

# Solid Copy

The CW Operators Club Newsletter

July 2020 — Issue 126



## Teaching the Astronauts



Keith, NM5G trained astronauts for ham radio on the International Space Station. [Story page 9.](#)

### CWops "CWT" Every Wednesday

Start: 13Z, 19Z, 03Z (+1), 1 hour each session

Exchange: name/number (members)

name/SPC (non-members)

### Avoid DX pileups!

Next slow speed CWT is November 11-12.

### US Vanity Callsign web site:

<http://cwomc.org>

**CWops "neighborhood":** Look for CWops on 1.818, 3.528, 7.028, 10.118, 14.028, 18.078, 21.028, 24.908, 28.028, 50.098 "and up"

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Director: Matt Frey [CE2LR](#)

Director: Bert Banlier [F6HKA](#)

Director: Barry Simpson [VK2BJ](#)

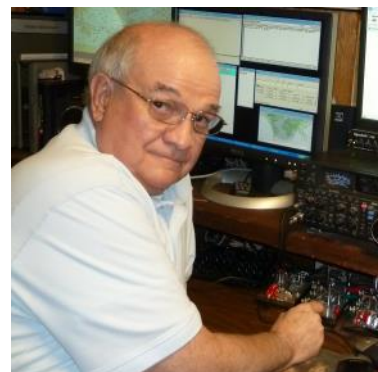
Director: Riki Kline [K7NJ](#)

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Newsletter Editor: Tim Gennett [K9WX](#)

## President's Message

Add June and now July to our experiences under the Covid-19 Pandemic environment. The medical and scientific experts provide data on the progress of the illness. Compared to March



and April the data have been showing us signs that it is still with us possibly not as intense as then yet still concerning with recent upticks happening. It cannot be ignored and so we truck on. Our ham radio hobby has been helpful as a way to cope with the isolation from oth-

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ers. All members are encouraged to keep practicing safety. It's not over yet.

ARRL's annual Field Day event has also changed under the effects of the pandemic. Where we once were able to meet as larger groups, set up temporary operating conditions and experience the fun of a contest like activity, we found ourselves adapting to changed rules of engagement. Actually, it was helpful to have to bend to a new situation. Field Day is a simulation of emergency operating conditions and which we've made into a fun summer exercise. The pandemic disruption made us realize that this event has to teach us flexibility. Hams are good at adapting and the stories of how it was done will be shared for another year.

CWops continues to grow in membership and new qualified ops are joining in with the fun of the CWT's. Let's hope that band conditions continue to improve and that the higher HF bands open more and more. It would be nice to think that we'll reach the point where 20 meters is open 24/7. It's fun to imagine doing CWT sessions on 10 meters. Then we'll have to decide which band(s) to start the hour on. It may be the first-time hams will hear CWops CWT that are not familiar with it now. I picture amateurs in Asia becoming active with us and possibly we can get some of them to encourage more CW activity around the world. Some of our current members have been doing a great job of finding and inviting qualified CW operators in Europe to join with us more and more.

The word qualified alludes to our membership qualification. But it doesn't mean that aspiring CW operators who are trying to reach the 25 wpm level cannot compete in the CWTs. Our weekly CWT activity provides a good place for those who want to achieve higher performance levels to a place to practice/participate. The performance level is established by the minimum 25 wpm requirement for membership. So, if I could only perform at 18 – 20 wpm, I wouldn't expect CWops to QRS much below the 25-wpm level. Compare, for instance, a high school football player walking onto an NFL practice field and expecting the team to drop their performance expectations. The newbie needs to equal the level he wants to play at and practice his art until he's ready and qualified.

Our collective mission is to encourage more people to become CW operators and enjoy the art and skill of communicating with others using it. We use the CW Academy to respond to those who want to build their skill using CW. The four levels work very well supporting a student's interest and drive to succeed. Those students who are in the progressive states of improvement are encouraged to get on the air and make contacts. Recently, a group of advisors have been meeting the students for a CWT-like activity at slower speed (20 wpm) to give them more experience than they get with the three times a year slow speed CWT Wednesdays. Also, they are meeting weekly at 0300Z, between 7.100 – 7.110 for approximately 15 minutes. You don't have to be an advisor to practice with them, and please join in from time to time. We need to provide opportunities like this for their training. Do it for fun and help build better operators.

CW Forever

**73, Mac NN4K**, President

## From the [Editor](#)

### The Field Day That Wasn't in the Field

If you live in North America, the annual [ARRL Field Day](#) is probably one of the highlights of your operating schedule, and it is overwhelmingly a group activity as opposed to the single-operator participation common to other on-air events. By the numbers, it's a big deal: in 2019, there were over 3,100 entries and 36,000 participants who logged almost 1.1 million QSOs during the 24-hour event. Just over 53% of those 3,000+ were "in the field" while only 25% operated from home on commercial mains.



When we compare one event to another across years, we usually focus on propagation and band conditions. That's true of Field Day, but we are also likely if not more likely to compare menus from year to year as the social component is a big part of Field Day, and there are few things more social than eating really good food together. For most of us, Field Day is about spending face-to-face time with your best friends, doing what you love to do.

But, not for 2020. The need to minimize social interaction in order to reduce exposure and the spread of Covid-19 changed the event and the way people participated. As of this writing, the number of entries was waaaaaay up (8,204) or more than double last year, while the nature of the entries had also shifted. Only 14% were "in the field" while nearly 65% operated from home on commercial mains. We will have to wait for results before we know how the participant numbers were affected.

I counted myself among those who abandoned the traditional Field Day setting and wimped out, operating from the comfort of my home shack. I briefly considered trying to arrange for emergency power and even going mobile but, in the end, I did neither.

Did I have fun? You bet. I logged 852 CW QSOs (and 1 phone QSO!) in about 13 hours of low-power operation. And I got to spend a lot more time in the chair than I would have if I had been operating as part of my traditional Field Day group. So, it was a good day.

#### ***Field Day Photos***

Check out the "News and Notes" column ([page 4](#)) for more Field Day photos and stories from CWops members.

But as seems to be the case with most folks, in the years ahead, I will remember this as the Field Day that wasn't in the field. And conclude that what I gained in terms of personal operating time did not compensate me for what I lost in quality time spent with friends.

**73,**

**Tim K9WX** Editor



# News and Notes

## [Jerry Weisskohl AC4BT](#)

**Duncan, G3WZD** Here's another plug for CW Academy (CWA) from one of my recently graduated Basic students, M0SRZ (Stuart did his Beginner with Will M10WWB). See below and the link to his club website: <http://www.wythallradioclub.co.uk/>

If you go to the above website and scroll down the page a little bit, you will see an article honoring Stuart titled 'Award for CW Success' with a very nice endorsement of CWA.

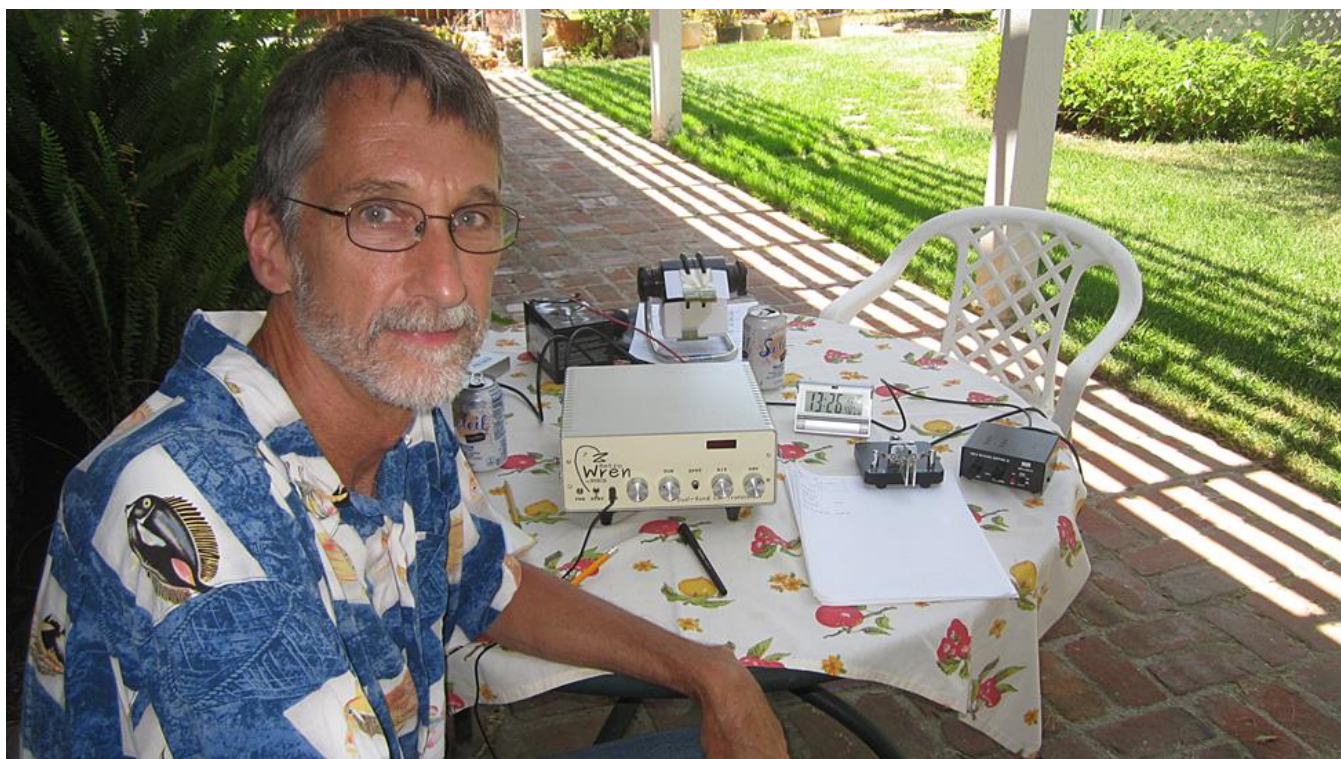
### **Stuart, M0SRZ**

On Tuesday evening, via a Zoom meeting, my local club awarded me the Lew Williams Shield (SK). It's awarded every May for progress in CW activity.

Lew was a past president of the club, a wartime telegrapher and taught many members Morse over the years. Thanks to you all, but especially you, Duncan. I couldn't have done it without you!

(<http://www.wythallradioclub.co.uk/>) There's a great plug for CWA in the article!

**John N6HCN** See photo below of Operator Desk at the N6HCN class 1E FD 2020 Southern California Zombie Apocalypse station. Rig is my own dual-band Retro Wren HB, chilling out at only 5W and sipping solar-fed 12VDC to score the Natural Power bonus and 5x multiplier. All beverages in the photo are non-alcoholic.



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Many thanks to Jim, K9JM CWOps #909 for transmitting the bulletin to us West Coasties; the QSB on W1AW was, like, wicked, dude.

**Dan KB6NU** I've started teaching online Technician classes.

If any of our CWops members know of friends, relatives, or neighbors that would like to attend one of the classes, they can sign up for my mailing list and be notified when I'll be holding the next class by going to <https://landing.mailerlite.com/webforms/landing/m6l6t4>.

**Jim N3JT** The activity was enormous for Field Day (FD), largely from 1D stations. The running and S&P practice of CWT sessions really does help in these kinds of events, or maybe FD helps with CWTs!

**Frank NF8M** Though I usually join my local club, the South Lyon Area ARC, for Field Day (FD), most of us did individual operations this year. In the spirit of FD, I wanted to be off-the-grid as much as possible, using battery power and temporary antennas, yet be in the more comfortable backyard setting, so I operated in category 1E.

I built an antenna mount for 3/8-24 threaded antennas using an old mobile mount and some scrap Unistrut and planned to run Hamsticks but had better luck using an MFJ telescoping whip on 20, 15 and 10. For 40 meters, I used a wire vertical that attaches to a MFJ telescoping fiberglass pole, which I frequently deploy at Scout events and have used at past club Field Days.



The TS-690S had some chirp issues running on battery voltage so I reduced power to around 25-30 watts to keep the CW note clean. Logging was done using the Linux laptop pictured, connected via RDP to one of the shack computers running N1MM+ (with no rig control), and all keying was done using the SuperCMOS4 keyer and Bencher paddle pictured. Even though I had microphones at the ready, all operation was CW, of course!

Five QSOs were made on 40 meters using the FT817 powered by a battery charged using a solar panel for the 100 point bonus.

My totals in just under 8 hours of operation, mostly S&P:

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Band	Mode	QSOs	Pts	Pt/Q
7	CW	89	178	2.0
14	CW	55	110	2.0
21	CW	17	34	2.0
28	CW	9	18	2.0
Total both		170	340	2.0

Score : 680 + 150 bonus = 830

**Gary AF8A** Much fun was had at a two-man, two-radio, microphone-free Field Day this year, under the Case ARC callsign of W8EDU.

CWops members Jim, W8WTS (pictured) and Gary, AF8A CQ'd for 24 hours, using a multitude of wire antennas to make over 1650 CW QSOs. Both ops are EE alumni of Case Western Reserve University, and they've operated together at most FDs since 1986.

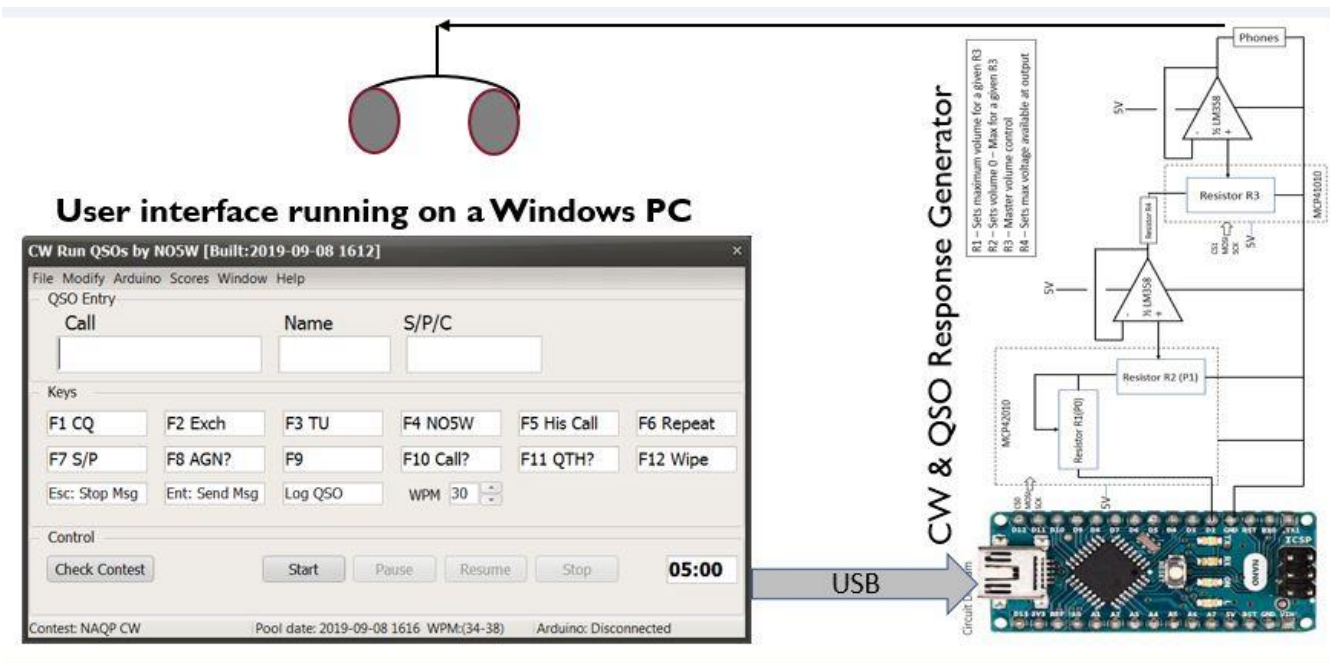


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**Chuck NO5W** Since most of my operating takes place at our club station in a local playground, the COVID-induced playground closures and the stay at home orders from the Mayor have put a severe kink in my airtime.

Looking around for a project to help ward off cabin fever I decided to put the Sudoku puzzles aside for a while and learn something new. In the past, many of my home-brewing efforts have stopped short at the bread boarding phase so I thought it would be good to learn how to design a printed circuit board and, if I got really ambitious, to learn about 3-D printing so I could print an enclosure for whatever it was that I was going to create. But what would that creation be?



Several years ago I developed a [CWT Trainer](#) based on an Arduino UNO and a few external chips and wrote it up in Solid Copy. It was definitely a work in progress as it left many construction-details up to the user, there was no readily available PCB or enclosure, and the user interface had some confusing rough edges.

