as straightforward as "Beginners" or "Intermediate" class descriptions because Cathy and I always cover a wide and varying set of topics.

The common thread, though, just like when your mother said, "Eat your vegetables" or "Take your vitamins," is that it is good for you and your LICW progress. As a matter of fact, one of Cathy's sayings is, "Time on the air – get your Daily CW Vitamin – one a day!"

Although our approaches vary, we both strive to help you get on the air and be successful Amateur Radio Operators. We constantly strive to provide you with broader goals, tips & tricks, operating aids, and a wide variety of operating opportunities and activities. These include contesting, POTA & portable operating, award chasing, new bands to try, and more. We also cover tools to help you maximize your experiences with logging & contesting software and QSLing (both traditional and online, including LoTW and eQSL), ways to check your own signal and find other potential contacts with DX Clusters, Reverse Beacon Network and free Online, Tunable SDR Receivers.

We are also there to answer questions on almost any aspect of operating on the air. In addition, we will be providing a little pushing, urging and goal-setting to keep you moving forward in your LICW and Ham Radio journeys. We encourage club members of all levels and experience to join us weekly, and if the time is inconvenient, view recorded sessions via LICW Dropbox Folders 64 (Joy of Operating) & 54a (Reaching Your CW Goals). I also maintain a continuing document with upcoming and previous materials from my Tuesday "Joy of Operating" version of Essential Operating Subjects at [tiny.cc/joynotes](http://tiny.cc/joynotes). You can also find Cathy's notes on her sessions in the Recaps Folder in Drop 54a.

Cathy and I will be doing tag-team articles for upcoming LICW newsletters and would love your feedback.



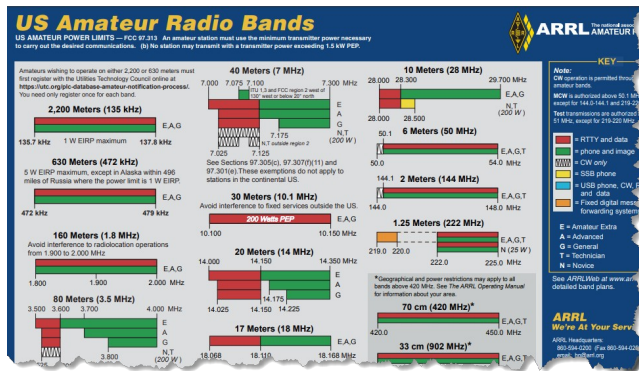
### Sample Material From an Essential Operating

Subjects Session Recently, I covered Cathy's Thursday session with a presentation, "Charts & Maps for Amateur Radio." The session had over 230 links to free operating aids for Hams. The session included: Band Plan Charts, Frequency Allocation Charts, Amateur Radio



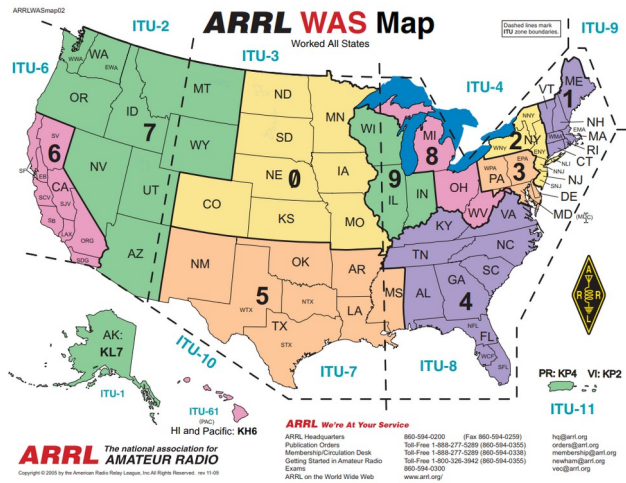
Maps, Interactive Maps, Grid Square, County & Zone Maps, Prefix Maps, Amateur Radio Software for Mapping, Radio Cheat Sheets & Mini-manuals and Technical & Operating Aids.

You can watch the recorded video in Dropbox 54a and view the slideshow with all the links to the resources at [tiny.cc/mcfar](http://tiny.cc/mcfar). To whet your appetite, here is a short sample of the resources.



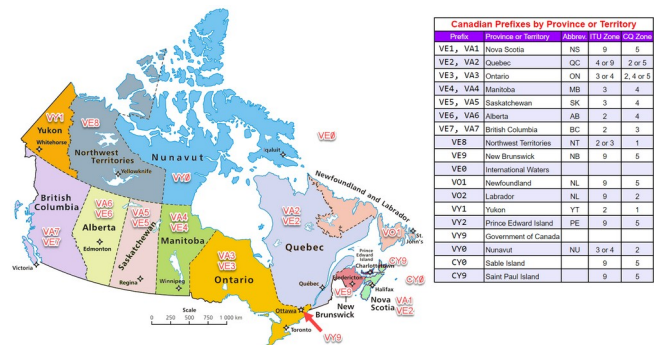
- ARRL
  - Frequency Bands Chart (8.5 X 11; grayscale)
  - Frequency Bands Chart (11X17; color)
  - On The Air Version- Frequency Bands Chart VERTICAL (8.5 X 11; color)
  - Complete Band Plan Text-Based Reference
  - The Considerate Operator's Frequency Guide

- ARRL/RAC Sections Map
- Worked All States (WAS)

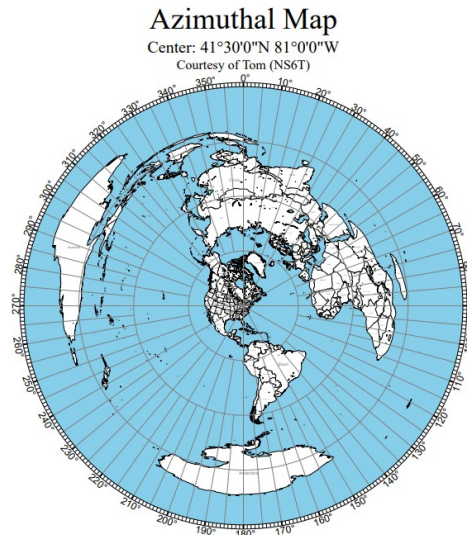


**K8ZT**

- US General Class HF Allocations
- K8ZT- Section List
- Canadian Band Plan
- Canadian Prefixes by Province or Territory
- FM Simplex & 2 Meters Considerate Operator Guides
- 10 Meters Considerate Operator Guides



10 Meter Considerate Operator's Guide							
All Licenses (Technician)				General, Advanced & Extra			
CW & Data		Phone (SSB Only)		Phone & Image		AM, FM Simplex & FM Repeaters	
28.000-28.299		28.300-28.499		28.500-28.899		29.000-29.699	
28.000-28.070	CW	28.300-28.499	SSB	28.500-28.899	SSB	29.000-29.200	AM
28.074	FT8	28.380	10-10 Nets	28.680	SSTV	29.200-29.510	FM Simplex
28.080-28.120	RTTY	28.385	QRP SSB Calling	28.800	10-10 Nets	29.520-29.580	Repeater Inputs
28.180	FT4					29.585-29.605	FM Simplex
28.120-28.150	PSK					29.600	FM simplex Calling
28.120-28.189	Automatically controlled data stations					29.620-29.680	Repeater outputs
28.190-28.225	Beacons						
28.200	NCDXF Beacons						



NS6T-  
 Create & print an Azimuthal Map centered on your location- an interactive website  
 Create My Amateur Radio Map- OK2PBQ  
 K2DSL- ADIF to Map Amateur Ham Radio Contacts

- Q Codes, Pro-Signs & Abbreviations
- o Q-Codes & Prosigns- link
  - o Abbreviations- Link1 & Link2
  - o ARRL Quick Reference Operating Aids



**Beginners Carousel 1 & 2 :**

**Whats Happening**

The Beginners Carousel (BC) class format has been a huge success since it was adapted last year. The hallmark of the BC1 and BC2 format is that there is no beginning and there is no end. What that means is that in every class you attend, you will learn three new letters that day. You will do drills with those three letters to reinforce them. Also, during the class, the instructor uses the same tool to do those drills that you will use at home. So, if you are attending a class regularly every week and you have “life” throw you a curve ball, it’s OK! You can come back anytime and join right back into a BC1 or BC2 class and it will come back around to where you left off. Along the way you will learn three letters. What’s happening in BC1 and BC2? Well besides the description above, we are seeing migration.



