

# THE



# DXer

NOVEMBER 1987

VOL XL - NUMBER 11



## CALENDAR

- Nov. 7-9 ARRL November Sweepstakes, CW.
- Nov. 7-8 QST QSO Award Party, Phone.
- Nov. 13 NCDXC November Meeting, Harry's Hofbrau, Palo Alto.
- Nov. 14-15 QST QSO Award Party, CW.
- Nov. 21-23 AOEC 160-Meter DX Contest.
- Nov. 21-23 ARRL November Sweepstakes, Phone.
- Nov. 25 Last date for inputs to December DXer.
- Nov. 28-29 CQ World Wide DX Contest, CW.
- December NCDXC Meeting - none scheduled thus far.
- Dec. 4-6 ARRL 160 Meter Contest.
- Dec. 12-13 ARRL 10 Meter Contest.
- Apr. 22-24 1988. Visalia International DX Convention.

+ = + = +

## NOVEMBER MEETING - BLACK CAT NIGHT! FRIDAY THE THIRTEENTH HARRY'S HOFBRAU, PALO ALTO

The November meeting of the NCDXC will take place at Harry's Hofbrau, Embarcadero Road East, on Friday the 13th. Lou Beaudet, our Repeater Committee chairman, will discuss the past, present and future of our repeater. Changes are being considered - all those with an interest in the future of W6TI/R owe it to themselves to attend the meeting and learn about the various proposals that are being considered. Cocktails at 6:00 PM, dinner at 7:00, meeting at 8:00.

+ = + = +

## FROM THE PREZ

By the time you read this, Martti, 50RASD a.k.a. OH2BH and his group will have finished a successful DXpedition to the Western Sahara. I hope that all of you who tried were able to catch him and that the

ARRL will award this one "new" status. It was a real thrill for me to hear the ol' pro and one of the greatest operators in the world working us during our 40 Meter CW opening...Monday morning, 19 October (Zulu). Good show Martti!

In this DXer you will find an article by Jay O'Brien, W6GO, regarding his ideas for proposed changes to our repeater, W6TI, and its operation. I urge all of you to read and consider the ideas offered. It is also very important to make your thoughts known at the meeting or with a letter to Jim, W6CF, if you wish to be heard through a future DXer. As time passes, and our membership expands out of the Silicon Valley, we must consider what benefits are derived from the club and how it



Ted, KA6W

serves every one of us... ONE OF THE BENEFITS we receive is the exchange of DX info from the W6TI repeater... input/output from the Silicon Valley AND input/output from distant areas. These remote areas NEED and DESERVE to communicate with ALL club members through OUR repeater. Many of our members from remote regions of Northern California have helped the NCDXC by serving as volunteers and officers...the benefits derived from their past and present efforts are understood and well documented. It is the power derived from groups of individuals operating together that I'm suggesting we need to preserve. "So what's repeater expansion going to cost me?" At the present time I don't know, but that question and so many others can and will be answered if a majority of you elect to accept the concept of repeater expansion.

In closing, I offer THANKS to all of you who helped host Roly, ZL1BQD and his XYL Gail, ZL1FV, during their recent visit to our area...WB6GFJ, WB6QDC, WA6AHF, W6QHS, KA6HSM, W6GO, K6HHD, W6OSP, W6REC and W6KQK. People like you help strengthen the bonds of friendship with our DX neighbors.

73 es GUD DX,  
Ted, KA6W

**THE NORTHERN CALIFORNIA DX CLUB, INC.**

P.O. BOX 608, Menlo Park, CA 94026

The *DXer* is the bulletin of the NCDXC and is published monthly for the benefit of its members. Permission to use any portion of this publication is hereby granted, provided credit is given to the *DXer*.

**NCDXC OFFICERS**

President	Ted Algren	KA6W
Vice Pres.	Rich Stempien	WA9WYB
Secretary	Roger Gearhart	W6PKB
Treasurer	Frank Holst	W6ZKM
Director	Lou Beaudet	K6TMB
Director	Jim Knochenhauer	K6ITL
Director	Ron Pantan	W6VG

**DXER STAFF**

Editor	Jim Maxwell	W6CF
Contributing	George Allan	WA6O
Contributing	Hal Godfrey	N6AN
DX Ladder	Jim Hicks	KK6X
Production	Dave Hillman	N6AUS
Production	Ron Pantan	W6VG

Send DXer contributions to

Jim Maxwell, W6CF  
PO Box 473, Redwood Estates, CA 95044

Send DX ladder reports to

Jim Hicks, KK6X  
2260 Santa Fe Dr., Santa Rosa, CA 95405

**NCDXC REPEATER W6TI/R**

Input 147.96 MHz; Output 147.36 MHz;  
Simplex 147.54 MHz

Trustee	Bob Vallio	W6RGG
Repeater Committee	chairman	
	Lou Beaudet	K6TMB

**NCDXC THURSDAY NIGHT NET**

On W6TI/R Thursday at 8:00PM local time.

Operations Manager	Ralph Hunt	AG6Q
DX News	Phil Garrahan	W6LQC
Propagation	Al Lotze	W6RQ
Contest News	Bob Dorsey	K4UVT
Westlink	Dave Bottom	KD6AZ
Swap Shop	Steve Munro	KZ6Z
QSL Info	Jan O'Brien	K6HHD

**NCDXC DX BULLETIN BROADCASTS**

Trustee	Bob Vallio	W6RGG
---------	------------	-------

W6TI, the NCDXC memorial station, broadcasts DX bulletins each Sunday at 1800 PST (Monday at 0200 GMT) on 7.015 and 14.002 MHz

years the NCDXC 2 meter repeater, along with the *DXer*, has provided the glue that binds this club together.

The NCDXC 2 meter repeater was first put on the air from Don Schliesser's (W6MAV) garage in April 1971, and then moved to Lee Shaklee's (W6BH) home in the Oakland hills in July 1971, and then to its present 2700 ft. Black Mountain location in the Los Altos hills in 1973.

The goals for the NCDXC repeater are the same today as they were in 1971: to promote good, reliable communications for our members over as wide an area as possible.

During the past 16 years of operation, many improvements have been made to the repeater system. New transmitters/receivers were put into operation, a new tower and antenna system installed, PL was added along with other technical improvements, W6GO and K6ANP established their simplex links to the repeater, and a new controller will be installed and operational by year-end 1987.

The new controller will provide some new, and much needed, improvements to the system such as transmission timeout, courtesy tone, significant improvements in controller security, and the capability to add additional functions.

