



Publication of the
Northern California
Contest Club



Issue 576

July 2020



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— Greg, N6GD became a Silent Key on July 13, 2020

Inside this Issue:

	Page
President's Report — WD6T	1
About the NCCC	2
July 25, 2020 Meeting — Dr. Sandy Faber	4
Editor's Column N6ZFO	5
CQP Corner — N6DE	7
RF Quiet 12.5V Power Supply—K6KM	12
Field Day in a Pandemic. Stories from NCCC	
K6MI, K6GHA and KU6F	17
Point Generator Profile, N6RO — W1RH	23
Tube of the Month — N6JV	25
NCCC Information	26
HRO Advertisement	27

NCCC June, 2020 ZOOM Meeting Saturday July 25 1230 PDST

"Cosmology, Meaning, and Destiny"

Dr. Sandy Faber

*Prof. Emerita, U.C. Santa Cruz, Member,
National Academy of Sciences*

ABSTRACT: See Page 5

Date: Saturday, July 25, 2020

Time: Chat at 1230 and after talk

Presentation is at 1300 PDST

Web Access Instructions — see

<http://nccc.cc/meetings.html>

QUICK START Guide to Zoom:

<http://support.zoom.us>

President's Report - WD6T

"The Inner Game of Contesting"

We recently got the exciting news that NCCC won the US club competition in CQ WPX RTTY. This is a great achievement that we can all be proud of. But ultimately, we do this Radiosport because we love it.

When N6GD, W9KKN and I did a remote Field Day with the NW6P station, we kept a Zoom meeting open, including video. Operating CW, it was striking how little seemed to be happening from an external point of view. As I could neither see them typing, nor see their screen, nor hear their audio, Bill and Greg just seemed to be sitting there staring into space. It was as exciting as watching people wait for a bus. I quit operating around 2:30 AM and went to sleep, leaving the Zoom session open. When I awoke, my computer showed the exact same image of the same two guys. Was this a trick? Was I watching a repeating video loop?

Of course, internally a lot was going on. Back in 1972, a book was published with the name "The Inner Game of Tennis." It began with the assertion that every game has an outer game (technique, etc.) and an inner game (managing self-doubt, anxiety, motivation), etc. Similarly, there is clearly an inner game of Radiosport. While it is one thing to work hard at the outer game--CW SO2R and the like--there is also everything else that happens during a contest that the real pros understand. These intangibles include dealing with exhaustion without losing rate/accuracy, managing boredom and concentration when the rate gets low, avoiding getting discouraged when Murphy strikes, handling anxiety after missing five "jump-balls" in a row in a sprint, and keeping an even keel when

President's Report Continues on Page 3



Northern California Contest Club

Excellence In Amateur Radio Contesting

Officers:

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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	



ten stations are calling you on 40m SSB in the middle of the night at exactly the same dynamic level, at exactly the same time, with foreign accents, and QRM that sounds like fingernails on a chalkboard. How do you maximize fun and excitement, without lapsing into a physiological response encoded in DNA for the purpose of escaping from saber-tooth tigers?

One such "inner technique" is the notion of sailing on no matter how well or poorly the winds are blowing. You can feel sure you've completely messed up : wrong band at the wrong time, running when you should have S&P'ed, wrong time off, blew the EU opening, forgot to turn the amp on, or violated the 10-minute rule. The flip side of this is the assumption that the competition is doing everything right and is having no problems. Yet both of these thought processes are fantasies. For everything that went wrong, there are plenty of things that went right. And the seemingly invincible guy who is 200 Qs ahead of you had to shut down when a beaver felled a tree and took down his antenna (true story, taken from a 3830 comment from Canada Day.) No matter what happens, it aint over until it's over, and when you cross the finish line, it can often be surprising how well you've done. Or if you didn't do so well, it can still inspire ideas on how to improve the station or the operation for the next contest.

The inner/outer dichotomy is present in making music as well. I once read a book entitled "Stage fright with special reference to the violin," which outlined all the possible anxieties that violinists experience: fear of dropping the violin, fear of dropping the bow, fear of playing out of tune, fear of going out on stage and discovering your fly is unzipped, etc. What all of these have in common is that they have nothing to do with music, which is in the moment. If you are on stage and play a couple of wrong notes, you have a critical choice. You can become distracted by dwelling on the mistakes you just made, which leads to more mistakes. Or you can leave those dead bodies behind, putting your heart and soul into the music you are making NOW. Listening to old live recordings of famous violinists and pianists is fascinating in that their playing is full of mistakes and slightly off notes. Yet the emotion is exquisite. (In contrast, modern recordings, in which any such "errors" are painstakingly edited out, can seem sterile in comparison.) Contesting, like making music, is about the "flow", getting in the "groove." Ideally, you're in the moment and time disappears...well, until 10 minutes have passed and you can finally change bands.

As we celebrate our 50th year as a club (more on our plans for this soon), it can be illuminating to ponder this "inner game." We have such a wealth of accomplished station builders and operators, masters of combining calm persistence with extreme effectiveness. What psychology techniques and attitudes have you cultivated as you worked towards achieving your PhD from the School of Hard Knocks? Inquiring contesters want to know. -

73, Dave, WD6T, NCCC President 2020/21



NCCC Zoom Meeting – 1:00 PM Saturday, July 25, 2020

“Cosmology, Meaning, and Destiny ”

Dr. Sandy Faber

Dept. of Astronomy, UC Santa Cruz; Prof. Emerita, U.C. Santa Cruz, Member, National Academy of Sciences; Prof. Emerita, University of California Observatories.

ABSTRACT: The broad outlines of the history of our Universe are now clear. This talk will summarize the modern picture for the origin of our Galaxy and the formation of our Earth, Sun, and Solar System within it. Crucially, there are many points along the way where that history could have taken a different turn, raising profound questions about chance, fine-tuning, Deity, and the very nature of reality. The modern cosmic origins story demolishes old myths and challenges us to find new meaning in the existence of Planet Earth and our presence on it.

Date: Saturday July 25, 2020

Time: Open Chat: 12:30 PM Meeting: 1:00 PM followed by open chat.

Instructions for connecting to the meeting by Zoom Video Conferencing:

Please refer to NCCC web page announcement at:

<http://nccc.cc/meetings.html>



Editor's Column

Bill, N6ZFO 415 209-3084

Prof. Sandy Faber, internationally famous cosmologist and member of the National Academy of Sciences, delivers her second talk to NCCC on Saturday. The first, many years ago, organized as a Stanford departmental seminar by Dave Leeson W6NL, was an over-the-top success. Notably, there are two female cosmology Academy members in the general area of astronomy, a field which has been “difficult” for women. The other is **Prof. Martha Haynes** of Cornell. Sandy (2012) and Martha (2019) both received the coveted Bruce Medal, awarded since 1898 by the Astronomical Society of the Pacific. For a fascinating history of the Bruce Medal see <http://www.physastro.sonoma.edu/BruceMedalists/BruceMedalHistory.pdf> I had the pleasure of meeting Martha Haynes at Cornell in the early 1980's on a visit to the Cornell Plant Physiology Department.

