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NCCC June, 2020 ZOOM Meeting Tuesday June 9 1900-2030 PDST

"CQP Expeditions - 2019 and the Future"

*Dean, N6DE and Glen, W6GJB
Moderated by Bill, W9KKN*

Date: Tuesday, June 9, 2020
Time: Chat open at 1830, again at 2030
Meeting is 1900-2030 PDST

Web Access and Zoom instructions:
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QUICK START Guide to Zoom:

[Zoom: How-Do-I-Join-A-Meeting?](#)

President's Report - WD6T

It was great to see another huge turnout for our May Zoom meeting. Many thanks to Bob, K6XX, Bob, K3EST and Bill W9KKN for the excellent preparation for WPX. It was gratifying to receive a number of personal emails saying this was one of the best NCCC meetings ever, as well as seeing how many NCCC members got on the air for WPX. Just today, I ran into an NCCC member who told me he hadn't done a WPX in ten years (and that was the SSB one). He said he was so inspired by the meeting that he got on the air for over 12 hours and made over 600 QSOs. And, most importantly, he had a great time. This is what NCCC is all about: inspiring our members to have more thrills, make more Qs and points, with more BIC, contribute more to the club and in turn get more back from the club in the way of support, inspiration, camaraderie and raffle tickets. While it's always great when we can beat another big club, let us not lose sight of the positive effect we can have on our ham community, regardless of where the point totals fall... i.e. our role in motivating our members to get on the air and join in team efforts, introducing new contesters to this wonderful Radiosport obsession, and generally promoting contesting in Northern California and around the world.

Meanwhile, Field Day is almost upon us. You know, that "not a contest" (TM) where many contesters first got the bug, including your's truly. Although this year we may not be able to go out in the field in groups, as a special accommodation, ARRL is allowing home stations (class D) to work anyone for points, so expect high participation. In addition, this year ARRL is including a club competition. No, we are not going to make this an NCCC focus contest! But this would be a great time to re-connect with your local or regional

President's Report Continues on Page 3



Northern California Contest Club

Excellence In Amateur Radio Contesting

Officers:

President	David Jaffe	WD6T	k6daj@arrl.net
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Secretary	Gary Johnson	NA6O	secretary.nccc@gmail.com
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Director	Bob Wolbert	K6XX	K6XX@arrl.net
Director:	Bob Cox	K3EST	bobk3est@gmail.com
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CQP Chair	Glen Brown	W6GJB	210glen@gmail.com
K6ZM QSL Manager	George Daughters	K6GT	k6gt@arrl.net
K6CQP,N6CQP,W6CQP QSL Mgr	Ed Muns	W0YK	w0yk@arrl.net
NCCC Email reflector Admin	Phil Verinsky	W6PK	kb-w6tqg@verinsky.com
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Webinars	Bill Fehring	W9KKN	bill+nccc@w9kkn.net
JUG Editor	Bill Haddon	N6ZFO	n6zfo@arrl.net

Thursday Night Sprint:

The Northern California Contest Club sponsors a Thursday Night Contesting session of thirty minutes duration.

Often, on Fridays prior to a major contest weekend, a special practice session is held.

Generally, on Thursday evenings, a special format is followed, called NS or "NCCC Sprint". The NS began in the summer of 2004 as a snappy, concise contest occurring most Thursday nights, North American time. The power limit is 100 watts. Occasionally multi-week ladder competitions are held. See www.ncccsprint.com for details.

Thursday Night Contesting Director and Founder	Bill, N6ZFO
NCCC CW Sprint	Tom, N3ZZ (initially, Ken N6RO)
NCCC RTTY Sprint	Ken, K6MR
NCCC Sprint Ladder	Bill, N6ZFO
Sprint Web master www.ncccsprint.com	John, K6MM
Ladder Scores Manager	Tim N3QE
Thursday night Contesting Advisory Group:	N6ZFO, Bill (Chair)
	Mark K6UFO, (with W4NZ, N4AF, W9RE, K4BAI, N3BB, VE3YT and W0BH).
	Ken, N6RO
The Thursday night NCCC Net	



club and see if they are doing a club effort. Then break out your portable rig and climb a hill (butt in motion)... or get in the car (butt in gear) ... or just operate from home (butt at standing desk).

FD is a great time to be an ambassador for contesting. Handing out a few Qs can be rewarding in surprising ways. During 7QP, I was slightly frustrated by how many non-7s called me. Yet, I subsequently received a QSL card (thankfully, with SASE) saying "first contact with California." This brought back distant memories of what a thrill it was to make my "first contact with Texas" (from New Jersey) using my 15-watt Ameco 2-tube crystal controlled transmitter, ca. 1967. Now that's DX!

