DXer

NORTHERN CALIFORNIA DX CLUB

Inside

The Editor's Keyboard

New NCDXC Officers

New officers and directors were elected at the June meeting, and will take over from the present slate at the close of the July meeting. The new Board brings together senior members with a long history of service to our club—including three former Presidents—and newer members assuming elected positions for the first time.

Our 1994-95 officers and directors are:

- President—Knock Knochenhauer, K6ITL. Knock joined NCDXC in 1971 and has been Treasurer, Vice-President, Director, Net Manager, DX Convention Chair and DXer-of-the-Year Chair. He was DXer of the Year in 1993.
- Vice-President—George Allan, WA6O. George joined our club in 1982 and is outgoing President. He has also served as *DXer* Editor, Vice President and Director.
- Secretary—Eric Edberg, W6DU. Eric joined NCDXC in 1962 and has been President and Director. More recently he has been President of NCDXF.
- Treasurer—Bob Wilson, NQ6X. Bob has been an NCDXC member since 1984 and has served twice before as Treasurer.
- Director—Jerry Griffin, W8MEP. Jerry joined NCDXC in 1987 and became President the next year! He also has served as Director.
- Director—Al Koblinski, W7XA. Al joined the club in 1981. This is his first elected office. Al is a sales engineer in the semiconductor industry.
- Director—Stan Goldstein, N6ULU. Stan joined NCDXC in 1991, and also serves for the first time. Stan is a self-employed CPA.

Expanding the Roster

The annual NCDXC Membership Roster contains useful membership information: name, call, license class, address, and home and business phone numbers. But we now live in an era of expanded communications options. Many members now own FAX machines, subscribe to on-line services, and/or have Internet access. Most also log on to the DX Packet Spotting Network.

Outgoing President (and VP-elect) George Allan, WA6O, and I think it is time to include these additional communications routes in the Roster. Please send your FAX number, your E-Mail ID, and whether you regularly log on to DXPSN to the Roster Manager, NI6T. We print next year's Roster in the fall, so do it now, when the idea is in front of you. My new EMail address is NI6T@MCIMail.COM.

Frank Quement Radio Film at July Meeting

The July meeting of NCDXC will be held on Friday, July 8, in Room H1 of the Cubberley Community Center, 4000 Middlefield Road, Palo Alto. This is the same location used for the June meeting and is between San Antonio and Charleston Roads.

The program will feature a movie made by the late Frank Quement, W6NX, showing old-time ham radio. The original film has been transferred to videotape.

From Highway 101, take the San Antonio Road exit and proceed *south*—away from the Bay. There are then two options. 1. Turn right at Charleston (there is a Unocal station on the SW corner) and proceed to Middlefield. Turn left at Middlefield: Cubberley is on your right. 2. Continue on San Antonio and turn right at Middlefield. Cubberley will appear on your left.

Room H1 is at the end nearest Charleston Road. There is parking both in front of and behind the facility. The meeting will begin at 7:30 PM. As before, there are no eating or drinking facilities at this location.

N O R T H E R N
C A L I F O R N I A
D X C L U B

Club Officers:
President: George Allan, WA6O
Vice President: Craig Smith, N6ITW
Secretary: Ron Panton, W6VG
Treasurer: Dewey Churchill, KG6AM
Director: Jim Knochenhauer, K6ITL
Director: Louese Bloom, KA6ING

DXer:
Editor: Garry Shapiro, NI6T
20941 Nez Perce Trail
Los Gatos, CA 95030
(408) 353-1118
NI6T@MCIMail.Com
(or via DXPSN)
Printing, Mailing: Ron Panton, W6VG

DX Ladder: Larry Bloom, KD6XY
2520 Heather Lane
San Bruno, CA 94066
(or via DXPSN)
Roster Manager: Garry Shapiro, NI6T

Club Repeater, W6TI/R, (147.36+)
Trustee: Bob Vallio, W6RGG
Comm. Chairman: Ralph Hunt, AG6Q
Club simplex: 147.54 (suggested)
Thurs. Net QTR: 8 p.m. local time.
Net Manager: Ralph Hunt, AG6Q
DX News: Dave Pugatch, KI6WF
Propagation: Al Lotze, W6RQ
Contest Manager Rich Hudgins, WX6M
Westlink: Craig Smith, N6ITW
Swap Shop: Ben Deovlet, W6FDU
933 Robin Lane
Campbell, CA, 95008
(408) 374-0372
QSL Information: Mac McHenry, W6BSY

W6TI DX Bulletins:
W6TI Station Trustee Bob Vallio, W6RGG, transmits DX information at 0200 UT every Monday (Sunday evening local time) on both 7.016 and 14.002 MHz.

Club address: Box 608
Menlo Park, CA
94026-0608

The DXer is published Monthly by the Northern California DX Club and sent to all club members.

Board of Directors Meeting

The Board met at the home of W6VG. Present were: George Allan, WA6O; Louese Bloom, KA6ING; Craig Smith, N6ITW; Jim Knochenhauer, K6ITL; Dewey Churchill, Jr., KG6AM; and Ron Panton, W6VG. The meeting was called to order at 8:03 P.M.

- Dewey Churchill presented fiscal data for the past 11 months. After much discussion, the Board accepted his summary.
- It was moved, seconded, and passed unanimously that the Procedures Manual, Para. 3-106, Election of Officers and Directors-at-Large, should be changed to add the following sentence to subpara. 3-106b:

The committee chairman shall publish in the June DXer and announce on the Thursday night net, the list of its nominees.