Where do we go from here? It is up to the club membership to chart the course. Do we want or need additional functions? Do we want a formal policy and implementation plan to establish links to members in outlying areas? If so, what technique should be used? What's the cost and who pays?

Elsewhere in this month's *DXer* is an article by Jay O'Brien, W6GO, describing one of several linking concepts that have been proposed. More articles and discussions of this type are needed before the membership can make intelligent decisions on the course the club should take.

The November meeting will provide a forum for some of this discussion.

Hope to see you there

+ = + = +

**GUEST EDITORIAL**

**THE NCDXC REPEATER**

by Lou Beaudet, K6TMB  
Repeater Committee Chairman

Was there life before the NCDXC FM repeater? What's happening now? Where are we going? We will attempt to answer some of these questions in this month's *DXer* and more fully at the next NCDXC meeting on November 13, 1987, at Harry's Hofbrau in Palo Alto.



Lou, K6TMB

Hams are basically communicators, and NCDXC members are certainly no different than the rest of the ham fraternity in this respect. For nearly 40 years the NCDXC has been using 2 meters to communicate DX and other related information amongst its members. For the past 16

**MINUTES OF THE OCTOBER MEETING OF THE NCDXC**

The regular meeting of the NCDXC was convened October 9, 1987 at Harry's Hofbrau, Palo Alto. The meeting was called to order by the president, Ted, KA6W. Ted welcomed all of the guests including ZL1BQD, Roly, his XYL Gail, ZL1FV and Guido, ON4AGD. Rusty, W6OAT, announced that Jim, N6TJ, is leaving for Egypt. He will probably be on the air the weekend of October 17 thru the CQWW. A large local group is mounting a major assault on the CQWW from P40V, Aruba. The group includes AI6V, W6SZN, N6KT,

NU6S, N6TU, N6TR, and W6OAT. There will be a spotting net for the CQWW the weekend of October 24.

The 9 Band Award starts tomorrow, October 10. A special anniversary drawing was held by Steve, W6MKM, with the prize being the choice of a handheld transceiver. W6TEX had the winning ticket and selected the 2M rig... congratulations Bill!!

Roly and Gail started the evening's program by discussing Roly's trips to Kermadec, Tokalu and Chatham. The program continued with "How to QSL Successfully" by Jan, K6HHD. The audience was highly appreciative and special thanks to our speakers, especially Jan, for having come so far for the meeting. The antiquated club typewriter was declared excess and auctioned off. The auctioneer, Rod, NG6X, managed to squeeze \$34 from W6PKB. The treasurer's report was printed in the DXer and Frank, W6ZKM, received applause for his efforts. A second reading was held for Mike Ritz, KW6C, and he was unanimously welcomed into the club. A first reading was held for Mark Aaker, NT6G. The meeting adjourned at 9:45PM. A good time was had by all.

Respectfully submitted,  
Roger Gearhart, W6PKB  
Secretary

+ = + = +

diture of not more than \$400 for the purchase of a Carousel projector. The Board also approved the expenditure of not more than \$450 for the new controller. Steve, W6MKM, reported success (profit of \$59) with the anniversary raffle and suggests that we have more raffles for handhelds in the future. Changes #9 and 10 to the procedures manual describing the Publication Manager and Operations Manager were signed off by the Board members and the manual will be updated.

The meeting adjourned at 10:134 PM.

Respectfully submitted,  
Roger Gearhart, W6PKB  
Secretary

+ = + = +

**TREASURER'S REPORT - OCT. 1-30, 1987**

Checking account activity

Sept. check balance	\$6579.14
Deposits from dues	738.00
Other receipts	827.75
Subtotal	\$8144.89
Accounts payable	(1261.63)
Current balance	\$6883.26

Bank of America Savings \$13652.42

Reserve Fund/Savings Account

Dues Life Members 86-87	\$ 624.00
Dues Life Members 87-88	624.00
QSL Cards	2500.00
Subtotal	\$3748.00
At depletion of reserve fund-	
Savings balance	\$9795.48

Certificate of Deposit American S&L  
1 yr 7.411% annual yield \$5800.00

Frank H. Holst, W6ZKM  
Treasurer

+ = + = +

**TAYLOR WASHBURN, N6DYS  
NCDXC MEMBER!!!**

Why a headline to confirm that Taylor, a member in good standing now for over five years, is still a member? Well, according to club records, Taylor had not paid his dues, and he was therefore dropped from membership last month.

But Taylor had paid his dues, in plenty of time. We blew it. The SYSTEM fell apart, and Taylor slipped through the crack. Unfortunately, Taylor was also left out of the new membership roster.

Our sincere apologies to Taylor.

Frank, W6ZKM

**BOARD OF DIRECTORS**



**MINUTES OF THE OCTOBER 14 1987 MEETING  
OF THE NCDXC BOARD OF DIRECTORS**

The president, Ted, KA6W, called the meeting to order at 7:24PM at the home of W6VG. Present were W6ZKM, W6VG, K6ITL, W6PKB and guest W6MKM. Frank, W6ZKM, gave the treasurer's report. A letter to the Board from W6GO was discussed. Jay has requested "sanctioning" (sic) of the 144.95 MHz links, addition of PL to the W6TI identifier, and for official copies of the W6TI license to be furnished to the operators of the present links. In response, the Board approved a motion to include provisions in the newly purchased controller for transmitting PL at all times. The Board also acted to refer to the repeater committee the other issues raised in Jay's letter and the committee is requested to consult with Bob, W6RGG, the station trustee. The Board approved the expen-

### STATUS OF SORASD

Now that SORASD has been activated, what will it count for? Following are some comments by Bill Polemitz, K1MM, of the DXAC, as published in *The DX Bulletin*.

The current status of RASD or Western Sahara (formerly Rio de Oro), is that contacts with stations in that region do not count for anything. A DXAC vote in October may consider several alternatives:

- A. Reactivating Rio de Oro (undeleting a deleted country, as happened with Singapore) or
- B. Acceptance as a New One, or
- C. Postponement of the question.

The latter is gaining in popularity, as some DXAC members question the accuracy of the translations from Spanish of some of the RASD documents submitted to the DXAC. QRX on this one.

Thanks Chod Harris and *The DX Bulletin*.

+ = + = +

### EGYPT DXPEDITION BY N6TJ A SUCCESS

In spite of the fact that California stations seemed to have their ears plugged during the phone CQWW, N6TJ considers his expedition to Egypt a rousing success. About 900 QSOs were made on CW prior to the contest, using the call SU1MR. Several W6s were worked on his first day of operation on 20CW, but only a single one made the grade on 40 - W6QUV. During the contest, 3367 QSOs were made on phone, as SU1ER. The *only* Californian worked during the contest was NCDXC member AE6H, on 20 SSB. Final score will run about 4.3M points. While there, Jim delivered a TS440 to SU1ER, a donation by the Northern California DX Foundation.

