

# Solid Copy

The CW Operators Club Newsletter

September 2019 — Issue 116



## DXpedition to FM



Armin DK9PY visits Martinique: view from their first hotel. See story [on page 10](#).

### 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 13-14.

### 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"

**13+ wpm practice:** Tuesday, Friday, Sunday 6-8 pm "local time" 7.035-7.045

### CWops Officers and Directors

President: Mac McDonald [NN4K](#)

Vice President: Peter Butler [W1UU](#)

Secretary: Jim Talens [N3JT](#)

Treasurer: Craig Thompson [K9CT](#)

Director: Stew Rolfe [GW0ETF](#)

Director: Nodir Tursoon-Zade [EY8MM](#)

Director: Raoul Coetzee [ZS1C](#)

Webmaster: Dan Romanchik [KB6NU](#)

Editor/Publisher: Tim Gennett [K9WX](#)

## President's Message

Summer is in the books now and Fall is going to bring a shift in activity on the bands. The antenna refinements are in place, so attention is set more on contesting, DX-chasing (if any) and of course those enjoyable CW QSOs. Our club members have diverse interests but the common binding thread is using CW. When one listens to the weekly CWT sessions it is apparent that the participants are not beginners. They have developed their CW skills and can easily manage making exchanges at rates between 25 and 40 wpm. The principle of accuracy over speed is tested when doing contests and CWTs under adverse conditions like QSB and QRN.



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Repeats may slow the flow of exchanges, but they are important to the sender and the receiver to fulfill the accuracy required. At the end, knowing the log is valid with accurate information is one of the goals.

This letter is being written just after the September CWops CW Open. Each four-hour session was filled with lots of activity. Unfortunately, at this point in the solar cycle, we have fewer bands available to support the needs for more runners. Just think of what it will be like when more sunspots start showing up and activity on 10m can be heard 24 hours a day. The congestion on the low bands will be relieved over what it is today.

CWops was represented at the August [Huntsville, Alabama Hamfest](#). The booth had non-stop visitors. The supply of handouts for CW Academy was exhausted and most likely that will soon be reflected in the number of applicants for training in CW. Working with people who want to learn CW is a lot more fun than dealing with folks who don't want to learn it. Opportunities for using CW grow as new activities like POTA (Parks on the Air) and SOTA (Summits on the Air) are activated. The QRP folks benefit from using CW in their various activities. I was hopeful of making CW contacts with the Boy Scout Jamboree, but they only fielded a few, but good, CW operators. Timing and propagation conditions didn't help.

The September/October semester for the CW Academy is underway. The average number of students is about 300 each semester. Others are also training new CW operators besides CW Academy, but the good news is that the efforts to keep CW as a viable mode are working. The future benefit is more operators to enjoy CW whether it be in contests, ragchewing or DXing. A big thank you to all the volunteer Advisors and the managers who work to make the program successful. It is nice to tell folks at meetings that they are likely to be placed in the next available class if they apply. The long backlog we used to have has been worked down to 'real time' by the availability of more Advisors. If you have never 'paid it forward' by being an Advisor, consider adding your name to the list by [going to our web site](#) and sign up as an Advisor. Even if you only do it once or twice, you will enjoy the experience.

Until next month, CW Forever.

**Mac** NN4K, President

### **CWTs:**

#### **An Update To Suggested Frequencies**

Suggested frequencies are from 28 to 45 kHz from the band edges. However, this range should not be considered a limit when activity is such that participants find it necessary to spread further. Please be considerate of ongoing QSOs and mindful of ongoing or imminent DXpedition operations., W1AW transmissions, etc.



**Bill WB4WTN at the call sign copy competition, from the GARS Club in Lawrenceville, GA. He didn't think he could do better than 15 wpm but hit 22 when he finished.**

# From the [Editor](#)

## Mobile Antennas

I never cease to be amazed at the wide variety of interesting and important topics that CWops members are a part of.

Case in point: an email I received from Andy HB9CVQ in response to the Florida QSO Party mobile article by Chris NX4N in the [August issue of Solid Copy](#). Andy, along with a group of collaborators, has undertaken an extensive research project into electrically-small HF vehicular antennas similar to those used in mobile ham radio operations. Their work includes both ground wave and sky wave testing, the latter accomplished using the WSPR (Weak Signal Propagation Reporter) beacon system network. Using the WSPR network allows the performance of test antennas to be compared to a reference antenna, averaged over hours, thus minimizing variations from unavoidable fading and propagation changes. How cool is that? Their work also includes a variety of statistical modelling to supplement their field testing.

By the time you read this, Andy and his colleagues will have presented their findings at the [EMC Europe 2019](#) conference in Barcelona on September 4. They also hope to have their work published in a future issue of QST.

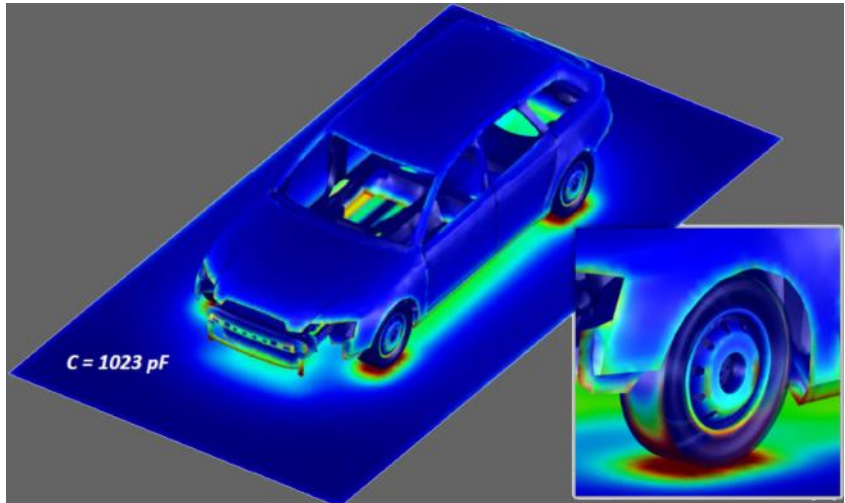
In the meantime, a summary of their work (a 16-page PDF file) can be [downloaded from the conference website](#).

As someone who has frequently operated in state QSO parties, I appreciate the antenna challenges involved and the importance of optimizing your antenna and radio installation. I'll be looking forward to hearing more from Andy down the road (ha ha), hoping he can come up with definitive information that allows mobile operators to squeeze 1 or 2 more dB out of our vehicles.

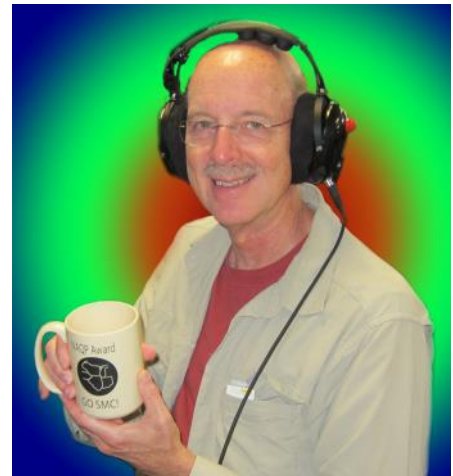
And, as always, I feel privileged to be part of a group whose membership is so accomplished.

**73,**

**Tim** K9WX Editor



**Audi A6 Avant Capacitance Test**



**K9WX Capacitance Test**

# Call For Nominations

## [Don Greenbaum N1DG](#)

It's election season again and the nominating committee is getting ready for the big event in November.

In 2019 we shall be electing a Vice President, and a Director . Peter W1UU and Stew GW0ETF are the incumbents. Riki K7NJ has already indicated he would like to run for director as well.

The slate so far is:

<i>Vice President :</i>	Peter Butler W1UU
<i>Director (Choose 1):</i>	Stew Rolfe GW0ETF
	Riki Kline K7NJ

Per our by-laws, during the Month of October nominations are solicited. The nominating committee hereby solicits anyone interested in the post of Vice President, or 3 year directorship.

Please send an email to me at [dongreenbaum@gmail.com](mailto:dongreenbaum@gmail.com) by October 31st if you are interested in nominating someone or yourself.

**Don** N1DG

Chair, nominating committee

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# CWops Privacy Policy

## [Jim Talens N3JT](#)

Some months ago, James G4ILW and Jim N3JT recognized that CWops needed to develop a privacy policy consistent with the European General Data Protection Regulation (EU GDPR), which applies to membership organizations like ours that have a broad Internet presence and possess certain personal data.

Jim N4TMM volunteered to lead a CWops committee to develop and implement a suitable Privacy Policy. Several members volunteered immediately to assist, including James G4ILW, Fabian DJ1YFK, Mike K4RUM, Duncan ZL/G3WZD and Alan AC2K.

Special thanks go to Fabian for providing an invaluable initial framework, to James for his initial observations and language, to Mike for his careful and thorough scrutiny, to Duncan for his inclusion of CWA and to Alan for his reviews and suggestions.

The club Board has approved the EU GDPR language and the [policy has been posted on our website.](#)

**Jim**, N3JT, Secretary





# News and Notes

## [Jerry Weisskohl AC4BT](#)

**Jim, N3JT:** N3JT in 9A and S5

Jim visited the Club station outside Zagreb with 9A1A, Emil, (left) and 9A7R, Braco (right, top)

In Ljubljana Jim met with old friend S50A, Tine (right, bottom).

**Gary NA6O:** I haven't been very active in CWTs (or anything else) for the last year or more due to severe RFI from next door. But that's about to change because after two years of effort I have a nice remote-operated station.

With the help of my partner, W6TCP, we share a nearby ridge top location, 1300 feet above our valley floor. Antennas are a JK Navassa 5 + 6m, Optibeam OB1-3040, MSquared 9M2, and a half-sloper for 80m, all on a 30-ft tower with 14 ft of mast sticking out. The tower and other infrastructure are actually a commercial microwave installation that we helped with, and that is what made access to the site possible. The antennas aren't fancy, but the location is to die for! The rig is a K3 and KPA1500 plus a transverter and amp for 2m. We use RemoteRig for control and audio, and SplashTop for the computer remote access. Our permanent network isn't up yet, but initial testing shows that we put out a rocking good signal and we hear well. The station/club callsign is W6SRR.

As a side-effect, I needed a 4WD vehicle to get up there, so that was a great excuse to buy a new

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**N3JT and friends**

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Jeep. My XYL really likes the satellite radio music so everyone is happy... I've been saving up a long time for a station like this and at last it's coming online. I will continue to do all the big contests from N6RO because I really enjoy the camaraderie of a multi-multi operation, and nothing can beat the setup there. Hope to see you all more often in the CWTs and pileups.