Meeting adjourned at 9:15 P.M.

—Ron Panton W6VG

General Meeting

NCDXC precedent was broken when the June meeting was held at Cubberley Community Center (formerly the High School) in Palo Alto. For as long as I can remember, the meetings had always been dinner meetings. The June 10 meeting was held in a large, comfortable lecture center, with podium. There was no food or drink. Room temperature was cool, while the outside temperature was hitting 100°F. The meeting was called to order by President George Allan, WA6O, at 7:50 PM. No guests were present.

- The next BoD meeting is tentatively scheduled for Wednesday evening, June 22 at the home of W6VG.
- Jim Maxwell, W6CF, made the sad announcement that Bill Johnson, W6MUR, is a silent key. The club will send a card to Mrs. Johnson, but old friends of Bill are urged to do likewise. A memorial paper is being printed by Mrs. Johnson.
- Brad Wyatt, K6WR, Pacific Division Director, spoke about ARRL and Washington action on radio-related subjects. Eshoo, Lantos, Boxer, Dellums and Feinstein, among others, are not in favor of ham radio, and Brad urges us to write Feinstein and Boxer (and Congressmen) ré our ham radio emergency involvement.
- Rusty Epps, W6OAT, is devoting his time in retirement to city and county antenna/tower ordinances and citing emergency uses of same.
- Eric Edberg, W6DU, announced the nominating committee's slate of officers: President—Jim Knochenhauer, K6ITL; VP—George Allan, WA6O; Treasurer—Bob Wilson, NQ6X; Directors—Jerry Griffin, W8MEP, Stan Goldstein, N6ULU and Alan Koblinski, W7XA. The committee had no candidate for Secretary but Ron Panton, W6VG, nominated Steve Stevenson, W6MKM. Rusty Epps, W6OAT, then nominated Eric Edberg, W6DU, whereupon W6MKM withdrew his name. Nominations were closed, and the slate was elected.
- A roundtable ensued, with club members sharing interesting anecdotes relating to ham radio. The low sunspot numbers precluded the usual lies about who was heard or thought to have been worked.
- A second reading was held for Eveline Noyes, KM6KO, with sponsors K6RK and W6NLG both speaking on her behalf. It was a foregone conclusion that a CW operator would be elected to membership. Welcome Eveline!
- The July meeting will again be held at Cubberley community Center, room H-1, (rental $22 per hour). Eat & drink before arriving. I suggest to the Board that we start the meeting at 8 P.M. these summer months! Meeting adjourned at 9:02 P.M.

—Ron Panton, W6VG

Roster Changes

New Member

Eveline G. B. Noyes, KM6KO (E)
1689 Regent Dr.
San Leandro, CA 94577
H (510) 351-0170

Silent Key

R.W. (Bill) Johnson, W6MUR
2820 Grant St.
Concord, CA 94520

Change of Address

Gregory F. (Greg) Engle, N6PYI
13712 Westdale Dr.
Bakersfield, CA 93312-9692
H (805) 588-8009
B (805) 398-5755

Dean C. Bailey, WA6HAN
P.O. Box 1853
Prescott, AZ 86302
H (602) 766-4383
Dean becomes an Absentee Member.

Michael Terranova, KJ6AP
37608 NE 85th Ave
La Center, WA 98629
No phone #'s provided.
Michael becomes an Absentee Member.

Income & Expense Statement (11 months)

Income		*Expenditures*	
Dues	$8,562.00	General administration	$2,580.84
Meetings & dinners	4,691.00	Meetings & dinners	6,622.91
HRO	500.00	DXer printing & postage	6,451.61
QSL sales	450.00	Trophies & awards	511.92
Awards (9BDXCC)	62.00	Badges & pins	138.76
Badges & pins	15.00	Misc. expenses	170.82
Convention	6,676.67		
Misc. (raffle etc)	129.88		
Account interest	343.50		
Total income	$21,430.05	Total expenditures	$16,476.86

Op Cops to Stealing Bux for 3YØ Trip

Wilber gets two to three

Robert Wilber, N4GCK, one of the operators on last February's DXpedition to Peter I Island (3YØPI), has pleaded guilty to bank fraud and mail theft, according to a report in the *Ann Arbor News*.

Under a plea agreement, he will receive 24 to 37 months in federal prison and be subject to three to five years of federal supervision following his release.

The paper said Wilber took checks totaling some $113,000 from the mailbox of a University of Michigan professor and cashed them. He was photographed at an automatic teller machine and his photo appeared in the paper on December 20, 1993. At that time "he knew he was caught," the *News* said.

Wilber, 35, of Ypsilanti, Michigan, avoided arrest long enought to join the expedition to Peter I. He surrendered upon his return, having spent all the stolen money, the *News* said.

—from The ARRL Letter, June 15, 1994

"Artificial Stupidity" Launched

Urb Le Jeune, W2DEC, has started a newsletter called *Artificial Stupidity*. It is obviously a not-so-tongue-in-cheek takeoff on Artificial Intelligence.

The newsletter is intended to be a somewhat-irreverent look at computers for people who tend to be intimidated by them due to lack of experience or downright dislike. As the byline states, "it is a newsletter for people who would rather have root canal administered by *Tip the Tool Man* than learn a new computer application." Hopefully, useable tips and technical information in small doses, liberally sprinkled with levity, will help overcome fear and anxiety.

Each issue will have DOS and Windows tips intended for a broad range of people from novices to power users. Also included will be topical information and Urb's caustic comments on the current computer scene. If you would like a free copy, send a note to Urb at Box 1126C, Tuckerton, NJ 08087, or call him at (609) 294-0320.