So, enjoy the weather, put up some new wire or aluminum if at all possible (I'm thinking deep thoughts about 6 meters), and try to get out and enjoy our beautiful Northern California, preferably with something that radiates RF and keeping a safe distance from your fellow petri dishes. Bring binoculars... there is no curfew on nature.

73, Dave, WD6T, NCCC President 2020/21

VP/CC Report – Bill Fehring, W9KKN

First of all, I want to thank everyone that got on the air for WPX CW for NCCC, no matter how big or small the log -- this goes to show that the club still has an interest in going after this moon-shot goal of ours. A special thanks to everyone involved with our raffle program (WD6T, NA6O, N6KT, K6EU, K6XX, and anyone I forgot), and again to the Bobs (K3EST and K6XX) for an inspiring talk on WPX strategy at the last meeting. So many people commented that this inspired them to get on the air last weekend.

How did it turn out? Well -- again, a record turnout for WPX to begin with, this is the COVID-19 effect; 13445 logs have been submitted between the 2020 SSB/CW contests, compared to 9936 last year. This result is an all-time record for WPX participation at rock bottom of the solar minimum with some very challenging conditions. We were teased a bit with Cycle 25 C and even M-class flares in the days leading up to the contest from an active region that had just started to come into view, implying that we would have some high-band action. But it turned into nothing.

I'm still running the numbers as they become available; actually, I've been writing software to do it, and I hope to cover a few slides about it at our meeting. Still, it looks like, between SSB and CW, we managed to come up with 149 logs compared to 126 last year -- this is well on the way to where we want to be. Of course, the biggest thing we are missing is on the DX side, and even our club members that normally do operate from the Caribbean found themselves unable to travel. And even if they could have, it was probably not a great choice this year. One thing that is for sure, we definitely got robbed of EU propagation this year; The east coast had, for example, a significant 10m opening to Europe.



Now it's time to make a few decisions. Based on this result and the understanding of how challenging this will be for our club to build up the momentum needed to be successful in this contest, you might ask if it's worth it or not? Nobody said it would be easy, and no matter what major contest it is that we choose to focus on as a club, a multi-year effort will be involved. It stands to reason that some of these longer-term projects need continuity across different NCCC leadership administrations, as these efforts can't start from scratch every few years. If they do, they will never build up the needed momentum. What this probably looks like are a few committees outside of the board that focus on the logistics of one of these multi-year wins, so if this is something that is of interest to you, please, reach out to me.

Regardless of what contest we focus on, we have A LOT of work to do -- mostly building up our arsenal of stations and our army of operators. Now that the 2019/2020 contest season has come to a close, it's time to focus on our stations and operators. I've already heard from a few of you offering advice and assistance, and I'm grateful for all of it — though I'm still processing all of it and trying to come up with something interesting. The survey I had mentioned last month is still coming out shortly, and we'll start to figure out what we need to do.

More to come!

KB!

Bill Fehring / W9KKN
NCCC VP/CC



NCCC Meeting – Tuesday, June 9, 2020

“CQP Expeditions - 2019 and the Future”

Dean, N6DE and Glen, W6GJB

Moderated by Bill, W9KKN

Date: Tuesday, June 9, 2020

Time: Open Chat: 6:30 PM Meeting: 7:00 PM to 8:30 PM followed by open chat.

Location: On-Line only due to continuing Corona virus pandemic.

Menu: We encourage you to consume delicious foods and enjoy appropriate (or inappropriate) libations while sheltering in place.

Cost: Free Zoom access provided, courtesy of Bill, W9KKN

Instructions for connecting to the meeting by Zoom Video Conferencing:

WEB ACCESS: <https://us02web.zoom.us/j/82809530865>

Meeting ID: 828 0953 0865

OR Join by “one tap mobile”:

One tap mobile +16699006833,,82809530865#

Or. . Join Zoom Meeting audio by dialing in and then typing in the Meeting ID:

Phone number: (669) 900-6833

Meeting ID: 828 0953 0865

Need help with Zoom? [Zoom: How-Do-I-Join-A-Meeting?](#)

CQP Corner

Dean, N6DE

cqden6de@gmail.com

CQP Health Check

We usually gauge the health of any contest by the number of logs it receives, and whether we run out of stations to work by the end. However, there is much more that a contest sponsor can learn about its contest by analyzing its log dataset. In this article, I will perform a CQP health check, where I will attempt to address the following questions:

- How many CA and outside-CA stations were active?
- Are the CQP operating classes working well?
- How many new stations entered CQP 2019? How many 2018 entrants did not participate in 2019? And how many participated both years?
- How many hours are stations participating in CQP?
- What is the impact of fixed stations in CQP vs. expeditions and mobiles?