**Geo, W0PHX:** Over the summer I got into Mobile HF. My Jeep Wrangler was equipped with a mount for a Hamstick. The first rig I used was my KX2. So far, I've worked about a dozen DX entities at QRP level from the Jeep.

In August, I met up with fellow CWops member Sam N5FO for coffee at 5 am (yes, really, 5 am in the morning!). We had a great visit on the patio at his motel and solved all the world's problems whether it was QRP to QRO.

About 5 hours after visiting with Sam, I wound up buying a KX3 that is now my dedicated mobile rig.

A weeks later while I was at work, I saw a truck with a Hustler Resonator antenna with the license plates of KB0R. His QRZ listed him as a CWops member! I spotted Larry and we had a great chat.

It's always a fun to make eyeball QSOs with CWops members especially when they wind up at the end of the road in Ely Minnesota.

**Jim, W5LA:** I have been working with a teacher in the STEM program at West Monroe High School, in West Monroe, Louisiana, since last Fall. The first meeting of the West Monroe High School Amateur Radio Club took place on August 26, 2019. More than twenty students attended, of which eight are already licensed. They were able to get on the air, using the club call sign WM5HS, with an Icom IC-7300 that was donated to the club and a portable 20-meter ground plane erected outside the STEM building.

Later in the Fall I will be teaching another Technician Class session and I anticipate another dozen or so students will become licensed Amateur Radio operators. Sounds like CW Youth Academy might be appropriate at this point!

**Dan, KB6NU:** I had a great time activating the Pointe aux Barques Lighthouse (USA 615) on National Lighthouse and Lightship Weekend, August 3-4. The weather was perfect I had a wonderful operating position overlooking Lake Huron (see photo) and the bands (at least 40m) cooperated. I made 25 CW QSOs overall.

My operations this weekend al-



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most got off to a bad start. After I'd hung my doublet up in the tree, I found that I was missing the BNC-binding post adapter that I use to connect the twisted-pair feedline to the Kx3. After searching everywhere for it—and doing a little cursing—what I did was to stick one of the conductors into the center contact of the BNC connector and screwed the other conductor under one of the screws holding down the case (see photo right). Fortunately for me, it worked like a charm!



**IT9/F5IYJ**

**CW ops**

*Amateur Radio Telegraph Station*

**Joe, AA4NN:** What is a DXpedition, anyway...

These exercises were performed from various locations in the Plumas National Forest of Northern California. Our group would camp in a squad tent to man the radios. Everything was real except for a few crews where the C47 would do a fly-over rather than land for a pick-up.

From time to time there would be a mock Operational Readiness Test throughout the United States and Canada. We set up our communications base at Fort Bragg, North Carolina. Later we were called into the BIG worldwide tests. Our station would be in Puerto Rico. Six months later

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for another big test we would be in the boonies of North Africa. These two remote sites gave me the experience which later I learned was just like a Ham Radio DXpedition!

We had two towers, each 90 feet tall, about 40 feet apart. They were raised using the falling tower method. No beams, just 5 dipoles of various frequencies from top to bottom. Our equipment lineup was two BC610s crystal controlled and several HQ receivers.

I was not a Ham at the time in North Africa, but there was an extra class Ham among us who revealed himself. When not in a Readiness Test he would rig the BC610 Master Oscillator into the 20 meter band, bootleg a 5A1 call and have a great time. The unaware callers would never get that 5A1 QSL card.

Back at Stead AFB (we called it Stud AFB) the extra class Ham administered to me the Conditional Class written exam, which I passed; then he checked a perfect copy of 20 wpm text. Being a Louisiana boy, the FCC assigned K5GFN to my Conditional Class license, 1955.

After earning a BS in Math and Physics at Louisiana Tech in 1960, I eventually found North Carolina in 1963. Working at Celanese home office I met Gary Dixon, K4MQG, who invited me to his shack for some CW using his loosely configured Bug. What fun! In 1977 I was required to pass Novice, General, Advanced, Extra, and 20 wpm to become AA4NN in North Carolina, moving in 1989 to South Carolina.

I worked for years ragchewing on 40m CW. Then years of contesting, years of DXpeditioning (the last one being K9W, Wake Island), and years of QRP. Now I'm in the quiet years!

**Roger G3LDI:** I am in a real mess with antennas here. The Steppir has a faulty driven element EHU so I had a party to luff the tower over to remove and replace it. Not quite as straight forward as I had hoped. My main tower is a 120 ft three section with a 22 ft ground post. Guess who forgot to chain and lock the three sections? Must be Alzheimer's checking in with me!

When it got to just below horizontal, there was a dreadful noise and the top section slid out. Luckily, I had the Steppir mounted on a homemade tilt plate, but it did



hit the ground quite hard, breaking one of the 50 MHz elements. The beam itself hit the ground flat, so the poles were undamaged - phew!! I had to get the heavy engineering crew to come and help. Unfortunately, the top guy was damaged, a 150ft length of Phyllistran 40001 and it is una-

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available in the UK now. We managed to push the top section back in again, but the dipole pulley bar had to be cut. The stub mast will have to be replaced too as I don't have a locking mechanism on the tilt plate and in the wind, it had worn very badly over ten years.

Last week we did manage to replace the top 70ft tower that supports one end of my rhombic. My son did a splendid job welding an old BXI tower into a Strumech copy!

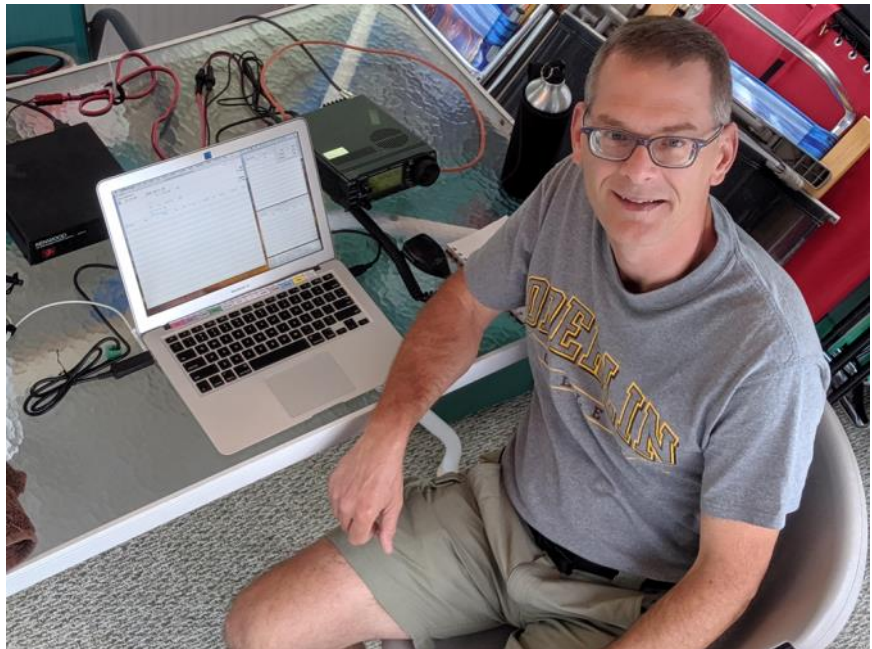
I was hoping to have all the antennas working by September 7th for the CWops Open, but it does not look good for this year. I will do what I can however, as I am a Team UK member. Still lots to do, and a lot of expensive work too! Hope to be in the test though although not with as strong a signal as this year.



**Gary, AF8A:** I was thrilled to make a slew of contacts with CWops members in the 2019 Ohio QSO Party.

Out of 240 total QSOs (236 CW, 4 SSB), 97 were from club members, across 66 different call signs (that's counting K8NZ and W8CAR, operating K8O/m, with whom I had 11 contacts). I put on a Field Day-style operation, with a single antenna (trapped 40/80 dipole) in the wilds of Geauga County, Ohio.

I operated inside a buddy's pool house (about 8x12 feet) with minimalist station: IC706MKIlg, power supply, 'phones and a laptop. Pretty simple - not even a set of paddles. Once the antenna was up, building the station took only about 20 minutes, slightly less for teardown.



Owing to poor 20 and 40 meter propagation, most QSOs were east of the Mississippi, including OM2VL and DL3DXX (both being WAY east of the Mississippi). Thanks to all!

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**Jean, F6JOE:** I have just been moved back to Guadeloupe, I hope to find my call FG8NY. I'll do it as soon as possible to be on the air again.

**Joop, PG4I:** I am on holiday in Ireland with the campervan and brought a Homebrew QRP rig.

The Antenna I is a vertical dipole on a Spider-beam mast.

I worked 3 stations: DK5KK and F5MNK (both very loud) and K3WI. Not sure if Bill got my callsign correct. Thanks for the QSOs!

**Dan, K4FN:** Here is a photo of me guest operating during a CWT from KE4KY's very nice QTH. I am in the process of relocating my station and Glen was kind enough to offer his QTH so I wouldn't suffer from total withdrawal.



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## A DXpedition to Martinique

[Armin Sturm DK9PY](#)

This year we (my XYL Petra and me) planned to visit my friend Bruno, who I know from 2013, when we were in Mayotte (FY) and QRV as FH/DK9PY. In 2013 we had the opportunity to meet with Bruno FH4VOS a native French teacher who speaks German as well as English and other languages. He is an excellent ham and teaches children in French overseas islands. He moved from Mayotte to French Guyana in 2016. So, we booked our flight from Frankfurt to French Guyana and planned after a stay of 1 week in French Guyana to move to Martinique (FM) for another 2 weeks in order to participate in the ARRL DX contest February 16-17, 2019 as LP entry.

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Unfortunately, I had a surgery back in October 2018 and was under strong medication. Just a few days before departure, I have been informed that a Yellow fever vaccination, at least 10 days before arriving in French Guyana, is mandatory. It will be checked at Charles de Gaulle airport and if there is no vaccination, one cannot enter the plane. Neither the travel agency nor Bruno told me that well in advance. Also, the yellow fever vaccination was incompatible with the current medication, therefore we had to cancel the trip to French Guyana.

Petra and I decided to visit Martinique only, but 3 weeks instead of 2 weeks. Finally, it was not too bad going to Martinique only, because it is such a beautiful island and has many touristic attractions and we booked three different locations in advance, therefore we had the opportunity to see every corner of this beautiful island. A direct flight from Frankfurt to Martinique makes it very easy too. You leave Frankfurt around 30F and arrive some 9 hours later in the 90's with tropical humidity.