—from NJDXA Newsletter, May, 1994

This Life is a Test
It is Only a Test

Had it been a real life, you would have received instructions where to go and what to do with it.

—found on a wall in the Santa Cruz Mtns.

I Remember Don

Hugh Cassidy, WA6AUD

Cass recalls the notorious DXer who changed the face of DXCC forever. Part 2 of 2.

At the end of the meeting, a basket was passed around for voluntary contributions to the great cause. The basket was enthusiastically filled with currency. Many were ready to put their money where their trust was: in Don Miller. Don went east from this June meeting. He had filed a law suit against the ARRL, asking for damages for their actions. Actually, an NCDXC club member—a prominent Bay Area lawyer—was hired by the ARRL as part of the team to handle their side of the case. With all the uproar about some of Miller's operations being disallowed, Don announced he was setting forth on a Caribbean tour. This was to include a stop at Navassa and some other promised needed-ones. (There was a hint that St. Peter and Paul Rocks might be visited.)

Navassa was and is controlled by the U.S. Coast Guard. Its permission is required to land on the island. Don Miller did not get this okay but went to Navassa anyhow. The ARRL said the operation would not be accepted. Then Don moved on to Serrana Bank and Baja Nuevo. He operated from both these needed ones, then disappeared for some weeks. No word at all. Suddenly, there he was—operating from St. Peter and Paul Rocks in the Atlantic Ocean, east of Brazil. This turned out to be the Achilles Heel of the Don Miller Story.

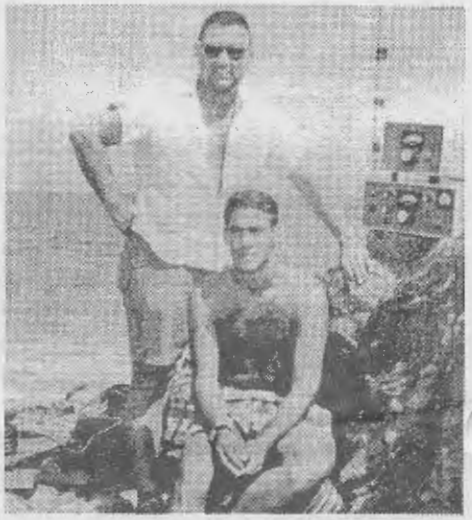
He had the skills and the willingness to travel. He did his homework. Unfortunately, he started cutting corners...

The lawsuit got to the deposition stage, and that was where the whole thing blew up. It blew up so hard and loud that some of the DXers, the more trusting and faithful ones, never recovered either their hearing or their faith in the goodness of mankind. If Don Miller was flawed, the whole world was flawed. One major amateur magazine was so shaken that the word was given never to mention that name again in the publication's columns. The Don Miller photo had been turned to their editorial wall. It probably is still there.

In the deposition stage and under oath, Miller's partner on the trip admitted that they had never been on St. Peter and Paul Rocks, but actually had operated on a boat off the coast of Venezuela, some 1800 miles west of the supposed operation. The legal case blew up. Don Miller had also been giving depositions when his partner spilled the beans. With this development, the taking of the sworn statements was put on hold, and there were some signs of a willingness to settle the whole thing. After some discussion between the lawyers, an agreement was signed and the matter was more-or-less ended.

In some aspects, the matter has never ended. The DXing you practice today is largely directed and controlled by ARRL actions taken after the end of the lawsuit. The good old days of belief in the goodness of man—and especially the nobility and honesty of DXers—came to an end. The ARRL instituted changes which were initially so strict that foreign amateur associations protested them most loudly. Eventually things eased up a bit, but the basic rule that came forth is that you must be ready to prove some things pertaining to an operation, things like licenses, permission to operate—and that you were physically there.

Years ago, I got the definitive word right out of the mouth of Bob White, W1CW, who was then running the ARRL DXCC Desk. A group was ready to go out and put the Spratlies on the air but there was some nagging question about the call sign. They wanted to sign 1S1A. A phone call came from Hong Kong asking if that point could be clarified and would the call 1S1A be accepted? In turn, a phone call was made to Bob White in downtown Newington, who phrased his reply so succinctly that there could be no doubt as to his intent or wishes. "I don't give a damn *what* call they sign," Bob roared into the telephone, "just as long as they can prove that they were there!" Who could argue with such clarity?



Don Miller and Herb Kline, K1IMP perched high atop St. Paul's Rock operating PYØXA.

Bogus photo & caption from CQ, *Dec., '66 (tnx KN6BI)*

Inevitably, steps were taken to straighten out what obviously had been an abuse of trust. The DX Advisory Committee was the first of several such committees authorized to help the ARRL Board of Directors better understand some of the more exotic practices within amateur radio. Other Advisory Committees followed.

The Don Miller matter had demonstrated that the ARRL Board,in many instances, was just unable to comprehend what was going on, DX-wise. Only a few on the Board in those days had any understanding of DXing. Most of them were completely lost when the nuances of the great undertakings were explored. The Advisory Committees

were the road to understanding—if not to better decision-making.

Don Miller persisted for a while, but the bloom was off. A number of his operations were later disallowed, these because of the lack of supporting evidence. In some respects, these were *ex post facto* demands, since the original submissions had been accepted for DXCC credits. Don could not or would not prove the operations had taken place; the ARRL could not prove they were not. Supporting documentation was not forthcoming, and the questioned countries were dropped from accreditation.