By answering these questions, we may be able to better understand where we are excelling and where we can improve in 2020.

Overall Participation

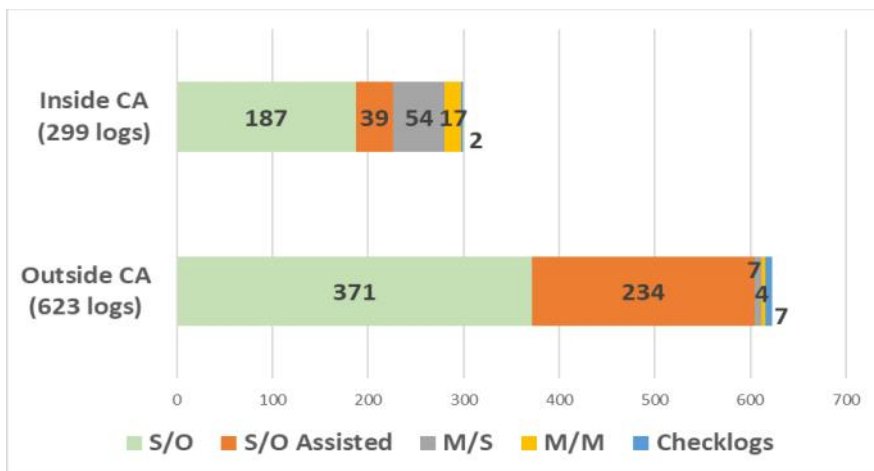


Figure 1. CQP 2019 Distribution of Logs Received

Observations:

- 32% of CQP 2019 logs came from stations inside California, while 68% of our logs received were from outside California. This is a good ratio, although we could improve by increasing the amount of CA participation.
- S/O Unassisted remains the preferred class chosen, by far. S/O Assisted logs primarily come from outside of CA. This is probably because the packet spotting network from CW Skimmers is much

more useful to the stations outside CA mostly operating S&P, while stations inside CA mostly call CQ.

- CQP organizers introduced the S/O Assisted class in 2015. From the data above, it was the correct decision to add a S/O Assisted class and to separate it from the S/O (unassisted) class. Most participants still prefer to operate without packet assistance, getting enjoyment out of finding stations and multipliers on their own. Yet, 30% of all 2019 log submissions were S/O Assisted entrants. This likely boosted CW QSOs for CA stations because we were more easily found through Skimmer spots.
- Multi-ops accounted for 24% of all CA logs. However, 22 of the 54 CA M/S stations were K6AQL/M logs with K0DI operating mobile and his son driving. If we consider K6AQL as one M/S callsign, the number of unique M/S and M/M entries inside CA was 50. Add 11 Multi-op stations from outside CA, and this becomes a manageable number to implement any Multi-op guidance or rules changes in CQP 2020, while most participants will be unaffected.

2019 vs. 2018 Participation Trends

Last year, CQP marketing consisted of:

- **Emailing approximately 300 CQP 2018 participants three days before CQP 2019, encouraging them to participate.**
- **Emailing stations in rare mults, asking them to participate.**
- **Emailing contest clubs and cq-contest.**

Most of the CQP organizers' time leading up to CQP 2019 was spent in tracking county activation, working actively with many county expeditions to help them be successful, implementing a new county tracker page on CQP.org, and doing all the work needed on the log submission page and supporting infrastructure.

With a minimal marketing effort, I wondered whether we would gain any new participants, lose any past participants, or if it would stay the same. With 922 logs received in 2019 and 905 in 2018, my guess was that most everyone who participated in 2018 would participate again in 2019, and that we wouldn't gain or lose many people year over year. Was I ever wrong!

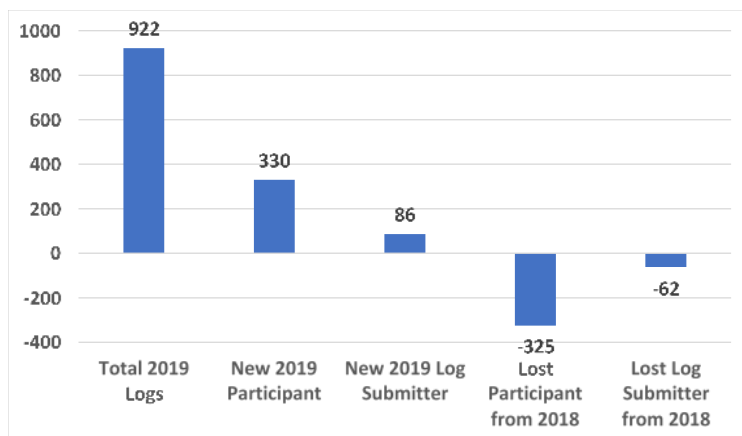


Figure 2. CQP 2019 Participation Compared with 2018

Definitions (Figure 2)