In the evening after Sandy's NCCC Zoom lecture be sure to observe the exciting Comet NEOWISE, formally called C2020 f3 (NEOWISE), as you contemplate the deeper significance of our role and status in the cosmos. Grab a pair of binoculars, find a reasonably dark area with an unobstructed view of the Dipper in Ursa Major, and look directly down toward the horizon. Most observers will, under clear skies, see the comet even without binoculars. It's the most exciting comet since Hayakutake and Hale-Bopp in 1996-7, although probably not in the “Great Comet” class. Since antiquity, comets have been considered portents of calamity and disaster. Perhaps this one should be called the “COVID Comet.” Below are two pictures of NEOWISE taken in Kelseyville at N6ZFO recently, one while it was a morning comet (through a telescope) and the second as it appears just after dark using only a DSLR camera. The early morning picture shows a dust tail which is bi-furcated—an unusual occurrence which hasn't been explained. The comet is now visible just after dark, much more convenient. In the photo below you might be able to discern the blue ion tail to the left of the dust tail.

While on the subject of calamity and disaster: In the same week NCCC lost two significant contributors.

The July 20 passing of Greg DesBrisay, N6GD shocked all of us — We'll have more later when we receive full details from his son, Jerome. Greg served ably on BoD as Secretary last year and has contributed significantly as JUG Assistant Editor.

While not an NCCC member himself, Grady Ferguson, W5FU, made immense contributions to NCCC through his funding and support to the Tom Taormina K5RC/W7RN super-station. Jeff, WK6I's stellar performance in the July 2020 RTTY NAQP is the most recent evidence of Grady's huge impact on NCCC. Read the tribute on Tom's web page: <http://www.w7rn.com/grady-ferguson-w5fu/> Grady was a victim of COVID19. Quoting from Laurie Garret's book “The Coming Plague—Newly Emerging Diseases in a World out of Balance (1994)” “. . . A small bacterium weighs 0.00000000001 gm. . . A whale 100,000,000 gms . . . a bacterium can kill a whale.”

73, Bill N6ZFO
Editor, NCCC JUG



Comet C/2020 f3 (NEOWISE) morning of July 8, through 8" Celestron Schmid-Cassegrain telescope at prime focus while NEOWISE was an inconvenient morning comet. Note the interesting bifurcated dust tail.



Comet C/2020 f3 (NEOWISE) looking north from N6ZFO July 16. Six 20-sec exposures with Canon t2i 55mm lens, f5.8, ISO 1600 with tracking. Photos were summed in Deep Sky Stacker. A faint blue ion tail is visible to the left of the dust tail.

CQP Corner

Dean, N6DE

cqden6de@gmail.com

CQP Goals and Planning

We significantly changed the CA activation form and the county tracker web pages for CQP 2019. On the surface, you might think that the only people who would care about these results are the CQP organizers. To make this article more interesting to all NCCC readers, I will attempt to explore topics that could be enlightening to the entire contest community. I will omit all the items that only the CQP organizers will find interesting. The questions that I hope to answer in this article are:

- Are contesters accomplishing their goals in CQP? If not, why not?
- How far in advance are contesters thinking about CQP? What can we learn about this as we engage potential participants?

Goals

In the CQP 2019 activation form, I included fields for CA participants to fill out, indicating their CW and SSB QSO goals for the weekend. For each CA station that filled out the survey, I reviewed their participation in the contest. There were 16 responses that were either duplicates or changes from earlier responses. The chart below includes all non-duplicate survey responses, showing everyone's latest entry. The chart also excludes the dozens of other plans from stations who I directly asked about their participation and who did not fill out the form.

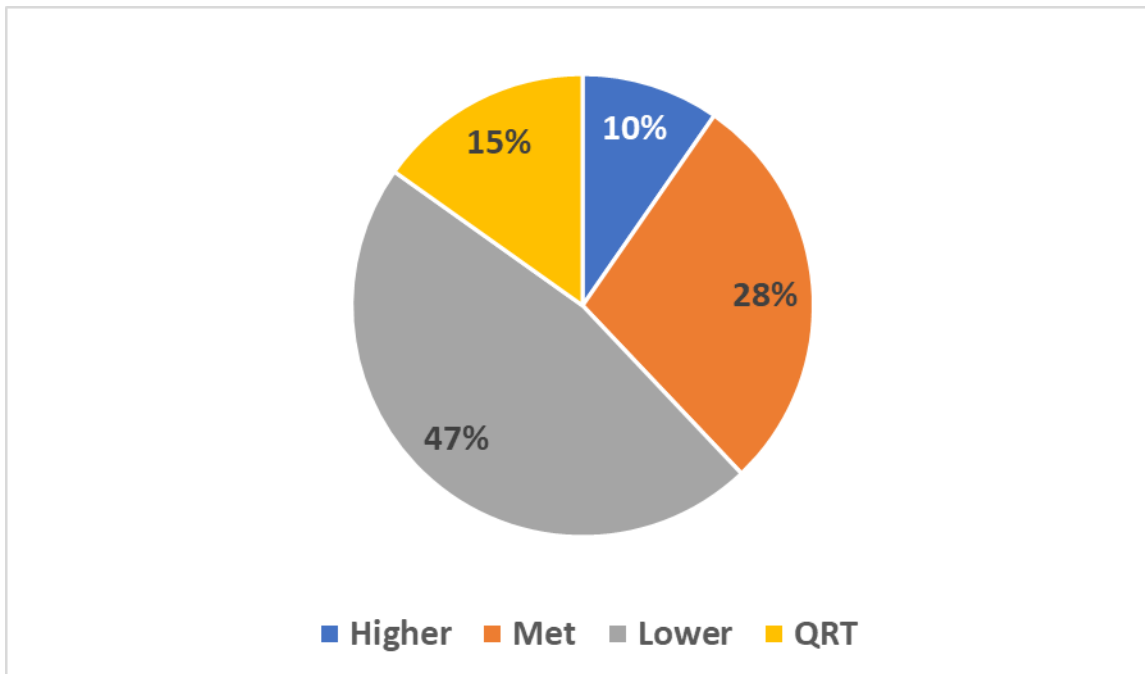


Figure 1. CQP 2019 QSO Goal Results

Goal QSO ranges in the survey were: 1-99 QSOs, 100-249 QSOs, 250-499 QSOs and 500+, per mode.

Higher = stations that made more QSOs than their goal range in the survey.

Met = stations that met the range of goal QSOs in the survey.

Lower = stations that made fewer QSOs than their goal QSO totals in the survey.

QRT = station did not make any QSOs at all.

There were 145 unique responses. There were 22 QRT stations, leaving 123 that made at least one QSO. 103 stations submitted a log, while 20 stations that made at least one QSO did not submit their log.

QRT:

Twenty-two CA stations who signaled their intentions before the contest (15%) did not make any QSOs in CQP 2019. I made sure they did not make a single QSO by performing reverse log lookups for their callsign in every log we received.

