

The CW Operators Club Newsletter







An antigravity drone? ET's latest device for phoning home? A 2m transmitter for fox hunting? See story by VA7OM 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!

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"

CWops Officers and Directors

President: Stew Rolfe, GW0ETF Vice President: Peter Butler, W1UU

Secretary: Jim Talens, N3IT

Treasurer: Craig Thompson, K9CT Director: Theo Mastakas, **SV2BBK** Director: Raoul Coetzee, ZS1C Director: Matt Frey, CE2LR Director: Bert Banlier, F6HKA

Director: Barry Simpson, VK2BI

Director: Riki Kline, K7NI

Director: Ken Tanuma, IN1THL WebGeek: Dan Romanchik KB6NU Newsletter Editor: Tim Gennett K9WX

Due to the pandemic restrictions I was able once again to have some fun in the ARRL DX CW contest last month. In recent years we've spent it away in different parts of world where Feb-



ruary is the ideal time to travel; last year we just about managed to fit in a river/road trip through Laos and Northern Thailand before the world started to shut down beyond China.

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Google Photos, courtesy of the '*This Day 12 months Ago'* gizmo, has been flashing up tantalising photos of the Mekong and the boulevards of Vientiane just to remind me how lucky we were to make it.

The contest itself was a fairly relaxed effort on 20m. It always amazes me how many QSOs can be made on a single band with a number of capable UK contesters reporting totals well over 1000 on this band – there certainly are a huge number of CW contesters on the continent of North America! Furthermore my logger has an 'Extra Information' window which can be fed with an edited CWops member list so any call being worked shows the name and number if a member. I can tell you that this window was very busy the whole time and a testament to our healthy level of both membership and activity throughout W/VE.

The January/February semester for CW Academy was extremely successful with a record number of students exceeding 500 which I think is quite remarkable. We are now on a month long break before the next semester in April/May but there's not much time for our 3 Academy supremos to relax; it looks like being even better attended with some new advisors on board following a request from Joe AA8TA. Thanks to all who came forward - the role of our advisors is crucial to satisfying the needs of ever increasing numbers of student sign-ups which in its turn is a key cog in the overall effort of keeping CW alive in years to come. More work is needed to widen out the profile of CWA beyond the shores of North America. It's a slow process but we are making some progress linking in with social media sites over here in Europe that deal with CW learners/QRS and who seem keen to hear about CWops, the Academy, K1USN and our Giving Back program.

The new K1USN Slow Speed Contest each Friday at 2000z got underway in February and is looking promising. I have been working learners and/or Academy students each week and have even had a couple of appreciative emails thanking us, plus some positive feedback on social media. Good support too from local CWops members and a fair number of QSOs are being made across the Pond on 40m. We can look forward to 20m remaining open soon which should add to the excitement for our beginners. In general I definitely get the sense of increasing interest from CW learners; I spent an hour in the RSGB 80m contest of February 25th up at the top end of the band which stipulates a 15wpm limit and was gratified to work probably 30 previously unknown calls who were clearly very new to CW and were giving me serials of 4 or less and requiring varying degrees of patience. The numbers are still small but they appreciate our efforts and we should all be willing to encourage them and help them on their CW journey. And not forgetting the conversational aspect, I have for the time being grabbed the empty Giving Back slot which precedes the SST so there is an opportunity for learners to have a QRS conversation followed by some relaxed contest fun each Friday.

CWops is now a member of the International CW Council. This is the brainchild of Howard Bernstein WB2UZE (#1361) with the aim of bringing together all the different CW clubs and organisations around the world to provide a forum for discussing common aims and interests. Rob K6RB has helped put together a draft of 'Aims and Objectives' which will form the basis of how the Council operates. Some of these describe what CWops already does, and does well, but there will certainly be value in the interplay of ideas and coordinated approach to certain issues. It's early days and more details will no doubt follow in future editions of *Solid Copy*.



And finally the QSO Today HamExpo which has been featured on our web page has come and gone by the time you read this *Solid Copy*. Thanks to Peter W1UU, CWops had a significant presence with a booth and talks by both Peter and Eric NM5M. The aim was to showcase CWops to a wide ham audience and provide the opportunity to question members manning the booth. As I write this at the end of February I'm intrigued to see how all this worked and very much look forward to finding out how it all went. I'm sure many more folk will know about CWops as a result.

73, Stew GW0ETF, President

From the **Editor**

CW is Sending

I was immediately drawn to CW when I was first licensed in 1993. All my early QSOs were CW QSOs and I still remember the sense of accomplishment I felt upon completing that very first one, most likely at 5 wpm, inexpertly keyed by hand with my newly-purchased Bencher paddles.

I got better at hand sending but I never got very good at it.

It didn't take long, however, before I was lured into contesting, where speed is the operative word. The faster you go, the more QSOs you make, the higher your score, the better your standing when the contest results are published and the bigger your bragging rights when you rehash the contest with your friends. You do what you can to help you go as fast as you can and computer sending is one of the first station automation projects for new contesters. I figure I completed my last hand -sent CW QSO in 1995 and never touched my paddles for the next 150,000 QSOs other than to maybe send a dit dit after completing a contest QSO with a friend or send a lone "R" when a QSO partner asked me to confirm that my exchange had been copied correctly.



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Fast forward to 2020 and the K1USN radio club started the weekly slow speed contest. What a great way to help those trying to learn CW or just improve their skills! Supporting the SST seemed very much in keeping with the teaching and mentoring mission of CWops and I was in. I couldn't always make the Sunday night schedule but by January of 2021 I had operated in a half dozen or so. All with computer sending on my end, although I noticed that, unlike most contest QSOs, many of the ops I logged were obviously sending by hand. Hmm....

A conversation about the SSTs with local friend Dave K9FN got me thinking. He uses a Begali HST single-lever key and offered to let me borrow it to see if it would improve my hand keying. That sounded like a great idea but once I had his key sitting on my desk I realized I would have to send something other than dit dit or the letter R to test it. The January 25 SST became my moment of truth.

I prepared carefully. I practiced sending with the HST using just a sidetone, no RF. I was becoming very glad that the SSTs were just that: slow speed. I tried 20 wpm and that was a bit too fast for me. Sixteen wpm seemed a better match for my nascent sending skills. I experimented with the location of the paddle on my desktop. Do you key with your fingers or your wrist? Does my forearm rest on the desk or suspend in the air? Elbow tight to my body or held away?

As 0000z approached I was having doubts and some anxiety. I was as nervous as if I was about to make my first-ever CW QSO. I noticed how much dust was on the top of the desk and the equipment, so I dusted to dispel my nervous energy. I updated all the PC software for which I could find updates. I even brushed my teeth. Can't hurt, right?

An hour later, I had 49 new QSOs in the log, all made with hand sending. My sense of accomplishment was palpable and I've operate two other SSTs since then, sending by hand with similar results.

Did the HST key make me a better CW operator? Well, not really. I flubbed a lot of what I sent and I clearly have a lot of work to do. A single lever key would be the way to go if I was in the market for a new key. Begali and CWops member Tony N3ZN typically exhibit at the Dayton Hamvention, and hopefully they will be back in 2022. Something to look forward to.

But a different paddle was not an instant cure for poor sending, at least in my case. I recalled the article Dave W7FB wrote for the <u>April 2019 issue of Solid Copy</u>, one of the articles I am most proud of during my now four-year tenure as editor. In "A Comment on Morse Code Structure" he wrote, "CW IS SENDING! Receiving is what you do when you're not doing CW! ... SENDING is the hard part for sure! I've learned to send over the years. Practice is the word!!"

So that's where I am, happy to get back to manual sending after a 25-year hiatus and glad for the opportunity for some sorely–needed slow speed practice. Tune in on Sunday nights and check to see if I am making any progress. My apologies in advance for all those errors you will hear.

73, Tim K9WX, Editor

CW

(Background image, page 3, Jon Callow / Wikimedia Commons.)

News and Notes

Jerry Weisskohl AC4BT

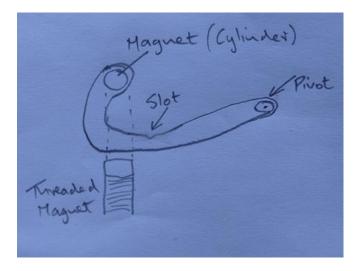
We regret to report that KW3F, Robert C. Brown (CWops #1450), became a SK on Feb 11, 2021.

We regret to report that JF2IWL/ND1R, Dai Nagakura (CWops #1286), became a SK on Feb 17, 2021.

Stew, GW0ETF: I've finally accepted my arthritic thumbs are probably affecting my squeeze keying! They've never been good after a couple of skiing injuries a few years ago – now I more and more suffer the embarrassment of screwing up the F in my own callsign. What's more I don't appear to be alone in my suffering after reading eHAM key reviews....

This is my second attempt to do something about it. For several years early on I happily used a Kent single paddle key. A couple of years ago I got hold of another but couldn't get used to it so went back to my twin paddles. From the start of using twin paddles I've been a squeezer and found the Kent impossible to un-learn the technique though I didn't really try very hard. So, I decided to call my bluff and fork out some serious money on a Begali HST 3 single paddle and it's seems to be turning into a positive experience.

I've been using the HST3 for a couple of weeks now and I'm still screwing up my R, F, Ls and punctuation occasionally but I'm getting really good vibes from this super smooth key. I feel confident my occasional lapses into quasi squeezing will soon go and my regular twin paddle is back in its box. It's quite a big key and nice and heavy; sat on a piece of that plastic drawer liner it never moves at all. It looks markedly different to any other Begali key and I'm intrigued by the design and engineering. The lateral tension is provided by a single repelling magnet pair one half of which sits on the left end of a curved arm that is pivoted at the opposite end – see my attempt at a rough sketch and the photo. A small roller bearing on the paddle arm sits in the slot keeping it centred. Moving the paddle left or right moves the roller bearing out of the slot and pivots the magnet pair closer. Removing the finger/thumb pressure allows the magnets to move apart and the bearing falls back into the slot thereby keeping the arm precisely centred and allowing for





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very small contact gaps to be used reliably. The clever bit as I see it is the shape of this cam arm which equalises the linear magnet motion and thereby dit and dah tension using a single magnet. This magnet is right by your fingers so can be adjusted even while sending when necessary.

Next decision is whether to go whole hog and sell my Begali Signature and BY1 iambic keys since my brain certainly won't be up to swapping back and forth!

Jim, N3JT: A flat spring broke in my Begali Stradavarius paddle. No parts are available from Begali, and Begali is many months behind in orders for new paddles because of COVID. My backup March paddle is now in place.

<u>Chris, G4BUE</u>: I went QRT on 24 February and have dismantled my station in readiness for my QTH move to Bexhill-on-Sea on 26 March.

<u>Chuck, WS1L</u>: We've finally had some weather above freezing and some of the snow is melting. Time to plan the spring antenna work.

I have an Alpha Delta trap dipole that is ruined for the upper end of 80M. There's no extra wire to drop the resonance down to the CW portion, so I am faced with either replacing the entire portion between the 40 and 80M traps or trying to add some kind of drooping extension to make the 80M portion longer. I'd be interested in hearing from anyone else who has successfully modified the resonance on a similar antenna.

I'm also planning an Inverted-L over ground radials for the lower bands. I have a legal-limit coil and capacitor from a previous installation but now I'm considering trying it out using the wideranging auto tuner in the shack. The ohmic loss for a mismatch of 10:1 is only about one dB even up to 30M. Again, if anyone has tried this, I'd like to hear how it went.

Mark, K5GQ: Here are some interesting CWops new membership number stats from one of my CW Academy students (Tony KX3H) who is getting close for me to nominate him for CWops membership:

Tony KX3H: I looked at the CWops newsletters, *Solid Copy*, where it lists the new members for that month. I've estimated when certain numbers might be granted if/when we get accepted for membership to guess when to apply.

Newsletters are here: https://cwops.org/newsletters/ (free to read and full of good information).

CWops issued numbers:

Feb 2020 - 2429 to 2449 = 20 Mar 2020 - 2450 to 2467 = 17 Apr 2020 - 2468 to 2537 = 69 May 2020 - 2538 to 2579 = 41 Jun 2020 - 2580 to 2632 = 52

Jul 2020 - 2633 to 2655 = 22

Aug 2020 - 2656 to 2670 = 13

CW

Sep 2020 - 2671 to 2687 = 16 Oct 2020 - 2688 to 2702 = 14 Nov 2020 - 2703 to 2736 = 33 Dec 2020 - 2742 to 2758 = 16

Jan 2021 - 2759 to 2781 = 22

Feb 2021 - 2782 to 2805 = 23

Estimated new numbers (if trends follow last year):

Mar 2021 - 2806 to 2835 Apr 2021 - 2836 to 2905 May 2021 - 2906 to 2947

Jun 2021 - 2948 to 3000

John K1AR: As manager of the CQ WW CW Contest, I received this really nice note from the winner of the 2019 CW Rookie CQWW plaque that CWops sponsors:

My name is Connor Dickey, KD9LSV, and I am honored to receive a plaque for CQWW CW Rookie North America Category for 2019. I am attending Bradley University as a junior majoring in Electrical Engineering. I operated on behalf of the Bradley University Amateur Radio Club (BUARC) (W9JWC) as a single op.

Throughout my life, I was involved in the Boy Scouts of America. This opportunity allowed for people to become aware of what Ham Radio has to offer. I obtained the Radio merit badge dur-

ing JOTA-JOTI event back in 2013. Back then I had an interest but nothing sparked beyond that. I obtained the Eagle Scout Rank on 9/9/2018. Last Summer, I worked at a Scout BSA Summer Camp teaching young people about life skills around the world.

In the fall of 2018, I joined BUARC. In September of 2018, I obtained my Technician License. Three weeks later, I obtained my General Class License. At BUARC, I have participated in many contests, made antennas, and met people all over the world. I believe that if a prospective ham would get in touch with their local club, they would be more likely to get their ticket and be active.

In March of 2019, I was graciously offered the opportunity to operate in the CQ WPX SSB contest at the station of K9CT. Craig Thompson (K9CT) allowed me to see and operate with other like

-minded people for 48 hours. During that event, we made approximately 4000 QSOs all around the world. That event allowed me to see how big the Amateur Radio community is.

In August 2019, I received my Extra Class License. This was a goal early on in my career in Amateur Radio. Also, I completed the CWops Level 1 Academy Class and currently at a code speed of around 17wpm.

For the past few months, I have been involved with the Greater Los Angeles Amateur Radio





Group (GLAARG) helping with the implementation of amateur radio remote testing. Since I joined in April, I have helped over a thousand people receive a new license or an upgrade in the middle of a pandemic.

During COVID, I was gifted an HF rig and currently operate it from my home QTH due to being home and not able to operate from the W9JWC station. I try to get on the air and make QSOs when I can. I need to get more involved in CWTs and keep advancing my skills in CW.

As President of BUARC, I have plans to increase membership to the club, increase awareness of what amateur radio is, increase more community involvement using Amateur Radio as a medium. Once again I want to thank you for this wonderful opportunity for allowing me to be the recipient of your award.

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 -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 schedule:

| | Giving Back Operating Schedule 7 PM Local Time 7.035-7.045 MHz | | | | | | | | | |
|-------|---|--------|-------|---------|-------|--------|-------|--------------|-------|------------------|
| | UTC+3 | UTC+2 | UTC+1 | UTC/BST | UTC-1 | UTC-5 | UTC-6 | UTC-7 | UTC-8 | Hawaii UTC-10 |
| Mon | | | | GM0EUL | | AF8A | K8UDH | NS6W | N6HCN | KH6LC |
| Tues | | SV2BBK | | GW2CWO | | WE5P | | K7NJ K0ES | K6RB | |
| Wed | | | | G0HKC | DF7TV | N4TMM | K5XU | KU7Y | | |
| Thurs | | SV2BBK | | G2CWO | | | KQ0E | | | |
| Fri | | SV2BBK | | GW2CWO | | VE3FXX | KG5U | | K6RB | |
| Sat | | | LA1IO | | | VE3FXX | N8LR | | N6IET | |



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 January's GB efforts:

Volunteer: Stations Worked

AF8A: W1BLU, N5URL, N5GVT, KI5JCO, K4WY, KN1O, KC8MFF

DF7TV: DJ1DD, DJ3KU

GW2CWO: DK2KV, HA8CJ, DL3NAA, 9A2UN, LZ2YR, F5VBU, PA0XAW, HA8RJ, YU3TA, DM4EA, 4O3RB, RA3DS, UT2LA, I5ECW, RN3ZA, DL7GAO, RC6AQ, YU1ZH, UT7KF, G4YZK, LZ2YR, UR7UZ,

GW4VPX, OK2SMP, SK5CG

K6RB: K9QAG, WP4JBG, W7GM, WB7AEA, N2DGQ, NN0D

K7NJ: KI7NRI, WV9S, KK4RF, W0ITT, W8KR, K2NYR, K0HNL, WA4IWD, KX5S, W5WTH, KB3HTN, VY1JA, N7BHP, WB7GR, W2LVP, N7CQR, N6FMF, K7HZ, N8DUS, KI5JCO, K0AF, AB2GU, N1FE, KG5STP, WA5AMM, WB2KMR, W7DRA, KB0HQD, KB9ZRP, K9QAG, W5FBQ, K2OHK, KI4IO, K9EW,

KN4VCE, WA4JYX, N4UZZ, NP3V, N0KTB

K8UDH: AA0YY, N2MA, KG5IEE, KB3SAR, N1LJQ

KH6LC: WA4KFZ, W3EEK, ZL2AIM, W4IPC, WA6APN, WA0USA

N4TMM: N9EE, WB2WIK, K8MPH, K2MZ, K5OGX

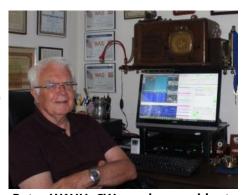
N6HCN: WB7AEA, AC6YY

SV2BBK: F8AOF, IK1YHZ, IZ2XAO, OK2BR, DL2HVM, SV1DAY, PA3ABR, IZ1PON

Wrapup: CWops and the **QSO Today Virtual Ham Expo**

Peter Butler W1UU

Once finally implemented "on line", we were up and running. There were issues by the event organizer getting people properly registered and assigned priority levels for back stage setups. All persevered! The screenshots (next page) show the activity at our "virtual booth." As a point of comparison the top row shows activity at Elecraft's table, the next row shows activity at the FlexRadio tables, and the third row shows the CWops tables. Notice how many people visited our booth! Very gratifying! People could move from table to table and those on booth duty could answer questions!



Peter W1UU, CWops vice president

Overnight, CWops set aside 20 tables of 8 seats, called the "Lounge" and much conversation was made on various tables to continue what we do best! Socializing! Our first visitor was from Spain!



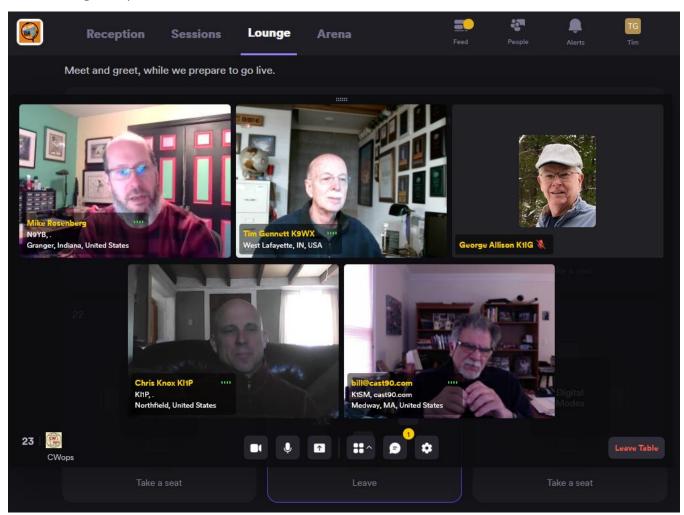


The next day, formal presentations were made by Eric NM5M on CW Academy and he confirmed that he had about 300 visitors and there were 40 signups! Many also went to the CWops booth to answer more questions!

The near last presentation of the day was given by W1UU on "The New Frontier of CW Operating." AA3B talked about CWT, W3LPL talked about new tools for DXing and propagation, K1JD talked about SOTA, 3D2AG talked about being "rare DX and how to work it, and K1ESE talked about the QTX program.

The presentations, both video or slides, were about 5-6 minutes long. That presentation was delayed about 2 hours, but we also had about 300 visitors. Both NM5M and W1UU fielded many questions, and after they came to the CWops booth to answer more questions!

Let's not forget one of the best parts: N5OT, Mark; W5LA, "Rags"; AC6ZM, Juan, and myself, W1UU as Inspirator-in-Chief worked tirelessly to make this event a fun one for all fielding a new way of showcasing CWops!



CWops members Tim K9WX, George K1IG and Bill K1SM chat with guests Mike N9YB and Chris KI1P in the CWops booth.



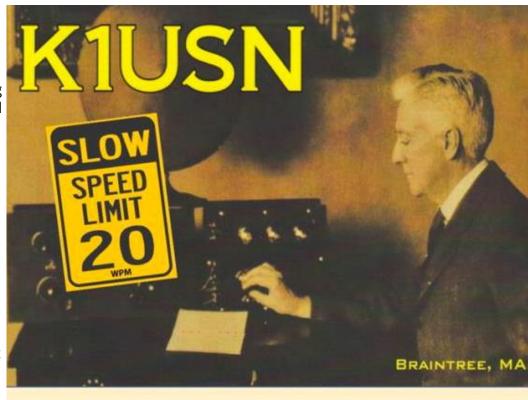
The K1USN SST Success Story

Rich Hoffman, K1DJ

In the nearly six months since its initial run in mid-September 2020, the K1USN SST (Slow Speed [con]Test) has drawn in many CWA students and other CW and CW contesting beginners with its more relaxed / less stressful 20 WPM maximum speeds and its friendly, less rushed, and more forgiving for-

mat. The original 0000Z Monday (Sunday evening in the USA) sessions have been attracting 85 or more reported scores each week on 3830scores.com. while the more recently added 2000Z Friday (more EUfriendly) sessions have already grown to 73 reported scores as of Friday February 26th. And the indications are that numerous ops are participating but not yet reporting their scores.

Much of this success is due to the regular participation of you -- the CWA Advisors and other experienced CWops -- who have been putting in



KIUSN SST
Weekly CW Slow Speed [Con]Test

the time (and having fun!) as SST runners and S & P participants. Thanks!

Some stations run right at the 20 WPM maximum speed limit. That's fine because it provides good practice for intermediate students who have already developed the ability to jump in at that speed, and are using the SST as prep for the CWTs and other high speed contests.

Others, who have been very successful at drawing in newcomers, have chosen to run at lower speeds -- and are willing to drop to even slower speeds when needed to complete a QSO -- to accommodate and assist the newest arrivals to CW. Among the latter are several members of the K1USN Radio Club, who are keeping track of their first-time contacts in each session. Several of



us have found a sweet spot for bringing in first-time callers by running at around 14-16 WPM, with slower repeats and fills as needed.

If you have not yet joined us in the SSTs, please do! All are welcome to participate as runners and S&P ops at 20 WPM or less, but we are especially looking for more ops willing to drop their running speeds below the max, at least on occasion, to help out our newest arrivals to the wonderful world of CW and CW contesting! Please give it a try!

Hoping to hear you tonight and in future SST sessions --

Foxhunting: What is it?

Les Tocko, VA70M

Chances are you have heard of foxhunting. It is also known as bunny hunting, transmitter hunting, radio orienteering or ARDF (Amateur Radio Direction Finding).

