

Northern California DX Club DXer



Volume XLIV - Number 4

April, 1991

RON'S COMMENTS

If you weren't at last month's meeting you may not know that AA6AD presented his feelings regarding a decrease in the amount of DX announcements on the repeater. The feeling by many is that people now use packet and don't bother with voice announcements (with the exception of Louese, KA6ING, who faithfully reports packet activity over W6TI). The result was that W6DU made a motion that the Club buy a synthesized Text to Voice device which will announce DX reports from packet over W6TI automatically. The motion was approved. John K6LLK, and Rusty, W6OAT have agreed to obtain the device which the club is buying at a cost of just under \$300.00. Delivery is about one month so tests should tentatively start in May. It should be noted that once the system is operational it will be used for a 90 day period after which time the NCDXC will vote to either keep it activated or shut it down and sell the box.

On another note, there has been some confusion over sponsorship of new members. In August of 1989 the Board of Directors resolved that the Procedures Manual "1-103" be changed to read "One of the prospective sponsors must be present to speak for him or her at the applicants second reading. If neither sponsor is available for the 2nd reading, it will be deferred to the next general club meeting at which time one of the sponsors is available." Murphy got into the act and this change was never implemented into the Procedures Manual and it has caused confusion at several readings. We (BOD) are changing the manual to show this. See you at Visalia! 73, Ron NG6X

CONTENTS

Ron's Comments . . .	Page 1
Club Info . . .	Page 2
Meeting Minutes . . .	Page 2/3
Address Changes . . .	Page 3
Club Thanks . . .	Page 3
Feature . . .	Page 4/5/6
Trivia . . .	Page 6
Classified . . .	Page 7
Sacramento Thanks . . .	Page 7

NEXT MEETING

VISALIA!

CLUB INFORMATION

THE NORTHERN CALIFORNIA DX CLUB, INC., PO BOX 608, MENLO PARK, CA 94026

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

NCDXC OFFICERS

President: Ron Rasmussen, NG6X
Vice President: Bill Fontes, W6TEX
Secretary: Stan Kuhl, K6MA
Treasurer: Bob Wilson, NQ6X
Director: Morris Brown, N6DJM
Director: Rusty Epps W6OAT
Director: Larry Souza, KG6GF

DX'er STAFF

Editor: Doug Beck, K6ZX
Production: Ron Panton, W6VG
DX Ladder: Larry Bloom, KD6XY
Data Base: John Cronin Jr., K6LLK

Send DX'er contributions to:

Doug Beck
995 Lundy Lane
Los Altos, CA 94024
-or- dbeck@erg.sri.com

Send DX ladder reports to:

Larry Bloom
2520 Heather Lane
San Bruno, CA 94066

NCDXC REPEATER W6TI/R

Output 147.36 Mhz, Input 147.96 MHz
Trustee: Bob Vallio, W6RGG
Repeater Committee Chairman:
Ralph Hunt, AG6Q
Suggested simplex freq.: 147.54 MHz

NCDXC THURSDAY NIGHT NET

On W6TI/R Thursday at 8:00 PM local time.
Operations Manager: Ralph Hunt, AG6Q
DX News: Bob Artigo, KN6J
Propagation: Al Lotze, W6RQ
Contest News: 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

NCDXC DX BULLETIN BROADCASTS

Trustee: Bob Vallio, W6RGG. General interest broadcasts at 1800Z Sunday and 0200Z Monday on 14.002 MHz and 7.016 Mhz

MEETING MINUTES

NCDXC Board of Directors Meeting, Feb. 27, 1991

1. Members present: NG6X, W6TEX, N6DJM, K6MA, at Harrys Hoffbrau, Mountain View.

2. Several second readings of membership applications have been postponed since neither sponsor were present. October '89 membership vote requires one or both sponsors be present at the second reading; unfortun ately it has not been incorporated in present issue of Procedures Manual. This will be incorporated in the next revision of Procedures Manual. No solution at this time except to notify sponsors responsibility.

3. Discussion on Marathonrules. Lists ok? Any other modifications? N6DJM to query membership for club inputs.

4. DX'er of year award - Feb. 8th last day for nominations.

5. Officer nomination committee for 91-92 club officers to be decided next month. BOD to think about p[ossible committee members and decide next month BOD meeting.