Competitive sporting events such as marathons and car races have a DNF statistic for its participants: Did Not Finish. I wondered what contributed to our own DNF tally for CQP, so I asked most of the affected stations. Following were the most common reasons I received:

- **Work.** A majority of our DNF group were forced to be QRT due to unexpected work commitments. Some are on call during weekends and got called out to work. Others are in professions where boundaries are less clear these days between work hours and non-work hours. Participants are finding that weekends are increasingly becoming fair game for work hours. This is especially true in our work-from-home world during COVID-19. This is a societal trend which contest organizers cannot change, but there are steps that organizers can take to minimize this effect. One that CQP organizers can adopt is by making sure the CQP dates are on potential participants' calendars months before the contest. We can do this by early outreach. Scheduling vacation early (in the summer) with our employer for the CQP weekend, and for the Friday before CQP, will help eliminate work conflicts. Another step we can take is to make CQP weekend more compelling to potential participants. If it seems to people that CQP is more like work and less like fun, participants may choose to use that time on the weekend to catch up on their real work instead. We need to create more compelling reasons for people to participate, even during the low sunspots.
- **Family conflict.** Some mentioned that family events out of town caused them to skip CQP. Family gatherings and out of town trips are less likely to happen during CQP 2020 due to COVID-19, but other family conflicts can certainly change a contest weekend to a QRT weekend. The best way to combat this is to review a family calendar with one's spouse and children on January 1 to get the CQP weekend set in stone in all family members' calendars. At the same time, dedicate a different weekend close to CQP as a family-only weekend. This compromise will reduce the chances that your CQP hopes will get derailed.
- **Station problems.** One station told me that upon powering up a radio on Saturday morning of CQP, the radio would not transmit power out. It took two days to track down the problem. Another station told me in the summer they planned to operate an expedition with high power. Then later, it was downgraded to low power. Later again, downgraded to QRP. And finally, was not able to make any QSOs at all. A third station suffered antenna and rotor problems that we were unable to help fix before CQP. One way that we could prevent some of these problems is by encouraging all possible participants to test their equipment in CW and SSB contest in September. Problems found then could be fixed before CQP. Success transmitting on FT8 does not necessarily translate to success transmitting on CW and SSB. How about we send email to all potential participants and recommend

for them to test their station on CW and SSB in a QSO Party in the month of September? CO, TN, TX, AL, IA, NJ, NH, WA and ME all have their respective state's QSO Party in September. This would seem to tie well with the ARRL's State QSO Party Challenge in 2020. Another way we should explore solving station problems is to create a CQP help email list as a venue for anyone to ask for station help.

- **Serial DNFs.** I found three stations that signed up two years in a row on our CQP activation form, and both years, made 0 QSOs. Clearly, they know CQP is happening and were motivated enough to go through the trouble of filling out the form. But somehow, CQP did not seem to maintain their interest when game time arrived. Perhaps if we had something reachable and interesting for them to chase, they would actually participate. Look for more info soon from W6GJB about the 1x1 SE-QUOIA initiative in CQP this year.
- **Band conditions and the FT8 factor.** While FT8 has created enormous interest and activity, it is also creating expectations that are difficult to fulfill on other modes during the sunspot minimum. Here's a quote from one station:
 - "Had logging SW and voice keyer ready. I really wanted this to work. Started on time and heard nothing at all. After an hour I gave up. But I could work people on FT8."

It's unclear whether the root cause for this particular station was local noise, a misconfigured radio, accidentally selecting the wrong antenna, a poor band choice during the first hour, or something else.

Goal Results:

We rarely see the QSO goals of any participants prior to any contest. The exception is AA3B, who usually posts his contest goals on Facebook. The CQP 2019 activation form results give us a rare glimpse into the QSO goals of over 100 CA stations. Part of the intent of asking for QSO goals was to make them public on our page and give participants a reason to work toward those goals, similar to telling your friends about your fitness goals and reporting to them your results every week to help hold you accountable. The thought would be that we would have fewer QRT stations as a result. As the previous section showed, this unfortunately did not seem to reduce the QRT numbers this year. Another reason for asking about goal QSOs was to help evaluate the desired level of seriousness by each participant so that the organizers would know how well each county was going to be represented by mode, as well as providing a numbers based indication to everyone else inside CA during the planning phase. Earlier, we used to rely on a color-coded map of CA. In some circumstances, this caused confusion and incorrect assumptions about the level to which a county was going to be covered. Operators planning an expedition could see counties that were already covered by 500+ QSO stations, and where there was light 1-99 QSO coverage. They could also see whether CW or PH needed more focus by county.

I compared the goal QSOs with the actual QSOs made by the 123 stations that made at least one QSO. The result is an enlightening glimpse into whether a station accomplished their goals, and which ones who missed their goals are good candidates to offer our help this year. It also gives us an opportunity to see why stations missed goals, and how we can prevent a retention problem in 2020 if they missed their goals by a large margin in 2019.

- **Higher.** Only 14 stations exceeded their stated QSO goals in CQP 2019. Almost all of these stations had a strong presence on CW. This is a meaningful result because we are likely to experience the same band conditions in CQP 2020 as we did in CQP 2019. The main exception to this was

K6SZQ on SSB. K6SZQ had an outstanding Phone QSO total from the NC6R/K6SZQ station. An excellent operator paired with a great station was able to have success on SSB.

- **Met.** 41 stations met their stated QSO goals.
- **Lower.** 68 stations were unable to meet their QSO goals. This is 55% of the 123 stations that made at least one QSO. A large majority of these stations are in this category because of their SSB totals. CQP 2019 demanded a strong signal on SSB to thrive.

At this point, it would be easy to throw up our hands, conclude that it was poor band conditions that caused many stations to miss their goals, and not give this topic any more thought. I believe that would be a mistake. We were already experiencing poor band conditions when stations filled out the survey. They most certainly would have taken this into account when filling in their QSO goals. Another explanation could be that stations set intentionally high, even unrealistic, goals for themselves, knowing they wouldn't be able to achieve them but giving them something to strive toward. The phrase people often use for this idea is a "stretch goal." This could have been the case for some respondents, but I seriously doubt it was the case for a majority. Finally, some stations genuinely may not have had any idea what QSO numbers to expect, and filled in a high range. Again, this is possible, but I don't think it represents the majority of respondents after looking at their callsigns and determining that most had participated in CQP in the past.

One station with high hopes wrote this:

- "I was really looking forward to big numbers. Unfortunately, after just a few minutes on the air, my radio started acting up and I couldn't get it going again and had to call it quits. Such is life; there's always next year."

This quote tells us that we can influence the future. Perhaps this person could have benefited from a better radio if one was available to borrow. Perhaps he would have appreciated some mentoring from experienced contesters and a radio test with a mentor on the air or in another contest before CQP. But clearly he has not given up on CQP, as the door is clearly open for an effort this year. We need to follow up him and others to provide technical help and encouragement to come back strong in CQP 2020. One way we can learn more about each of their cases is to simply ask them, either in email or through a survey. I will try to dedicate some time this year for this initiative. I won't be able to help everyone, and will seek the NCCC knowledge base for help.

Planning

We released the signup survey for CA stations on August 1 last year. How early do participants make their plans for upcoming contests? The chart below shows when we received CA signup responses for CQP 2019. In the case of multiple responses from one person (either duplicate or changes to communicate), only the latest update was included in this tally.

