



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

The Editor's Keyboard

After WRTC

It's over. One of ham radio's Great Moments—the second World Radiosport Team Championship—is history. The competitors, judges, referees, and miscellaneous beer drinkers like me have all gone home. The Internet Reflectors have gone on to other subjects and other contests. But the NCCers and NCDXers who worked long and hard to bring off this event succeeded hugely, and perhaps by now have caught up on their sleep and are ready to look back in awe and amazement at this contest-cum-huge party that went on for a solid week.

Participants came from 30 countries; 30 people came from Slovenia, for starters—did anyone stay home and operate?

The Championship itself was won by KRØY and K1TO—going away. Sure, there was plenty of debate about whether there was *really* a “level playing field,” whether such a thing is possible (probably not), whether the North Americans had an advantage (certainly), whether the best operators were competing or judging. Is this important? What was *really* important was that so many high-quality, high-energy DXers and Contesters—our hobby's movers and shakers—got together from all over the planet and pulled off a first-class event; that more than fifty Bay Area operators can proudly say they hosted WRTC teams, and that the bonds of friendship among far-flung friends and competitors were strengthened.

Inside, there's more WRTC coverage, including a short essay, a competitor's account, and lots of pictures.

The DXer congratulates all who helped make this event happen. Here's hoping we all get to go to the *next* one!

The Fresno Convention

Our new President and Board have taken office. Ted, KA6W had stated prior to his election that he intended to move the 1997 International DX Convention out of the Visalia Holiday Inn — and preferably out of Visalia, as well. He also had agreed to keep the convention in Central California. The contracts were signed by the new administration: we are going to Fresno! The dates are April 4-6, 1997.

There has been, of late, some rumbling and grumbling on the PacketCluster. After all, it is now August and no announcements had been made by the Convention Committee! Those who have reservations at Visalia have wondered if these will be good at Fresno. Others have been unsure of the venue and/or the dates.

Yes, it's a late start. The Committee in fact, has held off making announcements

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Congo Video to Show at August Meet

The monthly meeting of the NCDXC will be held Friday, August 9, at the Dunfey Hotel in San Mateo. Socializing and/or dinner commences at 6:30. The meeting is at 8 PM.

VP Doug Westover, W6JD informs that the presentation will be the NCDXF video of the 1995 German DXpedition to the Congo. The young adventurers prevailed in the face of harassment and delays by a corrupt secret police.

The Dunfey is located on the northwest side of the junction of Freeways 92 and 101 in San Mateo. Take the Delaware St. exit from 92. Monitor W6TI/R on 147.36 for routing assistance. Guests and interested parties are always welcome.

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: Ted Algren, KA6W
 Vice President: Doug Westover, W6JD
 Secretary: Peter Gerba, KN6BI
 Treasurer: Gordon Girton, W6NLG
 Director: Eric Swarz, WA6HHQ
 Director: Lloyd Cabral, AA6T
 Director: Al Burnham, W4RIM

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9-Band Award: John Brand, K6WC

California Award: Ruben Hughes, WA6AHF

Historian/archivist: Ron Panton, W6VG

Records Manager: Ron Panton, W6VG

Publications Mgr: Ron Panton, W6VG

Club Repeater, W6TI/R

Frequency/offset: 147.36 MHz, +

Trustee: Bob Vallio, W6RGG

Comm. Chairman: Eric Swarz, WA6HHQ

Club simplex: 147.54 MHz (suggested)

Thurs. Net QTR: 8 pm local time.

Net Manager: Randy Wright, WB6CUA

DX News: Dave Pugatch, KI6WF

Propagation: Al Lotze, W6RQ

Swap Shop: Ben Deovlet, W6FDU

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. Unless otherwise noted, NCDXC permits re-use of any article in this publica-

Whiskey Shots

Looking Forward

It is with great pride and some reservation that I assume the office of President for the second time. I thank you and welcome the opportunity to serve.