Martinique (like many other French overseas islands) is part of France and therefore part of the European Union with all advantages like Euro currency, no customs control etc.

As usual I carried my radio (FT857) together with YT100 LDG antenna tuner, the Morse keyer, 30-amp power supply, a telescopic fiber glass mast of 30 ft (just 20 inches long when not erected and fits easily into the suitcase) and some 100 ft of wire and a 1:9 unun. This setup was used since 2010 in many smaller DX-peditions to FG/FH/FR/3B8/6Y/SV9/4S7 and allows worldwide CW communication from 80m to 6m without any problems. Other modes have never been used.



**"Antenna System" 30ft pole and inverted L antenna**

When we arrived in Martinique, I found out that Tom, K8BKM (CWOPS member 1925) was plan-

ning to run in the ARRL DX contest as well as HP entry from FH5BH superstation and I was afraid, that I might have no chance at all to be heard with my little pistol station. FM as a contest mult is much easier to work with a HP station, and I believed that no one will call me. Therefore, I decided to participate in the contest only partly and discover the south of the island during the day and operate the contest during the evening and night hours or when time allowed (holiday style contest). In total I worked 23 hours out of the 48 and had a total score of 721,116 based on 1,216 QSOs and 198 mults, whereby approximately 50% was running and another 50% S&P contacts.

Our QTH was in the south west of the island in a small resort with a nice view towards Fort de France (north), the capital of Martinique. Martinique is a pretty small island and measures ap-

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prox. 40 miles by 13 miles. However, the roads are not as good as in America or even Germany and the average getting from a to b is around 20 miles per hour. Around the capital there are very long traffic jams in the morning and evening hours which makes driving a nightmare. But one can find fruit stands at every corner and gives the opportunity to buy all kind of tropical fruits for very reasonable prices.



**Laurent, FM5BH to the left and Tom, K8BKM to the right**

Tom is an excellent CW operator and had fantastic pile ups always. Unfortunately, I never worked Tom before. One evening just before the departure of Tom, we had a chance to have a get together dinner with FM5BH and K8BKM in a nice restaurant.



**Station setup and view to the east**

After a week we moved to the north east of the island so that we can discover the northern part of the island without too much driving. This location was fantastic as it was in the outback and only reachable via a very bumpy road. But we had a small house for our own and were the only guests.

We stayed another week in this tiny guest house and have received many recipes and also local food as well as drinks from the owner, a nice lady in her 60's. From here we discovered the center of the island and had wonderful nights under the Milky Way that is unbelievable bright as we were far away from any city lights.

After another week here, we moved further to the north into another hotel, where I could not op-

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erate the station due to LED and neon lights as well as electrostatic noise created by air conditioners. But it was a convenient location, where we could discover the northern part of the island and also the active volcano Mont Pelé about 4,500 ft AMSL. We hiked it early in the morning and made the top around noon time. During the hike we had temperatures in the upper 90's with a humidity of 95%, so really a sweaty matter. But from the very top, you're rewarded with a fantastic view and a flora and fauna never seen before, with temperature in the lower 50's.

Every holiday has an end so after 3 weeks in Martinique we left the island via Barbados with colored skin and more than 3,500 CW QSOs in total. Thanks to all hams, especially those in our CWT group for the nice contacts. Sometime in November we will go again somewhere tropical, which I will announce well in advance.



Some explanation of the volcano and the flora and fauna



Picture of the trail to Mont Pelé: very steep and you see a few people



View to the south almost from the top



Tropical rain forest in the northern part of Martinique

# CW Operators' Club Tenth Anniversary Celebration

[Bill Gilliland WØTG](#)

January 2020 marks the 10<sup>th</sup> anniversary of the CW Operators' Club (CWops). In our ten years of promoting the use of CW in amateur radio communications, we've grown to more than 2,350 members worldwide. To honor our members' devotion to CW and the efforts of many volunteers toward promoting its use and educating new devotees, we're celebrating with a month-long on-air event in January 2020.

The following rules have been adopted for the event:

- All radio amateurs are welcome to participate
- Timeframe: 0000z 1 January 2020 to 2359z 31 January 2020
- Bands: 160m, 80m, 40m, 20m, 15m, 10m
- Exchange: Signal report. Participants are encouraged to send additional information at their discretion such as member number, name, state or province, etc.
- All QSOs must be made with Special Event Stations (SES) or members via CW
- SES and members will call "CQ CALL/CWO" or "CQ CALL CWO"
- Members calling another member or SES should send "CALL/CWO" or "CALL CWO"
- Scoring: 1 point for each unique member or SES worked per band



The Celebration Team, led by AA3B, is working on multiple award scenarios and those will be released as soon as we've worked out the details.

Use of Special Event Station callsigns and CWops Mini Club vanity callsigns by CWops members is an important part of our celebration and members are urged to pursue acquiring SES callsigns or sign up to use our club vanity callsigns as soon as possible to ensure they're available for the event. If you have difficulty with either, please contact WØTG for assistance.

Publicity for the celebration should start appearing soon in periodicals and online, and we will be publishing more details in *Solid Copy* in the coming months.

Please help us make the CW Operators' Club 10<sup>th</sup> Anniversary Celebration a memorable event by participating as much as possible. We look forward to seeing our members on the air identifying themselves with the CWO suffix!



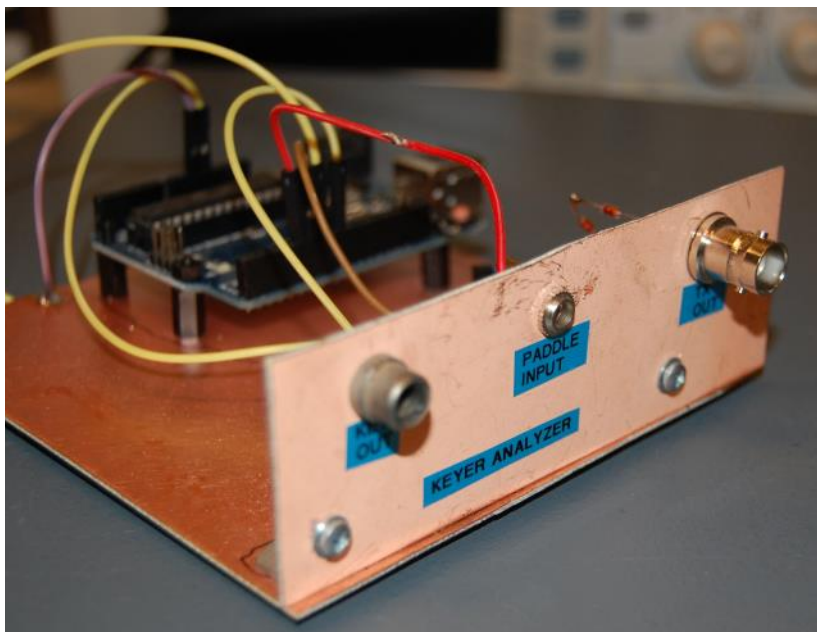
# A Keyer Analyzer

[Nick Kennedy WA5BDU](#)

Few hams who are both CW enthusiasts and programmers of microcontrollers have been able to resist trying their hand at a keyer or two. I've done several in the past 30+ years, starting with one for the 6502 in an Atari 800 and on through PICs, AVR's and now the AVR in its popular host board, the Arduino.

The basic rules for Morse timing with specific timing ratios for dot, dash, space, character and word are standardized and well known. Beyond that we have expected keyer responses for both paddles closed, for after a paddle is released and so on with terms like *iambic* and Modes A & B and *Ultimatic*.

But even after this, certain questions remain regarding timing subtleties not addressed by the definitions. So, while in the middle of writing an Arduino keyer program, I decided to let myself get sidetracked into another programming project, this one to analyze the logic and timing of an existing keyer and report the details.



**Figure 1 - The WA5BDU Keyer Analyzer**

That's the basic idea behind the Keyer Analyzer. You connect it to the paddle input of your keyer and to the keyed line out and it does the sending and finds out what is going on inside. (In a transceiver, where you may not have access to the internal keyer's keyed line output, I have a method for sampling the RF output while transmitting into a dummy load.)

In truth, much of the stuff this gadget tells you can be determined just by playing with the keyer. But a few things are revealed which require a device like this to ferret out.

Why would you try it? Well, you're interested in keyers and you own a few, the software is free, and an Arduino can be had for \$3 to \$10 or so. Good enough?

In this article I'm going to outline the features and hookup details, as well as the results of some tests. More detailed information is in a manual I wrote for the system, which is available for download.

## User interface:

There are two, actually, although I avoided the complexity of LCD screens, pushbuttons and so on.

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The first method uses I/O via a serial communication terminal which is part of the Arduino IDE. A menu is presented, choices accepted and then the results are shown. You can use terminal software other than that which is part of the Arduino if you prefer.

The second method of communicating with the user is via Morse. (Of course!). In this case grounding a certain pin on the Arduino tells it to run all tests automatically and report results in Morse – via your own keyer!

**Here's what the menu looks like on a terminal screen:**

```
WA5BDU Keyer Analyzer V1.0
Select:
0 - Verify functionality
1 - Timings, speed, ratios
2 - Check Iambic & Ultimatic operation
3 - Check Mode A or B
4 - Check time for same element latch
5 - Dot paddle open/close
6 - Dash paddle open/close
7 - Send PARIS for WPM
* - Send serial port text
```

**Here are some example test results:**

```
Key Out idle state: HIGH
Dot length ms is 61
Dash length ms is 181
Space length ms is 61
1st dot length ms is 61
Speed: 19.7
Dot Ratio: 1.0
Dash Ratio: 3.0
Time to close TX line ms is 14
Time to get off paddle is 47
This is 77% of a space.
Speed using PARIS: 19.7
The above are responses to menu items 1, 4 & 7.
```

**Summary of tests of some keyers in my possession:**

Keyer	Dot-R	Dash-R	Iambic	Mode	Latch wait	DLY to TX	WPM_20
WA5BDU	1.0	3.0	YES	B	53%	0 ms	19.7
WinKey 10	1.0	3.0	YES	A	98%	1 ms	**
Super CMOS II	1.0	3.0	YES	B	102%	9 ms	19.9
ATS-3	1.2	3.5	YES	B	98%	1 ms	19.3
FT-991A	1.0	3.0	YES	B	73%	17 ms	19.5
K3 (QSK)	1.0	3.0	YES	B	79%	12 ms	19.6
K3 (Semi)	1.1	3.1	YES	B	81%	13 ms	19.6
KX3 (Semi)	0.8	2.7	YES	B	76%	14 ms	20.8
K3NG Arduino	1.0	1.0	YES	B	102%	15 ms	19.9
K3NG U-Mode	1.0	3.0	NO	A	100%	15 ms	19.9
PK-Basic	1.0	2.9	YES	B	100%	6 ms	20

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## Hardware notes

Figure 1 shows my build of the analyzer. In fact, the only required component is an Arduino board. I've used the Uno version but others will do as well. Power is provided by the USB port.