That is probably the best part of teaching a BC1 or BC2 class. We get to see new faces come in, stick around for a few weeks then trickle out to the next class. All the while we get to see new faces trickle in. With the introduction to sending being introduced right up front in BC1 we also get to listen to the brand-new student send a letter or two. It is such a sense of accomplishment when we hear that student in their first week send a letter, then get to hear them sending letters 6 weeks later. We are there when their fist developed.

Listening to a student as they develop their fist is really neat too. The *crème de la crème* is to be at a park calling CQ during a POTA activation, pencil in hand, and see one of your students call signs come out on your log. You can not help but cheer out loud. Then, what really sends it over the top, is when you see that student volunteering to be a BC1 or BC2 Instructor... Then in essence, the Carousel truly does come full circle.

~W4EMB

#### About the author

Ed Bennett, W4EMB. Retired. Ham since late 2008. Joined LICW in Aug of 2022 to learn CW. Six months later in Mar of 2023 started teaching BC1.



## SLOW SPEED TRAFFIC NETS

ED CONWAY N2GSL  
FALL 2023

### CAN SLOW SPEED TRAFFIC NETS HELP US ALONG OUR CW JOURNEY?

On Tuesday evenings the LICW Slow Net Class meets at 7pm eastern. Lane WK4WC, Kim N8FNC and Rob W2ITT and I attempt to inform all that venture to join us in the art of formal message handling. When we started this class, we discussed why we were undertaking this task. Two main threads came out of this discussion. First, listening to traffic nets was another tool that could be used to practice decoding morse code on the air under all band conditions. Second, relaying formal messages or radiograms is a skill that is needed today just as was needed at the inception of the Amateur Radio Relay League and we could inspire the next group of traffic handlers. After all Amateur Radio is a service. Over the next few years, we finely tuned a series of presentations and resources that we hope convey what is necessary to understand what goes on during a CW traffic net. Let's look at what a CW traffic net is. On a scheduled basis a group of ham radio operators get together on a predetermined frequency (after checking if it is free) to send or relay formal messages from one part of the country to another. The leader of the net is the Net Control Station (NCS). The NCS starts by calling up the net usually by sending a preamble consisting of the name of the net and welcoming all amateur radio operators. Next, the NCS asks for stations to check in. Messages that need to be relayed are listed when stations check in. The NCS conducts the movement of the traffic so that all the messages are moved forward closer to their

destinations. When there are no more stations to check in and all the traffic is passed then the NCS releases to stations and the net is closed. This is the high-level view of CW traffic nets. During our sessions we detail all parts of the net. There are slow speed (10 to 13 WPM) training nets across the country that meet on a schedule that you can listen to live on the air and use as a resource for code practice. Each time you listen to a traffic net you experience different band conditions and different operators or fists. Getting used to decoding under these variations will ease your way to getting on the air. To facilitate the flow of the CW nets there are protocols, special Q-signals, abbreviations and prosigns. We have developed a LICW Slow Speed Net Class Manual that includes many reference documents you can use to understand what you decoded during the net. The manual can be downloaded from the LICW Groups.io files page. Open LICW Groups.io and click on Files on the left side navigation list (see Fig-1), then click on CW Net Info and there is the LICW Slow Speed Net Class Manual ready to download. A listing of Slow Speed Nets can be found in the Class Manual (see Fig-2). You should be able to find a net in your area that you can hear. The National Traffic System or NTS is the framework that the system is built on. Check out the ARRL website <http://www.arrl.org/nts> and the Radio Relay International website <https://radiorelay.org/> for more information.

What kind of “practice” can you experience by listening to CW Nets? During the net call up there are some plain language words and some special Q-signals for you to decode. As the stations participating in the net start to check in you will hear their callsigns. This allows you to practice decoding callsigns. Following the directions that the NCS gives to the stations lets you hear

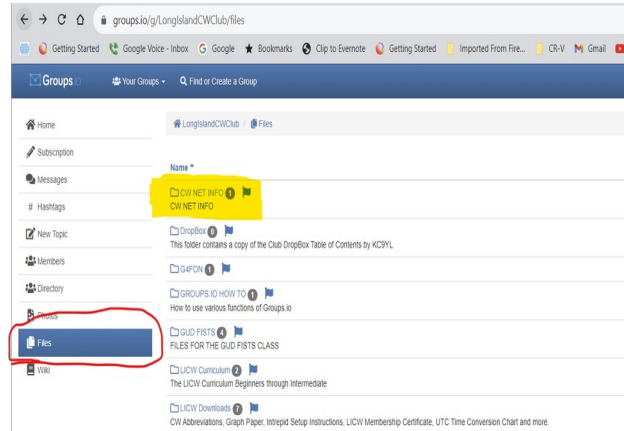
some more Q-signals. When the actual messages are relayed there is some structured information in the beginning or preamble of each message then the text of the message itself. These pieces of the net all add up to a nice practice session. Nets usually last from 15 to 25 minutes. Here is an excerpt of what might be heard on the Carolinas Slow Net:

QRL?  
 CSN CSN CSN DE WK4WC CAROLINAS  
 SLOW NET MEETS DAILY ALL WELCOME  
 CSN  
 QND QNZ DE WK4WC/C (WK4WC IS THE  
 REP FROM THE NC EVENING PHONE NET)  
 CSN QNA CN REP QNI K (ASKING FOR A  
 CAROLINAS NET REP /B)  
 CSN QNA SC REP QNI K (ASKING FOR A  
 SOUTH CAROLINA NET REP /D)  
 DE WS4P/D GE LANE QRU AR  
 (WS4P IS THE SC REP) (NO TRAFFIC)  
 GE AL WS4P TNX/D AR  
 CSN DE WK4WC QNI K  
 W  
 W  
 DE KV4WN GE LANE QRU AR  
 (KV4WN CHECKS IN NO TRAFFIC)  
 KV4WN GE NED &lt;AS&gt; CSN QNI K  
 CSN DE WK4WC QNI K  
 M  
 M  
 DE N6MRS GE LANE QTC KV4WN 1  
 &lt;AR&gt; (N6MRS, MIKE CHECKS IN AND  
 HAS ONE  
 MESSAGE FOR KV4WN)  
 N6MRS GE MIKE R1 ; (R1, NET CONTROL  
 RECOGNISES ONE MESSAGE)  
 CSN DE WK4WC QNI K  
 K  
 K  
 DE KI4KZS GE LANE QRU (KI4KZS  
 CHECKS IN, NO TRAFFIC)  
 KI4KZS GE BRENT  
 CSN QNI K  
 WS4P R NET CALL PSE K



CSN CSN DE WS4P QNI K (AL WS4P ASKED TO MAKE A NET CALL FOR NCS)  
 CSN CSN QNI NIL K (NOTHING HEARD)  
 TU AL PSE

So, you can see that that there are many ways to streamline the back and forth between NCS and the net participants. There can be a learning curve to understanding what is taking place as you listen to the net and that is what our class is all about but that doesn't stop you from decoding for fun and practice. I think the answer is yes, listening to Slow Speed Traffic Nets can help us on our CW journey. I hope that you give listening to CW traffic nets a try, Remember wherever you are on your CW journey and however you choose to practice remember to have fun!