ARDF is the official name and it is an activity where participants use radio direction finding techniques to locate one or more radio transmitters hidden within a designated search area. The sport originated in the late 1950's and has been most popular in Eastern Europe, Russia, and China. Other nations are catching up and the first world championship was held in 1980 in Poland. North America joined the world championship that was held in the former Czechoslovakia in



80m transmitters

1990. The first formal multi-national foxhunt in North America took place in 1991.

An ARDF competition takes place on foot in diverse wooded terrain where 5 low power transmit(Continued on next page)



ters (less than 5 Watts) are hidden. All foxes transmit on the same frequency but operate in a five-minute cycle. So, the first fox comes on the air at the precise start of each fiveminute period, transmits for one minute and then shuts down. At this point, number two starts up and sends for one minute and so on. Each identifies itself in Morse code with the letters MO followed by a number of dots, so the first sends MOE (one dot) and the subsequent ones send MOI, MOS, MOH and MO5 (which have 2, 3, 4 and 5 dots respectively). With this arrangement, the letters MO provide five dashes to facilitate taking a bearing and by counting the number of dots, the identity of the fox can be ascertained without the need for knowledge of Morse code.

Individuals are allowed to start at five-minute intervals so that everybody starts at the same point in the cycle. The objective is to find as many foxes as possible within an overall time limit – usually around two hours.

ARDF events usually have one day of competition using a 2meter frequency (AM or FM modulation) and one day of

competition using an 80-meter frequency (CW). The antennas used are omnidirectional, vertical wires on 80 meters and crossed dipoles on 2 meters.

The receivers carried by competitors use directional antennas. On 80 meters it is a ferrite or a small loop antenna and on 2 meters is a two or three element Yagi or HB9CV antenna. In addition to the radio equipment an ARDF competitor uses a topographic map and a magnetic compass for navigation.

The variations of ARDF are sprint and Fox Oring. Sprint events have 80m receiver shorter courses, use lower pow-



Bob, G3ORY at the 2m world championship in Croatia in 2010.



ered transmitters in the 80 meter band which transmit in sequence for only 12 seconds with the cycle repeating every minute. The expected winning time is 15 minutes.

Fox Oring is a variation of the sport that requires more orienteering skills. In a Fox Oring course, the radio transmitters put out very little power, and can be received over only very short distanc-



es, often no more than 100 meters. The location of each transmitter will be indicated on the map with a circle. The transmitter does not need to be exactly at the circle's center, but one should be able to receive its transmissions everywhere within the area indicated by the circle. A competitor must use orienteering skills to navigate to the area of the circle on the map and only then use radio direction finding skills to locate the very low power transmitter.

But overall, ARDF is the pleasure of being in direct contact with nature, of breathing fresh air, of joining with friends from different amateur radio clubs and societies. This article can only give a brief de-



The author's daughter Andrea (L) and granddaughter Mikaela (R) foxhunting in 2014

scription of this fascinating sport. Check out this YouTube video for more information.

https://www.youtube.com/watch?v=tl4HztSY8Mo&ab_channel=ARDF





G4FON Sending Trainer (within Morse Trainer)

John Dvoracek, KE5C

Various ideas circulate on how you can learn CW. Among the most recognizable is the Koch method. Multiple computer or device training aids exist based on this method but almost all are receiving trainers only. Another idea endorsed by several sources I have encountered is that sending practice improves not only your ability to send clean code, but also to copy better. This was endorsed and discussed in one of KK5NA's recent Advanced Academy Classes where we all could copy 25-30 wpm, but most of us had trouble sending much above 25 wpm. Please continue reading this even if you now conclude this would not apply to you since you are still working on slower code. I think it does apply to you.

Buying into the concept that sending improves copying, what should you send? Most commonly we send words we are trying to learn, or catchy text phrases with difficult and/or back to back characters, but with these we are sending what we are reading off a page or screen. Our class also noticed most of us could send 30 wpm doing this, but our QSO's fell apart anywhere near that speed. Why?

Learning CW involves training neural pathways. What if the pathways are different for reading to sending than thinking to sending? At least two posters suggested practice sending whatever thoughts come to mind and disavowed sending text from a page for this very reason. How much cross training exists between sending page text and thoughts? From experience, not enough.

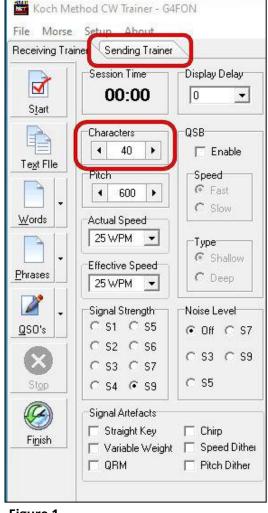


Figure 1

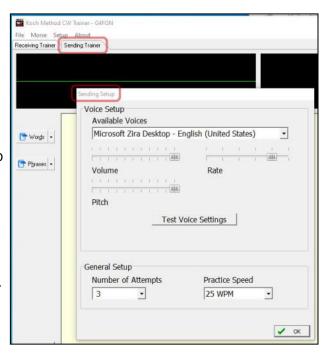
There are suggestions and trainers that offer possible solutions to improve sending your thoughts as you would during a rag chew. One way to get an idea to send is to daydream. Another is to get an idea from hearing it. Some might say that is no different than sending what you read, but I can send what I read AND think about something else, so sending what I read somehow bypasses being fully in my conscious thoughts. There is some neural sight to hand movement path below full consciousness, some sleight of hand if you will.

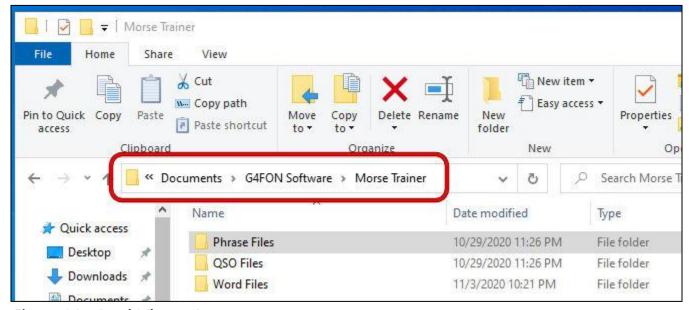
Through sending practice, you will improve your copy increasing the benefits of your training time. Let's proceed to using the <u>G4FON Morse Trainer</u> in Sending Trainer mode. The Morserino-32 sends a word to you, and you send it back until correct, but those are sometimes not availa-



ble. Moreover, G4FON requires no special devices and has other advantages. G4FON uses a synthesized voice to read you words or phrases to send from text files, then evaluates if you sent them correctly giving you a number of chances that you set. G4FON evaluates your sending using a Fast Fourier Transform of your PC's audio input device – usually your microphone or line in. Thus you need an audio signal of your sending. I used a code practice oscillator. You may need to adjust your audio level so that the peak signal in the right hand window almost fills the window.

When the trainer first starts, go to the "Characters" dialog box and set that to 40 (**Figure 1**). You will notice the "Sending Trainer" tab can now be selected. Once there, go to the Setup Menu Item and select the voice, speed and repeats you like (**Figure 2**). I





Figures 2 (top) and 3 (bottom)

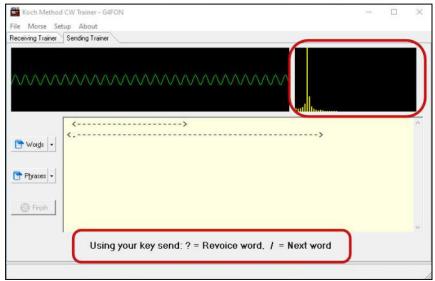
understand the female synthesized voice better. An additional aid to help understand the voice is to select phrases rather than just words. If you don't get one word, you can often guess it from other words in the phrase. The phrase files are fabulous in my opinion. If you use the included word or phrase files, you will encounter British spellings, so if you prefer American spellings, you will need to edit those files first. Best of all, you can load your own words and phrases. Go to your Documents>G4FON Software>Morse Trainer directory and you will see subdirectories for the Phrase, QSO and Word files (**Figure 3**). You may need to adjust your audio level so that the peak signal in the right hand window almost fills the window (**Figure 4**). When practicing, note the controls at the bottom of the sending trainer. You send the "?" or "/" with your key when you need to repeat a word or phrase or to advance if you are stuck. Your inter-character and word spaces do



matter, so pay attention to those.

Here is a short example, a six word run of words I uploaded. The voiced third word sounded like "gave" but that wasn't accepted. Then I tried "game" which was correct.

Good luck!



Copying Morse Without Really Trying!

Duncan Fisken, G3WZD

The following article had its genesis in a recent thread on the FISTS reflector, sparked off by a comment I posted to the effect that I realised I had been unconsciously copying CW in the background while doing something else. I often have the rig on in the background, tuned to one of the CW 'watering holes', while working on another project in the shack. This time however, the 'light-bulb' moment came when I was doing a newspaper crossword puzzle with a Morse tutor running in the background. The tutor was sending random callsigns at 30wpm and 25wpm Farnsworth (I am working on my contesting skills!), and it suddenly dawned on me that I had been copying quite a few of the calls without really trying, at speeds somewhat beyond my comfort zone.

The following has been authored by Chris Pearson, G5VZ a practicing Neuropsychotherapist and enthusiastic CW operator. Chris kindly gave his blessing to my suggestion that I submit it for publication in *Solid Copy*. I hope it is of interest to the membership at large and the Advisor community in par-



G3WZD



ticular; it certainly interested me!

The Neuroscience of Copying Morse

Chris Pearson, G5VZ

A great deal of what we do in life is achieved through non-conscious processing. What is often called the subconscious mind. That applies to driving sometimes: how often does someone arrive at their destination and realise they have no real, conscious memory of the journey? But driving, generally, is done without conscious thought – working those pedals, and steering wheel and all that, would be overwhelming if you actually thought about it all the time.

There are two types of memory: **explicit memory** consists of event memories – autobiographical memory – and facts you learn. Knowing the capital cities of all the countries of the world is an achievement of explicit memory. Knowing that PARIS represents a 50-unit, conveniently standard Morse word is an explicit memory.



G5VZ

Implicit memories are neural networks that are activated without thinking *about* them. Some things, like riding a bike, begin in the conscious domain and often seem very clumsy before they become implicit.

When you hear 'Paris' accurately in Morse characters received at 30 wpm, that's an achievement of implicit memory. These are the learned skills promoted by many of the old telegraphy texts.

Until really quite recently it was thought that this process happened in younger people: the brain reached a point when it had achieved all it could and, from then on, it was a slow, inexorable decline. Research since the mid-nineties has clearly shown that neuroplastic activity occurs in the brain from well before birth until the moment a person breathes their final breath.

It can be convenient to think about explicit memory as being something that happens in our conscious mind while implicit activity is subconscious. Subcortical parts of the brain that process sensory information and respond implicitly are incredibly rapid – these are structures within the brain that are essential for many survival responses.

It is said that 'the subconscious is always listening' and that is true. The subconscious continues to be active even when we are sound asleep – what would hear the alarm clock if it wasn't?

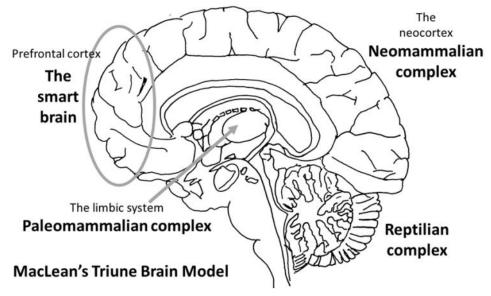
So we can be confident that a part of our brain is hearing Morse and recognising those patterns of sensory information whatever we're doing. There's a picture of the human brain, divided into three evolutionary parts by Paul MacLean who developed the *Triune Brain Model*. We do all our thinking in the cortex which is the most recently evolved part of the brain and, slow as it is, allows sophisticated thought. Paleomammalian and reptilian complexes evolved much earlier and are rapid, and survival-enhancing.



The tricky part with Morse is having your cortical brain (often called the neocortex or the neomammalian brain) keep up. The non-conscious, limbic structures in the brain are activated and respond in millisecond timescales. The cortical brain takes almost half a second - everything we think of as 'now' is, in fact, about half a second ago. Our mind stitches together neurological events that make us think it's all happening now and that we exercise some kind of choice or

control over many things that happen without conscious intervention.

Catching a ball is a classic example. It happens faster than our 'smart brain' can process events. But we have non-conscious processes that we practice and develop that make it possible. Try throwing a ball at a baby who hasn't developed this response. Same with riding a bike - our nervous



system and musculature must respond for balance much more quickly than we can think. I've had conversations with typists as they bash out documents at unbelievable speeds and, on one occasion, asked one typist what she was typing: "Oh, I'm not reading it - I'm typing it." Just like those telegraphists who could (can?) hold a conversation and copy code simultaneously, the activity doesn't even need to touch their conscious mind.

Copying Morse is the same as many other neurological activities. It's not the receiving the characters that's an issue, it's transferring their information content to the cortex that is the trick!

That's exactly why you may notice that distracting your cortex makes it easier. Because your cortex believes you are NOT able to copy that code. If it doesn't notice that you are, then it won't get in the way. Making the experience fun helps a lot, too!

If you are, say, *thinking* that you're comfortable at 15 wpm and you want to improve, start every practice session at 40 wpm.

You'll probably copy little accurately. Drop down to maybe 30 wpm and notice how you pick up more. Then at 25 wpm you may well be accurately copying a lot. And you will probably be surprised at how easy it seems. (I say, 'seems' because in reality, it 'is.' If someone can do it then, generally speaking, anyone can do it.)

Every time you do this – every time the particular neural network is activated – tiny cells called glial cells arrive at the synapses between the activated neurons. These calls have many functions – including the processing of neurotransmitters – but they also physically glue the neurons together – axon terminal of one neuron to a dendrite of the next – making the circuit through the



network both biochemically and electrically more efficient. And faster.

Most practice starts slow and speeds up - in exactly the opposite way to the way brains work.

I learnt all this, by the way, not from a radio ham but a professor of neuroscience who had a great deal of theory to pass on and some functional MRI scans to prove it.

Biographical Note: Chris Pearson became interested in amateur radio around the age of 12. He moved from London to Northfleet in Kent and spent many hours in the shack with Bill, G5VZ. He was taught Morse by Bob, G3ORC (SK) who had been a RN telegraphist and, after marriage and children, came back to amateur radio and was licenced M0JRQ. You may have seen the call on the G-QRP Antenna Handbook and other publications, including compilations of Drew Diamond's Radio Projects. Having the opportunity to honour Bill and keep the call G5VZ on the air, Chris is now 100% CW. Although in later years, Bill was not a fan of the key.

As a psychotherapist, Chris gained Clinical Neuropsychotherapy certification at CDSC at Brisbane Royal and Women's Hospital, then a post-graduate degree in Neuropsychotherapy in Queensland, Australia in 2018. He works as a Neuropsychotherapist.

Planning Ahead for the Inevitable

Gary Mikitin, AF8A

Nothing is as sure as death and taxes. While we might be able to influence the latter, the former is inevitable. How we prepare for that difficult day will make a difference to those left behind. As for myself, I do not want to burden my family with a pile of incomprehensible electronics after I shuffle off this mortal coil.

A first for me: Disposing of SK estates

In 2019, I offered to help the family of a dear friend who passed on with no warning, eventually selling all of his gear on <u>QRZ.com</u>; the proceeds went to his family. It took a few months, and the sales went smoothly. Further, his antenna 'farm' consisted of a few low dipoles, easily removed from his home.

In 2020, a good friend of my wife lost an acquaintance in an auto crash. I didn't know the ham, but my wife's friend was aware of my long time hobby and came to me, stating the family needed help with antenna removal (not difficult, as they were indoor antennas, an attic installation) and in finding a worthwhile person or cause to which the equipment could be donated. After a half-dozen postings to QRZ.com, all was sold and I had significant funds which I donated, after getting the family's approval, to the Youth On The Air organization.



Lessons Learned

At the very least, have a discussion with one more or of your ham contemporaries, and ask if they would guide your family in disposing of your station. Discuss what your preferences might be. Offer to reciprocate. And, if you own some valuable gear, or if you have antennas that would require professional disassembly, seriously consider putting your wishes in writing. While I am not qualified to discuss legal options such as wills and



The Death of Socrates by Jacques-Louis David. Rumor has it that Socrates had very little ham radio gear to dispose of.

last testaments, common sense suggests that anyone who suspects their estate might benefit from written instructions should follow through with a legal professional.

Bottom line, doing nothing is a very poor option. It doesn't seem right to burden those who put up with our 'beautiful' antennas, the chirps and chatter from our rigs, solder burns on the furniture, etc., with a task for which they are undoubtedly unprepared. Make a plan, discuss it with all concerned, and lastly, consider putting your wishes in writing.

If you need an 'ice breaker' to start such a conversation, this article might do the trick.

CW Academy

Kate Hutton K6HTN Joe Fischer AA8TA Bob Carter WR7Q

The January-February 2021 CW Academy class is complete and the report of this semester follows. This was a busy semester with 818 students initially signed up, 616 students verified for a class, 500 students who completed a class and 424 students who met the final goals of a class. This represents one of the largest classes we have ever had.

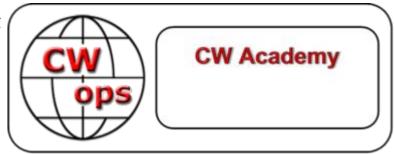
We are deeply indebted to the following advisors who volunteered their time and efforts to assist all of these students.



Advisors who led three classes: AC6AC and K6HP.

Advisors who led two classes:

AA8TA, K1DW, K5GQ, K6HTN, KA7MDM, KI7OMH, KK5NA, KK6M, N5KB, VE2KM, W0FN, W7VQ and WR7Q.



Advisors who led one class:

AA5CF, AC5EZ, AD7KG, AG4EA, AJ1DM, AK4SQ, AK7O, G0HKC, G0IBN, G3WZD, IK1HGE, K0ES, K0MP, K0VD, K1BG, K1CHM, K1DJ, K1LHO, K2CYS, K6PB, K6RB, K7MOZ, K7OJL, K9CPO, K9DLP, K9OZ, KD2KW, KG5FZ, KI2N, KI7WNS, KK7RR, KT5V, KV8Q, MI0WWB, N0DNF, N3EE, N4ARY, N5AAS, N5TOO, N5WNG, N6JFD, N7ID, N7JP, N7MU, N8AI, N8LR, N9EP, NJ8M, NN4K, NN7M, NU7Y, VE3FXX, W0EJ, W0OJ, W3PNM, W4IF, W6RR, W7EEE, W8EWH, W8OV, WA3AER, WA6L, WA9CW, WB0JRH, WB7DKZ, WT8P, WU6P and YL3JD.

Congratulations to the following students

Students who completed an advanced class (61 students):

AE7EU, AG4CC, AG7TX, AJ6AN, AJ6CU, K6AUR, K8OIP, KA7GPP, KQ0E, WA7KJ, AD8WR, G0GPH, G0ODP, G4DMG, G4XWJ, M0MUI, PA3HEN, N4DXI, VE9CD, WF4I, WR4T, AI6IE, KE6JAC, KI6M, VE7PS, KI6NTB, N2GG, VE7XT, W0GAS, WT6K, AA0YY, AA2GF, AA4BI, AC8RG, K4DME, KB3SAR, KF5WJ, KO4AXD, N2DA, N2MA, N9YB, NE5ET, VA3DKL, W0HY, W2NWU, W4LRB, WB1LLY, K4KO, K9PLX, KB9LLD, N4UZZ, K1ARR, K1RID, KC3FQF, KW4WA, K7VW, KB6VME, KJ5R, N5CWW, NJ6Q and WB7GR.

Students who completed an intermediate class (89 students):

AG7WI, AK7PM, K6GRH, K6NF, K6VN, KC9MJA, KD2QDD, KF6COZ, KN4YRM, KN6IPE, N4HOE, WB6POT, KA9OUT, KJ4CC, N2UD, VE3DPC, LB5DI, PF0X, SP6SUD, NF6N, W4MSL, W5HPQ, AB5XS, AI6VM, K5LNR, KE0SSV, KI4POV, KJ5T, KX3H, N7PHI, W5DL, KA1NP, NI3V, VE2VAB, KC1EJD, KD2RKN, N4ELC, KI5LOV, N9EEE, AD5CQ, N5EP, W0RLY, W9TD, WR5O, AA0IZ, AA7AZ, KI7TGX, KM6TVJ, KI7VEM, KM6QYV, KM6VPJ, KN7A, W2AFE, W6HMN, K1ECU, NI4U, WB8YHD, WD9CUU, AF7MM, N6EFF, VA7KBM, VA7RPE, W7GFW, AA6TQ, AJ6ET, KF7QNS, NE6G, WB6ADC, WM7X, K5HEM, KC2BE, KN4CQB, W5SD, KD8OOK, KE8BWA, W1RBG, WA3GPP, WQ8P, W6TC, K0FUZ, N9DXP, VE4SF, N5DCH, NN0G, VE6GL, W3KK, CR7AWB, IV3IFZ and SV1DAY.

Students who completed a basic class (96 students): K0LAR, K5WRL, KN4UDT, KO4ALY, W0JCB, W9JRM, AB4DM, JJ1TBK, K1KL, K4BLB, K4JSK, K4PZ, KA2TQV, KA9LWK, KD8VCB, W0VK, AA6PM, AB1GS, AC0VM, K4CBW, K6JSC, W1SAV, W5EAL, AC0MG, K0WET, K7PKA, KC9AD, KG7MLL, 9A6ZE, CT7AUP, PA2G, S55AC, KG4FUU, N0RPM, WB8BCU, K3KZU, KC1OAV, N1NS, W8QE, WB7WEA, AA4HV, N5EKO, W0ARK, KC3OVA, KD4IZ, KW4WL, W3KCK, KI7VUX, N6FP, W2RY, AD5RX, AG7XI, KM6ZMZ, KM6ZNZ, W7JRD, KD2JWH, KT9N, W1AGE, WA3KD, WY4G, K7MNF, KN6KJK, VA7STQ,



W6OLI, AB7HA, K0LUM, K0BRE, K6ABM, KB1NO, KB8M, KD0FGD, KJ4J, KQ3S, OA4DVG, WA9OTA, G8HKS, G8RWG, LZ1DAF, M0NOM, M0STQ, SA3IEI, KA5DAQ, KC9YJP, KE0EKF, KF0BIW, KØEED, N1AOK, N9JHZ, KS6PKY, N6EO, WM6T, AJ6EE, KJ7IZT, KK6KOI, KM6NEP and W7PEZ.

Students who completed a beginner class (177 students):

AB9MZ, KG5VQZ, KN4KFH, W4SSF, KD2EMW, N1DUC, N1PKA, VA3CN, N4PMK, N0JJW, K7ESC, W0FFC, CR7AUS, M1JSC, K0SEC, KB0VHA, N0OHL, WY8V, Y2DP, K8OOF, KC1OOF, N0TO, Maria Polyanska, Kassandra Spalding, KF4HAW, KM4DLF, KO4ECD, K7MAS, KD4YSJ, KJ7GIE, KK6AMY, W2TAR, KA2LAC, KB4MIS, K0CSL, KE3GK, AG5GN, KE0OZJ, KF5UCO, N5QH, W4SQ, AG6LK, AI7BL, KL2ZZ, NB7O, W6KX, K3DEX, K9CFA, K9STM, KG5MEL, K2WLD, K8IG, KB9JMU, KC1AQQ, WD9GYM, AC6PC, K6KMH, K7SFQ, K5BEZ, Trevor Best, K0MOS, KK4ETS, KB1EHX, KB3YZX, KN4BHO, KN4QPA, KK7RK, KN6EY, N7COT, K7PGR, N6KZW, NF7X, W1TKR, W7LRM, KC5ONZ, KO4GPB, KA3BEN, KB9YOJ, KD2RNN, W6WGT, M5OTA, MW0OWM, KD5IRL, KK4SNO, XE1HG, KM4OPN, N2EMK, VE7SGD, AD2BE, AD8FA, KJ7JKL, KO4AIE, KW4CZ, KE4CON, KT5P, AE4JB, AJ6KX, KG7DTN, KN6HGG, KK2Z, W9SSN, KC1NBE, KO4FPJ, N4NMN, N4PSW, N8MKG, VY2NA, W2JTR, W2JVO, K5ENL, NG1H, K8NPA, KC5QFG, KD9LTN, N3VXM, VE4HAZ, AG8NT, AK3B, N4SRN, N9MGK, WB3HUS, K5JF, K5LB, K9HOU, KE0LUA, VE9SC, W1EZE, IU1JVO, IZ7VLL, PA1BBO, SP5GDX, SQ5TK, AAOKU, K6HDX, KJ6WKT, KJ7LAN, K5NEC, K7BEZ, K7OED, K9POL, KE0AHD, KK7FW, N0OLD, NE7TS, Christopher Bentley, WA6MOK, K5BKW, KA1TE, KM8V, KP4LCC, VE1GWE, KG5MCN, N2RSC, NR5TX, W9WLX, AG7SH, K6ASN, K6SUD, VE7LF, WA0ZAW, K5AEB, KI0KE, N9AEP, W5EJD, WE1SER, WH6FIR, KC1MII, KE8HXE, N3NBM, NT3U, S56VHA, KF6YXK, KN6IUF, KN6KAF, N7FNA, Tim OBoyle and WA7VFQ.