So, long story short, I've spent the last several homebound months redesigning the CWT Trainer around an Arduino Nano which has a more desirable form factor; developed and fabricated (with the help of Osh Park) a PCB on which to construct the circuit; designed a custom enclosure that can be 3D printed from the supplied STL file (with the help of a club member about a dozen have been printed for the club's CW Study Group); cleaned up the user interface, and added support for several contests, including NAQP, ARRL DX, ARRL SS, and ARRL Field Day. Along the way I learned how to use Eagle to design the PCB, and Tinker CAD to design the enclosure.

See [this page](#) of my website for details and documentation regarding construction and use. Feel free to contact me if the project is of interest to you. It's been fun but it surely is good to get back behind the radio on Wednesdays now that the COVID restrictions are easing – hopefully they won't tighten up again soon.

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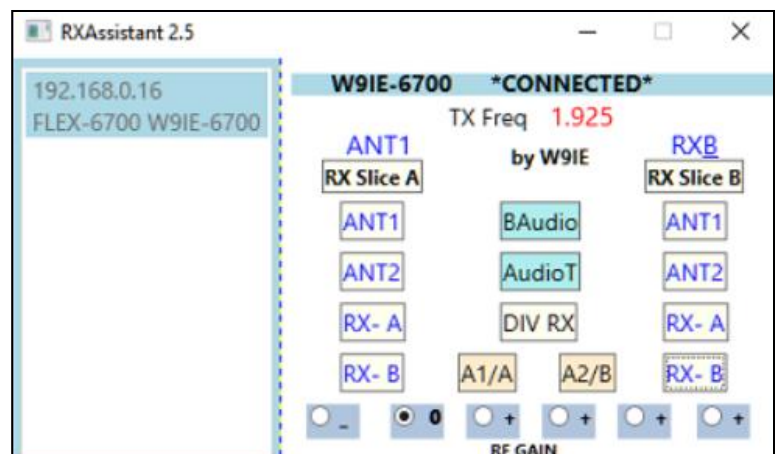
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**Chuck WS1L** The move went well, and Stacie and I are now in our new home in the Berkshires of Western Massachusetts. As hoped, I was QRV in time to only miss one Wednesday of CWTs. So far, the dipole is up and a Hexbeam is ready to be assembled sometime this summer.

I'm looking forward to settling in here and slowly improving the station.



**Ken Buser W9IE** Developed an application for Flex Radios, the RXAssistant, being profiled on [the Flex Radio website](#). Ken says, "It eliminates some of the menu changes and some of the touch screen fumbling some people have. It provides some of the selections I wanted with a click of the mouse. I can quickly switch between antennas. When I wanted to use my headphones, I wanted the speakers to go off. So I built a toggle so



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you could select between the sources. I then added RF gain buttons and a few other options. It's great to be able to operate the way you want to."

**Tim N3QE** Has been named the Contesting Editor for CQ magazine. He is an active contester and has been secretary of the Potomac Valley Radio Club for several years. When not on the air from his suburban Washington DC station, Tim works for the Washington Metropolitan Area Transit Authority, coordinating the data acquisition of 70,000 devices around the railroad and the supervisory control center computers at the Washington DC Metrorail system. [See the June 26 entry on the CQ blog website for more information.](#)



**New CQ Contesting Editor  
Tim, N3QE**

**Sadly, Ed Palagyi, KN4Y, # 1684** became a silent key on June 4th. Ed wrote the Dateline CW column in the *The Roadrunner*, the MARAC newsletter. Ed was a very active CW county hunter and ran mobile in several of the southern state QSO parties.

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## ARISS Astronaut Training

[Keith Dutson NM5G](#)

ARISS is an acronym: Amateur Radio on the International Space Station. Details are available on the web at <http://www.ariss.org/>

Two years ago, on November 10, 2015, I received the following email from long-time friend Ken Mitchell KD2KW:

*Keith,*

*I have a question that I have to get back to Lee (STX Section manager) to help locate a FCC license class trainer for the astronauts. Something has happened to the person that was doing this. Since you and Skip do license classes in this area do you know of someone in the Clear lake area that could be asked to take this task?*

*It would certainly be fun to get to work with new astronauts in getting their li-*

### **Editor's Note:**

This story was originally written for the newsletter of the Northwest Amateur Radio Society, Houston Tx in 2017. The author, CWops member Keith NM5G, has updated it for 2020, [see page 13](#). Page 1 photo from NASA.gov. Other photos provided by NM5G.

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*cense, but travel would be an issue from Oak Point.*

*Do you think Skip might want this opportunity?*

*73, Ken*

Skip Ferguson K5LLR is also a long-time friend, and my partner for classes that have been given to prospective hams in the Houston metropolitan area since March 2, 2014.

Skip and I agreed to take this responsibility, if asked. Ken passed our response to Lee Cooper W5LHC, ARRL STX Section Manager. Next, a conference call was set up by Debra Johnson K1DMJ, ARRL Education Services Manager, to speak with Kenneth Ransom N5VHO, the ARISS program's operations liaison at Johnson Space Center. We found later that the former ARISS trainer was Nick Lance KC5KBO, who became a silent key. Kenneth subsequently passed to us the study guide used by Nick, via email.

I recall meeting Kenneth in 2010 when he gave an excellent presentation to my club, Northwest Amateur Radio Society (NARS), of ARISS operations at NASA, giving details of setting up visits with classroom students around the world, with astronauts aboard the ISS.

Next, Kenneth arranged for a meeting with the ARISS exec team February 17, 2016. Skip and I presented the study materials and methods used for our Technician Class and discussed how these would be modified for the abbreviated times allocated for astronaut training. I was impressed that the team members were from all over the USA, and took time to come to NASA, and meet with us. All seemed pleased with our plan.

A lot of time passed, then I received the following from Kenneth January 31, 2017:

*Looks like we have some dates. Can you support license training on Tuesday, May 16 from 2-4 pm and Wednesday, May 17 from 3-5 pm?*

*Once I confirmation that support is available, I will authorize the scheduler and coordinate with our local VE team to support the exam on May 19. I will arrange for badges to be available for you to pick up in building 110 (off to the right after you tell the guard at the main entrance off Saturn) a bit earlier so that you will not be late the session. I can meet you there if needed. I expect the class will be held in Building 5 (but need to verify) which is a short drive on site. General access parking is available across the street.*

*More to come once we get closer.*

This was good news but conflicted with my plan to attend Contest University in Dayton May 18. I had signed up and paid for this and the Contest Dinner on May 20. I met with Skip and we decided I would teach the May 16 class, and he would teach the May 17 class. This was sent back to

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Kenneth and approved.

As the training date approached, Skip and I decided to hold a Technician class in early May, to be better prepared for the trip to NASA. See details at this site:

<http://www.dutson.net/Ham/HamClass/HC2017.html>

Skip lives in Brenham. On May 16 he travelled to my home in Tomball, and we rode together to NASA. Kenneth met us there, where we got badges.

Kenneth drove us to the training building.

After meeting the astronauts and Erik Lopez (Kenneth's MAPI alternate support person), Skip presented to each class member a hard copy of the manual we use for reference (Technician Class FCC Element 2 Amateur Radio License Preparation, by Gordon West WB6NOA, with Eric P. Nichols KL7AJ). These were provided by NARS. Skip then gave an overview of what we plan to present over the two class sessions.



**From left, Skip Ferguson K5LLR, Serena Aunon-Chancellor KG5TMT, Nick Hague KG5TMV, and Erik Lopez**

The Technician Exam Practice tests on QRZ.com were used to display test questions on the large screen. I proceeded to read the questions and analyze the four answers for each. After some time, I could hear Serena calling out the letter of the correct answer while I was reading the question. No doubt, astronauts are quite knowledgeable and quick thinkers. One question asked who could receive compensation for teaching amateur radio. The answer, a teacher, was chosen

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by Nick, with the explanation that the teacher is already being paid. A quick look in Gordo's manual revealed the same explanation. This confirmed my thought that these folks are highly intelligent. At the end of this session, I told them Skip would finish the next day, and I would be on my way to Dayton. There was no doubt in my mind that these folks would pass the exam planned for Friday, May 19, and given by the Clear Lake VE team.



From left, Kenneth Ransom, N5VFO, Serena Aunon-Chancellor, Nick Hague, Skip Ferguson, K5LLR

During my visit to the Dayton Hamvention, I received this from Kenneth May 19:

*Both crew (Serena Aunon-Chancellor and Nick Hague) passes their amateur radio exams. In addition, my MAPI alternate support person (Erik Lopez) also passed. Great job getting them ready for the exam.*

I understand Serena and Nick will be headed to ISS sometime in 2018, leaving aboard Soyuz missions.



Keith NM5G and Victor Glover KI5BKC

## 2018 Sessions

A second session was held September 30 and August 1, 2018, for astronauts Victor Glover and Steve Bowen. Neither has flown to date, but I saw an interview on the NASA TV channel that Victor is going to be lifting off from Kennedy Space Center on a SpaceX rocket.

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The third session was held December 10 and 11, for astronaut Josh Cassada.

That was the last ARISS Class. The next class will be dependent on the next astronaut(s) receiving an assignment to fly in the ISS. Each is asked if they want to participate in ARISS, and if so, do they have a ham radio license. If not, Kenneth will schedule a class and notify me with a class date. I look forward to the next date.



**Steve Bowen KI5BKB**



**Josh Cassada KI5CRH presented ARRL License Manual by Keith NM5G, courtesy of NARS (Northwest Amateur Radio Society)**

## Update May 2020

Serena KG5TMT and Nick KG5TMV have both completed their assignments aboard the ISS.

Serena was first. She is an MD. She ran a bunch of medical experiments while in space. You can listen to the ARISS side of a QSO between Serena and F5KEM Collège Léonce Bourliaguet on YouTube at <https://www.youtube.com/watch?v=l8oZnWTfd6A>

Nick's first flight was aborted after lift-off due to a problem with the Soyuz rocket and you can watch a NASA video covering the launch and abort here: <https://www.youtube.com/watch?v=LUwnLKFfuBE>

He flew on a later rocket. Before he became an astronaut, he was an Air Force F-15 test pilot.

# Giving Back Update

## [Rob Brownstein K6RB](#)

CWops' Giving Back (GB) program is meant to provide on-air QSO experience and practice for anyone who wants it. It was initially intended as a way for our CW Academy students to get some on-air experience. We all know that when there is activity on the bands, these days, it's usually a DXpedition pileup or a contest. Today's CW aspirants have had little chance to work others who are skilled at CW, operate at moderate speed, and are committed to helping. That's the mission of Giving Back.

The GB volunteers get on the air at approximately 7 PM local time and seek out CQers, or call CQ, and engage in routine QSOs including some conversational tidbits.

Here is the current GB schedule:

Giving Back Operating Schedule 7 PM Local Time 40 m									
	UTC+3	UTC+2	UTC+1	UTC	EDT	CDT	MDT	PDT	UTC-10
Mon				GM0EUL	AF8A	K8UDH	NS6W	N6HCN	KH6LC
Tues		SV2BBK		GW2CWO	WE5P	W8OV	K7NJ	K6RB KK6M	
Wed				G0HKC	N4TMM	K5XU	KU7Y	K6DGW	
Thurs		SV2BBK		G2CWO		AC6ZM	NS6W	WU6X	AH6KO
Fri		SV2BBK			VE3FXX W2LCQ	AC6ZM	KU7Y	K6RB	
Sat					VE3FXX	AC6ZM			
Sun						N9EP		K6RB	

Those interested in working these folks and practicing should look for them at around 7 PM in each time zone. They will usually send a "CWA" just before signing after a CQ. This identifies them as GB volunteers and lets others know these people are there to help.

Here are the results of June's GB efforts:

### Stations Worked

**AC6ZM:** K8TED, K9ID, NR3Z, WA4NKL, N8XMS, W8RTJ, VE3VIC, N8HZM, W3TOS, UA3RC, KI4IO, K E2WY, W0DQ

**AF8A:** WA2PCN, K8UC, KG5DKG, K0AF

**AH6KO:** N7POV, KM6ZYC, NU6F, KJ4BQS, KH6FHI, K2RP, W6LFB, KG6T, KF6HKU, K7SF, N6PG, WA6L, K7NDE, WU6X, AJ6KZ, VE2EBL

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**GW2CWO:** M6FEU, 9A5O, DK2RW, PA0VLD, G M0MOP, HB9DXA, RA3UU, F5IYJ, DL4MD, DL6FAX, DL6RO, OM3YAG, DJ9IE, HB9HFA, PA3GJA, R3RR, PA3GBY/P, UR5QMP, E73KW, M5EVT, UA3WBC, F8DTU, DL1CC, G4LHI, ON4CLF, GW0MY, GW3TYI, G0ACQ  
**K6RB:** LU5UEA, N8AI, N7POV, KV1E/6, K8ZX, AA0W, K6TET, N7KM, K7AYW, WA6OUW, AC2K, AA7JC, K7NJ, W7KB, KJ5XF, KB5KBD  
**K7NJ:** KD8AZO, KD6GBY, KI6M, WD4KET, K6ZGN, AC6YY, W6BBA, K9ING, N7NKK, WJ7S/P, KD8AQO, KG5AQV, K6RB, K6EE, W7LRY  
**K8UDH:** KB2IDY, W8RTJ, WA5RES, N8XMS, KG5IEE, KQ5H  
**KH6LC:** KG6NRV, K6TTT, WA5UUP, K0HX, K7SF, W3EEK, N7CQR, N7POV, KL2S, N8DUS, AG7GP, NU6F  
**N9EP:** KB4CG, K4EWG, KB1FGC, AB2ZT, N5UU,  
**SV2BBK:** DL6FAX, IQ9QV, IT9PBR, RO6G, YT2ISM, RN6LOZ  
**VE3FXX:** KN4TFR, NA9M, K1ARR, K1YS, WW3Q, K2QU, KD2MTG, W9TTH, W8BJO, KB4CG, AA1PD  
**WE5P:** KM4CU, AC4BN, N2RO, N3HAM, K8RQX, K1ARR, KB2SN, K0AF  
**WB5BKL:** KO4OL, K4TZ, N4SO, K4QD, W3TB, K5WE, W2MF, W4JU, W3RA, N4XL, W3GC  
**G2CWO:** M7CJK, SM7ZDI, PA/ON5AF, DL4MG, DL6FAX, UR5AMJ, G4JQT, DL1CWM, DL4HJ

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## A Simple Remote Setup

[Jim Walter, WT9U](#)

As a pilot for FedEx, I'm often on the road. I have been interested in a simple way to operate my station remotely without getting too crazy with extra programs, interfaces, etc. Recently while on vacation I stumbled across an article in the March 2020 *QST* entitled "Inexpensive Remote Operation with NoMachine and a Raspberry Pi". I read the article as well as the hyperlinks to several other articles by W3YJ. I realized that the NoMachine software just might be the solution I was looking for.

My primary interest in operating is contesting. I started entering the CWTs on Wednesdays (and soon became a member) as this hour-long format allows me to develop/hone my SO2R skills, get my rate fix, etc. My station consists of an FT1000MPv and IC7300. I use a YCCC SO2R box to control the audio and CW keying lines. I've been using N1MM+ for years and take advantage of many of the bells and whistles it offers. I've got dual band decoders that select a KK1L 2x6 antenna switch that I built. My antennas consist of a KT34a on a 45' house bracketed tower, delta loop for 40 m, dipole for 80 and inverted L for 160. The tri-bander runs into a 4O3A triplexer and associated bandpass filters. Essentially, I have 6 mono-band antennas. Several years ago, I added the Easy Rotor Control to Ham-M control box which allows me to turn the rotor through N1MM, either via keystroke (Alt-J) or the Rotor Control window on the desktop. Since the station control is basically automated, I figured remote operation shouldn't be too difficult.

