



# Solid Copy

The International CWops Newsletter

March

2017

Issue No. 86

## Paddles for Portables by N7RR



*KT5X activates a SOTA peak with a Pico-Palm and an MTR5; story by N7RR on [Page 7](#) (KT5X photo)*

### CWops "CWT" Every Wednesday

#### Regular Tests: Full Speed

Start times: 13Z, 19Z, 03Z (+1)

1-hour each session

Exchange: name/number (members)  
name/SPC (non-members)

**Avoid DX pileups!**

### 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: Mac McDonald [NN4K](#)

Vice President: Peter Butler [W1UU](#)

Secretary: Jim Talens [N3JT](#)

Treasurer: Craig Thompson [K9CT](#)

Director: Stew Rolfe [GW0ETF](#)

Director: Vidi La Grange [ZS1EL](#)

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

Webmaster: John Miller [K6MM](#)

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

## President's Message

What a great honor for Rob K6RB and CWops! The Dayton Hamvention 2017 Awards Announcement shows the Technical Achievement Award has been won by Rob. There will be an awards dinner where he will receive this award.



The location details will be available soon. On behalf of all the CWops members, Congratulations Rob! The CW Academy is the fruit of your ideas and a great tribute to your craft, skill and management.

Early in February, CWops was busy and active at the Orlando Ham-Cation. The table was manned for two full days and the visitors were non-stop. The CWops Banner was on display and the sounds of CW floated through the air around the exhibit. The table arrangement was similar to other events I

(Continued on page 2)

## Table of Contents

<a href="#">President's Message</a> .....	1
<a href="#">From the Editor</a> .....	3
<a href="#">News &amp; Notes</a> .....	4
<a href="#">Feature Story: Paddles for Portables</a> .....	7
<a href="#">True Story</a> .....	16
<a href="#">My Story: New member bio's</a> .....	17
<a href="#">CW Academy</a> .....	21
<a href="#">How We Were – K1HTV</a> .....	23
<a href="#">CWops Award</a> .....	24
<a href="#">CWops Tests</a> .....	25
<a href="#">CWops Members Awards</a> .....	27
<a href="#">New Members and Nominees</a> .....	30
<a href="#">New members to receive Radiogram</a> .....	31
<a href="#">QTX Report</a> .....	31
<a href="#">Operating Events</a> .....	33

(Continued from previous page)

have attended with the laptop, video monitor and a leader board on an easel. There were 50 plus handouts for CWT and CW Academy on the table and most of them were picked up by the end of the day Saturday. Many people are wanting to learn Morse Code and the word is out about how successful the CW Academy program has become. That's exciting, but when told there is a long backlog ahead of them, you can feel the disappointment. We have to overcome this backlog situation. The only thing that will help shorten the backlog is for more members to volunteer for a few semesters, continuous or intermittent until we can get the Level I down to a shorter enrollment time. If you can help, please go to the CW Academy website and find the place where you can sign up. It will be greatly appreciated by the student prospects.

One of the reasons for setting up the exhibit is to help someone from CWops to talk directly with student prospects about the mission of CW Academy. It's not complicated and the prospective student leaves with information to take the next step by visiting our website and requesting an opportunity to enroll. The other reason for having the exhibit is for some fun. The "Call Sign Copying Competition" stirs those of us who are competitive to make a run through the eight minutes of copying. The results are logged on the board for all to see. This last time we had a maximum speed of 60 wpm posted by NN7CW. But the largest grouping of speeds were in the 30/40 wpm range. It's just for fun and we don't offer any prizes but I have been sending out Certificates of Participation and recognizing the individuals' score/wpm.

### ***President's Message . . .***

"Many people are wanting to learn Morse Code and the word is out about how successful the CW Academy program has become. That's exciting, but when told there is a long backlog ahead of them, you can feel the disappointment."

There were 20 competitors in the CW Call Sign Copying Competition. The visitor log has an additional 19 CWops members signing into the guest log. Thanks for participating in the fun.

There are some unfilled CWops Ambassador positions around the world. I would like to get those positions filled soon. You can see the unfilled slots under the Ambassador tab on the CWops website. If you have an interest in one of the unfilled positions, please let me know by direct email, [vadenmac@aol.com](mailto:vadenmac@aol.com).

The CWT weekly activity continues to have over a hundred members and non-members exchanging call – name – number (s/p/c). We don't let the frustrations of the solar cycle weigh us down and it's fun to have those spirited cw contacts between friends.

73

**Mac**, NN4K, President

# From the [Editor](#)

## First Steps



"If I have seen further, it is by standing on the shoulders of giants" is an old saw commonly attributed to Sir Isaac Newton. It comes to mind as I step into the *Solid Copy* editor's role, succeeding Rick, N6XI.

Rick has an impressive resume, both as a ham and as a citizen of the 21st century. But it is as the editor of *Solid Copy* that he has left his mark on CWops. Beginning with the January 2013 issue and through and including the February 2017 issue (a grand total of 50 issues, if you are counting), he fashioned *Solid Copy* into an important and valuable benefit of CWops membership. He has shared his thoughts and experiences freely with me and his standard of excellence will be the proverbial tough act to follow. So in this, my first column as your new editor, I would be remiss if I did not thank him for his service to the organization. If I succeed it is because, like, Newton, I am standing on the shoulders of a giant. Alt-

hough, in my case, that another old saw may offer better hope for me: Even a blind squirrel finds an acorn now and then.

I should also thank our President, Mac, NN4K, for his confidence in me, allowing me this opportunity within CWops.

Now, I need to get out into the woods and start rootin' around under those oak trees.

Back in January 2013, Rick wrote this in his first column, he reprised it last month, and I want to make it the cornerstone of my work as editor: "We need general interest articles to keep *Solid Copy* as vibrant as it has been in the past. So please tell me what you want to read and submit your own articles for publication (emphasis added). Welcome topics include antennas, shack accessories, expedition stories, even CW-related poetry (!) and fiction. Tell us how you discovered ham radio, CW and your other radio activities. If yours is not a silver quill, feel free to ask for editorial assistance. If your story is good, we can make it read well. *Solid Copy* will be what we, the members, make it. Don't just read, participate!"

"We need general interest articles to keep *Solid Copy* as vibrant as it has been in the past. So please tell me what you want to read and submit your own articles for publication."

CWops is comprised of some of the most accomplished and thoughtful individuals in the amateur radio service. Our organization would benefit greatly from your authorship, and you can also enhance your ham radio resume at the same time. Please, take a few minutes to think of an article you can author, and then sit down and start typing.

One new feature debuting this month: [True Story on page 16](#). Adapted with permission from a reflector discussion, it recounts an experience that Gary, N5PHT, had several years ago. Do you have a ham radio experience that is a little bit hard to believe or just downright funny? Send me an email ([TimK9WX@gmail.com](mailto:TimK9WX@gmail.com)) describing what happened. We all appreciate a good story, especially when it happens to someone else!

73,

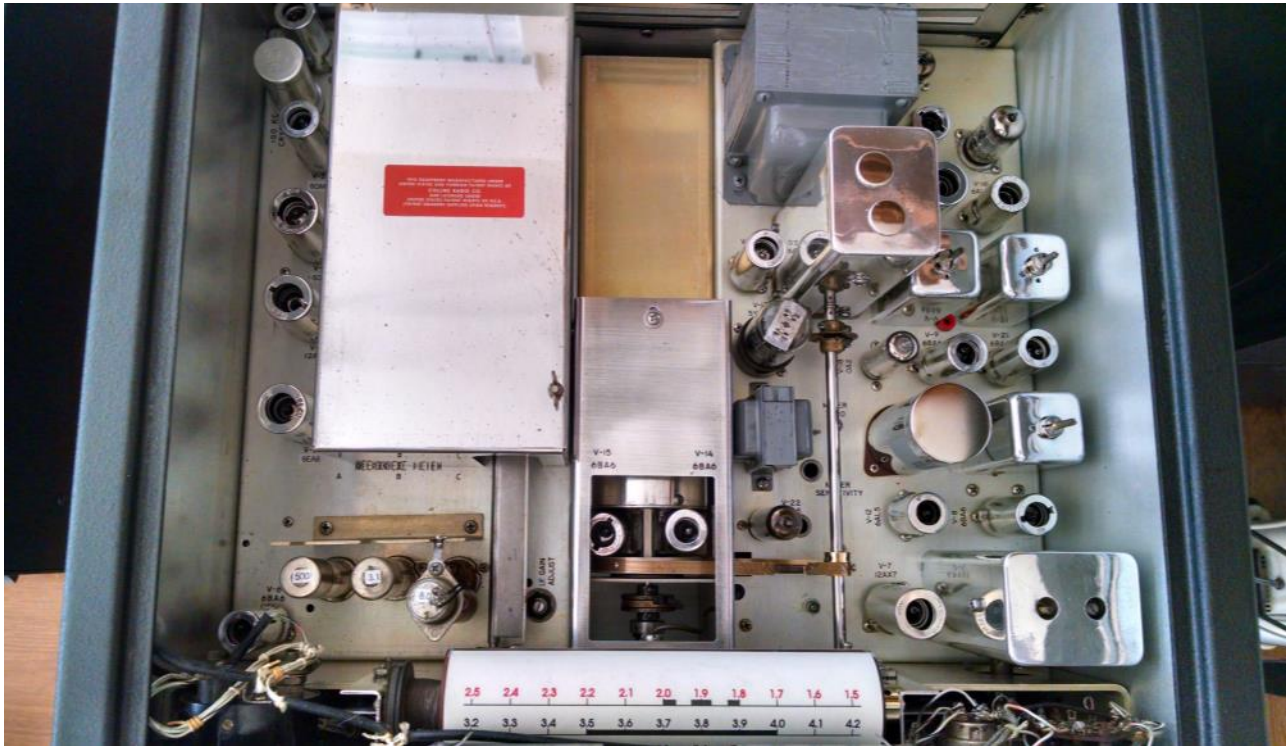
**Tim**, K9WX, Editor



# News & Notes

[Jerry Weisskohl, AC4BT](#)

**Rob, K6RB:** Sitting here on a flight to Detroit by way of Chicago. My 75A-4 receiver came home, finally, after a restoration effort. So, I'm back on CW with the vintage station. It looks great, inside and outside. Had to make some tweaks though probably because of transport.



(Continued on next page)

*(Continued from previous page)*

**Lar, K7SV:** In early January my 160M inverted L came down in a wind storm. I had been reading discussion on the Tower Talk reflector reading a hypothesis that K2AV came up with regarding loss of effectiveness of THHN insulated wire after being in the elements for several years. I decided to replace the inverted L with a Tee using new wire. The L was 70ft vertical and 70ft horizontal feed via a capacitor. The Tee is 70ft vertical (same location as the L was) with a 70 foot top hat and fed via a 2:1 un-un. I've had a Tee up before and replaced it with an L and didn't notice a lot of difference. This time when I replaced the L with a Tee and new wire I'm seeing marked improvement. I'm beginning to think that K2AV's thought about THHN wire losing effectiveness may have some merit. The thought is essentially that after time, moisture getting between the copper and THHN causes the surface of the copper to become resistive at RF. The bottom line is I'm now quite satisfied with the antennas on 160 through 10 meters!