Of the students listed above, these have become members of CWops since January 1, 2021:

AA0YY, AA4BI, AC8RG, AD8WR, AE7EU, AG4CC, AG7TX, AJ6AN, K0FUZ, K1ARR, K1ECU, K1RID, K4DME, K4KO, K8OIP, K9PLX, KA7GPP, KB6VME, KB9LLD, KC3FQF, KI6M, KJ5R, KO4AXD, KQ0E, KW4WA, M0MUI, N2DA, N2GG, N2MA, N4UZZ, N5CWW, NI4U, NJ6Q, PA3HEN, VA3DKL, VE7XT, W0GAS, W4LRB, WA7KJ, WB1LLY, WB7GR and WT6K.

If you are a CWops member, please check the potential member status page to see if any more deserving students might be sponsored.

We extend our most sincere congratulations to all students who found success in one of our classes. We are looking at another busy semester coming up and plans are well under way to get started in April.

73,

Kate K6HTN, Joe AA8TA, Bob WR7Q CW Academy Managers



New Members

Trung Nguyen W6TN

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

| CWops | Call | Name |
|-------|--------|--------|
| 2806 | N2DA* | Craig |
| 2807 | K9XW* | John |
| 2808 | N2GM* | George |
| 2809 | AA0YY* | Mark |
| 2810 | NE2V* | Justin |
| 2811 | EI6FR | Declan |
| 2812 | NK1N* | Glen |
| 2813 | KT9X* | Flip |
| 2814 | K4KO* | Greg |
| 2815 | K4DME* | Dave |
| 2816 | K1ECU* | Chas |
| 2817 | N1CC* | Mike |
| 2818 | F6BCW* | Dider |
| 2819 | KE7LOY | Brian |
| 2820 | NI4U* | Mike |
| 2821 | N4NTO* | Tripp |
| 2822 | K1TZQ* | Howie |
| 2823 | W4LJ* | Doug |
| 2824 | LZ1ZF | Georgi |
| 2825 | W0PR | Larry |

| CWops | Call | Name |
|-------|--------------|----------|
| 2826 | GM3WUX* | Terry |
| 2827 | N2MA | Al |
| 2828 | US2YW | Slava |
| 2829 | DL8HK* | Karen |
| 2830 | OK1FCJ/OL8R* | Petrasco |
| 2831 | VE7XT* | Richard |
| 2832 | WT6K* | Al |
| 2833 | WB7GR* | Greg |
| 2834 | KF6C* | Brian |
| 2835 | NE6ET | Shin |
| 2836 | K0TI* | Dan |
| 2837 | CE3CT* | Roberto |
| 2838 | N4UZZ* | Otto |
| 2839 | K9PLX* | Chuck |
| 2840 | KB9LLD | Tony |
| 2841 | EA2EFI | Nol |
| 2843 | AC8RG* | Walter |
| 2844 | K1ARR | ArtK |
| 2845 | EA2KV | Jose |
| 2846 | K1RID | Ed |

| CWops | Call | Name |
|-------|-----------|------------|
| 2847 | VA3DKL* | Dave |
| 2848 | K5WSN* | Bill |
| 2849 | KW4WA* | Julio |
| 2850 | W4ZGR* | Peter |
| 2851 | WB1LLY | Billy |
| 2852 | W4LRB* | Ben |
| 2853 | N5CWW* | Charlie |
| 2854 | WD9CUU* | Pat |
| 2855 | M0MUI* | Mui |
| 2856 | NE4EI* | Dave |
| 2857 | AD8WR* | Dave |
| 2858 | K8OIP* | Scott |
| 2859 | KQ0E* | Ron |
| 2860 | AJ6AN* | Rowdy |
| 2861 | AG7TX* | Dave |
| 2862 | M0HDF/M8A | Angel Luis |
| 2863 | WA7KJ | Ken |
| 2864 | DK7PE* | Rudi |
| | | |
| | | |

Current Nominees

As of March 8, 2021:

Need Sponsors: WB8YHD, K7ENH, KB6VME, K7VW, KJ5R, AA4BI

Invitations Extended: AB3AH

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



^{*}Life Member

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 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

In view of the continuing growth in membership of CWops, and the ongoing influx of new participants in the CWTs, a brief retrospective of the history of the CWTs may be of interest, especially to newer members.

The CWTs were one of the first activities organized by the CWops club. The first CWTs were held in January 2010. There were 21 scores reported for the first CWT at 1100z on January 12, 34 scores for the 1900z CWT later that day, and 42 in the first 0300z session on January 13. There is a <u>brief writeup on the January 2010 CWTs in the first (February 2010) issue</u> of *Solid Copy*.

Beginning with the February 10-11, 2010 CWTs, all of the reported scores can be found at <u>3830scores.com</u>. The February 2010 CWTs were also the first to use the current exchange format, so basically the CWTs as we know them today began with these February 2010 sessions.

At first, there was one monthly set of CWTs on the second Wednesday of the month at 1100z, 1900z and 0300z (Thursday UTC). The original intention had been that each of these sessions would cater to a different geographical area (Asia/Pacific at 1100z, Europe/Africa at 1900z and the Americas at 0300z), but from the beginning there were participants taking part in all three sessions without regard for the intended target area.

The first changes to the CWT schedule came in April 2011. The first session starting time was changed from 1100z to 1300z, primarily to make it a more favorable start time for Japan, but this also had the effect of making it easier for North American participants. As well, the frequency of the events was doubled to twice a month, on the second and fourth Wednesdays of the month.



A further experiment was the scheduling of some Saturday CWTs, in hopes of making the events more accessible to participants whose work made it difficult to participate on weekdays. There were Saturday CWTs in June, July, September and November of 2011 and in January 2012, but this experiment was not very successful. Because of the difficulty of finding open weekends where the CWTs would not conflict with major CW contests, it was not easy for potential participants to be sure whether or when the next Saturday CWTs would take place, and as a result participation was not as good as had been hoped. Predictability is an important success factor for events like these.

One of the biggest incentives for taking part in the CWTs has been the gold, silver and bronze medal participation awards. These were first announced by CWT manager W6SX in June 2013,

and the first awards for participation in 2013 were delivered in early 2014. Ever since, the participation awards chase has played an important role in keeping interest in the CWTs alive, and participation has grown rapidly since then.

By March 2014, the CWTs had become popular enough to try putting them on every week. The first two added CWTs inserted into the schedule, in the first and third weeks of March, were also the first slow-speed CWTs, and were intended to welcome new CW Academy graduates. These



were followed by regular CWTs every week in April, and these were so popular that the weekly format quickly became permanent.

From June 2014 until November 2020, another feature of the CWT schedule was the special slow-speed CWTs on the second Wednesday of March, June and November each year to commemorate the graduating class of CW Academy students. These came to an end in November 2020, in large part because of the success of the K1USN SSTs (Slow-Speed Tests). Starting in September 2020, the weekly SSTs (twice weekly since February 2021) have been a hit with newcomers who are not yet quite ready for the full-out battles in the regular CWTs.

Participation has increased steadily over the years, with a big jump in March 2020 as a result of the pandemic. In the first two months of 2021, the average participation in the 1300z sessions has been close to 425 entrants, an average of close to 450 scores were reported in the 1900z sessions, and the 0300z sessions are averaging over 320 participants. Our highest participation count ever was 478 scores reported on January 27 at 1900z, and the target of 500 reported scores in a single session appears to be within reach. As recently as 2017, a total of 500 scores reported in all three CWTs would have been a cause for celebration, and now we are approaching that level for a single session!

Stay safe, and keep enjoying the CWTs!

73,

Rich, VE3KI



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. <u>Use the new online tool to submit your data</u>. 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.

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

| Call | ACA | СМА |
|--------|------|-------|
| AA3B | 1194 | 10516 |
| K3WW | 1118 | 8108 |
| NA8V | 928 | 6235 |
| K3WJV | 921 | 5821 |
| K1VUT | 833 | 3949 |
| KG9X | 826 | 4195 |
| WT9U | 801 | 4537 |
| VE3KI | 794 | 6304 |
| AC6ZM | 784 | 3087 |
| K3JT | 779 | 4102 |
| N7US | 768 | 4634 |
| N8BJQ | 720 | 6745 |
| K3PP | 718 | 4028 |
| K4WW | 709 | 3614 |
| NA4J | 707 | 2675 |
| K7QA | 698 | 3803 |
| K6NR | 697 | 3042 |
| W4WF | 696 | 3126 |
| I2WIJ | 696 | 2708 |
| AC3BU | 692 | 2863 |
| N5RZ | 689 | 6314 |
| N1DC | 683 | 3855 |
| W1RM | 668 | 7193 |
| K8AJS | 667 | 3657 |
| DL6KVA | 631 | 4602 |
| K9WX | 620 | 3708 |
| AA5JF | 620 | 1454 |

| Call | DX |
|--------|-----|
| W1RM | 208 |
| F6HKA | 194 |
| DL6KVA | 165 |
| W4VQ | 157 |
| UR5MM | 154 |
| G4BUE | 149 |
| OH2BN | 148 |
| OK1RR | 143 |
| VE3KI | 134 |
| W9ILY | 129 |
| K1SM | 128 |
| N8BJQ | 127 |
| AA3B | 126 |
| K3WW | 125 |
| K1ESE | 123 |
| 9A1AA | 119 |
| W0VX | 118 |
| AC4CA | 118 |
| N5IR | 117 |
| N5RZ | 114 |
| N5PHT | 114 |
| N1EN | 112 |
| EA8OM | 111 |
| K3WJV | 107 |
| W1UU | 106 |
| 4X6GP | 106 |
| VK7CW | 105 |

| Call | WAS |
|--------|-----|
| WT9U | 50 |
| WT2P | 50 |
| WF7T | 50 |
| WA9LEY | 50 |
| WA4JUK | 50 |
| W9ILY | 50 |
| W7GF | 50 |
| W6KY | 50 |
| W4VQ | 50 |
| W1UU | 50 |
| W1RM | 50 |
| W0EJ | 50 |
| VK7CW | 50 |
| VE3KI | 50 |
| NU7Y | 50 |
| NA8V | 50 |
| NA6O | 50 |
| N8BJQ | 50 |
| N7WY | 50 |
| N7US | 50 |
| N5RZ | 50 |
| N5RR | 50 |
| N5PHT | 50 |
| N5IR | 50 |
| N4ZR | 50 |
| N2UU | 50 |
| N2RC | 50 |

| Call | WAE |
|--------|-----|
| W1RM | 59 |
| UR5MM | 59 |
| DL6KVA | 58 |
| OH2BN | 55 |
| F6HKA | 54 |
| VE3KI | 50 |
| OK1RR | 49 |
| DJ1YFK | 49 |
| 9A1AA | 49 |
| G4BUE | 47 |
| AA3B | 47 |
| N8BJQ | 46 |
| K3WW | 46 |
| G4HZV | 46 |
| W9ILY | 45 |
| SM0HEV | 45 |
| PG4I | 45 |
| K3WJV | 45 |
| IN3FHE | 45 |
| W4VQ | 44 |
| NA8V | 44 |
| K3PP | 44 |
| K1ESE | 44 |
| IK0YVV | 44 |
| N2UU | 43 |
| M0RYB | 43 |
| K1SM | 43 |

| Call | WAZ |
|--------|-----|
| UR5MM | 39 |
| W1RM | 38 |
| OK1RR | 38 |
| OH2BN | 38 |
| N8BJQ | 38 |
| F6HKA | 38 |
| AA3B | 38 |
| 9A1AA | 38 |
| W4VQ | 37 |
| VE3KI | 37 |
| G4BUE | 37 |
| W9ILY | 36 |
| W0VX | 36 |
| N6WM | 36 |
| N5RZ | 36 |
| N5PHT | 36 |
| K3WW | 36 |
| K1SM | 36 |
| DL6KVA | 36 |
| AC4CA | 36 |
| N5RR | 35 |
| K1ESE | 35 |
| UT3UZ | 34 |
| ON4CAS | 34 |
| NA8V | 34 |
| N1EN | 34 |
| IK0YVV | 34 |



| Call | ACA | CMA |
|--------|-----|------|
| N2UU | 602 | 4640 |
| WW3S | 583 | 1070 |
| K1EBY | 579 | 3168 |
| WN7S | 577 | 2795 |
| AF4T | 556 | 1576 |
| KC7V | 541 | 4251 |
| K1DJ | 539 | 3388 |
| WA4JUK | 534 | 2942 |
| K2TW | 534 | 2753 |
| K3ZA | 533 | 1145 |
| NJ3K | 531 | 2116 |
| F6HKA | 527 | 6560 |
| VE3TM | 506 | 1824 |
| K6KM | 504 | 1613 |
| K1ESE | 495 | 4683 |
| NR3Z | 495 | 1762 |
| K8JQ | 493 | 4107 |
| LB6GG | 481 | 1721 |
| W1AJT | 480 | 1132 |
| KV8Q | 478 | 2031 |
| KT5V | 475 | 2674 |
| W6LAX | 473 | 1509 |
| K1SM | 471 | 3350 |
| W3WHK | 464 | 2401 |
| N4FP | 459 | 1685 |
| OZ3SM | 449 | 1792 |
| WS1L | 446 | 1736 |
| NF8M | 442 | 1342 |
| VE3MV | 441 | 2534 |
| K4TZ | 440 | 1999 |
| KE8G | 433 | 2860 |
| W0TG | 425 | 2128 |
| 9A1AA | 420 | 3390 |
| W2NRA | 418 | 2187 |
| EA4OR | 417 | 1394 |
| AF5J | 404 | 843 |
| K2YR | 403 | 1282 |
| K0TC | 397 | 2391 |
| WA2USA | 397 | 1408 |
| W1EQ | 397 | 1276 |

| Call | DX | Call | WAS |
|--------|-----|-------------|-----|
| NA8V | 105 | N1EN | 50 |
| N5RR | 105 | N1DC | 50 |
| N2UU | 105 | KY7M | 50 |
| N7US | 103 | KU7Y | 50 |
| I5EFO | 103 | KE4S | 50 |
| IK0YVV | 101 | KC7V | 50 |
| AE1T | 101 | K9WX | 50 |
| K3PP | 100 | K9OZ | 50 |
| ON4CAS | 99 | K8JQ | 50 |
| K8AJS | 99 | K8AJS | 50 |
| EA1WX | 99 | K7QA | 50 |
| WT9U | 98 | K6NR | 50 |
| UT3UZ | 98 | K5IX | 50 |
| K0VBU | 98 | K5CM | 50 |
| N6WM | 96 | K5AX | 50 |
| WA9LEY | 95 | K4WW | 50 |
| IN3FHE | 92 | K4GM | 50 |
| K1DJ | 91 | K3WW | 50 |
| DK9PY | 91 | K3WJV | 50 |
| N4ZR | 90 | K3SEN | 50 |
| K3JT | 89 | K3JT | 50 |
| K1DW | 89 | K2QB | 50 |
| NG7M | 88 | K1ESE | 50 |
| N7WY | 88 | K1EBY | 50 |
| N2RC | 87 | K1DW | 50 |
| F6JOE | 87 | K1DJ | 50 |
| SM0HEV | 86 | K0VBU | 50 |
| N7RD | 86 | KOMP | 50 |
| KY7M | 86 | IK0YVV | 50 |
| KR3E | 86 | I5EFO | 50 |
| KC7V | 86 | G4BUE | 50 |
| DJ1YFK | 86 | F6JOE | 50 |
| RM2D | 85 | F6HKA | 50 |
| CT1DRB | 85 | F5MNK | 50 |
| PG4I | 84 | EA8OM | 50 |
| N1DC | 84 | DL6KVA | 50 |
| I5IYJ | 83 | DK9PY | 50 |
| AD1C | 83 | AE1T | 50 |
| K5ZD | 82 | AD1C | 50 |
| G3LDI | 82 | AC4CA | 50 |

| Call | WAS |
|--------|-----|
| N1EN | 50 |
| N1DC | 50 |
| KY7M | 50 |
| KU7Y | 50 |
| KE4S | 50 |
| KC7V | 50 |
| K9WX | 50 |
| K9OZ | 50 |
| K8JQ | 50 |
| K8AJS | 50 |
| K7QA | 50 |
| K6NR | 50 |
| K5IX | 50 |
| K5CM | 50 |
| K5AX | 50 |
| K4WW | 50 |
| K4GM | 50 |
| K3WW | 50 |
| K3WJV | 50 |
| K3SEN | 50 |
| K3JT | 50 |
| K2QB | 50 |
| K1ESE | 50 |
| K1EBY | 50 |
| K1DW | 50 |
| K1DJ | 50 |
| K0VBU | 50 |
| K0MP | 50 |
| IK0YVV | 50 |
| I5EFO | 50 |
| G4BUE | 50 |
| F6JOE | 50 |
| F6HKA | 50 |
| F5MNK | 50 |
| EA8OM | 50 |
| DL6KVA | 50 |
| DK9PY | 50 |
| AE1T | 50 |
| AD1C | 50 |
| AC4CA | 50 |

| Call | WAE |
|--------|-----|
| I5EFO | 43 |
| G3LDI | 43 |
| DL5DBY | 43 |
| DK9PY | 43 |
| 4X6GP | 43 |
| SM7IUN | 42 |
| N5RZ | 42 |
| N5RR | 42 |
| N5IR | 42 |
| K8AJS | 42 |
| G3YLA | 42 |
| EA8OM | 42 |
| AC4CA | 42 |
| OZ3SM | 41 |
| LB6GG | 41 |
| K3JT | 41 |
| HB9ARF | 41 |
| EA4OR | 41 |
| UW7LL | 40 |
| SQ9S | 40 |
| RM2D | 40 |
| N1EN | 40 |
| MI0WWB | 40 |
| M0DHP | 40 |
| K1DJ | 40 |
| I2WIJ | 40 |
| G4NVR | 40 |
| G4ILW | 40 |
| G4DRS | 40 |
| W0VX | 39 |
| SP2R | 39 |
| SM2CEW | 39 |
| PA3HEN | 39 |
| N4ZR | 39 |
| LA8OM | 39 |
| K5ZD | 39 |
| IT9MUO | 39 |
| G3WZD | 39 |
| DF7TV | 39 |
| AE1T | 39 |

| Call | WAZ |
|--------|-----|
| 4X6GP | 34 |
| VK7CW | 33 |
| N5IR | 33 |
| K0VBU | 33 |
| I5EFO | 33 |
| W1UU | 32 |
| KC7V | 32 |
| I5IYJ | 32 |
| DK9PY | 32 |
| WA9LEY | 31 |
| RM2D | 31 |
| NG7M | 31 |
| N7US | 31 |
| N2UU | 31 |
| OK1RP | 30 |
| NA6O | 30 |
| N7RD | 30 |
| N2RC | 30 |
| KR3E | 30 |
| K8AJS | 30 |
| K3WJV | 30 |
| WT9U | 29 |
| WF7T | 29 |
| SM0HEV | 29 |
| OZ3SM | 29 |
| N4ZR | 29 |
| KT5V | 29 |
| K3JT | 29 |
| K1DW | 29 |
| IT9VDQ | 29 |
| 9A2AJ | 29 |
| N5AW | 28 |
| K7QA | 28 |
| K6NR | 28 |
| K5ZD | 28 |
| I2WIJ | 28 |
| DJ1YFK | 28 |
| WE5P | 27 |
| N7WY | 27 |

(Continued on next page)

KJ9C



| Call | ACA | CMA |
|--------|-----|------|
| KA1YQC | 395 | 705 |
| KT4XN | 390 | 1648 |
| W2VM | 374 | 1903 |
| KB4DE | 358 | 1269 |
| SM0HEV | 356 | 1512 |
| K5YZW | 349 | 985 |
| W4NBS | 336 | 1762 |
| DK9PY | 335 | 2910 |
| M0RYB | 335 | 1409 |
| UR5MM | 327 | 3122 |
| K5HEM | 325 | 728 |
| W8OV | 323 | 1742 |
| K4GM | 322 | 3050 |
| N4CWZ | 322 | 929 |
| K9OZ | 313 | 2831 |
| WA5LXS | 295 | 1548 |
| N5IR | 288 | 3973 |
| K5QR | 280 | 1456 |
| AA8R | 279 | 1184 |
| KM4FO | 272 | 1605 |
| F5SGI | 269 | 384 |
| AG4EA | 268 | 1202 |
| K9CPO | 266 | 683 |
| HB9ARF | 263 | 1909 |
| G3SZU | 263 | 361 |
| W1UU | 262 | 3462 |
| AI60 | 262 | 2012 |
| W4VQ | 256 | 3163 |
| OK1RR | 253 | 3000 |
| KE6K | 253 | 1090 |
| K3SEN | 250 | 2181 |
| K4EES | 249 | 919 |
| NN4K | 248 | 2281 |
| KF8O | 246 | 1155 |
| G3LDI | 238 | 1809 |
| EA3FZT | 230 | 921 |
| W2XYZ | 221 | 901 |
| W2CDO | 216 | 907 |
| PF5X | 216 | 635 |
| KC8J | 214 | 1266 |

| Call | DX |
|--------|----|
| Call | DA |
| K4HQK | 81 |
| WA4JUK | 80 |
| OZ3SM | 80 |
| NA6O | 80 |
| K9WX | 80 |
| K5AX | 79 |
| DL8PG | 79 |
| KJ9C | 78 |
| K1EBY | 78 |
| N1ZX | 77 |
| K4GM | 77 |
| IT9VDQ | 77 |
| DL5DBY | 77 |
| WT2P | 76 |
| WF7T | 76 |
| KE4S | 76 |
| K7QA | 76 |
| I2WIJ | 76 |
| G4HZV | 75 |
| LA8OM | 74 |
| KE8G | 74 |
| K4WW | 74 |
| HB9ARF | 74 |
| SM7IUN | 73 |
| K2QB | 73 |
| IT9MUO | 73 |
| KG9X | 72 |
| WE5P | 71 |
| K4HR | 71 |
| G4NVR | 71 |
| DK1WI | 71 |
| W2NRA | 70 |
| N5AW | 70 |
| M0RYB | 70 |
| KT5V | 70 |
| K1VUT | 70 |
| G4DRS | 70 |
| LB6GG | 69 |
| VE3MV | 68 |
| SM2CEW | 68 |

| Call | WAS |
|--------|-----|
| AB7MP | 50 |
| AA8TA | 50 |
| AA3B | 50 |
| WN7S | 49 |
| WB5BKL | 49 |
| WA5LXS | 49 |
| WA3GM | 49 |
| W8XC | 49 |
| W8FN | 49 |
| W8DN | 49 |
| W4WF | 49 |
| W4PM | 49 |
| W4NBS | 49 |
| W4ER | 49 |
| W3WHK | 49 |
| W2NRA | 49 |
| W0VX | 49 |
| VE3TM | 49 |
| VE3MV | 49 |
| VA7ST | 49 |
| OK1RR | 49 |
| NN4K | 49 |
| NJ3K | 49 |
| NG7M | 49 |
| NA4J | 49 |
| N7RD | 49 |
| N6WM | 49 |
| N5AW | 49 |
| N2WK | 49 |
| N1ZX | 49 |
| KV8Q | 49 |
| KT5V | 49 |
| KM4FO | 49 |
| KK0ECT | 49 |
| KJ9C | 49 |
| KG9X | 49 |
| KE8G | 49 |
| KE4RG | 49 |
| KC8J | 49 |