Some will even yet ask why the Miller caper happened. It happened because of the internal handling within ARRL of what was then considered a minor activity. In retrospect, many of the more ancient DXers at times did speak guardedly among themselves of other DX operations which, when carefully reviewed in later years, raised some very strong and still unanswered doubts. That time is now long gone, but back at the height of the Miller problem there was some talk that the ARRL was concerned that any legal hearings might bring some of the then long-gone operations back out into daylight for scrutiny. The point might have been raised that if such operations in the past had been accepted, why were Miller's questioned when these others had not been?

In short, it was a situation that had developed over many years. Don Miller brought it to perfection. He had the skills and the willingness to travel. He did his homework. Unfortunately, he started cutting corners. One who accompanied Don on some of his later trips even said that he got lazy. Even when a legitimate operation could have been mounted with no great effort, it was felt that the happy DXers back home would never know that the operation was not from where it was claimed, so why go to all the trouble? Often, he did not.

Don Miller should be remembered for the big changes that were wrought within DXing by his activity. He made it what it had never been before and possibly has not been since. It was perhaps an early full-time DXing effort. A "World Propagation Study," it was called. It did happen once; it is doubtful whether something like this could ever happen again. Some will still always be ready to denounce Don Miller, yet some of the castigators probably have QSLs from him which gave them new DXCC counters and new countries. Others denounced Miller because they felt then, and still do, that their trust in him was betrayed. Even today—over a quarter century later—some cannot find a good word to say about him. Yet others will still remember him as superb operator who could figure out places that would count for new countries.

There are plusses and minuses all up and down the line, but that night at the NCDXC meeting at the Fork and Cork there was seen neither dissent nor disbelief. Perhaps the only word whispered in an aside was: "With all those photos of the Laccadives and Heard Island, how come none of them show Don Miller in the picture?" A good question! Sometime, when the pace is slow and someone talks again about the Don Miller years, ask what operations actually were nailed by the ARRL as frauds. It may be surprising even yet to some, but it does seem that the St. Peter and Paul Rocks was the only one. The other Miller efforts that were deleted were because the requested supporting documentation had not been supplied.

In later years a lot of things went wrong for Don Miller, but that is another story. He had been the brightest star in the DXing firmament. He blazed out along the way. After twenty five years, it may be well to remember what happened, how one can trust and lose and how one of DXing's top operators fell from the pinnacle. And, above all else, remember that the earmarks and procedures of DXing as you know it today are directly traceable to Don Miller and what he did—and what he claimed he did but did not do.

N6VAW Posts YL 1st

In commemoration of the 50th anniversary of D-Day, Marilyn Bagshaw, N6VAW, became the first woman to operate from the radio room of a World War II submarine. With permission from the Navy, Marilyn made contacts on CW and SSB from the U.S.S. *Pampanito*, using her amateur radio callsign followed by the original radio callsign of the submarine, N6VAW/NJVT.

Amateur radio operators occasionally operate from the *Pampanito*, which has been under restoration at Pier 45 in San Francisco for several years by the National Maritime Association and many volunteers. Noteworthy was Marilyn's CW QSO with a man who had been aboard the *Pampanito* when she was commissioned over 50 years ago!

The *Pampanito* (the name of a South Pacific fish) made six patrols, sinking six Japanese ships—and narrowly missing destruction on several occasions. She rescued 159 Allied POW's from the water in September, 1944, several days after participating in the sinking of Japanese ships carrying them.

Pampanito is open to the public daily; a self-guided audio tour is available for a small fee. Radio amateurs are usually on board on Thursdays and welcome other operators.

—Marilyn Bagshaw, N6VAW

Coming Events

- Livermore Swap Meet, 1st Sunday each month, Las Positas College, Livermore, 7 AM-noon
- Foothill Flea Market, 2nd Saturday, each month, Foothill College, Los Altos, from 7 AM
- IARU HF World Championship, July 9-10
- ARARM Convention, Puebla, Mexico, July 21-23
- Northwest DX Convention, Richmond, BC, July 22-24
- SEANET CW Contest, July 23-24

DXer Interview

The Bright Side of the Force

A Conversation With Force 12's Tom Schiller, N6BT. Part 3 of 3

(Ed. note: at the end of Part 2, the subject was wire-loss in 80m linear-loaded dipoles.*)*

It sounds like a topic for a Master's thesis, at least. Are you sure you want to offer this option?
Sure. If the primary interest is ragchewing and the customer wants an amplifier-friendly antenna...
Do you really have customers who would go through this much trouble who are not serious DXers?
Yes. I got a guy who wanted our 80m dipole just to talk to his friends up and down the coast.

The original design goal was to provide an 80m antenna that anybody could put on his tower, that would be an improvement over what he had. At my own location, I have had over 100 antennas on 80, and it has been very frustrating trying to get one that *worked*—especially one that could hear well. This one meets that, even with the galvanized wire. So now it is even better with the lower-loss wire. The final wire is a tinned copper-clad wire, which is a pain to work with: you have to solder it before you cut it.

"I have had over 100 antennas on 80, and it has been very frustrating trying to get one that worked*—especially one that could hear well."*

100 antennas? Do you find that your hand sort of naturally fits arounds inch-and-a-quarter tubing?
That's probably why I have carpal tunnel (syndrome) in both hands...