NET NAME	FUNCTION	FREQ.	Net TZ	Net Time	DAYS	NET MGR	Rcvd at: Call	Rcvd QTH: City / State	COMMENTS Note: * denotes net is affiliated with the National Traffic System
Oklahoma CW Training Net	Traffic/Training	7.120.60	CT	1720	Daily	WB5KND			
* K9YA Slow Net	Practice/Fun	7.137.00	CT	1900	Daily	N9BOR			
* Texas Slow Net (TSN)	Traffic/Training	3.552.00	CT	1945	Daily	W5ESE			<a href="http://www.atcweb.com/tsn/Texas_Slow_Net.htm">http://www.atcweb.com/tsn/Texas_Slow_Net.htm</a>
ILN (Illinois Net?)	Traffic	3.538	CT	2000	tbd	WC9P	N8FNC	Dearborn, Michigan	Seems to be a training net.
NARL CW Slow Net	Traffic/Training	28.180.00	ET	730	Daily	AA1GW			
Hit And Bounce Slow Net	Traffic/Training	7.112.00	ET	730	Daily	N7MPS	WK4WC	MOUNT PLEASANT, NC	<a href="http://hitandbounce.net/">http://hitandbounce.net/</a>
Sunrise Net	Practice/Fellowship	7.123.00	ET	900	Daily	K440XX	WK4WC	MOUNT PLEASANT, NC	<a href="http://qsl.net/srn/">http://qsl.net/srn/</a>
*Maine Slow Speed Net	Training	3.585.00	ET	1800	Daily	W1QU			
Empire Slow Speed (ESS)	Traffic/Training	3.566.00	ET	1800	Daily	W1ZG	W2ITT	Huntington, NY	Frequency Corrected here 9/11/2021
Midsouth CW Training Net	Training	3.593.00	ET	1800	Daily	WD4PTJ			
* Ohio CW Slow Net	Traffic/Training	3.535.50	ET	1810	Daily	WD8Q	N8FNC	Dearborn, Michigan	Good signal into southern Michigan
Commonwealth Slow Speed Net	Traffic/Training	3.547.00	ET	1830	Su/M/Th/Sa	K2PB	K2MZ	New Net - Welcome!	
NJ-CW-Slow-Net	Traffic/Training	3.547.00	ET	1830	Daily	K2PB		Currently inactive.	
PA CW Training Net	Code Practice	3.537.00	ET	1830	Daily	N35W			
PA Traffic Net (PTN)	Traffic/Training	3.585.00	ET	1900	Daily	N3GE			
* Maryland CW Slow Net	Traffic/Training	3.563.00	ET	1930	Daily	W8CPG	N2GSL	Long Island, NY	Weak Signal
* Carolina Slow Net (CSN)	Traffic/Practice	3.571.00	ET	2000	Daily	KV4WN	WK4WC	MOUNT PLEASANT, NC	New NET MANAGER
* VE2UMS CW Traffic Net	Traffic	3.578.00	ET	2000	Daily	VE2CBW			
MARISN (Ma & RI: Slow Net)	Traffic/Training	3.598.00	ET	2030	Mo, Tu, F, Sa	K2MZ		Currently inactive.	Advised closed by W2ITT
MICHIGAN QRP NET	INFORMAL	3.535.00	ET	2100	Tuesdays	K8JRO/MI	N8FNC	Dearborn, Michigan	Strong NCS Signal
* Georgia CW Training Net	Traffic/Training	3.549.00	ET	2100	Daily	WE4GA	N8FNC	Dearborn, Michigan	Weak Signal
Florida CW Traffic Net	Traffic/Training	3.547.00	ET	2200	Daily	AG4RJ	K3ZGA	The Villages, FL	QFN: All Florida CW Traffic Net. Alt. Freq. 7.051
* Utah CW Net	Traffic/Training	3.570.00	MT	1930	Daily	NA7G			
* Idaho Montana CW Net	Traffic/Training	3.572.00	MT	1945	Daily	N7MPS	AG7FH	MISSOULA, Montana	Reported through email
Hoodview CW Net	CW Practice	28.130.00	PT	1900	Daily	N7QR	W7PAT	Beaverton, OR	
*West Coast Slow Net(WCN)	Traffic/Training	3.540.00	PT	1900	Daily	K7EX	W7PAT	<a href="http://west-coast-net.info/index.php">http://west-coast-net.info/index.php</a>	
* British Columbia Net	Emergency Traffic	3.652.00	PT	1900	Daily	VE7XLH			
*Northern CA Slow Net	Traffic/Training	3.705.00	PT	2100	Daily	WB6UZK			
Sandia Valley Slow Net	Code Practice	7.063.00	PT	2100	Wed	WB7RHT			
Northern California Net (NCN)	CW [Slow]	3.533.00	PT	2100	Daily	WB6UZK			



## SKCC MARATHON JOURNEY

By Ai Nguyen, AI8AI

Aside from taking the ten-week Instant Character Recognition (ICR) class with Glenn, W4YES, and Tom, WØFN, in May 2022, embarking on the Straight Key Century Club (SKCC) Marathon Award was by far the best thing I did for my CW journey. After having done several longer QSOs with Randy, KB4QQJ, and then completing a marathon with Cathy, W4CMG, in August, I knew this was the way to proceed. It would provide me focused one-hour airtime with a different fist each day. I would be head sending, head copying, and working through QRN, QRM, and QSB, and a litany of other challenges.

At first, I had no intention of getting involved. I was only helping Cathy with her crazy, lofty goal. In fact, Cecil, K5YQF, SKCC manager, told me straightaway, on average, it takes about two years to accomplish the task if one marathon is completed per week. I didn't have two years. I had about 90 days with a finish line before 2023. Now my goal was crazier and loftier than Cathy's. I told no one.

I planned my work and began to work my plan. I was averaging about 25 marathons per month. I was meeting new people every day, hearing different fists, and having a conversation that lasted beyond, RST, QTH, name, and 73.

When a marathon ended, sometimes I felt sad because I had made a connection, learned something new, had a few laughs. Other marathons, I could not wait to end when the QSB, QRN, and QRM filled the airwaves, and I had my ear to the radio with every filter turned on hearing every other letter. My #37 marathon with Bill, WA4FAT, ended with a storm that knocked out his computer.

However, we hit the mark at 63 minutes. He was so determined to get it done.

My greatest achievement was with Glenn, W4YES, my #57 marathon. Whilst he was fighting other fists, QRN and QSB, I was happily head copying almost the entire marathon. Most of my marathons were done with old school ops who learned CW when they were five years old. Finding topics to talk about weren't very difficult. All I had to ask is, "Do you like boat anchor gear?" Easily, 20 minutes would pass. Tell me about your antennas—another 20 minutes. Loved to talk about building kits, radios, tubes, books, grandkids, gardens, motorcycles, musical instruments, flying planes, pets, etc.

At the end of November, I began to experience a turn in propagation, and for every five attempted marathons, I would get one or two. As December rolled on, the propagation and my numbers worsened. The well of participants I had sourced was running dry. By the time, I got to marathon #90, it was the last week of December. After completing #98, Peter, AA2VG, and #99, John, KD2BD, I had less than 48 hrs (UTC) to get my 100th marathon before 2023. Then, everything went super south.

On 30 December, I attempted eight marathons and each one failed. With my compromised antenna and the horrible propagation, I was up a creek without a paddle. The next morning rolled around, I attempted another marathon, which failed. By the afternoon, two more failures under my belt. I sent a text to Randy, KB4QQJ, and shouted, "I QUIT." He told me I wasn't allowed. I had four hours before we would cross the Rubicon into 2023.

Then, the phone call came. The Grand Poobah himself, Howard, WB2UZE, Founder of the Long Island CW club (LICW), stated he had heard I had completed 100 marathons. I



explained I needed one more, and all 11 tries had failed miserably. Neither one of us could understand how I was able to work 99, but not get this last one. He then said he would like to be my 100th marathon.

And so, at 23:58hrs UTC, on 31 December, two minutes before 2023, I completed my 100th marathon with Howard. I felt so honoured. It was worth all 11 failed attempts after marathon #99. Thank you, Howard! You're the best! It was a great way to end the year.