- **New 2019 Participant**
 - Station did not make any QSOs in CQP 2018, but participated and submitted a log in 2019.
- **New 2019 Log Submitted**
 - Station made QSOs in CQP 2018 but did not submit a log in 2018. In CQP 2019, participated and submitted a log this time.
- **Lost Participant from 2018**
 - Station submitted a log in 2018, but did not make any QSOs in CQP 2019.
- **Lost Log Submitter from 2018**
 - Station submitted a log in 2018, and participated in 2019 but did not submit a log in 2019.

When performing this analysis, I made sure to consider the following factors:

- Any operator who changed their callsign between CQP 2018 and CQP 2019.

- Example: KK6NON in 2018; K6JO in 2019.
- Same operator who operated with a different callsign.
 - Example: W1UE in 2018; HQ9X in 2019.
- Anyone who operated with their callsign one year, and as part of a Multi-op callsign the other year.
 - Example: W6PZ M/M operator in 2018; N3RC S/O in 2019.

This was time consuming to analyze, but ensured the data was accurate.

Observations:

- Over a third of all operators who submitted a CQP 2019 log did not even make a QSO in CQP 2018. This is an astonishingly positive result, given that we did very little marketing to people who did not participate in 2018. We had no advertisement in QST, no ad on QRZ.com, and no news story like we used to have years ago on NS3T's contesting news page.
- Over a third of all operators who submitted a CQP 2018 log did not even make a QSO in CQP 2019. I definitely would not have expected us to lose over 300 participants from the prior year. If this were a business, it would show an employee retention rate of about 65% year over year. That is an alarmingly poor number which we'll want to improve.
- We had a good gain in people who submitted their log in 2019 vs. not submitting in 2018. The CQP organizers spend a lot of effort every reaching out to participants in the log submission phase, encouraging, reminding, and helping them to submit their logs. Tom NS6T has a detailed and sophisticated live report by QSO count and by multiplier of which stations we need to chase for logs.
- For the people who did not submit their log in 2019 but did in 2018, I found that most of them had lower QSO counts in 2019 compared to their submitted log in 2018. They might have made a conscious decision not to submit in 2019, or they may have just paper logged in 2019 and did not bother to translate their log electronically.
- I reviewed the CQP 2018 and 2019 Top 20 S/O wine winner lists.
 - Loss: 7 of the Top 20 S/O non-CA CQP 2018 wine winners, and 3 of the Top 20 in CA, did not participate in CQP 2019. This was surprising. We should try to contact these stations and understand why we lost them.
 - Gain: 4 stations in the non-CA 2019 Top 20 wine list did not participate in 2018. This was encouraging to see some serious participants appear seemingly out of nowhere.
 - Same: all of the Top 20 S/O CA 2019 wine winners participated in CQP 2018 in some form.
 - Net result: we lost the overall participation of 6 high scoring stations in CQP 2019 compared to the prior year: 3 in CA and 3 outside of CA.
- We need to focus on ways to motivate 2019 participants to return in CQP 2020, bring back CQP 2018 participants who skipped 2019, and understand how we can inspire new participation in 2020 that we haven't seen in prior years. We cannot just expect participation to magically flock to us in CQP 2020 because of more people staying at home due to COVID-19. We also should try to understand from participants themselves why they either did or didn't participate. If we understand it, we'll be able to better influence and motivate the increased participation we want in 2020.

Operating Time

CQP is a 30-hour contest. S/O can participate in 24 of those 30 hours, while Multis can participate all 30 hours. I wondered how many hours that stations participate in CQP. Tom NS6T calculates the number of on-time minutes for every log submitted. That allowed me to analyze operating time in several different ways, shown in the following figures. K6AQL/M operating time is considered as one large log instead of 22 small logs.