| Call | WAE |
|--------|-----|
| WT9U | 38 |
| WA4JUK | 38 |
| UT3UZ | 38 |
| N1DC | 38 |
| IT9VDQ | 38 |
| EA3FZT | 38 |
| DM6EE | 38 |
| DK1WI | 38 |
| CT1DRB | 38 |
| AC3BU | 38 |
| SV2BBK | 37 |
| SM5IMO | 37 |
| RT5P | 37 |
| PA3BFH | 37 |
| KR3E | 37 |
| K3MD | 37 |
| K1VUT | 37 |
| K1DW | 37 |
| F6JOE | 37 |
| DL4KG | 37 |
| W1UU | 36 |
| SP1D | 36 |
| PF5X | 36 |
| ON4VT | 36 |
| F5IYJ | 36 |
| EA1WX | 36 |
| 9A2AJ | 36 |
| PA7RA | 35 |
| ON4CAS | 35 |
| N7WY | 35 |
| N7US | 35 |
| K0VBU | 35 |
| G4LPP | 35 |
| EA5IUY | 35 |
| DD7CW | 35 |
| VE3MV | 34 |
| N5AW | 34 |
| M0NGN | 34 |
| K7QA | 34 |
| K4HQK | 34 |

| K4GM 27 K3PP 27 IN3FHE 27 WT2P 26 WAWJUK 26 PG4I 26 N1ZX 26 K9WX 26 K9WX 26 K9OZ 26 K5CM 26 K4HQK 26 K1DJ 26 K1DJ 26 K1DJ 26 G4DRS 26 CT1DRB 26 V31MA 25 UW7LL 25 SM2CEW 25 LA8OM 25 KE8G 25 K4WW 25 IT9MUO 25 HB9ARF 25 DK1WI 24 SM7IUN 24 NA4J 24 NATDC 24 KG9X 24 G3LDI 24 DL4FDM 24 DF7TV 24 <t< th=""><th></th><th></th></t<> | | |
|---|--------|-----|
| K3PP 27 IN3FHE 27 WT2P 26 WA4JUK 26 W4WF 26 PG4I 26 K1ZX 26 K9WX 26 K9WX 26 K9OZ 26 K5CM 26 K4HQK 26 K1EBY 26 K1DJ 26 G4DRS 26 CT1DRB 26 V31MA 25 UW7LL 25 SM2CEW 25 LA8OM 25 KE8G 25 K4WW 25 IT9MUO 25 HB9ARF 25 DK1WI 25 W0TG 24 SM7IUN 24 NA4J 24 N1DC 24 KG9X 24 G3LDI 24 DL4FDM 24 DF7TV 24 <t< th=""><th>Call</th><th>WAZ</th></t<> | Call | WAZ |
| IN3FHE 27 WT2P 26 WA4JUK 26 W4WF 26 PG4I 26 N1ZX 26 KU7Y 26 K9WX 26 K9OZ 26 K5CM 26 K4HQK 26 K1EBY 26 K1DJ 26 G4DRS 26 CT1DRB 26 V31MA 25 UW7LL 25 SM2CEW 25 LA8OM 25 KE8G 25 K4WW 25 IT9MUO 25 HB9ARF 25 DK1WI 25 WOTG 24 NA4J 24 N1DC 24 KG9X 24 DL4FDM 24 DF7TV 24 WW3S 23 KE4S 23 K8JQ 23 | K4GM | 27 |
| WT2P 26 WA4JUK 26 W4WF 26 PG4I 26 N1ZX 26 KU7Y 26 K9WX 26 K9OZ 26 K5CM 26 K4HQK 26 K2QB 26 K1EBY 26 K1DJ 26 G4DRS 26 CT1DRB 26 V31MA 25 UW7LL 25 SM2CEW 25 LA8OM 25 KE8G 25 K4WW 25 IT9MUO 25 HB9ARF 25 DK1WI 25 W0TG 24 SM7IUN 24 N1DC 24 KG9X 24 G3LDI 24 DF7TV 24 WW3S 23 KE4S 23 K8JQ 23 | K3PP | 27 |
| WA4JUK 26 W4WF 26 PG4I 26 N1ZX 26 KU7Y 26 K9WX 26 K9OZ 26 K5CM 26 K4HQK 26 K2QB 26 K1EBY 26 K1DJ 26 G4DRS 26 CT1DRB 26 V31MA 25 UW7LL 25 SM2CEW 25 LA8OM 25 KE8G 25 K4WW 25 IT9MUO 25 HB9ARF 25 DK1WI 25 W0TG 24 SM7IUN 24 NA4J 24 NA4J 24 NATDC 24 KG9X 24 G3LDI 24 DF7TV 24 WW3S 23 KE4S 23 | IN3FHE | 27 |
| W4WF 26 PG4I 26 N1ZX 26 KU7Y 26 K9WX 26 K9OZ 26 K5CM 26 K4HQK 26 K2QB 26 K1DJ 26 G4DRS 26 CT1DRB 26 CT1DRB 25 SM2CEW 25 LA8OM 25 KE8G 25 K4WW 25 IT9MUO 25 HB9ARF 25 DK1WI 25 W0TG 24 SM7IUN 24 NA4J 24 N1DC 24 KG9X 24 G3LDI 24 DL4FDM 24 DF7TV 24 WW3S 23 KE4S 23 K8JQ 23 | WT2P | 26 |
| PG4I 26 N1ZX 26 KU7Y 26 K9WX 26 K9OZ 26 K5CM 26 K4HQK 26 K1EBY 26 K1DJ 26 G4DRS 26 CT1DRB 26 V31MA 25 UW7LL 25 SM2CEW 25 LA8OM 25 KE8G 25 K4WW 25 IT9MUO 25 HB9ARF 25 DK1WI 25 WOTG 24 SM7IUN 24 NA4J 24 N1DC 24 KG9X 24 G3LDI 24 DF7TV 24 WW3S 23 KE4S 23 K8JQ 23 | WA4JUK | 26 |
| N1ZX 26 KU7Y 26 K9WX 26 K9OZ 26 K5CM 26 K4HQK 26 K2QB 26 K1EBY 26 K1DJ 26 G4DRS 26 CT1DRB 26 V31MA 25 UW7LL 25 SM2CEW 25 LA8OM 25 KE8G 25 K4WW 25 IT9MUO 25 HB9ARF 25 DK1WI 25 W0TG 24 SM7IUN 24 NA4J 24 N1DC 24 KG9X 24 G3LDI 24 DL4FDM 24 WW3S 23 KE4S 23 K8JQ 23 | W4WF | 26 |
| KU7Y 26 K9WX 26 K9OZ 26 K5CM 26 K4HQK 26 K2QB 26 K1EBY 26 K1DJ 26 G4DRS 26 CT1DRB 26 V31MA 25 SM2CEW 25 LA8OM 25 KE8G 25 K4WW 25 IT9MUO 25 HB9ARF 25 DK1WI 25 W0TG 24 SM7IUN 24 PY4XX 24 NA4J 24 N1DC 24 KG9X 24 G3LDI 24 DL4FDM 24 DF7TV 24 WW3S 23 KE4S 23 K8JQ 23 | PG4I | 26 |
| K9WX 26 K9OZ 26 K5CM 26 K4HQK 26 K2QB 26 K1EBY 26 K1DJ 26 G4DRS 26 CT1DRB 26 V31MA 25 UW7LL 25 SM2CEW 25 LA8OM 25 KE8G 25 K4WW 25 IT9MUO 25 DK1WI 25 W0TG 24 SM7IUN 24 NA4J 24 N1DC 24 KG9X 24 G3LDI 24 DL4FDM 24 DF7TV 24 WW3S 23 K8JQ 23 | N1ZX | 26 |
| K9OZ 26 K5CM 26 K4HQK 26 K2QB 26 K1EBY 26 K1DJ 26 G4DRS 26 CT1DRB 26 V31MA 25 UW7LL 25 SM2CEW 25 KE8G 25 K4WW 25 IT9MUO 25 HB9ARF 25 DK1WI 25 W0TG 24 SM7IUN 24 NA4J 24 N1DC 24 KG9X 24 G3LDI 24 DL4FDM 24 DF7TV 24 WW3S 23 K8JQ 23 K8JQ 23 | KU7Y | 26 |
| K5CM 26 K4HQK 26 K2QB 26 K1EBY 26 K1DJ 26 G4DRS 26 CT1DRB 26 V31MA 25 UW7LL 25 SM2CEW 25 LA8OM 25 KE8G 25 K4WW 25 IT9MUO 25 HB9ARF 25 DK1WI 25 W0TG 24 SM7IUN 24 NA4J 24 N1DC 24 KG9X 24 G3LDI 24 DL4FDM 24 DF7TV 24 WW3S 23 K8JQ 23 | K9WX | 26 |
| K4HQK 26 K2QB 26 K1EBY 26 K1DJ 26 G4DRS 26 CT1DRB 26 V31MA 25 UW7LL 25 SM2CEW 25 LA8OM 25 KE8G 25 K4WW 25 IT9MUO 25 DK1WI 25 W0TG 24 SM7IUN 24 NA4J 24 N1DC 24 KG9X 24 G3LDI 24 DL4FDM 24 DF7TV 24 WW3S 23 KE4S 23 K8JQ 23 | K9OZ | 26 |
| K2QB 26 K1EBY 26 K1DJ 26 G4DRS 26 CT1DRB 26 V31MA 25 UW7LL 25 SM2CEW 25 LA8OM 25 KE8G 25 K4WW 25 DK1WI 25 DK1WI 25 WOTG 24 SM7IUN 24 NA4J 24 N1DC 24 KG9X 24 G3LDI 24 DL4FDM 24 DF7TV 24 WW3S 23 KE4S 23 K8JQ 23 | K5CM | 26 |
| K1EBY 26 K1DJ 26 G4DRS 26 CT1DRB 26 V31MA 25 UW7LL 25 SM2CEW 25 LA8OM 25 KE8G 25 K4WW 25 IT9MUO 25 DK1WI 25 WOTG 24 SM7IUN 24 PY4XX 24 N1DC 24 KG9X 24 G3LDI 24 DL4FDM 24 DF7TV 24 WW3S 23 KE4S 23 K8JQ 23 | K4HQK | 26 |
| K1DJ 26 G4DRS 26 CT1DRB 26 V31MA 25 UW7LL 25 SM2CEW 25 LA8OM 25 KE8G 25 K4WW 25 IT9MUO 25 HB9ARF 25 DK1WI 25 W0TG 24 SM7IUN 24 PY4XX 24 N1DC 24 KG9X 24 G3LDI 24 DL4FDM 24 DF7TV 24 WW3S 23 KE4S 23 K8JQ 23 | K2QB | 26 |
| G4DRS 26 CT1DRB 26 V31MA 25 UW7LL 25 SM2CEW 25 LA8OM 25 KE8G 25 K4WW 25 IT9MUO 25 DK1WI 25 W0TG 24 SM7IUN 24 N4J 24 N1DC 24 KG9X 24 G3LDI 24 DL4FDM 24 DF7TV 24 WW3S 23 KE4S 23 K8JQ 23 | K1EBY | 26 |
| CT1DRB 26 V31MA 25 UW7LL 25 SM2CEW 25 LA8OM 25 KE8G 25 K4WW 25 IT9MUO 25 HB9ARF 25 DK1WI 25 W0TG 24 SM7IUN 24 PY4XX 24 N1DC 24 KG9X 24 G3LDI 24 DL4FDM 24 DF7TV 24 WW3S 23 KE4S 23 K8JQ 23 | K1DJ | 26 |
| V31MA 25 UW7LL 25 SM2CEW 25 LA8OM 25 KE8G 25 K4WW 25 IT9MUO 25 DK1WI 25 DK1WI 25 W0TG 24 SM7IUN 24 N4J 24 N1DC 24 KG9X 24 G3LDI 24 DL4FDM 24 DF7TV 24 WW3S 23 KE4S 23 K8JQ 23 | G4DRS | 26 |
| UW7LL 25 SM2CEW 25 LA8OM 25 KE8G 25 K4WW 25 IT9MUO 25 HB9ARF 25 DK1WI 25 W0TG 24 SM7IUN 24 PY4XX 24 NA4J 24 N1DC 24 KG9X 24 G3LDI 24 DL4FDM 24 DF7TV 24 WW3S 23 KE4S 23 K8JQ 23 | CT1DRB | 26 |
| SM2CEW 25 LA8OM 25 KE8G 25 K4WW 25 IT9MUO 25 HB9ARF 25 DK1WI 25 W0TG 24 SM7IUN 24 PY4XX 24 NA4J 24 KG9X 24 G3LDI 24 DL4FDM 24 DF7TV 24 WW3S 23 KE4S 23 K8JQ 23 | V31MA | 25 |
| LA8OM 25 KE8G 25 K4WW 25 IT9MUO 25 HB9ARF 25 DK1WI 25 W0TG 24 SM7IUN 24 PY4XX 24 NA4J 24 KG9X 24 G3LDI 24 DL4FDM 24 DF7TV 24 WW3S 23 KE4S 23 K8JQ 23 | UW7LL | 25 |
| KE8G 25 K4WW 25 IT9MUO 25 HB9ARF 25 DK1WI 25 W0TG 24 SM7IUN 24 PY4XX 24 NA4J 24 KG9X 24 G3LDI 24 DL4FDM 24 DF7TV 24 WW3S 23 KE4S 23 K8JQ 23 | SM2CEW | 25 |
| K4WW 25 IT9MUO 25 HB9ARF 25 DK1WI 25 W0TG 24 SM7IUN 24 PY4XX 24 NA4J 24 KG9X 24 G3LDI 24 DL4FDM 24 DF7TV 24 WW3S 23 KE4S 23 K8JQ 23 | LA8OM | 25 |
| IT9MUO 25 HB9ARF 25 DK1WI 25 W0TG 24 SM7IUN 24 PY4XX 24 NA4J 24 KG9X 24 G3LDI 24 DL4FDM 24 DF7TV 24 WW3S 23 KE4S 23 K8JQ 23 | KE8G | 25 |
| HB9ARF 25 DK1WI 25 W0TG 24 SM7IUN 24 PY4XX 24 NA4J 24 N1DC 24 KG9X 24 DL4FDM 24 DF7TV 24 WW3S 23 KE4S 23 K8JQ 23 | K4WW | 25 |
| DK1WI 25 W0TG 24 SM7IUN 24 PY4XX 24 NA4J 24 N1DC 24 KG9X 24 G3LDI 24 DL4FDM 24 DF7TV 24 WW3S 23 KE4S 23 K8JQ 23 | IT9MUO | 25 |
| W0TG 24 SM7IUN 24 PY4XX 24 NA4J 24 N1DC 24 KG9X 24 G3LDI 24 DL4FDM 24 DF7TV 24 WW3S 23 KE4S 23 K8JQ 23 | HB9ARF | 25 |
| SM7IUN 24 PY4XX 24 NA4J 24 N1DC 24 KG9X 24 G3LDI 24 DL4FDM 24 DF7TV 24 WW3S 23 KE4S 23 K8JQ 23 | DK1WI | 25 |
| PY4XX 24 NA4J 24 N1DC 24 KG9X 24 G3LDI 24 DL4FDM 24 DF7TV 24 WW3S 23 KE4S 23 K8JQ 23 | W0TG | 24 |
| NA4J 24 N1DC 24 KG9X 24 G3LDI 24 DL4FDM 24 DF7TV 24 WW3S 23 KE4S 23 K8JQ 23 | SM7IUN | 24 |
| N1DC 24 KG9X 24 G3LDI 24 DL4FDM 24 DF7TV 24 WW3S 23 KE4S 23 K8JQ 23 | PY4XX | 24 |
| KG9X 24 G3LDI 24 DL4FDM 24 DF7TV 24 WW3S 23 KE4S 23 K8JQ 23 | NA4J | 24 |
| G3LDI 24 DL4FDM 24 DF7TV 24 WW3S 23 KE4S 23 K8JQ 23 | N1DC | 24 |
| DL4FDM 24 DF7TV 24 WW3S 23 KE4S 23 K8JQ 23 | KG9X | 24 |
| DF7TV 24 WW3S 23 KE4S 23 K8JQ 23 | G3LDI | 24 |
| WW3S 23 KE4S 23 K8JQ 23 | DL4FDM | 24 |
| KE4S 23 K8JQ 23 | DF7TV | 24 |
| K8JQ 23 | WW3S | 23 |
| | KE4S | 23 |
| K4HR 23 | K8JQ | 23 |
| | K4HR | 23 |

(Continued on next page)



KB4DE

| , | • | , , |
|--------|-----|------|
| Call | ACA | СМА |
| G3WZD | 207 | 893 |
| WA5PFJ | 205 | 839 |
| W7GF | 202 | 1209 |
| RT5P | 200 | 464 |
| AA8TA | 196 | 1986 |
| N5XE | 195 | 1635 |
| KB8GAE | 195 | 1407 |
| KE4S | 194 | 2437 |
| W8XC | 193 | 834 |
| W9ILY | 189 | 5049 |
| W6TN | 188 | 1034 |
| EA5IUY | 186 | 734 |
| KE4RG | 184 | 1209 |
| W8DN | 182 | 1495 |
| PA3HEN | 182 | 503 |
| N7SU | 180 | 650 |
| M0NGN | 173 | 370 |
| AB7MP | 172 | 1362 |
| G4NVR | 164 | 1388 |
| SQ9S | 164 | 976 |
| F5IYJ | 162 | 808 |
| NU7Y | 149 | 1621 |
| G4LPP | 142 | 689 |
| K8RJW | 136 | 748 |
| N7RD | 133 | 1478 |
| W2TT | 132 | 574 |
| NG7M | 128 | 3923 |
| SP1D | 124 | 1021 |
| G4HZV | 121 | 1394 |
| MIOWWB | 121 | 630 |
| KJ4M | 117 | 1265 |
| DJ1YFK | 109 | 1996 |
| DL4KG | 99 | 490 |
| WB5BKL | 95 | 1477 |
| VE6JF | 94 | 965 |
| SV2BBK | 93 | 424 |
| M0DHP | 91 | 648 |
| K1IG | 85 | 322 |
| DM6EE | 84 | 855 |
| DF7TV | 79 | 1014 |

| Call | DX |
|--------|----|
| Call | DA |
| F5MNK | 68 |
| W4WF | 67 |
| W3WHK | 67 |
| UW7LL | 67 |
| SQ9S | 67 |
| AC3BU | 67 |
| 9A2AJ | 67 |
| N2WK | 66 |
| EA4OR | 66 |
| VA7ST | 65 |
| V31MA | 65 |
| OK1RP | 65 |
| NA4J | 65 |
| SM5IMO | 64 |
| K9OZ | 64 |
| F5IYJ | 64 |
| K3SEN | 63 |
| K3DMG | 63 |
| G3WZD | 63 |
| DF7TV | 63 |
| CO8NMN | 63 |
| M0DHP | 62 |
| K8JQ | 62 |
| AA8R | 62 |
| ON4VT | 61 |
| K5CM | 61 |
| WN7S | 60 |
| W4PM | 60 |
| DM6EE | 60 |
| DL4FDM | 60 |
| W4NBS | 59 |
| NR3Z | 59 |
| KO8SCA | 59 |
| G4ILW | 59 |
| PY4XX | 58 |
| PA7RA | 58 |
| NN4K | 58 |
| K4QS | 57 |
| W6KY | 56 |
| VE3TM | 56 |

| 0 " | |
|--------|-----|
| Call | WAS |
| K6RB | 49 |
| K6KM | 49 |
| K6DGW | 49 |
| K5ZD | 49 |
| K5QR | 49 |
| K4TZ | 49 |
| K4HR | 49 |
| K4EES | 49 |
| K4AFE | 49 |
| K3PP | 49 |
| K3MD | 49 |
| K2TW | 49 |
| K1VUT | 49 |
| K1SM | 49 |
| K0TC | 49 |
| EA4OR | 49 |
| Al60 | 49 |
| AF4T | 49 |
| AC6ZM | 49 |
| AC3BU | 49 |
| 9A1AA | 49 |
| WM6Y | 48 |
| W8OV | 48 |
| W6LAX | 48 |
| W2VM | 48 |
| W0TG | 48 |
| UR5MM | 48 |
| N5XE | 48 |
| N4FP | 48 |
| KT4XN | 48 |
| KR3E | 48 |
| KO8SCA | 48 |
| KE6K | 48 |
| KB8GAE | 48 |
| KA9BHD | 48 |
| K4QS | 48 |
| K4HQK | 48 |
| K3DMG | 48 |
| IT9VDQ | 48 |
| IT9MUO | 48 |

| Call | WAE |
|--------|-----|
| K1EBY | 34 |
| IK0NOJ | 34 |
| DL4FDM | 34 |
| W4WF | 33 |
| W4PM | 33 |
| W2NRA | 33 |
| VE3TM | 33 |
| PY4XX | 33 |
| N6WM | 33 |
| KG9X | 33 |
| KC7V | 33 |
| K4WW | 33 |
| NR3Z | 32 |
| NJ3K | 32 |
| N2WK | 32 |
| N2RC | 32 |
| KY7M | 32 |
| KJ9C | 32 |
| KE8G | 32 |
| KE4S | 32 |
| K5QR | 32 |
| K4GM | 32 |
| I5IYJ | 32 |
| F5MNK | 32 |
| DK3WW | 32 |
| CO8NMN | 32 |
| W3WHK | 31 |
| VK7CW | 31 |
| V31MA | 31 |
| OK1RP | 31 |
| N1ZX | 31 |
| KO8SCA | 31 |
| K5AX | 31 |
| F5SGI | 31 |
| DL8PG | 31 |
| DL1NKB | 31 |
| DF4ZL | 31 |
| AA5JF | 31 |
| WS1L | 30 |
| WA9LEY | 30 |

| Call | WAZ |
|--------|-----|
| G4NVR | 23 |
| G4HZV | 23 |
| EA4OR | 23 |
| AC3BU | 23 |
| AA5JF | 23 |
| W7GF | 22 |
| W2NRA | 22 |
| SQ9S | 22 |
| N2WK | 22 |
| LB6GG | 22 |
| KO8SCA | 22 |
| K6KM | 22 |
| K5QR | 22 |
| DL4KG | 22 |
| AF4T | 22 |
| AA8R | 22 |
| WN7S | 21 |
| W4PM | 21 |
| W4NBS | 21 |
| VE3TM | 21 |
| VA7ST | 21 |
| SP1D | 21 |
| PA7RA | 21 |
| NR3Z | 21 |
| NN4K | 21 |
| M0RYB | 21 |
| K6DGW | 21 |
| K3SEN | 21 |
| K1VUT | 21 |
| G3WZD | 21 |
| DM6EE | 21 |
| DL5DBY | 21 |
| CO8NMN | 21 |
| AC6ZM | 21 |
| W4ER | 20 |
| W3WHK | 20 |
| M0DHP | 20 |
| JF2IWL | 20 |
| F5IYJ | 20 |
| | |

(Continued on next page)