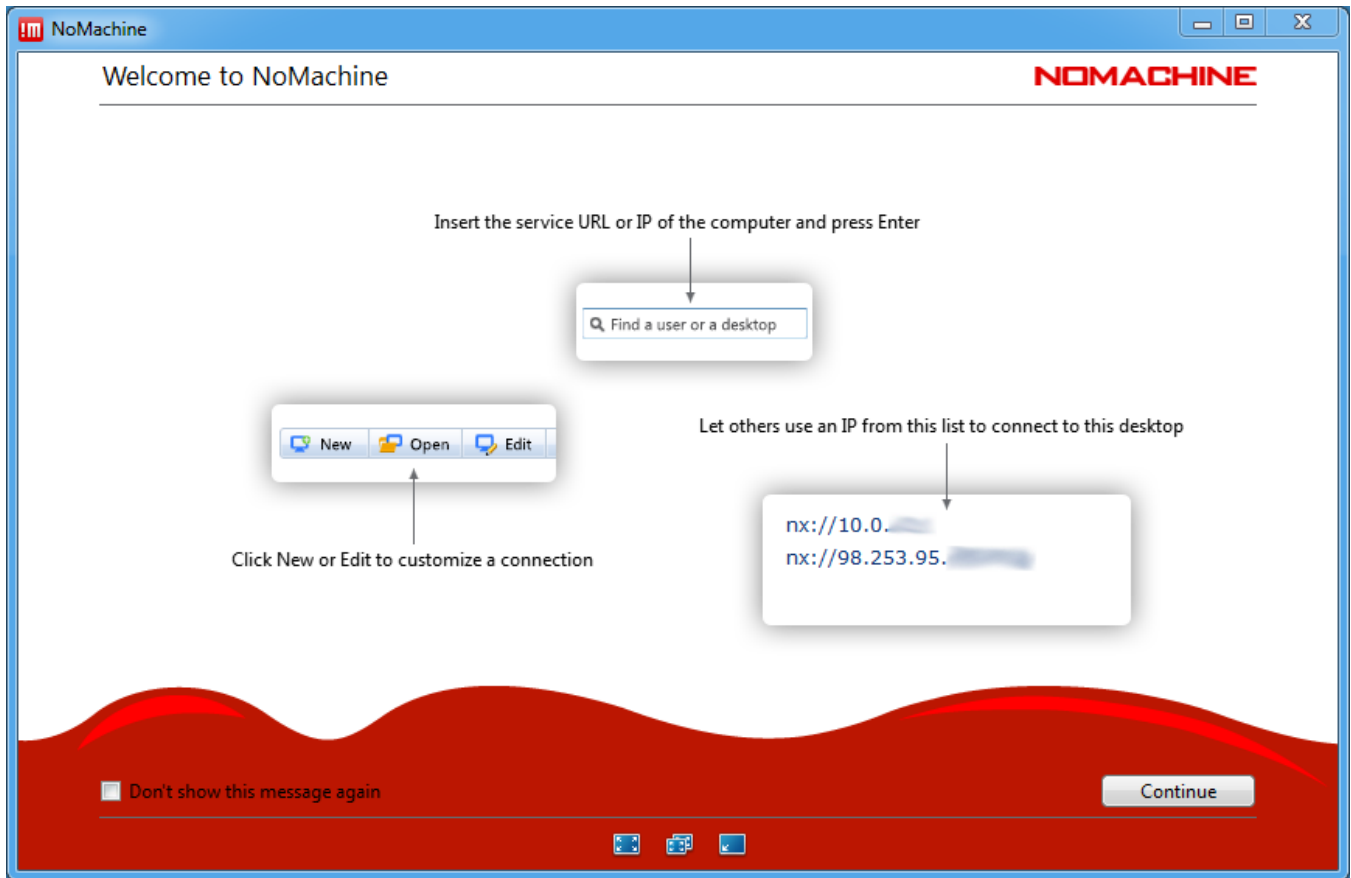
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When I got back from vacation, [I downloaded NoMachine \(which is free\)](#) onto the shack computer. Although the author of the original QST article used NoMachine with a RaspberryPi, I don't use the R-Pi in my setup.

Once the program is installed on your shack computer, it determines two IP addresses in your setup (see screenshot, below) that one needs to allow the remote devices to connect. The top IP address is used when I operate from within my LAN and the bottom IP address is used when I operate from outside my LAN. Those remote devices can be a laptop computer, iPad/iPhone or Android device.



With that information in hand I downloaded NoMachine to my iPad. I entered the IP numbers and was able to see and manipulate my shack computer desktop.

NoMachine handles the audio as well. With the IC7300 that's a fairly simple process as it sends an Audio Codec to the computer via the USB cable. To set this up on the shack computer you go into Sound Control Panel, Recording Tab. In my case I see USB 3 Codec from Radio. Under properties check "Listen to Device." Below that select "Speakers (NoMachine Microphone Adapter)." On the Level Tab. The slider needs to be around 75 or greater and the speaker symbol unmuted. (When I operate FT8 I have to readjust the level to 2 to keep the audio to the WSJT-X program from overloading.)

Once that is set then you should also see Microphone (NoMachine Microphone Adapter Ready) in

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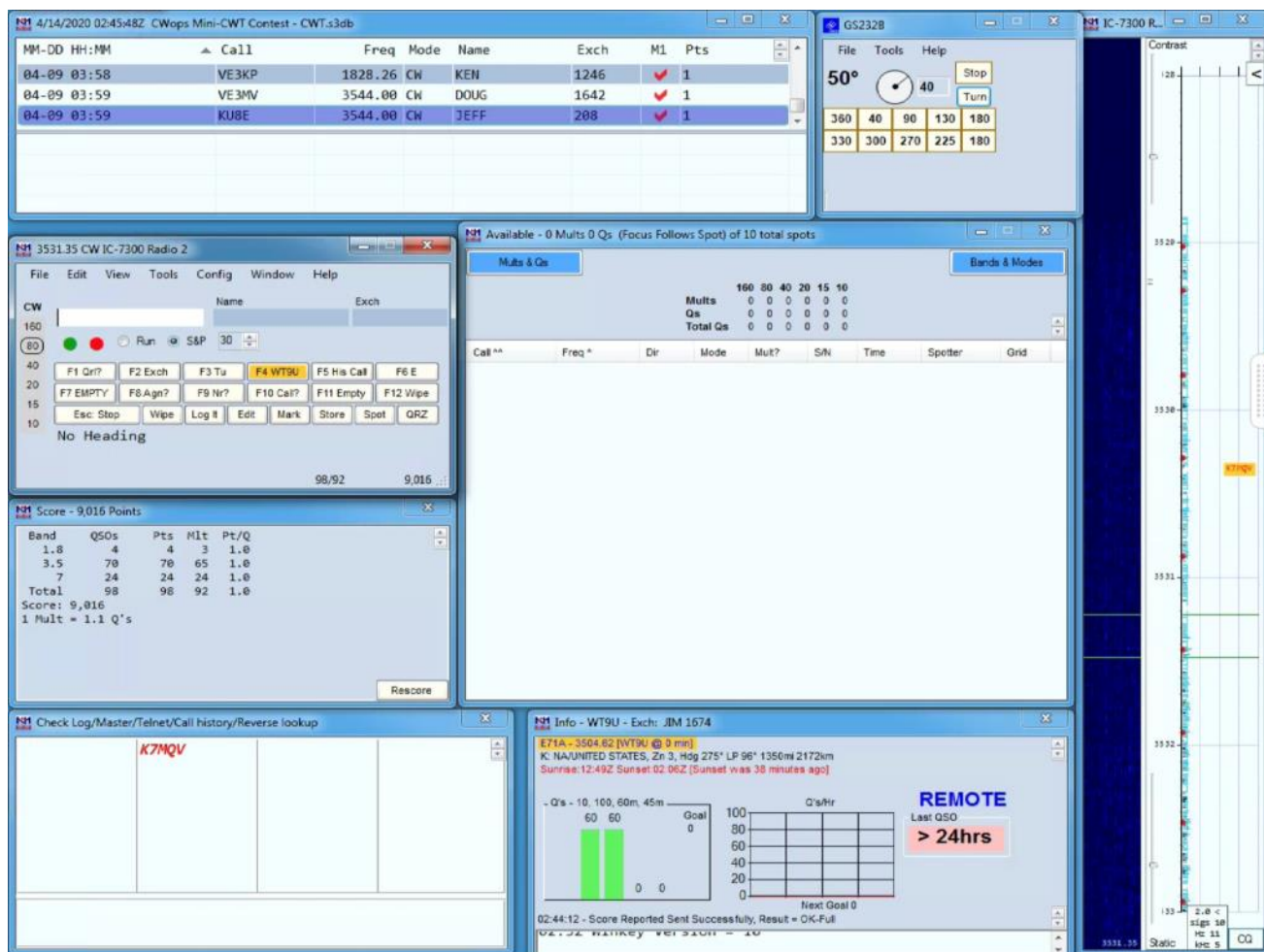
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the Recording Tab. Select this and Properties. Under the Listen Tab check “Listen to this device.” Under Levels make sure the speaker icon is unmuted. The level doesn’t seem to matter.

On the iPad (or other device) go to settings and click on the speaker (Audio) icon. Enable that audio and adjusted the level to max. You can then control the volume through the iPad volume control.

All the equipment in my shack is powered through a distribution box that I built (think Power Strip). I bought a TouchSmart outdoor switch at Walmart. This switch connects to my Wi-Fi (which is not on this power circuit) and can be controlled via iPad/Smart Phone, etc. I plugged my distribution box into this.

Here’s how it works. I switch the power on to the shack via the TouchSmart app. My computer is set to autoboot on power up. I always leave the Icom radio turned on, so it boots up as well. The antenna switch is controlled by the same power supply. Allowing maybe 90 seconds for the boot up process to take place I then open the NoMachine app on my iPad and use one of the two connections available, depending on whether I’m at home or not. That establishes a connection with the shack computer where I’m looking at the desktop. I then open N1MM. Once that program is open the antennas auto select and I’m in business. Here’s a screenshot of N1MM+ running on my iPad.



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I found an inexpensive Bluetooth keyboard that I can use with the iPad. I've operated briefly in a couple of CWTs with it. I control the frequency of the radio with the up/down arrows or tap on a signal in the spectrum display. You could also type a frequency into the entry window and press enter as well. I can jump to spots or next signals using the keyboard too. There can be some latency depending on the connection so I won't be doing any SO2R stuff with this arrangement, but I will be able to have some fun, which is the operative word. I have no paddle input so anything that isn't pre-programed in a function key must be sent via the keyboard. I have conducted one ragchew this way, but it is a bit tedious even being a touch typist.

When operating from the shack I use two monitors. I can swap between monitors with NoMachine but it's a bit tedious. I've used the OPON command (Ctrl+O) within N1MM to create several screen configuration options within N1MM. If I'm operating remote, I use OPON REMOTE and have all the relevant windows on one screen (see picture, previous page). If I'm operating FT8 I use OPON FT8 where the screens are set up differently. When I'm operating from the shack, I use OPON WT9U for a normal SO2R configuration for CW and SSB and OPON RTTY for RTTY contests where I use a different layout.

I have also used NoMachine with a laptop which is a lot less tedious than the iPad but much bulkier to haul around on the road. I've even operated FT8 using my Android phone although the small screen makes it a bit more of a challenge.

One of these days I'll be on the road and have the opportunity to put in a full hour using the remote configuration. I'll let you know how that goes.

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## Antenna Repairs at W1WEF

[Jack Schuster, W1WEF](#)

When we returned home February 1 from two back to back Caribbean cruises, I found that every one of my antennas had problems. Everything was working when I left (except one rotor). I was so despondent over it I almost had my tower taken down and I considered going with all wire antennas. There had been some very high local winds when we were away.

In early February, the weather turned so beautiful that I decided to tackle the repairs myself. First, I had to go up the tower to assess what had to be done, and to see how I felt climbing at 82! I took my time and didn't push myself, and felt fine after going to the top (108 ft) where I installed a pulley with a 5/16 braided nylon rope for the 80 dipole which broke at the feedpoint which could not be reached with one end tied to the tower. With the help of my very supportive wife, we managed to get the rope OVER the top of a big tree that is between the tower and the far end of the dipole. After repairing the dipole, we hoisted it back in place to about 85 ft average height.

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Repairs on the 80 four-square were easy because two of the wire elements in trees broke at the bottom. Thanks to the inventor of split bolt connectors! With a split bolt connector (picture, right) intentionally just snugged up, if the wind blows the tree hard enough the wire will pull loose from the connector instead of breaking. A rope from about 6 ft up the wire allows me to retrieve it should it pull apart at the split bolt connector and fly up into a tree.

The 160 Inverted L did break loose and fly up into a tree. Luckily, I could barely reach the end with a long pole and pull it down. That antenna now has a retrieval rope on it.

I decided to simplify the station a bit and do away with the TH6 on a IIX rotating sidearm at 75 ft. The rotor on that one had already failed early in the winter with the antenna stuck North. Although the antenna worked fine it couldn't have stuck in a worse direction! First I suspended the antenna with a sling and the boom vertical, and managed to manipulate it so I could remove the elements. I just tossed the elements in a horizontal position to the ground, one at a time onto a clump of mountain laurel. All landed perfectly except one that had the tip damaged.

The IIX sidearm is very rugged and heavy. I just dropped that to the ground and it landed in great shape! On the way down the tower I cut away the tape holding the rotor and coax cable no longer needed.

The next task was removing and replacing the 20-year-old Yaesu G1000SDX rotor on top of the tower with a new G1000DXA. I have an extra rotor shelf above the rotor but below the flat top and thrust bearing. On that shelf I have a piece of aluminum angle stock with holes for a U bolt to temporarily keep the mast from tipping when the rotor is removed. Replacement was pretty straight forward but I had to replace the rotor cable with the new connector pre-installed and checked out in the shack.

The best use I found for that second TH6 was being able to have it in a different direction from the one on top. In CWTs I would have it on Europe and the top antenna on the states. I would usually run stateside stations on the top antenna but if I heard a weak EU station calling I could flip a toggle switch and put the two TH6s in parallel by means of a steering diode in the remote RCS10 control box, and the EU signal would come way up. Surprisingly the SWR with the two antennas paralleled was pretty good. Now that I no longer had a second TH6 I missed that ability, so I put a 20 meter dipole broadside to Eu-



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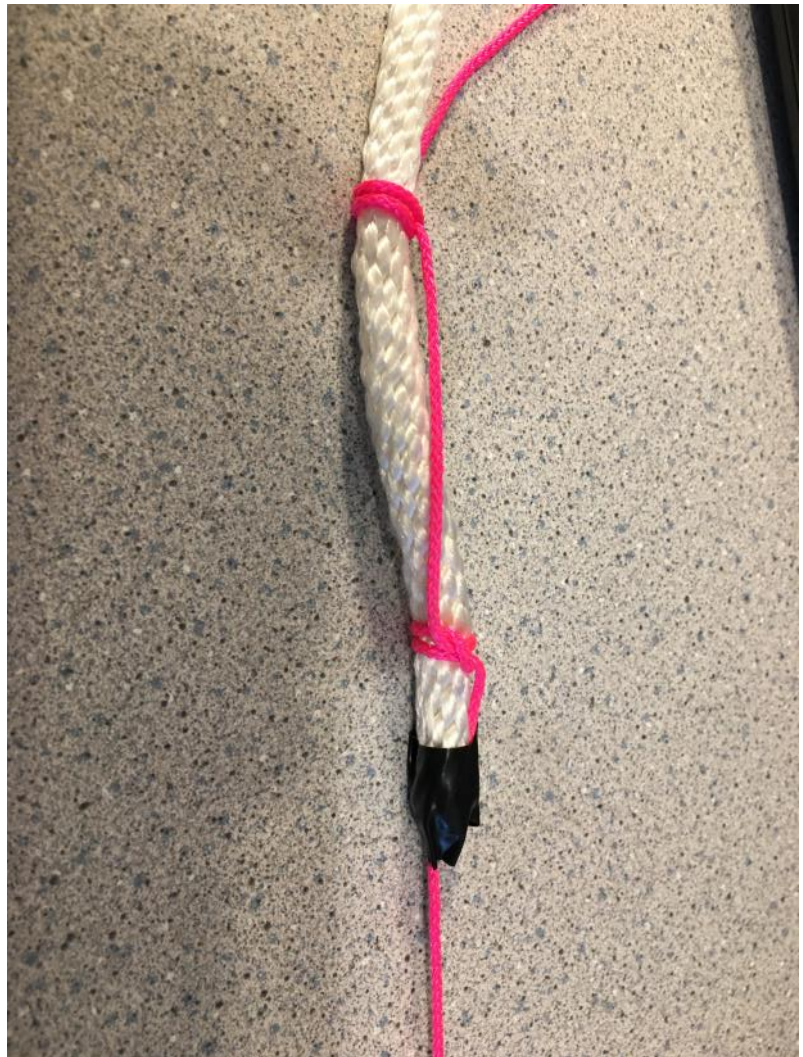
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rope between a couple trees, and it works great! With one less TH6 and rotor, I reworked my cabling to and from the junction box at the base of the tower and in the shack, and I now have an unused 8 conductor control cable for future projects if any.

What is my preferred way to get a rope up into a tree? I use a slingshot with a closed face reel (mine came from Walmart) and 8 lb test nylon line to put wires in trees. The reel is mounted on one arm of the slingshot with a small stainless steel hose clamp. I first shoot a 1oz sinker over the treetop or branch, let the sinker fall to the ground and then pull a brightly colored mason line back over the tree. I then use the line to pull a 5/16 diameter braided nylon rope back over the tree and use the rope to support one end of the wire antenna.

To attach the rope to the mason line in a manner to avoid bulky knots that can get caught in the branches, I tie two clove hitches around the rope with the mason line, and then tape the end with a small piece of electrical tape as shown. I've had good success with this rope over branches without elaborate pulley and weight schemes, with the branches acting as natural springs with no failures from abrasion. The rope has lasted well over 5 years with no breakage or deterioration from sun.