You all know the NCDXC is the World's Greatest DX Club. Your new Board — W6JD, KN6BI, W6NLG, AA6T, WA6HHQ, W4RIM and myself—stands ready to discuss and implement your ideas to improve the NCDXC. You are encouraged to attend Board meetings and make your feelings known, and to speak up during our W6TI Thursday Evening Net.

As Garry, NI6T (who continues as Editor of this wonderful *DXer*), has said, “those members who have found it comfortable just to be spectators over the years need to step up and become participants and contributors to club activities.” Please consider giving something back to your Club when you are approached for volunteer service. Remember that you don't have to be a .400 hitter to help: come to the plate, swing accurately and get your body and mind on one of the three bases; the *win* will follow. Your club volunteers and elected officers will need *your* help to ensure our continued growth and momentum.

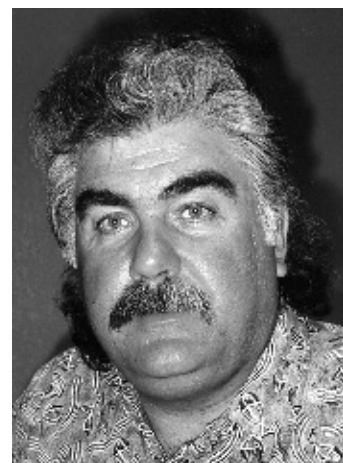
During the past year Al, W4RIM, his Board of Directors and many volunteers positioned our club to continue growing stronger. The actions taken to institute Associate Membership and to improve the DX Convention have left some *big* shoes to fill. I want to thank all of you for your efforts.



General Meeting

The monthly meeting was held Friday, July 12 at the Dunfey Hotel in San Mateo. The meeting was called to order by outgoing President Al Burnham, W4RIM at 8:12 pm. Guests included Hrane, YT1AD/3V8BB; Rasa, YU1RL; Sergei, RN1AN; Zeljko, 9A2DQ; Jacob, 4X1KM and his XYL, Mazal, 4X4KM.

- The June Minutes were approved as printed in the July *DXer*.
 - Rusty Epps, W6OAT reminded everyone of the WRTC competition that weekend. WRTC callsign checksheets were made available.
 - Membership applicants were WA6KAH and AB6WD (Full Membership) and N6IWJ (Associate Membership). All were voted in and welcomed into the club.
 - W4RIM presented outgoing officers and the *DXer* editor with engraved “Stars” as mementos of their service to the Club this past year.
 - The evening's program was a video presentation of the first-ever joint Israeli/Jordanian operation of 1995.
- The meeting adjourned at 9:12 pm.



Dues Again: Final Notice!

If you have not yet paid them, your annual dues are now overdue and the clock is ticking on your grace period.

At the stroke of midnight on 31 August—should you allow the terrible event to occur—you will be relegated to the dustbin of history. You will be dropped from membership and excluded from the new Roster. Reinstatement will require an application, a fee, the vote of the membership and announcements in *The DXer*—so grab your checkbook and avoid the hassle and expense.

Membership dues are:

- \$24 for Full and Associate Members
- \$16 for Absentee (Out-of-State) Members
- For Family memberships, the fee is \$24 plus \$15 for each additional member..
- \$11 for a new badge

Checks should be made out to NCDXC and sent to our new Treasurer—Gordon Girton, W6NLG at PO Box 60031, Sunnyvale, CA 94088-0031.

Be sure to write your callsign on the check!