I checked five keyers and none of them had open-circuit paddle input voltages greater than 5 VDC. So a direct connection to these keyers is acceptable. A 5 V Arduino should be used rather than a 3.3 V version.

A schematic is shown in figure 2. The circuit shown below the Arduino is one way of monitoring the keying of a transceiver which does not provide access to its "keyed line".

## Conclusions

OK, it's not exactly as indispensable as your DMM, but it has proven fun to play with and did provide some information I found to be useful in my own keyer programming.

## Where to get source code and additional information?

Here is [a link to my blog post](#) about the analyzer:

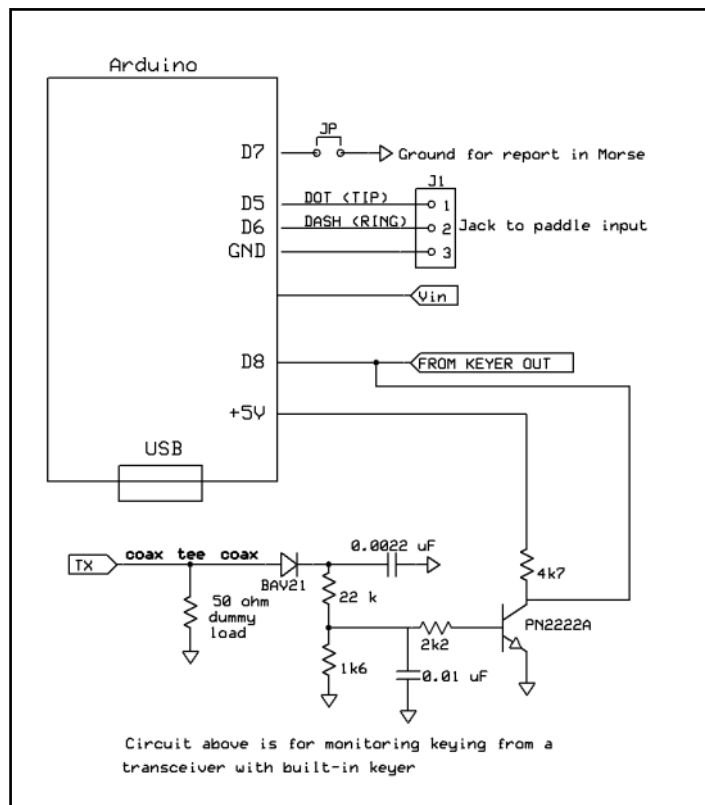
And [here is a link to a shared folder](#) containing a PDF manual I wrote about the analyzer with a lot more info, plus the source code needed to create your own keyer analyzer.

## A couple of similar programs or devices of interest

In discussing my analyzer on a radio reflector, a couple of related programs were brought to my attention.

The [Docktor program by ZL1AN](#) allows you to connect your straight key (or bug) and send while it grades your timing and spacing.

Another program/keyer developed by OZ1JHM is a keyer on an STM / Arduino board that interfaces to a Windows program. [It's called The Timing Keyer](#). You send with a paddle and it determines and shows when you closed and released the paddle with respect to Morse elements – early or late, to analyze things like how close you get to extra word spaces, extra elements, missing elements and so on.



**Figure 2: The keyer analyzer may be powered by 8 to 12 VDC to the Vin pin, or +5 VDC to the +5 V pin, or by USB connection.**



# An “Easy” DXpedition

[Dennis McAlpine, K2SX](#)

For most of the 60+ years I have been operating in contests, my home station has never been competitive with the Big Guns. At least, that is the excuse I use for not being at the top of the scoring lists. Since retiring about ten years ago and moving to a gated community in South Carolina with little hope of putting up even one tower, my hopes of building a superstation have evaporated into the ether, sort of like the sunspots in recent years.

My answer has been to go where I can be in high demand and where huge antennas are not necessary, i.e., a DXpedition. I hasten to add that I am not talking about those trips that require 3-5 days bouncing around inside a small ship on 30' waves on the way to a remote island/reef that has probably not seen a human being for several years. No, those “tent and generator” DXpeditions are a bit more than I want to tackle. Even if the entity is not rare, it is usually possible to still push the rate meter well over 200 QSOs per hour on occasion, which generates its own adrenaline rush, something that is mostly missing from my home operations.

I have gone on several trips, e.g. PJ7W, on which the operators have brought all of the antennas and radios and cables and PCs and built a fairly elaborate station from scratch, operated the contest and then dismantled it, often in lousy weather, all within a few days. I find I now prefer something a bit easier, where most, if not all, of the antennas are already in place and where other creature comforts are available.

Another factor that often creeps into the decision of where to go is the location’s “spouse appeal”. While my wife does not have a license, much less know CW, she does enjoy going to new places, trying different restaurants and seeing different sights. It is even better if she has another spouse to share in the adventure. Since she could care less about propagation or if the location is a three pointer rather than a two pointer, creature comforts climb higher on her acceptability scale. Her acceptance threshold is that the area we are going to has a Ritz Carlton or something similar nearby, even though we do not have to stay there. Now, I can still go off on my own and leave her behind, as I did on this trip, but I have found that the IOU list can get pretty long, a.k.a. “expensive”, if I don’t regularly include her on some of these trips. This trip to VP5 only cost me trips to Chicago and DC, so it was not too costly.



**The back deck of the VP5 house at Harbour Rock**

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Several years ago, I was invited to do CQWW CW from a new ham QTH that Jim K4QPL, was building on Providenciales (referred to as "Provo" by those in the know), part of the Turks & Caicos Islands chain, a.k.a. "VP5", about 650 miles southeast of Miami. The entity consists of over 300 islands although only eight are of significant size. Population is a bit over 30,000 residents, with about two-thirds of them living on Provo. Prince used to visit, but his estate was recently sold for a measly \$10.8 million. Drake is apparently a frequent visitor as well, most recently recording a new album from there. The islands are not part of CEPT though, so there is no license reciprocity and you must obtain a VP5 license. This is a simple process though, and one which Jim handles with ease.

I had met Jim while participating in an M/2 operation from NY4A a few years earlier. As it turned out, this renovation was Jim's introduction to "Island Time" and the planned construction fell too far behind schedule to make that trip possible. However, earlier this year, Jim asked me if I was interested in doing CQ WPX CW from his now mostly completed station at VP5M as part of a multi-op operation. After conferring with my wife and promising her that, if it looked good, she could come on a future trip, I signed up and started getting ready. The island was pretty easy to get to with Jim and I taking a direct flight from Charlotte while the other two ops flew direct from Atlanta.



**Beams**

One of the incentives for going on this trip was that John K4BAI, would be another of the ops. I had first met John on a similar trip back in 1983 when a group of us operated from Haiti as HH2VP in CQWW CW. It was an interesting experience to

wander around a small airport in Haiti looking for someone you had never met before and had no idea what they looked like. Fortunately, John had the presence of mind to carry a copy of QST under his arm and, therefore, was pretty easy to spot. In addition to Jim K4QPL, the fourth operator would be Rob KK4R, who had operated from VP5M in the previous year and, therefore, was quite familiar with the operation.

Jim had decided when he started building the station in Provo that it would not have multiple towers with beams all over them but, instead, would be spouse and non-ham friendly. He has one AB-577 tower at 35' which carries a SteppIR three element Yagi, which covers 40 to 6 meters. There is another beam, an A3S, which can be mounted temporarily on about 25' of mast. This can be used on the higher bands for chasing mults or for bursts of activity on 15 and/or 10 meters, if they opened. On 80 meters, we had a dipole with the center point just below the SteppIR. We decided not to bother with 160M given the nature of the contest, i.e., multipliers count only

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once regardless of band, and the high summer QRN levels. One of the advantages of the QTH was that it was near the top of a hill about 120'ASL with a clear shot going Northwest to Northeast, which just happened to be in the direction of Europe and the US. Nice planning, Jim.

The station comes equipped with its own K3 and KPA-500 linear and a TS-590 as a back-up for visiting operators. To augment that, I brought along my trusty, travel-worn K3 and John added his battle-tested laptop. Given the setup, we decided to compete as a Multi-Op/Single Transmitter Low Power operation, a category that the station had won in the previous year. Currently, Jim's station is the only one active in contests on the island since Jody, VP5JM, decided not to



**View from the deck looking north**

rebuild after Hurricane Irma destroyed much of her rental station in 2017. Jim correctly reasoned that the VP5 call sign would make up for the low power, even though there was no country multiplier in WPX.

One of the big advantages of operating from an existing station is that the set-up time is greatly reduced, leaving more time for casual operating or touring the area or whatever. We all did a bit of each. Testing the station by calling CQ proved to be a popular pass-time. It was encouraging to rapidly build a pile up indicating that we were getting out with a decent signal and to find out that the two stations were not, for the most part, interfering with each other.

After an initial burst of operating, we shut down and headed for downtown Provo to stock the pantry and get some dinner. We headed for a local shore restaurant called Sharkbite. The food was simple but good, but we were a bit disappointed that the namesake sharks did not gather for us to ogle while we ate. I have been told by reliable sources that the sharks really do assemble every so often for the viewing pleasure of the tourists. Then, it was off to the grocery store, part of the Graceway chain. I was particularly impressed by the quality and variety of food offered, much better than usually found on Caribbean islands. Prices were not cheap but that is to be expected when everything has to be imported. Following some judicious shopping, we returned to the station, known as "Harbour Rock", for some additional operating and strategy discussions.

The next day, Wednesday, Rob headed off early for some SCUBA diving, which is apparently quite good off Provo, while the rest of us started putting the station into final operating shape. To see if the station was operating correctly, on Wednesday, we took part in the weekly CWTs. John

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started off by operating the 1300Z CWT as VP5/K4BAI. Later on, I operated the 1900Z CWT while Rob operated the 0300Z version. In addition to becoming used to the vagaries of a strange station, we were also able to learn of some problems that needed to be corrected, particularly with regard to networking the two computers, something none of us were that familiar with. We were also having a bit of trouble setting up N1MM. I quickly dashed off an e-mail version of HELP! to CWops member VE3KI. Within a few hours, Rich replied with the answers to our questions, changes in settings were made and we were off to the races. Thanks, Rich.