My trees are about 75 ft and I can go right over the top. Not always the first shot but usually within 2 or 3. A calm day is a requirement. If you miss your mark on the first shot you should never try to pull the sinker back through the branches; cut it off, reel the line in and reattach with a fisherman's knot.





# CW Academy

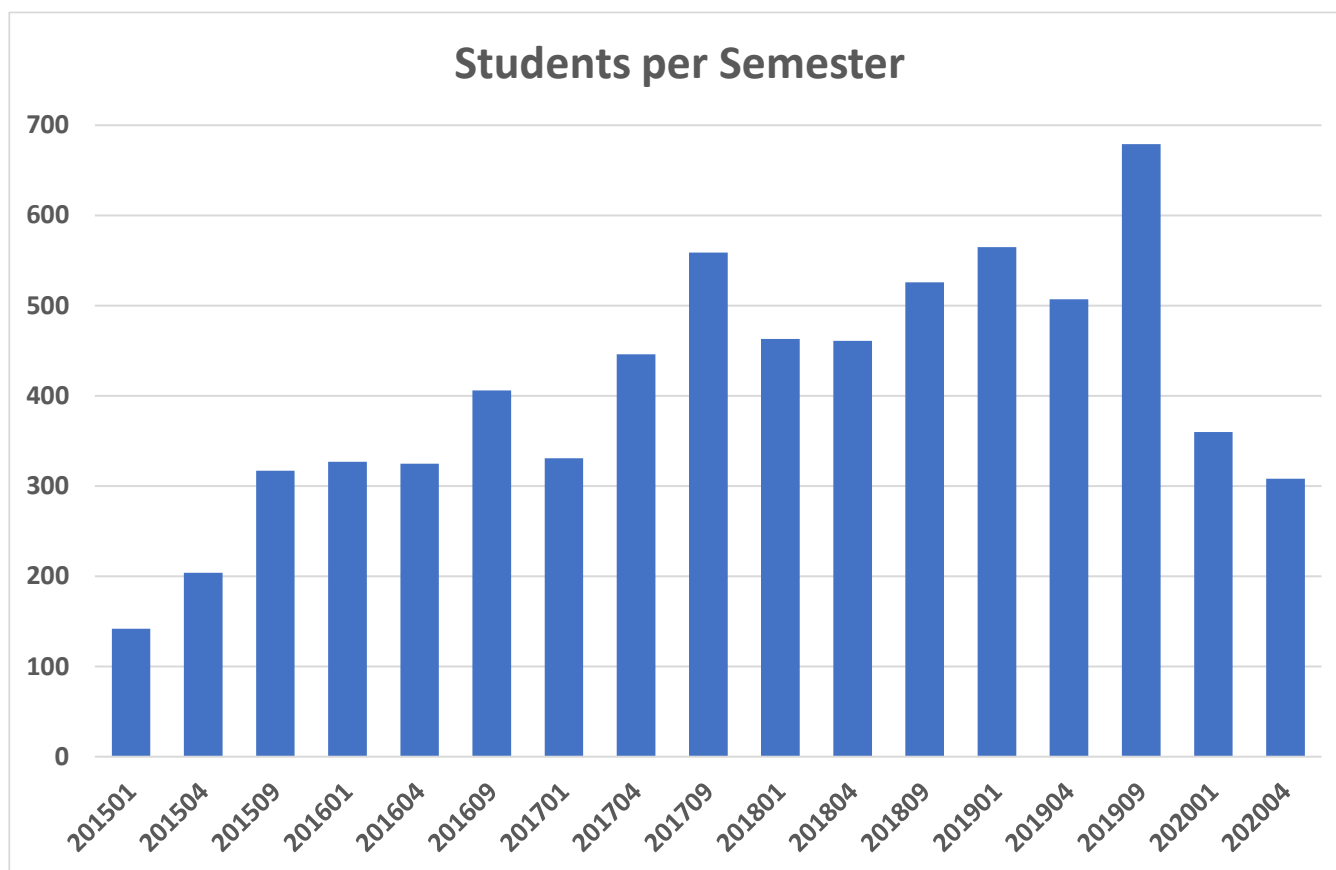
[Kate Hutton K6HTN](#) [Joe Fischer AA8TA](#) [Bob Carter WR7Q](#)

Over the last few years, the CW Academy has had two different ways of tracking students, advisors and classes. Joe recently went through an exercise to consolidate some of this information into a relational database in order to help answer several questions I get along the lines of “how many students...” There are some inaccuracies to this data mainly going back a few years where determining the exact status of a student could not be quickly done, especially using scripting tools. Hopefully, the data is accurate to within several percentage points.

The data below starts with the year 2015. You will see years in the horizontal axis for the semesters along with a two-digit number. These codes mean: 01 = January-February; 04 = April-May and 09 = September-October. Even though the CW Academy was running prior to 2015, the statistics are not available. The data include students who were placed into a class. Some withdrew during the class; students who withdrew before classes were selected were not included. There are some other students who were not placed in a class, usually because of a lack of advisors, and these students were also not counted.

From January 2015, through May 2020, 6,926 students were placed in a class. Over that time span, 158 different advisors have led at least one class.

The following chart shows the number of students enrolled in each semester.



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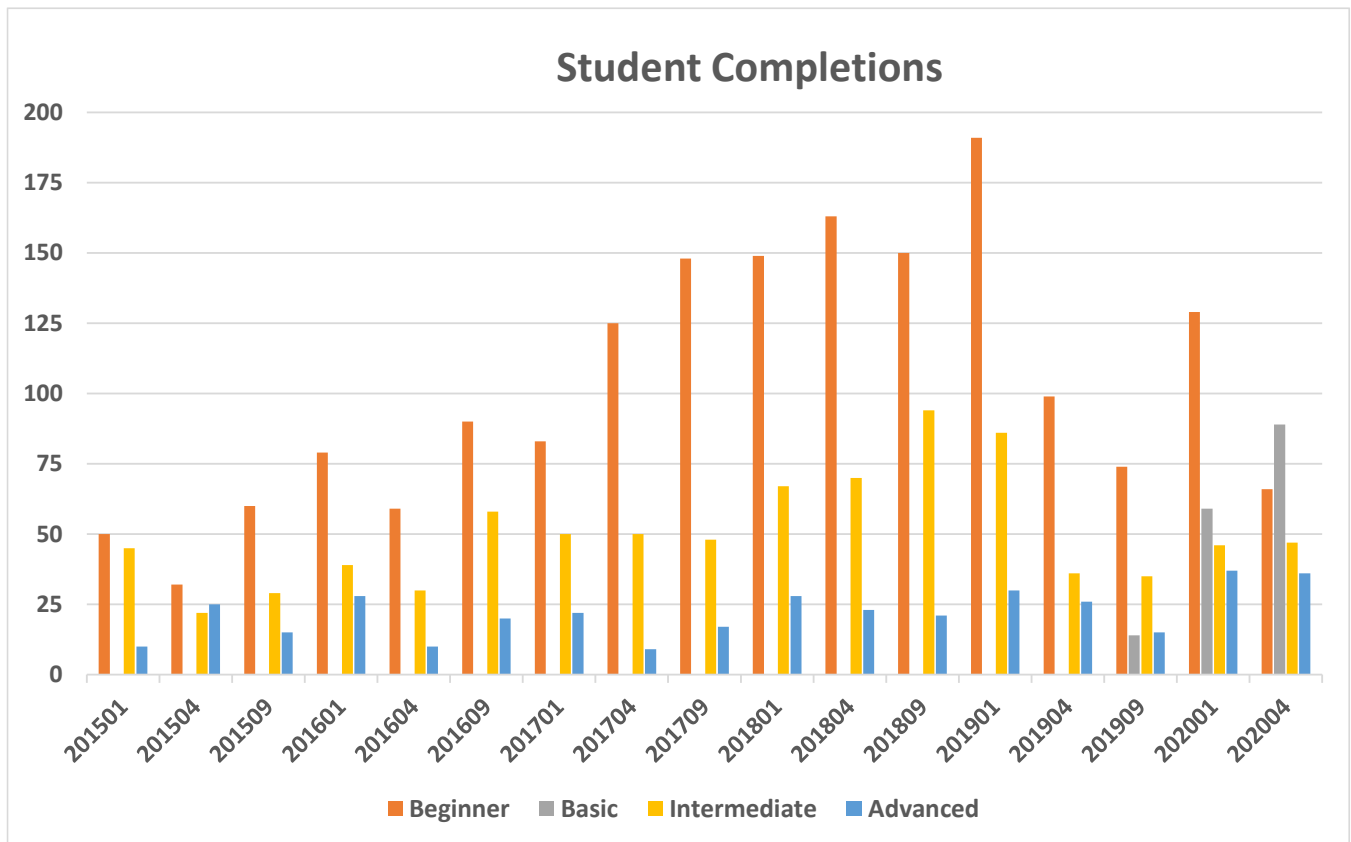


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This shows a significant spike in the number of students in September 2019. Since then, the numbers have gone down for unknown reasons.

Since 2015, 3,439 students have completed a class; many students completed more than one class (Beginner and Intermediate, for example) and are counted for each class they completed. 1,747 students completed a Beginner class, 162 students completed a Basic class (a fairly new class), 852 students completed an Intermediate class and 372 students completed an Advanced class.

The statistics in the last paragraph are summarized in the following chart.

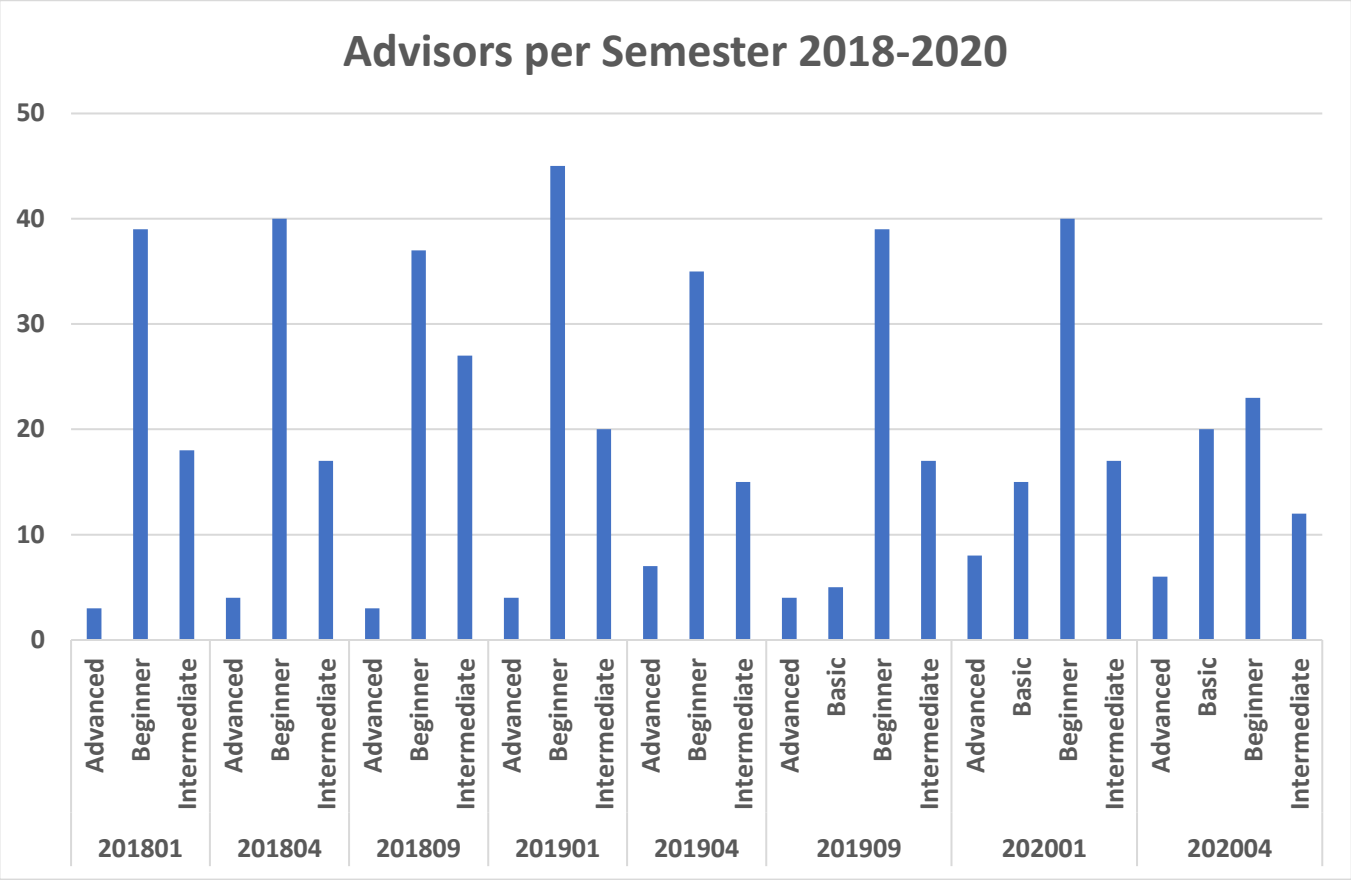
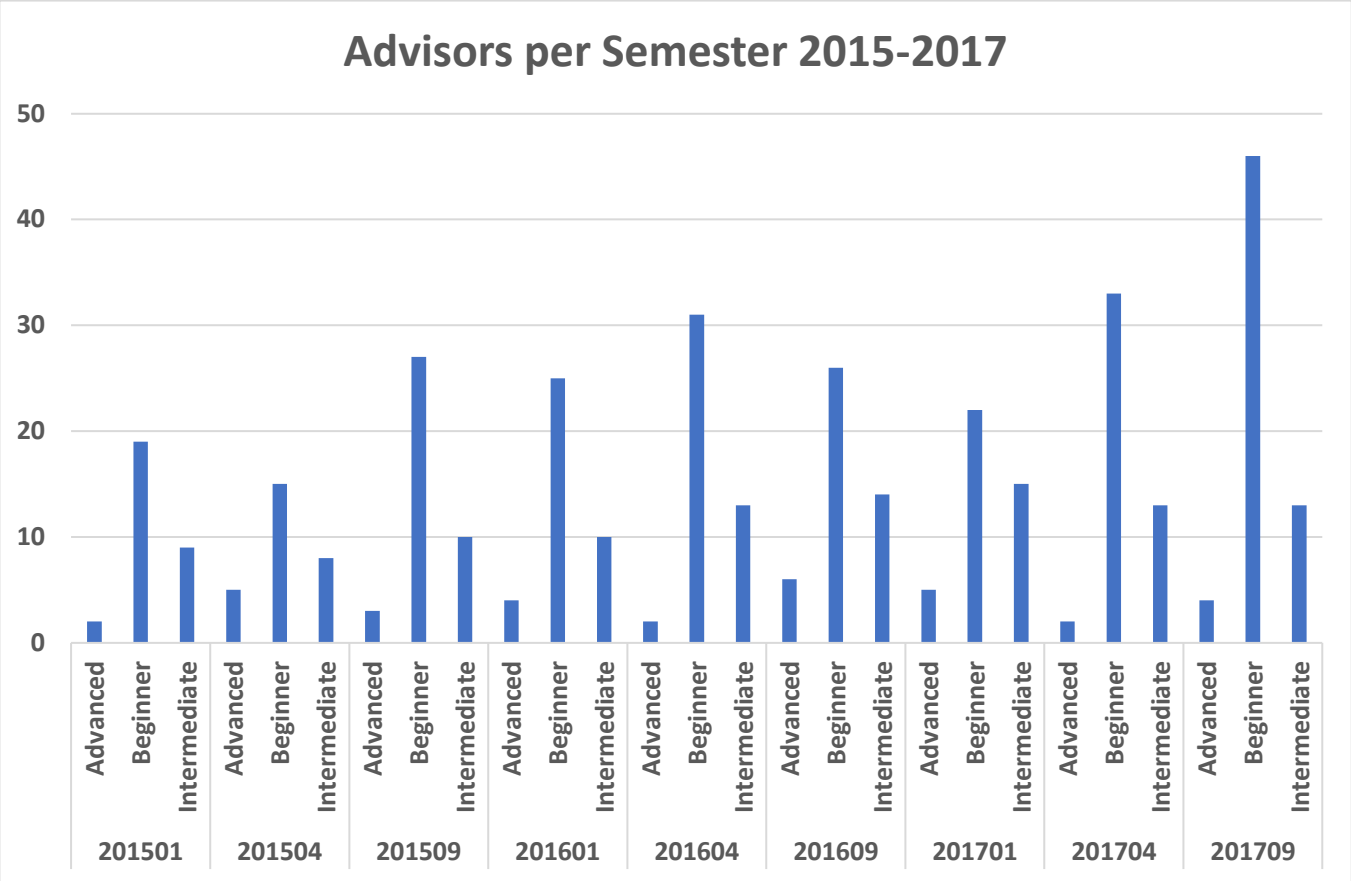


For advisors, the final charts (next page) summarizes the number of advisor-classes per level per semester. Several advisors lead more than one class in a semester, so they are counted more than once.