Jim is promising bigger and better things out of zone 34 in the future. QSLs go to N6CW.

Jim, W6CF

+ = + = +

### DX CALENDAR

Thanks to *The DX Bulletin* and *Long Skip* for the following.

Amsterdam - FT8ZA on 7073 at 1400, 3507 at 1300, 7001 at 1300, 14214 at 1200, QSL to F6FNU. The *DX Bulletin* says F6CZB will be on from this one starting in early December until July 1988, all bands, CW and SSB

China - New stations being reported regularly. Latest are BY1CKJ, BY2HIC and BY5RT. VE3BX reports BY4RB on 14029 at 1310, VE1BNN reports BY1QH on 14026 at 1245Z and BY4RB on 14029 at 1215Z.

Crozet - Everyone should have this one by now, but he likes 7073 at 1230 to 1400, often chewing the rag with VE7 stations. QSL to F6FNU.

Cyprus - 5B4TI will be guest-operated by N6ZZ for the CQWW CW contest, in an all-band effort.

Europa - FR5AI/E is now gone. QSLs go to Yoland Hoarau, 4eme Km., St. Francois, F-97400 Saint Denis, Reunion.

Gambia - Ten meters is still not a very reliable band, but VE1BNN reports C53CR on 28520 at 2000Z.

Johnston Island - WB4KMV/KH3 and WH6BOQ/KH3 are two new stations on now. WY5L likes 7005 or so at 1130 and 14050 at 1300. QSL to N5DAS.

Juan Fernandez - CE0ICD on 20 SSB between 14200 and 14235 at 0000 and on with CE3ESS as an MC. He should be there two years.

Kampuchea - XU1SS showing quite regularly on 14165 in the 1200 to 1400 time slot. Operator Seth works you on CW upon request. QSL Seth at Box 1974, Non Thabury, 11000 Thailand. Send a U.S. green stamp and do not put call signs on the envelopes.

Niger - 5U7/12VA cards are now accepted for DXCC credit. TU4BR/5U7 and C53FC/5U7 are not.

South Cook Islands - George, W8AP and XYL Bea, W8MMB will be QRV as ZK1X? November 10-13 from Rarotonga, at ZK1CG's shack. QSL to home call.

Sudan - PA0GAM/ST2 reported active on 20, 40 and 80 meters, especially on CW. Look 5 up on the low bands, 25 up on the high ones.

Thailand - H50B has been worked on 14005 at 1450 and 14177 at 1520.

Tristan da Cunha - John Stamps, KY0T, will stop by ZD9 the last week of November, as he sails from Brazil to Africa. QSL with SASE to WV4F.

Vatican - HV3SJ has been worked on 21286 at 1630Z. QSL to I0DUD.

Western Carolines - Look for KC6CS during the CQ WW CW contest in November. QSLs go via JE1JKL.

+ = + = +

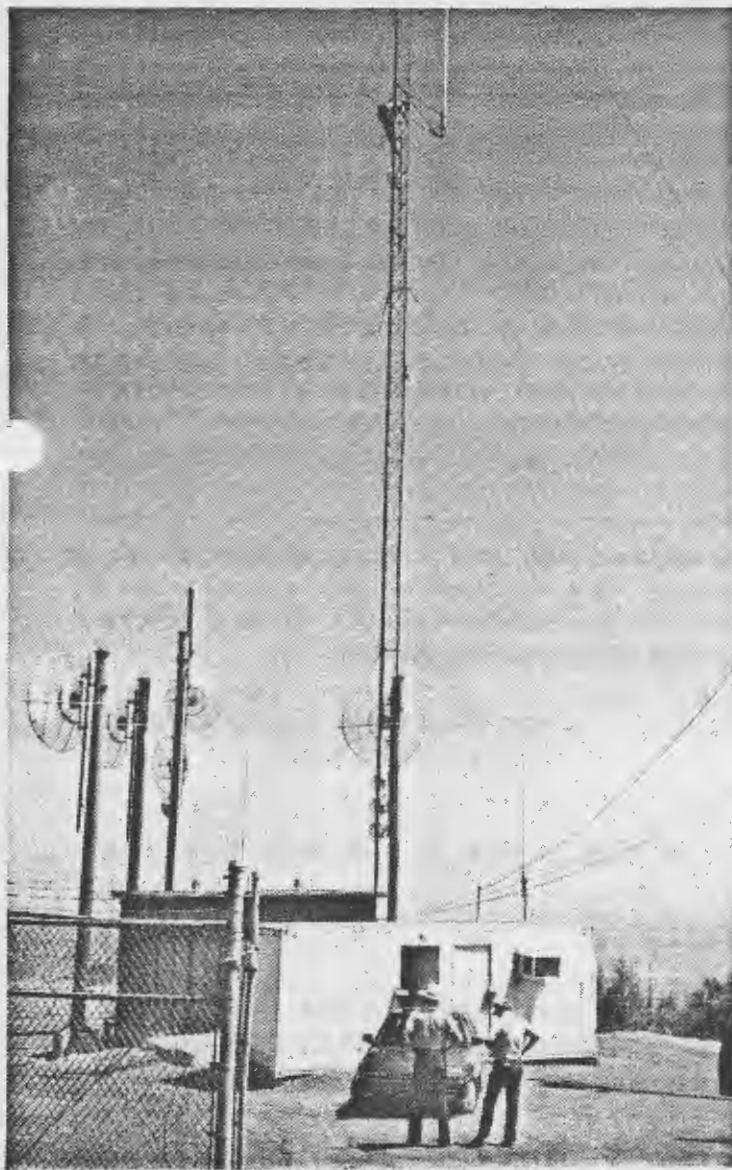
### USSR TIDBITS TO MERGE WITH THE NATIONAL CONTEST JOURNAL

Tom Frenaye, K1KI, has been publishing his popular *USSR Tidbits* bulletin every other month since March 1981. As the popularity of the bulletin has grown, so has the workload - circulation now stands at nearly 200 per issue. In order to bring things under control, Tom has arranged with the *National Contest Journal* to carry *USSR Tidbits* as a regular feature. According to Tom, the *NCJ* is planning to expand its coverage to include topics other than contesting, such

as awards hunting and DXing, so a column on amateur radio in the USSR should fit in nicely.