AI60



| Call | ACA | CMA | Call | |
|--------|-----|------|--------|--|
| G4DRS | 78 | 1353 | PF5X | |
| 4X6GP | 75 | 1841 | K6RB | |
| K0MP | 72 | 1781 | K6NR | |
| G4BUE | 70 | 3876 | G3YLA | |
| PG4I | 67 | 849 | W2VM | |
| DL1NKB | 65 | 186 | W0TG | |
| OH2BN | 42 | 1321 | SP1D | |
| SP2R | 42 | 555 | K0TC | |
| G0ELZ | 34 | 229 | AA5JF | |
| WT8P | 30 | 542 | MONGN | |
| G4ILW | 22 | 815 | K5QR | |
| N1EN | 17 | 2493 | K2TW | |
| WE5P | 15 | 1216 | EA3FZT | |
| VA3DKL | 15 | 16 | DL4KG | |
| AA0O | 7 | 487 | AC6ZM | |
| K4NE | 6 | 90 | W8DN | |
| AJ1DM | 5 | 896 | NJ3K | |
| LB2TB | 4 | 4 | MI0WWB | |
| G0DJA | 2 | 31 | W8XC | |
| W0VX | 0 | 4522 | IK0NOJ | |
| AC4CA | 0 | 4479 | KV8Q | |
| N5PHT | 0 | 4303 | KU7Y | |
| K0VBU | 0 | 4266 | KT4XN | |
| K1DW | 0 | 4250 | K4AFE | |
| N5RR | 0 | 4223 | AF4T | |
| K6RB | 0 | 4032 | W8FN | |
| KJ9C | 0 | 3968 | WW3S | |
| K5AX | 0 | 3634 | SV2BBK | |
| WT2P | 0 | 3586 | WS1L | |
| NA6O | 0 | 3352 | N3FZ | |
| N2RC | 0 | 3271 | KB8GAE | |
| KY7M | 0 | 3252 | G4LPP | |
| K5ZD | 0 | 3210 | W8OV | |
| AE1T | 0 | 3206 | RT5P | |
| N4ZR | 0 | 3122 | PA3HEN | |
| VA7ST | 0 | 3088 | N5XE | |
| WF7T | 0 | 3060 | DK3WW | |
| N7WY | 0 | 3045 | AI60 | |
| F6JOE | 0 | 3002 | W4ER | |
| WA9LEY | 0 | 2990 | PA3BFH | |

| Call | DX |
|--------|----|
| | |
| PF5X | 56 |
| K6RB | 56 |
| K6NR | 56 |
| G3YLA | 56 |
| W2VM | 55 |
| W0TG | 55 |
| SP1D | 55 |
| K0TC | 55 |
| AA5JF | 55 |
| MONGN | 54 |
| K5QR | 54 |
| K2TW | 54 |
| EA3FZT | 54 |
| DL4KG | 54 |
| AC6ZM | 54 |
| W8DN | 53 |
| NJ3K | 53 |
| MI0WWB | 53 |
| W8XC | 52 |
| IK0NOJ | 52 |
| KV8Q | 51 |
| KU7Y | 51 |
| KT4XN | 51 |
| K4AFE | 51 |
| AF4T | 50 |
| W8FN | 49 |
| WW3S | 48 |
| SV2BBK | 48 |
| WS1L | 47 |
| N3FZ | 47 |
| KB8GAE | 47 |
| G4LPP | 47 |
| W8OV | 46 |
| RT5P | 46 |
| PA3HEN | 46 |
| N5XE | 46 |
| DK3WW | 46 |
| AI60 | 46 |
| W4ER | 45 |
| PA3BFH | 45 |

| Call | WAS |
|--------|-----|
| | |
| I2WIJ | 48 |
| EA1WX | 48 |
| DL8PG | 48 |
| AG4EA | 48 |
| AF5J | 48 |
| AF3K | 48 |
| AA5JF | 48 |
| 4X6GP | 48 |
| WW3S | 47 |
| WT8P | 47 |
| WS1L | 47 |
| WE5P | 47 |
| WA2USA | 47 |
| W6TN | 47 |
| W2NO | 47 |
| W1EQ | 47 |
| W1AJT | 47 |
| VE6JF | 47 |
| VE1OP | 47 |
| SM5IMO | 47 |
| PY4XX | 47 |
| ON4CAS | 47 |
| OH2BN | 47 |
| NR3Z | 47 |
| NF8M | 47 |
| LA8OM | 47 |
| KY0Q | 47 |
| KJ4M | 47 |
| KF8O | 47 |
| K2YR | 47 |
| I5IYJ | 47 |
| HB9ARF | 47 |
| DK1WI | 47 |
| CO8NMN | 47 |
| AJ1DM | 47 |
| AA8R | 47 |
| WA5PFJ | 46 |
| W2XYZ | 46 |
| W2CDO | 46 |

| Call | WAE |
|--------|-----|
| W1AJT | 30 |
| NG7M | 30 |
| NA6O | 30 |
| N5PHT | 30 |
| K3SEN | 30 |
| DL5JQ | 30 |
| AC6ZM | 30 |
| WN7S | 29 |
| NA4J | 29 |
| N7RD | 29 |
| K4QS | 29 |
| K2TW | 29 |
| K2QB | 29 |
| G3SZU | 29 |
| G0ELZ | 29 |
| AA8R | 29 |
| WT2P | 28 |
| WF7T | 28 |
| SV9RNG | 28 |
| PA5KT | 28 |
| NN4K | 28 |
| K9WX | 28 |
| K8JQ | 28 |
| K4HR | 28 |
| AF4T | 28 |
| AD1C | 28 |
| WW3S | 27 |
| WE5P | 27 |
| W2VM | 27 |
| VA7ST | 27 |
| SV2BXA | 27 |
| KA1YQC | 27 |
| W8DN | 26 |
| W2CDO | 26 |
| W1EQ | 26 |
| N4FP | 26 |
| K3DMG | 26 |
| GW4MVA | 26 |
| G0MGM | 26 |
| PA0INA | 25 |

| Call | WAZ |
|--------|-----|
| VE3MV | 19 |
| PF5X | 19 |
| NJ3K | 19 |
| N5XE | 19 |
| KV8Q | 19 |
| KB8GAE | 19 |
| K2TW | 19 |
| K0TC | 19 |
| WM6Y | 18 |
| WB5BKL | 18 |
| WA3GM | 18 |
| W8OV | 18 |
| W8FN | 18 |
| ON4VT | 18 |
| NU7Y | 18 |
| KE6K | 18 |
| K4AFE | 18 |
| IK0NOJ | 18 |
| EA3FZT | 18 |
| W8XC | 17 |
| W8DN | 17 |
| W2VM | 17 |
| SV2BBK | 17 |
| SM5IMO | 17 |
| N4FP | 17 |
| MI0WWB | 17 |
| M0NGN | 17 |
| KT4XN | 17 |
| KP4AF | 17 |
| KK0ECT | 17 |
| K0MP | 17 |
| G4ILW | 17 |
| DK3WW | 17 |
| AF3K | 17 |
| WS1L | 16 |
| WA5LXS | 16 |
| WA2USA | 16 |
| W6TN | 16 |
| VE6JF | 16 |
| | |

(Continued on next page)

PA5KT



V31MA

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| Call | ACA | CMA |
|--------|-----|------|
| IK0YVV | 0 | 2958 |
| K5CM | 0 | 2866 |
| EA8OM | 0 | 2758 |
| W8FN | 0 | 2707 |
| N5AW | 0 | 2510 |
| CO8NMN | 0 | 2440 |
| N2WK | 0 | 2339 |
| N6WM | 0 | 2273 |
| K4HR | 0 | 2212 |
| K4HQK | 0 | 2193 |
| W4PM | 0 | 2122 |
| K6DGW | 0 | 2122 |
| AD1C | 0 | 2101 |
| W6KY | 0 | 2088 |
| K4QS | 0 | 2069 |
| K2QB | 0 | 2023 |
| EA1WX | 0 | 1961 |
| IT9MUO | 0 | 1924 |
| K4AFE | 0 | 1909 |
| VK7CW | 0 | 1809 |
| DL8PG | 0 | 1789 |
| K3DMG | 0 | 1773 |
| K3MD | 0 | 1734 |
| KU7Y | 0 | 1674 |
| IT9VDQ | 0 | 1618 |
| KR3E | 0 | 1602 |
| W4ER | 0 | 1582 |
| KO8SCA | 0 | 1556 |
| V31MA | 0 | 1520 |
| I5EFO | 0 | 1447 |
| DL5DBY | 0 | 1417 |
| SM5IMO | 0 | 1382 |
| LA8OM | 0 | 1370 |
| UW7LL | 0 | 1362 |
| N1ZX | 0 | 1348 |
| RM2D | 0 | 1332 |
| WM6Y | 0 | 1308 |
| KK0ECT | 0 | 1275 |
| IN3FHE | 0 | 1253 |
| WA3GM | 0 | 1230 |

| Call | DX |
|--------|----|
| G0MGM | 45 |
| AF3K | 45 |
| SP2R | 44 |
| PA5KT | 44 |
| N4FP | 44 |
| EA5IUY | 44 |
| DD7CW | 44 |
| WA5LXS | 42 |
| W1AJT | 42 |
| KK0ECT | 42 |
| WB5BKL | 41 |
| WA3GM | 41 |
| KB4DE | 41 |
| K6KM | 41 |
| K3MD | 41 |
| DL5JQ | 40 |
| NG1R | 39 |
| KA1YQC | 39 |
| AA8TA | 39 |
| W1EQ | 38 |
| W7GF | 37 |
| K6DGW | 37 |
| W0EJ | 36 |
| KM4FO | 36 |
| WA2USA | 35 |
| W2NO | 35 |
| JF2IWL | 35 |
| F5SGI | 35 |
| DL1NKB | 35 |
| NF8M | 34 |
| AJ1DM | 34 |
| AG4EA | 34 |
| SV9RNG | 33 |
| KP4AF | 33 |
| K4TZ | 33 |
| G0ELZ | 33 |
| WM6Y | 32 |
| W6TN | 32 |
| W2TT | 32 |
| W2CDO | 32 |

| Call | WAS |
|--------|-----|
| UW7LL | 46 |
| SP1D | 46 |
| SM0HEV | 46 |
| RM2D | 46 |
| OZ3SM | 46 |
| N7SU | 46 |
| N4CWZ | 46 |
| N3FZ | 46 |
| N0PP | 46 |
| KC4WQ | 46 |
| K8RJW | 46 |
| K5HEM | 46 |
| K3ZA | 46 |
| JF2IWL | 46 |
| G4HZV | 46 |
| G4DRS | 46 |
| G3LDI | 46 |
| DL5DBY | 46 |
| CT1DRB | 46 |
| AA0O | 46 |
| W0PHX | 45 |
| ON4VT | 45 |
| NG1R | 45 |
| KA1YQC | 45 |
| K5YZW | 45 |
| G4NVR | 45 |
| F5IYJ | 45 |
| DF7TV | 45 |
| AB7RW | 45 |
| 9A2AJ | 45 |
| W3RZ | 44 |
| SM7IUN | 44 |
| SM2CEW | 44 |
| PG4I | 44 |
| PA5KT | 44 |
| N7MU | 44 |
| N4GL | 44 |
| M0RYB | 44 |
| LB6GG | 44 |
| 1 | 1 |

| Call | WAE |
|--------|-----|
| | |
| K6NR | 25 |
| W8FN | 24 |
| N1RM | 24 |
| K6RB | 24 |
| AF3K | 24 |
| N3FZ | 23 |
| KV8Q | 23 |
| KT5V | 23 |
| KT4XN | 23 |
| KB4DE | 23 |
| K9OZ | 23 |
| K5CM | 23 |
| K0TC | 23 |
| EA1DP | 23 |
| W4NBS | 22 |
| W0TG | 22 |
| NG1R | 22 |
| N5XE | 22 |
| DL8BH | 22 |
| W8XC | 21 |
| KB8GAE | 21 |
| JF2IWL | 21 |
| GD4EIP | 21 |
| F5PBL | 21 |
| AG4EA | 21 |
| WA2USA | 20 |
| W8OV | 20 |
| K4AFE | 20 |
| W2XYZ | 19 |
| K9CPO | 19 |
| K2YR | 19 |
| WB5BKL | 18 |
| WA5PFJ | 18 |
| WA3GM | 18 |
| W6KY | 18 |
| W2NO | 18 |
| VE10P | 18 |
| NF8M | 18 |
| G4RCG | 18 |
| AJ1DM | 18 |

| Call | WAZ |
|--------|-----|
| NF8M | 16 |
| N3FZ | 16 |
| KM4FO | 16 |
| KB4DE | 16 |
| K5YZW | 16 |
| W1AJT | 15 |
| NG1R | 15 |
| KJ4M | 15 |
| KE4RG | 15 |
| KC8J | 15 |
| KA1YQC | 15 |
| K9CPO | 15 |
| G4LPP | 15 |
| AJ1DM | 15 |
| AG4EA | 15 |
| AF5J | 15 |
| AB7MP | 15 |
| W6LAX | 14 |
| W2XYZ | 14 |
| W2TT | 14 |
| W2NO | 14 |
| W1EQ | 14 |
| RT5P | 14 |
| N7MU | 14 |
| N0PP | 14 |
| KF8O | 14 |
| K5HEM | 14 |
| K4TZ | 14 |
| K4EES | 14 |
| K2YR | 14 |
| G3YLA | 14 |
| EA5IUY | 14 |
| AA8TA | 14 |
| W3RZ | 13 |
| PA3BFH | 13 |
| KH6TU | 13 |
| K8RJW | 13 |
| DD7CW | 13 |
| AB7RW | 13 |
| | |

(Continued on next page)

WT8P



KH6TU

| Call | ACA | CMA |
|--------|-----|------|
| CT1DRB | 0 | 1146 |
| N3FZ | 0 | 1143 |
| ON4CAS | 0 | 1131 |
| SM2CEW | 0 | 1114 |
| F5MNK | 0 | 1111 |
| UT3UZ | 0 | 1035 |
| AF3K | 0 | 983 |
| W2NO | 0 | 961 |
| SM7IUN | 0 | 918 |
| DK1WI | 0 | 908 |
| K5IX | 0 | 892 |
| G3YLA | 0 | 884 |
| PY4XX | 0 | 861 |
| 9A2AJ | 0 | 841 |
| I5IYJ | 0 | 837 |
| NG1R | 0 | 828 |
| VE10P | 0 | 768 |
| KA9BHD | 0 | 755 |
| W0EJ | 0 | 754 |
| KY0Q | 0 | 752 |
| ON4VT | 0 | 719 |
| PA5KT | 0 | 707 |
| OK1RP | 0 | 701 |
| KC4WQ | 0 | 694 |
| JF2IWL | 0 | 674 |
| DL4FDM | 0 | 646 |
| N5KW | 0 | 639 |
| KH6TU | 0 | 631 |
| N4GL | 0 | 574 |
| N0PP | 0 | 550 |
| N7MU | 0 | 536 |
| PA7RA | 0 | 518 |
| G0MGM | 0 | 495 |
| DK3WW | 0 | 491 |
| N1RM | 0 | 490 |
| W3RZ | 0 | 478 |
| PA3BFH | 0 | 477 |
| DD7CW | 0 | 472 |
| W0PHX | 0 | 426 |
| KD2KW | 0 | 413 |

| Call | DX |
|--------|----|
| VE10P | 32 |
| KF8O | 32 |
| K5YZW | 32 |
| K4EES | 32 |
| G3SZU | 32 |
| DF4ZL | 32 |
| NU7Y | 31 |
| K2YR | 31 |
| SV2BXA | 30 |
| KE4RG | 30 |
| KC8J | 30 |
| K9CPO | 30 |
| W2XYZ | 29 |
| WA5PFJ | 28 |
| W6LAX | 28 |
| N4GL | 28 |
| KE6K | 28 |
| KA9BHD | 28 |
| K8RJW | 28 |
| GW4MVA | 28 |
| EA1DP | 28 |
| AF5J | 28 |
| W3RZ | 27 |
| K0MP | 27 |
| DL8BH | 27 |
| PA0INA | 26 |
| N1RM | 26 |
| N0PP | 26 |
| GD4EIP | 26 |
| F5PBL | 26 |
| K5IX | 24 |
| AB7MP | 24 |
| K5HEM | 23 |
| VE6JF | 22 |
| NF5KF | 22 |
| KJ4M | 22 |
| G4RCG | 22 |
| AA0O | 21 |
| K1IG | 20 |
| KI3F | 18 |

| ΟX | Call | WAS |
|----|--------|-----|
| 32 | KD2KW | 44 |
| 32 | SQ9S | 43 |
| 32 | N5KW | 43 |
| 32 | N1RM | 43 |
| 32 | KI3F | 43 |
| 32 | K9CPO | 43 |
| 31 | DJ1YFK | 43 |
| 31 | WU6P | 42 |
| 30 | W6GMT | 42 |
| 30 | UT3UZ | 42 |
| 30 | N7ID | 42 |
| 30 | K1IG | 42 |
| 29 | IN3FHE | 42 |
| 28 | G3WZD | 42 |
| 28 | W2TT | 41 |
| 28 | G3YLA | 41 |
| 28 | DL4FDM | 41 |
| 28 | PF5X | 40 |
| 28 | NA1VT | 40 |
| 28 | KR4WI | 40 |
| 28 | EA3FZT | 40 |
| 28 | WA5BDU | 39 |
| 27 | DM6EE | 39 |
| 27 | W4MDV | 38 |
| 27 | K1LHO | 38 |
| 26 | WB4OMM | 37 |
| 26 | W9KM | 37 |
| 26 | PA7RA | 37 |
| 26 | NF5KF | 37 |
| 26 | KB8PGW | 37 |
| 24 | IK0NOJ | 37 |
| 24 | EA5IUY | 37 |
| 23 | DL4KG | 37 |
| 22 | DD7CW | 37 |
| 22 | M0DHP | 36 |
| 22 | DK3WW | 36 |
| 22 | OK1RP | 35 |
| 21 | MI0WWB | 35 |
| 20 | GD4EIP | 35 |
| 18 | G0MGM | 35 |

| Call | WAE |
|--------|-----|
| PA0VLD | 17 |
| N4GL | 17 |
| KF8O | 17 |
| K8RJW | 17 |
| W4ER | 16 |
| W2TT | 16 |
| K6KM | 16 |
| K5YZW | 16 |
| WA5LXS | 15 |
| KU7Y | 15 |
| KE4RG | 15 |
| AA8TA | 15 |
| K4TZ | 14 |
| K4EES | 14 |
| K0MP | 14 |
| KM4FO | 13 |
| KC8J | 13 |
| AF5J | 13 |
| WM6Y | 12 |
| W6LAX | 12 |
| KP4AF | 12 |
| KK0ECT | 12 |
| KI3F | 12 |
| K6DGW | 12 |
| AA0O | 12 |
| ON6PJ | 11 |
| KJ4M | 11 |
| KA9BHD | 11 |
| K5HEM | 11 |
| K3ZA | 11 |
| K1IG | 11 |
| G0DJA | 11 |
| W6TN | 10 |
| W3RZ | 10 |
| W0EJ | 10 |
| NF5KF | 10 |
| NA1VT | 10 |
| N5KW | 10 |
| VE6JF | 8 |
| SM7CIL | 8 |

| Call | WAZ |
|--------|-----|
| WA5PFJ | 12 |
| W2CDO | 12 |
| PA3HEN | 12 |
| KA9BHD | 12 |
| K3ZA | 12 |
| AA0O | 12 |
| W0PHX | 11 |
| SP2R | 11 |
| N4GL | 11 |
| KY0Q | 11 |
| KC4WQ | 11 |
| K1IG | 11 |
| G3SZU | 11 |
| F5SGI | 11 |
| WU6P | 10 |
| SV9RNG | 10 |
| N7SU | 10 |
| KI3F | 10 |
| K1OJ | 10 |
| GD4EIP | 10 |
| G0ELZ | 10 |
| DL8BH | 10 |
| DL5JQ | 10 |
| DL1NKB | 10 |
| W6GMT | 9 |
| SV2BXA | 9 |
| N7ID | 9 |
| N1RM | 9 |
| KG5VK | 9 |
| F5PBL | 9 |
| WX5CW | 8 |
| WB4OMM | 8 |
| W4MDV | 8 |
| NA1VT | 8 |
| KD2KW | 8 |
| G4RCG | 8 |
| EA1DP | 8 |
| SM7CIL | 7 |
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|--------|-----|-----|
| Call | ACA | CMA |
| W6GMT | 0 | 391 |
| DL5JQ | 0 | 381 |
| IK0NOJ | 0 | 366 |
| N7ID | 0 | 311 |
| KI3F | 0 | 308 |
| NA1VT | 0 | 306 |
| AB7RW | 0 | 302 |
| NF5KF | 0 | 289 |
| KB8PGW | 0 | 284 |
| KR4WI | 0 | 255 |
| WA5BDU | 0 | 243 |
| W9KM | 0 | 236 |
| WU6P | 0 | 234 |
| W4MDV | 0 | 225 |
| SV2BXA | 0 | 211 |
| GD4EIP | 0 | 199 |
| K1LHO | 0 | 192 |
| GW4MVA | 0 | 192 |
| DF4ZL | 0 | 177 |
| WB4OMM | 0 | 169 |
| SV9RNG | 0 | 164 |
| KG5VK | 0 | 163 |
| W8EH | 0 | 149 |
| F5PBL | 0 | 134 |
| G4RCG | 0 | 131 |
| EA1DP | 0 | 131 |
| DL8BH | 0 | 115 |
| KI7RS | 0 | 110 |
| KG5U | 0 | 93 |
| K8MP | 0 | 89 |
| KP4AF | 0 | 88 |
| PA0INA | 0 | 86 |
| AF9W | 0 | 59 |
| WX5CW | 0 | 49 |
| OK4MM | 0 | 40 |
| PA0VLD | 0 | 37 |
| SM7CIL | 0 | 35 |
| KM3A | 0 | 33 |
| K1OJ | 0 | 29 |
| ON6PJ | 0 | 21 |
| DD5KG | 0 | 18 |

| Call | DX |
|--------|----|
| KC4WQ | 18 |
| K3ZA | 18 |
| W0PHX | 17 |
| PA0VLD | 17 |
| N7MU | 16 |
| AB7RW | 16 |
| NA1VT | 14 |
| N5KW | 14 |
| G0DJA | 14 |
| KY0Q | 13 |
| KH6TU | 13 |
| ON6PJ | 12 |
| KD2KW | 12 |
| WT8P | 11 |
| SM7CIL | 11 |
| N7SU | 11 |
| KG5VK | 11 |
| K1OJ | 11 |
| WX5CW | 10 |
| WB4OMM | 10 |
| W6GMT | 10 |
| OK4MM | 10 |
| WU6P | 9 |
| N7ID | 9 |
| N4CWZ | 9 |
| W4MDV | 8 |
| K1LHO | 8 |
| KR4WI | 6 |
| KI7RS | 6 |
| K4NE | 6 |
| KB8PGW | 5 |
| W9KM | 4 |
| LB2TB | 4 |
| DD5KG | 4 |
| WA5BDU | 3 |
| W8EH | 3 |
| KM3A | 2 |
| KG5U | 2 |
| K8MP | 2 |
| AF9W | 2 |

VA3DKL

| Call | WAS |
|--------|-----|
| F5SGI | 35 |
| W8EH | 34 |
| G4LPP | 34 |
| KI7RS | 33 |
| KG5VK | 33 |
| G4ILW | 33 |
| MONGN | 32 |
| SV2BBK | 29 |
| PA3BFH | 29 |
| K8MP | 29 |
| G3SZU | 29 |
| KG5U | 28 |
| K4NE | 28 |
| G4RCG | 28 |
| SP2R | 27 |
| PA3HEN | 27 |
| DL5JQ | 27 |
| SV9RNG | 23 |
| G0ELZ | 23 |
| AF9W | 23 |
| KP4AF | 22 |
| DL1NKB | 21 |
| WX5CW | 20 |
| RT5P | 18 |
| GW4MVA | 18 |
| KM3A | 17 |
| SV2BXA | 13 |
| SM7CIL | 13 |
| OK4MM | 13 |
| F5PBL | 13 |
| EA1DP | 13 |
| DL8BH | 11 |
| DD5KG | 10 |
| G0DJA | 7 |
| DF4ZL | 7 |
| VA3DKL | 5 |
| PA0INA | 3 |
| K10J | 3 |
| PA0VLD | 2 |
| ON6PJ | 2 |
| | |

| Call | WAE |
|--------|-----|
| N0PP | 8 |
| KD2KW | 8 |
| K5IX | 8 |
| AI60 | 8 |
| W7GF | 7 |
| NU7Y | 7 |
| KG5VK | 7 |
| OK4MM | 6 |
| K1LHO | 6 |
| N4CWZ | 5 |
| KE6K | 5 |
| KC4WQ | 5 |
| AB7MP | 5 |
| W6GMT | 4 |
| LB2TB | 4 |
| AB7RW | 4 |
| W0PHX | 3 |
| N7SU | 3 |
| KY0Q | 3 |
| KR4WI | 3 |
| WT8P | 2 |
| N7MU | 2 |
| N7ID | 2 |
| KB8PGW | 2 |
| K4NE | 2 |
| DD5KG | 2 |
| WX5CW | 1 |
| WU6P | 1 |
| WA5BDU | 1 |
| W9KM | 1 |
| W4MDV | 1 |
| KM3A | 1 |
| K10J | 1 |
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| Call | WAZ |
|--------|-----|
| KI7RS | 7 |
| GW4MVA | 7 |
| PA0INA | 6 |
| N4CWZ | 6 |
| KR4WI | 6 |
| K4NE | 6 |
| G0DJA | 6 |
| DF4ZL | 6 |
| WA5BDU | 5 |
| W9KM | 5 |
| PA0VLD | 5 |
| K1LHO | 5 |
| W8EH | 4 |
| ON6PJ | 4 |
| KM3A | 4 |
| LB2TB | 3 |
| KG5U | 3 |
| K8MP | 3 |
| DD5KG | 3 |
| AF9W | 3 |
| VA3DKL | 2 |
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QTX ReportEnjoying the Art of Conversational CW

Bruce Murdock K8UDH

In today's Ham Radio world, we have a many different modes of communication that were unheard of not too long ago. So why is CW our favorite mode? Rob K6RB gives us some insight in his Editorial "Sailing and Morse – Two Peas in a Pod" in the very first issue of Solid Copy February 2010. http://cwops.org/newsletter/2010/02scopy10feb.pdf It's definitely worth taking the time to read.