For the September-October 2020, semester, we have 608 students signed up to take a class and 54 advisors signed up to lead at least one class. Every time zone in the world, except four, have at least one student signed up. There are 242 students signed up for a Beginner class, 158 Basic students, 135 Intermediate students and 73 Advanced students. As usual, North America is where most of the students are with 461 signups. There are 54 signups in Europe and the rest scattered around other parts of the world including over 25 signups in Asia.

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# New Members

## Trung Nguyen W6TN

With great pleasure we welcome the following new members to CWops:

CWops	Call	Name
2633	W6RLL*	Joe
2634	WO6W*	Bob
2635	OE9WGI	Walt
2636	DL1FY*	Erwin
2637	N7QT*	Bob
2638	PE2K	Adi
2639	KG6NRV*	Bill
2640	VE2JCW*	Jean

CWops	Call	Name
2641	G4UZE*	Chris
2642	WN5V*	Dave
2643	KG5RXG	Mike
2644	KC0TVD	Chris
2645	K1ZJA*	Bill
2646	TA7I*	Ozkan
2647	VE3UTT/W1AJT*	Art
2648	W2HZ*	Fred

CWops	Call	Name
2649	K0MVB	Bob
2650	KR4WI*	Matt
2651	LA1IO*	Hal
2652	K2DM	George
2653	LZ1QN*	Boyko
2654	DM6EE*	Lutz
2655	HA8EV	Szupepe

\*Life Member

## Current Nominees

As of July 9, 2020:

**Need Sponsors:** KK6ZHK, K5ESW

**Invitations Extended:** K7RI, K5PHB, F5EQR, LZ5PW

For more details about nominees and up-to-date status, check the "Membership" then "Members only" page on the website: <http://www.cwops.org>. For information about joining CWops, check the "Membership" page on the website: <http://www.cwops.org>

Notes: If you have updated your personal info, e.g., new QTH, new callsign, or additional callsign, please send it to [membership@cwops.org](mailto:membership@cwops.org) so I can add it to the roster. Vice versa, if your callsign becomes inactive I can remove it, too. Then the roster will be accurate and current for our usage.

**73,**

**Trung W6TN**, Membership Manager

# CWops Tests

[Rich Ferch VE3KI](#)

This past month has been marked by a number of events I found interesting, including the special slow-CW CWTs on the second Wednesday of the month, followed by the ARRL VHF contest, then the ARRL Field Day two weeks later, and the conjunction of the Wednesday CWTs with the RAC Canada Day contest on July 1.

First, the slow-speed CWTs on June 10-11. These events are intended to attract new participants to the CWTs, especially from among CW Academy grads, and based on my logs, they appear to be doing that. On a typical Wednesday, I might expect that among the call signs I contact, no more than perhaps up to 10% of the stations I work would be non-members. On June 10-11, this number rose to close to 20%.

Let's hope some of them come back for more. The experiment proposed by some of our members of operating the first few minutes of the 0300Z CWT session between 7100 and 7115 kHz while staying at 20 wpm or less may help with this. I'll be trying this out and watching how it develops in the weeks to come.

The lower speed, of course, results in lower scores – the longer it takes to complete a QSO, the fewer QSOs will be completed within the hour. Looking at the total numbers of participants and numbers of QSOs reported in the three CWTs on June 10-11, the number of participants reporting scores was slightly higher than in the previous and following weeks, while the total number of QSOs reported was lower by a little under 30%, as might be expected.

The following weekend was the weekend of the ARRL VHF contest. I operated on 6 meters in this contest, and while the majority of my contacts were in digital modes, I did make 80 CW contacts. Of those, one-third (26) were with CWops members. This is a lower percentage than in many other North American contests. For example, on Field Day just about half of my CW contacts were with CWops members.

Likewise, almost half of my contacts during the RAC Canada Day contest (all CW) were with CWops members. Virtually none of those came during the CWTs on July 1, though. Although I was prepared to send, receive and log both exchanges, the modus operandi adopted by the majority of those members who were active in the RAC contest was to take a break from the RAC contest and operate only in the CWT during its one-hour duration. I need not have bothered preparing the ability to combine the two.

Looking ahead, the CW North American QSO Party will take place on August 1-2 this year, and I look forward to meeting many of the CWT regulars there, as well as other CWops members who are usually unable to make the mid-week CWT sessions.

We do the CWTs because they're fun; let's all make sure they continue to be fun for everyone.

**73,**

**Rich VE3KI**, CWT Manager



# CWops Member Awards

## [Bill Gilliland W0TG](#)

The Annual Competition Award (ACA) is based on the number of members worked each calendar year. You get one point per member worked, once per year. It resets to zero at the beginning of each year. The Cumulative Member Award (CMA) is based on how many members you've worked since January 3, 2010 on each band and continues to grow in perpetuity. [Use the new online tool to submit your data](#). It's easy! (Watch the tutorial if you have not used the online tool before.)

This table is a composite of scores from the old system and the new. Anyone who submitted logs via the new web page will see those submitted scores here. Those who have not adopted the new process will see scores they reported via the old system. Anyone who see errors in their scores should report them to [cwopscam@w0tg.com](mailto:cwopscam@w0tg.com).

Members whose call signs are in **RED** have achieved a milestone: 100 DX entities, 40 WAE entities, 50 states (WAS).

Call	ACA	CMA	Call	DX	Call	WAS	Call	WAE	Call	WAZ
AA3B	1400	9660	W1RM	205	WT9U	50	UR5MM	58	UR5MM	39
K3WW	1283	7340	F6HKA	187	WT2P	50	W1RM	57	W1RM	38
N5RZ	1175	4201	DL6KVA	158	WA9LEY	50	DL6KVA	56	OK1RR	38
K3WJV	1142	5095	W4VQ	154	WA4JUK	50	OH2BN	55	OH2BN	38
NA8V	1111	5465	UR5MM	152	W9ILY	50	F6HKA	53	N8BJQ	38
F6HKA	1081	6020	G4BUE	149	W7GF	50	VE3KI	50	F6HKA	38
W1RM	1019	6635	OH2BN	148	W6KY	50	OK1RR	49	AA3B	38
WT9U	1018	3812	OK1RR	139	W4VQ	50	9A1AA	48	9A1AA	38
K4WW	1012	2949	VE3KI	134	W1UU	50	G4BUE	47	W4VQ	37
N8BJQ	996	6262	N8BJQ	125	W1RM	50	N8BJQ	46	VE3KI	37
VE3KI	961	5762	K3WW	123	W0EJ	50	DJ1YFK	46	G4BUE	37
KG9X	951	3316	AA3B	122	VK7CW	50	PG4I	45	W0VX	36
K7QA	925	2962	K1ESE	119	VE3KI	50	K3WW	45	N5PHT	36
I2WIJ	923	1889	AC4CA	118	NU7Y	50	AA3B	45	K3WW	36
N7US	893	3746	W0VX	117	NA8V	50	IK0YVV	44	DL6KVA	36
K1ESE	837	4291	9A1AA	117	NA6O	50	G4HZV	44	AC4CA	36
K1VUT	831	3049	N5PHT	113	N8BJQ	50	W4VQ	43	N5RR	35
N1DC	797	3253	N5IR	112	N7US	50	K3WJV	43	ON4CAS	34
K8JQ	795	3707	EA8OM	111	N5RZ	50	K1ESE	43	N1EN	34
W4PM	795	1495	W9ILY	110	N5RR	50	I5EFO	43	IK0YVV	34
WA4JUK	792	2419	K1SM	110	N5PHT	50	W9ILY	42	4X6GP	34
K9WX	785	3157	N1EN	109	N5IR	50	NA8V	42	W9ILY	33
DL6KVA	777	3897	VK7CW	105	N2UU	50	N5RR	42	VK7CW	33
NA4J	765	1864	N5RR	105	N2RC	50	N2UU	42	NA8V	33
AC3BU	762	1741	4X6GP	105	N1EN	50	EA8OM	42	N5IR	33
K1DJ	749	2924	N2UU	104	N1DC	50	DL5DBY	42	K1ESE	33
N5PHT	744	4149	W1UU	103	KY7M	50	AC4CA	42	K0VBU	33

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Call	ACA	CMA	Call	DX	Call	WAS	Call	WAE	Call	WAZ
WN7S	738	2108	I5EFO	103	KU7Y	50	4X6GP	42	I5EFO	33
K6NR	714	1552	K3WJV	102	KE4S	50	SM0HEV	41	K1SM	32
W9ILY	691	4346	NA8V	101	K9WX	50	K1SM	41	I5IYJ	32
9A1AA	679	3046	IK0YVV	101	K8JQ	50	RM2D	40	WA9LEY	31
KV8Q	678	1575	AE1T	101	K8AJS	50	G3LDI	40	RM2D	31
KT5V	662	2235	N7US	100	K7QA	50	W0VX	39	N7US	31
N2UU	661	4234	ON4CAS	99	K6NR	50	SM7IUN	39	N5RZ	31
AC6ZM	661	1150	EA1WX	99	K5IX	50	N1EN	39	N2UU	31
W6LAX	655	1084	K0VBU	98	K5CM	50	LA8OM	39	W1UU	30
K3JT	654	2974	WA9LEY	94	K5AX	50	K8AJS	39	OK1RP	30
KE8G	646	2412	K8AJS	94	K4WW	50	IT9MUO	39	NA6O	30
K4TZ	645	1653	WT9U	92	K4GM	50	HB9ARF	39	N2RC	30
W0VX	625	4283	N5RZ	90	K3WW	50	AE1T	39	KR3E	30
W4WF	620	1848	K1DJ	88	K3WJV	50	N5IR	38	K3WJV	30
CO8NMN	606	1793	N2RC	87	K3SEN	50	M0RYB	38	K8AJS	29
WA9LEY	602	2945	F6JOE	87	K3JT	50	IT9VDQ	38	K3JT	29
IT9MUO	597	1924	KY7M	86	K2QB	50	I2WIJ	38	IT9VDQ	29
K0VBU	595	4266	KR3E	86	K1ESE	50	G4NVR	38	WT9U	28
W3WHK	591	2051	RM2D	85	K1EBY	50	DK1WI	38	N5AW	28
WS1L	577	987	I5IYJ	83	K1DJ	50	SM5IMO	37	KT5V	28
NR3Z	576	974	AD1C	83	K0VBU	50	OZ3SM	37	K4GM	27
K0TC	562	1936	K4HQB	81	K0MP	50	MI0WWB	37	DJ1YFK	27
OZ3SM	557	1115	PG4I	80	IK0YVV	50	KR3E	37	WT2P	26
K5ZD	550	2306	NA6O	80	I5EFO	50	K3MD	37	N1ZX	26
K4GM	547	2820	K3JT	80	G4BUE	50	K1DJ	37	KU7Y	26
K0MP	534	1658	DJ1YFK	80	F6JOE	50	G4ILW	37	K5ZD	26
K3SEN	526	1985	K9WX	79	F6HKA	50	F6JOE	37	K5CM	26
K8AJS	525	3034	K5AX	79	F5MNK	50	W1UU	36	K4HQB	26
W2NRA	524	1860	DL8PG	79	EA8OM	50	M0DHP	36	K2QB	26
KB4DE	517	1025	N1DC	78	AE1T	50	G4DRS	36	K1DJ	26
AG4EA	514	919	N1ZX	77	AD1C	50	EA1WX	36	V31MA	25
NJ3K	491	803	IT9VDQ	77	AC4CA	50	WA4JUK	35	LA8OM	25
VE3MV	490	2007	K4GM	76	AB7MP	50	SQ9S	35	K9WX	25
W8OV	485	1437	WA4JUK	75	AA8TA	50	ON4VT	35	K7QA	25
N5IR	477	3654	LA8OM	74	AA3B	50	ON4CAS	35	IT9MUO	25
W2VM	474	1500	KE4S	73	WN7S	49	LB6GG	35	DK1WI	25
WA2USA	469	942	K2QB	73	WB5BKL	49	K5ZD	35	WA4JUK	24
W1UU	464	3039	IT9MUO	73	WA3GM	49	K0VBU	35	K4WW	24
W8DN	464	1204	G4HZV	73	W4WF	49	IN3FHE	35	HB9ARF	24
KC4WQ	454	694	G3LDI	73	W4ER	49	N7US	34	DL4FDM	24

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Call	ACA	CMA	Call	DX	Call	WAS	Call	WAE	Call	WAZ
W8FN	450	2055	WT2P	71	W3WHK	49	N5AW	34	PG4I	23
VE3TM	446	574	K5ZD	71	W2NRA	49	N1DC	34	N1DC	23
K5QR	445	674	DL5DBY	71	W0VX	49	K4HQB	34	KE8G	23
KE4S	442	2156	DK1WI	71	VE3MV	49	IK0NOJ	34	K8JQ	23
K1EBY	441	2368	N5AW	70	VA7ST	49	DL4FDM	34	G4HZV	23
KF8O	439	898	K4WW	70	NN4K	49	WT9U	33	WE5P	22
KC8J	436	910	W2NRA	69	NA4J	49	W2NRA	33	NA4J	22
KT4XN	435	1221	SM0HEV	69	N5AW	49	SV2BBK	33	N2WK	22
AA8R	422	931	HB9ARF	69	N2WK	49	PA3BFH	33	KG9X	22
KB8GAE	420	1154	N7WY	68	N1ZX	49	N5RZ	33	KE4S	22
LB6GG	419	762	KE8G	68	KV8Q	49	K3JT	33	K6NR	22
W1EQ	412	773	F5MKN	68	KT5V	49	N2WK	32	SM7IUN	21
G4BUE	410	3789	OZ3SM	67	KM4FO	49	N2RC	32	SM0HEV	21
W4VQ	410	3024	K7QA	67	KG9X	49	KY7M	32	OZ3SM	21
AA8TA	403	1761	SM7IUN	66	KE8G	49	K1VUT	32	K6DGW	21
W0TG	401	1424	N2WK	66	KE4RG	49	I5IYJ	32	K3SEN	21
SM0HEV	399	868	V31MA	65	K6RB	49	F5MKN	32	K1EBY	21
SQ9S	394	763	OK1RP	65	K6DGW	49	F5IYJ	32	G4DRS	21
M0RYB	386	918	SM5IMO	64	K4TZ	49	EA4OR	32	G3LDI	21
K2TW	382	1897	K1EBY	64	K4HR	49	DK3WW	32	W4PM	20
HB9ARF	378	1614	G4NVR	64	K3MD	49	W4PM	31	W2NRA	20
RM2D	375	1332	KT5V	63	K1VUT	49	VK7CW	31	W0TG	20
N4CWZ	364	542	KG9X	63	K0TC	49	V31MA	31	VA7ST	20
NN4K	361	2073	K3DMG	63	DL6KVA	49	OK1RP	31	NN4K	20
KM4FO	354	1388	W3WHK	62	AC3BU	49	N1ZX	31	JF2IWL	20
KK0ECT	352	757	VA7ST	62	W8OV	48	K5AX	31	IN3FHE	20
G4HZV	344	1204	I2WIJ	62	W8FN	48	K4WW	31	AC3BU	20
DJ1YFK	341	1737	K5CM	61	W8DN	48	K4GM	31	AA8R	20
UR5MM	340	2920	G4DRS	61	W4PM	48	G3WZD	31	W7GF	19
PG4I	329	718	VE3MV	60	W2VM	48	DL8PG	31	W4ER	19
G3LDI	326	1573	K3SEN	60	W0TG	48	NA6O	30	W3WHK	19
G4DRS	324	955	K1VUT	60	UR5MM	48	KE4S	30	VE3MV	19
VA7ST	322	2579	DL4FDM	60	NJ3K	48	K1EBY	30	KB8GAE	19
NA6O	319	3352	ON4VT	59	N7WY	48	EA3FZT	30	K4HR	19
G4NVR	318	1161	M0RYB	59	KR3E	48	DF7TV	30	I2WIJ	19
DK3WW	311	491	K8JQ	59	KK0ECT	48	WA9LEY	29	G4NVR	19
K4AFE	310	1766	F5IYJ	59	KE6K	48	SP1D	29	F5IYJ	19
NU7Y	310	1419	NA4J	58	KB4DE	48	N5PHT	29	CO8NMN	19
OH2BN	310	1307	SQ9S	57	KA9BHD	48	KE8G	29	WN7S	18
K6KM	301	487	K4QS	57	K5ZD	48	K7QA	29	WA3GM	18