Publication of the *NCJ* was recently taken over by the ARRL, after 15 years of operation by a group of dedicated testers. NCDXCer Rusty, W6OAT, has been one of those prime movers for many years. Expansion of *NCJ*'s coverage to include DXing and awards hunting is an exciting development which should broaden its appeal considerably. Those who have not already subscribed can do so by slipping a \$10 check into the mail to the ARRL.

Jim, W6CF



**W6T/R Repeater Location**

W6T/R is located in the left half of the white shack, at an elevation of 2700 feet above the Santa Clara Valley. The right half of the shack is used by Foothill College. Pete, WB6OOL, works on the tower, as Ted, KA6W, and Rod, NR7E, look on. The tower consists of 90 feet of Rohn 45. (Photo by K6TMB.)

## REDUCED TO SELL - SUPERB QTH LEAVE THE RAT-RACE AND QRM

You can have a great QTH on the crest of a ridge at 4200' with a tremendous view of the Sierra Nevada mountains in pine-forested country. Already installed: 75' crank-up and tilt-over tower, TH6DXX yagi, full 80m dipole at 75', open wire feeder, pre-tuned couplers for 80 and 40, relays to switch the five bands. Station has 5 BDXXC on SSB. Emergency 1500 watt generator for main lighting, ham station and TV.

QRM from the Bay Area on 20, 15, and 10m doesn't exist. No daily pressure here, little traffic, low population, no smog, quiet. Close to Twain Harte and City of Sonora with excellent medical, cultural and physical services. Twain Harte just rated one of the best places to retire in the U.S.A.

The house has 1950 sq. ft. on two floors, 3 bedrooms, 2 baths, living room, dining area, radio room, sewing or hobby room, laundry, large deck. Most rooms have wood panelling. Fully equipped all electric efficient kitchen. The house is well insulated and has fireplace, excellent wood stove with catalytic combustor, and electric baseboard heat with individual thermostat in every room. The 450 sq. ft. basement has installed incredible storage cabinets. 2-car garage, natural garden, NO lawn.

The price at \$109,900 has been reduced to sell.

If it weren't for a family situation forcing me to move to the Seattle area, I assure you I would not be selling this excellent QTH.

For further information contact:

W6VQD - Win Wagener  
23845 Buckboard Court  
Sonora, CA 95370

Phone: (209) 586-5432

+ = + = +

## SO YOU THINK WE HAVE PROBLEMS!

Dateline Copenhagen: The number of Danish Amateur Radio licenses climbed from 9243 to 10760 between 1981 and 1984, but by the end of 1986 it fell 2% to 10528. The breakdown is as follows. Class A (all bands, 500 watts) 1137; Class B (all bands, 100 watts) 4099, for a total of 5236 (49.7%) in the all band classes. The restricted classes consist of Class C (HF 10 watts, UHF 100 watts) 176; Class D (UHF 100 watts) 5088; Class E (UHF 500 watts) 28, for a total of 5292 (50.3%). The number of candidates for the technical exam common to all licenses fell from 1543 in 1981 to 534 in 1986, a decline of 65%.

### YASME DXPEDITION GOES FORTH AGAIN

FLASH! The Yasme DXpedition represented by Lloyd Colvin, W6KG, and Iris Colvin, W6QL, will be on from Mexico (calls promised but not yet assigned) from 22 October 1987 through 30 November 1987. Operation will be on all bands - 10 Meters through 160 Meters, SSB and CW. They will participate in the CQ World Wide DX contest in both the CW and Phone portions.

If you are missing Mexico on any band, here is your chance!!

As usual, all QSLs to:

THE YASME FOUNDATION  
PO Box 2025  
Castro Valley, CA 94646

73.

Bob Vallio, W6RGG  
Secretary  
THE YASME FOUNDATION

+ = + = +

### ANOTHER SUCCESS FOR PRB-1

For those interested in antenna ordinance cases, there is some good news. A Federal District Court Judge back east has used the 1985 FCC Order called PRB-1 to invalidate a local antenna ordinance that was overly restrictive. On September 25, 1987, the following bulletin was sent by W1AW.

"A Federal judge has relied on PRB-1 to void a local height limitation as applied to an Amateur Radio antenna. Andrew B. Bodony, K2LE, had brought suit in U.S. District Court for the Eastern District of New

York to overturn denial by the Village of Sands Point of his application for a building permit for an 86-foot tower, retractable to 23 feet in height. In granting partial summary judgment in Bodony's favor, District Judge Jack Mishler found PRB-1 to be a proper exercise of FCC authority and found that the Village was precluded from applying its 25 foot height limitation on accessory buildings to Bodony's proposed antenna. This court test of PRB-1 represents the first time a local zoning ordinance as applied to an Amateur Radio antenna has been declared invalid on the basis of PRB-1, and further strengthens the position of radio amateurs fighting unreasonable local ordinances."

This case could be very useful in overturning restrictive ordinances of local governments. There are currently several cases in the Pacific Division, most in the S.F. Bay Area, in various stages of litigation dealing with ordinances that most often restrict the height of an amateur antenna to 25 feet. I will try to keep Division members informed of the outcome of these very important cases. The Thernes case in Kentucky was given a lot of publicity as being the first blow struck by ham operators to obtain fair treatment by local zoning officials and city councils. However, the Thernes case final judgment was based upon what is called a consent decree or a stipulated judgment. That is, both of the parties in a lawsuit agree that a judgment should be entered based upon their agreement. Many of the city attorneys who are advising the city councils are stressing that since it was a consent decree, it shouldn't be given much weight. I think when we start getting a few decisions like the New York case, the local officials will see the light.

From the *Monthly Director's Report*  
by Rod Stafford, KB6ZV



## 1988 CALLBOOKS

The cover price for the two books will be \$52.00. The cover price on the supplement available in June 1988 will be \$10.00. For \$52.00 we will send you a set of Callbooks AND the 1988 Supplement when it is published. If you wish only the 1988 Radio Amateur Callbooks without the supplement, our price is \$44.00 for the set, boxed and mailed to you.

JAY & JAN O'BRIEN  
THE W6GO/K6HHD LIST  
P.O. BOX 700  
RIO LINDA, CA 95673-0700  
(916) 991-2010



## DXCC GOLDEN JUBILEE TIMES 2

According to *The DX Bulletin*, several DXers have already worked 200 or more countries in 1987. K8YSE worked #200 on Sept. 29, all on phone. WY6Q worked his 200 in six months. T12TEB hit 200 on Sept. 9th, working them all barefoot. Have any NCDXC members hit the 200 mark yet in 1987? Drop me a line or pass the word on 2 meters.