Because we love CW, we support the work of CW Academy. Every CW Academy Advisor at all levels wants to see their students continue to improve their CW proficiency and get on-the-air, but many are reluctant. It takes coaching and mentoring to show them the way, and that's what many CWops are doing. A calendar full of skeds with former CW students at all levels is a good thing. They're learning how to have conversational CW QSOs and enjoying CW.

CW is great!! If it's CW it's all good.

Comments from QTX Submissions

AB7MP: Most recent QSO lasted 17 minutes with a ham in his third year of CW. We were pretty slow, but he was doing a great job. Could have gone longer but had to call a traffic net...

K6DGW: Somehow, I found more time in Feb for radio than usual. One of the QTX's was almost an hour with an old friend from a gazillion years ago

N6HCN: Added an amp to my station in hopes of making copy easier on the other end. Enjoyed roundtable with Vic WA6MCL & Don W6JL. Great QTX with Brian K0DTJ and Rob N6KIX, whose career(s) would make for a good book.

KCOVKN: Had a couple of wonderful chats with some folks I haven't QSOd in a while!

W1AJT / VE3UTT: Both DX but will increase activity in March.

WA2USA: I had a QSO with a gentleman who will turn 100 years old this year. He's been pounding brass since 1933. How about that!

W9EBE: My longest ragchew this month was with my good friend, Jim/N5NSN with a 57 minute gab fest. We've had some great CW conversations through the years. Thanks, Jim!

KB6NU: I collect QSLs from stations whose call signs spell words. Well, this month, I had ragchews with N1HOG and W1EAT!

AJ1DM: I'm grateful for my many friends, in and out of CWops, who make rag-chewing fun and rewarding. 73



F5IYJ: Some nice openings on 17m which allowed me some good chats with CWops members from the Mid-West and West coast.

KG5IEE: Had a fun ragchew with Don, W8DEA. Turns out he used to live in the small town in TX that I live in and he belonged to the ham club that I am a member of. Many of the members are still active from when Don lived here and were happy to hear about my QSO. Small world

N8AI: I got Del W8KJP to tell me the full story of how he met his wife in Naples, Italy. 48 minutes of great entertainment, including a dressing-down by her Colonel father for failing to salute him on the street.

K8UDH: During February, and continuing on, I'm enjoying ragchew QSOs with quite a few CW students who completed their Advanced CW Class in February. It's very rewarding to help them learn and enjoy conversational CW.

Awards and Medals for 2021

Medals for 2021 are awarded for three different levels in QTX.

Gold - 400 QTX QSOs

Silver Medal – 300 QTX QSOs

Bronze - 200 QTX QSOs

Joe KCOVKN is in the lead with 154 QTX QSOs. John K1ESE is close behind with 146 QSOs.

QTX for February 2021

| Call | QTX |
|--------|-----|
| WS1L | 74 |
| KC0VKN | 69 |
| K1ESE | 67 |
| K9OZ | 62 |
| N8AI | 49 |
| N5IR | 46 |

| Call | QTX |
|--------|-----|
| WA2USA | 30 |
| F5IYJ | 29 |
| KB6NU | 26 |
| W9EBE | 24 |
| K5YQF | 22 |
| N6HCN | 16 |

| Call | QTX |
|--------|-----|
| AJ1DM | 15 |
| K8UDH | 14 |
| K4AHO | 11 |
| KG5IEE | 11 |
| K6DGW | 6 |
| AA5AD | 5 |

| Call | QTX |
|-------|-----|
| N5LB | 4 |
| AC8RG | 4 |
| W3WHK | 3 |
| W3PNM | 2 |
| K1BZ | 1 |
| W1AJT | 1 |

MQTX for February 2021

| Call | MQTX |
|--------|------|
| N8AI | 67 |
| WS1L | 38 |
| K1ESE | 28 |
| SV2BBK | 23 |
| AA5AD | 19 |

| Call | MQTX |
|--------|-----------------------------------|
| K6DGW | 15 |
| W9EBE | 14 |
| K4AHO | 12 |
| KG5IEE | 12 |
| W2USA | 12 |
| | K6DGW W9EBE K4AHO KG5IEE |

| Call | MQTX |
|--------|------|
| AC8RG | 10 |
| MI0WWB | 8 |
| N6HCN | 5 |
| G3WZD | 4 |
| K5YQF | 4 |

| Call | MQTX |
|-------|------|
| K1BZ | 3 |
| W3WHK | 3 |
| AB7MP | 2 |
| K8UDH | 2 |
| W1AJT | 1 |



2021 Totals for QTX

| Call | QTX |
|--------|-----|
| KC0VKN | 154 |
| K1ESE | 146 |
| K9OZ | 124 |
| N8AI | 101 |
| WS1L | 93 |
| N5IR | 83 |
| WA2USA | 65 |
| F5IYJ | 61 |

| Call | QTX |
|--------|-----|
| KB6NU | 58 |
| W9EBE | 52 |
| N6HCN | 34 |
| K4AHO | 33 |
| KG5IEE | 32 |
| K5YQF | 30 |
| AJ1DM | 20 |
| K8UDH | 18 |

| Call | QTX |
|--------|-----|
| AA5AD | 13 |
| EA2AJB | 10 |
| K6DGW | 8 |
| N5LB | 8 |
| W3WHK | 8 |
| KF9VV | 7 |
| AC8RG | 4 |
| N3FZ | 4 |

| Call | QTX |
|--------|-----|
| N5PHT | 4 |
| N0BM | 3 |
| G3WZD | 2 |
| K1BZ | 2 |
| W1AJT | 2 |
| W3PNM | 2 |
| MI0WWB | 1 |
| SV2BBK | 1 |

2021 Totals for MQTX

| Call | MQTX |
|--------|------|
| N8AI | 134 |
| SV2BBK | 54 |
| WS1L | 42 |
| W9EBE | 34 |
| W2USA | 32 |
| AA5AD | 31 |
| K1ESE | 28 |

| Call | MQTX |
|--------|------|
| K6DGW | 27 |
| KG5IEE | 27 |
| K4AHO | 20 |
| MI0WWB | 14 |
| G3WZD | 13 |
| AC8RG | 10 |
| N6HCN | 8 |

| Call | MQTX |
|-------|------|
| W3WHK | 8 |
| KF9VV | 8 |
| K1BZ | 7 |
| K5YQF | 5 |
| W1AJT | 5 |
| N3FZ | 4 |
| K8UDH | 3 |

| Call | MQTX |
|-------|------|
| N0BM | 3 |
| AB7MP | 2 |
| AJ1DM | 2 |
| N5PHT | 2 |
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Thanks for supporting the CWops QTX Program. I hope you thoroughly enjoy CW in whatever ways you like to do it.

73,

Bruce K8UDH, QTX Manager

My Story: New Member Biographies

Glen Johnstone, NK1N

First, I would like to thank the Academy...Wow! That works in this context!

The real thanks go out to my sponsors: Dave K1VUT, Greg WA3GM, Joe KK5NA, Chuck WS1L and Steve WX2S. I am very pleased to be a part of CWops.

I have been continuously licensed since 1974 when I received my Novice callsign, WN8SIV. After three trips to Detroit's FCC Office, I upgraded to Advanced in the summer of 1975 (WB8SIV). Now that I had phone privileges, CW was left in the dust. Time passed as it likes to do. Moving to Con-



necticut in 1986 put me in touch with a couple of real CW operators: WB4FCC and KY1F. They inspired me to break through my 15 WPM wall and earn my Extra. Now being a fan of CW, I wanted a shorter callsign. The FCC acquiesced with NK1N in 1987.

During my 47 years as a ham, I have chased my IT career from the 8th (MI) to the 1st (CT), 5th (TX), 9th (IN, IL), 3rd (PA) and 2nd (NY, NJ) call areas. I have been a Life Member of the ARRL since 1978 and participated in a bit of every-



thing ham radio has to offer. Since moving to NJ, I have focused on new activities. Well, new to me. These include: QRP, Pedestrian Mobile, Satellites, Fox Hunting and QRQ CW.

One Wednesday morning, I was trolling the band wondering about all those spikes that popped up on my panadapter. "What in the world is CQ CWT", I thought. A quick Google search uncovered CWops - along with 10,000 other things. I tried my hand, literally, during a couple of CWTs only to realize my CW skills had waned over the years. CWA was there to fix that problem. CWA not only fixed that problem but introduced me to a group of very interesting people. During the two months of instruction where we practiced head copy and laughed more that I have in years, I learned that CWops is *way* more than a bunch of speedy hams. A few of my CWA classmates and I continue to meet weekly to laugh and practice. Yes, in that order.

This, of course, is all made possible by my loving and supporting XYL, Andrea.

I look forward to chatting on the air.

David Edmonds, K4DME

Many thanks to Joe KK5NA for being our CWA adviser and for nominating me. The advanced level class was fun and interesting with great classmates. What a fine service CWops provides to the world of CW.

I was first licensed in 1968. It has been an interesting hobby over the years. In addition to my K3s I have a few vintage and QRP radios which are all fun to operate. Other interests include flying classic airplanes, working on old cars, and tinkering in my garage.



I have been retired from the electrical construction industry now for 21 years. My wife and I enjoy camping and hiking in the mountains and we travel as much as possible.



I have 3 children, none of whom are interested in Ham Radio, but they have given me 8 grand-kids and so far 2 great grandkids.

Thanks to all for helping me get here and I'm looking forward to meeting you on the bands.

Charles Estabrooks, K1ECU

Originally licensed in 2015, Charles Estabrooks is a graduate of the RPI School of Architecture in Troy, NY.

Upon graduation, he teamed up with three other RPI alumni to launch Image Systems Technology, a startup venture developing software for the architecture and engineering market. This proved to be nearly as much fun as college and much more lucrative. Some small remnant of his code may still be embedded in the depths of Auto-CAD Raster Design (Formerly CAD Overlay).



His childhood passion for black and white photography gradually "developed" into a rewarding career as Estabrooks began shooting for fellow alumni who had gone on to become architects. In 1994, Estabrooks left Image Systems to pursue photography full-time. This proved to be even more fun than the software business. Always interested in expanding his skills, Estabrooks spent two years as Staff Photographer at Blass Communications in Old Chatham, NY where he studied under renowned industrial photographer Tracy Woodworth.

In 1996, Estabrooks relocated his family to the beautiful Ocean State of Rhode Island in order to avoid the harsh Upstate New York winters and take advantage of more favorable sailing conditions. Providing commercial photography and digital imaging services kept Estabrooks on a reasonably straight and narrow path for the next dozen years. In 2001, Estabrooks and his family moved a stone's throw across the river to Pawcatuck, CT.

In 2008, Estabrooks was appointed as Stonington Deputy Harbormaster by Governor Rell which provided another excuse for spending time out on the water. Eventually, Estabrooks decided to join the family business and obtained his Connecticut teaching certification. Since 2011, Estabrooks has been teaching computer science, electronics, and engineering at Ledyard High School where he also serves as the faculty advisor for the school's FIRST Robotics team. On windy days between May and October, he can usually be found somewhere out on Fisher's Island Sound attempting to avoid the rocks.



Doug White, W4LJ

It is an honor for me to be a member of CWops. It is also humbling for me to be in the same group with such great CW operators.

Thank you to JJ, WA3NZR for nominating me and to Bud, AA3B; John, K4BAI and Scott, K0MD for sponsoring me!

I was born and raised in the little town of Marion, Ohio into a family with two hams. My dad was K8JVG and my grandfather was W8JYO. It was by watching and listening to them that I became interested in amateur radio. I look back on that now and consider myself as very fortunate for the experience. However, it wasn't until 1972, at the age of 16, that I took my Novice test and received my license (WN8NYK). I took the ARRL Handbook to school and read it through when I should've been studying school work (oops!). Oh well, I made it through high school anyway. My grandfather took me to the FCC examination in Cleveland



in 1973 for the General test (13 wpm CW and written exam) and to Columbus for the Advanced exam. I became WB8NYK. My interest in amateur radio enabled me to qualify for Ground Radio training in the Air Force after high school and I learned a lot more.

After my 4 years in the service, I attended The Ohio State University and completed my BSEE. I passed my Extra Class exam in 1985. After college, I worked at Delco Electronics and Honeywell for a number of years and am now retired and living in South Carolina (less cold weather but hotter in summer). I elected to apply for a "4" call and am now W4LJ.

I have always liked CW and have participated in many contests. I typically just search and pounce and then turn in a check log. Still, I have a lot of fun doing it. I wanted to improve my proficiency and fortunately CWops exists and is really helping me achieve my goal.

I am also a member of the SKCC and FISTS.

I have been married to a lovely lady named Sheryl for 40 years. She is also a ham (N4PDM). We have 1 son and 1 grandson who also live in South Carolina.

My station consists of a TS-590SG a 3 element beam at 11 meters and some wire dipoles.

Thank you again for inviting me to join CWops. I really enjoy the CWTs.

Larry Menzel, WOPR

Ahh...the magic of ham radio. I was bit hard and early, but with a twist. The year was 1956, I was 10 years old.



My neighbor across the street was an Army officer stationed at the Presido in San Francisco. He was a ham and had a bunch of military surplus gear in his garage. He invited me to listen and actually let me talk to another station that happened to be in Sioux Ste. Marie, MI. I still remember my first QSO and I was hooked! He offered to help me get my Novice license and we sent away for the stuff from ARRL. Back in the days of snail mail, it took a couple weeks, but by the time the material showed up, he'd been transferred and was GONE! I knew not another ham, so I languished and the fire went out.



Fast forward twenty some years, I

had quit my job as a high school teacher and was making some actual money as a truck driver. CB was huge in the late 70's so I started there. I soon got back interested in amateur radio, picked up a Yaesu FT301D, and installed it in the truck. Pretty soon, thanks to daily W1AW code practice, I was copying CW in my head at 30 wpm and sending with a Bencher strapped to my leg! N0CIB/m was on the air. I finally got licensed in 1980, so I like to say it took me 25 years to learn CW...HI

I got my Extra within the first year or so, and spent the next several years happily running mobile from the 18 wheeler. I quit driving in 1983 and got a job in sales. I began to plan and build my first station from home. I live on a 10 acre hobby farm to this day, and have lots of room for antennas. I put up my first tower, a second (third-fourth) hand Rohn 20 tower and Mosely TA33. My shack was really a shack, a small room I built in the upstairs of an old granary on my little farm. It was cozy but I feared bringing people up the rickety stairs to get there. Needless to say, that was not enough tower. So I soon acquired an 80' Rohn 45 tower, IIX climbable mast and TH7. That was big step up, and eventually upgraded to a TH-11 and a HyGain Explorer 7-3, three-element Yagi.

I went through many radios and amplifiers over the years, and I upgraded that dusty old shack for a 12x12 heated and air conditioned room, purpose-built for ham radio in a 30x60 pole building (two car garage and woodworking shop) with two separate 220 circuits and four 120 lines. Lots of power for amps and rigs. I'm currently running a new Icom IC7610 and an IC7300. Backed them up with an Alpha 91b and ACOM 1000. I'm active chasing DX, contesting and tinkering. CW is, of course, my favorite mode with 310 confirmed on CW. Too bad the propagation is so poor...and DXpeditions are so few.

In the intervening years I worked in various sales jobs and spent the last 25 years in the financial



services industry. First as a life insurance/securities representative, and for the last 15 years of my career as a regional pension plan consultant for several major insurance companies. While on the road I always had a mobile setup running an IC706MkIIG and a HiQ screwdriver antenna and an SGC SG500 solid state amp. I continued my CW mobile experience with hundreds of QSOs, DXCC/m, and county hunting . (I got real popular when I'd get to some rare counties in rural SD or ND from time to time.) Great fun.

My sincere thanks to Hans, K0HB, Scott, K0MD, Bill, W0OR and Fred K4IU for their friendship, support and sponsorship. I will strive to be a worthy ambassador for our favorite mode.

Brian Comer KF6C

Introduced to ham radio by Sid, G2AXI ,at age 15, when he showed me his 2 m rig, an Eddystone 358 and home brew TX. My first 2 m receiver was a concoction of WWII stuff and a broadcast receiver. I progressed though home brew converters, tube and solid state and a BC342N, which I converted to solid state.

Serious bicycle racing for 5 years meant no ham radio. After that I worked at Plessey semiconductors managing test and calibration. From the first communications radio specific integrated circuits of the production line, I built a 2 m SSB transceiver when SSB was new on



KF6C and son Andrew KK6EME. They had ridden their mountain bikes to the top of Cuyamaca Peak 6484ft a climb of 1600ft, for the 10 Ghz and up contest.

the band. A 30 watt, high dynamic range, digital readout transceiver $4 \times 6 \times 10$ inches, when an FT101 or tube transceiver was the norm, a serious advantage for mountain topping. My home brew was tested by Plessey and I was transferred to applications.

Sent to the USA when CB was all the rage. I was working on a transceiver for Hallicrafters but they could not resolve their financial situation. A difficult time for USA ham radio manufacturers, I ended doing too many designs that went nowhere including the Palomar PTR130, and Dymec DR333.



I did communication radio design for 35 years and was a consultant for front end design and antennas for medically implanted devices for 15 years.

My wife and I have 6 children, 2 biological and four adopted. I spent a lot of time with them bicycle racing, two of the girls gaining 3 national and 36 state titles. Two of the boys are licensed; Alan KA6PPC and Andrew KK6EME. Alan wrote radio firmware for our company since 14 years of age and SDR software with no more than a mathematical outline from me in 1993. Andrew has helped with the renovation of many boat anchors, built many Elecraft radios including a K2/100 at age 6 and helped with many 10 GHz HB transverters.

Extremely disappointed in west coast VHF contesting, I did little beyond testing radios for many years. I am competitive but other than 10 GHz found little interest in other contests except for SKCC WES events. I started working them with Andrew, both had great fun.

I struggled with my difficulties in stopping my mind lock onto decoding CW by counting, it has been difficult, and still is at times, to think of a character's sound not its make up. I may have put Andrew off by insisting he learn the code using modern methods. He is bright and the code may have come to him with little effort. His greatest delight a CW QSO in a 10 GHz contest, it was not that slow.

Only in the last few weeks have found three ways of finally breaking my counting habit:

Listing to limited groups of words at above 30 wpm.

Using a Morserino in the echo mode.

Touch typing the received code combined with head copy while looking away from the screen.

My story is all radios, bicycles and family. As the radio part is both work and play, it is quite long.

Greg Rix, WB7GR

First and foremost, thank you to BOTH the CWA advisors and fellow students. Their time and encouragement along with the CWT operators, is the sole reason for my current capabilities. I hope to pay it forward.

I am located in the southeast corner of Wyoming, just east of Cheyenne. The military brought me to WY in 1989 and I retired from the US Air Force in 1992 and decided to stay in Cheyenne, WY.





Then in 2003 I moved to Gering, NE to work in a Motorola service shop. There, I did everything from painting to payroll and still climb towers for myself and friends.

Seven years later I moved back to Wyoming where I bought a small home with enough acreage to grow some antennas. I did a little of this and some of that for a while and then retired from the county public works department in September of 2019.

I was first licensed in 1991 and quickly moved up to extra class. However, I immediately forgot CW when I left the test facility. Almost 30 years later, I found a renewed interest in CW. My current station consists of a Yaesu FTdx-3000 usually connected to a 43 ft Vertical. I also use an OCF dipole for 80M, 3element tribander, and a dipole for 160M. I also have an IC-7300 in my workshop where I seem to spend most of my time.

Thank you for the nomination, sponsorship and opportunity to participate as a member of CWops.

Garmendia Imanol, EA2EFI

A warm greeting to all the members of the community and a special mention to my mentor and supporters (Jose, Raul, Felipe and Stuart).

My operator name is "NOL" and I practice CW around the QRP calling frequencies, with my older and simpler equipment. Think of me as intrepid birdman: <u>Those Magnificent Men in their Flying Machines</u>. My approach to the hobby is shared and collaborative but not competitive, so I am not a contester. On the net you can find additional information about it, my QTH & Shack.

I am very excited about this group and hope to learn from all your experiences and wisdom... tips, tricks, etc. about telegraphy and radio. It is

a distinction and a responsibility for me to wear the club's logo.

I've been practicing CW for years and I have a special preference for manual sending: Vibroplex and semi-automatic machines.

Anyway if you come near my QTH and you have the opportunity... don't forget to knock on the door. It is Already open!



George "Dody" Mainescu N2GM

My journey into ham radio started in the '70s, when I was in elementary school back in my native country of Romania. At that time, there were certain state-organized activities and clubs for young kids, which were called "pioneers clubs," a concept similar to boy and girl scouts in the United States, but with a much wider range of activities that were all oriented towards children.

One day, I opened the door of such a club. It was the "Electronics and Ham Radio" club. I still remember today how



impressed I was hearing from a speaker for the first time that music of dits and dahs. I immediately learned that the operator was in a QSO with somebody abroad, and I became fascinated by

Morse code and by the fact that you were able to communicate with the outside world – something that was not to be taken for granted at that time in Eastern European countries.

Lucky for me, the professor in charge of that club was YO3ND, one of the best-known instructors in the country. He became my first Elmer, and I've maintained a lifelong friendship with him – even now after so many years. Morse classes were every week, and I don't think I ever missed a single one. Slowly but surely, my ears started to differentiate between a "S" and a "H" and between a "H" and a "5" – Hi!

I was driven by my wish to learn the code. As a funny anecdote, I remember carrying an old tape recorder that weighed about 15-20 pounds from my home to the club building – a distance of 4-5 miles – for each of these early Morse classes. I would use the tape recorder to record the class, and then once I was back home, I would practice reception. It makes me smile now thinking about it. Today, with Morse Runner, Rufz, etc., we are spoiled now!

At the club, I also became hooked on contesting. The club was very active in contesting using their special call sign YP3A. I spent endless hours filling out pages and pages of calls and checking for dupes. Some of us may still remember that process...no N1MM at that time, Hi!

At that same club I encountered for the first time the world of electronics. I learned to read the color code on resistors and capacitors, to solder, to work with transistors and to build radio receivers. The club offered all kinds of easy kits for kids who were interested, and the instructor was always there to help.



When I turned 18 – the minimum age to be licensed – I registered for the licensing exam and passed. After a while, I got my license in the mail, with the call sign YO3MS.