Many thanks to Cathy, W4CMG, a great mentor, for encouraging me to take on this crazy lofty goal with her. Thank you to Randy, KB4QQJ; Jimmy, WB5MET; and Eddie Jones, W2LCQ, for being my cheering squad from start to finish. The latter, for gifting me the J-38 straight key, which got me through all 100 marathons, and his sage advice that experience comes with "time in the chair." To which, I replied, "I hope it's not the electric chair."

Many thanks to the two other YLs who partook in the marathon – Caryn, KD2GUT, and Teri, KO4WFP. Both have also taken up the challenge.

Thank you to everyone who participated in the marathons with me. I could not have done it without you. Many fond memories of our QSOs. As a new ham, two years into the hobby, I learned so much through this experience.

And finally, many thanks to the two LICW members who designed my special QSL marathon cards.

Please note: This article was first published in the March 2023 SKCC Rag Chew newsletter, Vol 16, Issue 1. It has been updated and revised.

## Colorado SOTA; 14er Event

Coloradoans have been hiking 14ers since there have been 14ers. There are 58 in the state and some of Colorado's best known are also the tallest: Mount Elbert, Pikes Peak, and Longs Peak.

When Summits on the Air came to Colorado, we had one more reason to hike to the top. May of 2010 saw the formation of the W0C (Colorado) SOTA association with its first activation by WGOAT Steve on Mt Herman. And it's been all uphill since then.

The month of August hosts the annual Colorado 14er event which encourages locals and tourists alike to head up the trails to the high summits. Since we're going up there anyway, why not make it a SOTA adventure at the same time. While the title suggests that only 14ers are part of the game, all SOTA peaks are in play for activators. That provides over 1700 summits to activate!

For SOTA activators, it's a great weekend event to head up and activate those peaks you've been thinking about. Also, a good reason to load up the cooler (leave it at the bottom), meet your activator buddies at the trailhead, and spend the day in the fresh air and sunshine.

For SOTA chasers, it's a great weekend to load up the cooler, stretch your coax over to the porch, and cash in on the plethora of summits being lit up.

And to make things even better, the Southern California SOTAfest and Pacific Northwest Not-Quite-Fourteener Event is also held the same weekend. This turns it into a Summit-to-Summit extravaganza with activators from three states all up high making cool waves, as WGOAT likes to say.



Speaking for the Colorado side of the event, there was quite a bit of activity as indicated in the handy table provided by Bob K0NR (not all logs submitted at publishing time):

Date Number of Activations QSOs

Aug 4 - Friday 19	399
Aug 5 - Saturday 17	299
Aug 6 - Sunday 11	193
Aug 7 - Monday 10	297

That's over 1100 QSO's just from the Colorado WOC folks.

Events like this provide great opportunities for CW operators of all skill levels to get out and get some air time. Whether you've always wanted to break contact with that picnic bench in the

park, or the well-worn throne in the shack and try your fist at SOTA; or just want to practice your copy skills and hone your fist, it pays to be on the lookout for one of these weekend radio games.

The Portable Operations Forum will start back up in October and will focus on all things portable. From rigs to power sources to antennas or just stories from adventurers like you, there will always be something discussed to help you get out there and stretch your horizons.

Check the schedule this fall for upcoming topics. And if you're ever out in Colorado and want to hit the trails, look me up.

Jim NOIPA

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**Slow speed Challenge by Kasey KD2YMM**

Link to the Website: <https://licwchallenge.org/>

A reminder that we now have a monthly Slow Speed Challenge, with the main details being:

*The LICW Slow Speed Challenge or LICW SSC for short, is a 24 hour slow speed challenge running at 13-15 WPM.*

*Time frame: Every first Thursday of each month, starting on September 7th 2023 at 0000 UTC (8PM ET the Wednesday before).*

Scores from the first slow speed challenge

The results from the 1<sup>st</sup> Quarter main LICW Challenge

A reminder that the scores for the main LICW Challenge should be submitted via the logger app, located at: <https://licw-apps-h96ku>.

Also, the certificates have been generated and will be handed out shortly!

73 Kasey





## Slow speed Challenge results.

Name	Call Sign	LICW#	QSOs	Score	Award
Jon	G4IVV	2837	15	57	Bronze
Kevin	K0TTW	1908	33	83	Silver
Bob	K0VVV	3812	10	22	Bronze
Evan	K2EJT	3740	110	253	Gold
Jerry	K2GV	0004	151	374	Gold
Jeff	K4TNE	3163	29	63	Bronze
Eric	K9VIC	2404	89	243	Gold
Bob	KA9BHD	4285	10	51	Bronze
Randy	KB4QQJ	1086	187	352	Gold
Don	KC0DWZ	3982	38	133	Silver
Ron	KC2PSA	4110	40	42.5	Bronze
Bill	KC3WJM	4190	3	14	Bronze
Kasey	KD2YMM	3405	28	96.5	Silver
Greg	KD5HIZ	1631	2	7	
Doug	KD7DUG	3608	27	59	Bronze
David	KE8QFO	3512	4	11	Bronze
Adan	KF0DST	2727	21	48	Bronze
Frank	KJ7DZ	3002	8	29	Bronze
Kat	KK6CN	1565	33	86	Silver
Melvyn	KN4GB	3222	11	26	Bronze
Tom	KN6OKY	1835	5	12	Bronze
Will	KN6TZK	3160	4	17	Bronze
Jay	KO4PWQ	3470	1	6	
Jason	KO4TFE	3379	61	158	Silver
Craig	KR4Q	3872	10	30	Bronze
Jim	N0IPA	0588	107	213	Gold
Richard	N1RBD	0230	9	23	Bronze
Ed	N2EC	3533	26	75	Bronze
Erik	N2EPE	4260	8	37	Bronze
Ed	N2GSL	0097	26	61	Bronze
Denis	N2JJF	2427	2	7	
Scott	N2OG	3392	14	45	Bronze
Colin	N2TQT	0620	2	2	
Rich	N2WBJ	0890	6	21	Bronze
Steven	N2YLO	3004	8	24	Bronze
Dave	N5DCH	3064	12	27	Bronze
Chris	N8PEM	0254	57	130	Silver
Bill	NF6R	0690	10	34	Bronze
Ant	NU1U	1876	6	17	Bronze
Jack	NU2Q	0000	12	41	Bronze
Brad	VA4BDK	3524	41	119.5	Silver
Peter	VE3DRS	2996	12	39	Bronze
Scott	VE7CCY	2986	11	22	Bronze
Rob	W2ITT	0263	45	100	Silver
Cathy	W4CMG	0899	66	131	Silver
Ed	W4EMB	3459	6	13	Bronze
Rin	W4RIN	0851	29	74	Bronze
Steve	W4SGN	4145	6	20	Bronze
Dave	W7DLR	2962	2	5	
Dale	W7HLO	2356	39	99	Silver
David	W9AIL	0793	10	30	Bronze
Hal	WA2AKV	0077	11	31	Bronze
Duff	WA7BFN	2440	8	15	Bronze
Ken	WB2KWC	0921	12	30.5	Bronze
Howard	WB2UZE	0002	59	108	Silver
Sally	WQ5T	4009	11	29	Bronze

Name	Call Sign	LICW#	Score
Jerry	K2GV	0004	45
Randy	KB4QQJ	1086	26
Howard	WB2UZE	0002	15
Don	KC0DWZ	3982	12
Rin	W4RIN	0851	9
Marcos	K8ARE	4282	8
Evan	K2EJT	3740	7
Lidi	KQ3Q	4685	7
Kasey	KD2YMM	3405	5
Rob	W2ITT	0263	5
Eric	WS4K	0575	5
Ken	K5ENS	3562	4
Eric	K9VIC	2404	4
Ron	KC2PSA	4110	2
Dennis	N0SMX	0316	2
Tommy	OZ1THC	0929	2
Tom	VA2NW	4896	2
Russ	K1RWT	0134	1
Dave	N5DCH	3064	1



## CW Makers

BIO:



Neil Goldstein W2NDG is an IT Engineer for the Sloan Kettering Cancer Center in NYC and an Extra Class Ham, operating in upstate NY. He runs the LICW Makers Forum, and is a regular speaker around the Northeast on technology-based radio topics.