We took the 80 and scaled it to 40 and were able to offer a little 31-foot long 40m antenna; it doesn't cover the whole band; the longer one is 45 feet...I put one up for AA6VB. He has an HF2V, which I think is a very good vertical. I said "let's see how the little 40 dipole compares with the vertical." I thought it would be really close, but it wasn't. He has the vertical on the roof, so it's elevated and he has about 50 radials, so it's efficient. The average noise difference was about 3 S-units on his FT-1000 and the signals improved maybe 6-10 dB in favor of the dipole.

Ed Schuler, WA6CTA has one of our 20/15/17 dipoles and just got one of these 31-foot 40m dipoles. He has this big hill in back of him in Sausalito. *Ed. note: he has since moved to the ridgetop!* Paul (KK6H) was saying that yesterday Ed was laughing his head off, because he was able to work a ZL, which he could not do before. He also says the dipole is superior to his phased verticals.

You've done a lot of work with shared booms and reduced stacking distances. Conventional wisdom says to expect degraded performance but you've stated otherwise. By the way, N6TV has more stu on one mast than I have ever seen.

I have worked on short stacks for a a long time to try to figure how to minimize the interaction and Bob's is probably the best example of it. Nevertheless, you still get a lot of loss—even if you compensate for it—due to the proximity. Just to demonstrate it, the stack I have at home—8 element 10, 6 element 15, 6 element 20—if you go through and compute the loss, you'll find that the 10m—even though it's spaced seven or eight feet—will have at least 2.5 dB loss due to the 15 sitting there. So to get the 15 out of the way, there is a relay in every element with a control box in the radio room. If we are on the phone with you watching your S-meter and I open each element in turn, you'll see the 2.5 or 3 dB come back. That's why we wound up with the *horizontally*-stacked antennas.

At AA6MC, there is a 4BA at the top, and a 20/40 at the bottom. An 8-element antenna, less ground gain, has about 8.5 dBd. If you take off 3 dB for proximity, you have 5.5 dBd, which is about what the 4BA gives you on 10. So the 4BA gives you—on 17, 15, 12 and 10—what you would get out of a stack of monobanders with proximity losses.

I am now building a 15/10—a slightly truncated 6-element 15 with a 4 element 10 out the nose—to give virtually the same performance on a single boom that I have with that array at home, so you come out way ahead.

So you feel that the single-boom designs are preferable to the stacked designs?
Sure. And I went to the multiple feedlines—especially with the new rigs—to try to anticipate the new technology coming out. I think more guys are going to want to listen on more than one band. The new rigs can do it fine, and there are the multi-multi's, who want to do it also. Again, this is for the guy with a single tower.
Using the old 204BA as a gain figure-of-merit, on even the 5BA, everything is within about a half dB of that on the primary bands.

You have made statements indicating that some popular triband beam designs are essentially gainless. How do you back this up without your own range?
We have put dipoles side-by-side with tribanders and used various sources around the Valley at line-of-sight distances as the generated signal, and often with guys on hilltops, and it has been very interesting. I'm not sure I would tell anybody all of that but we have used the results to indicate what the minimu C3 (tribander) needed to be—and the configuration we have will outperform the classic tribander.

If your antenna doesn't have much of a pattern, then by definition you can't have much gain, because gain is just the redistribution of energy. If it does have a pattern, is there loss? If there is, then it may not have gain.

Sommers, the German manufacturer, also produces multiband trapless arrays. His use log-cell drivers while you use open-sleeve drivers. Any comments?

He's got a very fascinating design—a log-periodic sprinkled with parasitics. Incredibly complex and I have often wondered how he designed it. I've put them up—they're built very well—and they seem to work well. They had a nice pattern, and the band sounded lively.

I've had some guys compare mine to his and ended up buying ours for whatever reasons, I think primarily the complexity of his....As far as how much gain the log gets—his is different with the parasitic elements, so there are some unknowns.

There is some controversy about logs. A commercial company talked to me about building a log...so I asked the guy if he knew any good design software and he said no, the way to build a log was to build it and sort of put your thumb up to it like a piece of artwork and say "well, that looks good" and then sweep it for SWR and get the spikes out of the response...

Isn't NEC Wires *supposed to be able to handle that because it can embed transmission lines in the model?*

It might be able to do that, but I caution people—and I'm not talking down the logs—what you model and what you can build are two different things. When you are building yagis—without any phased parts—what you need to do is take every element tip and add or subtract at least an inch, and make sure that doesn't do anything to the design, and then change the element spacing like ±4 inches and do the same thing. Then you probably can build it. And also it can come into proximity with stuff and not get messed up. That's why *YO* has this feature which rounds off dimensions to the nearest inch; I told Brian I did that manually, and he incorporated it.

With some of these designs—just change the dimensions and see what happens. That is part of why I use extra elements.

What are presently your personal favorites in the product line and which have generated the most orders?

We have sold a lot of 80 meter dipoles and I think we will sell a lot more. My own favorite is the 5BA—five bands on a single boom. My next favorite is probably the 6-element 20 with 3-elements on 40 interlaced on a single boom because—from my perspective—I like 20 and 40 and it's a tremendous antenna on a single boom. And I have used it myself for over 10 years, so I know how well it works. AA6MC has one and W6RJ has a stack. I also like the little 31-foot 40m dipole.The *DXer* for 20/17/15 has sold well.

The DXer is about the size of a TH-7—although a lot lighter. Emotionally and psychologically, that appears comfortable for a suburban back yard.

You do have weight limits. We try to have a lot of antennas under 30 pounds, and not over seventy, so one guy can put them up. For the ones larger than the DXer, we use a two-plate magnum mount, which has a bolt that acts like a hook. You put that mast plate on first, bring the antennas up and just shove it on the bolt. All you have to do is get the antenna up to the plate and from there on the weight is off you.