When I first started doing SO2R I experienced fairly bad hash on 20 meters while transmitting on 40. This was fairly removed from the second harmonic from 40. After checking a number of things and discussion with Joe N3HEE I started looking for devices in the house such as wall warts that may have been picking up RF from 40 and re-radiating it. The circuit breaker panel for the house is right next to the operating position in the shack. One by one I secured circuit breakers while checking the intensity of the crud from 40 to 20. Once I had it down to two circuit breakers I unplugged devices one by one on those breakers until the noise decreased or went away. In one bedroom the charger for a cordless vacuum cleaner was a culprit. The other was a motion activated light on the front porch. Before contests I now unplug the charger and turn the porch light off. The crud went from S5-6 to my noise level which is about S2.

**Wayne, N4FP:** Here is a picture of some of the CWops members gathered at the Hamcation booth in Orlando.

Left to right: Jeff, KU8E; Wayne, N4FP; Marty, WB2VYK; Mac, NN4K; John, K4BAI.



A big thanks to Mac, NN4K for arranging and manning the booth. There were many more CWops who checked in during the weekend.

**Ken, KE4RG:** I am one of the newest CWops members. I was honored with membership, I think primarily because of CWT participation. I actually had little interest in ragchewing. And then today I discovered QTX scoring! Coincidentally, today was the last day of my CWA Level 3 class with Jack, NI8N. He did a great job, even made us sweat blood ragchewing! Thanks to him and to Mac, NN4K, and to Mike, WH6YH my Level 1 and Level 2 instructors respectively.

Well, I am happy to report that in the last 2 hours I have completed TWO ragchews of 20+ minutes and will be reporting perhaps even more for February. It is amaz-

*(Continued on next page)*



*(Continued from previous page)*

ing how much a little competition adds to the enjoyment, even when you are at the bottom of the food chain. BTW, I hope to see many CWops members at Ozarkcon in April.

**John, K4HQK:** Here's a photo of me adjusting the height of my new 80-meter dipole. It only took 25 years in this QTH to figure out how to squeeze an 80-meter wire onto our small lot: Configure it in an L-shape and wrap it around the corner of the house.

It's not high (we have short trees) but far more effective than the old longwire—plenty of 80m QSOs during a CWT. DX, too: VP6EU/Pitcairn plus 91 QSOs/54 entities during a five-hour stint in the recent ARRL DX CW contest.

Ready for those low sunspot counts!

**Dan, KB6NU:** On Saturday, January 28, I taught a one-day Tech class at the University of Michigan. I had 40 students and 37 passed the exam! Over the past four or five years, I've been averaging right about 90% for my one-day Tech classes. I'm going to be speaking about teaching one-day Tech classes at Dayton this year, date and time TBD.



In operating news, I've just acquired a Begali Magnetic Pro. It joins the Begali Simplex, Kent TP-2, and other assorted keys on my desk. This is the first magnetic paddle that I've ever owned, and I like it a lot. I do wish I'd ordered the aluminum finger pieces, though. The plastic finger pieces make it feel a little cheap. This is one purchase that I'll be making at Dayton.

**Gary, K7EK:** I moved from Washington to Kentucky last June. I've been in a no antenna apartment and have been doing all of my operating mobile with an Icom IC-706 MK2G and Hustler KW mobile antenna. I've been doing it all from the car, including AF MARS and amateur mobile CW in motion. Where there's a will, there's a way. Yes. MARS saw the err of their ways and has resurrected CW.

I finally closed on a house this month and can now operate from there. I have a very low broadband folded dipole up for now and have plans for one or more towers to hold my 2 element 40m yagi, 13.0-30.0 mhz log periodic, and other antennas. I should be fully operational by early summer. Meanwhile the folded dipole will have to get me through. I hope to start make some CWTs after a long period of absence.

**Bob, K6NV:** With the high winds and heavy snow this winter (Truckee, CA), I lost my 80m dipole and my WARC fan dipole.

I now have a 1/4 wave wire vertical up 70' in a tree with 2 elevated radials for 80m. Still trying to figure out how well it is really doing. If anyone wants to drop me a line after a CWT and let me know how loud (or in the mud) I was that would be great.

73,

**Jerry, AC4BT,** News & Notes

# World-Class Paddles for World-Class Portable Transceivers

[Bruce Prior, N7RR](#)

Morse code is beautiful. It helps to use a beautiful key to make fine-sounding Morse code.

## Elecraft KXPD3 Paddle

The reputation of the famous 15 W Elecraft KX3 transceiver keeps getting better as more improvements appear. The KXBC3 internal NiMH battery charger makes longer-term portable operation cost-effective. Its voice recorder considerably enhances phone contesting and phone SOTA activations. The 2 m module is great for VHF mountain-topping and SOTA operations. The paddle-to-digital feature makes truly-portable RTTY and PSK31 and PSK63 operations a reality with the KX3. The quality of the KX3 is so high that with the optional KXPA100 external 100 W amplifier and its companion KXAT100 tuner, the KX3 becomes a top main-station transceiver with a very small footprint.

When the KX3 was first released, it was accompanied by the optional dual-lever KXPD3 paddle. No single-lever version has been offered by Elecraft. Some KX3 CW operators have been happy with the KXPD3 from the start.

Others have been troubled by some quirks of the KXPD3. Unlike the KXPD1 paddle for the KX1 transceiver, the KXPD3 paddle cannot be angled sideways for optimal left-handed or right-handed paddling. Most operators need to view the KX3 from the left or the right when paddling comfortably with the KXPD3.

The KXPD3 paddle includes a small circuit board which provides an interface with a four-hole female plug which fits a square socket with four male pins in the KX3 front panel.



[Elecraft KX3 with MH3 microphone and KXPD3 paddle](#) (Image © Elecraft)

Some operators have experienced continuity or shorting failures with that system. For paddles shipped before September 2012, an upgrade kit, the KXPD3MDKT, is available from Elecraft at no charge.

The current KXPD3 paddle and the upgrade kit include a choice of three internal springs to produce different levels of paddle return force. Changing the spring requires partial disassembly of the paddle. Two different hexagonal wrenches are needed to adjust the contact spacing. In practice, neither return force nor contact spacing is readily adjustable with the KXPD3. Attempting to do so in the field would be very awkward. For operators who simply adjust a paddle once and forget it, that's no big deal.

I prefer to re-adjust both spacing and return force of paddles depending on my operating situation, making the KXPD3 suboptimal for my use in the field. At home or on a comfortable SOTA summit, I like close spacing and light touch. If I have to operate inside a cramped tent or in challenging weather conditions outdoors, wider contact spacing and firmer return force makes my sending more accurate.

The contacts on the KXPD3 are brass and stainless steel. How well that combination will stand up in a variety of outdoor environments over time is not clear.

*(Continued on next page)*



(Continued from previous page)

## Elecraft KX2 Pocket-Sized Transceiver and KXPD2 Paddle

Elecraft has followed the KX3 with the smaller lightweight KX2 transceiver which covers the entire HF spectrum from 80 m through 10 m with a maximum 10 W output power and with many of the same features of the KX3. Some KX3 features like an optional roofing filter and an optional 2 m / 4 m module and compatibility with the optional PX3 panadapter are not available on the KX2. A companion KXPD2 paddle is compatible both with the KX2 and the KX3.



[Elecraft KX2 Transceiver with MH3 microphone and KXPD2 paddle](#) (Image © Elecraft)

The KXPD2 is extremely low mass and low profile. For winter operations, I prefer to use the KXPD2, since it can be pre-mounted on the KX2 and packed in a padded container without exposing bare fingers to freezing temperatures during field installation. Although the fingerpieces are made of aluminum and can get very cold, they are large enough to manipulate with a gloved hand. Some operators cover the KXPD2 paddles with less conductive material like heat-shrink plastic or tape for cold-weather use. A hexagonal wrench for field-adjustment of contact spacing can be mounted on the paddle, so that contact spacing can be adjusted in the field. The KXPD2 return force is fixed by an internal spring, but I find the default return force satisfactory. Although the KXPD2 costs less than the KXPD3, it is a better product.

## Palm Radio Pico Keyer MK-KX3 Mounting Kit

The Palm Radio Mini Paddle has been available for many years, and some operators swear by it. I am not enthusiastic, because it is difficult to adjust. More recently the smaller companion [Palm Radio Pico Paddle](#) has appeared. I have not had a chance to test it, but the adjustment system appears to be similar to its larger sibling. Now a KX3/KX2 mounting system for the Pico Keyer is available:

This accessory includes an [interface](#) so that the Palm Radio Pico Paddle can plug into the KX3 or KX2 CW Key 2 socket on the front panel. Palm Radio paddles are available directly from [Germany](#) or in the USA from [Morse Express](#). The Pico Paddle costs \$109.95 and the KX3 mounting kit is \$39.95 plus shipping from Morse Express. Others can try out this combination and write their reviews.



[Palm MK-KX3 Pico mounting kit](#) (Image © Palm-Radio)

## Begali Adventure Dual and Adventure Mono Overview

There are two excellent-quality paddles available for the Elecraft KX3, KX2 and other portable transceivers. These are little jewels. Most operators will probably prefer the dual-lever Begali Adventure Dual paddle.<sup>1</sup>

(Continued on next page)



(Continued from previous page)



[Begali Adventure Dual attached to an Elecraft KX3](#) (Begali images © Officina Meccanica Begali)



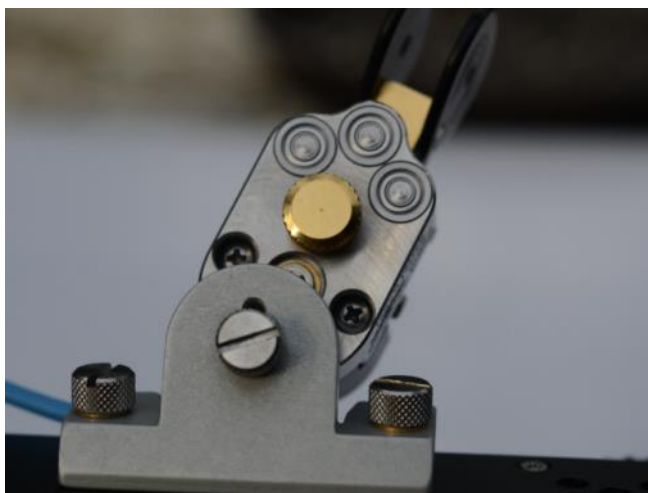
[Adventure Mono with its gold-plated central lever and sidescrews](#)

Begali also sells the single-lever Adventure Mono paddle. Its single lever is controlled by two fingerpieces, so at first glance it looks very much like the dual-lever Adventure Dual.

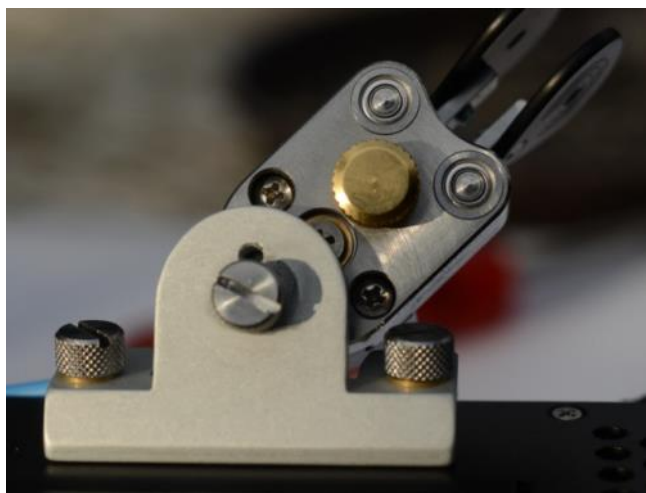
The Adventure Mono is more complex than the Adventure Dual. For example, the Adventure Mono utilizes three race bearings, whereas the Adventure Dual sports just two.