The major technical problems we encountered were getting the mechanical and software interfaces to work correctly. For the M/S category, and only for that group, you are limited to ten band changes per hour and one cannot transmit on two bands at the same time. The interfaces were to prevent the latter from happening. We finally got the system to work but it still needed some fine tuning. I still do not understand the real need for inflicting this category with such a restriction, other than paranoia about possible cheating, but that is a much longer discussion to be held separately. I had become enamored with SO2V operation and wanted to incorporate that into the run station so that we could pick up mults while still running on the same band. But, alas, we never got comfortable with that process. That will take a bit more practice before that tool is used.

The next day, Thursday, our prime objective was to put up the A3S for our second high-band antenna. We eventually tied the 25' push-up mast and bottom-mounted rotor to the side of the house. I'm sure it would have been an interesting door-piece for any visiting non-hams. The important thing was that the antenna worked, and it stayed up for the whole weekend. It even rotated 360 degrees. What more could one ask for?

One interesting note was that as we tied off the mast, we saw a bunch of inch-long centipedes traipsing along the top of a concrete wall next to the driveway. On closer examination, there must have been more than a hundred of the little creatures racing atop the wall. And, while most of them were going in the same direction, a number of them were headed in the opposite direction, down the wall. It was sort of like watching a pileup on a P5 that had suddenly ap-



**L to R: Dennis K2SX, Rob KK4R and John K4BAI**



**Station owner Jim K4QPL**

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peared unannounced on the band, although these creatures were much more disciplined in their approach. Some of them did crawl over their fellow travelers in their quest to reach the end of the wall while others turned about bumping into one of their brethren. We never did see where they came from or where they went when they finished their trip. Like signals on 10 Meters, they just faded away.

Friday was another casual day since the station was all ready to go. While Rob went off searching for some new type of sea-life, Jim took me on a tour of the northern part of the island, including the upscale Grace Bay area, while John checked out the setup. I was impressed with how well kept the island was, with hedges neatly clipped, roads clear of garbage and neat boutique stores. The only problem I had was that they drove their cars on the left side of the road and they also loved roundabouts, which made for some interesting driving.

At 0000z, John started running stations and we were off to the races. Once the rate slowed down a bit, we were able to use the second station to work new QSOs, many of them multipliers, while making sure that we did not exceed the ten band changes per hour rule. At 0300Z, I took over the run station and KK4R took over the mult station. Things settled down into a steady pattern and the QSO total kept steadily climbing upward through the weekend.

As expected, 40 and 20 were the money bands with nearly 900 QSOs and 1200 QSOs respectively. We managed only nine QSOs on 10 meters but, surprisingly, those included contacts with F5IN and CW4MAX. After looking at the Multi 2 logs, it is apparent that there were a lot more QSOs to be had on 10M if one had the flexibility to keep on the band, particularly if the number of band changes was not limited.

15 meters was a much better band with EU coming through much of the day. 80M was a bit noisy but still generated a bit under 200 QSOs. When the closing bell rang, we made a total of 2650 QSOs and a score of 8.13 million, a bit lower than last year's result mainly due to a shortfall on 20M. Based on claimed scores, we again came in as World #1 in the M/S LP category. Our final tally: 2,650 QSOs, 899 Prefixes for a score of 8,126,061. Our band breakdown is at right.

Band	QSOs
160	0
80	173
40	890
20	1,204
15	374
10	9

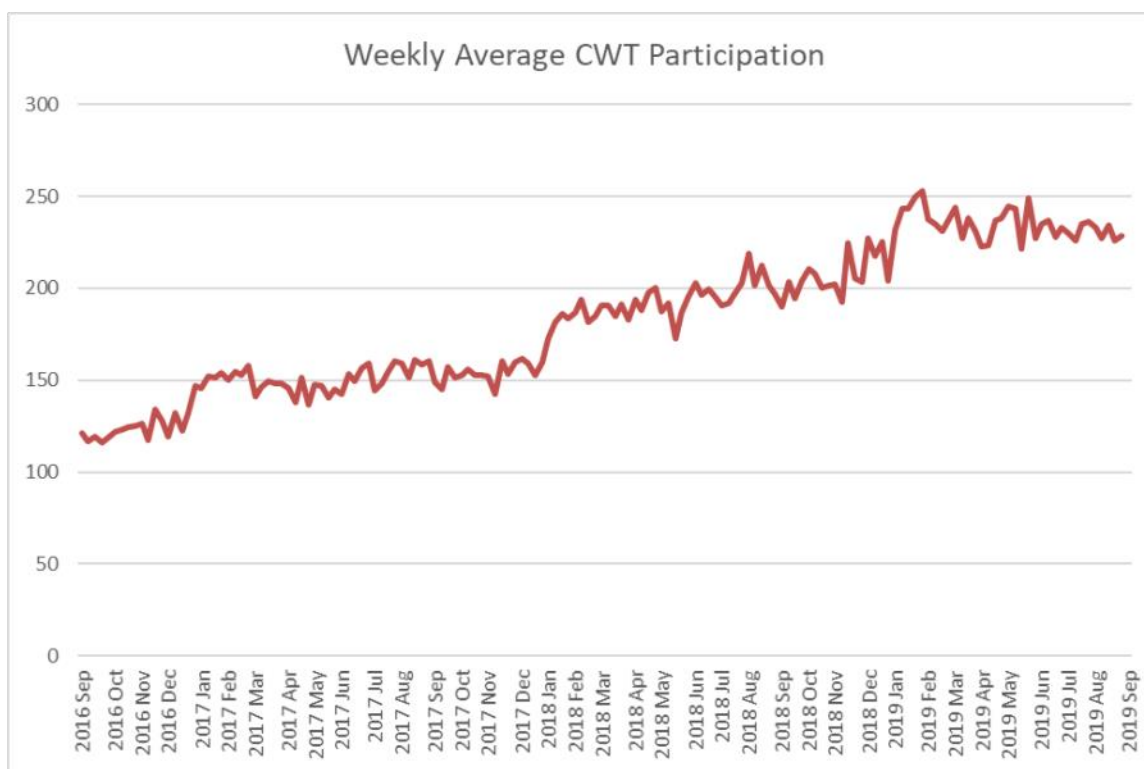
Monday was a take-down day and relatively relaxed since all we had to do was take down one antenna (the A3S) and take apart the station. That sure beat trying to remove a bunch of towers, wires, etc. In the afternoon, Jim finished my tour of the island. We did explore the North West Point of the island, which was essentially undeveloped except for a deserted reception area. The beach was quite unique, at least to me, in that it consisted of a layer of sand, covered by a layer of seaweed, followed by another layer of sand and then more seaweed and sand. The result was a very spongy surface which once we got used to it, was quite nice to walk on. We also went to the southern part of the island, including a trip by the infamous Bugaloo local bar. The area was not as "boutiquey" as the Grace Bay area.

Thanks to Jim for the use of his station and his hospitality and to all those who listened so carefully to hear us under the big signals. If anyone is interested in renting the station for a future contest, read Jim's QRZ.com page at VP5M but don't wait because contest weeks are getting booked. Sign up now for your "easy" DXpedition and leave the antenna raising to someone else.

# CWops Tests

[Rich Ferch VE3KI](#)

As of September 1, we had completed 105 CWTs, just over two-thirds of the 2019 total. Looking at the participation counts, we may be seeing the first signs of a slowdown in the growth of participation in the CWTs. After the annual jump at the beginning of the year, there has been a slight fall-off in the weekly averages this year, although they are still well above the levels at the same time last year.



As readers will no doubt be aware, our only awards are for participation (the annual participation medals). There are no awards for top scores, no log submission and no log checking. All we ask is that participants submit their claimed scores to 3830scores.com (thanks to Bruce Horn, WA7BNM, who maintains this web site).

A few words follow on how the participation totals are calculated.

The first step in the calculation is to copy and paste the data from the score summary pages for each CWT session into one large spreadsheet. If your claimed score is not in the score summary page, it won't be included in the participation count, so if you are hoping to get a participation medal, you need to remember to submit your claimed score after each CWT session.

The next step in the calculation is to compile a slightly shorter list of scores that meet the minimum score criterion (at least 10 QSOs for most stations). There is a bit of human intervention needed here to pick out the exceptions to the regular rule (stations outside EU and NA that make between 5 and 9 QSOs also qualify), but that doesn't take long.

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The most time-consuming step is associating mis-spelled call signs, special call signs, portable call signs or call signs that change during the year with the operator's home call sign. For CWops members, that should be the call sign that appears in the database of CWops members. You can all help me out here by remembering to enter your home call sign in the box called Operator(s) Call(s) on the score submission web page at 3830scores.com. While you are at it, take a few seconds to check that you spelled your call sign correctly.

If you change your home call sign during the year (for example, you decide to give up your old 2x3 call sign for a vanity 1x2 or 2x1 call sign), you need to let me know – otherwise, the scores accumulated under your two call signs might not get combined at the end of the year.

Once the scores are associated with the correct home call signs, it is a straightforward matter to have the spreadsheet program create the list of participation counts by call sign (the "topslst.txt" file that is posted from time to time at the CWops groups.io web pages).

Since the data is all in the spreadsheet, it is also quite easy to use it to generate statistics like the following: As of September 1, there had been 918 different participants in this year's CWTs. Of these, 730 are CWops members (that's about 40% of our total membership). Seven of these participants have submitted scores for all 105 CWT sessions. Extrapolating from the totals so far, we can expect to award about 90 gold medals, more than 100 silver medals, and more than 90 bronze medals at the end of the year. That's close to 300 people who find the CWTs enjoyable enough to keep coming back often enough to qualify for a participation award.

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



## Joop PG4I in Ireland

My goal has been to participate in at least one CWT with more than 10 QSO's. My first week was very bad since I only worked 3 stations: DK5KK and F5MNK (both very loud) and K3WI.

This week I finally got it. I was quite happy to make 15 QSOs in the September 11 1900z CWT, including 8 US stations. The rig is homebrew with 5 Watts output. I am using a palm radio mini-paddle with the K3NG Arduino keyer.

I will be in Ireland for another 2 weeks so I might try another CWT.

# CW Academy

## [Kate Hutton K6HTN](#) and [Joe Fischer AA8TA](#)

The September-October 2019, CW Academy semester is off and running after a three-month summer break. Not that all advisors took the summer off; several continued to offer sessions for any students who wanted to join them in order to continue to improve their skills. This goes above and beyond what we ask of advisors and it is very much appreciated.

Here is a breakdown of the classes that are in session.