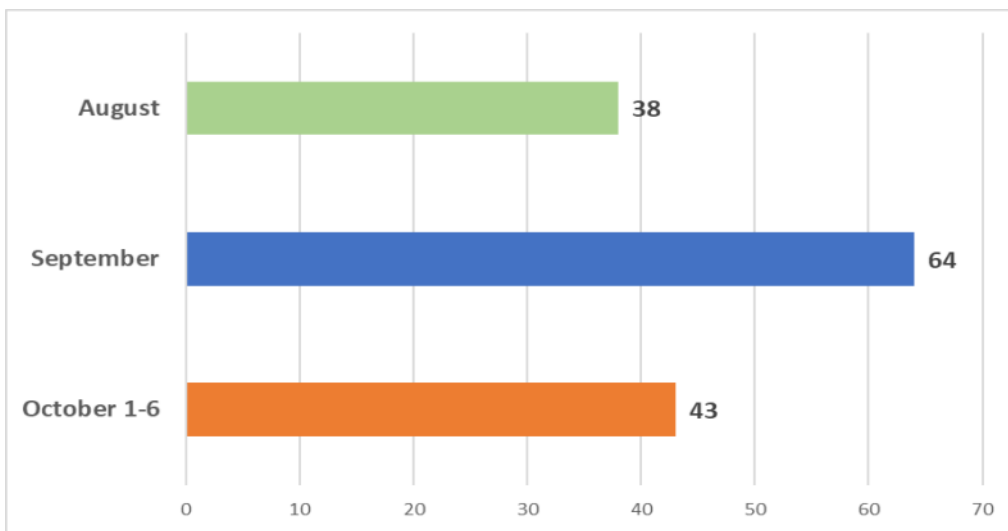


Figure 2. CQP 2019 Signups

Observations:

- 30% of respondents did not indicate their plans until the week leading up to CQP. Eighteen stations filled out the form less than 24 hours before the start of CQP.
- A majority of the responses in September were submitted in the 2nd half of the month.
- This could mean one of two things:
 - Many stations are not even thinking about CQP until the last minute.
 - Stations are actually thinking about CQP beforehand, but they take time to solidify their plans well enough to communicate them to us. I'd like to think most fit into this second bullet.
- Still, over 20 respondents filled out the survey in the first two weeks of August. This was encouraging.
- The responses tell us that it's important for the CQP organizers to address both groups: the early birds and the last minute arrivers. Monthly JUG articles can help keep CQP in our minds, which is as important as ever with so many other things that take our attention this year. Giving early deciders the information they need in the summer is important. John K6MM has already started updating the cqpc.org web page. Expect more content and updates soon from the CQP organizers. On the other end of the scale, reminding potential participants about CQP in the week leading up to the contest is equally as important.

RF quiet 12.3V 56A power supply for \$10 Roberto K6KM

HAMs are usually considered thrifty people (like Boy Scouts). This is not to say we are cheap but we always look for ways to achieve more with less.

Recently, in one of the ARRL email communications it was reported that a Ham purchased a surplus Server power supply for about \$20 and deployed it on his Shack. That spurred my curiosity and did some research over the Internet. There were anecdotal accounts of how quiet they were and videos on how to modify it for Ham Radio use. I jumped the gun and bought one in an online auction for \$9.95+tax free shipping (3 prong cord not included).



The nominal voltage is 12.3V which we all know is a little low for optimal TX in



regular rigs. There are directions and videos on the internet on how to add a resistor and move the voltage close to 13.8V. There are also comments from power supply experts who know about these servers and claim the protection in these supplies is set close to that value, so you might run the risk of tripping it. The output voltage is adjustable so you could settle for a little less than 13.8V. I did not do the modification on mine yet.

The first thing you need to do is trick the unit to power up. This is a rack mount supply so it expects to be plugged in in order to power up. A resistor of around 470ohms as depicted in the picture does the trick. Again, plenty of information on the Internet. The next thing is to create reliable terminals. Bronze screws, crimped terminals and a set of power poles accomplish this task.

Once done I took it to our resident Expert on RFI: Gary NA6O who in a few hours came out with a full analysis and declared the unit fit for Ham Radio use. The full report is included in this newsletter.

Roberto

K6KM



RFI Test Report – HP 12V 750W Server Power Supply

Manufacturer: HP branded, actually Delta Electronics
Model: DPS-750AB-3A

Model number: DPS-750AB-3A **Part number:** 643955-101
Description: Pluggable server power supply, 12V 62.5A, wide-range input
Purchased from: Ebay **Price:** under \$20 typical (used, pulled from equipment)

Test equipment: Isolation transformer, 50 uH LISN, HP 8560A with 20 dB preamp, Tek TDS320A. Note: Spectrum spikes around 100 MHz are FM band leakage.
Tested by: Gary Johnson, NA6O **Date:** June 4, 2020

Summary

Recommend for amateur radio stations: **YES**
FCC Part 15(B) conducted emissions: Compliant
FCC Part 15 labeling: FCC marking on device

Observations:

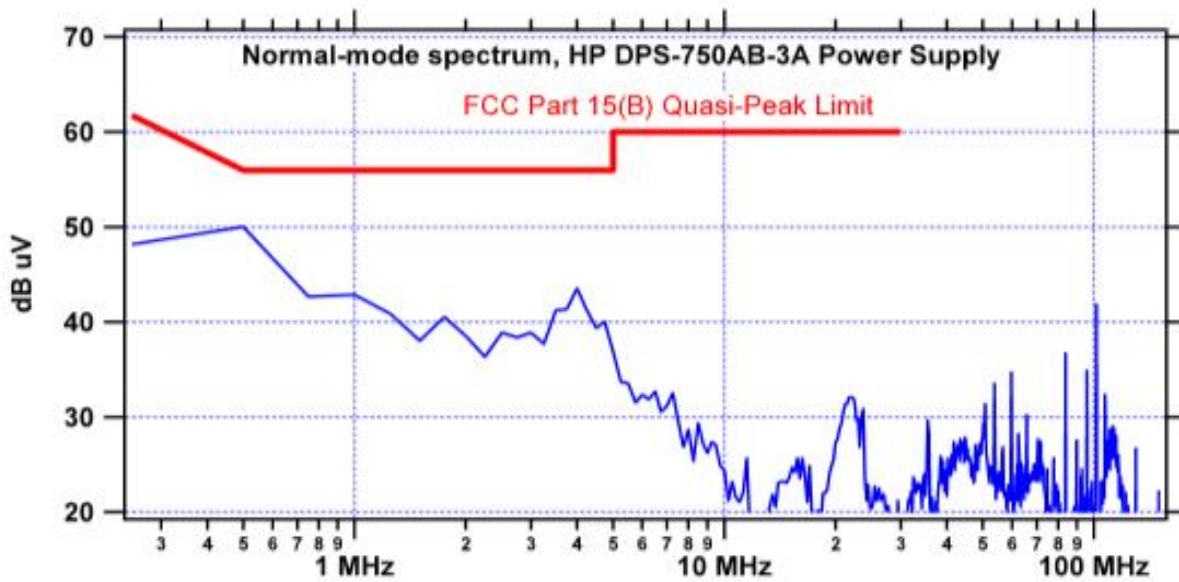
This is a plug-in power supply module intended for servers and is of very high quality but low cost on the used market. Numerous similar models are available but of course it's impossible to vouch for the performance of other versions. Output negative terminal is connected directly to case ground.