The Adventure Dual mechanism is straightforward. Each lever, connected directly to a separate fingerpiece, holds a gold contact at ground potential, which shorts the left or right dit or dah gold-plated terminals, or both, upon contact.

The Adventure Mono mechanism is a masterpiece. It also has two separate levers with their gold contacts at ground potential which swivel on two separate race bearings. However, the gold-plated single lever upon which both fingerpieces are mounted rotates on a third bearing, pushing against the magnetic return force, first engaging either the left lever or the right lever and then returning to a central neutral position upon release. The left and right contacts are shorted separately, and never simultaneously. Begali recommends occasional lubrication with a mineral gun-oil aerosol. In the case of the Adventure Mono, that may be especially intended for the mechanical interface between central lever and the two side levers. Since all three



Adventure Mono bottom



Adventure Dual bottom

(Continued on next page)

*(Continued from previous page)*

levers are at ground potential, no electrical noise is generated by their interaction.



Note the large finger pieces

The two fingerpieces on both paddles are non-metallic, so they're appropriate for cold-weather operation. In spite of the small size of the whole package, the fingerpieces are large enough to be controlled by a gloved hand.

### **Mounting Brackets and Adventure Magnetic Base**

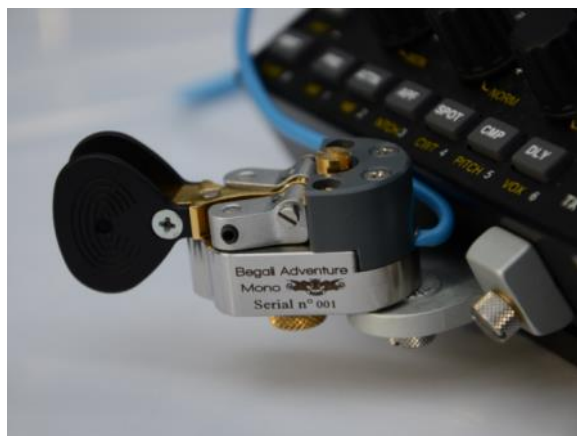
Pietro Begali decided to allow these paddles to be swiveled left or right or straight out.

Each paddle fits on an optional Mounting Bracket for the Elecraft KX3 or KX2, the Elecraft KX1 and the Yaesu FT-817 or FT-817ND transceivers. The KX1 and the FT-817 are no longer in production, but they are readily available on the used-equipment market.

I have tested the brackets for the KX3/KX2 and KX1 only. See below for a method of mounting them on an Elecraft K1 as well.

Besides the obvious differences between the Elecraft KXPD3/KXPD2 paddles and the Begali Adventure Dual/Adventure Mono, the mounting systems are also very different. The KXPD3 and KXPD2 mount flat against the KX3 and KX2 front panels, so the paddle is level when the KX3 or KX2 is level, and therefore the KXPD3 or KXPD2 paddle tilts downward when the rear of the KX3 or KX2 is tilted in its normal position upward, just barely above a flat operating surface. It's difficult to find a flat operating surface outdoors, except for picnic tables. The Begali KX3/KX2 Mounting Bracket tilts the paddles upward, so they are approximately level when the rear of the KX3 or KX2 is tilted upward, but they are positioned markedly upward when the KX3 or KX2 is level. The extra clearance of the Begali paddles partially solves the problem of using a KX3 or KX2 on irregular-ground.<sup>3</sup>

Since the KX2 became available, I've been leaving my KX3 at home and taking the KX2 to SOTA summits. Sometimes on a SOTA summit I prefer to operate with the KX2 not tilted at all, and positioned approximately at the same level as my sitting position on a rolled-up camping mattress. In that situation, the raised Begali paddles are more accessible to my paddling arm which is hanging almost straight down from my shoulder.



The KX3/KX2 mounting bracket is tilted upward

Pietro Begali decided early in his development process to allow these paddles to be swiveled left or right or straight out. He solved the thorny problem of potential slippage of the paddles around a single mounting screw by cutting radial slots on the paddle bottoms and on the mounting brackets, allowing the paddle to be locked into its selected lateral angle.

It's important to be aware of those radial slots when fastening a Begali paddle to its mount. Make sure that it is seated properly in the slots before applying strong tightening force.

That lateral swivel capability makes it much easier to view the KX3 or KX2 display in difficult lighting situations. To save current drain, I always turn off the KX3 or KX2 backlight when it's not connected to commercial power. The default initial KX3 or KX2 Menu item is BKLIGHT, so it's very easy to turn the backlight off quickly.

*(Continued on next page)*

(Continued from previous page)

## Adventure Magnetic Base

These paddles are such high-quality products that they deserve to be used not just in portable situations, but also in home stations



Adventure Magnetic base with four magnets and black basket

In addition to mounting brackets for specific portable transceivers, Begali sells an Adventure Magnetic Base which is compatible with each paddle. This base is an important part of the Adventure Dual/Adventure Mono story. I was amazed to discover that these paddles, in spite of their very small size, are such high-quality products that they deserve to be used not just in portable situations, but also in home stations. Just like with the mounting brackets for specific transceivers, these Begali paddles may be mounted on the Begali Adventure Magnetic Base oriented left or middle or right.

The Adventure Magnetic Base is equipped with four strong magnets on the bottom near the four rounded corners. A surrounding rubber

gasket subtly protects the operating surface and the Adventure Magnetic Base itself from scratching even when those magnets make it stick. That's another example of creative design by Pietro Begali.

## Magnetic Mounting

The Adventure Magnetic Base is heavier than each of the paddles, but it is still small and fairly light-weight. (See the details below.) In order to keep the paddles in place during operation, the default design of the Adventure Magnetic Base is that it should be mounted on a surface to which its four strong magnets will adhere. They do their job. The Adventure Magnetic Base magnets stick very well. The common metals to which magnets adhere are iron, nickel and cobalt. Ordinary steel works fine, but not stainless steel. Few of us operate on metal desks, however, so we need to accommodate this situation. In a local hardware store I found 9 cm by 9 cm 1-millimeter galvanized steel electrical-box covers with rounded corners for \$1.62 each including tax. Rather than doing anything permanent, I glued those steel covers with removable rubber cement to the operating desk. It stays put, even with vigorous paddling. Later I plan to further rust-proof the plates. Other operators may discover similar solutions.



Two vertical machining holes on Adventure Magnetic

## Other Mounting Options

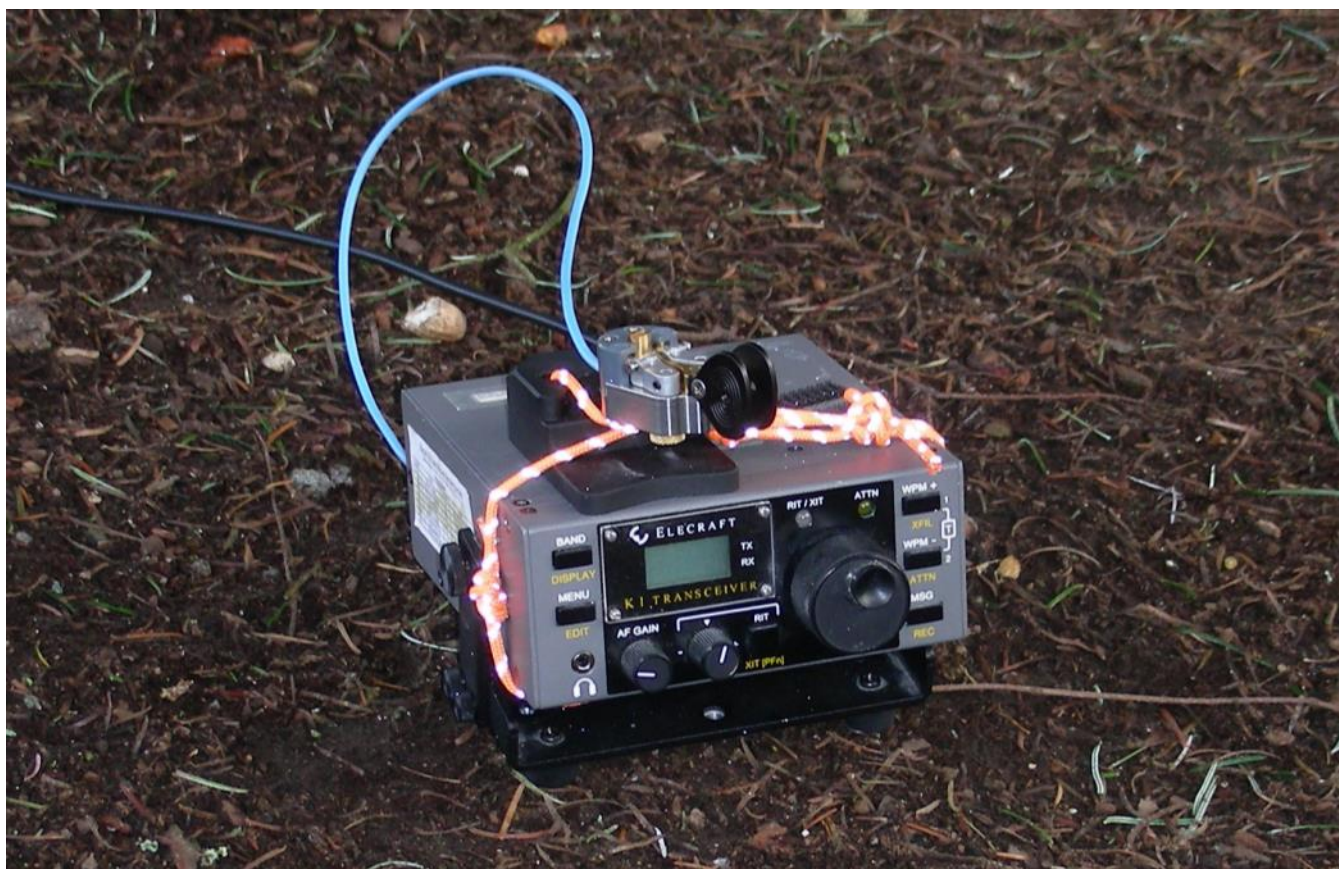
Since the Adventure Magnetic Base has two vertical machining holes toward its rear, a permanent arrangement for the home station could be to bolt the base to the operating surface.

In portable situations those same holes can be utilized to cinch the paddle down with a static or elastic cord on top of a transceiver or some backpacking gear using various knots. A good candidate is two opposing [Trucker's Hitches](#) which generate a 4:1 mechanical advantage to cinch the base very tight. For use with a transceiver, an appropriately-sized piece of flat steel could be

(Continued on next page)



(Continued from previous page)



Adventure Magnetic Base lashed to Elecraft K1 on KTS1 tripod tilt stand (Margaret Prior, K7MWP, photo)

glued to the chassis top so that the Adventure Magnetic Base magnets may be utilized.

## Measurements<sup>2</sup>

The width of the Adventure Dual and Adventure Mono is the same as the diameter of a US quarter dollar coin.