We haven't pushed the 5BA much, but I think that will wind up being very popular at $895.

What has it been like to transition from designing and testing to real-world marketing and manufacturing?

It's nothing I haven't done before...the main difference is taking something that was a hobby and now supplying a product into a marketplace. As long as you keep your mindset—that it's not a hobby and you can't get sidetracked and start talking about hobby stuff...The term "amateur" is a misnomer: there are a lot of professionals in there; you just don't get paid for doing it...

..Like DXer *Editors....What is your role going to be and where is the company going? How are you going to market the antennas?*

We will subcontract a lot of the manufacturing. We'll do the final subassembly and ship, but everything is modular...Subbing is OK if you choose the subcontractors carefully...

HRO is going to carry the whole line and we are setting up distributors across the world.

My particular participation after we move manufacturing out? I'll still work on new products, but it's primarily marketing and sales.

Another thing: all the scrap to date fits in just two boxes—total. That doesn't come easy. That's where Kurt's software is so important, because we work out all the yields. For each antenna there is a build sheet that tells you how to do it for best yield.

So you take a 12-foot piece of aluminum and use 11-and-a half-feet?

No, we use 12 feet, but there's another reason to build VHF antennas—then we can use the small pieces! We did a 9-element 6m out of the scrap; Robert (N7STU) used it in the VHF contest.

"...The term "amateur" is a misnomer: there are a lot of professionals in there; you just don't get paid for doing it..."

NCDXC DX-LADDER

	HONOR ROLL			DX TOTALS				DX BAND TOTALS						OTHER BANDS				5BAND
CALL	MIX	PH.	CW.	MIX	PH.	CW.	RTY	10m	15m	20m	40m	80m	160m	06m	12m	17m	30m	WAZ
K6DC	326			375	211	217		114	133	312	220	41			8	11		40
W6BSY	326	326		373	367													40
~6KH	326			370				130	159	327	138	115		35				40
5ISQ	326	326	326	367	360	335		257	250	250	262	179			43	67	43	196
W6ZM	326	326		366	361			149	157	322	101	120						40
W6RJ	326			362				200	200	300	200	294						200
K6MA	326	325	324	361	349	332		270	305	329	257	140	10		190	243	153	188
K6PU	326	326	318	359	350	327		200	200	300	200	100						
K5YY	326	326	326	357	354	334		174	239	346	222	274	168	42				40
W6CF	326			355	294	185		204	239	306	178	138						40
W6OAT	326	317	322	355	335	344		278	318	343	288	220						199
W6ZKM	326	326		352	352			268	261	290	169	141						185
W6LQC	326	326		348	348	89		100	100	100	100	100						40
W4RIM	326	326		348	348													40
W6XP	326	326		348	348													
WA6AHF	326	326		347	347		272	100	100	100	100	100						40
W6DU	326		318	347	310	334		231	267	322	166	114						
K6KM	326	326		347	347													
K6LQA	326			347														40
K6RK	326	322	321	344	338	326		100	100	100	100	100	107					40
K5GOE	326	318		342	332	34		212	100	100	114	107						40
N6JV	326	319	326	342	328	335		270	252	302	259	210	84		156	185	156	195
WB6ZUC	326		326	341	1	333		189	258	316	169	111						
WB6CUA	326	325	320	339	335	325		100	100	100	100	96						176
NB6L	326			339	267	242		144	180	255	145	132						40
N6ST	326			335	313	275		209	244	307	149	84	2		4	1	1	182
WX6M	326	326		334	334	155		174	172	216	133	112	17					40
WG6P	326	326		332	332	326	184	214	254	332	229	130	38		38	91	60	150
6SLO	326	326		331	331			304	317	331	235	238	7	18	174	140	1	194
wA6TJM	326			327	261													
N6HR	325			348				100	100	100	100	100	4		3	6	81	187
K1ER	324	319		342	336	264		209	246	334	188	113	1		82	129	74	165
W6NPY	324			340	200	300		100	100	100	100	100						40
W6FAH	324	321		329	327	298		244	286	320	226	158						187
W6YWH	324	324		329	329			146	195	266	172	128	5					
WD6EKR		324			320			214	280	320	110	89			15	14		
K6RQ	323			362				120	197	310	130	90	5					40
K6DT	323	322	322	352	336	328		295	315	349	253	162						193
K6OZL	323			350				100	100	100	100	100						
W6BJH	323			349	192	313		120	117	187	117	100						191
N7NG	323			348				244	273	315	244	163						40
W6TC	323		320	339		326		252	231	273	263	175	1		110	103	89	198
K6XT	323			339		160		100	100	100	100	100					120	40
K6XJ	323	323		338	338													
W6GO	323	323	323	336	336	328		290	302	328	291	222	60					200
W6IEG	323	323		333	333			17	33	290	3	3						40
K6LM	323	322	322	331	330	325		100	100	100	100	100	6					
W6DPD	323	323		330	330													40
W6OSP	323			328														
WB6WKM	323			328	100	100		100	100	100	100	65						40
W6TEX	323			327		301	127	100	100	100	100	100						40
AF6S	323			323		319		270	294	308	228	149			145	205	120	39
K6WR	322	322		354	354			100	100	100	100	100						40
~KOE		322			341													40
KLY	322	322		330	330	16		240	212	227	130	110		70	3			161
W6RGG	321	321		349	346													
K6WD	321			337		289		100	100	100	100	65						40
W6NLG	321	319		326	324	100		100	100	100	26	6						40