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Call	ACA	CMA	Call	DX	Call	WAS	Call	WAE	Call	WAZ
K8RJW	300	663	W6KY	56	K4QS	48	K4QS	29	W8FN	18
W6TN	291	910	K6RB	56	K4HQK	48	K2QB	29	SQ9S	18
WE5P	282	875	IN3FHE	56	K4AFE	48	G0ELZ	29	ON4VT	18
SM7IUN	281	701	WE5P	54	K3DMG	48	W3WHK	28	NU7Y	18
KE4RG	278	1112	W4PM	54	K2TW	48	KG9X	28	KE6K	18
W8XC	278	615	NN4K	54	K1SM	48	AD1C	28	K4AFE	18
W3RZ	278	478	CO8NMN	53	IT9VDQ	48	VA7ST	27	K1VUT	18
KJ4M	276	1078	AC3BU	53	IT9MUO	48	PA3HEN	27	K0TC	18
AB7MP	272	1224	IK0NOJ	52	EA1WX	48	M0NGN	27	IK0NOJ	18
AJ1DM	267	765	G4ILW	52	DL8PG	48	K9WX	27	WB5BKL	17
N1EN	264	2444	KU7Y	51	9A1AA	48	K3SEN	27	W4WF	17
DL5DBY	261	1123	AA8R	51	4X6GP	48	VE3MV	26	SM5IMO	17
G3WZD	260	532	WN7S	50	W8XC	47	NN4K	26	M0RYB	17
WA5PFJ	250	496	W2VM	50	W6TN	47	NA4J	26	K0MP	17
VE6JF	248	785	M0DHP	50	W6LAX	47	K3DMG	26	DK3WW	17
PA3BFH	247	396	K4HR	50	W2NO	47	G0MGM	26	W6TN	16
KE6K	244	946	LB6GG	49	VE3TM	47	AC3BU	26	W2VM	16
OK1RR	242	2614	K4AFE	49	VE1OP	47	K8JQ	25	NR3Z	16
K2YR	240	317	W0TG	46	SM5IMO	47	CO8NMN	25	KV8Q	16
DF7TV	237	295	MI0WWB	46	ON4CAS	47	WT2P	24	DL5DBY	16
W7GF	229	956	K0TC	46	OK1RR	47	WN7S	24	DL4KG	16
4X6GP	227	1733	DK3WW	46	OH2BN	47	W2VM	24	DF7TV	16
WT8P	225	453	NR3Z	45	NR3Z	47	NR3Z	24	W8OV	15
N7SU	218	467	G0MGM	45	LA8OM	47	K6RB	24	W8DN	15
WB5BKL	207	1224	W4ER	44	KT4XN	47	K5QR	23	LB6GG	15
EA4OR	205	368	DF7TV	44	KJ4M	47	K5CM	23	KT4XN	15
W6GMT	198	391	W8FN	42	KF8O	47	EA1DP	23	KE4RG	15
NF5KF	198	289	W4WF	42	KC8J	47	K2TW	22	KB4DE	15
KI3F	197	308	KB8GAE	42	I5IYJ	47	DL8BH	22	K6KM	15
SP1D	184	265	K2TW	42	I2WIJ	47	AA8R	22	G4ILW	15
GD4EIP	184	199	WA3GM	41	HB9ARF	47	JF2IWL	21	AJ1DM	15
MI0WWB	173	468	SV2BBK	41	DK1WI	47	GD4EIP	21	AB7MP	15
K4EES	166	334	K3MD	41	CO8NMN	47	F5PBL	21	W8XC	14
KA9BHD	157	755	G3WZD	41	AC6ZM	47	W4WF	20	W2NO	14
KU7Y	154	1674	WB5BKL	40	WT8P	46	K4HR	20	VE6JF	14
KG5VK	147	163	W8DN	40	WS1L	46	DL4KG	20	NJ3K	14
SV2BBK	142	319	PA3BFH	40	WE5P	46	VE3TM	19	N7MU	14
M0DHP	139	454	W8XC	39	VE6JF	46	KT5V	19	N0PP	14
OK1RP	136	701	KV8Q	39	V31MA	46	GW4MVA	19	MI0WWB	14
ON4VT	131	678	KT4XN	39	RM2D	46	DL1NKB	19	M0DHP	14

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Call	ACA	CMA	Call	DX	Call	WAS	Call	WAE	Call	WAZ
PA3HEN	127	140	K6NR	38	N7SU	46	WE5P	18	KM4FO	14
EA3FZT	125	185	EA4OR	38	N0PP	46	WB5BKL	18	K5QR	14
DL4KG	118	159	W8OV	37	KC4WQ	46	WA3GM	18	G3WZD	14
M0NGN	117	138	K6DGW	37	KB8GAE	46	WA2USA	18	AA8TA	14
AF3K	116	618	AA8TA	37	K8RJW	46	W6KY	18	W3RZ	13
EA1DP	104	131	W0EJ	36	K6KM	46	W2NO	18	VE3TM	13
K8MP	84	89	W2NO	35	K5QR	46	VE1OP	18	SV2BBK	13
GW4MVA	82	95	SP1D	35	JF2IWL	46	NJ3K	18	KJ4M	13
DL8BH	81	115	JF2IWL	35	G3LDI	46	K4AFE	18	KC8J	13
G0ELZ	72	195	M0NGN	34	DL5DBY	46	G4RCG	18	K4TZ	13
G4ILW	59	693	EA3FZT	34	AJ1DM	46	W8XC	17	K2TW	13
LA8OM	54	1370	NJ3K	33	AG4EA	46	W8FN	17	AC6ZM	13
I5EFO	52	1447	G0ELZ	33	WA5PFJ	45	PA0VLD	17	WA2USA	12
F5IYJ	51	660	VE1OP	32	WA2USA	45	NG1R	17	PA3BFH	12
N7MU	45	393	K5QR	32	W1EQ	45	W4ER	16	KF8O	12
ON4CAS	39	1131	DL4KG	32	W0PHX	45	W0TG	16	KA9BHD	12
DL1NKB	39	47	PA3HEN	31	OZ3SM	45	KB8GAE	16	AG4EA	12
DD7CW	38	38	KM4FO	31	N4CWZ	45	W8DN	15	WS1L	11
KM3A	28	33	VE3TM	30	G4NVR	45	KU7Y	15	W6LAX	11
K4NE	24	73	KB4DE	30	G4HZV	45	KT4XN	15	W1EQ	11
VK7CW	20	1809	W7GF	29	AF3K	45	K8RJW	15	W0PHX	11
PA0VLD	20	37	NU7Y	29	AA8R	45	K0TC	15	SP1D	11
DD5KG	17	18	KA9BHD	28	W3RZ	44	W8OV	14	NG1R	11
AC4CA	0	4479	K4TZ	28	PG4I	44	KV8Q	14	M0NGN	11
N5RR	0	4223	EA1DP	28	ON4VT	44	KB4DE	14	KC4WQ	11
K6RB	0	4032	AJ1DM	28	NG1R	44	K6NR	14	K8RJW	11
K5AX	0	3634	WA2USA	27	G4DRS	44	AG4EA	14	EA4OR	11
N2RC	0	3271	W6TN	27	N5KW	43	W1EQ	13	AF3K	11
KY7M	0	3252	W3RZ	27	KI3F	43	KF8O	13	KI3F	10
AE1T	0	3206	KE6K	27	F5IYJ	43	K0MP	13	K1OJ	10
F6JOE	0	3002	KE4RG	27	DJ1YFK	43	AJ1DM	13	GD4EIP	10
WT2P	0	2976	KC8J	27	W6GMT	42	AC6ZM	13	G0ELZ	10
IK0YVV	0	2958	DL8BH	27	SM7IUN	42	AA8TA	13	DL8BH	10
K5CM	0	2866	N0PP	26	N7MU	42	KI3F	12	W6GMT	9
EA8OM	0	2758	K0MP	26	N7ID	42	KE4RG	12	N7SU	9
K1SM	0	2566	GD4EIP	26	K4EES	42	KC8J	12	N7ID	9
N5AW	0	2510	F5PBL	26	K2YR	41	K6DGW	12	KK0ECT	9
N2WK	0	2339	NG1R	25	DL4FDM	41	KA9BHD	11	KG5VK	9
N7WY	0	2303	KF8O	25	SQ9S	40	W3RZ	10	K4EES	9
K4HQB	0	2193	K8RJW	25	SM0HEV	40	W0EJ	10	K2YR	9

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Call	ACA	CMA	Call	DX	Call	WAS	Call	WAE	Call	WAZ
K6DGW	0	2122	AG4EA	25	NA1VT	40	NF5KF	10	F5PBL	9
AD1C	0	2101	AC6ZM	25	M0RYB	40	NA1VT	10	WX5CW	8
W6KY	0	2088	K5IX	24	IN3FHE	39	N5KW	10	WT8P	8
K4QS	0	2069	AB7MP	24	G3WZD	39	KM4FO	10	WA5PFJ	8
K2QB	0	2023	NF5KF	22	W4MDV	38	K4TZ	10	W4MDV	8
EA1WX	0	1961	K6KM	22	W9KM	37	WS1L	9	NA1VT	8
DL8PG	0	1789	G4RCG	22	NF5KF	37	DD7CW	9	G4RCG	8
K3DMG	0	1773	WS1L	21	LB6GG	37	SM7CIL	8	EA3FZT	8
K3MD	0	1734	W1EQ	21	KB8PGW	37	N0PP	8	EA1DP	8
K4HR	0	1698	GW4MVA	21	IK0NOJ	37	KJ4M	8	SM7CIL	7
IT9VDQ	0	1618	KJ4M	19	DK3WW	36	K5IX	8	PA3HEN	7
KR3E	0	1602	DL1NKB	19	OK1RP	35	W6TN	7	N5KW	7
V31MA	0	1520	AF3K	19	MI0WWB	35	KG5VK	7	GW4MVA	7
SM5IMO	0	1382	KI3F	18	GD4EIP	35	K6KM	7	N4CWZ	6
N1ZX	0	1348	KC4WQ	18	G0MGM	35	AF3K	7	K1IG	6
W4ER	0	1311	W6LAX	17	KG5VK	33	K2YR	6	DD7CW	6
WA3GM	0	1230	W0PHX	17	M0DHP	30	WA5PFJ	5	W9KM	5
F5MNM	0	1111	VE6JF	17	G4ILW	30	W6LAX	5	PA0VLD	5
W2NO	0	961	PA0VLD	17	K8MP	29	VE6JF	5	KM3A	4
DK1WI	0	908	N7MU	16	DF7TV	29	NU7Y	5	K4NE	4
K5IX	0	892	NA1VT	14	PA3BFH	28	KK0ECT	5	DL1NKB	4
I5IYJ	0	837	N5KW	14	G4RCG	28	KC4WQ	5	K8MP	3
IN3FHE	0	769	KK0ECT	13	K4NE	27	AB7MP	5	DD5KG	3
VE1OP	0	768	K2YR	12	EA4OR	27	W6GMT	4	AF9W	3
W0EJ	0	754	DD7CW	12	DL4KG	26	KE6K	4		
JF2IWL	0	674	WA5PFJ	11	SV2BBK	23	W0PHX	3		
DL4FDM	0	646	SM7CIL	11	AF9W	23	N7SU	3		
N5KW	0	639	KG5VK	11	SP1D	22	N7MU	2		
N0PP	0	550	K4EES	11	G0ELZ	21	N7ID	2		
G0MGM	0	495	K1OJ	11	WX5CW	20	N4CWZ	2		
W0PHX	0	426	WX5CW	10	M0NGN	18	KB8PGW	2		
NG1R	0	424	W6GMT	10	KM3A	17	K4EES	2		
IK0NOJ	0	366	N7SU	9	SM7CIL	13	K1IG	2		
N7ID	0	311	N7ID	9	GW4MVA	13	DD5KG	2		
NA1VT	0	306	K1IG	9	F5PBL	13	WX5CW	1		
KB8PGW	0	284	W4MDV	8	EA1DP	13	WT8P	1		
W9KM	0	236	WT8P	7	PA3HEN	11	W9KM	1		
W4MDV	0	225	N4CWZ	5	DL8BH	11	W7GF	1		
F5PBL	0	134	KB8PGW	5	DD5KG	10	W4MDV	1		
G4RCG	0	131	W9KM	4	EA3FZT	9	KM3A	1		

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Call	ACA	CMA	Call	DX	Call	WAS	Call	WAE	Call	WAZ
AF9W	0	59	DD5KG	4	DD7CW	9	K1OJ	1		
WX5CW	0	49	K4NE	3	K1OJ	3				
SM7CIL	0	35	KM3A	2	PA0VLD	2				
K1OJ	0	29	K8MP	2	K1IG	1				
K1IG	0	13	AF9W	2						

## New to Member Awards?

[Use the new online tool to submit your data.](#) It's easy! (Watch the tutorial if you have not used the online tool before.)

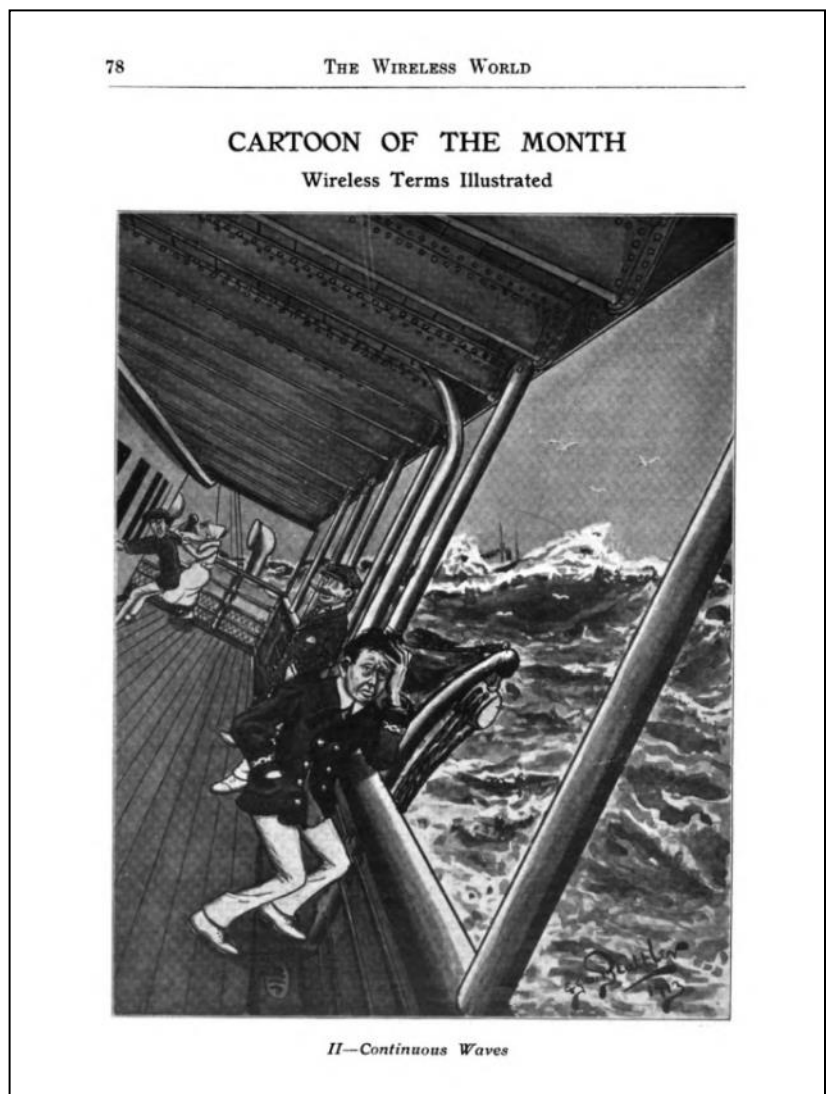
### Wireless World Remembered

#### [Frank Donovan W3LPL](#)

This is one of the cartoons published monthly in *The Wireless World*, a monthly publication of Marconi Wireless Telegraph Company, London. Marconi was a strong supporter of spark transmission -- for which he held many patents -- so the cartoon should be appreciated from that perspective.

It fun to review some of early issues of *Wireless World* and *Marconigraph*, its predecessor publication.

See [www.americanradiohistory.com/Wireless\\_World\\_Magazine.htm](http://www.americanradiohistory.com/Wireless_World_Magazine.htm) for more.



# QTX Report

## Enjoying the Art of Conversational CW

[Bruce Murdock K8UDH](#)

People tend to do what they like to do in their spare time. Everyone has obligations, but when our commitments are finished, we tend to turn our time and attention to activities that we truly enjoy. For all of us in CWops I can safely say that we all enjoy CW, and we enjoy CW in a variety of ways. There are so many things we can do with CW.

Students in Beginner CW Academy classes usually don't know what to do with their new CW skills, so we show them what a CW QSO looks like and help them gain confidence to get on the air. For some it's a big step. Then we nurture them and give them someone to talk to with the Giving Back program. As they improve their CW skills they learn about sprints, CWTs, contesting, and how to chase DX to name a few. Some of them discover that their favorite CW activity is rag-chewing.

This column is about "Enjoying the Art of Conversational CW." So, let's take a look at the comments and reports from our ragchewers.