Opening the door of the Electronics and Ham Radio club that day so many years ago ultimately defined the path of my professional future. I became hooked on electronics, and years later, I became a student at the Polytechnic Institute of Bucharest with a major in Electrical Engineering. In college, I had my second great Elmer. A professor teaching some of the RF courses was a well-known ham, YO3EM, and I became one of his students. During my time in college, under his supervision I built all kinds of ham radio equipment and accessories, all from scratch. In that part of the world, at that time, there were no kits available for purchase on the market. But the silver lining was that I learned how to calculate and build receivers and transmitters, how to use equipment to crosscheck theoretical results with empirical ones, and how to tune and troubleshoot that same equipments when needed. Building my own valve power amplifiers was yet another fun chapter of my time in college. Learning about PA operating classes, biases, filters, and working with high voltages – everything had its own appeal.

And sure enough, with YO3EM's mentorship, I developed my final project for graduating the engineering program, which was a "Solid State Ham Radio Multimode-Multiband Transceiver". It's been in service at the School's club station, YO3KWU for a while. We, too, have enjoyed a lifelong friendship.

This hobby really stuck with me. Even after relocating to the US, I of course had to become "radio-active!"

After arriving in the US, I got involved with the ham radio clubs in my area – Bergen ARA and Fairlawn ARC in New Jersey. At the first opportunity, I went to an exam session, and as I had a ham radio background, it was not much of an issue to pass the licensing levels all the way up to Extra in one session – including the Morse test at 20 wpm (at that time). A few days later I got my first US call sign, AA2WZ. When the vanity call gates opened, I changed the call sign to N2GM, which I continue to hold today.

Within our hobby, my main interests are related to constructions, DXing and HF contesting.

In terms of wishes, I (like many of us) would like to have a larger property to accommodate more and larger antennas, but living in New Jersey, in a suburb of New York City, I know that this will probably always be on my wish list. My contesting performance is thus limited from this point of view, but the most important thing is to have fun and achieve personal satisfaction. From the DXCC point of view, I am on the Honor Roll, still waiting for the last 4 to make it to the top.

I am a member of ARRL, NJDXA, Bergen ARA, Fairlawn ARC, North Jersey Contest Club, YO and Friends RC and Columbia University ARC, where I am trying to help welcome newcomers into our hobby. In fact, lately there has been quite a bit of interest among the undergraduate students, which is very encouraging.

Professionally, I am an Electrical Engineer working for a company that manufactures electronic test equipment for the utilities industry.



I've been married for 30+ years to my lovely wife, Diana, who, happily, has an understanding and acceptance for my hobby, as well as for those contest weekends and DX nights! I also have a grown daughter, who at one point showed some interest in learning Morse code...though it did not last long, ha ha. C'est la vie!

Apart from ham radio, my other interests include skiing, playing tennis, biking, a bit of hiking and a more recently developed interest in sailing.

And last but not least, I would like to thank both Jim (N3JT) for nominating me, and my sponsors. I am proud and honored to be accepted as a club member.

See you in one of the next CWTs!

Walt Joynes, AC8RG

I am excited to be a member of this group and look forward to participating in the activities that are offered. A big Thank You to the folks who nominated me for membership. It is greatly appreciated.

I've been active, on again, off again, since the very early 80's and 99.99% of all of my contacts have been CW. I've actively worked CW over the years from Mississippi and Guam while serving in the US Air Force, and now Ohio. I re-



tired from the Air Force after a 22 year career. I spent 15 years in aircraft electronic and avionic maintenance. My last seven years I served as a First Sergeant in two large Fighter Squadrons, a Communications Squadron and a Mobile Ground Radar Squadron. It was a great way to serve. I am currently working as a contractor as an electronic technician in a USAF laboratory. I call it my retirement job.

My QTH rig is an Icom IC-7300 and my antenna is an end fed long wire about 25 feet off the ground. My antenna is nothing special but it works well when the RF gods are pleased. My Parks on the Air and back yard rig is a KX3. I made a portable 33 foot vertical antenna with a MFJ-1910 fiberglass mast. It works great on all bands with the excellent tuner built into the KX3.

I am a casual operator who enjoys a good rag chew so I will be submitting MQTX and QTX QSOs. (I just realized ham radio is 2nd only to the military for loving acronyms and abbreviations). If you hear me calling CQ please stop for a chat.

Again, I am excited to be a member of this group and I look forward to chatting with you all.

Have fun.



Otto Arnoscht, N4UZZ

Thank you for helping me become a member of this illustrious organization. I am humbled and inspired. My special thanks go to Serge KK7RR, whose guidance and encouragement have been invaluable. I also want to thank W0PHX, George, my CWA Beginner instructor who gave me a wonderful start with CW Academy.

I was born in 1947 and raised in Vienna, Austria. When I was 14 years old, I decided that I would emigrate to the United States for all the old-fashioned reasons: freedom, opportunity, and admiration for a nation that – for the first time in history – did not vanquish and destroy the enemy after winning a war but rebuilt them to make them business partners. I was truly lucky being born into and growing up in Pax Americana. I came to the US in 1967 on a scholarship and never left.



I studied in Portland, Oregon, and Los Angeles, CA, and came to Auburn University in Alabama for my Ph.D. in clinical psychology, then settling in Montgomery, Alabama. I am a psychologist on the hard science end of the discipline where I have a lot in common with my engineer friends. And fellow hams. I design and supervise behavior management systems for nursing homes that have residents with dementia and behavior problems. I love my work and won't retire until I have to. My wife Tara, a blue-eyed curly-haired Irish girl from Connecticut, and I live in Montgomery with a German Shepherd and a Chihuahua. We have scaled down. We used to have seven big dogs: Shepherds, Great Danes, Irish Wolfhounds. We love dog obedience training. All our dogs had obedience titles. I play tennis and I am an instrument rated private pilot. Life is busy. I visit Vienna every other year to see old friends.

In radio I started as SWL at around age eight, growing up with the Voice of America and the United States Armed Forces Radio and Television Service in Europe (AFRTS). I was licensed in 1976 with 13-wpm code (call was WA6RMX). Then career and family life took over and I was inactive for years and let my license lapse. In the 1980s I was assigned N4UZZ and advanced to Extra class. Despite all efforts I could not get better in CW. By November of 2019 I could not even copy 5 wpm. I started Beginner class in January 2020.

I am net manager for Central Alabama Skywarn. I design, build, and install wire antennas. Now I have a new direction of interest in ham radio: activating POTAs and SOTAs in CW mode.

At home my station is an Icom IC-7610, an Elecraft KPA-500 amplifier, and an endfed wire up 20 feet. That is the best I can do because it must stay hidden from the HOA. I have a Vibroplex keyer and run N1MM. My activity these days is almost exclusively HF CW, mostly on 40 m. I will get on local FM when severe weather threatens. Look for me during CWTs.

Martin Held, AE7EU

I have been learning CW off and on for nearly 10 years, doing all the wrong things. After joining CW Academy classes, it was a long slog for me to unlearn all the bad habits of counting, charts,



etc. I have been very grateful to all the instructors in my various classes who have put up with me and helped me along.

I got into ham radio originally as part of being an electrical engineer nearly my entire life. I have been involved with electronics since I was 6, and have gotten involved in Ham radio to have some additional fun with System /PCB design. After getting my ticket in 2009 I started trying various / homebrew radio designs, and CW has locked in my mind as a simpler way of /doing things for someone who is used to a totally different subset of /electrical engineering.

I enjoy operating portable and getting away from the city noise. For the last 10 years a favorite haunt of mine has been an area I found off the Lake Kalamath border for the TQP. The noise levels there are spectacularly low, and with a simple dipole and 100W I can pretty much work all around the world. More power doesn't hurt though! The area has 100 ft tall ponderosa pines, so hanging a dipole up high is really easy. I have also done a few SOTA activations, and CW makes the range so much more bearable.



I am currently working on various amplifier and SDR based designs, and hope to eventually release some to the world for sale.

Professionally I am an electrical engineer with many years of experience in a variety of areas. I am currently a senior engineer for a teeny tiny company where we make things like ISM-band RF power modules, linear mosfets for MRIs, and other discrete devices as a part of a larger teeny tiny company that makes just about every semiconductor known. Previously I was a self-employed contractor, doing all the above, and before that doing much of the above at a solar start up. My first foray into the industry was with Tektronix doing broadband (DC->40Ghz) ASIC design, as well as some mixed signal/verilog/VHDL stuff.

I also joined with several friends to start a non-profit volunteer organization in my area supporting the forest service in the back country wilderness, where I do campsite restoration, track cleanup, trail education and other things to help protect our local wild areas. Other hobbies include cross country skiing, snowshoeing, hiking, swimming and the occasional video game.

Thank you to all who have put up with my slow(ly) developing CW abilities!

Gosho Vodenicharov, LZ1ZF CWops

I was born in 1955 in Karlovo, Bulgaria. I started to work CW on HF bands in 1969 in the Radio club LZ1KCP in Karlovo.



In 1975 became member of city student radio club LZ1KDP in Sofia and actively participated in many HF contests.

During the period 1983-2001 I've been responsible for training voluntarily more than 250 young



radio amateurs in the Radio club LZ1KVZ of The Technical College "Vladimir Zaimov" in Sopot. Most of them are still active licensed radio amateurs – contesters and CW operators.

I'm also keen on Amateur Radio Direction Finding (Fox Hunting) and have 32 medals in international competitions with highest scores: World vice-champion Category M21 in 1984 (Norway), 3rd in the World Category M40 in1997 (Germany), 3rd in the World Category M50 in 2006 (Bulgaria), Balkan champion Category M50 in 2007 (Macedonia), in 2008 (Serbia), in 2009 (Romania) and second place in 2010 (Moldova), one gold and two silver medals in European Black Sea Cup 2015 in category M60. I'm IARU international class ARDF referee # 79.

Since 1969 I've worked with more than 150 special event callsigns and till now I've written only manually and sent over 1,500,000 paper QSL cards. I prefer to participate in contests in M/S and M/M category – last 20 years from LZ9W, LZ6C and LZ5R.

Attended two IARU-R1 Conferences as a representative of BFRA: 1990 in Torremolinos, Spain and 1993 in De Haan, Belgium. Actively participate in IARU-R1 ARDF working group.

I've been retired in November 2020. Now live in a villa NE from the city of Stara Zagora (QTH locator KN22TL) and try to build good antenna farm.

Equipment: Elecraft K3, FT897D, FT857D, ACOM1000 and ACOM2000A.



Antennas: A small log periodic LS86, GP, Dipoles and beverages.

Photo is made in LZ5R shack in February 2019.

Greg Tomerlin, K4KO

First things first. Thank you Skip Arey, N2EI for nominating me for membership. And thank you Joe AA8TA, Don N4ZZ, Kirk K4RO, Jim AD4EB, Steve WD4CFN, and Tom WA9CW for sponsoring me.

To borrow a page from W0GAS Greg's bio in last month's issue of Solid Copy—Born 1963 Lebanon TN, licensed 2001. BK

When I graduated high school in 1982, I thought I was going to be a cabinetmaker after working evenings and weekends at a local cabinet shop my last two years of school. The summer after graduation I got a second job at night building and painting fiberglass bass boats, so then thought I might make a boat builder. Working two jobs turned out to be 1 ½ too many jobs for someone who



enjoyed fishing and hunting, so I applied for a position with Square D Company in nearby Smyrna, and in June 1983 was hired to build low-voltage switchgear. The job was fun, the pay was good, I had paid vacations and health insurance, and best of all it required only 40 or 50 hours of my time each week. That settled it. I was going to be an electrical switchgear builder. I got married, bought a house, got into beekeeping, and continued to enjoy fishing and hunting.

In August 1987, after spending a week vacationing in central Florida where I discovered the orange groves and commercial beekeeping, I came back to Tennessee dreaming of moving to Florida and becoming a commercial beekeeper. One week later a diving accident put a halt to my future beekeeping career, and I wound up spending the next four months in the spinal cord injury unit at Vanderbilt University Medical Center in Nashville. Suddenly I found myself wanting to be a cabinetmaker or boat builder or switchgear builder again. In fact, I would have settled for pretty much any job that involved working with my hands, but that was not to be. The injury to my spinal cord at the C4 & C5 vertebrae left me paralyzed from the shoulders down. That was 33+ years ago and occasionally I still wake up thinking it was all just a bad dream. If it were a dream, it would certainly be a hellish nightmare, but the truth is I consider myself lucky to have survived



this long post-injury. And even more lucky to have such a wonderful mother who was there for me when I left the hospital and continues to be there for me today. The truth is, I have led a charmed life and I appreciate every minute I get on this earth, or most of them anyway.

In 1989 I enrolled at Middle Tennessee State University, studied accounting and business administration, and graduated with degrees in those fields. My hobbies include chess, gardening, beekeeping, birdwatching, and of course amateur radio. After getting my license in July 2001, amateur radio quickly took over my life. It's all I thought about day and night. When not on the air I was either reading about radio, working on activities for our local ARC, or looking for ways to upgrade my station. Those first couple years were pretty much all phone, but once I caught the contesting bug (thank you Tennessee Contest Group), and a little later the DX bug, I realized CW was where it's at. I also realized my ability to copy at 5 wpm was not going to cut it. Moreover, my inability to send CW with a traditional key posed a problem. In 2003 I discovered computergenerated CW and soon after started using it on VHF and in HF contests. A year later and much to my great fortune, an article by Gary Gordon K6KV appeared in the March 2004 issue of QST featuring plans for a puff-and-sip keying device. My dear friend and Elmer, Sam Shields, WB4CSG

(SK) saw the article, ordered the parts, assembled the device, then surprised me with it just a few days later. It took several minutes, or hours, or maybe days, to get the hang of it, but soon I was sending my call sign and a few short phrases. A couple days later I logged my first "manually" sent CW QSOs in the 2004 Russian DX Contest. My 3830scores.com entry shows I logged 8 QSOs in that contest, but it was a start.

Editor's Note:

Greg has volunteered to write a feature-length article with more details about his puff and sip keyer. Look for it this summer in *Solid Copy*.

Once I got a taste of CW, it quickly became my mode of choice. In time, I got better but I never got good at copying anything other than call signs and short contest exchanges. Then last summer while playing in the IARU contest and struggling to copy many of the exchanges, I decided it was time to improve my skills. That Saturday night I downloaded G4FON Morse Trainer, installed it on my computer, and started listening to 100 common words at 25 wpm. I was embarrassed at how poorly I could copy even the shortest words and immediately thought maybe I wasn't capable of copying any faster or better. After 18 years of use, maybe I was as good as I would ever be.

The very next morning a message appeared in my inbox with the subject <u>How to Improve Your CW</u>. It was from Pete W1RM, who I had worked a week earlier in the 13 Colonies special event. In the email Pete claimed that of the 2000+ stations he worked during the event, I was the absolute worst he had heard, and he recommended I enroll in CW Academy immediately or consider giving up my license. Well, those were not his exact words but I logged on to the CWops website and signed up for the Intermediate class anyway. That was seven months ago, and just this past week I completed the Advanced class.

CW Academy was a wonderful experience for me. In addition to improved CW skills, I met and befriended nine of the funniest and most interesting people in the hobby. My Intermediate advisor Tom Waits, WA9CW and his assistant Steve Ghertner, WD4CFN, were instrumental in my improvement. They are so good at what they do and so dedicated to helping others improve their



CW, that our class met three nights every week, the third night on the air to practice sending and receiving. Moreover, after the 8-week class ended in October we continued meeting online once a week for the next two months, right up until the next session started. In addition to Tom and Steve, my fellow classmates helped improve my CW skills and made the class fun. Thank you Al KE6JAC, Chuck K9PLX, Dick K7ULM, Perry NE5ET, and Tony KB9LLD. Finally, two of my Intermediate classmates and I, along with Otto N4UZZ, were lucky to be placed in Serge Nikiforov KK7RR's Advanced class. Thank you Serge for your dedication to high-speed telegraphy, for getting me to the next level, and for showing me where to find the one after that. And thank you Otto for the inspiration and practice these last eight weeks.

I am thrilled to be a member of CWops. I look forward to improving my scores in the CWTs and to further improvement of my CW skills. And I look forward to giving back to CWops and CW Academy. Thanks again to the CWops organization and to CW Academy.

Mike Hollock, NI4U

Hello! I'm a former process engineer turned Air Force officer who loves tinkering in electronics, learning new things, and spending time outdoors with my wife and dog.

After SDR dongles piqued my interest in 2015, I went from zero amateur radio experience to no -code Extra in 3 months. I probably would have quit ham radio, if not for discovering this CW thing through my mentor and finding CWops. SSB isn't my jam and the fascination with digital modes faded quickly. I graduated the Basic course in 2016, Beginner in 2020, and Intermediate in 2021. Next up, Advanced in April!

I'd describe my station, but I'm constantly churning through radios and antennas trying to discover the right combination for my hamunfriendly QTH. Part of the fun is trying new things! As of this writing, I just sold my IC-7300

and bought a used K3S. I also own a few QRP rigs, including a KX2 and MTR3b. I'd like to transition from POTA hunter to activator soon.

Outside of amateur radio, I enjoy sailing the Chesapeake Bay, hiking the Blue Ridge Mountains, travelling the world, fly fishing in the Shenandoahs, and sipping a nice dram of peaty Islay scotch. I'm also the commander of a local Civil Air Patrol squadron.

For an adult, learning this CW business is downright hard. So I'm ever grateful to the CWops community and its volunteer advisors. You guys and gals turned my frustrations into joy over the past six years. Thanks to Bruce, K8UDH, for teaching me dits and dahs in basic class. Thanks to



John, A1JDM, for kicking me out of your Intermediate class and challenging me to focus on improvement. Thanks to John, N8AA, for helping me learn instant character recognition in our Beginner class. Thanks to Mike, N5KB, for building my contesting skills in the Intermediate class. Thanks to Kurt, AD0WE, for all your Morse Ninja resources that improved every aspect of my CW skills (see page 15 in the February 2020 issue of *Solid Copy*). And finally, thanks to Tom, K4AEN, for being my Elmer throughout this journey.

I look forward to seeing you on the air and becoming a CWOps advisor in the future.

Peter Archibald, W4ZGR

First, let me thank, Hank W6SX, for nominating me. I have worked a lot of the members, in contest etc. Glad to be a member, and when time permits, the Wednesday runs are fun. And some contesting to give out points. Belong to ARRL, AMSAT, Florida Contest Group.

Got my License in 1959. First transmitter was an ARC 5. Made a transmitter with a single tube. Just a dipole in the pine trees.



Had a couple of Heath Kit transmitters and receivers. While in the service I operated from Vietnam, Guam, Philippines, Okinawa, The Island of Shimi Island, off the coast of Alaska. The Hospital Ship USS REPOSE in the South China Sea. And Guantanamo Base, Cuba. And a lot of state side bases. Was in the U.S.M.C. for six years. Used the PRC 25 in Vietnam 65-66 on six meters. Made a straight key. 3rd Battalion, 7th Marines, Lima Company, 1st platoon. Flew the TA-33 jet trainer and F4 Phantom for a couple of years. In civilian life flew, Cessnas, and Piper Arrow, PA28R.

Worked in electronics for E.G.G. Made parts for the star navigation system, for the astronauts. Also did reverse engineering. Worked for Transitron Design and Manufacturing of linear and digital circuits. Worked for a cable company in Battle Creek, Michigan and Scarborough, Maine. Last twenty-five years work for a school department, repairing AV, radios, televisions, alarm systems, phones. CATV.

Returned to my home state of Florida. The family has moved so often, I have to check the newspaper, to see where we are.

We built a house in an HOA community, Palm City. FL. That was twenty years ago. Now going to move to a small ranch in Port Saint Lucie. Has some land, and no HOA or Association. Do not climb any more so plan to put verticals, and a couple of dipoles.



ALL EQUPMENT RUN ON BATTERIES;

- HF Elecraft K3, KAT500 Antenna Tuner, KPA500 amp.
- 40/20 DIPOLE,
- 3EL WIRE 20M BEAM AIMING NORTH.
- ALL ANTENNAS IN ATTIC

Howie Naugle, K1TZQ

Many thanks to Peter (W1UU) for the nomination and to Jim (N3JT), Gert (PA3AAV) and Hank (W6SX) for sponsoring and giving me the opportunity to be included in this great group of operators and outstanding organization.

My dad was my Elmer. He got me started with a cat's whisker crystal set and taught me the basics. In 1959, at age 13, he took me to the Custom House in Boston where I overcame a severe case of nerves and managed to pass the Novice



Class license exam. Some of the highlights of that first year on the air included working EP2BK and 80+ countries on 15 m with a crystal control QRO DX-20, an SX-28 "boat anchor" and a $\frac{1}{4}$ wave dipole at 17 feet: there were sunspots back then.

In addition to ham radio, I played on the high school baseball and football teams and later on the college golf team. I graduated from Merrimack College in 1968 with a BSEE and went on to work for Raytheon Co. for 39 years in engineering and program management before retiring. I have been married for 47 years to my wife Judy, a wonderful, caring and most patient person (lucky for me!). We currently live on the east shore of Aquidneck Island in Portsmouth, RI which has a clear shot to Europe and beyond (nice!).

I did some multi-multi and single op contesting in the 60's, 70's and early 80's. In 1985 we moved, and with the exception of some FD CW operation with the Newport County Radio Club, I was QRT for 35 years. I got back on the air this past summer and operation is almost exclusively CW. I enjoy chasing DX, "toy gun" contesting and rag chewing. The shack includes a Yaesu FTdx101MP, Elecraft KPA1500 and a 5BTV with 60 radials. DXCC is at 314 Mixed/299 CW and 5BDXCC is in the works.

Other than ham radio, my interest in sports continues as a fan and golfer and for the past 13 years I've been an active volunteer and presently serve on the board of a local animal rescue organization.



My dreams are to make the CW Honor Roll, to be on the "other side" of a pileup in some warm exotic place and to have a QTH with an antenna farm the likes of W3LPL. But most of that won't happen, so I'll be very happy and having fun renewing acquaintances from many years ago, meeting new folks, working new countries and being involved in CWops activities and programs.

Shin I. Yamasaki, NE6ET

I would like to thank Rob K6RB, my advisor/ teacher for my class for the past 8 weeks. I was motivated to keep practicing, and I was encouraged by the comments he made on my progress. He is the best CW influencer ever in my short ham radio life.

I have been a ham for over 10 years, but as all of you know, condition has been pretty sad. On top of that, I have been a devoted QRPer, so my on air activity has been low but when the contest is on, I have tried to make contacts. I almost preferred that "599 TU" because it is hard to carry ragchews if you don't copy all the words from other Op... I learned Morse on my own (via on line) and developed a bad habit of writing everything on paper. To break the habit, I tried few things, but I realized that I need to "head copy." So, enrolling in the CW Academy and improving my skill was really a great thing for me. I am still struggling at times but if it is a conventional QSO, I am pretty comfortable up to 25 wpm & I no longer take notes outside of callsign. I couldn't even imagine that 8 weeks ago!



I wish I started ham radio long ago, but I never got licensed while I lived in Japan. Back in 80's SWLing was very popular (So popular that they had a TV commercial!) and I was into it, but I lost interest at some point and moved on to other things. I wish I still had that Yaesu FRG-7, but it became my mom's steamy kitchen radio for MW listening and broke after a decade or so.

After college, I got a job at a trading company and I hoped that they can send me to the USA, but I ended up in Singapore. When I had an order to relocate to Hong Kong, I decided to quit and came here. That was 1995. Then, around 2000, I discovered Google search and was back to SWL. Then I realized that there are very few radio station broadcasting in Japanese program anymore, but I discovered CW and SSB signals. That's how I ended up taking the test and became a licensed amateur. All those are via Internet, so I didn't have a friend or Elmer to show / teach me things in the Ham world.

The academy was my first interactive event as a ham, and it was very enjoyable. At weekly SST or



CWT, I was excited to make contacts with my advisor and class buddies.

I am not retired as of yet, and the business environment has been pretty rough the last few years, so I am not sure if I can ever retire, but I am still not giving up hope! In a perfect world, I will move to somewhere where I can have land to put up a tall tower!

I am happily married with my wife Lisa, who is originally from Kansas City, MO and we are blessed with 2 beautiful girls who are both are in college now. I tried to get them into radio, but it didn't work. At least they still can decode CQ, SOS & my original callsign.