Roster Changes

New Members

Full Members

Terry Holcomb, WA6KAH (E)
PO Box 5566

Walnut Creek, CA 94596

H unlisted

W (510) 933-5566

Mark Gang, AB6WD (E)

13760 Lexington Ct.

Saratoga, CA 95070

H (408) 867-5861

W (415) 528-6211

Associate Member

Joe Talaich, N6IWJ (G)

19760 Yuba Court

Saratoga, CA 95070

H (408) 257-9829

Change of Address

Ken Anderson, K6PU

POB 853

Pine Grove, CA 95665

H (209) 296-5577

Callsign changes

Ed Hardin, WM6B is now W6CU

Ron Rasmussen, NG6X is now K6OP

Gerry Griffin, W8MEP is now K6MD

Steve Merchant, N4TQO is now W6EMS

Correction

Bill Alsup, N6XMW is Advanced Class,
not Extra Class

Announcing the 1997 International DX Convention

Centre Plaza Holiday Inn, Fresno, April 4-6, 1997

(209) 268-1000

- There is a special convention rate of \$78.00 per room.
- All reservations made at the Visalia Holiday Inn have been transferred to the Centre Plaza Holiday Inn, Fresno. If you made reservations at Visalia, please call the Centre Plaza to confirm that your reservation was transferred. It is *your responsibility* to cancel your reservations at the Visalia Holiday Inn.
- The Park Centre Fresno location is more spacious than the Visalia venue. More rooms are available, as is RV parking.
- Convention Co-chairmen Rich, WB6UDS and Rich, AB6ZV promise that this convention will have more activities and prizes. And, in addition to the usual convention patch, every registered attendee will receive a unique gift.

—Len Gerald, K6ANP, Publicity Chairman

published semiannually. Please submit totals for *confirmed* countries only. For the DX Ladder, your submission should include your current total countries by mode—mixed,

Ladder Update Time!

It's time to submit your Ladder updates! Please send them to Dave Bernstein, AA6YQ by September 1 for inclusion in the September *DXer*.

The Ladder is the members' record of DX achievements and is updated and

17m, and 12m; 160m zones; 6m zones.

You can submit your update via a PacketCluster mail message or snail mail to AA6YQ, or an Internet mail message to dhb@rational.com. To maintain your listing, you must submit an update at least once every 5 years.

—Dave Bernstein, AA6YQ

phone, CW, and RTTY, and by band—160m to 6m, including the WARC bands. Include deleted countries in these totals.

Also list *confirmed* current Honor Roll country totals by mode—mixed, phone, and CW. For the WAZ Ladder, your submission should include: total zones by mode—mixed, phone, and CW; 5BWAZ—your totals on 80m, 40m, 20m, 15m, and 10m; WARC zones—your totals on 30m,

Treasurer's Annual Report

Stan Goldstein, N6ULU

Profit and Loss Statement July 1, 1995 to June 30, 1996

Income

Club Dues	\$4,514.00	
Advertising	600.00	
Interest Income	1,126.10	
DX Convention	8,216.80	
Total Income		\$14,456.90

Expenses

Awards	\$826.13	
Badges	18.00	
Bank charges	37.00	
DXer	4,508.31	
Equipment	466.53	
Insurance	331.00	
Meetings	836.04	
Misc. expenses	110.75	
Office supplies	27.94	
Postage	39.24	
Repairs	152.47	
Roster	588.35	
Storage	297.00	
Supplies	61.68	
Total Expenses		\$8,300.44
Net Income		\$6,156.46

Balance Sheet As of June 30, 1996

Assets

Checking	\$971.32	
Life Members Fund	9,621.86	
Savings	27,226.45	
Total Cash		\$37,819.63
Equity	\$31,663.17	
Current Earnings	\$6,156.46	
Total Equity		\$37,819.63

Help Wanted/ Contest

QRZ Contest? NCDXC needs a Contest Chairman! The Club holds its own summer contest—the Marathon, currently in full swing—and, together with the Northern California Contest Club and the River City Contesters, competes with a trio of Southern California clubs in the ARRL CW and Phone DX Contests. We need a volunteer to coordinate/report on these endeavors and to write a short quasi-monthly column.

According to the Procedures Manual, the position requires someone who is highly intelligent, a skilful and savvy DXer/contester, and impossibly good-looking (It does so!) So it is a wonder to the Board that it has not yet received dozens of applications. Tear yourself away from the mirror and call Ted, KA6W. (Ted would take it himself if he were not President. Honest!)