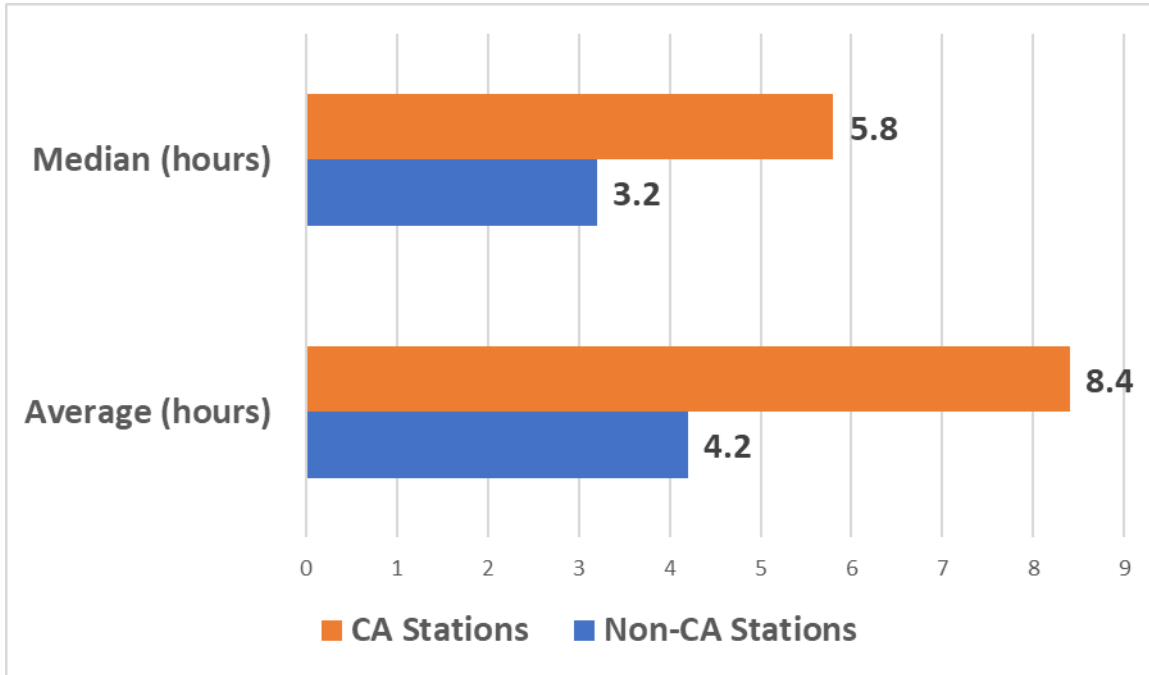


Figure 3. CQP 2019 Participant Median and Mean Operating Time (hours)

For those of us in NCCC who operate a lot of hours in contests, this might be an eye-opening chart. Things I concluded:

- Median and mean operating time was less than I would have guessed.
- CQP relies heavily on stations outside of CA that operate less than four hours. Clearly these stations are not chasing a county sweep. If we can find ways to extend these stations' interest for an additional hour or two by giving them something reachable to chase, it will greatly benefit the contest.
- Most CA stations operate less than six hours. If we can extend the amount of time that some good stations are on the air, perhaps through remote Multi-ops, we give the part-time stations outside of CA more stations to work and more reason for them to keep the radio turned on.

For the stations that submitted logs in both CQP 2018 and CQP 2019, did they operate more time or less time in CQP 2019?

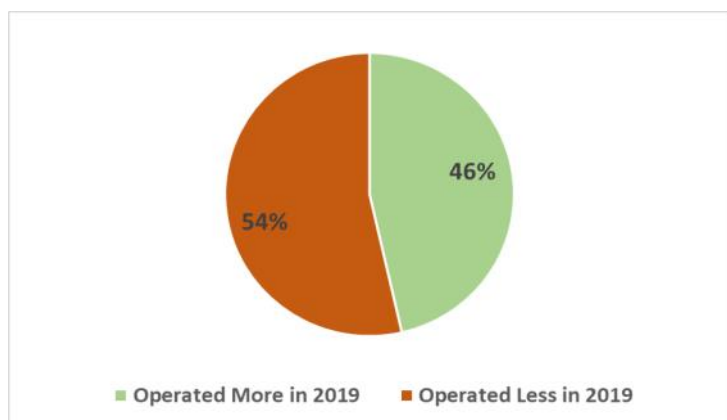


Figure 4. CQP 2018&2019: Repeat Participant Operating Time Difference

For stations that participated in both CQP 2018 and CQP 2019, how much more time, or how much less time, did they operate in CQP 2019?