6. Extensive discussion on "Dear Friend" letter by Chod Harris to non-subscribing DX Magazine and usage of the Packet Cluster. N6DJM distributed copies of back and forth correspondence. N6DJM prepared to discuss at next membership meeting.

NCDXC Membership Meeting, March 8, 1991
at Harry's in Palo Alto

1. Meeting opened by Ron, NG6X. Introduction of guests.

2. Membership applications readings.

First Reading:
AA6QY Herschel Stansch

Second Readings:

N0DJJ Jon Casmajor, Chico
N6DVR Jim Monty, Ripon
W6ROY Don Turner, Vacaville

All above voted into membership. Second readings were not presented for vote on KD4GW, Claude Fontaine and KJ6JF, Don Sexton since neither sponsor was present. Next reading will be at May meeting.

(Meeting Minutes - continues)

Reinstatement:

K6PBT, Charles Strobel, Magalia; voted back into membership.

3. Program speaker, Mike Schoessow, was introduced by Bruno, AA6AD. Topic was life and history of Nicola Tesla (1856-1943) who invented AC Motors and generators and made advances in high voltage transmission apparatus, high frequency radio circuits. He also patented rotary spark gap in 1893 and presented first radio controlled model boat in 1898. Tesla was contemporary to Marconi and Edison and was awarded Nobel Prize in 1911. The program was very enlightening, informative and enjoyable.

4. DXAC report by W6CF.

Penguin Islands being considered. No news yet. HL/P5 comments being reviewed. No action yet. DXCC Field checking for initial DXCC application approved. Implementation in process, ready perhaps by late '91. Petition for Jarvis has not been received yet by DXAC. Some 7O8AA QSL's have been received.

5. Convention Report - W6MKM

401 preregistered to date. \$16K in prizes to date. Friday night BBQ will be beef only (no chicken as previously optioned) Over 100 signed up. Bus to Sequoia TBD from Visalia. Bay Area to Visalia bus cancelled, not enough interest. Only 11 signed up, 35 needed.

6. Old Business. AA6AD stated very little action on repeater the past 6-9 months and encouraged others to make announcements on W6TI to maintain NCDXC club membership ties. After discussion, W6DU motioned club to sponsor experiment with voice synthesizer / packet converter. Membership authorized up to \$750 to finance experiment. Motion and finances approved. BOD to give K6LLK go ahead to purchase digital message recorder / announcer (DX-Alert) and relay to W6TI repeater.

7. New Business. Club Logo. Motion made, seconded and passed to adopt NCDXC Pin as official NCDXC logo.

de K6MA

ADDRESS CHANGES

Address Change:

Jerry Bliss K6SMH/G0CLY
Box 973
APO New York 0921

New Addresses:

Charles E. Strobel K6PBT
P.O. Box 883
Magalia, CA 94954
(H) 916.873.4447

Jon E Casamajor N0DJJ
24 Graceland Ct.
Chico, CA 95926
(H) 916.891.8817
(W) 916.893.5599

James R. Monty N6DVR
1458 Harvest Dr.
Ripon, CA 95366
(H) 209.599.2256
(W) 209.858.5533

Don C. Turner W6ROY
601 Somerset Dr.
Vacaville, CA 95867

COMMENT

The NCDXC would like to thank Lloyd Cabral, AA6I who has provided us with some commercial grade storage batteries for use as backup emergency power for the repeater.

At the present time, the batteries are stored at Smitty W6JZU's house. In late spring or summer a work party will be organized to install them at the repeater site. de NG6X

Most DXers eventually realize that there are events that can happen but whose significance is not realized until later. A month or so back one of the local QRPers came up the hill with an idea that we initially thought a bit ridiculous. After thinking about it for a couple of weeks, we are now not so sure.

"Tell me," this QRPer demanded, "tell me why they call it 'amateur radio' when obviously it is not. Absolutely not! Tell me why it is so mislabeled. You are supposed to know everything".

This was an easy one to answer—we thought. "It is called amateur radio," we quickly replied, "because if you should ever look in a dictionary, you would learn that an amateur is one who engages in a pursuit, study, science or sport as a pastime rather than a profession. For amateur radio, isn't that the obvious.!" Momentarily, we were firm in believing that we had neatly boxed in both the QRPer and his question. We also felt secure because Webster would certainly be on our side.