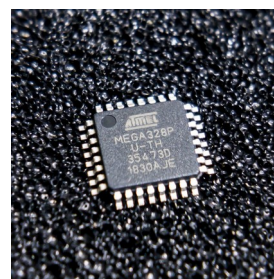
## CW Makers September 2023

“Why I talk so much about microcontrollers”

Many of you that have attended or watched several of my Makers sessions will know that I spend a bit of time talking about Arduino, and other microcontrollers. A lot of this has to do with the general march in that direction with Amateur Radio technology. The use of MC's in Ham Radio kits and projects is nothing new. What has changed is how much we can do with them. I think before I go into what has changed, I need to define some things.

What is a micro controller, as opposed to a full-fledged computer board? Micro-controllers are usually lower-resource devices than computers,

being used in most cases for a specific purpose that is pre-programmed into the device. They are usually interfacing with predefined input-output channels for control, sensing, display, alerts, and sometimes networking. A computer board (like a Raspberry Pi) has all of these things, but also a set of standardized input-output channels like HDMI video, standard keyboard and mouse interfacing, and other I/O from the general computing world. MC's are typically better for the purposes we talk about in radio because they can be much more efficient in a single-purpose scenario like a transceiver, or antenna tuner. They are more power efficient, and less costly than a computer board, and less problematic once programmed.



I know that there are other examples of how many features and functions can be packed into a Ham Radio microcontroller project, but I'm going to start with Hans Summers and his amazing QRP-LABS designs. Hans packs so many features into the QCX-series radios that it takes a while to learn your way around the menus. From CW decoding to practice modes to WSPR and test applications, Hans has really packed a lot into the ATmega 328 processor (the standard Arduino UNO chip). Then Guido and Manuel came along and packed even more abilities into the 328, giving us the (tr)u-sdx, which is able to perform SSB transceiver duties using SDR, all with this same chip. The (tr)u-sdx is far from a perfect design, but you have to appreciate the brilliance and efficiency of it, and what really excites me is where it will lead future

projects. The idea of a cigarette-pack size 5 Watt transceiver that operates on 5 bands (6 if you include 60), in CW, SSB or digital modes, and is fully reconfigurable through firmware updates, all for around \$140 is just amazing.



Hans has released the QMX now, which uses a much more powerful MC to perform the duties of the QCX radios, and his digital QDX, in one design. It can theoretically also do SSB and other modes just with a future firmware upgrade. The upcoming QSX, as well as multiple rumored projects from other designers will leverage this technology to give us highly efficient and configurable radios that are also affordable and portable.

One other view into this type of tech can be seen in an unrelated Ham Radio product, the Quansheng UV-K5 and K6 handhelds. We frequently joke (or argue) about the ubiquitous Baofeng UV-5R series radios. For about \$23 they are almost a disposable option for certain use-cases. These new Quansheng radios take this firmware-based tech and apply it to the low end of VHF/UHF HT's. The K5 and K6 are fully programmable and reconfigurable through firmware, all for a few dollars more than the Baofeng. The idea of an inexpensive HT with features like adjustable mic gain, and battery voltage display, as well as wideband receive is another example of where the marriage of Ham

Radio and more powerful micro-controllers is leading the hobby.

I know I'm excited to see what's next, and I hope you are too!

--

**Neil Goldstein W2NDG WQXD361**

<http://www.neilgoldstein.com>

### **Greetings from Wild About Bugs,**

We passed the one year mark a couple of months ago and with your support, we are still going strong. At the beginning, I was not sure that we would have enough content concerning bugs to last more than a few months.

Several months ago, we expended the class to include general key collecting as well as some topics associated with American Morse with sounders and related information. When we expanded to include straight keys and collecting we were joined by Tom Perera W1TP who brings a treasure trove of knowledge when it comes to all keys and collecting, not just bugs.

By the way, when I say we, I and referring to myself and Bob, WO6W. Although I am the front man for the class, Bob has always been there backing things up and providing a lot of technical expertise with computers and such that I do not possess. He is also a fair hand with a bug which is no small thing.



Over the months, we have covered topics concerning bug set up and operation as well as cleaning and refurbishing. This includes the complete disassembly, cleaning, repair and reassembly of several bugs including a BK100 “Coffin Bug” and a 1921 Vibroplex Original. Those were fun projects which led to experimenting with nickel plating making some replacement parts. Another thing that made me happy was the documenting of the thumb pieces for all Vibroplex Bugs. There have been three styles of these paddles and all can be drawn using a quarter, a half in washer and a ruler. With suitable material, minimal tools a little elbow grease a correct piece can be made. They may not fill the bill for a serious restoration but for a daily driver, they work just fine and provide the same feel at the original. Bob took the drawings and created some files for 3D printing them as well making them even easier to obtain. This alone has been worth the price of admission.

I am not sure what the next year will bring but I am sure that we will continue to dive deeply into all things bug related. Please let me extend an invitation to you to not only come visit with us but to let us know what bug related things you would be interested to know more about.

Thanks to all who have helped to make this first year so much fun!

73 For now and I’ll look forward to seeing you in Wild About Bugs.

Tom WA9CW

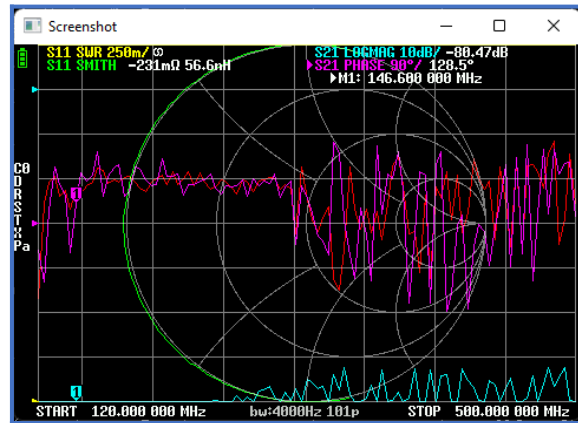


## How to use the NANO VNA

by Gary W5GW

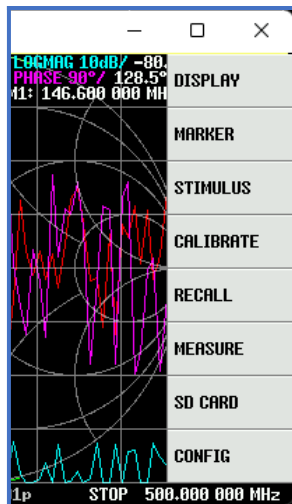
**Introduction:** The Nano VNA (Vector Network Analyzer) is a wonderful piece of inexpensive test equipment. It can be used as a network analyzer, signal generator, and antenna analyzer. This is a short tutorial on how to navigate around the unit and obtain meaningful results in just a few minutes. For this exercise we use the Nano VNA to measure the SWR of a 6-meter 3-element Yagi antenna.

**Intimidation:** Unfortunately, its overabundance of capabilities and small size can be overwhelming and make interpreting the screen difficult. On initial powerup you might have a screen like this:

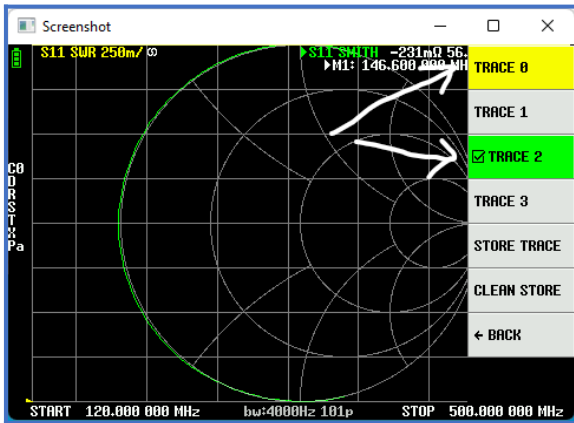


Our first objective will be to declutter the screen by removing all but one trace. Tapping anywhere in the screen with a stylus will bring up the HOME page menu:

For now, just tap<sup>1</sup> the DISPLAY menu followed by a tap of the TRACE menu. You can always return to the HOME page by the BACK selection at the bottom of all menus except the HOME page. For our exercise we will initially use only the HOME, DISPLAY, FORMAT, TRACE, SCALE, and STIMULUS menus. Look for these as you page through the menus.