Level 1: 43 classes with 225 students. Advisors are Mike, AA6MK; Joe, AA8TA; Buzz, AC6AC; Jim, AD5TT; Alan, AD6E; Duncan, G3WZD; Peter, GM0EUL; Bill, K0MP; Bruce, K1BG; Rich, K1DJ; Dallas, K1DW; Ned, K1GU; Dennis, K2SX; John, K4AFE; Ed, K6HP; Kate, K6HTN; Lar, K7SV; John, KE6K; David, KK6M; Kevin, KK6NVZ; David, KT5V; Ron, KU7Y; Tom, KV8Q; Ray, M0DHP; Will, MI0WWB; Jim, N4TMM; Jim, N7MU; Gary, N8LR; Mac, NN4K; Ryan, NN7M; George, W0PHX; Carl, W4IF; Tim, W7EEE; David, W8OV; Tom, W8TK; Terry, WB0JRH; Andy, WB7DKZ and Hanz, YL3JD.

Level 2 Prep: 5 classes with 30 students. Advisors are Ron, VE3FXX; Phil, W2OZB; Tom, WA9CW; Jim, N7MU and Quinton, NU7Y.

Level 2: 18 classes with 105 students. Advisors are Vic, 4X6GP; Buzz, AC6AC; John, AJ1DM; Keith, G0HKC; Al, K0AD; Bill, K0MP; Mark, K5GQ; Ed, K6HP; Joe, N3HEE; Ed, N9EP; Sergey, NS6W; Ron, VE3FXX; Bill, W3PNM; Ted, WA3AER; Tom, WA9CW and Bob, WR7Q.

Level 3: 6 classes with 49 students. Advisors are Chris, W4ALF; Joe, KK5NA; Ed, K6HP; Buzz, AC6AC and Keith, G0HKC.

Many thanks to these advisors for leading classes. Several advisors listed above are working with two, three even four classes this semester!

We have had several students in the Asia-Pacific region sign up and we are gratified that some of these students have flexibility in their schedules that they can take a class with an advisor in the UK or North America. We hope that some of the students in this area can advance through the CW Academy and become advisors and help out with students there who need to take classes in their evenings.

A reminder: we have a CW Academy class tailored for youth, those under 20 years of age. Several young people have taken this class and a few have advanced on to further levels of classes. The student signup form allows one to indicate whether she/he is younger than 20. We prefer that these classes be composed of all youth. Sometimes, a parent and child take a class together and are placed in a regular class. We have a couple of those cases this semester and also have a couple of spouses taking classes.

Do you have a love of CW? Would you like to see this fun mode be passed on to the next generation of CW operators (even if they have gray hair)? Would you like to help CWops grow with new, enthusiastic members? Do you have a couple of hours a week to guide some people to these

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goals? Then Kate and I would love to discuss with you being an advisor. It is very rewarding. Some of our advisors work their students (past or present) on the air and that is a thrill. Go to the CW Academy page on the CWops web site and sign up as an advisor.

**73,**

**Kate** K6HTN and **Joe** AA8TA, CW Academy Managers

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## New Members

### Trung Nguyen W6TN

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

CWops	Call	Name
2344	M0NPT/7X2TT*	Abdel
2345	W8BZY*	Jim
2346	KW5CW*	James
2347	K3WI*	Bill
2348	N7JI*	Scott
2349	UY1HY	Val

CWops	Call	Name
2350	W5BIB*	Steve
2351	KS4L	Randy
2352	K1ZZ*	Dave
2353	W5TN*	David
2354	DD5XX*	Saki
2355	AC3BU*	Daryl

CWops	Call	Name
2356	N4XL*	Ken
2357	K4EA*	Neal
2358	KB5RF*	Tom
2359	WA1T*	Al
2360	W4NF*	Jack

\*Life Member

## Current Nominees

As of September 3, 2019

**Need Sponsors:** KA6S, W4WQ, 2E0OBO, AA4NC

**Invitations Extended:** VK2IO, F5PLC, VE2WU

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 Secretary



# CWops Member Awards

## Bill 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. The CWops Award Manager (CAM) software, available at no cost, will help you keep track of your ACA and CMA totals.

In the table below, members whose call sign is in **RED** have achieved a milestone: 100 DX entities, 40 WAE entities, 50 states (WAS). Members who wish to track their totals for these awards can use the CAM software developed by N5RR. It's available at no cost here: [www.bbcyber.com/cam/](http://www.bbcyber.com/cam/)

Call	ACA	CMA	Call	DX	Call	WAS	Call	WAE	Call	WAZ
AA3B	1308	8418	<b>W1RM</b>	<b>190</b>	<b>N1ZX</b>	<b>50</b>	<b>DL6KVA</b>	<b>53</b>	W1RM	38
VE3KI	845	5201	<b>F6HKA</b>	<b>173</b>	<b>AE1T</b>	<b>50</b>	<b>W1RM</b>	<b>52</b>	F6HKA	38
W1RM	829	5855	<b>W4VQ</b>	<b>151</b>	<b>W9ILY</b>	<b>50</b>	<b>G4BUE</b>	<b>47</b>	W4VQ	37
N8BJQ	785	5542	<b>N7WY</b>	<b>143</b>	<b>K7QA</b>	<b>50</b>	<b>F6HKA</b>	<b>47</b>	VE3KI	37
F6HKA	764	5356	<b>G4BUE</b>	<b>142</b>	<b>K0MP</b>	<b>50</b>	<b>VE3KI</b>	<b>46</b>	N5RR	37
AE1T	678	3206	<b>DL6KVA</b>	<b>142</b>	<b>N5RR</b>	<b>50</b>	<b>AA3B</b>	<b>45</b>	G4BUE	37
K3WJV	653	2624	<b>N5RR</b>	<b>129</b>	<b>W1RM</b>	<b>50</b>	<b>N5RR</b>	<b>44</b>	N5PHT	36
W9ILY	650	3880	<b>VE3KI</b>	<b>123</b>	<b>W4VQ</b>	<b>50</b>	<b>W4VQ</b>	<b>43</b>	DL6KVA	34
K1DJ	644	2362	<b>N8BJQ</b>	<b>122</b>	<b>F6HKA</b>	<b>50</b>	<b>N8BJQ</b>	<b>43</b>	I5EFO	33
K7QA	621	2270	<b>K1ESE</b>	<b>111</b>	<b>W1UU</b>	<b>50</b>	<b>I5EFO</b>	<b>42</b>	VK7CW	32
DL6KVA	603	3039	<b>EA8OM</b>	<b>111</b>	<b>VE3KI</b>	<b>50</b>	<b>EA8OM</b>	<b>42</b>	I5IYJ	32
K8AJS	543	2481	<b>AA3B</b>	<b>108</b>	<b>G4BUE</b>	<b>50</b>	<b>SQ9S</b>	<b>40</b>	F5IYJ	32
KG9X	526	1474	<b>I5EFO</b>	<b>103</b>	<b>EA8OM</b>	<b>50</b>	<b>K1ESE</b>	<b>40</b>	RM2D	29
N1DC	522	2483	<b>AE1T</b>	<b>101</b>	<b>W0EJ</b>	<b>50</b>	AE1T	39	W7GF	26
W0VX	512	3642	EA1WX	99	<b>F6JOE</b>	<b>50</b>	IT9MUO	38	JF2IWL	25
K4QS	481	1390	W9ILY	98	<b>W6KY</b>	<b>50</b>	K3MD	37	N1DC	22
WT9U	504	1531	W0VX	98	<b>N1EN</b>	<b>50</b>	HB9ARF	37	K8AJS	20
K9WX	470	3028	N5PHT	98	<b>N5PHT</b>	<b>50</b>	F6JOE	37	WN7S	19
WN7S	468	1573	IT9MUO	90	<b>F5MNK</b>	<b>50</b>	IT9VDQ	36	G4NVR	19
K0TC	431	2358	VK7CW	88	<b>K5IX</b>	<b>50</b>	IN3FHE	36	CM8NMN	18
SQ9S	420	736	F6JOE	87	<b>K3SEN</b>	<b>50</b>	G4ILW	36	G4ILW	17
KB8GAE	414	778	N1EN	86	<b>AD1C</b>	<b>50</b>	EA1WX	36		
W0TG	405	1103	KY7M	86	<b>AB7MP</b>	<b>50</b>	W9ILY	35		
W8OV	401	1279	4X6GP	84	<b>AA3B</b>	<b>50</b>	W0VX	35		
K1ESE	397	3608	I5IYJ	83	<b>K5AX</b>	<b>50</b>	W1UU	34		
NN4K	396	2000	F5IYJ	83	<b>I5EFO</b>	<b>50</b>	RM2D	34		
NA6O	386	2801	AD1C	83	<b>VK7CW</b>	<b>50</b>	4X6GP	34		
K4WW	363	1903	SQ9S	82	<b>DL6KVA</b>	<b>50</b>	ON4VT	32		
CM8NMN	363	1109	IN3FHE	82	<b>K0TC</b>	<b>50</b>	N1EN	32		