All testing performed with a 4 ohm (3A) load. DC output voltage was 12.30 V. First impression is that this is an extremely quiet switching supply. Switching frequency is 110 kHz. If any interference is ever noted from this supply, it will be at harmonics of 110 kHz. See the output waveform plots. Turn-on into the 3A load is a smooth exponential rise (10-90% risetime 20 ms) with no overshoot. The small internal fan is very quiet.

Normal-mode AC line noise is well-suppressed. The NM spectrum shows that all energy is well below the FCC Part 15 (B) limit. There is little VHF energy, my measurements being limited by local FM station leakage. Common-mode noise current is low and, again, no VHF energy. Noise is undetectable with my portable HF radio and direction finding antenna beyond a few feet away, an excellent result. The rise in CM current above 20 MHz was not audible but could be completely suppressed with a common-mode choke applied to the AC line cord. Overall, this economical supply is a good choice for amateur radio use. Note: For most 100W transceivers, intermodulation distortion improves when the supply voltage is increased somewhat above 12V. There are instructions on the web regarding changing an internal feedback resistor to set the output at roughly 13.5-14V.

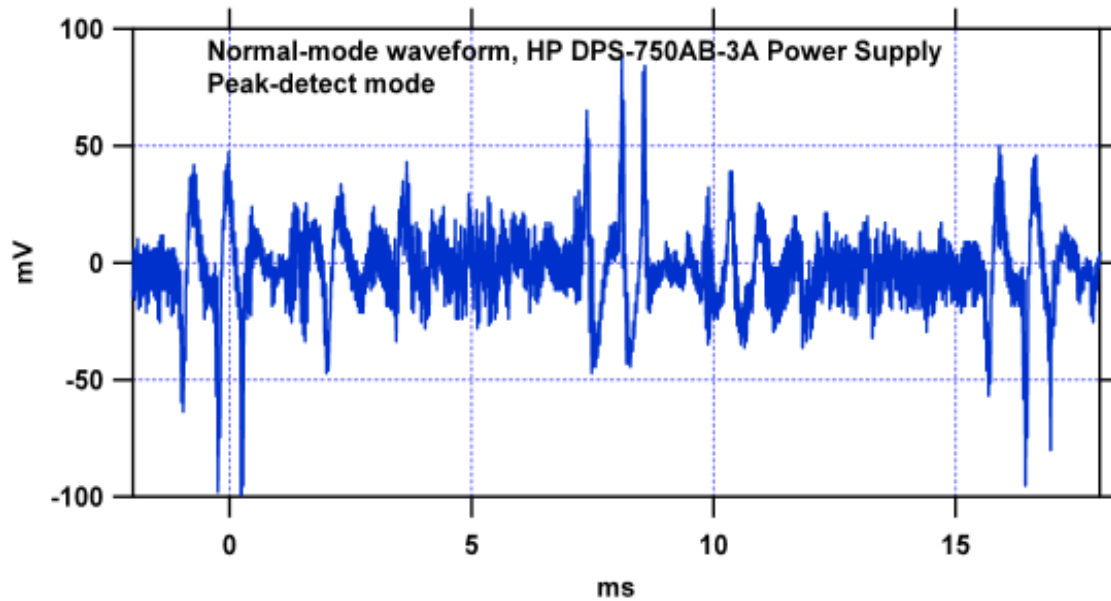


Normal-Mode Spectrum



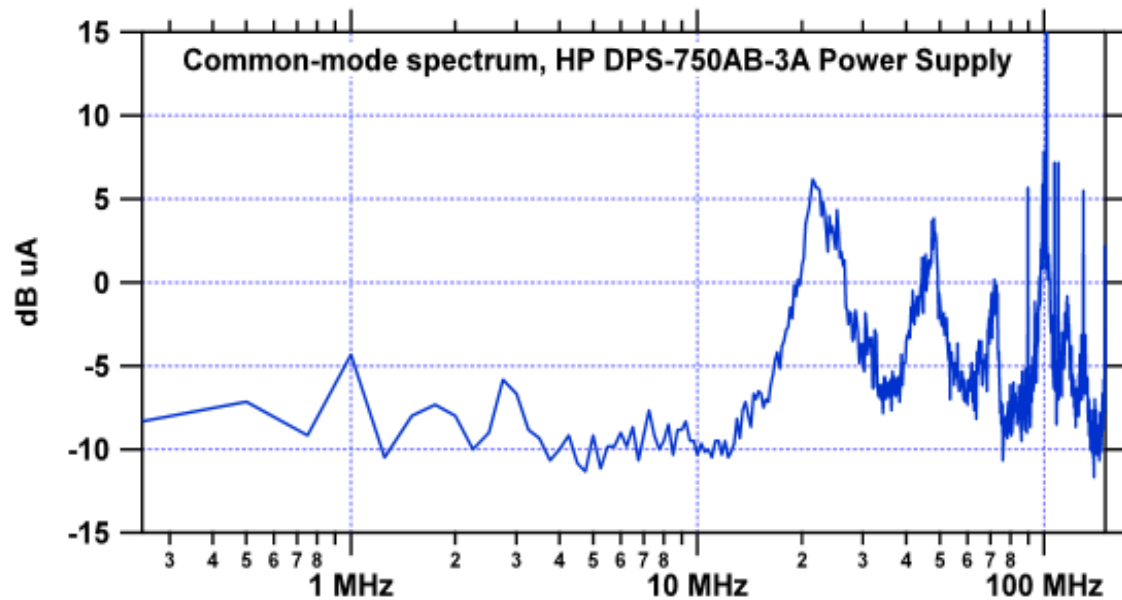
Normal-Mode Waveform

Glitches are well-filtered and energy is all below 100 kHz.