### Comments from QTX submissions

**K6DGW:** We're old [75 and 80] so we're staying pretty much isolated, and you'd think I'd do more rag chewing. Unfortunately, such does not seem to be the case ... I will need to investigate why

**G3WZD:** A nice month and several more QSOs at just under the 10 minute mark, so not counted. Probably just another over would have done it, but I don't clock-watch - hi hi. 73!

**N5PHT:** Not as active in rag chews this month. Too many distractions. Hope everyone staying well.

**W9EBE:** My ol' buddy Wink/WA8KOQ and I were finally able to enjoy a 1 hr. 7 min. QSO on 30m after a long dry spell due to poor propagation. Great fun!

**WS1L:** After our move from MS to MA it took over a week to get the station set up. My first QTX after our move was with W8WZ, Carl in NC. Longest was almost a half hour with Tom, NJ8D. I did get another QTX with WA1WCC, the museum station of WCC Chatham Radio. The last time we worked the museum was shut down and volunteers were activating the callsign from their home stations, but this time the museum was open for staff to prepare for visitors in the near future, so I was glad to hear the actual station itself back on the air.

**MI0WWB:** tnx fer the QSOs.

**N6HCN:** Such quality ragchews this month. Thanks to all my QTX friends for your fine conversation, warm company, thoughtful advice, encouragement, insight and humor in this time of isolation. ZUT!

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**N5IR:** 55 minute bug chew with K6RB et al

**KB6NU:** Worked QRP for more than a week, preparing to run 1B Battery on Field Day, so probably missed a couple of ragchews that I normally would have had.

**W3WHK:** Hope you're having a good summer, Bruce.

**N8AI:** Bruce K8UDH - Thanks very much for handsome medallion for my 2019 QTX Achievement. It looks and feels like real gold. My CW Academy observation class now knows you can win some-things besides Wednesday contest! 73 Chris N8AI (Note from the QTX Manager -- Rob K6RB takes care of our medallions, including the mailing. Thank you Rob).

**K8UDH:** One of my former CW Academy students, KG5IEE, and I had several really nice ragchew QSOs in June. CW ragchewing is great fun, especially with a good friend.

### Awards and Medals for 2020

Medals for 2020 are awarded for three different levels in QTX.

Gold – 400 QTX QSOs  
Silver Medal – 300 QTX QSOs  
Bronze – 200 QTX QSOs

Our Gold Medal earners so far are Art (K8CIT) with 749 QTX QSOs and Joe (KC0VKN) with 417 QSOs. Bill (N5IR) with 380 QSOs and Gary (N5PHT) with 333 QSOs have qualified for a Silver Medal. Our Bronze Medal earners are Chip (W9EBE) with 263 QSOs, Chris (N8AI) with 224 QSOs, Tom (DL5DBY) with 209 QSOs, and John (K1ESE) with 205 QSOs.

### QTX for June 2020

Call	QTX	Call	QTX	Call	QTX	Call	QTX
K8CIT	118	W9EBE	29	F5IYJ	17	AA5AD	4
N5IR	58	N5PHT	25	N6HCN	17	SV2BBK	2
K1ESE	49	KB6NU	23	K4AHO	13	G3WZD	1
KC0VKN	43	K5YQF	22	KG5IEE	11	K6DGW	1
N8AI	31	WS1L	21	K8UDH	9	N5LB	1

### MQTX for June 2020

Call	MQTX	Call	MQTX	Call	MQTX	Call	MQTX
N8AI	64	K1ESE	11	MI0WWB	8	K8UDH	1
W9EBE	30	SV2BBK	11	K4AHO	6	W3WHK	1
AA5AD	17	WS1L	11	G3WZD	4		
K8CIT	14	N5PHT	10	K6DGW	4		
KG5IEE	13	K5YQF	9	N6HCN	3		

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### QTX for 2020

Call	QTX	Call	QTX	Call	QTX	Call	QTX
K8CIT	749	WS1L	168	AG4EA	50	AA5AD	17
KC0VKN	417	KB6NU	134	K8UDH	41	EW6BS	15
N5IR	380	K2KRG	111	W3PNM	39	K6DGW	6
N5PHT	333	K5YQF	100	WB6TOU	23	N5LB	6
W9EBE	263	N6HCN	97	IK0IXI	22	AB7MP	4
N8AI	224	K4AHO	95	KG5IEE	21	G3WZD	3
DL5DBY	209	F5IYJ	75	SV2BBK	21	KU7Y	3
K1ESE	205	AJ1DM	60	W3WHK	19	KR4TH	1

### MQTX for 2020

Call	MQTX	Call	MQTX	Call	MQTX	Call	MQTX
DL5DBY	564	K8CIT	76	K5YQF	26	WB6TOU	11
N8AI	349	K1ESE	74	W3PNM	24	AB7MP	9
W9EBE	200	AA5AD	60	K6DGW	23	AJ1DM	5
SV2BBK	155	N6HCN	49	KG5IEE	22	KU7Y	5
WS1L	135	K4AHO	44	AG4EA	22	N5LB	3
K2KRG	134	G3WZD	39	K8UDH	17	KR4TH	1
N5PHT	109	MI0WWB	32	W3WHK	12		

Last month I received QTX reports from one of our ragchewers for January through May 2020. If you have any ragchew QSOs in 2020 that have not been submitted please send them in. Make a separate report for each missing month via the QTX Submission Form on the CWops web-site. Your ragchew QSOs will then be included in your totals for 2020 and shown in Solid Copy.

Thanks for participating in CWops ragchewing.

73,

**Bruce K8UDH**, QTX Manager

# IARU HF Championship Activity by CWops Members

These CWops Members operated under these callsigns during the 2020 IARU HF Championship contest. If you are participating in the [CWops Operating Awards](#), you can use this list to make sure you get credit for QSOs with these stations. You will need to enter these QSOs manually using the "Enter QSOs" button on the "[Award Tools](#)" website.

<u>Member</u>	<u>Member Number</u>	<u>Callsign Used</u>	<u>Bands and Operating Times</u>
VE9VIC	2482	VE9RAC	20 m, 2100z to 2400z
K4BAI	76	PJ4A	All bands, all times
VE2FK	1181	VE2RAC	80 m, all times
GM3JOB	2204	GM5M	All bands, all times
G3WGN	48	M6O	All bands, all times
K6KM	2450	N6WM	2000z to 2300z
DK6SP	2588	DQ5M	All bands, all times
G3WZD	1979	GR2HQ	15 m, 17:30 to 19:00
GW0ETF	919	GR2HQ	80m, 1200z-1800z, 2311z-0030z, 0131z-0301z, 0431z-0605z, 0755z-0900z, 1030z-1200z
IT9BLB	2138	IO9HQ	10 m, 12:00 to 17:30, 00:00 to 05:44
IT9BLB	2138	IO9HQ	15 m, 17:33 to 22:00. 08:35 to 11:59
IT9MUO	1569	IO9HQ	10 m, 17:31 to 21:37, 08:34 to 11:59
IT9MUO	1569	IO9HQ	15 m, 22:01 to 23:59, 02:15 to 08:34
IT9VDQ	1538	IO9HQ	10 m, 21:38 to 23:59, 05:45 to 08:33
IT9VDQ	1538	IO9HQ	15 m, 12:00 to 16:45, 00:01 to 02:10
AC6ZM	2419	W1AW/4	80 m, 1200z to 1600z, 2000z to 2400z 15 m, 1600z to 2000z 160 m, 0000z to 0400z
K1GU	884	W1AW/4	40 m, all times
K4RO	387	W1AW/4	20 m, 1200z to 1400z, 1800z to 2000z, 0000z to 0200z, 0600z to 0800z
W4NZ	831	W1AW/4	10 m, 1600z to 2200z
N4ZZ	902	W1AW/4	20 m, 2200z to 0000z
AD4EB	867	W1AW/4	20 m, 1400z to 1600z, 2000z to 2200z, 0400z 0600z
K0EJ	2016	W1AW/4	15 m. 1200z to 1600z, 2000z to 2200z
K3IE	990	W1AW/4	20 m, 1600z to 1800z, 0200z to 0400z



# My Story: New Member Biographies

## Bill Alpert, KG6NRV

I don't remember much from my younger years growing up in California. But I clearly remember my first shortwave receiver, a simple Hallicrafters S-120. With my radio, a long string of speaker wire strung out my bedroom window, and I was hooked for life. But lack of finding a local Elmer and eventually a busy life in the printing industry kept me away from my dream of a Novice license. Many years later, I managed to learn the code to 5 wpm and passed my Tech and General exams in 2002. I put up a vertical and found a used IC-746, made myself a basic ham shack.

Still, as a business owner and also as a professional musician (playing the violin in symphony orchestras), I found little time to pursue my ham radio hobby. Not until I retired did the ham radio become a possibility. My reawakening came in May 2019 when out on a hike, I stumbled upon a young ham running CW on a KX3 from a hilltop. At that moment I fell for the hobby hook, line and sinker.



I spent months drilling Morse code on my own. Finally, I came upon CWA and immediately applied for the Intermediate class with K6RB, Rob Brownstein. Under his guidance I began to head copy, eventually reaching 15 wpm. I continued at CWA under Ed Parsons, K6HP. Ed help me improve my sending tremendously. I plan to continue learning the code, with a goal of being able to head copy in ragchews at 30 wpm or better. I'm so thankful to CWOps for all of the amazing resources that have been made available.

Beyond radio, I'm a husband, father and avid long-distance cyclist. I love all photography and all things tech. I continue to perform and teach the violin. I look forward to my membership in CWOps and making many new friends. Please look for me on the CWTs; you might have to listen carefully because I'm running barefoot!

## Michael Marks, KG5RXG

I first became licensed in February 2017 by earning my Technician and then earning my General Class a few weeks later. I became an Amateur Extra in February of 2020.

It is funny how life plays out. I wanted to be a Ham much earlier in life but could never meet the code requirement. I was studying Morse Code via mnemonic charts. Not the best idea!

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After getting my ticket, I quickly learned that phone is not my preferred mode and I found FT8 to be boring. As a result, I submersed myself into all things CW. Through my curiosity, I found the DitDitFM podcast where CW Academy was frequently mentioned. In June of 2019 I completed Level 1 (Beginner) and Level 2 Prep (Basic) concurrently and took Level 2 (Intermediate) that fall. I owe a lot to my advisors Eric, NM5M and Mark, K5GQ. Both of them are outstanding advisors and very passionate about teaching code.



At my home station, I usually run 25 watts to a homebrew stealth wire. No self-respecting Ham should pay for a wire antenna! I have a healthy addiction to QRP radio kits, so I do quite a bit of portable QRP work. I do participate in contests, but I am not a contester! I got lucky that there were not very many rookies in the CQ WW in 2019.

I am the Emergency Coordinator for Travis County ARES and a member of the Austin Amateur Radio Club. I also volunteer with the American Red Cross within the Disaster Service Technology group. I am a member of NAQCC, SKCC, and hold QRP Zombie No. 1389. These days, my operating mode is almost 100% code and love every minute of it.

### **Bill Morrison, K1ZJA**

When I was 10 years old my Dad, an electrical engineer who designed jet engines for Pratt & Whitney, decided that he wanted to fulfill his childhood dream and become a ham. Somehow my brother managed to finagle his way out of being tapped to get a license with my Dad, so I ended up being his partner in learning the code and theory. I vividly remember the summer we spent 3 weeks on Cape Cod studying all day, every day, from morning till dusk for the FCC Novice test. Morse code was easy for me but understanding the technical stuff was much more complicated. I ended up memorizing all the answers. Dad passed his test a few months before me and became KN1WXZ.



Shortly thereafter I became KN1ZJA. We shared a Heathkit DX-20 with a chirp on 15 meters and a HR-10 receiver. Within a year we both passed the General exam. While I was away in college Dad

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studied hard and got his Extra and became AB1R.

Over the years I was on and off the air. The usual stuff managed to get in the way; kids, work, 9 relocations, etc. Skipping forward to 2019 I was now finally retired from a 40+ year banking career and 10 years as a financial services consultant. I finally had my first real opportunity to get reacquainted with ham radio. I still had the Collins S Line that my Dad had purchased in the late 60's. I had that refurbished recently. In addition I managed to add more equipment to the lineup including two HF-380's, two KWM-360's, a Yaesu FTDX-5000MP, a Signal One CX-11A, three Collins 30L-1's, and two Alpha 87A's. I even managed to find a "never used still in the factory plastic bags" Collins S Line. It really belongs in a museum. But I'm still decades behind ham radio today. I still have paper logbooks and send our paper QSL cards. One of my goals is to start logging everything in a laptop computer. Having lived in CT, NY, GA, DE, the UK and CA I finally retired in Asheville, NC a few years ago. Now I finally have some time to enjoy ham radio. So my station is pretty much set up with 3 different operating positions and enough gear for six autonomous stations. I've got a Carolina OCF antenna at 60FT and hoping to install a few more SteppIR antennas this fall.

It's really a pleasure to be joining the CWops organization. My passion has always been CW and now I can enjoy the hobby with hobbyists with similar interests. And just in time for some heightened solar activity.

### **Özkan Özal, TA7I**

I am glad to be a member of CWops Club. I hope good friendships will be created and I will learn new information.

I have been interested in electronic technique since I was little. I got my amateur radio diploma in 1989. I worked continuously in CW mode. I am trying to use them all actively including digital modes.

I was born in 1966, I am married and have 3 children.

At the same time Turkey Radio Amateurs Society (TRAC) Trabzon Branch President and I have been in this position for 3 years.

I am currently working actively in business life. I have a computer hardware and commercial software. I follow the contests as long as I have the opportunity. I am trying to live the amateur radio as a lifestyle.

Greetings to all friends.



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## **Bob Harris, WB7BWZ**

I am very honored and pleased to become a member of CWops. I would like to thank Ron KU7Y for my nomination as well as my three sponsors, Bud AA3B, Bill K3WJV and Lar K7SV.

I was first licensed as a Novice in 1965. I was in junior high school and living in the Denver Colorado, metropolitan area with my parents. I don't remember exactly what sparked my first interest in amateur radio. I met another ham at my junior high school



who had his General license. He was my age, helped me get my license, and we became best friends. I often wonder how our parents put up with all our ham radio activities. Riding in the car we would verbally send roadside signs in CW and talk to each other in CW. It had to have driven them crazy.

My first transmitter was a crystal-controlled tube type oscillator which I built on an 8 ½ x 11" aluminum pan. I had a dipole antenna on the roof. I delivered newspapers and splurged on a used NC300 receiver. After saving enough paper route money, I upgraded my transmitter to a DX-60. My best friend and I built antennas, mostly mono band beams out of aluminum tubing, putting them on our parents' houses. With a 20 Meter homemade Yagi, I made my first DX contact, CW with 60 watts. I was hooked on chasing DX.

My best friend and I both went on to college in electrical engineering at the University of Colorado rooming together for two years, with a station in our freshman dorm room using a wire antenna hanging out the window. We joined the CU Ham Club and mostly used the college club station. After graduation, my wife and I moved to Montana for my first job working for an electric power company. I retired almost 3 years ago.

My wife and I have 2 children both married and 6 grandchildren, 5 boys and a girl. My favorite activity is still chasing DX with a hope to make the DXCC Honor Role. I am active in the local club, ARES and a life member of ARRL. I enjoy contests. In the last year, I became interested in SOTA activities. I always enjoy CW.

When taking the code test for my Extra, I found I could not write, actually print, fast enough to keep up and had to look over the hand copy to get the message. This has always been a limitation to real CW enjoyment. I have had a desire to increase my speed and develop the ability to head copy for a long time. A good ham friend suggested I enroll in the CWA. I enrolled last Janu-

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ary and have really been enjoying the newly developed CW skills. The CWA is an awesome program. Thank-you to all the many CWops members who help make it happen.

Hope to see each of you "down the log"!