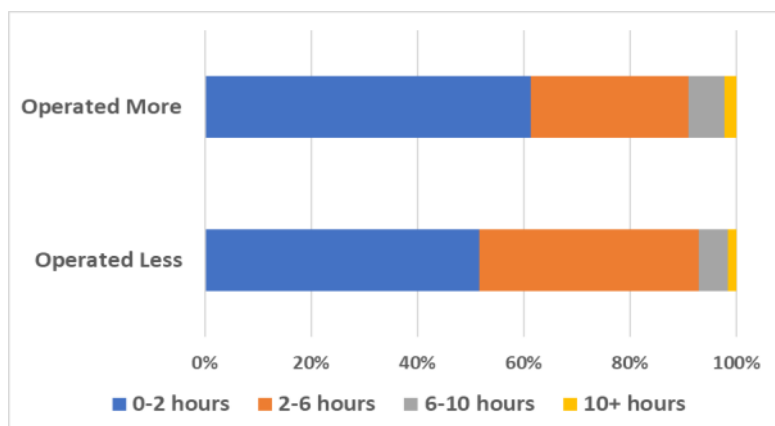


Figure 5. CQP 2018&2019: Repeat Participant Operating Time Change by Range

Observations:

- A majority of participants operated about the same amount of time both years, +/- 2 hours.
- For the stations that operated less, 41% operated between two and six hours less. That's significant because it was not replenished by stations that operated more. Just 30% of the "operated more" group operated between two and six hours more. This is concerning and is an area for the CQP organizers to try to address.
- The above is partially understandable because band conditions were worse in 2019 compared with 2018. In 2018, we had a 10m opening, and 15m supported a good number of QSOs. In 2019, 10m was non-existent and 15m was difficult. Also, our possible butt-in-chair time decreases with every birthday that we have. However, we should not just blame these factors and throw up our hands. The CQP organizing team can create some motivating ways to change this trend in CQP 2020.

For the participants that we gained in 2019 compared with the ones we lost, I wondered if there was any difference in operating time between these groups. In summary, there wasn't a significant difference. I placed these stations into 0-2 hour, 2-6 hour, 6-10 hour and 10+ hour groups. The percentage breakdown between stations we gained and stations we lost was within a few percentage points in each group.

Fixed Station Impact

We often discuss how important that expeditions and mobiles are for county coverage in CQP. However, we don't spend enough time discussing fixed stations inside CA. I wanted to analyze their impact in CQP.

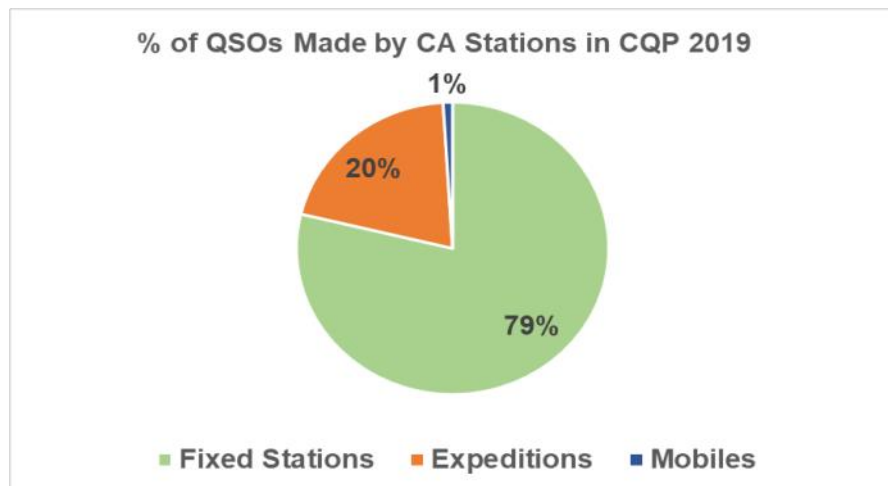


Figure 6. CQP 2019: Percent of All QSOs Made by CA Stations

Clearly, fixed stations inside CA are vital to the success of CQP. With nearly 80% of all QSOs made by CA stations from fixed stations, we would not be a viable QSO party if we only relied on expeditions or mobiles for all our QSO activity as well as rare county activation. Most QSO parties have light participation and modest seriousness from fixed stations inside their state or region, and people quickly run out of stations to work. CQP shines from an activity perspective because of our large number of fixed stations who are serious in the contest.

Expeditions accounted for 15% of the number of CA logs received, but 20% of the QSOs made by CA stations. 20% is an impressive number from portable stations. Since it is likely that there will be fewer expeditions this year, we'll need to find ways to maintain these QSOs and shift from some expeditions to fixed stations.

Recommendations

At the June 9 meeting, Glen W6GJB and I will be presenting about CQP. In addition to last year's expeditions, we will be discussing our conclusions from all of the data in this article and my previous CQP articles this year. We'll be outlining rules changes, guidance, motivation and new plans for CQP 2020.

During this time in the world we need something to look forward to. I hope that we can all look forward to CQP this year on October 3-4. See you in the Zoom meeting on June 9.