The QRPer thought differently. First he set out to demolish our beliefs. "Webster?" he said thoughtfully, "I presume you mean Noah Webster, right? But how about Noah also saying that an amateur is one lacking in skill or competence? Does that description fit the DXers that you know? Or do you lean to the other descriptions given by Webster for an amateur, terms like 'dilettante', 'dabbler' or 'tyro'. Do you think that any of these fit the majority of DXers. Tell me!"

Of course not! This one had come loaded for bear when all we had been expecting was a quite Saturday afternoon of fraternal DX no-quarter combat. We had to do something, and quickly.

Sidestepping to the right a bit, we asked: "What's on your mind, anyhow, that you come up here belly-aching? And why jump all over me?" We held more questions, momentarily, but it did no good. This one wanted straight answers. It was evident that he thought we had them. We quickly learned that we did not.

"Look", this QRPer said, the edge of the righteous in his voice, "I am a DXer. And I am also an amateur. All I know about radio I learned out of a book or talking to others like myself, all of them honest

amateurs. I work for a living, amateur radio and DXing has to necessarily be given a secondary priority. In short, I am a disadvantaged DXer forced to compete with professionals. Full-blown, 100% professionals! Tell me, do you think that that is fair?"

Of course it wasn't. Amateurs should not have to compete with anyone tainted by professionalism. And no true-blue, red-blooded, fair minded, sensitive, even-handed, square dealing DXer would ever stand for such an injustice. Absolutely not! "Tell me what you mean," we suggested. Later we wondered how we had so willingly put our foot into the snare.

"I am talking about those so-called DXers with advanced degrees in the arcane subjects", the QRPer took off in a jump start, "fellows with advanced degrees, and many of them PhD's, in Electronics, electrical Engineering, Mechanical Engineering, Communications, things like that. You know what I mean. The fellows with the big rigs and the big signals. Would you call them amateurs? Be honest about it! Aren't these full-bore professionals wearing the camouflage of an amateur. They sport the Amateur Extra Class License plus, in numerous instances, the FCC First Class Commercial license. Even the Commercial First Class with Radar endorsement! You call those amateurs? And in DXing I am supposed to compete with them—on an equal basis? Is that fair?"

"Of course it isn't", we shouted and then stopped. What had we done, what had we said? This QRPer could not be right. What he said flew in the face of everything. Everything like—well, like tradition. Absolutely! Amateur Radio has always been marked by tradition.

Any right-thinking DXer would know this. Tradition had always been our guide. And every DXer learns, as soon as he acquires that DXCC Certificate, perhaps even before, that it is the stations with the big signals and high towers that work all the DX. Naturally. That's the way it has always been. That's tradition! Have no doubt on that point. It's TRADITION! And it is the way it will always be for read DXers.

Read DXers who came up as all we old duffers did. It is tradition that DXers can only attain the sacred Honor Roll by following tradition. Start early, outlive our contemporaries, never be satisfied with your power but don't, for heaven's sake, talk about it. Never be satisfied with the height of your tower nor your DXCC country total and take early retirement. That's tradition! At least that was our thinking at that point. We had no reason not to believe that

the thinking would endure. It definitely is 'traditional' thinking, the best kind.

But how would one refute the "allegations" of this Local QRPer. We had to admit that with his background he might have problems. Actually it was almost a sure thing that as an amateur he would. So, having no ready answers, we tried to shift to another heading. And, truthfully, all we said was: "Anything else bothering you? Or is it just those with esoteric educational background that you feel puts you at a disadvantage? They alone?" It was not.

"And how about all those old gaffers who are retired", this QRPer roared on, shifting into verbal overdrive, "those 24-hour-a-day DXers. Turn on the two meter box any hour, day or night, and you will hear them in there. Everytime and all the time. They are the eternal DXers, apparently never sleeping, never leaving the rig. And not only do they want to work all the DX that shows, they also want to work it any time it shows, every day on every band."

"So what happens when I get a chance to tune the bands. I am competing for DX against the over-educated specialists calling themselves 'amateurs', I am also buried under the 'Over-Sixty' crowd who no longer work, who as a class usually have no need to worry over buying a home or raising a family and do nothing but tune the bands. And don't tell me that anyone who works the DX bands as these do are not 'professionals'. For them it is a full time, every day occupation. Don't call them tyros, don't call them amateurs, they are professionals and nothing else!"