Jim, W6CF

+ = + = +

## WC6I RECEIVES W-100-O AWARD

Steve, WC6I, achieved his W-100-O award, for working 100 Russian Oblasts, in August. Steve noted that it took eight and a half months from the time he applied until it arrived, not too bad considering how long QSL cards take!

USSR Tidbits

+ = + = +

## FIRST USSR VHF REPEATER

Some more details about the first VHF repeater in the USSR were reported in 3/87 *Radio* magazine. Leonid Labutin, UA3CR, writes that the repeater has been operating since February from the highest building at Moscow State University. It was installed after special permission was granted by the State Telecommunication Inspectorate of the USSR, for experiments in opening up new types of radio communication, including computer communication.

It uses the same 600 KHz split used in the USA, with input at 145.600 and output at 145.000 running 10 watts and a 3-5 KHz deviation. The callsign is UK3KP - repeated every three minutes. The transmitting antenna is a vertically polarized halfwave dipole about 450 feet above the ground and has a radio horizon of over 30 miles. Can spotting nets for DX contests be around the corner?

+ = + = +



**W6T1/R Repeater**

Ted, KA6W, pointing at the controller of W6T1/R. From top to bottom, the power amplifier, controller, transmitter/receiver, power supply, and cooling fan on the bottom of the box. Below the box is a heater. Duplexers are wall-mounted to the right. (Photo by K6TMB)



**W6T1/R Repeater**

Pete, WB6OOL, checking the repeater output, using a Motorola test monitor. (Photo by K6TMB.)

## LET'S HUB OUR REPEATER!

by Jay O'Brien, W6GO

The repeater of the Northern California DX Club does not cover all of Northern California. And, there are club members who live in areas not covered by the repeater. Steps have been taken to bring the repeater channel into some of these areas. In-band simplex links have been built, links to 220 and 440 MHz, and one-way links to other two meter channels. The links open to use by any member of the DX Club are the links which operate on 144.950 MHz; one is in Santa Rosa and the other is in Rio Linda, just north of Sacramento. These links retransmit the repeater as heard on 147.360 MHz to the link users on 144.950 MHz, and, when they receive a transmission from a link user on 144.950 MHz (with PL), they retransmit the link user to the repeater on 147.960 MHz. These links bring many DX announcements to the repeater from the Santa Rosa and Sacramento areas and enable the distant DXers to hear announcements from the members in the prime repeater area. *THESE LINKS ONLY EXIST BECAUSE THE USERS CANNOT CONVENIENTLY ACCESS THE MAIN REPEATER.*

There are many disadvantages to the use of simplex links. First, users of the same link who are out of simplex range of each other do not hear each other and can inadvertently jam each other. For instance, N6JV, south of Sacramento, and K6AAW in Red Bluff both use the link in Rio Linda. However, they usually do not hear each other when they are both on 144.950 MHz! For Norm and Larry to exchange information when both are on 144.950 MHz, someone on the main repeater must relay! Also, the 144.950 MHz frequency, even though in use for more than six years as a link to the DX repeater and properly sanctioned by the Northern Amateur Relay Council of California, is right smack in the middle of the newly emerging packet frequency range, and the link users regularly receive interference from packet stations who think that 144.950 is just another packet channel. And, the use of several frequencies in the same Amateur band to carry the same information is wasteful of valuable spectrum, and receives criticism as a result.

How do other repeater systems cover areas not reachable with one repeater? They use multiple repeater sites, often on the same frequency pair. If our repeater system was arranged in that manner, there could be 147.960 MHz receivers added in Sacramento, Santa Rosa, Stockton, Fresno, Concord, Redding, Red Bluff, Salinas, Livermore and Modesto, for example. Each receiver would have its own individual PL frequency so that users could select which receiver they wished to access. In addition, 147.360 MHz transmitters could be added to blanket these areas, giving

their users "prime" repeater coverage like that now enjoyed by our members in the South Bay and those close to the existing links. Practical experience with multiple transmitters on the same frequency *with the same exact modulation information* has shown interference problems to be nearly non-existent. In those few cases where a beat note is heard because two 147.360 MHz transmitters are received at the same time, a simple directional antenna can be installed to allow one 147.360 signal to capture the other. Or, that user could listen directly to the **HUB REPEATER**.