—N6T

Coming Events

- Foothill Flea Market, August 10, Foothill College, Los Altos, 7 AM
- New Orleans International DX Convention, August 30-31, Royal Sonesta Hotel, New Orleans, LA. Contact Wondy Wondergem, K5KR at (504) 837-1485.
- W9DXCC DX Convention, September 7, Holiday Inn, Rolling Meadows, IL; sponsored by Northern Illinois DX Assn. Contact Phil Camera, KB9CRY, (708) 343-1696, Email lphil@aol.com.
- CQWW RTTY DX Contest, Sept 28-29
- California QSO Party, October 5-6
- Pacifcon '96, October 18-20, Concord Hilton, Concord, CA. Contact Pacifcon Hotline, (510) 932-6125.



The W6REC 80 meter Four-Square

Editor's note: Effective real-world DX and contest antennas usually evolve over time—especially on the low bands. W6REC's highly-successful 80m four-square vertical array is no exception. Herein, Duane shares his development odyssey.

In the summer of 1993, I decided to build an 80m four-square at my QTH south of Sacramento. Accordingly, I ordered the DX Engineering switch box and waited. It arrived after months of broken promises—an experience shared by other customers.

An 80m four-square requires some real estate—almost an acre for the guys and radials. The spacing and height are each 1/4-wave and I ran 75 Ω feed lines to each vertical. I constructed my four quarter-wave verticals of 2" aluminum irrigation tubing. I had acquired almost 600 feet of this material—a common commodity in this area—with my property. To erect 62 feet of highly-flexible tubing requires a special technique—contact me for details.

At the first smoke test, the 'square did not work at all! I had correctly followed instructions, but found that the switch box had been assembled with the wrong terminal strip. After rewiring, the array worked in all directions. The first evening was shocking—I had never used such an antenna! I was easily able to blow through the east coast in pileups to Europe and Africa. Through that first winter of 1993-94, my country total for 80 meters quickly went from 185 to 205.

But, the following spring, a storm blew down the array—I had guyed it incorrectly. Rebuilt with a better guy system, it stayed up for another year. Then my neighbor's fence blew over and took out the guys: down came the array again. The neighbor's insurance paid for new material and I went to 3" tubing. Now the array seems quite stable—and it has stayed up for one entire season!

My original radial system used only four tuned coaxial elements per vertical. Everyone told me that I really needed more radials, so I purchased 2 miles of wire from a surplus store and began cutting and preparing it. This is a very big job and should not be underestimated! The result was 40 radials per vertical—a

ten-fold increase. But I could discern no difference in performance by on-the-air reports or by measurements. Now the experts tell me that my ground conductivity must be very high, so that I do not need a large radial system. *Duane's QTH is on rich bottom land—ed.*

Last summer, after a variety of actual and suspected problems, I replaced the DX Engineering switch box with the Comtek switch box. As far as I can tell by front-to-back ratio and all other indicators, performance is unchanged. I presently have an intermod problem but have not taken the time to fix it. My first experiment will be to change out the box and see if the problem goes away. In my opinion, the Comtek box is better-made and easier to use.

In using the array, I found that many signals were so strong that I wondered if 5 Watts could be heard. The results have been almost unbelievable. I call once and not with any "QRP pleading," and the stations often come back—even in pileups in competition with many QRO stations in the USA. With 5 Watts, I have worked 66 countries and all 7 continents, and I expect to reach DXCC. On many occasions, new countries have answered my CQ.



In the 1994 CW WPX I called CQ twice on 80 and worked 25 JA stations. The QRP effort garnered third place/world and it was entirely due to my 80 meter QSO's.

Not everyone is fortunate to have the space for such an antenna. But—if you do—you might be well-advised to consider one. Now, for 160 meters...