NCDXC DX-LADDER

	HONOR ROLL			DX TOTALS				DX BAND TOTALS						OTHER BANDS				5BAND
CALL	MIX	PH.	CW.	MIX	PH.	CW.	RTY	10m	15m	20m	40m	80m	160m	06m	12m	17m	30m	WAZ
W6JD	320			339	238	322		109	166	329	197	46						40
AG6Q	320			326	312	228		179	226	309	169	143						149
KI6WF	320	320		324	324	135		258	295	322	176	114	4		26	59	2	175
KG6AM	320			322	312	236		204	257	279	61	33						40
NQ6X	319	319		323	321			100	100	100	100	100						
KX6C	319			319														
W6PHF	318			350	336													
N6AN	318			339	288	287		281	281	307	177	118			68	100	41	40
W8MEP	318			321		141		100	100	100	50	35	1					40
WN6R	318	317		318	317	200		215	300	317	155	150						109
W6TSQ				363				290	300	300	330	258						200
W6CTL				341	4	297		223	194	339	97	11						40
W7XA				339				277	298	309	174	137						195
W6JZU				331				75	115	255	22	12						40
W6FGD				330	275	289												
N6OJ				329	275	105												40
WB6UOM				328	319	5		46	51	224	3							40
WR6R				327	312													
AI6L				321														40
WB6OTB				321														
KR7Y				320	303	290		170	212	286	154	122						179
WZ6Z				319	306	233		255	250	304	239	151	14					190
K6HHD				316	311	23		209	176	223	43	40						40
NW6P				316														
KN6EL				314	164	286		129	146	177	72	28	6					130
WB6GFJ				314	300	70		203	225	285	125	62						40
K6LRN				314	225	264		106	138	273	133	40	10					
N6ULU				314		294		139	153	219	122	85	6				1	
AA6YQ				314	289	268		179	185	264	151	97						
K4UVT				313	249	175		65	112	293	88	24	2			8		
N6JM				310	299	256		212	232	277	135	87	17		2	1	5	161
WA8LLY				310	297	279		242	265	265	119	25		57	140	124	1	
KN6J				309	301	287	245	218	210	200	152	165	108					
WB6KJE				308	308													
K6TMB				308	304	248		215	245	292	140	116						180
KG6LF				306				181	145	213	37	67	2					
W6TUI				306	305	1		109	125	187	125	116						158
KD6XY				306	289	54		124	137	226	8	3						107
NT6G				305	286	266												
WA6BSS				290	304	3		134	167	249	58	26						40
KG6I				301	282	269	82	200	223	278	178	103	24	13	101	143	110	179
AA6MV				300	293	259		183	196	264	127	44						
K6FD				296	271													
K6ZUR				294	85	290		139	189	265	176	79						40
WA6CTA				291		239		135	145	204	74	9	1			22	41	
NI6T				291	239	242	22	168	180	221	178	125	11		110	126	95	187
K6SIK				286	282	140		183	186	262	128	120						200
NG6X				285														40
KE6WL				282	254	250		217	243	267	170	60	8					174
N6RC				281	129	161	3	25	49	193	24	3						
N6EK				277	225	247		184	219	245	155	54	9					
K6XC				276	186	219	38	121	117	192	61	9	8		11	26	9	133
KA6ING				274	273	93		273	2					52				40
N3AHA				268	243	154	1	129	160	194	58	20	3			14	1	122
WD6EKR/M					261			92	216	167	4	3						40
N4QJ				260	187	184		121	125	135	112	64	8		1	4	6	166
KD6GC				258	42	216												
N6OND				254	202	52		160	124	111	19	3			1	2	2	40

	HONOR ROLL			DX TOTALS				DX BAND TOTALS						OTHER BANDS				5BAND
CALL	MIX	PH.	CW.	MIX	PH.	CW.	RTY	10m	15m	20m	40m	80m	160m	06m	12m	17m	30m	WAZ
WA6BYA					249			248						105				39
WW6D				248	121	225		84	134	188	93	40						33
KD6E				245	2	245		117	134	178	116	32	3			3	1	145
W6SYL						245												
WA6O				235				89	52	144	3	19						40
K6AFL				213	195	18		31	16	110	36	6			2	12		
N6LTN					213													
AB6EQ				212	200	96		104	60	173	36	1			16	13	8	113
AA6TA				208	200	20	45	93	54	97	1				3	11		
N6VAW				202	184	103		59	34	100	8							
KC6ESL				193	193			193										
AA6LF					186			93	79	149	10	1						
AA6TD				178	95	125		90	55	101	39	3	1					
WC6I																		188
AA6Z																		40

de Larry, KD6XY (07-94)

LADDER STUFF:
The Ladder Reports have taken on a new look. Figures for 10 thru 80 meters have been combined into one column and now shows the Total Zones worked towards 5 Band WAZ (all worked, equals 200). WARC Band figures have also been combined. I will continue keeping figures in the database for each seperate band in the groups, as always. They will be combined for the Report only. A zero in the column indicates no numbers have been submitted, and will change as new figures are received. The more difficult bands to confirm will still be shown individually, as in the past; ie: CW, 160m and 6m.

The DX and WAZ Ladder Reports may not be published at the same time in the future. Therefore, a new column has been added to the DX Report showing the combined number of Zones worked (Mixed, Phone, CW and 5bands).

Members who haven't updated, or confirmed, figures in the last five years will not be included in Ladder Reports henceforth, but figures will be retained in the database. So be sure to send your latest numbers and be published again.

