

Northern California DX Foundation Newsletter



Winter 1982

NCDXF BEACON NET

The NCDXF world-wide beacon net is operating continuously for observational use on 14.100 MHz. This is not an ordinary beacon - it is a net that will consist of 8 beacons located around the world.

All of the beacons:

1. Transmit on 14.100 MHz.
2. Send the same text in four 10 dB power steps.
3. Transmit every 10 minutes, 24 hours a day.

As of this writing (late November '82), four beacons are operating: 4U1UN/B, K6OPO/B, KH6O/B and 4X6TU/B. All other beacons, save one, have been shipped to their locations and should be operating very soon. The one exception is CT3B, for which we are still awaiting import papers.

Sequence of Beacon Transmissions

The current eight-beacon net plan is for each beacon to transmit in sequence every 10 minutes, 24 hours a day. Except for the South Africa beacon, the stations transmit in order from east to west beginning with the United Nations, New York on the hour.

Time	Station	Location
00:00	4U1UN/B	United Nations, NY
00:01	K6OPO/B	Stanford University, CA
00:02	KH6O/B	Honolulu Community College, Hawaii
00:03	JA2IGY	Tokyo, Japan
00:04	4X6TU/B	Tel Aviv University, Israel
00:05	OH2B	Espoo, Finland
00:06	CT3B	Madiera Island
00:07	ZS6DN/B	Transvaal, South Africa

The sequence is repeated at 00:10, 00:20, 00:30, etc.

As other beacons are added to the net, the keying sequence and keying interval will be changed to accommodate the additional stations.

Transmitted Message

Each beacon transmits the same CW message (about 58 seconds long) at about 20 wpm. That allows less than 2 seconds between the end of one beacon transmission and the beginning of the next.

Power Output	Message
100 Watts	QST de K6OPO/B beacon (each beacons signs its own call)
100 Watts	. _____ (9 second dash)
10 Watts	.. _____ (9 second dash)
1 Watt	... _____ (9 second dash)
0.1 Watt _____ (9 second dash)
100 Watts	SK K6OPO/B

Timing is such that the "Q" of the QST for each beacon's identification is within a small fraction of a second of WWV time ticks for each assigned beacon time. In effect, the beacons are a frequency and time standard within the 14 MHz band.

Comparisons

The dashes at each power level are made long enough for the listener to switch back and forth from one antenna to another for comparison during a single dash. Or perhaps it may tell the listener that one antenna is better on relatively local signals while another antenna is better on long-haul DX signals.

We are interested in hearing of any ways you may use the beacons or the dashes to test and compare antennas or receivers. Please let us know of any other uses you many find instructive or usable by others.

General Use of the System

This is a do-it-yourself ionospheric observation system. Hopefully the user may learn something about the day-to-day quality of the 14 MHz band by monitoring signal strengths of the beacons' different power levels. How will these observations correlate with the various A, K and other indices transmitted by WWV? Will anyone hear all 8 beacons in one sequence? At sunrise, if you can or cannot hear a given power level from a particular beacon, will that predict or fortell anything about band conditions that day?

The beacon net is an educational tool for the listener to use. However we are interested in hearing from listeners who make extensive observations. Mr. Al Lotze, W6RQ, a radio engineer, has volunteered to coordinate listener reports. Al is an experienced sun spot watcher and counter. He maintains records of all WWV indices for correlative work.



W6RQ is particularly interested in finding world-wide volunteer observers who can make observations at the same time each day. He is also interested in daily observations just before and after local sunrise and sunset (whatever time that may be). Please report the date, time and lowest power level dash heard for each beacon monitored. See a sample report format elsewhere in this Newsletter.

If you would like to volunteer as a regular observer, send your observations and tell W6RQ that you will be sending a report each month. His address:

Al Lotze, W6RQ
46 Cragmont Avenue
San Francisco, CA 94116 USA

Given sufficient world-wide reports to make the results meaningful, he will publish, through the NCDXF, a regular report. You are invited to participate by sending in your observations. Al will respond to all reports with an appropriate QSL.

We expect that other beacons will be added to the net to give more north-south coverage and "fill in some of the blanks".

Jack Curtis, K6KU, (NCDXF advisor) and Dave Leeson, W6QHS, (NCDXF board member) were responsible for developing the circuit ideas and the electronics. Cam Pierce, K6RU, (NCDXF board member) handled the engineering and production chores. The original idea for a power attenuating beacon net came from NCDXF scientific advisor Mike Villard, W6QYT.

MEMBERSHIP

Since the founding of the NCDXF, members have been asked to donate \$5.00 or 15 IRCs per year to help provide funds for support of DXpeditions, QSL cards, and equipment. These donations plus income from our initial endowment have allowed the NCDXF to help bring many rare countries on the air.

However, it's the old story. The inflationary erosion of buying power has reduced our capacity to support worthwhile DX activities. Meanwhile, expenses for postage, supplies, shipping, et al, continue to rise. The Trustees and other individuals who volunteer their time to the Foundation are not paid.

In order to respond to as many of the worthwhile requests for support as possible, the Trustees would like to suggest that a donation of at least \$10.00 or 30 IRCs accompany your membership renewal. To those who can donate even more, we would appreciate your raising your support to the Foundation. For those of you who cannot increase your donation, we solicit your support at any level, and are glad to have you as a member.



The NCDXF was founded with a generous initial capital gift from an individual. We solicit tax-deductible gifts from any individuals or organizations who are interested in furthering the work of the foundation.