Elecraft KXPD3: 39 g (1.38 oz) H: 20 mm W: 42 mm L: 50 mm

Elecraft KXPD2: 28 g (0.98 oz) H: 23 mm W: 48 mm L: 33 mm

Begali Adventure Dual: 92 g (3.25 oz) body H: 22 mm W: 24 mm L: 58 mm

Begali Adventure Mono: 98 g (3.39 oz) body H: 22 mm W: 24 mm L: 60 mm

Begali KX3/KX2 Mounting Bracket: 21 g (0.74 oz) H: 19 mm W: 4.75 mm D: 29 mm

Begali Adventure Magnetic Base: 141 g (4.96 oz) H: 24 mm W: 48 mm L: 71 mm

The Begali website doesn't adequately convey how tiny these paddles and the associated Adventure Magnetic Base are. The width of the Adventure Dual and Adventure Mono is the same as the diameter of a US quarter dollar or a British ten-pence coin. I found a 255 g container of Betty Crocker® Parlor Perfect™ ice cream toppings in the local grocery store. Those sweet toppings are an acquired taste, which is probably not worth acquiring! The container is the right size to protect one of these paddles and the KX3/KX2 Mounting Bracket, inside my backpack, with room left over. I

(Continued on next page)

*(Continued from previous page)*

prefer to carry the paddle and bracket separated from the KX3 or KX2 itself. Tightening the two thumbscrews to attach the bracket to the KX3 or KX2 normally takes two minutes at the most, except in frigid conditions.

## Adjustments

Since the mechanism of the Adventure Mono is more complicated, contact-space adjustment is also more involved.

The return force for the two Begali paddles is produced by internal magnets for both left and right motion on both paddles. Return force can be adjusted very quickly on the fly by an accessible single gold-plated thumbscrew on the cantilevered bottom of the paddle. There is a slight left-right return-force asymmetry on the heavier end, but it's nothing to worry about. Light return force seems to be symmetrical, but I haven't measured it.

Contact-space adjustment is different for the two paddles. For the simpler Adventure Dual, contact spacing is adjusted by rotating a gold-plated slotted oval stanchion on top of the paddle using a combination of a standard screwdriver or coin on the top and a Phillips-head screwdriver on the bottom with the paddle dismounted.

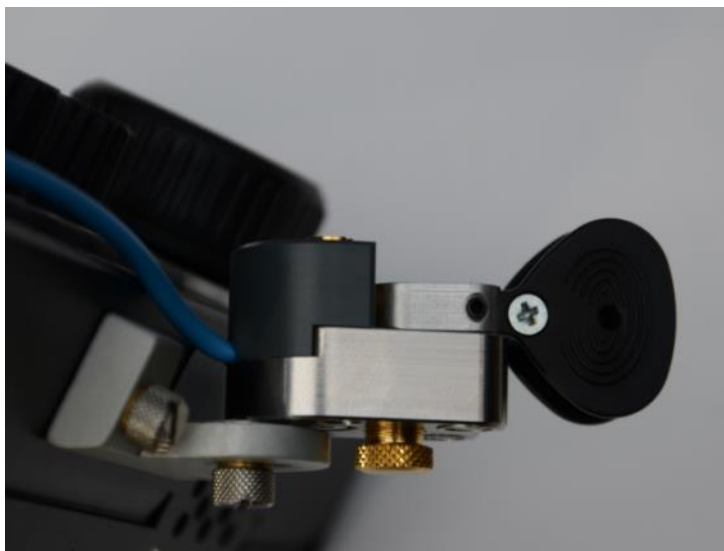
Since the mechanism of the Adventure Mono is more complicated, contact-space adjustment is also more involved. That same slotted oval stanchion can be rotated and tightened on the Adventure Mono as well. Each of the short side levers on the Adventure Mono has a spring-dampened stainless steel stop screw which limits the travel of the central lever so that it maintains a neutral center position when neither finger-piece is pressed. Those two small screws also must be adjusted each time after the stanchion adjustment is changed. There is an advantage with those two side screws, however. They can be tweaked using just a fingernail.

Although it can be done in the field, contact-space adjustments cannot be accomplished during a fast-paced QSO. I always carry a Leatherman multi-tool in the backcountry which includes a Phillips-head screwdriver and flat screwdrivers of different widths. That multi-tool, plus a coin, does the trick.

The lateral angular orientation of both paddles can be changed from left to middle to right positions using a thumbscrew on the KX3/KX2 Mounting Bracket and a standard slotted machine screw on the Adventure Magnetic Base.

## Metallurgy

These paddles will likely be subjected to a wide variety of challenging outdoor environments. I assume that is the reason why Pietro Begali chose to equip them with 12-carat solid gold contacts which interact with gold-plated fixed posts. That combination decreases the total weight and minimizes contact friction. The paddle body is stainless steel. The two levers on the Adventure Dual as well as the two contact arms on the Adventure Mono are aircraft aluminum. The central lever on the Adventure Mono is snazzy gold-plated brass rather than aluminum, to decrease the friction against the stainless steel adjustment screws. The rear cover of both paddles is not metallic. It is made with ABC (acrylonitrile butadiene styrene) or PVC



A single gold-plated fingerscrew controls return force

*(Continued on next page)*



*(Continued from previous page)*

(polyvinyl chloride) plastic composites with 25 % fiberglass. The Adventure Magnetic Base is anodized aluminum. These paddles are built to last for many years of outdoor use.

### Electrical Connection

These Begali paddles avoid potential problems with the KX3/KX2 front-panel paddle CW Key 2 socket. They are designed to plug into the KX3/KX2 3.5 mm mini-stereo CW Key 1 socket on the left panel. That feature makes them electrically compatible with a wide variety of other transceivers, and renders them more reliable electrically than the KXPD3 and KXPD2.

### Prices

For many KX3 or KX2 operators who use principally CW or paddle-based PSK31/PSK63 and RTTY, these Begali paddles are definitely worth their price:

Elecraft KXPD3: \$129.95

Elecraft KXPD2: \$109.95

Palm Radio Pico Paddle and  
MK-KX3 Mounting Kit:  
\$149.90

Begali Adventure Dual:  
€248.00

Begali Adventure Mono:  
€258.00

Begali KX3/KX2 Mounting  
Bracket: €28.00

Begali Adventure Magnetic  
Base: €33.00

The prices of these Begali paddles plus their accessories are significantly higher than the Elecraft KXPD3 or KXPD2 and the Pico Keyer

combination. There is no question that the quality of the Adventure Mono and Adventure Dual is superior to the other paddles. KX3 and KX2 operators will have to decide whether the extra cost of the Begali Adventure Dual or Adventure Mono and accessories over the Elecraft KXPD3 or KXPD2 or the Palm Radio Pico Paddle combination is worthwhile. For many KX3 or KX2 operators who use principally CW or paddle-based PSK31/PSK63 and RTTY, these Begali paddles are definitely worth their price.

Begali has sold the [Magnetic Traveler Light](#) paddle for years. At 1.5 pounds (680 g), it's barely portable. Luggable is a better term. Although the Magnetic Traveler Light action is good, the Adventure Dual and Adventure Mono action is better.

Finally two world-class paddles have appeared which are truly worthy of being attached to the chassis of the excellent Elecraft KX2 transceiver or the competition-grade Elecraft KX3 transceiver.

### Shipment

Receiving products in the USA from Begali is very fast. My package was shipped from Brescia, Italy on



Sarah, KM4WHL activates Moore's Creek (BF07) on phone for NPOTA using a KX3 equipped with a Begali Adventure Dual (Howard Hoyt, WA4PSC photo)

*(Continued on next page)*



*(Continued from previous page)*

2012-12-12 via DHL Express. Two days later in the early afternoon the DHL truck stopped by our house in the USA northwest, attempting to deliver it. That's amazingly fast. We were away at the time, so I had to wait over the weekend until 2012-12-17 to have it actually delivered.

## Dust Cover

Ignacio Iñaki EA2CTB sells excellent clear acrylic dust covers for Begali paddles which display the beautiful paddles while they protect them. Typically they include a front paddle slot and accommodation for the rear cable, so the paddles can be operated while under the cover. I ordered two covers for use with the Adventure Dual and Adventure Mono paddles mounted on Adventure Magnetic Bases. At my home station, an EA2CTB cover protects my hybrid Begali Leonessa paddle. The price is the same as covers for the Adventure Dual and Adventure Mono paddles. That's €35 including shipping to the USA. For EC residents, add VAT. Send Ignacio an email in English or Spanish at [ea2ctb@hotmail.com](mailto:ea2ctb@hotmail.com) for more information. You can pay via PayPal to that same email address. You can pay in US dollars to PayPal for payment in euros. I'd suggest adding a couple of extra euros to cover the PayPal fee on Ignacio's end.

## Summary

If I had to choose only one paddle for all of my ham radio operating, it would be one of these two tiny Begali paddles

The Morse key industry has given scant attention to producing top-drawer Morse paddles for portable use. Such operating can be challenging, so using a really fine-quality paddle is a big help. The Adventure Dual and Adventure Mono underwent a months-long development process. The result is a wonder of thoughtful design and precision machining in miniature. Even though the Adventure Dual and Adventure Mono paddles are extremely small and definitely qualify for backpacking, each one works so well that it could serve with the Adventure Magnetic Base as the principal base-station paddle. If I had to choose only one paddle for all of my ham radio operating, it would be one of these two tiny Begali paddles.

Rather than replace the fairly short cord which comes with the paddles, I prefer to use a stereo audio extension cable at my home station. Then the same paddle can be dismounted from the Adventure Magnetic Base and attached to a mounting bracket to accompany a KX3 or KX2 or KX1 or FT-817 or FT-817ND on a remote SOTA summit or on a picnic table without the additional weight or bother of a long cord.

The Adventure Magnetic Base itself is small and low mass, so some paddle owners may prefer to carry that as well as one of the new paddles into the field without using another mounting bracket. Some operators like to operate a paddle that is not fixed to a transceiver. One of these paddles can bridge both of those operating styles. From now on expect to see lots of these diminutive paddles on DXpeditions, Field Day operations and SOTA activations, as well as occupying a tiny footprint at well-equipped home-station operating positions.

©2017 Bruce Prior, N7RR  
[n7rr@mail.com](mailto:n7rr@mail.com)

Notes:

1. Most of the photographs of the Begali Adventure Dual, Adventure Mono and Adventure Magnetic Base were taken by Ulrich Steinberg N2DE and are from an earlier version of the Begali website: <http://www.i2rtf.com/>
2. Thanks to Stan Levandowski KB2LQF for his precise mass figures for the Adventure Mono, KX3/KX2 Mounting Bracket and the Adventure Magnetic Base, determined by a balance scale
3. A problem with the KX3 itself for backcountry operation is that, unlike the Elecraft KTS1 stand for the K1 transceiver, with its tripod base, the KX3 is equipped with four feet, which are inherently unstable on irregular surfaces. I solved the

*(Continued on next page)*



*(Continued from previous page)*

problem by removing the two KX3 front feet and replacing them with glued wooden feet with rubber bumpers on their tips. A similar third wooden foot is glued to the center rear of the KX3 bottom. For tilting, I add a friction-fit trekking pole tip to the rear foot. Those three feet raise the whole transceiver high enough so that they give lots of clearance on most irregular surfaces. The KX2 has three feet, but they are very low-profile, so it takes some fiddling on rough ground to find a stable spot for it. Substituting those three feet with higher-profile ones helps solve this problem. A friction-fitted extender on the rear foot allows the KX2 to be tilted toward the operator.