### **Art Tolda, VE3UTT / W1AJT**

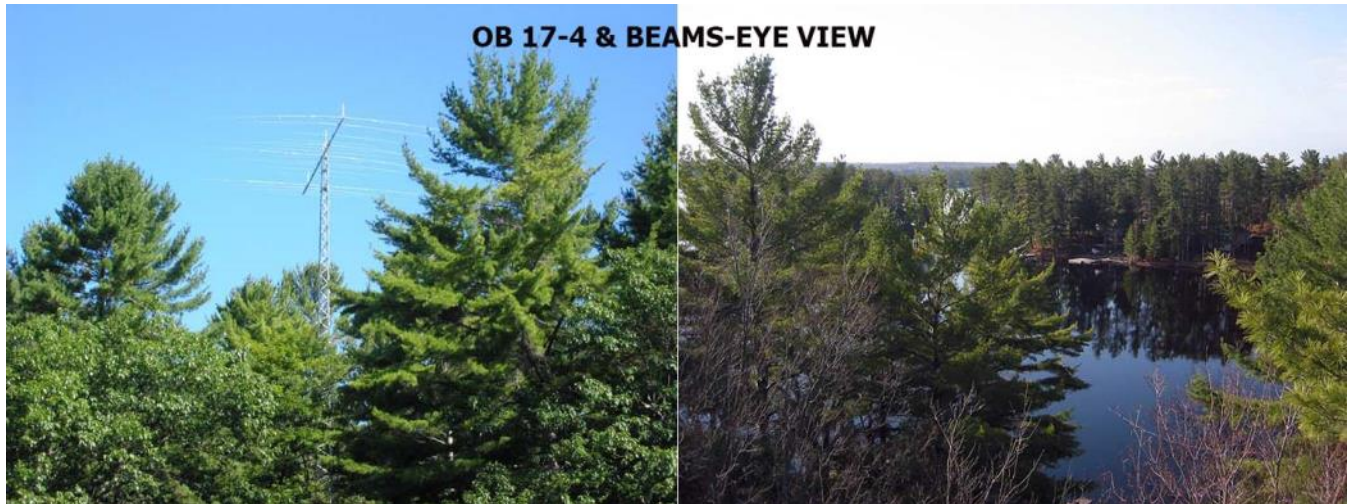
I grew up in Greenwich Village, NYC. A good friend was Richie Luchese (SK) who lived directly across the street. We both lived on the top of 7 floor walk-up buildings. We launched a string from one roof to the other and had many 2-can/string QSOs. We joined the boy scouts in early 1960 we had a new Scout leader, George Philactos - W2IWH (SK). George was one of the developers of modern radar. He had a 2el bamboo Cubical Quad on his Bank St. roof and a Drake line which he re-engineered himself. Seeing George make WW contacts from Bank Street inspired us. He mentored us and we learned the code at 5 wpm and enough technical things to pass our novice tests in Dec, 1960. I was WN2RQZ and Richie was WN2RQY (SK). We both passed our General tests in 1961 becoming WA2's. George passed away in 2006 and to my amazement when I told my dad that George was a radioman in the Navy and his obituary mentioned many battles in N. Africa and the Pacific during WW2 he said of course they were shipmates throughout the war which neither mentioned during the intervening 46 years!



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George and Amateur Radio drove me to engineering. In the early 60's I started the radio club at La Salle Academy HS in NYC and still hear from Hams that followed. We had a great Hallicrafters Station and 3el Yagi in NYC. I had, thanks to working odd jobs and generous parents, a good station with an HQ-145, Johnson Ranger then Johnson Viking II; my last rig was an NCX-3. I went to Brooklyn Polytech for one year in EE but had to drop out because I got married and had to go to work. I went back to night school and worked during the day finally getting my Masters in EE - Statistical Communications (great interest to the US government). I worked first for CBS TV on the change to color TV then for a Gov't contractor, Yardney Electric. There I developed and made the first totally sterile battery for NASA as the emergency power source for the Lunar Module – a copy I made is in the Smithsonian. I also developed the highest power to weight battery in history for the US Army which held the record for 35 years.

When I got my BSEE I started teaching labs at Queensborough Community College in the Physics Department and the Electrical Technology Department for 8 years. At QCC I resurrected the dormant Radio Club with Peter Stark K2OAW. We co-published 3 articles in the April, May, and June 1975 issues of 73 Magazine under the name "Whipple" which caused quite an uproar. They were complete articles with schematics for the infamous Red Box, Blue Box, and Black Box.

I left teaching and Amateur Radio in 1976 eventually joining Hewlett Packard in 1979 for 23 years. First as a technical specialist, then SE, and finally a WW Network Consultant and America's manager. In the late 90's I was working mostly in Toronto while managing my teams in the America's and bought my VE3UTT location 150 miles NE of Toronto.

I retired from HP September 7<sup>th</sup>, 2011 and had a retirement dinner at the Windows on the World hosted by the NYSE on September 10<sup>th</sup>. I was now an independent consultant in Toronto. The remote cottage got me interested in radio again. I bought an FT-101 using it for SW listening which motivated me. I took my tests and became KB1KCI, and shortly thereafter changed my call to W1AJT. I made my first QSO, June, 2003 from my own station as W1AJT/VE3 with PJ7/K3LPI, since my last in Oct, 1964 after 39 years. I upgraded to a TS-940S and discovered contesting. In Sept, 2003 I participated in my 1st contest ever, WAE-SSB – this was fun!!! I entered a few more but my CW skills were gone. In the 60's, I was rag chewing at 35 – 40 wpm with no problem with

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my Vibroplex Bug now I was lucky to copy 13 wpm. I could no longer copy everything in my head without writing it down. I joined Contest Club Ontario and entered 29 contests in 2004. I have been contesting since mostly on CW contests.

In 2006 I participated in a weeklong WW Emergency Response exercise sponsored by the Asst. Secretary of Defense, Strong Angel III in San Diego, CA. Strong Angel III involved roughly 800 participants from nine nations, and more than 70 international corporations and academic institutions. The premise was (this might sound familiar):

- Many countries are in the grip of a lethal pandemic. Many areas in the US are under quarantine, and movement is highly restricted. As the virus spreads, regional hospitals and clinics are rapidly overwhelmed and alternate care sites appear anywhere they can. As the weeks drag on and workers manning public utilities fall ill, critical infrastructure begins to falter. Regional communications systems fail and can no longer effectively coordinate disease containment and resource allocation.
- None of this escapes the notice of disruptive organizations. Well-versed in techniques of information warfare, they launch a series of cyber-attacks spread out over the course of several hours, targeting critical infrastructure at vulnerable nodes. Grid power is lost for the entire region and, with it, most Internet access.

My partner and technical master was Dragan - VE3FF and we were sponsored by Bell Canada. Given the above we started from shipping crates with no power, lighting, chairs or tables set up in an abandoned building near San Diego airport used for fire and police training. The first of fifty spontaneous tasks during the week was to be up and running with communications in 4 hours. Amateur Radio was the first to send and receive global precise medical messages beating the 70 international corporations and the first to complete the relative tasks. In addition, we trained and Dragan wrote a cookbook for operation of the US Marine Corps multi-million dollar communications truck. We sent round-trip messages between US – Canada – Ukraine and return viewable on a live screen at the Ontario Science Center in Toronto. For the first time we created seamless real-time communications between military, local government, police, fire through amateur radio integration. We sent emergency messages to officials wearing experimental Microsoft watches and I operated a remote station in Canada from the steps of a building with just my laptop and internet satellite link. They were amazed!

I have been contesting and trying to regain my CW skills since. I am now okay for contests at speeds greater than 35 wpm for short bursts and very comfortable at 30 wpm my speed is really limited by my typing. I don't think I can get back my high-speed rag chewing skills but I am trying with the help of the CWops QSO files.

For me CW has always been my favorite and will as long as I can still copy. I look forward to seeing you all on the air.

### **Fred Bresani W2HZ**

I was first licensed in ham radio in 1967, my first radio call was OA4AAH. My first rig was an Ital-

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ian made transmitter by GELOSO and my receiver was a National NC125, the antenna was a vertical home brewed device and worked well in the novice bands of 80 and 40 meters.

I began my professional life in 1970, after getting a BSEE degree from the Milwaukee School of Engineering, Milwaukee, Wisconsin. Worked as a design and construction Engineer for a large mining Company in Peru, South America, specializing in power generation, transmission and industrial distribution. Promoted to Management, I was transferred to New York City's Company headquarters. In the process I got my MBA degree in 1980. Later on, I got recruited out to run the North American Office of a large European manufacturing equipment and machinery for the



Steel industry, running operations in Mexico, Canada and the United States. We lived in Oakland, NJ for 42 years, our daughters and their families live in Bedford, NY and Portland, ME.

I retired in 2014, after 38 years of service and my wife Patricia (shown in my photograph) and I finally relocated on a permanent basis to Tucson, Arizona. Our retirement home location was carefully selected and managed to avoid the pitfall of the HOA antenna regulations. I currently operate an IC 7600 transceiver and a PW1 linear amplifier.

I also have in my radio shack a Drake collection of the "Drake twins" T-4XB/R4B and a L-4B linear amplifier. In addition, I also have a Drake TR-4C/RV-3 transceiver. All these units are fully restored and operational. My antenna farm is simple, I have a Yagi Beam by Mosley type PRO 67 C mounted on a crank up tower 50' high and an end fed wire allowing me to operate all bands, except 160 meters.

I enjoy operating AM/SSB and CW. Contesting, DX and Rag-Chewing, are my favorite activities, in that order. I am currently a member of the Board of Directors of the Oro Valley Amateur Radio Club, located in Tucson.

I would like to thank Tom Kravec, W8TK for nominating me for CWops membership, as well as all the friends who sponsored me.

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## **Bob Leichner, WO6W**

Many thanks to my CWA level 2 instructor Rob, K6RB, the exceptional group of students in our class, my sponsors and to the staff/volunteers of the CWA program. A special shout out to Riki, K7NJ, for his patience with my sending during a couple of "Giving Back" QSO sessions! What a complete pleasure!

I've been fascinated with many things electrical since I was 5 or 6 years old playing with a tube-based intercom in the garage. I loved (survived?) the tingling feel of leakage current from my feet into the cement garage floor. Around 1961 at age 10 there was a couple living down the street with a tower and beam! Fascinating! I introduced myself and they let me sit in on regular QSOs with their son who lived a few states away. I remember the pure magic of watching their communications...and the beauty of their Collins S-line. Since that time, it's been a progression of blending my hobby and career starting with computer networking and drifting into hardware design. I received my Advanced Class License in my early teens (WB6SQH), built a 4CX1000A linear from scratch in high school, and retired from my professional career designing very low-power mixed-signal wearable medical electronics.

I was never much into CW, logging only 5 or 10 total CW QSOs until starting the Level 2 CWA class this last March. I haven't had this much fun with Amateur Radio in years and look forward to the upcoming CWA level 3 class!

Currently spending much of my time sheltering in place on the radio, designing and building over-engineered peripheral devices for Ham Radio, and nixie tube clocks. I continue my 40+ year's study of Aikido – now without physical contact with a partner... challenging! I've also provided a picture of me circa 1966... give or take... Late Jr. High or early high school. My Swan 350 is in the photo... replaced by a TR4 in high school... That was a major upgrade!



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## **Robert Chapman KOMVB**

Back when I was a little kid, my Grandpa & Grandmother had an old, General Electric (International) desktop radio tube receiver that had some shortwave bands on it. I would

tune the bands, listening to foreign broadcast stations and amateur AM stations. I could also hear Morse code when the signals would mix together. It had the tuning eye tube in the front that was always fascinating to me.

I have always been interested in radio and electronics, (and still am), I used to like to take electrical and electronic things apart and see how they worked, most times they didn't go back together again.

I got many Heath-kits for birthdays, Christmas etc. I loved building them and learning about electronics. I also took electronics all through high school. They also used the Heath kits there for educational purposes. My teacher in that class was and former a navy electronics man, and he taught us a lot about tubes, I think he emphasized more on tubes, so I learned a lot about tubes, and built a lot of tube circuits on the bench. We also learned about integrated circuits and transistors.

When I got older my mom and dad got me some electronic kits at radio shack, one was the 300 in 1 circuits kit learned a lot about radio and different circuits.

Me and my dad were looking at a Heath kit catalog, and in it was a 2 meter HT with the touch tone pad. My dad said, "Son, you should get your ham license, then you could use this radio." My dad met a ham on the CB and my dad told him about me being interested in radio. So, this ham and me became friends, his name was Richard, KB0GJH (SK). We would have code practice sessions every night on the CB. I would record the sessions and I would listen to them on tape. This is how I learned code. Once I learned the code I went to Delano, California where I took my novice test from another ham BOB WA6MNQ.

I met a ham there and bought my first rig to get on the air on CW, I was so excited, it was a Drake 2nt Crystal controlled transmitter and a Drake 2C Receiver with VFO.

I went home and built a 40 meter inverted Vee on the roof and made hundreds of contacts all over the world, it was so fun and exciting!

Then a few months later I passed my Tech in 1985. And I got a Heathkit HTX-202, crystal controlled 2 meter mobile transceiver, which I got on the air with. I still have it today and it works!



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I was active in Navy Marine Corps MARS from 1985 - 1992, was Northern California Area Coordinator for NAVMARCORMARS from 1989 - 1992, during the Loma Prieta Earthquake of 1989. We passed over 1,000 RTTY Emergency traffic during that time. I was in charge of managing 100 MARS members. Operated a lot of RTTY and MARS traffic nets in Region 5.

I then moved to Kansas in 2006. I then passed my General Exam, which opened a whole new world of opportunity for me in ham radio.

I had laxed on my CW skills for several years, Until I met Don K0PV, he encouraged me to signed up for the CW Academy which was a great move. The CW Academy got me polished up again on my CW skills. I am enjoying CW more than ever now!

Special thanks to Don K0PV for encouraging me to sign up for the CW Academy, and I want to thank my Instructor in the CW Academy, Bill K0MP.

Thanks to the CWops that nominated and sponsored me: Alan AC2K, Bill K0M, Don K0PV and Bill K3WJV

Visit my QRZ page and see my contacts and equipment.

### **Erwin Rauh, DL1FY**

I was born in 1965 and I live in a little village approx. 25 km east of Munich.

Since I was young, I was fascinated from the radio technic and shortwave

As with many of us, my way led first to shortwave listening and CB radio, then studying communication engineering with focus on RF-Technology.

I am particularly interested in the DX on shortwave, on QRP operation, antenna technology and on satellite radio operation. Another focus area is on restoration of historical radio receivers and transmitters and the



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reuse of these wonderful devices for amateur radio. There is also a Historical Fieldday, which takes place every year south of Munich in the first week of September.

Above all other things in our hobby, the new software defined radio (SDR) technology offers us amateur radio operators new and surprising possibilities to develop and build our own transceiver. For example, in our local Radio Club in Erding, there we have a very nice SDR project. If you are interested in what we are currently developing, you can just search for 'Charly25 SDR' on the Internet.

But no matter whether with historical or modern SDR transceivers, the fascination for Morse code was and still is there. For me Morse code is much more, it is a kind of passion and anyone who has ever managed to learn this 'melodic language' will be fascinated by it for a lifetime. A melodically given CW-QSO with a straight key is like playing a violin. That is why it is important to me to promote this mode of operation and to bring telegraphy closer to young people and beginners.

I am happy to be part of the CWops Club and looking forward to meet you on the amateur bands.

.....don't forget ..... CW makes you happy.....

### **George Briggs K2DM**

I was first licensed as a Novice in 1960, given the callsign WV2NXP. The impetus came from my older brother Jeff (then WA2CLQ, now K1ZM / VY2ZM). My license expired after one year, and I remained off the air until sometime in the early 1970s. When my younger brother Peter got a license (WB2JAM, now K3ZM), I simply HAD to get back in the game.

Over the years I have had the distinct pleasure of participating in a number of DX contests from famous contest stations. I cut my teeth on multi-operator contesting from W1ZM in Connecticut, participating in a number of international contest efforts from that famous station. I also had the pleasure of operating from K1OX in New Hampshire and from W2PV in New York.

My first opportunity to participate out-



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side the U.S. was to be the 80 meter operator at KP4EAJ in a multi-multi effort in CQWW CW in 1977. I went back to Puerto Rico in 1980 to be the second-chair 80 meter op with Jeff at NP4A, also in CQWW CW.

After a number of years staying home, I was invited to join the ZX0F CQWW SSB team at Fernando de Noronha in 1999. We re-configured Andre's station for multi-multi and had a fabulous time. I got to do some serious operating during this contest, actually starting the contest as the 20 m op. The following year it was off to A61AJ's station in Dubai for CQWW CW, where I helped build Ali's 160M four-square array and enjoyed using that antenna as second op on 160M, again with Jeff. These two operations allowed me to meet and work side-by-side with some of the most famous contesters in the world!

To be honest, to this point all of these opportunities came my way because I am Jeff's brother, but I think I held my own.

A number of contest operations from the Caribbean followed, including WP2Z, V47DM, J7DM, V26DM, VP2MZM (Peter's call), VP2MDG and now VP2MDM. I have built quite a contest setup at the Gingerbread Hill guest house on Montserrat, and I get down there at least once a year. The photo is from October 2017 on Montserrat.

After my wife passed away from cancer in 2014, I was very blessed to meet and marry a wonderful woman, Karen Erickson. Then a non-ham, Karen has since passed the Technician, General and Extra class license exams and holds K4ZDM. Stymied by the antenna restrictions in our retirement community, we recently bought a place just outside The Villages. We now have three towers sporting a Bencher Skyhawk, a Cushcraft XM-240, wires, and a small 6 meter Yagi. A number of fellow CWops members have operated from the station in the last year.

I am an active member of The Villages Amateur Radio Club and the Florida Contest Group.