W6OAT VISITS NEPAL

By the time you read this, Rusty Epps, W6OAT, an NCDXF board member will be on the air from Nepal. His trip was planned to coincide with the birthday of the King of Nepal. Two complete stations are planned to use the call 9N38 - this being the 38th birthday of the King.

In the past year the Northern California DX Foundation has provided funds for several expeditions. These include all the trips of DJ6SI to T5, 6W8, and 5V. Also included are the current Heard Island expedition from Australia and the travels of SM0AGD around the Pacific Ocean. The Foundation also supported PY0ZZ, equipment for 7Q7LW, FROFLO for his trip to FH0, the KP2A/KP1 Navassa operation (Where are my cards? de N6ST), OH0W for the establishment of a permanent station, the St. Peter and St. Paul Rocks trip, the expedition to Mellish and Willis. Plus QSL card support for VQ9XX, K6HNZ/CT3, OE2VEL and F6BBJ for their African trips, KA2KVZ for a trip to GD, tubes and antenna parts for 3B8CF and finally ongoing support for CE0AE and 4U1UN QSL cards. Also some money was invested in the attempts of various parties to get to ZA.

QUESTIONNAIRE RESULTS

The last issue of the NCDXF newsletter had a questionnaire designed to help us get to know you a little better. The returns were most helpful and gratifying. Merle, K6DC, and Pres, K6WD, did yeoman service in tallying all the returns. The most senior ham responding was a W4 who has been licensed since 1910. The most junior was licensed in 1979. It seems that it takes a few years for the DX bug to strike. Most view ham radio as their #1 hobby though other interests listed included things as diverse as politics, magic and hunting. (Come to think of it, those aren't too diverse!) They went from drag racing and skydiving to bridge and camping. It looks like a pretty well rounded group, all things considered.

The license class breakdown indicates that DXers tend to be highly motivated.

Extra Class	220
Advanced	126
General	32
Novice	2
Total	380

For foreign license classes, we did our best to translate to the closest equivalent U.S. grade.



The questions regarding lists yielded the overall response that while most don't particularly like lists, about 80% said they would get on one if there was a new one there.

A fair number of comments related to the question of documentation. WA2VUY summarized very well. "The ARRL's microscopic attention to 'documentation' is driving me crazy, i.e. G3JKI/5A doesn't count (did you see the recent cover of Newsweek - who is going to operate without permission?)"

VK3AKK commented on lists that "perhaps if there was some self control exercised by DXers the many problems would not arise." Others commented in the same vein that some pileups are a disgrace with stations calling endlessly (especially on 20 and 80 meters).

I look upon DXing as a personal achievement which is neither aided nor diminished by other DXers and their totals. So when all is said and done, I advocate the following: Live and let live. If you are violently opposed to lists, don't get yourself on them, but keep quiet about the guys who like them ... Its no skin off your back. de CE0AE The Honor Roll is a bunch of stuff. Anyone can get on it with reasonable effort. de W5SUS The Honor Roll should be possible almost all the time. Would like to see ARRL pressured into adjusting country list in keeping with current status. de KH6CF One Thing the lists do is keep the big wheel DXer out of long ragchews with 9N1MM etc. Also they don't work the rare DX over and over to demonstrate their ability. The big thrill is getting one without a list - but a new one is a new one no matter how its obtained. de KS6A DX associations best live up to "The Amateur Creed" when they encourage new activity in the emerging nations for their technical development and international goodwill, rather than just DXCC fodder. de WB7DGU The Honor Roll makes me laugh! All the "phonies" on it. Buddys working rare ones for their Buddys who are working, or off that day. de W9NN Behavior on pile-ups, especially on 20, has deteriorated so much that now is really a shame. DX used to be so nice and everybody used to be a gentleman or a lady, but this is no longer so. Sometimes I am really ashamed to be a DXer. de LU3YL Present DXCC rules cannot satisfy the high demand of working DX. Last alterations have only caused already rare countries to become even more 'wanted'. i.e. 5BDXCC and CW DXCC increased the pressure on the rare countries. More liberal rules would spread out the hunting to more countries, and possibly lift the pressure on countries high in demand. The European VHF awards and awards for working different QTH locators (1 degree by 2 degree squares) is a good example. There are so many rare squares so if you miss some it does not matter. de SM6CMU Believe strongly in list operation for stations like mine, otherwise the big guns would have it all, working even the rare ones over and over to flex their muscles. de W3IF ... we will not be able to continue to justify our amateur radio use of the HF spectrum unless we greatly increase our interest and activities toward International Goodwill. Foreigners are getting tired of failure





20 Meter Beacon Observations

Date/Time	4U1UN	K6OPO	KH6O	JA2IGY	4X6TU	OH2B	CT3B	ZS6DN	Remarks

The first entry is S-meter reading.

Second entry is number of signal levels copied. i.e. 3 means 100, 10 and 1 watt levels were heard

Questionnaire

Name and Call (optional)

Male Female

Married Not Married

Age

Have You operated on the new 30 meter band yet?

Do you think operating awards should count 30 meter QSOs?

Should contests include 30 meters?

How do you envision using the 20 meter beacon net?

What ideas do you have for the NCDXF to help foster International Goodwill?

MEMBERSHIP APPLICATION/RENEWAL

Name _____ Call _____

Address _____

Enclosed is my contribution for \$ _____ Signed _____

Please try to donate \$10 or more. Thank you for your support.



to QSL by "big" American stations. I believe the NCDXF would be well advised to spend funds on equipment for amateurs in developing countries, instead of DXpeditions to "countries" that often have no meaning. de N6ZX

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