## True Story: The Good News and the Bad News

[Gary Stone N5PHT](#)

My short, but true, story. This was many years ago but email was in use so, maybe 10 or 15 years ago, I don't remember for sure. I was hot and heavy trying to finish my 5 band WAZ. I needed some Russian zones on 80 meters. So I came up with writing some emails to hams in the zones I needed. My error came when I decided to translate my request into Russian and add that to my email. I was writing and stating we should try CW because the propagation is much better on CW. I also suggested we would have to, if they are willing, pick the best times.



Well, my smarter-than-me wife, after the email was sent, asked me, "How do you know what you are really saying?" It got me to thinking so I found another translation program and pasted in the Russian to see what it came to in English. It was not pretty!

My CW became "Chemical Warfare" and the message I sent in Russian evidently sounded like "let's try chemical warfare and pick the appropriate times for best propagation." Well, I was beside myself - didn't know what to do. I finally actually called the ARRL for advice. After they got through laughing they suggested I keep all my copies of stuff in case someone came knocking.

The end of this story is good news and bad news:

The good news: no one seemed to care and never came knocking in black Suburbans.

The bad news: no one seemed to care and never came knocking in black Suburbans.

So, \*perhaps\* the "readers" of email missed it or an actual person actually read the entire email and saw what I was doing.

Oh, I did eventually finish the 5 band WAZ but NEVER got an answer from that particular email.

## My Story: New Member Biographies



### Bob Facto, K1YY, #1783

I received my novice license in 1976. I built a Heath Kit HW16 and was on the air on the novice bands. I upgraded to general, advanced, and extra in two years and had Drake and Swan radios. In 1979, I sold my station and moved from CT. to Ca. I was QRT until 2015 when I decided to get back into the hobby. The level 3 CWA course with Rob K6RB was a big help in improving my cw. I like working DX, and rag chewing.

### Bob German, KB4RGC, #1786

I used to have the following callsigns:

OE3RGC 1970-1980

KB0LH 1980-1995

KB3TJS 2009-2010

KB4RGC 2010- current

I used to design and build transmitting sites for shortwave broadcasting. I was Chief Engineer at WSHB (2x500kW) in the 90's then Project Director at WEWN (4x500kW) in Birmingham AL.

Then I spent 6 years with George Jacobs & Assoc. in Maryland doing frequency coordination for International Broadcast and developing software for frequency coordination and remote HF monitoring systems.

Then after another 8 years as software engineer in Maryland I retired and moved to Raleigh NC.

On HF I am mainly on CW or JT-65. Main interest is NTS traffic handling and I am on the Piedmont Coastal Traffic Net and on the CSN net almost every evening.



### Jim Ewing, N4TMM, #1791

Amateur General License (around 1992); Amateur Extra License (2015) after studying Gordon West materials and the ARRL book, which prepared me well.

I enjoy QRP; have an Elecraft K3/P3, Yaesu FT 817, MFJ 9020 and MFJ 9040 and also a Mountaintopper MTR5 (which I run with a Par EndFedz 20/30/40 or my AlexLoop); and recently built a 1Watter (SN 158; Very well kitted and fun to build and operate, around \$44 from Kitsandparts.com - highly recommended for a hot little rig on 20m - on the spectrum analyzer it's got a very clean signal, harmonics way down below FCC requirements!) Also enjoy operating a Banggood Frog Sounds rig that I just built (rockbound at 7.023 MHz), which can be bought for around \$10.00 (also well kitted and laid out, fun to build). Am a member of North Georgia QRP Club which is a great radio

*(Continued on next page)*



*(Continued from previous page)*

and S Line radios (32S-3 / 75S - 3B) (CW). Also have a Collins 51S-1 paired with my Heathkit DX 60 (with VFO) that was given to me in the 1980's by Martin Jue, the guiding light of MFJ. I will always be grateful to him and MFJ for that transmitter!

Antennas: A Radiowavz EFT 110 end fed oriented 90/270, vertex at 37 ft; a G5RV flattop oriented 150/330 at 38 ft (does not work too well) and a Cushcraft R7 Vertical mounted about 10 ft off the ground (works great, relatively speaking). As of December, 2016, I have an 80m full wavelength loop up about 70 feet in the trees.

My family rescues Australian Shepherds; current dogs are Bro, a red tri and Chip, a blue merle. Too smart by half, like having little people around the house. In April, 2016 we also rescued a stray Great Pyrenees who we named Mike. He weighs about 100 pounds and is an awesome animal. Great Pyrenees Rescue Atlanta rescues 250 of these dogs a year - farmers around here use them to guard herds against Coyotes and Wolves, but they stray away when neglected which seems to happen a lot.

Nancy is my wife. Two daughters, Jennifer and Allison, born 1987 and 1985 respectively. They live in LA and Buffalo respectively.

In a former life I was a patent lawyer and before that a Naval Flight Officer in the US Atlantic Fleet (VP-26) as well as an instructor at the Navy's Survival, Evasion, Resistance and Escape (SERE) school – teaching aircrew how to evade capture when downed, and if captured, how to resist as a POW.

## **Jim Lee, NK7B, #1774**

I live in Saint Paul, MN and have been on the air, more or less continuously, since 1957. I began my radio career as KN5KKV at age 14 during the best sun-spot cycle Earth has yet experienced (at least best for HF propagation). I am a retired gastrointestinal surgeon, formerly a Professor of Surgery at the University of Minnesota. Other interests besides ham radio include hiking, aviation, skydiving, golf, and tennis. I am a licensed physician in the State of Minnesota, work part time as a legal consultant and hospital quality investigator, and serve as an editorial board member for several scholarly journals in the fields of surgical infection control and healthcare epidemiology.



This snapshot of me was taken by a fellow skydiver up at 10,000 feet and it ought to stimulate our members to get out there, while still alive and kicking, and do something that is new, challenging, different, and vigorous.

*(Continued on next page)*

*(Continued from previous page)*

## **Bob Beyer – KE2D**

I first became interested in electronics and radio around 1970 and got my novice license in 1972 when I was 15. My call was WN2EQX. Eleven months later I upgraded to general and then 6 months later advanced. My call then became WA2NKK. I learned to send CW with a surplus WW-II straight key I had gotten from my grandfather (who was also a novice at one time). It was made in the U.S. but had Russian writing on it as I gather we had produced them for the Russians under the Lend-Lease program. I still have it. Later my parents gave me a Vibroplex bug and I used that for several years.



Very late one evening when I was still living at home in the mid 70's, I copied an actual SOS call on 40m. Another station and I both tried to call them but they did not reply. I gave the other operator my phone number and he called me immediately. We compared notes and found that we had both copied LAT LON numbers that he was sending and we both had the same exact numbers. Not knowing what to do with this info, I woke my parents up. My father had been a navigator in the U.S. Coast Guard and he quickly realized that the coordinates were in the Gulf of Mexico. He knew we needed to call the Coast Guard. We found the number for the USCG base in Philadelphia in the phonebook; in the blue pages section with the government phone numbers (remember them?). My dad told them what I had copied and gave them the LAT LON. The next day my father called them again to see if there was an update. It turned out that it was a small fishing boat in the Gulf of Mexico that had lost power and while they were not in imminent danger, they did need to be towed back to port.

When I became busy with college and work, my license lapsed. However, I was still within the grace period and when a colleague at work got his license he encouraged me to renew mine. I was living in Philadelphia at the time and I was issued KC3UY. I was very active in the hobby for about 10 years during my second tour of ham radio. This is when I learned to love and use an electronic keyer. My wife and I started our family in the mid 90's and I fell out of the hobby again. One day I looked at my license and realized that not only had it lapsed, I was beyond the renewal grace period. I was so disconnected from the hobby, and had fallen so far out of touch with my friends in it, that at one point I considered selling off my small collection of equipment.

Then, one day rainy day in spring 2011, my 12 year old son and I hooked up my old transceiver, threw up a dipole, and did some SWL'ing for an hour or so. Since we were near the peak of the sunspot cycle there was plenty of stuff to hear. While tuning through the ham bands he wanted to know if we could talk to the stations there. I told him we had all the equipment and skills but that I no longer had the federally required license. I took a couple of practice tests online and found that I could easily pass elements 2 and 3. A few weeks later I passed my general (again) and was issued KD2AMN. That September he passed element 2 and got his technician. He now holds KD2AWE. Not content with being relegated to the general bands and having no way to regain my advanced privileges since that license class had been discontinued in the intervening years, I determined to pass the extra class test and before the end of 2011 I upgraded. Shortly after that I applied for my current call sign. Despite having fallen out of the hobby for 15 years, when I returned for the second time, I could still manage 13 to 15 wpm and pretty soon was back up to 20 and better.

I've always like operating and experimenting with different modes. I've messed around with SDR, satellites, packet, AMTOR, WEFAX, PSK, WSPR, JT-65, and other modes at various times. I continue to use RTTY and SSB in contests throughout the year. My son and I enjoy participating in Field Day every sum-

*(Continued on next page)*



mer with a local club. We also participate in the September ARRL VHF contest where we setup on top of a mountain in the Pocono Mountains in Pennsylvania for 3 days. Out of necessity, I've operated a couple of CW contests remotely when I was not able to be home. It took a bit more effort and preparation but it was interesting. Last year I operated in the CQ 160m CW contest from a hotel room in London, U.K., packed up, flew home, and continued in the same contest from my same station which I was controlling remotely from London. I've never used a paddle for my remote CW contesting; only the keyboard with macros.

Professionally I've worked in film and television for my entire career and currently work as a broadcast engineer.

## Jim Spires, W4MJE, #1777



At age 14 while attending school in Mobile, Alabama, a classmate, Jim Austin, K4PWE, got me interested in ham radio. Learning code from the Encyclopaedia Britannica, Jim helped me with attaining 5 wpm and my Novice ticket in 1959 and received my first call sign, KN4KKG. I advanced to General within the next year and became K4KKG. My first receiver was a BC-348R that I obtained as a member of MARS at Brookley Field. My transmitter was a Heathkit AT-1 with two crystals for 40 meter cw. After mowing many lawns, I was able to purchase a Heath DX-40. After several more yards, I purchased a Viking II from a friend who was leaving for college.

After graduation from Auburn University, I sought to fulfill my dream of becoming a pilot. The Mississippi Air National Guard gave me that chance, giving me a training slot in 1968. After a year of Air Force pilot training in windy Lubbock, Texas, I returned to the unit in Jackson, Mississippi flying C-124s and then C-130s. During that time I received a new call sign, W5SYA, upgraded to Advanced license and built the Heath SB-301, SB-401, and SB-220.

In 1975, it was time to spend more time with family, including two young sons so we moved back to Mobile and left flying behind for 25 years. The Heathkit gear followed me until I donated it to the Univ. of South Alabama radio club. The Ten-Tec Corsair replaced the Heath gear. I applied for a new call sign as per FCC regs and received my current call and upgraded to Extra. The Corsair and SB-220 is my backup station since purchasing the K3, KPA500 and KAT500. My only antenna is a G5RV hanging from a very large oak tree.

God has blessed me in many ways. My two sons did not follow my amateur radio interests but one did follow my love for flying and is almost finished with his PhD in aeronautical engineering. The other son is a Urologist taking care of many old folks (like me) in Florida. My wife supports my recent return to active status on the ham bands so all is good.