You know something, it was getting difficult to listen to this one. Not only was he attacking the traditional, the sacred foundations of DXing, he was also aiming his heresy at the Old Timers. We wondered what the AARP was going to say when they heard about this. Meanwhile, we still had him on our hands and while we could see some basis for his discontent, we had to wonder how we might cool him down a bit. You know, to forget his griping. We tried again.

"What do you have in mind", we cautiously ventured. "Have you given any thought as to what might be done to make things what you might consider as being more even-handed. In short, what in your thinking are the alternatives to the present set-up? Something that would, let's say, emphasize the "amateur" aspect of amateur radio. Have you thought about any possibilities?" It was a quick revelation to learn that he had not only thought of possibilities, he was ready to fight for them.

"I sure have", he said delightedly, a smile of anticipation starting to show, "all we have to do is to make sure that in Amateur Radio the emphasis is on amateurism. If professionals are to be accepted on the amateur bands and in the DX Century Club, they should be recognized for their special skills and knowledge and they should always compete as professionals in an amateur activity. In short, The DXCC should be for amateurs and amateurs only. Professionals, and these include those with advanced educational degrees, those employed in the communication or electronic fields, plus those 24-hour, seven days a week DXers over sixty years of age, should be allowed to work some DX, naturally, but the DXCC certificate should be reserved for those who are real amateurs. Possibly some sort of a DXCC certificate, properly endorsed of course, should be available for the professionals who like to work a lot of DX. But it should not be the same certificate that we real amateurs receive. Absolutely not!"

This was an interesting but totally unexpected concept. The DXCC certificate would be only for non-professional amateurs. This might imply that something different would be available for those others. "How would you work it?" we asked, expecting more information. We got it. Have no doubt on that point. The local QRPer had figured out a lot of things, possibly more than some might want to hear.

"First", the QRPer proclaimed, "I would like to see that the Honor Roll is reserved for amateurs. Amateurs only!" Holding up a hand to forestall any hurried questions, he continued: "Of course, it would be fair to provide a Honor Roll for those other people, the professional DXers, it would seem fair to ensure that they also have some goals. But their DXCC Honor Roll would have to have some changes, rule changes applicable to the professionals only, of course. Their cut-off point for their own Honor Roll would be five below the current country total. Time would tell whether that cut-off point is too liberal. However, these are the ones who are more highly trained, in almost all instances are highly educated and definitely are more qualified than the real true-blue and genuine amateurs are. Thus their achievement threshold obviously should also be higher. Right!"

"And their certificate obviously cannot be the familiar DXCC. I think that a suitable certificate can be designed, one different than the traditional DXCC format because it would need more space for the

identification banner, the Professional endorsement. Not too much different, but definitely one to be easily recognized."

"I also think that it must be labeled very clearly. Maybe something like DXCC/p Century Club. Those in the know would have no trouble that label, don't you think? And in the contests, these professionals would compete in a separate category, signing their calls with the identifier /p. Their listings would also be prominently listed, right after the amateurs, of course. That /p would explain everything. You do understand that, don't you?"

This was all getting a bit sticky. This one had all his arguments lined out, he had collected all the justification that one might be able to handle, and to top things, it somehow was starting to sound right. It can be easily understood how an amateur without a technical background enjoyed by others, without an advanced graduate school education to give a superior advantage, or with only limited time to operate, would feel that certain professional types are favored by the current rules. That failure to recognize the obvious inequities would not only bring dissatisfaction but also possibly rebellion. Every part of his plan was crystal clear.

While some may feel that this might be but an individual viewpoint, when one starts to analyze the arguments, one can begin to appreciate, possibly even attain a better understanding, that life and the triumphs enjoyed in DXing have been made easier for some, the professionals, but it always was a difficult if not an outright insurmountable task, for others less favored. It might just be possible that the amateur radio fraternity, and that work "amateur" might be a strange word to use in this context, in the name of fairness and equal opportunity, must quickly realize that this is the time to do something about it. Obviously the remedy is long delayed, long overdue.

"Do you think it will fly," we finally asked and the QRPer smiled. "How can it miss?" was his cryptic reply. "Amateurs have always believed in fair play, haven't they? Just explain the concept to any fair-minded and square-dealing DXer and see what happens. You might be surprised".