Point Generator Profile

Fred (Skip), K6DGW

(as interviewed by Bob, W1RH)

You obviously know who our Point Generator is this month, just by looking at the title. If it wasn't in the title, however, I'd play a guessing game with you:

What call sign first comes to mind when you see the letters, NCCC?

Well, several come to mind, so let's narrow it down a bit.

What call sign comes to mind when you think about who's always there for you on the NCCC Reflector?

Easy, right? K6DGW! Some of you call him Skip. Some of you call him Fred. He answers to both and he's one heck of an asset to the Northern California Contest Club

I have not seen Fred's station since he moved to Nevada (taxes, family, etc.), but I did get to visit his station in Auburn. Big tower. Big beam. Lots of land. Big house. Real close to the airport. That's about all I remember. He was also only about a half hour from my point in Lotus....well make that 45 minutes considering the harrowing drive through the American River Canyon. It was easy to hear Fred in the contests when he was in Auburn!

Speaking of contests, I'm not sure just when Fred first started posting to 3830, or when 3830 first fired up, but you'll find Fred's scores in there for every year dating back to 2005. While Fred may not be the winner, he's always in the hunt. He participates in our contests, and that makes him a Point Generator. That's what being a KB'er is all about, isn't it?

Besides being a team player and an active participant in our Reflector, you can also associate the word, FLOGGER, with K6DGW. When I was president, Fred was always there for me, when it came down to organizing NAQP teams, and making sure everyone submitted their scores. I can't begin to tell you just how much I appreciated that and I'm sure many other former presidents of our club will agree.

Oh yeah, almost forgot about that Worked All California Counties award. Yep, K6DGW has quietly and efficiently managed this NCCC sponsored award program for years. [See *Fred's WACC article in the February, 2020 JUG, Issue # 571, Page 13. Ed.*]

OK, enough about building up Skip's ego. Now it's time to hear from Fred....ah Skip.

Name/Call Sign: K6DGW

Former additional calls: KL6ETK, HS1FJ, WA5SNP

Location: Sparks NV

How much property do you have? City lot, HOA

Describe your antenna system:

Current: WOOF [Wire On Organic Fence]. 136 ft. end fed wire along top of 6-ft. wooden fence. It works surprisingly well despite what one might think.



K6DGW, Fred, now in 7-land just east of Reno, often supplying that often rare NV multiplier.



Now this would have the best "guess the contester" photo ever! { Ed.} It's Fred at Galena AFS Alaska, '63.

Additional Antennas: Everything at W7RN which I operate occasionally remotely.

What's in your shack? K3/100, RemoteRig RRC1258, P3 + K2/10/Alexloop for summer outside QRP efforts

What are your previous QTH's? 5 acres in Auburn CA [38 years]

If you're working, what is your career? If not, what was your career?

Eclectic ... at best:

Broadcast engineer KSBY-TV [during college]
USAF Galena AFS AK [Communications Officer]1963
USAF SE Asia [Airborne Combat Comm Team Leader] 1964-1967
USAF NASA MSC Houston [trajectory planning/guidance analysis-Apollo] 1968-1970
USAF McClellan AFB CA [airborne radar system] 1970-1972
System Engineering [DoD/DoE contractor] 1972-2000
Retired 2000-present

Married? 51 years **Kids?** 4 **Grandkids?** 10 **G. Grandkids?** 5

How many DXCC entities have you worked? >200 mixed, I haven't counted lately. I've never been much into DX and most of what I have is accidental

What are your favorite contests? NAQP CW, 7QP, RTTY RU, NAQP RTTY. CQP used to top the list with the annual ALPI expedition, but it's less fun now from N. NV. The last Zoom meeting has propelled me to see what I can do with the KB award from home and/or remote @ W7RN. With 7QP down, I'm off to a fair start with 854 Q's and 3,381,840 KB Award points.

Any tips for contesters? I take tips from contesters, I don't give them [:=)

What would you like to see changed in NCCC? Nothing. Seems to be running pretty well these days.

Any other hobbies besides ham radio? History [mainly US], math puzzles



K6DGW Dong Ha RVN



K6DGW – Now.



Where ham radio happens – K6DGW aka K6DGW/7

Tube of the Month

846

Norm, N6JV

One of the smallest water cooled tubes made in the 1930s and 40s was the 846 triode. It was designed to be a general purpose tube with an output of 2.5 kW. Its simple construction with short internal leads allowed it to operate up to 50 MHz. The tube was a bit under 10 inches long. In operation, it would sit with the metal anode in a tank of cooled water. One of the filament leads has a number of ceramic beads around it to keep from shorting across to the second lead.