*(Continued on next page)*



## Dave Voit, WB6TOU, # 1784

I am a retired chemical engineer. I got my first ticket in 1972 and worked up to an advanced license as I could not do 20 wpm. After a decade, I dropped out for career and kids and now that I am retired, the urge returned. I needed badly to rebuild my skills after all that time and CWA was a godsend (thank you Scott and Rob). I operate out of Lodi, California and have a second location in Arnold, CA.

[\(Continued on page 26\)](#)



## CW Academy

### [Jerry Weisskohl, AC4BT](#)

We have just concluded the January – February 2017 semester of CW Academy (CWA). Student signups to our popular and unique service for teaching CW continue to roll in at a record pace. We have had over 300 new signups since the beginning of January 2017 and are now in need of additional CW Advisors to continue to provide timely and high quality instruction to our students anxiously waiting to get into a CW class.

We have a huge backlog of Level 1 students waiting to learn CW. If every active CWops member volunteers to advise just one class, at a minimum, our stellar CW Academy program will continue to flourish.

Advising level 1 is very straight-forward. It is 100% structured to the point where lesson plans for each of the 16 sessions are outlined in the Handbook. The student works on each lesson on their own using the Morse Trainer web application (customized for CWA), comes to class and the Advisor reinforces, corrects and encourages each student. It is perfectly laid out and suited for someone with little experience in running a class but one who has expertise in the topic - CW.

Signing up to be a Level 1 Advisor is easy to do, just fill out the Advisor form on the CWops web site: <http://www.cwops.org/cwa-advisor-su.html>. This is your chance to give back to a hobby that has given you so much satisfaction.

Thank you.

**Jerry**, AC4BT, CW Academy Manager

*\*\*\* Please note that some of our January- February 2017 semester classes are still on-going and therefore the below results are what has been reported back to me to date.*

The CW Academy January - February semester graduated **125** CW students led by 35 Advisors and 8 Associate Advisors.

*(Continued on next page)*

*(Continued from previous page)*

Below is a list of advisors, Associate Advisors, and student graduates from this semester:

**January – February 2017 Semester – 35 Advisors and 8 Associate Advisors**

**Advisors - 2 classes**

Rob K6RB, Ed K6HP, Joe KK5NA, Alex PA1FOX, Mike WH6YH, Dallas K1DW, Jack NI8N, Jerry AC4BT

**Advisors – 1 class**

Mac NN4K, Andy WB7DKZ, Paul K4JAZ, Don, K6ZO, Barry W4LSV, Bill W0EJ, John K4AFE, Bruce K8UDH, Van N5TOO, Lar K7SV, Kate K6HTN, David KM6ZT, Alan AD6E, Bruce K1BG, David W6BK, Vic 4X6GP, James VK4TJF, Stew GW0ETF, Mark K5GQ, Joe N3HEE, Ron VE3FXX, Eric G0HKC, Bill N7YT, Scott KF7GGN, Bob WR7Q, Ron WM9Q, Will WJ9B

**Associate Advisors**

Dave W5TRX, Jim W5TUF, Bob K9FS, Jason AI6PA, Trung W6TN, Bill K1AQB, Jim AD5TT, Phil G4NVR

**January – February 2017 Semester – Students who completed: 125 graduates**

**Level 1 Graduates: 61**

KC1XT, N9QEX, KT0G, AI0IA, KT5MMI, VE4DFM, W1WH, KB5EBB, W9RB, KB3ZUK, KG5MZG, K0KB, K9TYR, KC0CIN, KD9CSV, KD2KUB, VE3ZJO, K9AIX, W5MHN, KC1CP, K0DMW, KF5ZNQ, AG5FX, K5PAV, N2WMD, KG5HYP, KG5GTO, KE0JJJ, K4DIZ, WX4W, KK4RSK, N0SMX, KD1YV, W0KM, KK6IDX, N7DQ, N7NAV, W6DLK, K0ESX, K6WDE, KL3MM, AH6Q, KH6OWL, KD8MNV, KD2CY, VU2SW, KM4THR, K2AN, K2DCD, W4JWC, KB7LBZ, W0RLY, YO4TNV, ZL1HB, PD1GB, PA3GAT, PD0POU, Hans Nijkamp, PD0PS, GM0EUL, Michele Giugliano

**Level 2 Graduates: 46**

W4MJE, KB7EIU, N5VR, KC2NYU, WK4WC, KJ3P, N6KC, KV4R, VA3BOW, W3AER, DD5CF/G1ZOS, G0MGM, G8HKS, M0RVJ, KO5USA, KF7LU, K5SHT, KE8AQW, VE3KCY, W2MSW, KK4ZC, KM4JTE, W4GWS, KA1ZT, K6EEE, WB9IXS, WX4HP, W7SLS, K7PAX, W6WQY, N2JFD, K7AHF, W7555, AC6AC, VA7ADI, AH0U, KC1SA, WB8GCF, N7JEH, NA2CC, VA7QCE, PA9DX, PA1LEX, PA2RG, PA4W, PE1FJN

**Level 3 Graduates: 18**

W7GM, NS3C, KX6A, AE7US, KB6K, K1YY, WB6TOU, VA3HA, N4TMM, VE3PVI, AD4PM, WS4P, NE9A, KC1RL, KE4RG, KD4RCW, W4YES, WB8SCT

# How We Were

## [Hank Garretson, W6SX](#)

Rich Zwirko, K1HTV, CWops #198

**1958:** At age 16, passed Novice exam, received callsign KN1HTV. Began chasing DX as a novice with 50W from a Heathkit DX20 and a dipole in New Haven, CT. Heard the first Russian Sputnik satellite on 20 MHz and got the satellite bug!



**1959:** Replaced the ARC5 and Ocean Hopper regenerative receivers with a Hammarlund HQ110. Added a VFO to the DX20 transmitter and I was on my way to becoming a serious DXer. With my new General Class license I could operate phone on HF for the first time. A crystal microphone fed the audio section of a broadcast receiver which was used to screen modulate my DX20. I was lucky to get 10 Watts output to feed the 8 ft vertical that my dad installed on the roof. Back then we had lots of sunspots and great propagation on 10 Meters. I managed to work all continents but Asia on 10 Meter AM with that setup. It sure was fun back then. Here's what the 1959 shack looked like.

Please send your "How We Were" photos and stories to [w6sx@arrl.net](mailto:w6sx@arrl.net)

73,

**Hank**, W6SX, How We Were



# The CWops Award for Advancing the Art of CW

by Riki Kline K7NJ/4X4NJ

The purpose of this yearly award is to recognize individuals, groups, or organizations that have made the greatest contribution(s) toward advancing the art or practice of radio communications by Morse code.

**Criteria:** Candidates for the award may be one or more of the following:

- Authors of publications related to CW
- CW recruiters, trainers, mentors, coaches and instructors
- Public advocates of CW
- Organizers of CW activities
- Designers and inventors who advance the art or practice of CW
- Other contributors to the art or practice of CW

**Note:** The award is **not** limited to amateur radio operators and organizations.

## Nomination

Nominations may be made by anybody and are not limited to CWops members. Nominations should be emailed to [awards@cwops.org](mailto:awards@cwops.org) with a copy to [secretary@cwops.org](mailto:secretary@cwops.org). In order to be considered, a nomination must be received by April 15, 2017 and include:

- Name(s) and call sign(s) (if applicable) of nominee(s), and complete contact information including their postal address(es), email address(es), and telephone number(s).
- A detailed explanation supporting nominee qualifications according to the above criteria.
- Name, telephone number, email address, and call sign (if applicable) of the person submitting the nomination.

## Presentation of Award

A plaque will be presented at the Dayton Hamvention. If the recipient(s) is/are not present, it will be sent to them.

73,

*Riki*, K7NJ/4X4NJ, CWops Award Manager



# CWOpS Tests

[Rich Ferch VE3KI](#)

I have just been looking at the posted scores from the first two months of 2017, and there seems to have been a substantial jump in the popularity of the CWTs as well as a jump in the highest scores. I'll hasten to add that I am not responsible for any of this; I have been doing nothing to publicize the CWTs other than these reports in the newsletter and the occasional reminder about the slow-speed CWTs at the beginning of March, June and November. The CWTs seem to have taken on a life of their own.

Anyway, re the numbers: In 2015, there were an average of 97 scores reported in each session. The largest number of reported scores was 133, in the last session of the year. In 2016, that increased to an average of 119 reported scores per session, with a high of 154 in the second-last session. That's a year-over-year increase of over 22% in the average number of reported participants, which seems like pretty healthy growth, but that's nothing compared to the growth since then.

The very first session in 2017 started out with 149 reported scores, the second-highest ever, and it just kept on going. The highest number reported so far is now 165, and the average for the first 24 sessions in 2017 is 152 reported scores per session, vs. an average of 129 over the last 24 sessions in 2017. That's an increase of 18% in just two months' time, and the average for these two months is higher than the numbers from all but one previous session! I can't help wondering why. Does anyone have a clue? Is the growth driven by a burst of CW Academy graduates joining in, for example, or is there some other reason?

While we call the CWTs "mini-tests" rather than contests, and the only rewards we offer are for participation, not for high scores, there is clearly a competitive streak in many of us, or at least a drive to increase the number of contacts we can manage during the hour. Why else would so many of us keep coming back to an activity in which the only information we exchange with our friends is call sign, name and membership number, with perhaps an occasional short greeting?

So, what about those scores? Well, despite the increase in participation between 2015 and 2016, the average number of QSOs reported by each participant changed only slightly, from 48.8 to 49.5. Since that time the average has jumped to 54.4 during the first two months of this year, which is by comparison quite a rapid increase. I don't have data for median scores, so it's not clear to me whether this implies that everyone's score is going up together, or whether it's mainly the highest scores that are increasing.

It is possible that much of the increase in average scores is actually due mostly to a sharp rise in the very top scores. In particular, Bud AA3B has been setting new records right and left. He has reached the 200 QSO mark six times in the first 24 CWTs this year (the previous record was 190), has tallied 150 multipliers (different call signs worked) six times as well, and three times he has combined the two for scores over 30,000 points (last year's record was just over 24,000). His almost-neighbor Chas K3WW (how far apart do you two guys live – maybe 20 miles?) is knocking on the door of 200 contacts, and several other regulars are just a bit farther behind.

I'm sure technique has a lot to do with those really high scores. Bud is using two radios and interleaving QSOs on two bands, mainly CQing on both bands. He posted audio of his first over-200 session on Google drive, and it's quite something to listen to (the link is in Bud's post to the Yahoo group on January 11). The increased overall participation is no doubt also helping, by making more stations available for big guns like him to work.

*(Continued on next page)*



*(Continued from previous page)*

All this is happening despite a continuing decline in propagation conditions. Or maybe is it because of rather than despite propagation(?). What I mean by that is that as conditions decline, it's getting so that going to the shack and finding activity on the bands is getting increasingly difficult outside of contests. Contest weekends aside, the CWTs seem to be the easiest time to find some action on the air. Do you think that perhaps that contributes to their popularity?

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

73,

**Rich**, VE3KI (aka CG3KI in 2017), CWops Test Manager

---

[\(Continued from page 21\)](#)

## My Story: New Member Biographies

### Stan Froseth, AH6KO, #1794

The photo shows me working with portable antennas attached to my vehicle at 11,000 feet on Mauna Loa for the 2016 Grid Madness event. (Google for more info, it's as crazy as it sounds.) The cat litter jug used as an antenna cushion is typical of my MacGyver approach to ham radio. And for me, the CW mode fits the "do more with less" philosophy.