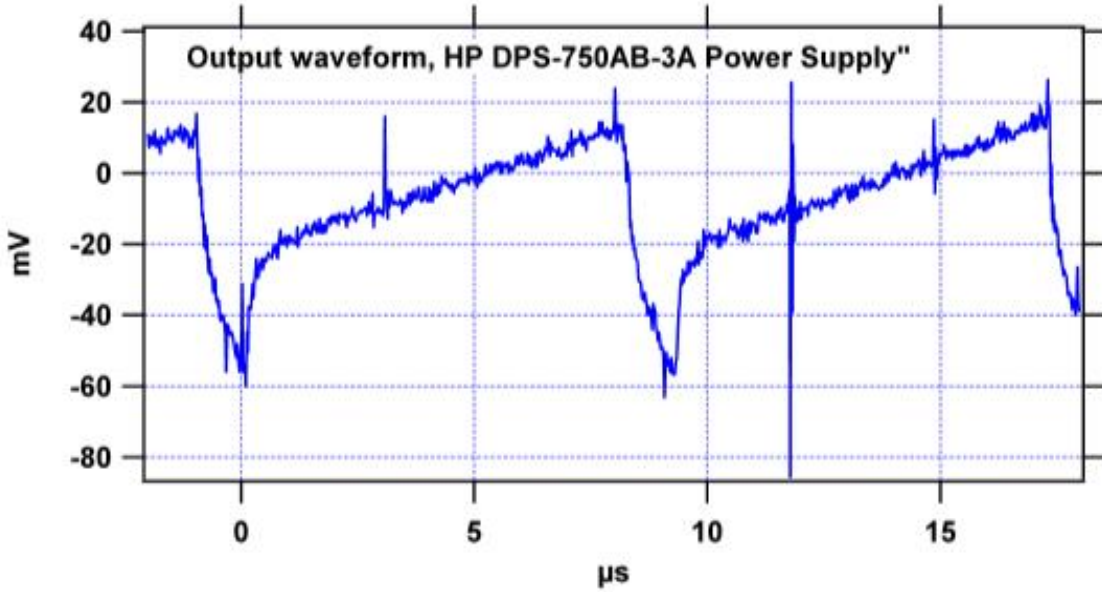
Common-mode Spectrum

The rise above 20 MHz could be completely suppressed with a common-mode choke applied to the AC line cord. Recommended is 10 turns on a 2.4-inch #31 toroid. VHF energy is all leakage from local FM stations.



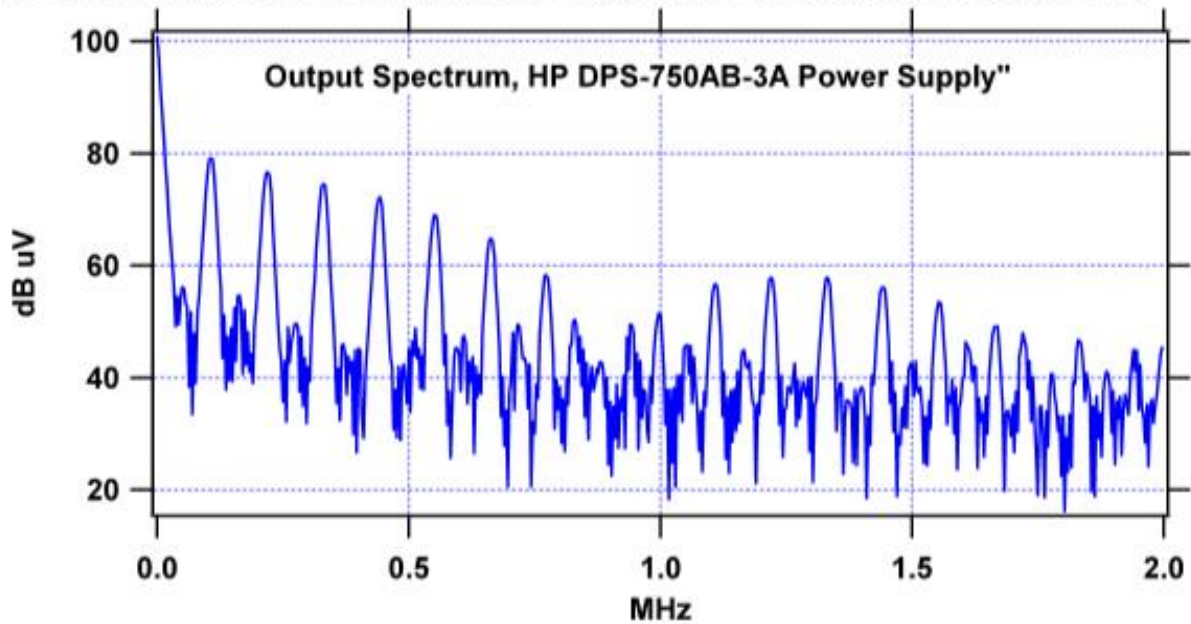
Output Waveform

Switching frequency is 110 kHz.



Output Spectrum

100 kHz and harmonics are clearly visible. Energy rolls off smoothly into the HF spectrum.



Field Day in a Pandemic—Stories from NCCC

While some NCCC groups braved a traditional ARRL Field Day, many chose to adopt a last-minute home station Field Day provision allowing “D” class stations, home station on commercial power, to contact all Field Day stations irrespective of class. Furthermore these stay-at-home ops could contribute their scores to club efforts. The following three stories illustrate the diversity of NCCC-member efforts. (N6ZFO, Ed)

Chew’s Ridge Field Day – 2020 **K6MI, WA6O, WB6HYD, KN6HQQ, KM6CSF and K6CQX** **By K6MI**

The K6MI FD group, known as the Chew’s Ridge Gang, was able to safely go where our field day group has gone since 1964, up at 5,000 feet near Carmel Valley. In the 1A 5w qrp solar powered category, aided by our long term CW guru, Mike, WA6O, we should be in the 7k point total area.

Equipment: 40’ tower trailer with a KT36XA beam; off center feed dipole for 40 and 80M; 2 satellite antennas, and a M2 3l 6m beam. The solar panel set up was engineered by Tom, WB6HYD.

New ham Andy, KN6HQQ, came for his first FD.

Our biggest problem was the 40 mph winds that came on Friday and didn’t abate until Sunday afternoon, causing destruction of some radios and the pop up shelter they were in. With three mechanical engineers on the team, field repairs were managed. The 6m K3 limped through the event, but will go back to Elecraft with a smashed microphone front panel connector.

But all was good through the night with Mike at the key, and the rest of us safely in our beds.



Photos of the K6MI crew including the masked contester at Chew’s Ridge, near Carmel Valley

Field Day at K6XX — N6IP

Don Taylor, K6GHA

with KW6S, N1WC, K6GHA and K6XX himself.

To say we live in interesting times would be an understatement. However, to have participated in Field Day 2020 underscores amateur radio's ability to adapt to conditions, and build and maintain social contacts.

Our story began about a month before field day. Our host asked a small group of local hams if we would be interested in operating a 1A station "with power" in the Santa Cruz Mountains in California.

My immediate reaction was a mix of emotions. First, I'd never operated a station over 100 watts, and this station would be running around 550W, what an opportunity! Second, with concerns of COVID-19, how difficult would setting up and operating a Field Day site? And Last, how well did my skills fit into the team being assembled. As Paul Harvey used to say, "And now, for the rest of the story". I couldn't pass on this event.

Field Day planning is an art. And even more so when it's done with a minimum crew, when you are erecting a tower, and balancing 3 antennas (a tri-bander for 10-15-20m, 40m wire Yagi, and an 80m dipole (plus a beverage)). I'd recommend that you start simply, and build up to taking on a complex effort. However, it helps to learn from someone who is experienced, a visionary, and at times a MacGyver. Our host, Bob Wolbert (K6XX) happened to be all of those. Having worked with him in the past, I knew whatever plan he had in mind would work. Also I knew, with the minimum crew, it would be a Field Day where 'all hands on deck' was expected.