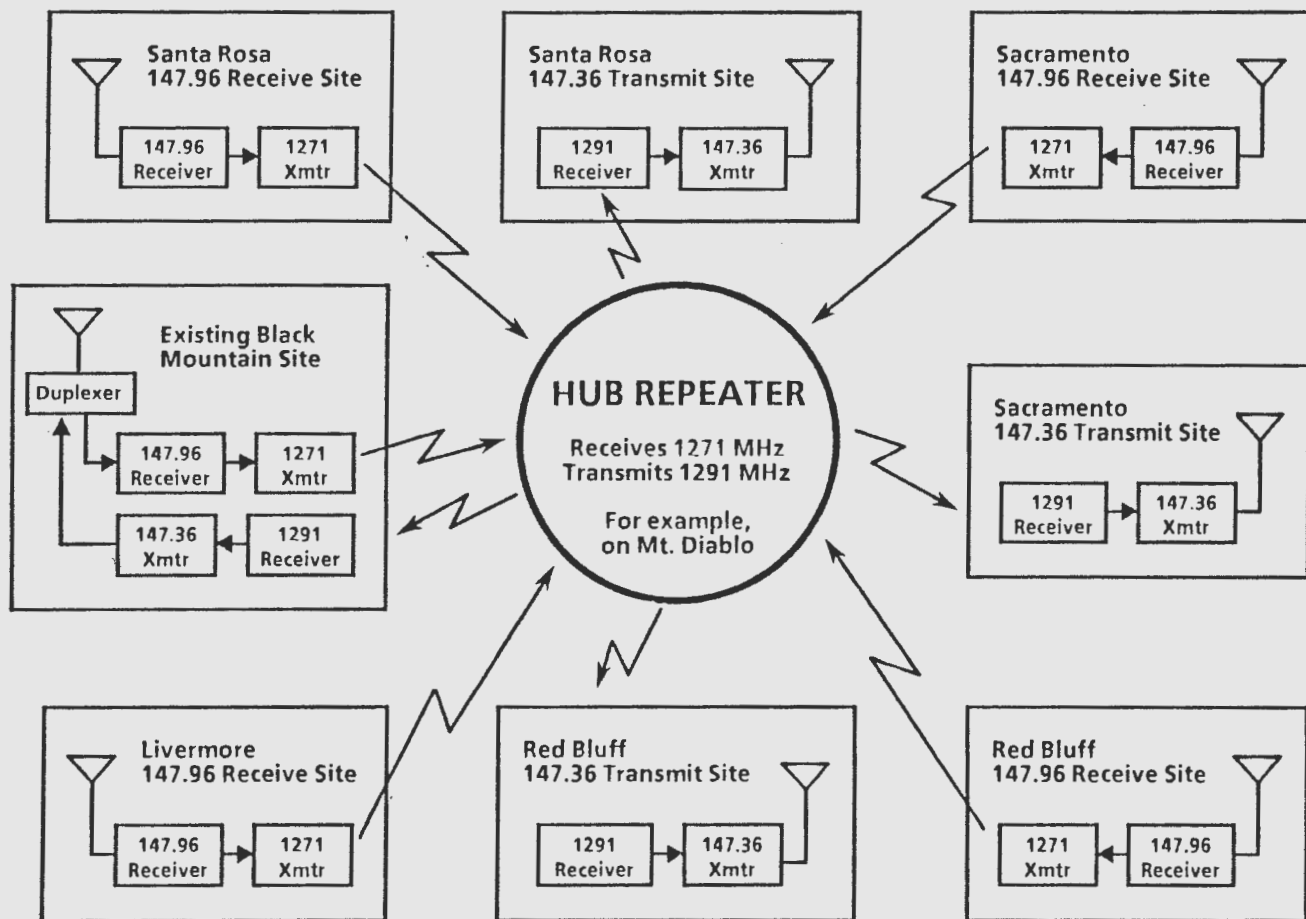
What is the **HUB REPEATER**? It is what makes this business of multiple receivers and transmitters on the same frequency pair all possible. The hub repeater is situated somewhere where it is reachable from the locations of all of the 147.960 MHz receivers and where it will reach all of the locations of the 147.360 MHz transmitters. The hub repeater is what actually does the "repeating," taking the signal which originated on 147.960 MHz and sending it to all of the transmitters operating on 147.360 MHz. It is on a band other than two meters, and would be directly accessible by members who wish to gear up on the band of the hub repeater. The hub repeater is the unit that identifies all of the 147.360 MHz transmitters with the automatic IDer, and is the focal point of all of the system. It could be on 220 MHz, 440 MHz, 900 MHz, or, for this example (see diagram), on 1200 MHz. If the hub, for instance, received on 1271 MHz and transmitted on 1291 MHz, then each of the local 147.960 MHz receivers would be connected to a 1271 MHz transmitter at the same location as the 147.960 MHz receiver. The hub would receive this signal on 1271 MHz and retransmit it out on 1291 MHz, where it would be heard by receivers at each of the 147.360 MHz transmitter sites. Note that there is no requirement for the 147.360 MHz transmitters to be co-located with 147.960 MHz receivers, thus saving the expense of duplexers and other items used to implement repeaters which transmit and receive on the same band. And, if the hub is not directly reachable by a remote 147.960 or 147.360 site, then an intermediate link would be established, perhaps on 220 or 440 MHz to complete the connection. Further, if 147.960 MHz or 147.360 MHz cannot be used in some area (Visalia, for example, already has a repeater on these frequencies), then a different repeater pair could be coordinated and used locally in place of 147.960 and 147.360 MHz.

Once the hub is established, then members or member groups can establish connections to the club repeater system to serve their own requirements. The club would coordinate the use of the standard PL frequencies and may require controls to be established to allow the user 147.96 and 147.36 terminals to be commanded off in the case of interference or jamming. A common PL frequency, such as 100 Hz, could



## EXAMPLE SYSTEM CONFIGURATION USING A HUB REPEATER

Add more 147.96 MHz receive and 147.36 MHz transmit sites as required for desired coverage



W6GO 10-87

be added to some of the 147.960 MHz receivers to simplify repeater access by those members who mobile through areas covered by different receivers.

I will present this concept at the November meeting, and propose that the NCDXC establish a hub repeater system that will give all of our Northern California members an opportunity to use the club repeater, even with hand-held transceivers! And, at the same time, release 144.950 MHz to packet. I hope that you will come and add to the discussion. Please call me on the repeater if you have any questions, and/or bring them up at the November meeting.

+ = + = +

## W6TI/R --- IN THE BEGINNING

by John G. Troster, W6ISQ

[Editor's note. Jack Troster has kindly produced for us a very thorough and interesting history of the W6TI repeater. Unfortunately, the full story runs to ten pages, too long for the *DXer*. Therefore, with Jack's consent, I have edited the story to a more manageable length. The full text will be placed in the club archives. I'll be happy to supply a copy of the entire article to any member, upon request.]

Here is how the present FM repeater got started --- with a letter to the editor of the *DXer* (John Gibson, N6OM, then K6YGS) in July 1970.

## UPGRADE THE "CATS" NET

The AM Cats Net has been used and enjoyed by NCDXCers for many years. Maybe it's time now that we respond to the times and consider upgrading our

Net to a FM repeater system. This would really open up the Club "services." Imagine a repeater in the Berkeley or Oakland hills. We could probably tie in members in Sacramento and at least as far south as Fresno (my Navy MARS Net checks in almost the whole valley through the repeater on Mount Diablo). And at last, too, everyone could hear all the Marin Mafiosi consistently!!

FM units are now available at reasonable (perhaps) prices, either old taxi/police/commercial gear (readily convertible, I'm told) or recent 144 MHz ham manufactured gear.

There is going to be a hassle about repeater rule-making in the FCC. But for once, all the ham magazines seem to be pulling together not only to turn back the proposals, but to make the Regs even more favorable for repeaters.

Just think ... with a repeater, people on the Peninsula could hear Uncle Vern on 144. That alone would be worth the price of the repeater.

All we really need is some one who knows how the repeater base stations works ... and someone who could set it up. But then we've got some high-grade talent around who could handle such minor items. Then we need a volunteer to have the thing in his house ... someone who lives on top of a mountain somewhere ... best would be East Bay ... let's see ... who might that be??

73 ... "The Maestro" ... W6ISQ ...

Six Italian String Quartets - "The Music Station"

At that time, Don Schliesser, W6MAV (now (K6RV) was President of the club. After the letter appeared in the *DXer*, Don called me and said in his smooth, ingratiating, loveable style, "OK, big mouth, you're on the committee."

"What committee?"

"The repeater committee."

"The repeater committee?"

"For the repeater we're going to start. You sounded off in the *DXer* about something; so, you gotta help with the work."