First licensed in 1968, I ran CW-only back then. Rag chewing with friends and SS CW were my thing. Took a very long break from radio and returned in 2012 to find CW alive and well on the Big Island.

Lloyd (KH6LC #85) invited me to try contesting with the team. Not all CW, but what great CW it is -- Robby (NH6V), Curt (AH6RE #830), Fred (K6IJ #216) and other fine CW ops from all over the world. Quite a few contests now, and unbelievable, with more to come.

Running CW on my own modest station is of course a whole 'nother thing. Each contact is golden, and a contest run is amazing. The great news is that there are new hams and female hams on our Island that are learning CW. CWops is a great find, and the enthusiasm is infectious!



# CWops Member Awards

[Pete W1RM](#) and [Peter W1UU](#)

The Annual Competition Award (ACA) is based on the number of members worked each calendar year. You get one point per member worked, once per year. It resets to zero at the beginning of each year. The Cumulative Member Award (CMA) is based on how many members you've worked since January 3, 2010 on each band and continues to grow in perpetuity. The CWops Award Manager (CAM) software, available at no cost, will help you keep track of your ACA and CMA totals.

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

Call	ACA	CMA	Call	DX Total	Call	WAS	Call	WAE	Call	WAZ
AA3B	634	6302	<b>W1RM</b>	<b>175</b>	<b>N5RR</b>	<b>50</b>	<b>W1RM</b>	<b>48</b>	W1RM	38
K5AX	500	2539	<b>F6HKA</b>	<b>162</b>	<b>W1RM</b>	<b>50</b>	<b>F6HKA</b>	<b>45</b>	F6HKA	38
VE3KI	449	4152	<b>W4VQ</b>	<b>144</b>	<b>W4VQ</b>	<b>50</b>	<b>OK1RR</b>	<b>44</b>	W4VQ	37
N8BJQ	430	4330	<b>G4BUE</b>	<b>125</b>	<b>F6HKA</b>	<b>50</b>	<b>N5RR</b>	<b>43</b>	G4BUE	37
K1ESE	407	2696	<b>N5RR</b>	<b>118</b>	<b>W1UU</b>	<b>50</b>	<b>G4BUE</b>	<b>43</b>	N5RR	36
W1RM	371	4662	<b>OK1RR</b>	<b>115</b>	<b>VE3KI</b>	<b>50</b>	<b>VE3KI</b>	<b>42</b>	VE3KI	35
DL6KVA	366	872	<b>N8BJQ</b>	<b>113</b>	<b>G4BUE</b>	<b>50</b>	<b>EA8OM</b>	<b>42</b>	N5PHT	33
N5PHT	350	2057	<b>VE3KI</b>	<b>112</b>	<b>EA8OM</b>	<b>50</b>	<b>W4VQ</b>	<b>41</b>	IK0YVV	32
K9WX	329	2103	<b>OH2BN</b>	<b>112</b>	<b>W0EJ</b>	<b>50</b>	<b>N8BJQ</b>	<b>41</b>	VK7CW	28
KE4S	286	1264	<b>EA8OM</b>	<b>111</b>	<b>F6JOE</b>	<b>50</b>	<b>OH2BN</b>	<b>40</b>	DL6KVA	27
IT9MUO	262	1540	<b>K1ESE</b>	<b>101</b>	<b>W6KY</b>	<b>50</b>	<b>AA3B</b>	<b>40</b>	JF2IWL	25
K8AJS	261	828	AA3B	95	<b>N1EN</b>	<b>50</b>	SM6CNN	37	W6NS	19
K3SEN	248	1145	SM6CNN	93	<b>N5PHT</b>	<b>50</b>	K1ESE	36		
NA6O	221	1586	EA1WX	92	<b>F5MKN</b>	<b>50</b>	IT9MUO	36		
W1UU	204	2038	W9ILY	89	<b>K5IX</b>	<b>50</b>	F6JOE	36		
NN4K	193	1365	W0VX	89	<b>K3SEN</b>	<b>50</b>	W1UU	34		
F6JOE	178	2677	N1EN	86	<b>AD1C</b>	<b>50</b>	W0VX	34		
W9ILY	176	2866	IT9MUO	85	<b>AB7MP</b>	<b>50</b>	KZ5D	34		
IT9VDQ	173	1109	F6JOE	84	<b>AA3B</b>	<b>50</b>	KR3E	34		
W4VQ	159	2519	N5PHT	82	<b>K5AX</b>	<b>50</b>	EA1WX	34		
K0MP	156	213	AD1C	81	W9ILY	49	W9ILY	33		
G4BUE	152	3256	PA7RA	79	W0VX	49	DL6KVA	33		
I5EFO	148	415	KZ5D	78	VK7CW	49	N1EN	32		
K6DGW	115	1660	DL8PG	78	NN4K	49	IT9VDQ	32		
N1DC	112	1507	DL6KVA	78	N8BJQ	49	F5MKN	32		
DL8PG	108	1729	K5AX	77	N1DC	49	PA7RA	31		
F6HKA	101	4380	W1UU	75	KT5V	49	DL8PG	31		
G4NVR	91	296	KR3E	73	K9WX	49	IK0YVV	30		

(Continued on next page)



(Continued from previous page)

## CWops Member Awards

Call	ACA	CMA	Call	DX	Call	WAS	Call	WAE	Call	WAZ
G0MGM	76	235	N1ZX	70	K6RB	49	NN6T	29		
VK7CW	47	1133	VK7CW	68	K6DGW	49	K5AX	29		
JF2IWL	18	920	F5MNM	68	K6DGW	49	N1ZX	28		
N5RR	0	4098	NN6T	67	GW0ETF	49	GW0ETF	28		
K6RB	0	3658	GW0ETF	67	WB9G	48	AD1C	28		
KZ5D	0	3239	IT9VDQ	64	W6NS	48	JF2IWL	25		
IK0NOJ	0	3093	IK0YVV	57	SM6CNN	48	K6RB	24		
W0VX	0	2796	K6RB	56	NN6T	48	I5EFO	24		
EA8OM	0	2758	W6KY	55	NA6O	48	G4DRS	24		
SM6CNN	0	2477	KE4S	53	N1ZX	48	KE4S	23		
W6KY	0	1966	NA6O	50	KZ5D	48	HB9ARF	23		
N1EN	0	1928	JF2IWL	50	KE4S	48	VK7CW	22		
AD1C	0	1919	4Z1UF	50	IK0YVV	48	N5PHT	21		
N2UU	0	1774	G4DRS	49	DL8PG	48	N1DC	21		
EA1WX	0	1724	WB9G	48	AD5A	48	K8AJS	21		
OK1RR	0	1618	NN4K	43	VE3MV	47	4Z1UF	21		
NN6T	0	1577	N1DC	43	NU7Y	47	K2ZC	20		
GW0ETF	0	1451	K3SEN	43	KR3E	47	G4NVR	20		
KG5U	0	1322	K9WX	42	K0DTJ	47	WB9G	19		
PA7RA	0	1200	KT5V	41	JF2IWL	47	NN4K	18		
KR3E	0	1136	I5EFO	41	WX7SJ	46	K9WX	18		
F5MNM	0	1111	HB9ARF	41	KG5U	46	G3YJQ	18		
W6NS	0	1090	K6DGW	39	K8AJS	46	AD5A	18		
KT5V	0	1088	W6NS	38	IT9MUO	46	W6KY	17		
AD5A	0	1071	K8AJS	37	I5EFO	46	NA6O	17		
W5ASP	0	1018	K2ZC	37	G4DRS	46	KG5U	17		
4X6GP	0	994	W0EJ	36	EA1WX	46	K3SEN	17		
PA4N	0	955	KG5U	35	OK1RR	45	G0MGM	17		
N1ZX	0	940	AD5A	35	K3WJV	45	K3WJV	16		
WB9G	0	888	G4NVR	34	K2ZC	45	KT5V	14		
K3WJV	0	882	K0DTJ	29	IT9VDQ	45	W6NS	12		
K2ZC	0	767	G0MGM	29	PA7RA	44	VE3MV	12		
IK0YVV	0	767	G3YJQ	27	DL6KVA	44	K6DGW	12		
W0EJ	0	754	K3WJV	25	KM4FO	43	W0EJ	10		
K5IX	0	750	K5IX	24	HB9ARF	43	G3XLG	10		
K0DTJ	0	742	VE3MV	23	OH2BN	42	K5IX	8		
HB9ARF	0	723	NU7Y	21	K0MP	40	W5TM	7		

(Continued on next page)



(Continued from previous page)

## CWops Member Awards

Call	ACA	CMA	Call	DX	Call	WAS	Call	WAE	Call	WAZ
KM4FO	0	721	AB7MP	21	NV9X	38	G0DJA	7		
VE3MV	0	664	G3XLG	18	G3YJQ	37	K0DTJ	6		
AB7MP	0	628	WT2P	14	4Z1UF	36	AB7MP	6		
WX7SJ	0	610	W5TM	11	WT2P	34	KM4FO	5		
WT2P	0	574	KM4FO	10	G4NVR	34	WT2P	4		
OH2BN	0	530	G0DJA	10	W5TM	32	NV9X	1		
G4DRS	0	496	NV9X	4	G3XLG	31				
NU7Y	0	479	KE6K	4	G0MGM	29				
N7WY	0	403	K0MP	4	KE6K	17				
W5TM	0	235			G0DJA	8				
G3YJQ	0	234								
G3XLG	0	201								
NV9X	0	149								
G4HZV	0	120								
KE6K	0	116								
4Z1UF	0	50								
G0DJA	0	23								
PA1FOX	0	5								
4Z1UF	0	50								
G0DJA	0	23								
PA1FOX	0	5								





# New Members

## Trung Nguyen W6TN

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

CWops	Call	Name
1766	N5EE*	Kenny
1767	N2WK	Wayne
1768	N3SD	Greg
1769	WB5K*	Jay
1770	W6NUC*	Dave
1771	G0MGM*	Rob
1772	K8FU	Mark
1773	SA6BGR/SD6M	Per
1774	NK7B	Jim
1775	VE3FXX	Ron

CWops	Call	Name
1776	KM5PS	John
1777	W4MJE	Jim
1778	W8RF	Mike
1779	W0LPF	Pete
1780	HI3CC	Tino
1781	AE7US*	Rocky
1782	KX6A*	Mike
1783	K1YY*	Bob
1784	WB6TOU*	Dave
1785	N2JFD*	Jim

CWops	Call	Name
1786	KB4RGC	Bob
1787	K3PP*	Glenn
1788	N5VR*	Bill
1789	KB6K	Ron
1790	N2IC	Steve
1791	N4TMM*	Jim
1792	KP3SK*	Angel
1793	N9SZ	Steve
1794	AH6KO*	Stan
1795	KG5HVO*	Bryant

\*Indicates a Life Member

## Current Nominees

As of March 2, 2017:

**Need Sponsors:** W6SBE, NV3N, KE4TWI, K5AUP, N5RP, WM4I

**Invitations Extended:** N4NX, KE2D, DL2DXA

For more details about nominees and up-to-date status, check the “Members Only” page on the website:  
<http://www.cwops.org>.