The ARRL DXCC Countries List for Honor Roll has been reduced to 326. This is a good time to adjust your totals to reflect this latest change.

- -

CALL:_____ NAME:_____

NCDXC DX-LADDER

HONOR ROLL:- Mixed:_____ Phone:_____ CW:_____

DX TOTALS:- Mixed:_____ Phone:_____ CW:_____ RTTY:_____

DX BAND TOTALS:- 10m:_____ 15m:_____ 20m:_____ 40m:_____ 80m:_____

OTHER BANDS:- 160m:_____ 6m:_____ 12m:_____ 17m:_____ 30m:_____

NCDXC WAZ-LADDER

ZONES WORKED: Mixed:_____ Phone:_____ CW:_____

5 BAND TOTALS: 10m:_____ 15m:_____ 20m:_____ 40m:_____ 80m:_____

WARC BANDS:- 12m:_____ 17m:_____ 30m:_____

OTHER BANDS:- 160m:_____ 6m:_____

(Mail figures to Larry Bloom, KD6XY, to the address listed in the DXer, or send via Packet to KD6XY.)

WAZ LADDER

CALL	MIX	PH.	CW.	5BAND	WARC	160m	6m
AA6AD	40			40	0		
N3AHA	40	39	22	122	0		
WA6AHF	40	40		40	0		
KG6AM	40			40	0		
N6AN	40	40	40	40	0		
K6ANP			40	40	0		
KA6BIM	39			39	0		
W6BJH	40			191	0		
WA6BSS		40		40	0		
W6BSY	40	40		40	0		
WA6BYA		39		39	0		28
W6CF	40	40		40	0		
W6CTL	40		40	40	0		
WB6CUA	40	40	40	176	0		
WW6D	33			33	0		
K6DC	40			40	0		
W6DPD	40	40		40	0		
K6DT	40	40	40	193	0		
AD6E	40			145	0	2	
WD6EKR/M		40		40	0		
KN6EL	40	39	40	130	0	3	
AB6EQ	38	38	30	113	27		
K1ER	40	40	39	165	86	1	
W6ETR			40	40	0		
W6FAH		40	40	187	0		
K6FO			40	40	0		
WB6GFJ	40	40		40	0		
N6GG	40			40	0		
W6GO	40	40		200	0		
K5GOE	40	40		40	0		
K6HHD	40			40	0		
K6HNZ	40			40	0		
N6HR	40			187	33		
KG6I	40	40	40	179	99	14	
WC6I	40			188	0		
W6IEG	40	40		40	0		
KA6ING	40	40		40	0		21
W6ISQ	40	40	40	196	0		
W6JD	40			40	0		
N6JM	40			161	0		
N6JV	40			195	0		
W6JZU	40	40		40	0		
W6KH	40	40	40	40	0		
K6KLY	40	40	5	161	0		20
W6KOE	40	40		40	0		
K6KQN	40	40		40	0		
AI6L	40			40	0		
NB6L	40			40	0		
K6LQA	40			40	0		
W6LQC	40	40		40	0		
WX6M	40	40		40	0		
K6MA	40	40	40	188	0		
W8MEP		40		40	0		
N7NG	40			40	0		
W6NKR	40			40	0		

CALL	MIX	PH.	CW.	5BAND	WARC	160m	6m
W6NLG	40	40		40	0		
W6NPY	40			40	0		
WA6O	40			40	0		
W6OAT	40	40	40	199	0		
N6OC	40			40	0		
WA6OEY	40			40	0		
N6OJ	40			40	0		
K6OJO	40	40		40	0		
N6OND	40			40	0		
WG6P	40	40	40	150	9	4	
K6PKO	40	40		40	0		
AG6Q	37	37	6	149	0		
N4QJ	39			166	9	6	
W6QL	40	40		40	0		
WN6R	40	40	29	109	0		
W4RIM	40	40		40	0		
W6RJ	40	40		200	0		
K6RK	40	40		40	0		
K6RQ	40	40	40	40	0		
N6RR	40			40	0		
DJ6RX	40			200	0		
AF6S	39			39	0		
K6SIK	40	40	40	200	0		
WA6SLO		40		194	74	8	13
N6ST	40	40		182	6	2	
NI6T	40	40	40	187	95	11	
W6TC	40		40	198	64		
W6TEX	40		40	40	0		
K6TMB	40	40	38	180	0		
WA6TOO	20			20	0		
W6TSQ	40			200	0		
W6TUI		40		158	0		
K6UD	40			40	0		
WB6UOM	40	40		40	0		
AJ6V	40			40	0		
K6WD	40			40	0		
KI6WF	40	40	32	175	37	4	
WB6WKM	40	40		40	0		
KE6WL	40	39	40	174	0		
K6WR	40	40		40	0		
NG6X	40			40	0		
W7XA	40	40		195	0		
K6XC	40	39	39	133	28	8	
K6XM	40			40	0		
K6XT	40			40	0		
KD6XY	40	40	24	107	0		
KR7Y	40	39	15	179	0		
W6YVK	40			40	0		
K5YY	40	40	40	40	0	36	
AA6Z	40			40	0		
WZ6Z	40	40		190	0		
W6ZKM		40		185	0		
W6ZM	40	40		40	0		
K6ZUR			40	40	0		

de Larry, KD6XY (07-94)

DXer

P. O. BOX 608

MENLO PARK, CA

94026-0608 USA

FIRST CLASS

July, 1994