Possibly that was exactly what we were hoping to avoid. Heck! We didn't even know how to explain that /p or what it implied. So we thought that we might pass the idea on to you and let you be the one

surprised. Then you could do something about it before those high-tech and over sixty crowd get wind of it. You know how negative their thinking can be when their special privileges are questioned? Right?
de WA6AUD - Cas

WE GET LETTERS

17 February 1991

Dear Friends,

We finished a six-months DXpedition in Africa today. All of our operations on this trip were rare countries: In the order of operation - 5H0QL (Dar-es-Salaam, Tanzania), 7Q7KG (Malawi), C9QL (Mozambique), ZS9/W6KG (Walvis Bay) and 9U5QL (Burundi).

We made several side trips to countries where either time, fighting or non-availability of licenses prevented operation. These were; The Congo, Zaire, Rwanda, and Uganda.

All this made us very much wanted by hams world wide. The pile-ups were enormous, but we enjoy them and have learned, on both fone and CW to copy stations with many others calling on top of them.

We made a total of nearly 40,000 QSO's and our half-year operation was a great success. Our total countries visited not totals 218. We qualified for DXCC in more than half of these countries.

73 & 88
Lloyd Colvin W6KG
Iris Colvin W6QL

Bob Nielsen, W6SWE, described a message from Jerry Crawford. A company called Hadron (spelling?) has a packet radio controller product, the PRC6064A, which is based on licensed TAPR technology. These devices are being used by special forces in Operation Desert Storm.

Al Dennis, who has some connection to the Department of Defense, spoke up about DoD use of amateur packet equipment. They've been using it since we started. It is used for man-carried single-threaded narrowband links. The packet controllers work naturally with the laptop computers and digital radios they already have in the field. The 18th Airborne Corps has been building up applications. Amateur-like packet is a de facto standard, because it's cheap and gives interoperability.

Packet is used both point-to-point and in networks. For logistic information transmission, packet replaces Jeep shuttles. Networking is coming, and interfaces to the DDN. They want to extend the DDN right into the jeeps in the field.

Question: Are you aware of tactical front-line use of amateur packet gear in Desert Storm? Answer: Yes! It is being used between camps in the desert. Then as the frontline troops advance, they outrun the logistics people - and use the packet thin-links to keep in touch.

Question: Can you *please* give this talk to the FCC? Answer: Not sure we can get involved. We did push for reciprocal licensing with Persian Gulf states. Question: Regulatory issues are getting to be a problem. Pointing out the benefits of amateur radio may help keep the regulators from getting out of control. Answer: We don't normally deal with the FCC, but I'll do what I can.

Question: Does the enemy have any trace of this kind of capability? Answer: No specifics, but note that TNC-2's are available world-wide, and so are smart people. NK6K: Note that they aren't using the TNC-2's modem through a voice radio like we do. They connect digitally, through a Crypto unit. So the communications wouldn't be easy to monitor.

Question: How well does it perform? It's not really optimized for this kind of work. Answer: It works well. Better than the other stuff they have. The amateur packet gear is the only error-correcting protocol they have that works on half-duplex radios. They even use it on UHF satellite links, which have

WANTED (Standing Order)
Ideas for future club programs. Provide topic, contact name and telephone number. Forward to any club officer. Thank you. de W6TEX

WANTED
Feature items for future DXer issues. One to two pages of text plus illustrations is the best size. If you don't come through, you will be faced with more ARRL Letter reprints. de K6ZX

Continued . . .

just a few poor-quality channels available. NK6K: We have a cheap satellite design you might be interested in ... Answer: We're very interested, and we've had proposals for years, but haven't gotten very far.

From TAPR Annual Meeting notes via Usenet

COMMENT

The February 8-9 Sacramento NCDXC meeting is now past, but not forgotten. Generally, the meeting went along as planned by the Steering Committee.

In retrospect, some things come to mind which may have caused some embarrassment.