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Call	ACA	CMA	Call	DX	Call	WAS	Call	WAE	Call	WAZ
HB9ARF	346	1333	K5AX	79	KY7M	50	KY7M	32		
KE4S	343	1943	DL8PG	79	NA6O	50	I5IYJ	32		
W4VQ	338	2860	N1ZX	76	K1DJ	50	G4NVR	32		
KE4RG	323	913	IT9VDQ	74	N8BJQ	50	F5MNM	32		
W8DN	320	807	RM2D	73	K9WX	50	F5IYJ	32		
IT9MUO	317	1946	N1DC	72	WT2P	50	K5AX	31		
K6DGW	308	2128	W1UU	70	K1ESE	50	DL8PG	31		
K8RJW	308	448	KE4S	69	K6DGW	50	N1ZX	30		
K0MP	301	1378	F5MNM	68	K3WJV	50	N1DC	30		
W1UU	297	2295	K1DJ	67	K4WW	50	K8AJS	30		
G4BUE	295	3652	K8AJS	66	K2QB	50	K3WJV	30		
KB4DE	292	563	NA6O	65	W7GF	50	G4HZV	30		
AA8TA	282	1430	K9WX	65	WN7S	49	M0DHP	29		
NU7Y	270	1080	HB9ARF	64	W0VX	49	KE4S	29		
G4NVR	260	798	K3DMG	63	ON4VT	49	K4QS	29		
AB7MP	250	1082	KT5V	60	NU7Y	49	K1DJ	28		
VK7CW	237	1662	K4QS	57	NN4K	49	AD1C	28		
W7GF	232	1530	K0TC	57	N1DC	49	VK7CW	27		
4X6GP	231	1455	W7GF	56	KT5V	49	G4DRS	27		
F6JOE	230	3002	W6KY	56	KG9X	49	K3DMG	26		
N1ZX	217	1300	K6RB	56	KE4S	49	JF2IWL	26		
ON4VT	189	658	G4DRS	56	K8AJS	49	G0MGM	26		
I5EFO	180	1261	G4ILW	55	K6RB	49	SV2BBK	25		
EA1WX	138	1961	K3WJV	52	K3MD	49	NA6O	25		
M0DHP	112	244	K3SEN	51	IT9VDQ	49	N5PHT	25		
AJ1DM	101	459	JF2IWL	51	CM8NMN	49	K6RB	24		
VE6JF	84	476	G4HZV	51	AA8TA	49	K4WW	24		
W3RZ	69	267	G4NVR	50	W8OV	48	MI0WWB	23		
SV2BBK	66	172	ON4VT	49	W0TG	48	WT9U	22		
F5IYJ	65	841	NN4K	49	WT9U	48	K9WX	22		
I5IYJ	64	837	WT2P	48	KE6K	48	F5PBL	21		
MI0WWB	62	218	W8OV	45	K4QS	48	NN4K	21		
F5PBL	61	82	G0MGM	45	K3DMG	48	K7QA	20		
KB8PGW	55	277	WT9U	44	EA1WX	48	K3SEN	20		
N5RR	0	4961	K4WW	43	DL8PG	48	CM8NMN	20		
K3WW	0	4669	CM8NMN	43	4X6GP	48	KT5V	19		
K6RB	0	4032	K3MD	41	W8DN	47	WT2P	18		
K5AX	0	3634	WN7S	39	VE6JF	47	WN7S	18		
KY7M	0	3252	K6DGW	39	VE1OP	47	W6KY	18		
N5PHT	0	3184	K7QA	38	KB4DE	47	VE1OP	18		

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Call	ACA	CMA	Call	DX	Call	WAS	Call	WAE	Call	WAZ
EA8OM	0	2758	W0EJ	36	JF2IWL	47	K0TC	18		
AD1C	0	2101	M0DHP	35	IT9MUO	47	W8OV	16		
W6KY	0	2088	VE1OP	32	I5IYJ	47	W7GF	16		
N1EN	0	1928	SV2BBK	31	HB9ARF	47	K6DGW	12		
WT2P	0	1925	F5PBL	29	G4DRS	47	AJ1DM	11		
N7WY	0	1838	W0TG	29	F5IYJ	47	W0EJ	10		
DL8PG	0	1789	MI0WWB	29	AJ1DM	47	KG9X	10		
KT5V	0	1774	AA8TA	27	KE4RG	46	K0MP	10		
K3DMG	0	1773	KG9X	26	RM2D	44	W0TG	9		
K3MD	0	1734	NU7Y	25	KM4FO	43	W8DN	9		
K3SEN	0	1643	W8DN	24	KJ4M	43	AA8TA	9		
IT9VDQ	0	1516	K5IX	24	G4NVR	43	KE4RG	8		
RM2D	0	1182	K0MP	24	K8RJW	42	KB4DE	8		
F5MNK	0	1111	AB7MP	24	IN3FHE	42	K5IX	8		
KM4FO	0	1107	KE4RG	19	G4HZV	42	K8RJW	7		
IN3FHE	0	1033	AJ1DM	17	W3RZ	41	AB7MP	7		
JF2IWL	0	931	W3RZ	16	SQ9S	40	VE6JF	5		
K5IX	0	892	KE6K	15	KB8PGW	37	KM4FO	5		
VE1OP	0	768	KB4DE	15	G0MGM	35	KJ4M	5		
W0EJ	0	754	K8RJW	14	MI0WWB	29	W3RZ	4		
KE6K	0	701	VE6JF	10	G4ILW	27	NU7Y	4		
G4DRS	0	692	KM4FO	10	M0DHP	24	KB8PGW	2		
G4HZV	0	603	KJ4M	10	SV2BBK	19	KE6K	1		
G4ILW	0	555	KB8PGW	5	F5PBL	8				
KJ4M	0	498								
G0MGM	0	495								
K2QB	0	125								

## QTX Report

### Enjoying the Art of Conversational CW

[Bruce Murdock K8UDH](#)

Welcome to the Rag Chewer Column for September. Summer is a busy time for many of us with a host of outdoor activities and sometimes we're able to include CW in our adventures. It's a good time to just kick back and have fun ragchew-QSOs on CW. CWops celebrates our ragchew QSOs with the QTX column. QTX QSOs are 20 minutes or longer in length and MQTX QSOs (mini

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QTX) are between 10 and 19 minutes in length. You can submit your QTX and MQTX results via the QTX area of the CWops website anytime. If you have any unreported QTX or MQTX QSOs please submit them and I'll add them to your totals for 2019. Last month Larry (KG4Q) joined the QTX/MQTX group for the first time and Duncan (G3WZD) joined us for the first time this month.

**Comments from QTX Submissions: (voluntary but on the submission page if you are so inclined):**

**W3PNM:** Just had a great QSO with Ken K5XOM who restores military vehicles and is a member of the Military Vehicle Preservation Associations. <https://www.mvpa.org/>  
Check out his QRZ page to see his Jeep and 1/4 ton trailer.

**G3WZD:** My primary interest is DX and contesting but, just for fun, I started to keep a record for QTX.. regular and mini.. Not a very impressive score for the month, but one's gotta start somewhere.. hi hi

**K6DGW:** Had a little more time this month, 4 of the mini Q's were on 60 m

**MI0WWB:** This is always an interesting challenge and a good way to build up rag chewing experience.

**W9EBE:** August was a fun month for ragchewing! I had a number of QSOs lasting over an hour, a few just shy of 60 minutes, and some very enjoyable MQTX QSOs, too. I've been mostly hanging out on 30m. I wish more ops would be active on the band.

**N6HCN:** Over an hour of fine CW with WA9AQN John.

**KB6NU:** My latest rag chew this month was with my pal, Paul, AA1LL, who was QRP from his campsite in Maine. I love talking to Paul because he's always doing something interesting.

**W3WHK:** Had fine ragchew with DL9CNC in German. It turns out he lives in an area I used to visit often while on tour playing music in Europe.

**K8UDH:** August was a busy month with travel and family activities, but when I did get on the air I had a great time. Ragchew QSOs are fun.

**N3FZ:** I've been out of the swing of things for the past 6 weeks after some medical problems. I was hoping to spend some more time in July and August with QTX, but it didn't pan out. Fortunately, I'm back in the swing of things and doing a little bit more each day.

**K2KRG:** My work schedule and some minor issues with the mobile antenna on my

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truck curtailed my operating a bit this month.

**GM0EUL:** Couple of nice chats about spaniels and living in Ireland.

**WB6TOU:** Two grand qso's that lasted an hour or more. I generally crush the opposition with my staying power and they qrt. This month I was beaten in a fair fight twice! Wonderful month!!

## MEDALS

Remember that we give out QTX Medals at the end of the year for 3 levels in QTX. Maybe we can develop something for MQTX later.

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

## MEDALS for 2019

We have three Silver earners so far: K2KRG (372), N8AI (371), and N5IR (357). We also have five Bronze earners: KC0VKN (298), N5PHT (282), W9EBE (251), K1ESE (239), and I5EFO with 226. Congratulations to all of you.

## QTX for July 2019

Call	QTX	Call	QTX	Call	QTX	Call	QTX
N5IR	43	KB6NU	21	K5YQF	5	G3WZD	2
N5PHT	43	K4AHO	20	K8UDH	5	GM0EUL	2
W9EBE	37	N6HCN	16	W3PNM	5	SV2BBK	2
K2KRG	36	K6DGW	9	W3WHK	5	KG4Q	1
I5EFO	31	KC0VKN	7	WB6TOU	4	MI0WWB	1
K1ESE	28	N4DT	7	KB8GAE	3	N3FZ	1

## MQTX for July 2019

Call	MQTX	Call	MQTX	Call	MQTX	Call	MQTX
K2KRG	41	W9EBE	16	G3WZD	5	KG4Q	2
MI0WWB	27	K6DGW	15	N6HCN	5	W3WHK	2
SV2BBK	23	K1ESE	11	KB8GAE	4	K8UDH	1
N5PHT	19	K4AHO	8	W3PNM	3		
I5EFO	18	N3FZ	6	K5YQF	2		

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## 2019 Totals for QTX:

Call	QTX	Call	QTX	Call	QTX	Call	QTX
K2KRG	372	N6HCN	109	W3WHK	34	MI0WWB	6
N8AI	371	K4AHO	95	KB8GAE	30	W5LA	5
N5IR	357	W0ITT	59	K0DTJ	29	WN7S	5
KC0VKN	298	K5YQF	55	N4PIR	24	WA8IWK	4
N5PHT	282	K6DGW	44	SV2BBK	24	KG4Q	3
W9EBE	251	N4DT	43	DL5DBY	21	N7MQ	3
K1ESE	239	WB6TOU	42	GM0EUL	15	AB7MP	2
I5EFO	226	K8UDH	41	W3PNM	15	G3WZD	2
KB6NU	177	HB9CVQ	39	N3FZ	8	N5LB	2
F5IYJ	147	AJ1DM	36	N9SE	7	K3GHH	1

## 2019 Totals for MQTX:

Call	MQTX	Call	MQTX	Call	MQTX	Call	MQTX
N8AI	441	W0ITT	65	K8UDH	34	AJ1DM	4
K2KRG	317	HB9CVQ	55	W3WHK	21	KG4Q	3
W9EBE	224	GM0EUL	53	WB6TOU	17	N7MQ	3
MI0WWB	193	DL5DBY	52	N3FZ	14	W5LA	3
SV2BBK	184	K4AHO	44	K5YQF	12	N5LB	2
I5EFO	165	N4PIR	44	W3PNM	10	WA8IWK	2
N5PHT	126	KB6NU	42	AB7MP	9		
K1ESE	120	KB8GAE	41	N9SE	6		
K6DGW	91	N6HCN	35	G3WZD	5		

Please let me know if you find any missing information or any errors. Also, your ideas and suggestions for improving the QTX program are much appreciated. Thanks.

73,

**Bruce** K8UDH, QTX Manager





# My Story: New Member Biographies

## Randy Moore KS4L

I got my novice license, WN5ALL, in September 1961, so long ago that I may have forgotten the time sequence of the events leading up to it, but not the events themselves. One Christmas, Santa Claus brought me a crystal radio kit for receiving AM radio broadcasts. It was simple enough that I built it on Christmas morning and was astounded that I could receive the radio station in a town about 20 miles away. That was my introduction to radio, and I still love to build radios, turning a collection of apparently random parts into a window on the world.