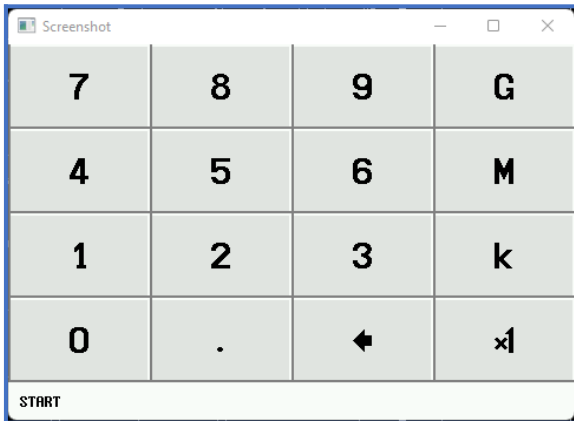


Here Trace 1 and 3 have been tapped to deactivate. Only Trace 0 and 2 have colors assigned and remain active. Notice how we have already decluttered the screen significantly. Now deactivate Trace 2 leaving Trace 0 (Yellow) active and return to the HOME page using the BACK menu.



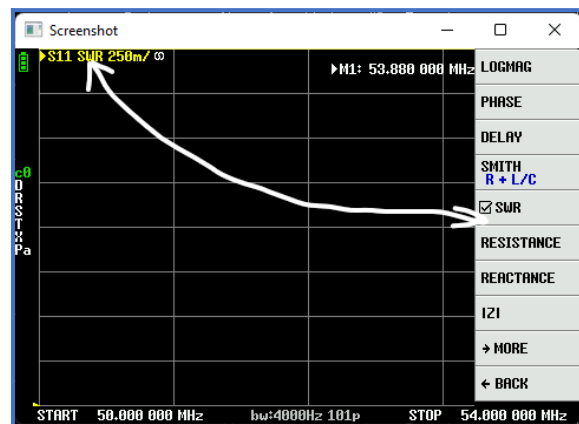
**Define the Sweep Range:** The Nano VNA uses the menu STIMULUS to access the start and stop of a frequency sweep. Let's set our sweep from 50 to 54 MHz. Go to the STIMULUS menu and then select START. You should see a menu like this: Tap 5, then 0, then M for MHz.

Notice the START and STOP frequencies are properly set. Now we need to assign a function to our S11 input line. On your VNA this may be labeled PORT 1 or COM 1 as well as S11.

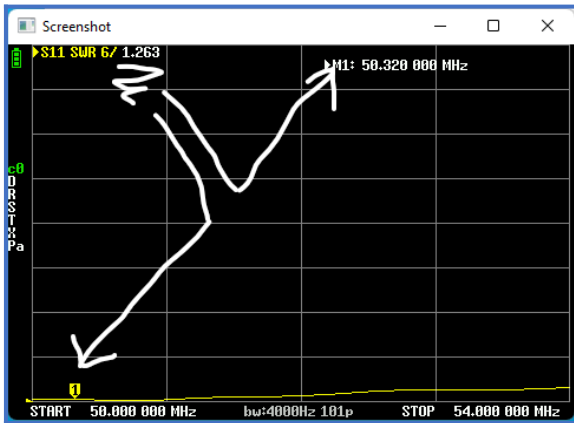


**Define Function of S11 to be Displayed:** The S11 parameter<sup>2</sup> is a common term in network analysis. For now, just consider it an input line. Tap DISPLAY and then FORMAT to get the following menu. Then tap SWR to activate that format or function and note SWR now appears after the S11 in the upper left corner.

We just set the START frequency of the sweep to 50 MHz, Now repeat this process and set the STOP frequency to 54 MHz. If you have done this correctly your display will look like the figure below:

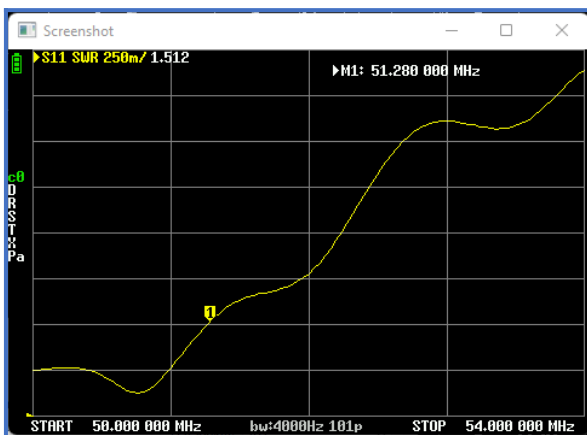


As we connect our 6-meter antenna to the S11 connector we see a display like the next figure. This is not very informative as the SWR trace is 5 units per division.



We see that our marker, adjusted with the small thumbwheel at the top of the Nano VNA, indicates we have a SWR of 1.263:1 at 50.320 MHz. This is where the antenna is tuned to have a minimum SWR for the FT-8 frequency of 50.313 MHz as well as nearby FT-4 frequencies. But let's change the SCALE to see what happens when we go up in frequency and obtain a more informative display. Tap DISPLAY, SCALE, SCALE/DIV and set it to 0.25 units per division.

Now our display should look something like this:

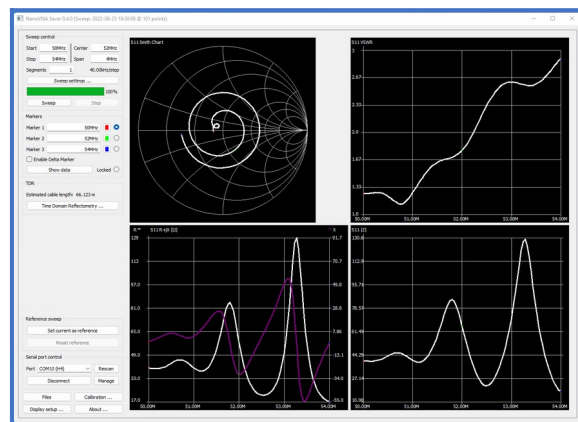


Our Y axis now has a maximum SWR value of 3.0:1 and a minimum SWR value of 1.0:1.

**Calibration:** There is a calibration procedure<sup>3</sup> that should be employed before you use the Nano VNA (Appendix A) for advanced measurements.

It is very easy to perform and there are numerous resources on the internet to guide you through the process. I would suggest you play with the controls using this tutorial before attempting a calibration.

**Software:** It is easy to control your Nano VNA with readily available open-source software. My favorite is NanoVNA Saver. Once you gain familiarity with your Nano VNA the use of NanoVNA Saver is intuitive. The figures used in this article were obtained using NanoVNA Saver's screen capture utility. Some of the later Nano VNAs have a micro-SD port so raw data can be saved and played back. If your unit does not have this capability, NanoVNA Saver can save raw data as well as screen displays to your computer. Here is a screen capture of this software's dashboard and display. Here we have a Smith Chart, SWR,  $Z=R \pm jX$ , and absolute  $Z$  plotted simultaneously in the software. Note the SWR chart is identical to the display on the Nano VNA with a slight aspect ratio difference due to how the x axis is slightly less in the software depiction.



**Conclusion:** The Nano VNA is an inexpensive yet powerful device that can perform many network, feedline, and antenna analysis functions. It can also act as a very low power signal generator. We have just skimmed the surface by describing one application, namely obtaining the frequency sweep pattern of an antenna's SWR. Other tutorials and YouTube videos on the internet go into greater depth and the many uses of a Nano VNA.