- The inadvertent failure to recongize Quad A's Electronic Supply of Citrus Heights as the donor of a raffle prize (1991 ARRL Handbook).
- Lack of appropriate recognition of the many hours of personal effort spent by the members of the Steering Committee. They were:

Chairman	Tony Borgia K6DR
Vice Chair	Marion Henson W6NKR
Publicity	George Leone K6SG
Dinner Res	Ed Merritt KF6EN
	Marion Henson W6NKR
Treasurer	Ed Merritt KF6EN
	Marion Henson W6NKR
Golf Chair	J. Van Blitter K6NM
Tourn Chair	Bill Hendrick NS6D
Sound Chair	Chuck Elder W6LOE
Sound Assist	Paul Wolf W6RLP
Prizes/Talk In	Paul Wolf W6RLP
Hospitality	Bob Cox K3EST
	Pete Peterson K6EDV

The support of the NCDXC Board is also acknowledged, particularly Bill, W6TEX.
de Tony K6DR

ALINCO REG. 749.00
DR-570T SALE \$549.95
 The Twin Band
 2m/70cm FM Transceiver

40W 2m
 35W 70cm
 Full Duplex
 Cross Band Operation
 Twin Band Receiver



ICOM IC-2400A/3220
 2m/440 MHz / 2m/440 MHz



VHF/UHF DUAL BAND
 FM TRANSCEIVER

April

1991

AEA Advanced Electronic Applications

PK-232 Multi-mode Data Controller
 Now with PakMail function



- NEW IBM Fax Screen Display Program Available
 - Transmit/Receive on Six Modes
 - CW/RTTY/ASCII/AMTOR/Packet/FAX
 - IBM and Commodore terminal programs available
 - Radio Ports for HF and VHF
- In Stock for Quick Delivery**
Free Shipment

KENWOOD

Super Compact HT
 700 MAH Battery



TH-27A NEW
 RX 118-165 MHz
 2 MTR/2.5W DTSS

TH-47A
 440/1.5W DTSS
 41 Memories

GREAT PRICE



HAM RADIO OUTLET

LARGEST HAM OUTLET IN THE WORLD

ALL MAJOR BRANDS IN STOCK



Bob Ferrero W6RJ
 President/Owner

Jim Rafferty N6RJ
 VP - National Sales Manager

ANAHEIM, CA 92801
 2620 W. La Palma
 (714) 761-3033
 (213) 860-2040
 Between Disneyland & Knotts Berry Farm

BURLINGAME, CA 94010
 999 Howard Av.
 (415) 342-5757
 Jeff, WD6ERA, Mgr
 5 mi. south of SFO on 101

OAKLAND, CA 94606
 2210 Livingston St.
 (415) 534-5757
 Rich, WA9WYB, Mgr
 I-880 at 23rd Ave. ramp

SALEM, NH 03079
 224 N. Broadway
 (603) 898-3750
 (800) 444-0047
 Paul, NW1U, Mgr.
 Exit 1, I-93; 28 mi. no. of Boston

YAN NUYS, CA 91411
 6265 Sepulveda Blvd.
 (818) 988-2212
 Al, K6YRA, Mgr.
 San Diego Fwy. at Victory Blvd.

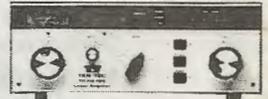
ATLANTA, GA 30340
 6071 Buford Highway
 (404) 263-0700
 Larry, WD4AGW, Mgr.
 Doraville, 1 mi. north of I-285

DENVER, CO 89231
 8400 E. Iliff Ave., #9
 (303) 745-7373
 (800) 444-9476
 George, KD0RW, Mgr.

PHOENIX, AZ 85015
 1702 W. Camelback Rd.
 (602) 242-3515
 Gary, WB7SLY, Mgr.
 East of Highway 17

SAN DIEGO, CA 92123
 5375 Kearny Villa Rd.
 (619) 560-4900
 Tom, KM6K, Mgr.
 Highway 163 and
 Claremont Mesa Blvd.

WOODBIDGE, VA 22191
 14803 Build America Drive
 (703) 643-1063
 (800) 444-4799
 Curtis, WB4KZL, Mgr.
 Exit 54, I-95, South to US 1



TITAN 425

- Pair 3CX800A7 • External Power Supply
 - Performance at legal limit
 - 3 MS QSK, 1.6 to 22 MHz • Assures "Loaf Along"
 - With authorized modification through 29.999 MHz
- IN STOCK NOW! FREE SHIPMENT!**

THE DXer
 P. O. Box 608
 Menlo Park, CA 94026
 U.S.A.



FIRST CLASS

FIRST CLASS

FIRST CLASS

Lic. Exp 3/94
 J Sherwood Charlton, K5GOE
 306 N Willow
 Fayetteville, AR
 72701

Handwritten: W...
 FR542/T
 May 5, 1991