Some time after that, I believe my introduction to ham radio itself was from an [Andy Hardy movie that I saw on TV](#).

Andy used a ham station to help out in a family emergency and that really impressed me. Along the way, my dad, who had been a Navy radio operator in WWII, taught me Morse code for a Boy Scout merit badge. This was really just an introduction to the code, learning the letters as sets of spoken or written "dots" and "dashes." Another significant motivation came from my middle-school science teacher. I mentioned to him that I thought it would be neat to get my ham license someday and he responded with something like, "Just do it!"

Then in the summer of 1961, before my high school freshman year, two friends and I talked a couple of hams in town into teaching us to copy code at 5 wpm and giving us the Novice exam. Of the three of us, I'm the only one who ever became an active ham. I feel a very strong sense of gratitude to all those early contributors to a lifetime of ham radio enjoyment.

I upgraded to Conditional General in 1962 and became WA5ALL. In those days, the Conditional license test could be given by an Extra class ham, which allowed me to take the test in a nearby town and not have to visit an FCC office a lot further away. Sometime in the late 60s or early 70s, I upgraded to Extra and did have to visit an FCC office. Because I had a Conditional license, the guy giving the exam had me take all the written elements and copy code at 5, 13 and 20 wpm, although I don't think all that was necessary. I passed all – no sweat! During this same time period, I qualified for the W1AW Code Proficiency certificate at 35 wpm. I can still copy at that speed in my head, but I can't write it down that fast!

During my high school and college years, my first radios were either homebrew or low cost kits, and almost all of my operation was CW. With my first real jobs and starting a family, there was a lull in my activity. I became active again when we moved to Huntsville, AL in 1978. When I updat-

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ed my FCC records with the new address in 4-land, they gave me my current call sign, KS4L. With that call I have continued to be mostly a CW operator. In Huntsville, I joined the Huntsville ARC and had my first opportunity to work Field Day, participating with the HARC 40m CW group with the call K4BFT. I also became interested in casual contesting and DXing. When I retired professionally in 2006, I set a goal of getting 5-Band DXCC (achieved in 2017) and 5-Band WAS (2018). I've now achieved both DXCC and WAS on 8 bands. A lot of that was done at QRP, and 80% on CW. And all of it was with wire antennas.

Currently my station consists of an Elecraft K3/100, used for any "serious" operating, Drake B-line radios which I drooled over in my early hamming days, a very neat little mcHF QRP kit rig, and my long-time favorite radio, an Elecraft K2 (QRP). I'm not a key collector, but I find myself with a collection anyway, including two Vibroplex bugs (1926 and 1965 vintage), a J-38 like the one I had as a Novice, a Navy Flameproof key like my dad might have used in WWII, and a lovely N0SA TPa paddle. Still using wire antennas hanging from trees in the backyard.

Thanks to my friend, Art, N4UC, for nominating me and to those who sponsored me. I'm glad to have been accepted into CWops and look forward to working a lot of you on the air.

## **Bill Schwartz K3WI**

First, a big thank you to those who nominated and sponsored me K3WW, AA3B, and NW3Y.

My story begins in 1967 when my father (WA3IIX-K3JI SK) first got his license. I would follow him down to the basement where his shack was located and watch him use a straight key to make his first contacts. I was fascinated by it! My father encouraged me to learn Morse code and in a very short while, like learning a second language, it simply sunk in. The following year, I passed my novice exam and was one of the younger licensees at the time (age 9). At age 17, I passed the Extra exam and had the callsign AD3N. In 2000, I switched to the current call of K3WI. Over the past 50 years I have enjoyed this hobby above all others. There is always something new to learn and so many great people that have been Elmers to me.



Due to QTH limitations, the various stations I've had during the years have all been simple: rig, amp, and wires. That had a positive impact on me though as it made me develop my CW skillset to a greater degree. Whether Running or S&P, I love the challenge of going head to head with my

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peers and trying to improve my performance year over years. These experiences allowed me the great privilege of operating at some of the top tier contest stations including W3LPL, N3HBX, W3PP(SK), N3RS and TI5W.

Recently, I returned from living in the Washington, D.C. area to my home state of Delaware. The property that was purchased definitely has the potential to support a lot more hardware than has previously been the case. Over the years I have accumulated multiple Yagis and Mono-banders, so it's now time to raise the bar once again by taking them out of storage and putting them to use!

Finally, CW has become part of my DNA and that will never change. I look forward to working all of my fellow members, supporting CWops, and sponsoring others in the future.

## Steve Morris W5BIB

Thank you to Bert F6HKA for nominating me for membership. Thanks to: Dan WA6URY, Steve WA8Y and Bill W5SG for their sponsorship.

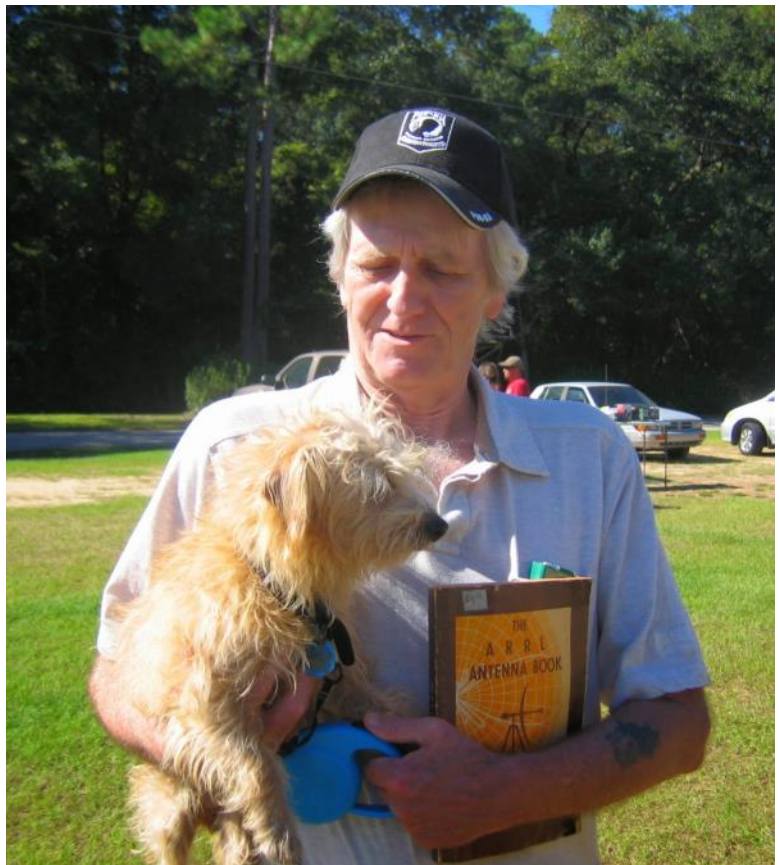
I've been 100% CW since 1961. Amateur, Commercial, & Military/Gov't.

U.S. Naval Security Group (NSA/CSS) Morse Intercept Operator and Instructor (02/1964-09/1972). Coast Station WLO Marine Radio CW operator 1988-1995. Life member DAV (Vietnam service connected), VWOA - (Veteran Wireless Operators Association) - <http://vwoa.org/>, (Life Member).

U.S. Naval Cryptologic Veterans Association - (<http://usncva.org>), SKCC - #7327, NAQCC - #6496, FISTS - #15529, SOC - #1133, FP - #4120, APWU / IBT - (Retired), U.S. Navy Together We Served - USNTWS - (Life Member)

I was team captain of the 3rd place U.S. NAVY NATO communications team in the 7th annual "NATO Naval Communications Competition" held in Amsterdam in April 1969, finishing 4th individually (straight key sending) in the "CW" portion of the then, 10-country NATO competition. [NATO Naval Communications Competition](#) - (scroll down past David's comments).

I concluded my NAVY career as an 'Advanced Morse' intercept instructor at Naval Communications Training Center in Pensacola, Fla. in Sept. 1972.



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I retired from the USPS in 2009 after 23 years of Federal service.

There is MUCH more information on the QRZ.com W5BIB page (biography).

I'm very proud of my YouTube video "[Morse Code Conversation Between Two Ham Operators](#)" that has garnered over **840,000** views. It may encourage new operators to appreciate the Straight Key!

Thanks for the warm welcome into CWops.

## Scott Rosenfeld N7JI

Thank you to Gary, W7EE, for nominating me, and to those who supported my nomination! I'd also like to thank my late father, a fellow electrical engineer who always wanted to become a ham and never did, for introducing me to the hobby.

I was licensed as KA3NJI in 1984 at age 15 in Maryland. I did basically nothing until the summer before college when I built a station and started operating very, very, very slow CW. I made a few hundred contacts that summer as my code speed crept up through painfully long QSOs. By September, I was ready for 13 WPM, and somehow passed the 20 WPM test. Over the next four months, I stepped through written exams and became an Amateur Extra (NF3I) at 17. The members of W3EAX (U of Maryland) picked me to coordinate exams. At 18, I became a VE, and coordinated monthly exams there for 11 years. I also learned how to contest from Andy, K1RA, the best contest operator I've ever seen.



**Field Day 2018**

Since moving to Oregon, I have been involved with Valley Radio Club, W7PXL, for which I am the station trustee. Five years ago, I founded a station at the Eugene Science Factory museum, which we operate every Saturday and use to teach the public about radio, electronics, atmospheric physics, and geography. I've taught 10 weekend Technician license courses over the past 2 years, helping over a hundred new hams earn their licenses, and taught several Morse code classes over our repeater.

I have always had an interest in QRP, CW, contesting and DXing, often combining multiple at once. I take great pride in busting a massive pileup with 10 watts and a dipole, or working the South Cook Islands with 500 mW SSB and a dipole. I spent many years operating mobile CW,

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watching my speed go from 18 to 35 WPM over a period of about a year once I started CW rag-chewing every day. My DXCC tally stands at 247 (still a lot of 'em left). I've had the privilege to operate from numerous foreign countries, and have been on the other end of (smaller) pileups. Work sends me all over North America, and I always bring the portable station, working FT8 and CW from inside hotel rooms with 3 watts and a mag loop.

Finally, I am very proud to say that my wife and daughter recently earned their licenses as well. Only our 11-year-old son remains...and he is actually already a seasoned phone contest op.

I could say more, but I've said enough. Hope to work you on the bands!

Thank you all for this great honor.