—Duane Ausherman, W6REC



July meeting. L to R: Zeljko, 9A2DQ; Bruno, AA6AD; Jacob, 4X1KM; Mazal, 4X4KM

WRTC: A Competitor's Story

• At the time of the WPX contest, the WRTC rules specifically prohibited the use of bandpass filters on either radio. We rapidly discovered that synthesized radios transmit wideband noise whenever they are in the transmit mode—even with the key up—across several bands! (This is not to be confused with front-end overload of radio B.) No filtering at radio B can solve this problem—it has to be done at Radio A. After the WPX, the rules were clarified to allow internal modifications to the transceivers. Coaxial stubs were internally added to both transceivers, and the wideband noise was brought down to insignificant levels. Switches were added in the radios to select the proper stubs. It was real fun trying to stuff 25 feet of RG-58 inside the cabinets of the TS-850 and TS-950! The Kenwood service technicians should have seen those radios!

Friday afternoon, just before the WRTC contest. We got down to our host's station and set everything up. For some reason, the latest version of NA software would not key the radio through the LPT port on Steve's antique computer. We ran around in tight little circles for about an hour, trying to make it work, and then decided to switch to CT. It worked fine. When we first cranked up the TS-950, we noticed that the internal wattmeter was reading 150 watts, and the external Autec unit was reading 120 watts. Our host volunteered his Bird wattmeter, and it read 85 watts! Steve and I exchanged glances, and immediately began spouting the praises of the Bird wattmeter, about how it's a laboratory standard, the choice of professionals, the standard of comparison, built like a battleship, etc. We must have overdone that little song and dance, though, because our referee pounced on the Bird and dragged it off to the Motel 6 to compare it to the *Official WRTC Wattmeter*. The Bird turned out to be about 30% low, so we didn't get to use it. Darn!

During the contest. When the contest

began at 0500 local, Radio A started running stations and rarely went to S&P. Radio B was used almost entirely to find multipliers. Preprinted paper check sheets of ARRL countries, zones, HQ stations and WRTC callsigns were used. Each time a new mult—other than the most mundane, sure to be worked later—was found, radio A stopped the run, worked the mult if possible, and immediately returned to the run frequency, hopefully to find stations still waiting and the packet spots still valid. We

alternated the operators between radio A and B on the hour.

Radio A stayed on CW unless we thought we could double the rate on SSB. There were times on SSB when Steve had the CT last-10-QSO rate over 550 and the last-100 rate over 350. Absolutely unbelievable and unforgettable! When the contest was over, I honestly thought we had won! I couldn't believe, as was the case, that it had been just as frantic an 18 hours for many of the other competitors.

A WRTC Summary

For those who were in a coma during mid-July, here is a short summary of what happened during WRTC week.

The Second World Radiosport Team Championship was organized by the Northern California Contest Club after the original organizer—the Potomac Valley Radio Club—backed out. The competition occurred within the larger IARU Championship on July 13 and 14. 52 international two-man teams—plus two demonstration teams from China and Latvia—competed from Bay Area host stations selected to be as “equal” as possible. Competitors were limited to 100 watts, tribanders at moderate height, and 40 meter dipoles. Each team was constantly observed during the contest, by judges and referees who themselves were a Who's Who of International DXers and Contesters. Only 40, 20, 15 and 10m were used. Both CW and SSB were employed, with CW QSO's weighted double. Post-contest log evaluation was extremely sophisticated.

Around this competitive center orbited a series of celebrations—tours, picnics, banquets, beer blasts, hospitality suites—that rocked and rolled every night except the night before the contest. But the eve of the competition was serious to the max, as teams drew their host assignments and—a half hour before the contest—the special 1X1 callsign to be used.

Two thirds of the teams made over 2000 QSO's, but QSO's alone were not sufficient for victory. The winners—KRØY and K1TO operating W6X at WA6AHF—were third in QSO's with 2457, but first in multipliers. Their score was 12% higher than the second place team, K6T (K4BAI and KM9P) at NQ6X. The highest placing by non-native English speakers—9A3A and S53R—was eighth, considered a sterling performance. The defending champions—K1AR and K1DG—placed 13th. Our own N6TV, teamed with former QRP champion K7SS, placed 12th.