The only equipment that I can find that used this tube was the three-ton BC-340 amplifier from World War II. This amplifier delivered 10 kilowatts into 600-ohm feeders and used four of the 846 tubes. With the complexities of matching several parallel tubes, I find it odd that they chose this size of tube as single water cooled tubes were available that would avoid many problems and simplify the circuitry. The four tubes required 11 volts at 204 amps to light them all.

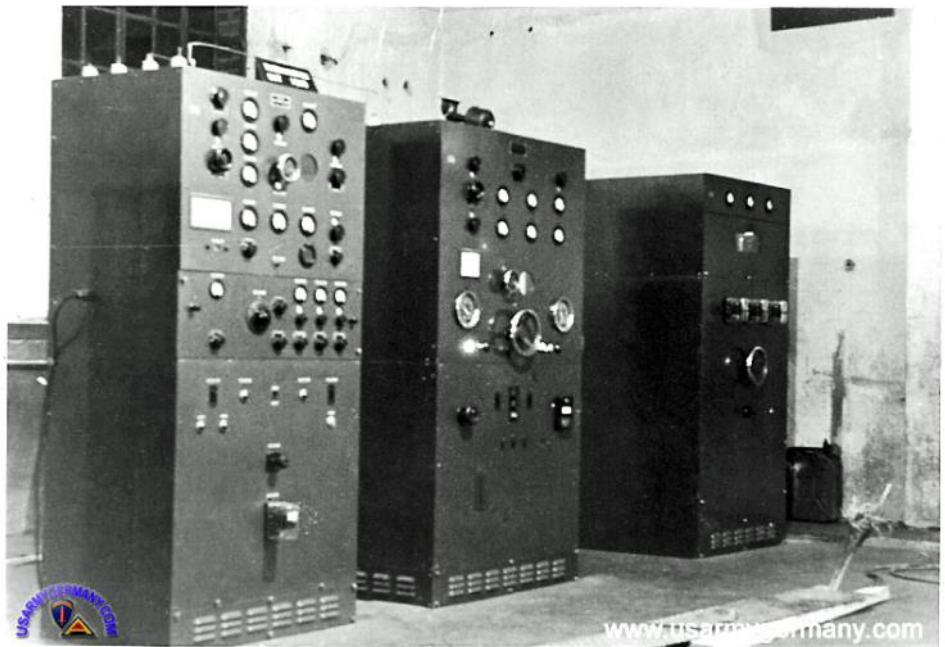
The driver for the BC-340 was the BC-339 which was a kilowatt transmitter operating from 4 to 26.5 MHz using CW and FSK. The Army photograph below shows the BC-339 on the left, the BC-340 in the middle and the unit on the end may be the rectifier unit. In addition there was a chiller for the distilled water. Distilled water must have been hard to find in remote locations, so a still was provided. After the needed distilled water was produced, the Army personnel “re-purposed” the still and kept it very busy and popular with the troops.

Visit the museum at N6JV.com

Norm N6JV



The 846



Army photograph – BC-339 on the left, the BC-340 in the middle. The unit on the end may be the rectifier unit.



NCCC Membership Information

If you wish to join NCCC, please fill out an [application for membership](#), which will be read and voted upon at our monthly meeting.

To join, you must reside within [club territory](#) which is defined as the maximum of:

- Northern California, anything north of the Tehachapi's up to the Oregon border, and
- A part of north-western Nevada (anything within our ARRL 175-mile radius circle centered at 10 miles North of Auburn on Highway 49).

Life Memberships.— \$250.00 Contact secretary.nccc@gmail.com. The 80/20 Rule: Members who have reached 80 years young and been a NCCC Member for 20 years are eligible for Honorary life membership. Contact secretary.nccc@gmail.com

JUG Articles Wanted!

Without your help we cannot produce a quality newsletter so please consider submitting a suitable article!

The editor welcomes any and all relevant articles for inclusion in the JUG.

The soft deadline is 7 days before month-end. The preferred format is MS Word (.doc or .docx) Arial 12 point. Pictures should be full resolution. Send your material to Bill, N6ZFO at n6zfo@arrl.net. Include pictures or charts in-line with the text, or identify them by file name at the insertion point.

Northern California Contest Club Reflector—Guidelines

The NCCC reflector is devoted to the discussion of contesting.

Topics include, for example, contests, station building, dx-peditions, technical questions, contesting questions, amateur radio equipment wants/sales, score posting, amateur radio meetings/conventions, and membership achievements.

Postings may not include personal attacks, politics, or off-subject posts. Such postings will be considered a violation of the Guidelines.

Violations of reflector policy may result in removal of the member from the reflector and possibly from club membership in good standing.



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