Thanks again for supporting me to become a member, and I am looking forward to having many QSOs with all of you!

José Antonio Cano Cabrera, EA2KV

Greetings from Spain.

This is José EA2KV, born in 1971 at Zaragoza city and currently living at Villamayor de Gállego, small town 5 km away from the city, country-side, where I'm the only ham.

Glad to join the CWops club and thanks to SQ9S for nomination as well as the sponsors.

Started my interest on radio on the late 80s and finally licensed in 1992 when CW learning was still required. I have always been a CW guy but not leaving some SSB, and occasionally digitals. Loving DXing, contesting, building kits and wire antennas.

At present, my station setup is as follow:

- Antennas Hexbeam + EFHW wire for 80 M + V/UHF.
- Transceiver Yaesu FTdx101D
- PA Henry 2K Classic, floor desk (aka washing machine, old piece but never let me down)

Nothing fancy in shack but fun enough.

About keys, I have been running vertical, bugs, iambic but the one I like the most is my Begali Sculpture.

I'm member of URE and just landed to CWops, also member of EMCOM Spain, and member of the Scout group of my town sharing with the kids the radio spirit and being on the air during JO-TA events.

Apart from radio, my interests are mountain biking, mountaineering and socializing.



Ed Ridolfi, K1RID

So excited to be a CWops member and a proud know-code Extra!

My grandfather was a radio/tv repairman from the 1930s until the 1970s. He built me a XTAL set when I was 6. Later on I sat next to him as he built a Tandy Globe Patrol regen receiver with a Weller pistol soldering iron in one hand a cigarette in the other. Later I picked up a Hallicrafters S120. I was all SWL, collecting QSL cards from Radio Tirana, Moscow etc. until I got a CB li-



cense in the late 70s. I'm not sure why my grandfather never got his ham ticket.

In 2014, a former ham buddy's daughter joined a Morse code club at school which led them and me & my 13 year old son to get licensed again. The 4 of us formed the Newburyport Electronics & Radio Society, aka NERDS (licensed as K1YRD). We built Rockmite 40s and played with CW across town at maybe 500mw.

One day I was practicing calling CQ with the Rockmite feeding a quarter wave piece of wire strung around my apartment when KN1O came back to me. I must have asked him to repeat his call 3 times and was sweating bullets trying to copy K N 1 O. The op lived a few streets away and became my 1st QSO and my 1st mentor.

I purchased a NORCAL40 kit and took it everywhere and made my 1st DX contact with DJ6ZM using that rig and a low inverted V wire. Of course he had a beam mounted atop his 3 story building but I have the QSL card!

I really enjoy operating outdoors, next to my firepit, on the beach or activating a SOTA summit. My latest kit was a KX1 which taxed my meager kit building chops. I love that rig. I either use that or my fancy FT818 for summit activations.

For me, CW is the best mode. I love CW operators and appreciate their patience with new ops. There's something about a CW ragchew that is so much fun.

Al, KN1O and a small group of newish CW ops have been maintaining a slow speed, learning sked for about 3 years under the NERDS moniker and we have brought a few former hams back to the hobby and to CW as well as a couple of newbies.



CW Academy has been instrumental in teaching me how to use paddles and to head copy. I feel like there's more progress to make, but I love the confidence it has given me to enjoy ragchews that go beyond sweating out a quick signal report exchange.

Al Houston, N2MA

A recent graduate of CWA, and now a proud member of CWops #2827. My main passion for CW is chasing DX and contesting. After the 13 Colonies event last year I received an email from Pete W1RM suggesting that I might benefit from CWA. I didn't realize how much better I would be after taking a class with KK5NA, or how much more I aim to do. Thank you Pete, Joe, Bruce and my classmates. It has been fun!

N2MA with XYL Jeane (L) and Piero Begali I2RTF (C) at his factory

First licensed in 1963 as WN2LWE then WB2L-WE, the Army gave me an opportunity to op-

erate AB8AAK in Quang Tri Vietnam. Returning I acquired WB6OID. Back in NY I passed my Extra and became N2MA. Jeane & I have traveled quite a bit scuba diving and have spent a fair amount of time in the saddle of a Harley. My career has been in sales & photography having my own custom frame shop for 13 years.

Work brought me to Pittsburgh in 1981 and currently live in Mars PA with my wife Jeane. I am a member of Skyview Radio Society and participate in their multi-multi contests. I am also the Activities Director for the North Hills ARC and participate in their activities. Events such as 13 Colonies and last year the 100th Anniversary of the first commercial radio broadcast from KDKA.

My station consists of Icom IC-7610, IC-7300 and ID-4100. Antennas Butternut HF-9V & HF-2V. & a TA-34XL beam

Craig Szczutkowski, N2DA

It's an honor to be a member of CWops - many thanks to my CWA Intermediate Advisor, John, AJ1DM, and my CWA Advanced Advisor Joe, KK5NA. Thanks to both of them and CWA I have gotten back to really enjoying CW.

I've been a ham since 1970 - WN3OWX, then WA3OWX in PA, before getting my Extra and current callsign while living in Syracuse, NY in 1977. Though I worked a lot of CW in my early days, my time on the air lapsed soon after my college years. I had fun working in military electronics and public safety mobile communications engineering, product development, and later, in marketing and international sales. I kept my license and a station on the air, but was fairly inactive until about 10 years ago.

After some good-natured prodding from my college-era ham buddies to get back on the air, I



joined their sideband sked, and less often, their CW sked. But my CW was rusty and I struggled to keep up at 15 WPM. Luckily, one of them (John, AJ1DM) is a CWops Member and Advisor who, each time a new semester rolled around, invited me to sign up. While I passed on his initial invites, after COVID-19 hit I felt the time was right. I completed his Intermediate class in May



2020, and Joe's (KK5NA) Advanced class this February. Boy, what a difference the two classes have made - I'm back to really enjoying CW and am more proficient than I had ever been in my younger days. I enjoy CW ragchewing, occasional contesting, QRP'ing, and DX'ing. I also enjoy restoring old tube and transistor radios.

Until a few years ago, my main rig was the HW-100 I built while in high school in 1970. I picked up an 'old' Drake TR7 from a ham friend in 2013. Felt like I entered the modern era, with solid state and the 100 Hz digital readout! Been using a Kenwood TS-590SG since 2017. I also have a Ten-Tec PM2B QRP rig which I just put on the air after about 40 years. I still have my novice receiver, a BC348-Q (recently rebuilt the power supply) and recently bought an old Knight T-60, which was my novice transmitter back in 1970. I tend to mainly work 80, 40, and 20 Meters with the TS-590SG, but am looking forward to 15 and 10 opening up again.

My antenna is a 130 ft center fed (ladder line) multiband dipole strung to fit in the attic. With a Dentron Jr tuner, it loads up pretty well on 80 through 10 Meters, and I don't have to worry about windstorms and falling tree branches!

My wonderful wife of 23 years, Laurie, enjoys quilting as much as I enjoy radio. Fortunately, the pandemic has been conducive to both of our hobbies! We love travelling and visiting with friends and family – hope to be able to get back into it soon.

I look forward to meeting more CWops members on the air, as well as encouraging other hams' use of CW.

Mui Tsun, M0MUI

A big thank you to my CW Academy advisor Keith G0HKC for nominating me, and to my sponsors Roger G3LDI, Peter M0RYB, Keith G3SZU and Gert PA3AAV. It's an honour to be part of CWops.

I'm originally from Hong Kong but have lived in the UK since 1985.



I'm relatively new to the world of amateur radio and CW. I had of course heard of Morse code before (who hasn't?) but knew nothing more beyond associating it with sending SOS. It was by chance that I became, as my partner Mark MOUMG puts it, a bit obsessed. (Surely I can't be the only one who takes their Morse keyer to bed?

One day in early 2018, I happened to be walking by when Mark was watching someone sending Morse on YouTube. I thought, "Oh, what's that? What is it saying?" There and then, I was hooked!

Soon after that the whole family, including our then 14-year-old son James MOXUI, joined the local Norfolk ARC and went on to obtain our full licences.



With the help of the on-air CW lessons provided by some of the club members, I have been able to improve my CW steadily since then. I'd like to take this opportunity to thank Jim G3YLA, Roger G3LDI and Malcolm G3PDH for their support and encouragement for my CW in the past 3 years.

I can't really put my finger on why I'm so fascinated by CW. If I have to analyse it, it is its strangely hypnotic and musical quality. Also, copying CW appeals to that part of me that enjoys solving cryptic crosswords. It's hugely satisfying!

My goal now is to develop my skills and become more proficient in conversational CW, to the point where I can chat without having to think too much about it. Just like learning any new language really.

Other things I enjoy include photography, watercolour painting, music (from operas to heavy metal), puzzles/crosswords, world cinema and travelling with my family to remote places.

I look forward to meeting you all on the bands.

Richard Thompson, VE7XT

I would like to thank Gil N2GG for the nomination and Rob K6RB for the tremendous mentorship during our Academy program. Thanks to all my sponsors and the great CW operators from the CWTs.

My interest in radio started at an early age with a transistor radio given to me one Christmas. That radio led to hours of late night listening to broadcast stations from around North America. My father recognized my interest in radio and was always very supportive. The following Christmas I received a Radio Shack DX-160 shortwave receiver. With some wires strung between the trees I became an avid shortwave listener and quickly found the ham bands. Thanks to the Maple Ridge Club and their amateur radio course, I was successful in obtaining my amateur license in 1976. At that time the Canadian license required you to pass a 10 wpm code exam and then



operate for a full year on CW before you could write your Advanced License. I filled several logbooks with CW contacts over that year and had no problem with the 15 wpm requirement that was part of the Advanced license exam. That year of required CW operation was successful in making Morse code a permanent part of my ham radio experience.

I had a great group of high school friends who all got their amateur radio licenses around the same time. We played in contests, did Field Days and experimented with equipment and antennas. We were all lucky to have had a great group of local experienced hams as mentors including Lee VE7CC who introduced us to CW contesting.

In the early 80s I was at the University of BC (UBC) studying Ecology and Fisheries Forestry management. Although university reduced the amount of time available to play on the radio, I was still able to have fun at the UBC club station (VE7UBC). Many of the UBC hams spent their breaks visiting in the shack or in

their breaks visiting in the shack or in front of the Collins S line making contacts. We tried to operate most of the major contests from the club station.

Amateur radio has been a great hobby with new things to try and skills to practice and improve. I still enjoy chasing DX, and have earned DXCC Honor Roll, 5 band DXCC, and DXCC Challenge. The challenge of the chase, especially working that rare DX on CW, is still exciting. Hopefully once COVID has passed, people will get back to DXpeditions and the remaining DXCC entities I need will be activated. I can dream. 3Y, P5 anyone?

I spent most of my working life as an Aquatic Habitat Biologist for the BC Provincial Government. My wife and I both retired in 2019 and plan to spend some of our retirement traveling and camping. My KX3 is always ready to go. Dayton and Friedrichshafen are travel destinations on the list. I hope I get a chance to meet some of the CWops members during our travels.

Like so many things in life, there is always room for improvement. I continue to work on my CW proficiency. More CWTs, contests, and DXing I hope will contribute to improvements in my CW skill.



I am honored to be part of the CWops organization, a group of Amateurs dedicated to CW. Thanks. See you on Wednesday.

Ben Cuperman, W4LRB

I am so happy to be a new CWop. Thank you all. I know there is much for me to learn and am hoping that my membership will help me in my journey and help many others as well. When I was asked to write an intro, I first hesitated as Tim K9WX will confirm. In fact this submission is being made at the last minute. My sincere apologies to the editors.

The first place we look for info on a fellow ham is the QRZ page. Mine, as you can see, includes basic information and background with a few photos. Truth be told, many hams



are private and prefer not to share and I respect that. At the same time, when I took a look at the bios for the new CWops, I was amazed at the details being shared. So I will try to complement my QRZ page as well. English is not my first language (actually my third...) so I hope you take that into account as you read this.

My first dive into HF was in my teens, but not in the terms of a novice getting his first rig and key. Today I am discovering that many hams started as novices. In fact as an immigrant to Canada in the 60s this was foreign to me. I had no clue about ham radio.

As a young child in Israel in the 50s I remember listening to the Wizard of Oz on a big radio. Growing up in Montreal in the 60s I missed my country of birth and somehow stumbled into shortwave radio, specifically the Kol Israel broadcasts on 9 MHz. It was then that a spark occurred and I started reading about ham radio. In fact I put together multiple dipoles, or so I thought, on our roof in Montreal so I can better receive the signal from Israel. Having no Elmers and no YouTube times were different for me then. So you can imagine the contraption that I put together. Dr. Emmett Brown from Back to the Future would be proud. LOL

Moving forward to 1985 I decided to become a ham. By that time I had graduated with a physics degree so I had some technological background which must have prompted me get serious with the hobby and take the classes. One of my CW teachers was Tony VE2KM. I passed the Regular and Advanced code and theory and the rest is history. As VE2LRB I filled my paper logbook with DX and was active with CW but never got to head copy. Tony and I lost touch after I moved to the States in 2001 but we recently met on an SKCC Sked page. At the same time I was in the Advanced CWops class and Tony helped me again to move forward with this hobby. Thank you Tony for the nomination and thanks as well to my sponsors.



As I said, my station details, etc are on QRZ and you can find me often on the SKCC Sked page pursuing Marathons and chasing C, T and S. I am also slowly getting involved with CWT so you might hear me there from time to time. Oh yes, I applied to take the CWops advanced class again as I feel I have more to learn.

I hope you know me better now and please say hello on the air when you hear me.

Chuck Hopper, K9PLX

As a newly minted member of CWops, I'm extremely grateful to Tom WA9CW and Steve WD4CFN for their help in the CWA Intermediate class last fall; they helped me get my speed up to 25 wpm after years of 15 – 20 wpm CWing (is that a word?). I followed that up with an Advanced class with Serge KK7RR. Serge pushed me further than I would have believed possible, to a fairly steady 35 wpm and aspirations to 40. I appreciate everything these fine amateurs have done for me.



I grew up in west central Illinois, about

90 miles north of St Louis. Radio first got my interest when I was at Boy Scout camp and one of the counselors had a shortwave radio that he let us listen to. Not too long after that one of my junior high school teachers, Ed Ahlquist W9FOH (SK) set up a station in a corner of the classroom and I was a goner. Ed had classes after school for anyone who was interested and a few months later Jacksonville had 10 or 12 new teenage hams. I got my Novice ticket in 1959 and my General a year later, but it wasn't until 2002 that I upgraded to Extra. Life kind of got in the way for a while.

I spent 35 years in middle schools in the same school district in west suburban Chicago, first as a teacher and finally as Assistant Principal. I also taught at Concordia University in River Forest for quite a number of years, teaching computer science classes in the evenings and summers. I loved the work but it didn't leave much time for playing radio. Finally in 2002, a year before I retired, I got some new gear, threw up some wire and a 6 meter Yagi, and haven't looked back yet.

Most of my work has been CW, although I also have a fair number of Qs using nearly every digital mode known to man (including Throb – have you ever heard Throb? Beautiful). Since starting in the CWA I have really enjoyed the weekly CWTs and have become almost exclusively a CW operator. I have never enjoyed phone contacts much so there aren't too many of them in my log.

I'm looking forward to working you soon!



Dave Lahn, VA3DKL

First, thank you for accepting me into CWops. It is a great honour. Thanks to Vic VE3YT for nominating me, and for those who sponsored me. I'd also like to thank my CW Academy Intermediate advisor John AJ1DM, and my Advanced advisor, Joe KK5NA, for playing a big part in advancing my CW skills.

I currently work as a Software Developer for a large digital marketing agency, managing the infrastructure of their big data activities.

I had an interest in ham radio for quite some time, but only recently got my license in 2018. I was living abroad in Amsterdam and London for a number of years, and my living situation wasn't conducive to antennas. My wife and I moved back to Canada in 2018, and that was a perfect time to get started.



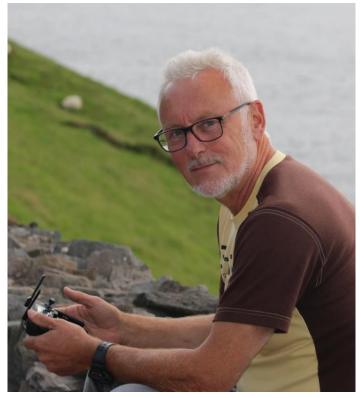
My local club started a CW class (led by Vic VE3YT) in 2019. Unfortunately, I wasn't able to join, as my daughter was born a couple months prior, however, I credit this class in sparking my interest in CW. I started self-studying in March 2020, and I've never looked back.

You will find me in most of the major CW contests, as well as ragchewing. I hope to see you on the air!

Rudi Klos, DK7PE

I want to say thank you to Ken (G4RWD), James (WW3S), Axel (DL6KVA) and Dirk (DJ7UC) who nominated and sponsored my membership to CWops. I'm honored to be a new member of CWops Club and I look forward to many nice CW ragchew QSOs.

Amateur Radio has been my hobby for over 50 years now. I started as a shortwave listener with a used DRAKE 2-B receiver when I was fifteen. Learning Morse code was easy and, at the age of 16, I passed my ham radio examination. From the first day of my license in in 1973 I have been active on CW. Eventually, a Morse key became like a music instrument to me.



(Continued on next page)



Working DX was exciting, but I was eager to see those exotic places and different cultures myself. As a student I could only afford low budget trips. By train, hitchhiking and boat I made it to Egypt back in 1978. I visited VO1LX/SU at the UN-Camp in Ismailia and for a few hours I was allowed to use this famous station. The pile-up was huge!

In 1981 I completed my studies at the University of Applied Sciences in Wiesbaden as an Engineer in Communications. After a job at German Television (SWF and ZDF) and Deutsche Telekom I moved into the Airline Communications field for the remaining 37 years. During my spare time, I traveled the world with my radio and activated many of the DXCC entities I have worked from my home station. My last operation was from Bolivia in March 2020, where I left just before they closed the border... This was DXpedition entity #159. Besides amateur radio, I am interested in astronomy, photography, producing videos, hiking and riding my bicycle together with the family. With all these hobbies and our little grandson, the second one is already on the way, a 24-hour day is not long enough...

We live in a suburb of Mainz (the Gutenberg town) and the QRN noise here is heavy. The high bands are quite ok, but the low bands are a bit difficult sometimes. I retired last year and now would have more time to travel, but I guess it will take a while to activate a new one...

So I wait for my next DX-pedition to come. See you on the bands!

Rowdy Ratts, AJ6AN

Thank you so much to CW Academy and to my instructors, David Roy Godden, KK6M and Buz Tarlow, AC6AC for their mentorship, guidance, and encouragement in learning CW. Unlike my first time around learning code, my instructors made the learning environment fun and entertaining. The CWA curriculum and tools worked wonders on my head-copy and sending abilities, while the regular Zoom meetings kept me engaged and motivated to continue. One of the activities Buz assigned our class was to write a CW themed haiku, to be sent to classmates during a class meeting. I had a ball writing haiku's, this one being my favorite (which I'm probably more proud of than I should be...):

"My message to you My boat is sinking"

Three dits, three dahs, and three dits

I was born and raised in north-east Kansas. My family moved out of state several times, but always ended up back in Kansas. I've lived in Kansas, Arizona, Oregon, Texas and California. I do miss the regular seasons, but living on Mt Laguna, CA at least gives me a decent winter season, not to mention lots of tall pine trees as antenna supports. I run an ICOM IC-7300 to a 10-40m OCF dipole at 40-50'. Soon I plan to add a 2nd wire antenna,





perpendicular to the OCF.

I work as a field technician servicing cash and coin sorting machines in banks, vaults & casinos etc. It's fun playing with loads of money to test machines. At the end of the day, though, it's just paper I can't take home...

I was first licensed in May 1999 (KF6WJB) after passing my Tech+ exam and 5wpm code test. Earlier that year I discovered amateur radio as a suitable emergency communications system for a remote private school north of Los Angeles. That station featured a 2 meter mobile base station with a 15-element beam and did a great job getting a signal out of the valley. About 6 months later I upgraded to General class, passing the 13wpm code test with some difficulty.

Eventually I bought and assembled a 40 meter Ten-Tec QRP CW kit and nervously made a few contacts with a straight key & wire antenna. Unfortunately, I did not know anyone else active in amateur radio and became inactive for quite some time. I did manage to keep my license active though.

CW now comprises about 90% of my amateur radio activity. I hope to work you all in the next CWT.

Scott Teague, K8OIP

I am honored to be joining the ranks of CWops. I never would have made it without my instructors. Some of those who helped along the way were:

- Quinton Gleason, NU7Y who took us level 1 student and taught us to head copy the characters and some of the possibilities for fun things to do with CW.
- Ron Stark KU7Y who got us Intermediate students to send words to each other in a semi-coherent fashion so that we could actually converse and taught us quite a lot from his vast experience
- Buz Tarlow AC6AC



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who got us barely literate folk in Intermediate and advanced up to a more reasonable speed and error rate, and works extremely hard to elevate everyone to their best potential

- Several others who helped with practicing such as Gerbux W6BUX and Joe KH6FHI and others.
- Anyone who has suffered through any of my failed attempts to send (or copy) well or my low signal due to low power and low antenna.

I got into this hobby as sort of a happy accident. I grew up in Central Florida and would sometimes listen to the funny sounds on shortwave and wonder what they were and what was being said. I used to take (far too many) things apart to figure out how they worked. I eventually went into the Marines and did Electro-Optical Ordnance repair in 1st Tank Battalion and loved soldering or playing with oscilloscopes much of the day, and would fiddle with computers in my spare time.

When I got out of the military I did some schooling, met my future XYL, and found myself with the best daughter in the world and her very excellent brother to inspire me to be a better person. I soon got into fiddling with computers for a job, and now I have an excuse to sling some solder again in my spare time. Building QRP kits and a few simple homebrew things is greatly enhanced when I can actually use them to reach out and say hello to folks. I'm still not sure if it is more like magic, or more like a puzzle that can do useful things (or go up in smoke, as sometimes happens).

Either way it's great fun, thanks for helping me along and I hope to see y'all out there on the hands!

Carlos Erwin Wenzel- IK1YRA

First, I want you to know that I feel proud to be part of CWops and to have friends as IN3HFE Helga, I2WIJ Bob, IK7UKF Sal and I8QFK Ben they made it possible. I've always seen CWops membership as a far and hard target to reach...... thing happens that you never expect. Thanks.

I am a ham model 1961, born in Argentina where I grew up. I was a child when I started shortwave listening on my grandma's radio, it was like traveling all over the world while seated at home. So many different languages, music, familiar talks and "strange nois-



es", I didn't know but I discover the Morse code, listening and listening I could learn some letters and words from the local weather station on 500khz with the help of my friend's father



LU4DAV (sk). My CW disease began in that way....

Then my first license when I was 16, to get it required, a 5wpm and technical test and then, LU6EON, a few bands to operate mostly CW, a homemade 6L6 tube TX and the grandma's (practically mine) receiver.

Later, LU1CJY, LU4AE, IK2YRA, N4WEN. My QSOs are CW 99% on all HF bands, I also join some local Telegram and Whatsapp CW groups helping the "new ones" to see the Morse code as song to sing....

Today IK1YRA, not too much room to place antennas, mostly "short wires" and tuners, Elecraft and Yaesu (tubes too) are my radios, Begali ad Kent my keys.

In the meanwhile, I been working in my new host land, Italy as Telecom Dipl. Eng., broadcasting antennas designer, and telecom field engineer in several countries.

I get married twice and we have two "kids" Klaus and Sofia, she gave me Emma, a sweet, smart and tiny girl, my only granddaughter....

My hobbies are sailing, I am a sailing Instructor and racing judge. And mountain tracking (SOTA). But because the inexorable life still running thru, the main hobby remains CW ham on a comfortable and soft chair.

Now I am glad to be "on board" to the CWops club, I am sure it will help me to look forward making Morse code as great as it was in the early days....

Hope to QSO with you all, in the low side of the bands of course! Thanks for the warm welcoming.