Were the stations really all that equal? I think a paraphrase of Orwell's *Animal Farm* is apropos here: “All (stations) are equal—but some are more equal than others.” The Bay Area is home to an enormous number of stations, but it is neither a long strip of beach, nor a prairie. It is inevitable that among 50+ stations, some will have a hill in the wrong direction, and some will have a dB or three more gain at a crucial angle. In that sense, the luck of the draw plays a part, as it does in lane assignments at a race, or in the coin toss at a football game. True sportsmen recognize that, and deal with it.

—N16T

In preparation for the WRTC, I flew up and joined my teammate—Steve, N2IC—at his QTH for WPX CW. We practiced by using his low tribander and a specially-constructed 40 m inverted vee, and three different callsigns over the course of the weekend, to keep the activity level high for maximum training effect. We learned several important things during this practice session:

- Without the computer's RS-232 port connected to the transceiver, there was a significant probability that contacts would be logged with the wrong band or mode selected on the computer. For that reason, we decided not to use our favorite logging program, TR-Log, for the WRTC, since it is difficult to correct previous QSO's.
- For a multiplier excursion to another band, it was important to develop a routine procedure. The radio B op handled the rotor, antenna switch, and computer band/mode. The Radio A op concentrated on getting radio A to the new frequency. As soon as the mult was worked, the reverse procedure was immediately initiated, and radio A went back to the original run frequency. After a while, we could pull off this routine like a Richard Petty pit stop.-



ritos early in the contest, with predictable results.

Let me conclude by thanking all of the organizers, sponsors, host stations, judges, referees, and contest participants through-out the world who made this WRTC an unforgettable experience. Standing up to receive the bronze medal was the highpoint of my amateur radio career. Special thanks to our hosts—Dave Barton, AF6S, and his charming wife Susan, KA6SEH—who made us feel completely welcome and at ease, operating from their San Jose QTH. They are two of the nicest people you would ever want to meet. Special thanks also to our referee, Scott Jones, WR3G, who spent 18 boring hours listening to someone else operate, when he would rather have been applying his own excellent operating skills.

—Dave Hachadorian, K6LL, posted to the CQ-Contest Reflector

The level of competition was truly intense! In retrospect, the only thing I can think we might have done differently would have been to more actively pursue moving mults from band to band. We did it a few times, but could have done it more often.

We discovered several new items to add to Tree's list of "ways to irritate your WRTC partner":

- Open a box of Quaker Oats cereal squares, loudly rustle the wax paper inside, and chomp furiously on the little squares. It was enough to trip the VOX, bury W6QHS's signal under the QRM, and render any line noise in-consequential.
- Consume mass quantities of bean bur-

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Convention

until the Visalia reservations were transferred; suffice to say that the information might have been sent more quickly from Visalia, but was not. Convention co-chairs WB6UDS and AB6ZV are still calculating the registration fees, but inside you will find Publicity Chairman K6ANP's first announce-ment—your reservations are good in Fresno. And there are at least 30 RV spaces available.

—N16T



WRTC '96!



Carl, AI6V/P40V with Oms, PY5EG



Danny, K7SS, left, with Bubba, WA7NIN and Bill, K6KM



The Kazakh BBQ: Vitaly, UN2L cooks; rear, from left: Oleg, YL2DW; Lloyd, AA6T; Pat, WA7NIN



Julio, EA4KR and Bob, KØKR



July NCDXC meeting: Sasha, YU1RL and Hrane, YTIAD



Martti, OH2BH (center) with YL's



Jun, JH4RHF



Niko, S51BO and daughter Polona at Stanford



Marko, OH6DO/AB6NJ et al

P. O. B O X 6 0 8

M E N L O P A R K, C A

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FIRST CLASS