Friday morning, just 24 hrs. before the event, we arrived on site and started the assembly of the tower on a 90+ degree sunny day. First adding the boom and spreaders for the 40m wire Yagi to the tower, and then attaching the 4 element triband Yagi. The 40ft tower was then raised and guyed. The 80m dipole would be hoisted up into position, as we flew 'the colours' on the tower.



N6IP Field Day Station

Photo—K6XX

Friday afternoon we began the station setup and configuration. We knew we wanted to cover the basic modes of Sideband, CW and Digital, so we needed to ensure the configurations and PC software was correctly installed and operating. Tom Stollar (KW6S) was our Digital and VHF/UHF captain. Reed Cotton (N1WC an ARRL VE and instructor) and I (K6GHA) were focused on Phone operation. Our host (K6XX), whose name and call you may remember from the 2018 WRTC, was again the MacGyver focusing on CW. Bob also operated all other modes, and configured the Elecraft K4. We were one of a handful of test sites for the new Elecraft K4. I could only think 'how cool is this?!'.

The station set up proceeded without a hitch, and within five hours we were ready to copy the ARRL W1AW CW bulletin at 5PM Pacific. All went mostly according to plans. In my limited experience, an uneventful set up

for Field Day can only be attributed to good pre-planning, team communication and coordination, and preparedness for the unexpected. Safety, contingencies, and backup resources are all a part of that preparedness.



KW6S on the air.

**Photo by Intentional Video,
www.Intentional.video**

Saturday morning greeted us with a sunny and dry day in the high 80's, and a growing excitement about the event ahead of us. Little did we know what fun Mother Nature planned for this year.

We established the schedule of operation. The four of us, ensured we would be using our own headsets, addressed 'best social and sanitizing practices' for the open air screened mesh tent we were using, and finalized the systems setup for digital operations. The clock ticked to 18:00 UTC and it was about 86 degrees and calm. We were ready. N6IP 1A SCV (Santa Clara Valley).

The operating schedule was set up to guide the team through an introduction to the Elecraft K4, build station and trade-off techniques and awareness, and to ensure mode configurations were operating efficiently. The first ½ hr. made sure we were working on all bands, antennas, and modes, and acted as a guided tour for the new K4 touch screen features. You may ask why we didn't do this prior to the start of Field Day, and the simple answer was timing and the availability of the Elecraft K4. However, getting up to speed went smoothly. After the first half hour, each operator took a one hour shift to test their understanding, and become familiar with the radio and band conditions. The number of 1D stations was noted quite quickly in response to our CQ's.

I started my one hour shift and was amazed at the clarity and ease of listening with the audio from the K4. Even in a pile up I was able to sort most calls. I have a K3, and the improvements were noticeable. As I got used to the radio, my efficiency improved and just towards the end of my first hour I had settled into a fun rhythm and rate. It also was my first time using a beverage antenna and diversity reception. Having a different receiver in each ear was a little distracting for me at first. However it really opened up possibilities for operational improvements at my own home station. As Bob said "It made my 40m rate much better, listening to the Yagi in my left ear and the Beverage on the right. Reduced repeats down to nearly none."

It gave me a greater appreciation of what Elecraft has produced. My focus on making the next contact was so intense it took a tap on the shoulder to be told my time was up. I was having a lot of fun! I reluctantly unplugged and completed the operator change. We then settled into our standard 2 hr. shifts of operation throughout most of the rest of the event.

Dusk fell on the West Coast and we were treated to a fire red reflection of the setting sun off the high forming wispy clouds. 20m was still active. As the sun set, there was a noticeable change in the weather. The wind had increased to about 10mph in gusts, and the temperature was beginning to drop. I retreated to my sleeping bag for a quick nap before my 1am shift was to begin.

I awoke, excited for my shift, and was glad to have brought a jacket. The winds were now about 10 to 12mph steady, and the temps had plummeted into the high 40's as I started. In the next 4 hrs, the weather didn't improve. At the end of my 2hrs, Bob checked in and asked if I could do another shift. I couldn't answer fast enough... SURE! He took over for 30 minutes, while I took the time to warm up a little bit, grab my sleeping bag as a wrap against the cold, and relieved him to pick up again on 40 and 80m. In that short time the wind started to really gust. It was over 15mph and sometimes higher. I could tell it was blowing because the fan in the tent, which was turned off, was freewheeling on its own and at a good rate! The temp was now down into the low 40's. Not sure of the wind chill, but with an open tent layout, and expecting warmer conditions, I know I made a sight for Tom who arrived at 4am. He quickly retreated to get a blanket to use as his wrap, and we completed the shift change.

As dawn broke at our elevation of 2600 feet, we were in the clouds. A thick marine layer of fog and dampness moved in as the winds abated. Band conditions improved, by 9:30am the clouds were breaking, and the temps were now on the rise again. The warmth and band activity was appreciated.

There were no issues heading to the finish line of the event, and we finished with Bob at the helm closing Field Day out with CW. 11am arrived, we shut down the radio, took a breath, and began the station takedown.

In our case, the station teardown was as uneventful as the set up. Within about an hour and a half, the tower was lowered, and the antennas removed. A quick, and much appreciated, snack provided by Bob's wife Miki boosted our spirits and motivated us to the final clean up. Ropes, guys, and lines wound up, beverage and 80m dipole packaged up, 40m Yagi, Tribander, and tower disassembled and ready for put away.

With planning, flexibility, and a little MacGyver'ing, N6IP logged contacts on all HF bands for which we had antennas. Everyone had a great time!

N6IP Field Day Contacts Logged:

- 621 CW
- 649 SSB
- 132 Digital (FT-4/8)

for a total of 1428 contact, and score of 2137 points.

Bonus Points:

100% Emergency Power -	100
Media Publicity -	100 (Film Crew for Elecraft K4)
Field Day Message -	100
Web entry -	50
Total Bonus -	350
Total Score plus Bonus -	2487

Even in these strange times, challenging conditions, and an added surprise from Mother Nature, Field Day 2020 was all, and more, than I expected. Saying I had a great time doesn't capture the full essence of working with a great team, on a great station, and running with power.

Having that additional power was a treat I won't soon forget. As we broke down the station, Bob reminded me we were running an Elecraft KPA500 amp for Field Day, and said with a wink "you could even go another 4dB up in power, to 1500W someday." As a Low Power operator, I am reminded often by Bob, "More power to you". I can't wait for an opportunity at full power!

As we departed, the team agreed that our operation fulfilled everyone's expectation of the most important part of Field Day, great FUN.

Field Day 2020 —The Home Edition

Saraj, KU6F

If the origin of Field Day is to practice message handling and station assembly under difficult conditions, I win!

Everything went wrong, but I persevered.

In my wee HOA townhouse patio, 18' mast doesn't fit tripod, strap to back fence post.

Missing coax adapters, drive to Elmer's house, borrow adapters, tune buddi pole on 20 and 15.

Tuner dead, future research.

K3 mic doesn't work, ran through both menu and configurations, reset all, no joy.

Bear's (sk) rig too heavy for me ICOM 756 PRO II in go box, Jan's (sk) ICOM 746Pro rig AWOL (the search continues).