"I don't know nothin' about repeaters."

"Tough. But we got people who do. Be at Chinn's house Friday night."

So we go to Chinn's house to talk about repeaters. That first meeting took place on July 23, 1970. Present were:

Chairman K6KQN - Vince Chinn  
Committee W6ISQ - John Troster  
WA6ISX - Harley Licht

Contributing Observers and Guests:  
Don Schliesser, W6MAV  
Al Neilson, WA6AGA  
George Chong, W6BUR.

George Chong did most of the talking because he had been active in recent repeater start-ups. I was surprised and impressed that Don knew as much about repeaters as he did, but I came to find out he too had been active in a repeater group. The committee report itself, published in the *DXer* for July 1970, was in part in the form of questions and answers so as to inform the membership. Some of the worries about non-members, interference, operations, etc., were the concern then as now. For example, quoting from the committee report --

If we are to have coverage outside of the Bay Area, won't we invite more non-member listeners and possibly more QRM on a DX station being worked (when DX information is passed on the Net)?

*The purpose of the Net is to create DX information as well as other information among members. There are currently many non-member listeners on the AM frequency, and our object is NOT to "kick" them out, but to enhance DX to all. We may be able to create more interest among non-members as well as members.*

How do we set up a repeater and how much will it cost?

*Setting up a FM repeater is quite simple. Al Neilson and Don Schliesser have offered to set the Club up with a complete repeater. The cost of the equipment will be no more than \$250. This includes Rcvr-Xmtr, tower, antenna and all other hardware. Also, there would be no labor charge!!*

Who is going to maintain the repeater?

*A technical committee will be formed for this function. Also, it was noted that in case of severe breakdown there are many qualified technicians familiar with FM repeaters in the Bay Area who would give the Club assistance at no cost.*

Why spend so much on a FM repeater when my interest is DX?

*For those who are not on AM currently, and for those who cannot get on two meters because of a bad location for AM, a repeater will serve the following:*

- 1. The repeater will put you in contact with practically all the full members of the Club.*

- 2. The cost to get on FM is less than AM in most cases.*

The committee report closed with a recommendation to the club favoring a FM repeater, and indi-

cated that a discussion of the concept would be held at the September meeting. The report closed with the following comment.

After September's meeting, voting ballots will be sent out to all members regarding the adoption or tabling of a FM repeater.

So we decided to have a repeater.

In February 1971, a brief spot announcement appeared in the *DXer*:

Don, W6MAV, disclosed that he has purchased a repeater which will be used by the NCDXC for its DX Net.

In April 1971:

#### **NCDXC FM REPEATER - ON THE AIR!!**

The NCDXC repeater is on and working, although only from the garage of W6MAV. Final site selection is under way, and it should be in its final resting place by June. The repeater frequencies have been firmed up, and are as follows:

REPEATER IN 147.96 (YOUR TRANSMITTING FREQUENCY)

REPEATER OUT 147.18 (YOUR RECEIVING FREQUENCY)

Avoid the rush and buy your crustals now!

Full operational instructions will be publicized in the *DXer* and at NCDXC meetings as soon as the permanent site has been selected and installation completed.

In July 1971 the (temporary) permanent location for the repeater had been selected - the home of Lee Shaklee, W6BH, at an elegant site located at 1200 feet in the Oakland Hills. The IDer was supplied by our old friend Jack Curtis, K6KU, using a timer built and donated by Larry Boyle, WA6LHU. The initial call was W6TI/6.

Club members began to gether informally around the repeater on Monday or Wednesday nights to swap lies and other straight DX info. I do not remember when or exactly how the regular present format of the Thursday night net meeting started, but I recall that when I was president of the club in 1975, I talked to Gene Darlington, W6TTS, about presiding over the chatter and perhaps to set up some sort of a regular meeting order. Gene developed the first regular sequence and pattern that we continue to use for the on-the-air meetings today.

So that is how W6TI/6 got started and began to grow. Unfortunately, former very active club members Don, W6MAV (K6RV), Vince, K6KQN, and Harley, WA6ISX, are no longer very active in amateur radio. A

great loss to the club because they were "movers and doers"!

Two asides:

1. Vince Chinn's house was also the first meeting place less than two years later for creation of the Northern California DX Foundation --- which Vince started.

2. Some of the readers may have seen a movie I showed recently at a club meeting about the CQ WW fone contest activity at XV5AC in 1975. I went with Don and Vince.

73 --- de W6ISQ

+ = + = +

#### **LETTERS LETTERS LETTERS**

---de Jay O'Brien, W6GO -

#### **SACRAMENTO LINK SHUT DOWN**

The FCC license for the Sacramento link on 144.950 MHz expires on November 12, 1987. The W6TI trustee will not furnish copies of the renewed W6TI license to the link operators without formal club sanction. The Board of Directors, responding to my formal request for sanction during their October meeting, decided to take no action, referring it instead to the technical committee.

The identification for the transmitter on 144.95 is the W6TI identifier, retransmitted through the link. Through an agreement with the trustee of the club repeater when the link was established in 1981 (the repeater was then WR6ACZ), a copy of the repeater license is maintained in the link's files. When the repeater became W6TI/R, a copy of the W6TI license was furnished and replaced the WR6ACZ license copy. The legal requirement for station identification is thus handled by the W6TI identifier and authorized by the license copy. This method of identification was chosen as it is the least confusing and least disruptive method of identification, and is entirely legal. An identifier at the link would add an additional call to the system, and would cover up transmissions on W6TI while it identifies itself. Further, it would be an unnecessary expense to add an identifier to the link.

The formal letter which I sent to the Board of Directors for action at the October meeting made three requests. First, for official club sanction of the links. Second, for the addition of PL to the W6TI identifier, and third, for official copies of the W6TI license to be furnished to the link operators. The PL on ID request was to correct a technical oversight which I made when I requested PL to be added to the W6TI transmitter on 147.36 to improve the operation of the links. PL was added at my request, and PL on the W6TI

transmitter is now present only when a station is transmitting on 147.96, and is not present during the "hang time" of the W6TI transmitter. This gives the link users the opportunity to begin transmitting before the W6TI transmitter drops off, in the same way that stations operate who can reach W6TI directly. The addition of PL on the W6TI transmitter in this way has improved the operation of the links. However, when I requested the technical committee to add the PL, I did not consider the fact that the W6TI identifier itself would not cause PL to be transmitted. I requested the correction over a year ago, and was led to believe that my request was being acted upon, albeit slowly. A month ago, I found out that a technical committee decision had been made to NOT put PL on the IDer without club sanction, so I promptly wrote a letter requesting that sanction.