73 – Gary, W5GW

**Footnotes:**

1. *The Nano VNA has a touch sensitive display, but due to its small size a stylus comes in handy. Mine was delivered with both a guitar pick and a conventional stylus.*
2. *The S11 parameter in antenna/network theory represents Gamma ( $\Gamma$ ) or the complex return coefficient. By measuring this term, as a function of frequency, many other functions, such as SWR, can be derived. The Nano VNA does this heavy lifting for us by computing SWR from the magnitude of the complex return coefficient.  $SWR = (1 + \text{abs}(\Gamma))/(1 - \text{abs}(\Gamma))$*
3. *Calibration should be performed whenever a frequency range has changed, AND you wish to use the Nano VNA for more than simple magnitude measurements (such as SWR). A calibration places its reference plane of phase to the port connector, or the end of the included test leads, or any test leads you might provide. More information regarding calibration is beyond the scope of this tech note. Suffice it to say, when using the VNA for just SWR, calibration is not necessary to get acceptable results for most amateur radio applications.*

**Appendix A: Abbreviated Nano VNA Calibration Sequence**

- a. *Reset the current calibration state CAL RESET*
- b. *Connect OPEN standard to CH0 port and execute CAL CALIBRATE OPEN*
- c. *Connect SHORT standard to CH0 port and execute CAL CALIBRATE SHORT*
- d. *Connect the LOAD standard to the CH0 port and execute CAL CALIBRATE LOAD*
- e. *Connect the LOAD standard to CH0 and CH1 ports and execute CAL CALIBRATE ISOLN. If there is only one load, the CH0 port can be left unconnected*
- f. *Connect cables to the CH0 and CH1 ports, connect the cables with the through connectors, and execute CAL CALIBRATE THRU*
- g. *End calibration and calculate error correction information CAL CALIBRATE DONE*
- h. *Specify the data number and save. CAL CALIBRATE SAVE SAVE 0*





## Special Event Stations – The Fun - and Challenges - of Being “Special” de Cathy W4CMG

I just finished a round of W1AW/4 special event station shifts for the ARRL Volunteers on the Air program (<https://vota.arrl.org/>), with QSOs from seven 2-hour shifts in the log! It was fun but made me think of the reasons why I do – and don’t – love being a Special Event Station.

The events I have worked as a special event station – CW only – have been a blast, but there are a few things that still make me glad to get out of the chair at the end of a shift.

How I got started: My good friend and Elmer called me one day to give me a “challenge” – to beat his score for the number of reindeer in the SKCC December WES (WOW- that was 3 years ago!). And I just LOVE a challenge (remember my Reaching Your CW Goals class?). Of course, I got nowhere close, but that was the start of the fun.

Followed by:

- SKCC - Operating as a K3Y/4 station each year – a great way to move up the C-T-S ladder, and operating as an “Easter Egg” and other monthly bonus stations.
- NAQCC - operating their anniversary events as N3A/4.
- Being a FOX in the 2022 QRP Foxhunt – WOW – talk about learning to manage pileups!!! Can’t wait for the 40M foxhunts to start again for another turn!
- W1AW/4 for TN Section in the 2023 Spring and Fall sessions.

THE GOOD STUFF that comes from being a special event station:

- Increased awareness of band plans and conditions.

- Learning more about my rig’s features (filters and working split).
- Learning new tricks in N1MM Logger to enhance run rates.
- Building stamina for larger, longer contests.
- Improved sending and copy skills.
- Navigating pileups.
- Meeting new ops on the air.
- Longer chats when it’s slow – moving past the contest mode of exchange of 599 TN

W1AW/4 – THE LATEST ADVENTURE:  
Working as W1AW/4 was a lot of fun, to the point that I jumped at the chance to sign up for fall shifts based on my Spring experience.

Some fun points during my shifts:

- I got to work one of the students in my LICW Kids Klass – who contacted me as W1AW/4, and got a bit of a surprise when I sent “CU in class”, followed by my personal call and name. We chatted for a few minutes before I went on to calling CQ again. FUN!!!
- I had a nice chat during a slow period with an op in Canada, filling him in on the QSL process. Thank goodness I like impromptu ragchews, since it was totally unscripted!
- I sent all exchanges by hand at whatever speed ops sent to me, switching from paddles to a cootie to slow it down when the need arose. It was fun listening to ops who usually send machine/computer generated code sending by hand, since I threw in some personalization and real RSTs.
- Great run rate as W1AW/4 in the 0300 MSTs – so there were a lot of stations who got VOTA points!
- A bit of a struggle picking up a station in CA that had an RST of 339 at best, with QSB – right at the same point in his callsign. Another station popped in with “it’s XX#XXX”, to help me out – and then we had a nice chat after I worked the original weak station. You never know who is



listening, and they are willing to help!

Here are some challenges that I had while working as W1AW/4 - and my workarounds.

- Just because I called CQ, it doesn't mean someone wanted to respond:

- o I was limited to a single band, so moving was not an option – EXCEPT – If there were open slots at the same time, I did a last minute request to add a band so I could operate on more than one.

- o Using ESM – Enter Sends Message – to send CQ to save the wear and tear on my wrist – and manually sent every exchange.

- The band conditions have been terrible – not much to can fix it. I kept my filters narrow and hugged my rig (so to speak) to hear those faint signals. The Haptic Device helped with the faint signals, giving me an extra edge.

- There was a club that didn't realize that the process for signing up for shifts had changed, and had one of their ops running on the frequency I had reserved for my timeslot. Only one op per band and mode is allowed for each W1AW section, so had to wait until the band freed up. A quick call to the Section Manager and some detective work on his part quickly resolved the issue, and I was back on the air where I had planned.

- There are other stations that have already been worked for the same type of event, not everyone needed my /4 area. I publicized my times in various reflectors the day before I started in my CW groups – LICW, CWops, Tennessee Contest Group in hopes that I would have some good runs.

- LICW Discord yielded a few extra calls, and ops got the bonus of my personal call and LICW number toward the challenge.

- Deliberate QRM – ignored it, and eventually they figured out I wasn't moving or giving up.

- Ops who don't QRL and start calling right over you on your frequency – their problem, not mine! I didn't move. Eventually, they got the message. PLEASE QRL, WAIT and QRL again before you start calling CQ!

The end result – one happy op who added 221 calls to the W1AW/4 log. (<https://vota.arrl.org/>). I also redeemed some of my “penalty” for taking 10 days off the air for a cruise – 5 QSO for each day I don't have a QSO – so they added up quickly

Can being a special event station be addictive? Absolutely! Remember – when you are calling CQ, you own the cadence, so start early and run often. The next thing you know, you'll be signing up for any special events that are on the contest and event schedule!

What's next? I'll be operating again as one of the N3A/4 stations in the NAQCC anniversary event from October 7 – 14!

CU on the Bands!

73, Cathy, W4CMG



## FIRST CW CONTACT

A little background: I've been a ham for about 15 years (Tech in 2007, General in 2008), but for the most part I was inactive. When I was active, it was on local VHF/UHF repeaters. I finally decided at the start of the year that I would earn my Extra license and learn Morse code. I got my Extra in June, and around that time I joined LICW. Like many of us, I learned about LICW through Josh Nass at Ham Radio Crash Course.

After a couple of months in the Beginner's Carousel classes I decided to dust off the HF equipment I had accumulated over the years and try for a real-world contact. My first three attempts were a bust; I couldn't hear anyone, and my RBN reports were not exactly impressive. I swapped out my vertical for an EFHW and suddenly I was receiving signals loud and clear. However, I still didn't get any response the first time I deployed the wire.