Brava to Miriam Marlin (quilting friend, but her husband is a ham) for wandering into a Texas HRO two years ago and sending me a Kenwood TS-480 SAT. Out of the box for a first adventure to save field day!

By the time I got on the air and made my first QSO It was like being a brand new ham, the thrill returns!

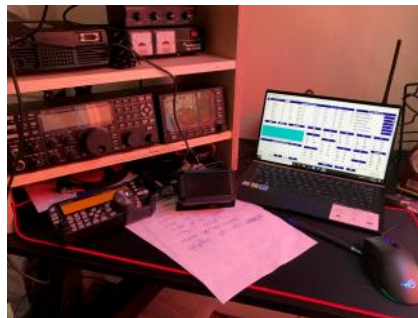
With lots of QRM and my extremely compromised antenna and shack I only made 11 QSO's, but heard lots of stations all over the country and in Canada. I kept a list of all heard, research data for future configurations.

Setting up willy nilly as I did really got the brain working on the minutiae for better configuration, station grounding, etc. Before I tear the K3 apart, I'll improve grounding, that might be the issue. The Kenwood was built for mobile and not nearly so fussy. The lad and hubby will help me install a long wire in the attic and assemble a quod (tak-tenna) in the next several weeks, now I've got the bug again and Sascha's college is out for summer.

Jan's ICOM 746Pro was hiding "incognito" as components of our surveillance system underneath a dust cover.

My current collection of HF rigs (for inquiring minds):

- K3 from Roger's collection
- The TS-480SAT from my beloved friend Miriam
- Bear's (KG6AKL/SK friend from long ago) ICOM 756 PRO which is in a go box with various other bits — we used it for CQP last year.
- Jan's (WA6WTF/SK) ICOM 746PRO with lots of accessories etc.
- And (drum roll) the Hallicrafters SX-101A and HT-37 of the late Bob Shraeder (W6BNB/SK) currently stuck in "waiting for bits and pieces ordered the week before shut down" cleaning and repair status.



Point Generator Profile (by W1RH)

Ken, N6RO

Name/Call Sign: Ken Keeler N6RO

Past calls: KN2EIU, K2EIU (+portable 5 and 0), WA6DKF, W6PAA. Also operated W2SZ at RPI

Location: Oakley, CA. Contra Costa County

How much property do you have? 10 acres

Describe your antenna system:

Current:

- 160m: wire 4 Square
- 80m: wire 4SQ, two x 2L quads
- 40m: 4/4 M2 yagis, top at 135'; 2L vertical array, sloper
- 20m: 5/5/5 KLM yagis, top at 135'
- 15m: 6/6/6 KLM yagis, top at 135'
- 10m: 5/5/5 HyGain yagis, top at 100'
- 6m: 7L JKV @ 40', 7L LFA at 105', M2 loop @ 80'
- TH6 @ 50', WARC dipole @ 35'
- .RX: SAL-30; two reversible 600' beverages



Ken, N6RO

Photo courtesy of Bob, N6TV

Future:

- dreaming of a 80m dipole or 2L @ 170'
- a few small UHF/VHF antennas

What's in your shack? There are four K3 stations, old Alphas, AL1200's, an ACOM 2000, two FLEX 6600m/PGXL amps; and custom antenna switching systems by NA6O.

What are your previous QTH's? Born Danbury, CT hospital; grew up in South Salem, NY; USAF 1962-1969 - Big Spring, TX, San Antonio, TX; TWA brought me to CA in 1970; Belmont, CA, Redwood City, San Jose, CA, moved to Oakley in 1979. Threw a wire out the second story apt. while in TWA training in Kansas City, MO, 1976.

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

- Retired from gainful employment since 1997; supplemental income from music and wine-grapes.
- 1962-69: USAF Instructor Pilot
- 1969-1980: TWA Pilot; furloughed twice. Company went bankrupt
- 1972-76: Real Estate Broker, Redwood City
- 1974-76, 1981-1994: Sales Engineer, Tektronix. In 1994, TEK dissolved the spectrum analyzer group.
- 1994-1997: Sales Engineer, ARC Tech. Resources - EMI test equipment
- Music career since 1945, professionally since 1976. Bandleader, stringman, jazz festival director.

Married? Recently widowed; **Kids:** daughter, **Grandkids?** Three in their 20s

How many DXCC entities have you worked? I have no idea. I kept track of 80m DX until about 1995, when I had ~270. My idea of DXCC is getting >100 countries on each band in a DX contest which I have yet to do on 160!

What's your favorite contest? Used to be SS CW — I have done 66 of them. Nowadays it's the NCJ sprints. Many of my operating team are relieving me in single-op contests. The focus now is hosting multi-multi's.

Any tips for testers? Observe, learn from the experienced ops. To win, BIC.

Any other hobbies besides ham radio? Music and contesting keep me busy enough.

I'm fortunate to have had help building and maintaining the station, as well as operating contests multi-multi. Most are engineers (two are PhD's) and they are leading me into the 21st century technology.

More info at: <http://www.jazznut.com/n6ro/n6robio.htm>



N6RO in a serious SO1T Effort—Single Op, One Tractor. Always watch for smoke emanating from your rig, whether radio or tractor, as its presence can indicate, for example, a major feedline problem, as seen at lower right in this photo. We assume MF on the tractor is “Massey Ferguson,” not a comment on the op QRM’ing Ken’s run frequency. (*Caption can be blamed on N6ZFO*)

Tube of the Month

Norm, N6JV

F-129-B/R

In a previous article, I described the tubes used in the 10 KW, BC-340 amplifier. I noted that it was unusual for the amplifier to have four parallel tubes and all the problems with that configuration. In further research, I found that in later versions of the BC-340, they replaced the four 846 tubes with two of the Federal F-129-B triodes. Each F-129-B was capable of 12 KW output so at 10 KW output, the tubes could coast along at less than half power.

The F-129-B had a maximum voltage of 12,000 volts at 2 amps and was good up to 30 MHz at full output. The filament was 18 volts at 58 amps. The F-129-B was a general-purpose tube and was used in many applications. The tube in the photo was saved from a junk pile outside an old Voice of America station in Ohio. I was told it was used as an audio driver tube. Many of the Federal tubes were also made in an air-cooled version that could be used at reduced ratings. The F-129-R is shown with its large radiator with handles.

The BC-340(*) was in use for several years and to the delight of the communications crews, it still required the same distillery equipment. I can't take credit for suggesting the tube change as it occurred about the time I was born. I didn't find my first big tube until about 1949.



Visit the museum at N6JV.com



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 of age have and been a NCCC Member for 20 years are eligible for Honorary life membership. Contact secretary.nccc@gmail.com

JUG Articles Wanted!

Your help allows us to produce a quality newsletter. Please consider submitting an article!

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

The preferred format is MS Word (.doc or .docx) Arial 12 point. Pictures should be full resolution. Avoid PDF files if possible. Please contact us if that's your only format. Include pictures or charts in-line with the text, or identify them by file name at the insertion point.

Send material to Bill, N6ZFO at n6zfo@arrl.net 415 209-3084

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.



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KENWOOD



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TM-281A
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TH-D74A
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YAESU
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