When Ted, KA6W, called me to inform me of the Board's action (non-action?) on my request, I reviewed the copy of the W6TI license that trustee W6RGG had furnished me several years ago, and found out that it expires the day before the November NCDXC meeting! I am obliged to turn the link off if a valid copy of the renewed W6TI license is not forthcoming. I will bring this up at the November 13th meeting. If you wish to see the link continue, please attend and make your view known.

Is this the NORTHERN CALIFORNIA DX Club or the SILICON VALLEY DX Club?

+ = + = +

[Editor's note. Almost every month for over a year a column has appeared in the *DXer* written by Catperson. Many references have been made by Catperson to the CATS net - a long-standing nickname for the NCDXC 2 meter net, now on W6TI/R. Where did that name come from? Well, it all started in *QST* for April 1963 in an article written by NCDXCer Jack Troster, W6ISQ. Thanks to the ARRL for permission to reprint that article.]

## IT'S THE CATS-NET

By John G. Troster, W6ISQ

"The Communications and Traffic Society Net will now come to order. H'ya fellas. Anybody here? Net Control by."

"This is W6WX. Yeah, I'm here. Been updating my tape library. Got every one of Danny's calls punched on tape - even the /MMs. No matter where he goes now I can call him day and night. W6WX."

"Good news. OK, anybody else want to check into CATS Net?"

"Net Control - W6SC. Not much here. Few simple changes in the receiver. Rewired all the r.f.'s, i.f.'s, audio and power supply - W6SC."

"And it still works??? OK, anybody else want to check into the Communications And Traffic Society Net?"

"Net control, this is W6SAI. Not much new here. Been working on my new book, *Invisible Towers For Hams With Neighbors*. Aaannndd, let's see - got my new two-meter Beer Can Collinear on the invisible tower now - up 71 feet.

Looks kinda funny up there all by itself. Police Department outside now arguing whether this is case for local or federal authorities."

"You oughta drink the beer. Maybe the collinear would go away. Haw."

"How ya think I made the tower invisible?"

"Hey, you guys, this is W6FYM. We got an emergency here. Somebody at W6UF's just called and said Bill is hung up on his new beam."

"He's rotating?"

"Naw, he climbed the 110 feet up the tower OK, but then I guess he figured he was Richard Henry Dana or somebody else 'Before the Mast', 'cause he started out the 7-Mc. director like it was a yard arm. So he's about one-eighth wave out reefing air like a real Jack Tar."

"Easy, friends, there's no problem that CATS net can't handle instantly and adequately. W6SAI - will you please step outside your front door and ask the police to call the Fire Department to go up and throw Bill a line er sumpin!"

"Rajah."

"I tell you, there ain't nothing' the old Communications And Traffic Society can't handle. Right? Ha. OK, are there any other check-ins?"

"Net control this is W6CIS. I have one short message for Menlo Park."

"W6CIS this is Net Control. Ahhh, you mean you have a third-party message - like one for somebody else?"

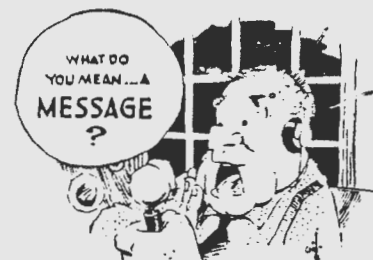
"Right. A message originating in Florida addressed to a party in Menlo Park."

"We don't have any stations in CATS from Menlo Park."

"Ya got W6WX. He's in Menlo."

"Oh yeah. Guess he is. Well, what's the message say?"

"It's about a time of arrival. Say is this the Communications And Traffic Society Net that is listed in the National Roster of traffic nets? Maybe I got the wrong frequency."



"W6CIS from Net Control. Stand by, old man. Say Howard, W6FYM - call me on the land line, will ya."

(Rriinnnggg) ... "What do ya want?"

"Look, Howard, we got a *real* emergency on our hands! This fella wants us to handle a message. He must be crazy. We haven't handled a message in ten years. Now come on, you're the president of the Society, what are we gonna do?"

"You know anybody who knows how to handle a message?"

"Heck no. Do you?"

"Well, not in CATS Net anyway. We had a fella once a few years ago, but he ..."

"We gotta get this fella off our backs, Howard."

"I got it, I got it. Now look, it's simple. We'll do this ... buzzzzzz ... buzzzzzz ... got it? OK, you call those four fellas on the phone and I'll call this group. Call back in 5 minutes. Stall W6CIS off a minute or two."

"Ahhhh ... W6CIS from Net Control, Stand by, old man. Little trouble here with the, ahhhh, doubler. Be with ya in a second ..."

\*\*\*

"Where's that phone book? Lessee, W6KG lives across the bay ... yi, a toll call, but it's worth it ... Lloyd, we gotta fella checking into the net who wants us to handle a third-party message ..."

"A what???"

"Yeah, that's right, a third-party message. Yeah, I know we don't, but he saw the Communications And Traffic Society Net listed in the book and ... well, here's what we want to do ... you vote in favor? Good."

\*\*\*

"Howard, ya get ahold of your boys?"

"Yeah, all voted in favor of the motion. Go ahead with the net."

"This is Net Control. Anybody else want to check into the CATS Net?"

"Net Control from W6CIS. Hey, what about my Menlo traffic?"

"W6CIS - sorry, OM, CATS Net doesn't handle third-party traffic."

"Well, you're listed right here ... CATS Net, it says here ..."

"Well ya see, OM, we had an emergency - errr - executive commit - ahhhh vote - there must be some mistake OM."

"Well, right here it says 'CATS NET - Communications And Traffic Society Net' meets every ..."

"W6CIS, this is Net Control. Well, it's the CATS Net all right, but I guess you have an old list or somethin' like that. CATS stands for Chatter And Talking Society. See ya again sometime, eh? Now, anyone else want to check into CATS Net?"

+ = + = +

### POETRY CORNER

Ode to a Toad  
or  
The DXers Lament

by Catperson

Your QRM\*  
Makes me squirm  
Like a worm.  
Do you confirm?

\* Pronounced "qwerem", first coined by K6XO.

+ = + = +



### ROSTER CHANGES

N6DYS was accidentally omitted from the November 1987 NCDXC Membership roster. Please change your rosters as follows.

N6DYS - Taylor Washburn, 356 Stanford Ave., Menlo Park, CA 94025. Phones: (415) 851-7390 (H), (415) 859-2112 (W).