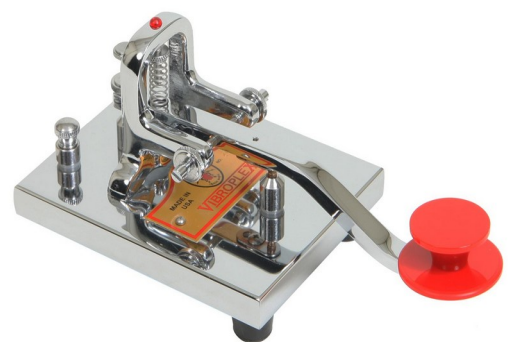
Last Saturday, after a day of yard work and gutter cleaning, I decided to give it another shot. I hopped on 20m and called CQ. No response, even though RBN said my signal was getting out 600-900 miles or more. I hopped around for an hour trying to find someone who wasn't blazing away at 30 WPM. I checked the POTA app, but all the activity was on the other side of the country. As I was making my final attempts for the day, I finally got a reply. It was clear and slow enough for me to copy.

Boxing fans may remember Mike Tyson's famous words: "Everybody has a plan until they get punched in the face." Well, I had a plan to send a perfectly formatted response, and that plan went right out the window the moment I heard someone call back. I don't recall exactly what I tried to send - I'm sure a signal report was in there somewhere - and I'm not sure how much of it got through, but we at least exchanged call signs. A

couple minutes later I got another response, and I learned that there was a big pileup on the other end that I couldn't hear. There was also a lot of QSB, so I sent a quick reply and a 73. Time to pack up and call it a (successful!) day.

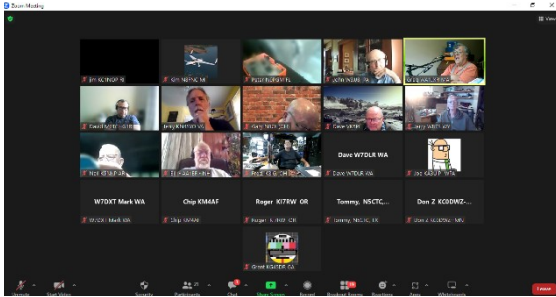
This being the 21st century, I found my two contacts on QRZ and emailed them just to confirm that I got their info correct and that they got mine. I received two very nice replies. CW operators are the best. If you're nervous about getting on the air, that's fine - do it anyway. And when you finally get a response, you'll probably fumble it and forget something, but that's OK. It's not like Mike Tyson is going to punch you in the face when you mess up.

73 Paul, KE7PMN, LICW #4710



## LICW Antenna Forum

Each Sunday morning at 11AM EST, a number of LICW Hams gather in ZOOM “A” to talk about Antennas (see below):



The Antenna Forum organizing team consists of Greg WA1JXR, Rachael M1AYZ and Kim N8FNC.

Our original intention was to ‘Host’ speakers on various antenna topics each week, and occasionally to pause and field questions from our members on their specific antenna concerns. As time went by, finding speakers on ‘new’ antenna topics became more difficult but, we found that most members wanted, and needed, to talk about their own antenna problems. As a result, we now only occasionally ‘interrupt’ our personal antenna discussions to host a speaker.

### “My God, it’s full of stars!”

Just as Bowman in Sir Arthur C. Clerk’s novel ‘2001: A Space Odyssey’ found he was looking through a doorway to an infinitely large space, the Antenna Forum finally understood a few factors:

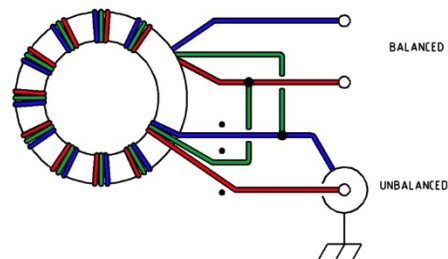
- Every antenna installation is unique,
- It’s not just the ‘Antenna’ that counts,
- Grounds and ground references are critical,
- SWR is not the whole story,
- Feed lines can make a world of difference,
- Etc.

Time and again that first point about the unique features of each QTH location, the bands to be used, where an adequate ground can be found, how much power is planned, what type of antenna is possible given space available, nearby trees or buildings to use as tie points, how often do the HOA ‘Nazis’ patrol with live ammunition?...All these and more contribute to an always interesting and informative exchange of information among everyone on line. When new topics arise, usually someone in the group has had experience with it.

Speaking of HOA antennas, check out the Drop Box (22) for the presentations on impossible to see HOA proof antennas. Some are in plain sight and literally invisible, even when you know where to look.

### Equipment & ‘things’:

It seems that Ham equipment, and especially stuff related to antennas can be a never-ending Pandora’s Box of ‘What is that, what is it good for, should I make my own, or buy it, is there a kit for it, and is there a YouTube video about that?’ (Whatever ‘that’ happens to be today.)



Most often than not, one ‘regular’ member of the group that gathers for the Forum on Sunday at 11AM on ZOOM ‘A’ either has one, has used one, and has a story to tell about their success or failures. If there is an internet source of information, we can usually count on Grant KG4SDR, one of our ‘regulars’, to post it in the Chat for us all.

## Build it and Find Out!

I have always believed that: after initial research (reading what you can find about the ‘what-ever-that-thing-is’ item), attempting to build your own with minimal cost in materials (raid your junk box) and running into at least one of the corollaries of Murphy’s Law (“Anything that can happen, will happen.”) i.e. (something usually goes wrong with the first try of anything), will result in one of at least three outcomes’ results:

You now know a LOT more about the widget than you did before, You probably understand more about RF and its relationship to the equipment, and If you finally decide to purchase a kit or manufactured version, you know enough to make a more ‘informed’ decision.

“Experience trumps logic” is not just a casual saying. In Amateur Radio it should be a guidepost for any of your activities.

### Caution:

The ‘experiences’ of some of our members have driven home the point that many of us (most?) are getting to an age when we should not be climbing trees, crawling up on roofs, or scaling antenna towers, or (as with one of our members) not being careful enough when walking in our own yard if it is on a slope and we are laying out ground radials.



Leave that to the professionals.

Their fee is less than your trip to the hospital!

.....  
*(Of course, shortly after writing this, I was on our roof, just to prove I can't take my own advice.)*

### The Team:

The ‘lead’ folks that keep the Forum running I mentioned earlier, but here is a bit of background: Greg WA1JXR, is a retired Raytheon radar engineer who also runs ‘The Doctor is In’ forum and co-hosts the ‘Elmers’ group. Greg lives on the East coast of the US and actively participates in local Ham events. Greg also plays the ‘stand up base’ with his local band.



Rachael M1AYG is a retired Magnetics Research Scientist and tells us that she has signed the ‘Official Secrets’ act in the UK, so some project are avoided. Rachael also hosts the 8AM EST CW Practice group on Mondays and Fridays in ZOOM A. She lives in Northern Great Britain and is an avid cyclist on her ‘Brompton’ folding bike and is “always fiddling with antennas”.

Kim N8FNC is a retired EMC (Electromagnetic Compatibility) test engineer. He is also a team member for the Slow CW Net Class on Tuesday evenings along with the lead, Ed N2GSL, Lane WK4WC and Rob W2ITT. The team also conducts the V-Band open forum for practicing traffic net protocols on Friday evenings. Kim is a licensed private pilot, PADDY certified scuba diver, teaches STEM classes at the local library and plays classical guitar in his 'spare' time.

Check the LICW calendar for day and time details on all classes and forums.



#### **POTA & SOTA Forum:**

While we like to see folks join us for the Antenna discussions, I also want to direct interested Hams to the Saturday AM "Portable Operations Forum" when it comes back online on September 30th. While our Sunday 'Antenna Forum' tends to focus on fixed QTH sites and associated antenna types, the Portable Operations Forum has many outside speakers, and they present a diverse range of light weight (suitable for backpacking) antenna topics.

Check them out and I believe you will be pleasantly entertained and informed.

73 N8FNC AR



**That's it for this Fall edition of the LICW newsletter.. I hope you enjoy it !**

**Thanks to all who submitted.**

**Dont forget.....to check out the LICW website, Facebook, podcast and groups.io sites for more information on CW and LICW club activities.**

**Hope to hear you on the Air !!**

**73 Mike VE3MKX**