For information about joining CWops, check the “Membership” page on the website: <http://www.cwops.org>

73,

**Trung**, W6TN, Membership Secretary

# New Members to Receive Radiograms

[Bob German KB4RGC](#)

Being a ham since 1972 (CW ONLY), about 2 years ago I found I was burned out with rag chewing, DX chasing and contesting, so I started looking for something else.

I found a little known niche in ham radio: traffic handling. Initially started by the ARRL, it is basically using ham radio to send radiograms as a public service. It is used for everything from birthday greetings to health-and-welfare traffic in disasters.

The image shows a standard ARRL Radiogram form. At the top, it says "ARRL — the national association for Amateur Radio™" and "RADIOGRAM". Below this, there are fields for "NUMBER", "PRECEDENCE", "HIS", "STATION OF ORIGIN", "CHECK", "PLACE OF ORIGIN", "TIME FILED", and "DATE". The form is divided into two main sections: "TO" and "FROM". The "TO" section includes fields for "AMATEUR STATION", "NAME", "STREET", "CITY, STATE, ZIP", and "PHONE". The "FROM" section includes fields for "NAME", "STREET", "CITY, STATE, ZIP", and "PHONE". There are also fields for "MESSAGE" and "REMARKS". At the bottom, there are fields for "SEND" and "RECEIVED".

The thing I like most about it: moving traffic through an intricate web of traffic nets all over the US and Canada (and now through Europe and Australia) makes you feel like a professional telegraph operator.

After becoming a CWops member I thought about sending a congratulatory radiogram to all new members on behalf of the organization. I started sending off a few emails to CWops Management and was prepared for a long wait for a reply. Not so. 30 minutes later I had a return email from Jim, N3JT and a few hours later we had a radiogram text ready and the details established.

The next evening the first radiogram was listed at the RRI East Coast net on 80 Meters and was on its way to California.

If you are curious how a large CW traffic net with multiple control operators and traffic handlers on about two dozen frequencies move traffic and keep track of everything and you are in the Eastern part of the US, you can listen to the RRIE Net on 3552 kHz at 8 PM Eastern.

## QTX Report

### Enjoying the Art of Conversational CW

[John Huffman K1ESE](#)

It was a short month, but we always appreciate your report, large or small. Just count up your monthly total of CW conversations lasting 20 minutes or longer. Remember, any QSO longer than 20 minutes counts, with any ham, as many times per month as you like.

QTX Standings: Here is how we all did this month

Call	Feb
N5PHT	113
N5IR	56
KC0VKN	53
K5KV	44
K1ESE	31
KB6NU	22
I5EFO	18

Call	Feb
K5YQF	12
K4AHO	11
N4DT	11
WH6YH	11
HB9CVQ	10
K0DTJ	9

Call	Feb
WA8IWK	4
W5JQ	3
K6DGW	3
KE4RG	2
N7YT	2
W3WHK	2

(Continued on next page)



(Continued from previous page)

Gary N5PHT is had another outstanding month with over 100 QTX points. Bill N5IR was again second with 56 and Joe KC0VKN right behind at 53. Benny K5KV and your moderator are a bit farther down the list.

It was a short month with lots of competing activities but we still had several members who posted personal best scores for the year – KB6NU, I5EFO, N4DT, HB9CVQ, and W5JQ.

We totaled 417 QSOs, down from January, and had 19 stations reporting. If you missed reporting, just send me an email so that I can add your January count to your annual totals.

But, you don't have to have a top score to be a winner. We award QTX medals for the following totals at the end of the year -

Gold Medal - 400 QTX points

Silver Medal - 300 QTX points

Bronze Medal - 200 QTX points

It will be fun to see if you can accumulate the contacts needed to reach each level. Good luck with your totals and enjoy making new friends and chatting with your regular pals.

Here are the Medal Standings for the year to date:

Call	CY2017	Call	CY2017	Call	CY2017
N5PHT	237	K4AHO	31	KE4RG	2
N5IR	139	N4DT	19	N7YT	2
KC0VKN	125	WH6YH	11	W3WHK	6
K5KV	95	HB9CVQ	19	K6HP	11
K1ESE	84	K0DTJ	18	N5LB	5
KB6NU	42	WA8IWK	16	NN4K	2
I5EFO	24	W5JQ	5	K8UDH	2
K5YQF	25	K6DGW	3		

We have our first Medal winner of the year – N5PHT is already at the Bronze level. There is plenty of time for all of us to earn a medal for 2017. Good luck to all and see you on the bands.

Thanks to all for your participation.

73,

*John*, K1ESE, QTX Manager



# Solid Copy - Upcoming CW Operating Events

[Joe Staples, W5ASP](#)

*This list of operating events is intended to provide members with options for using and improving their cw skills in not only the more popular contests but also in other more casual on-the-air activities.*

Both the Russian DX and the JIDX CW contests should be a challenging experience for any CW operator. Each provides the opportunity to work a wide range of DX entities hosted by capable operators. Even short periods of checking whatever bands are open can be quite productive.

Just a reminder to those who may not be aware of this feature the FOC QSO Party, unlike the FOC Marathon, is open to all radio amateurs world-wide. The only limitation is that non-FOC members may work only FOC members, not each other. FOC members can be distinguished by the addition of their FOC Number to their exchange.

The "Texas State Parks on the Air (TSPOTA)" event covers 99 state parks in Texas. How many will actually be active is anyone's guess, but one never knows without trying. If you happened to get caught up in last year's NPOTA (National Parks on the Air) you may have experienced the kind of unexpected contacts one chances across. The same may be true here. Full rules and a list of parks as well as list of operations that plan to be active can be found at the official website.

The Yuri Gagarin International DX Contest has been around for quite a few years, and from the looks of last year's results is still very popular among Europeans. There were a few scattered North American entries but it certainly has not drawn a lot of stateside attention. However, it is a CW only event and has a lot of different entry categories. If you catch some good propagation, it could be an interesting operating experience.

Once again there is veritable flood of state QSO parties on the docket. Several of them have featured high levels of mobile activity in past years, and can provide an interesting operating session.

Till next time ... Keep on pounding.

## MARCH / APRIL EVENTS

Russian DX Contest <a href="http://www.rdx.org/asp/pages/rulesg.asp">http://www.rdx.org/asp/pages/rulesg.asp</a>	1200Z, Mar 18 <sup>th</sup> to 1200Z, Mar 19 <sup>th</sup>
FOC QSO Party <a href="http://g4foc.org/qsoparty/">http://g4foc.org/qsoparty/</a>	0000Z-2359Z, Mar 25 <sup>th</sup>
JIDX CW Contest <a href="http://www.jidx.org/jidxrule-e.html">http://www.jidx.org/jidxrule-e.html</a>	0700Z, Apr 8 <sup>th</sup> to 1300Z, Apr 9 <sup>th</sup>
Virginia QSO Party <a href="http://www.qsl.net/sterling/VA_QSO_Party/2017_VQP/2017_VQP_Rules.html">http://www.qsl.net/sterling/VA_QSO_Party/2017_VQP/2017_VQP_Rules.html</a>	1400Z, Mar 18 <sup>th</sup> to 0200Z, Mar 19 <sup>th</sup> and 1200Z-2400Z, Mar 19 <sup>th</sup>

(Continued on next page)



Louisiana QSO Party <a href="http://laqp.louisianacontestclub.org/laqso_rules.htm">http://laqp.louisianacontestclub.org/laqso_rules.htm</a>	1400Z, Mar 18 <sup>th</sup> to 0200Z, Mar 19 <sup>th</sup>
Missouri QSO Party <a href="http://www.w0ma.org/index.php/missouri-qso-party">http://www.w0ma.org/index.php/missouri-qso-party</a>	1400Z, Apr 1 <sup>st</sup> to 0400Z, Apr 2 <sup>nd</sup> and 1400Z-2000Z, Apr 2 <sup>nd</sup>
Mississippi QSO Party <a href="http://www.arrlmiss.org/2017 - MSQP Rules.pdf">http://www.arrlmiss.org/2017 - MSQP Rules.pdf</a>	1400Z, Apr 1 <sup>st</sup> to 0200Z, Apr 2 <sup>nd</sup>
New Mexico QSO Party <a href="http://www.newmexicoqsoparty.org/">http://www.newmexicoqsoparty.org/</a>	1400Z, Apr 8 <sup>th</sup> to 0200Z, Apr 9 <sup>th</sup>
Georgia QSO Party <a href="http://www.georgiaqsoparty.org/">http://www.georgiaqsoparty.org/</a>	1800Z, Apr 8 <sup>th</sup> to 0359Z, Apr 9 <sup>th</sup> and
Michigan QSO Party <a href="http://www.miqp.org/Rules.htm">http://www.miqp.org/Rules.htm</a>	1600Z, Apr 15 <sup>th</sup> to 0400Z, Apr 16 <sup>th</sup>
Ontario QSO Party <a href="http://www.va3cco.com/oqp/rules.htm">http://www.va3cco.com/oqp/rules.htm</a>	1800Z, Apr 15 <sup>th</sup> to 0500Z, Apr 16 <sup>th</sup> and 1200Z-1800Z, Apr 16 <sup>th</sup>
North Dakota QSO Party <a href="http://w0nd.com/">http://w0nd.com/</a>	1800Z, Apr 1 <sup>th</sup> to 1800Z, Apr 16 <sup>th</sup>
Nebraska QSO Party <a href="http://www.qcwa.org/chapter025-rules-ne-qso-party-2017.pdf">http://www.qcwa.org/chapter025-rules-ne-qso-party-2017.pdf</a>	1300Z, Apr 22 <sup>nd</sup> to 0100Z, Apr 23 <sup>rd</sup> and 1300Z-2200Z, Apr 23 <sup>rd</sup>
NCCC Sprint NCCC Sprint NCCC Sprint NCCC Sprint NCCC Sprint NCCC Sprint <a href="http://www.ncccsprint.com/rules.html">http://www.ncccsprint.com/rules.html</a>	0230Z-0300Z, Mar 17 <sup>th</sup> 0230Z-0300Z, Mar 24 <sup>th</sup> 0230Z-0300Z, Mar 31 <sup>st</sup> 0230Z-0300Z, Apr 7 <sup>th</sup> 0230Z-0300Z, Apr 14 <sup>th</sup> 0230Z-0300Z, Apr 21 <sup>st</sup>
SKCC Sprint <a href="http://www.skccgroup.com/operating_activities/weekday_sprint/">http://www.skccgroup.com/operating_activities/weekday_sprint/</a>	0000Z-0200Z, Mar 22 <sup>nd</sup>
NAQCC CW Sprint NAQCC CW Sprint <a href="http://www.naqcc.info/">www.naqcc.info/</a>	0030Z-0230Z, Mar 16 <sup>th</sup> 0030Z-0230Z, Apr 12 <sup>th</sup>
Texas State Parks on the Air <a href="http://www.tspota.org/index.htm_files/TSPOTA_Rules%202017%2002%2013.pdf">http://www.tspota.org/index.htm_files/TSPOTA_Rules%202017%2002%2013.pdf</a>	1400Z, Apr 8 <sup>th</sup> to 0200Z, Apr 9 <sup>th</sup> and
Yuri Gagarin International DX Contest <a href="http://gc.qst.ru/en/section/32">http://gc.qst.ru/en/section/32</a>	2100Z, Apr 8 <sup>th</sup> to 2100Z, Apr 9 <sup>th</sup>

