

Results of the 1992 CQ World-Wide DX CW Contest

BY LARRY BROCKMAN*, N6AR/4, AND BOB COX**, K3EST/6

What a fantastic surprise the 1992 CQ WW DX CW Contest turned out to be! The specter of declining sunspots loomed over all of us ominously, yet in the end, old sol came through with some of the finest propagation ever for the CW section, almost on a par with the SSB section. In some areas all six bands were open at the same time, making it difficult to choose an operating pattern. Those who mastered this wonderful predicament were richly rewarded with record-breaking efforts and some milestone performance achievements, specifically, 19 new records in all for the record books.

Some of the most significant achievements do not necessarily pop out of the tables and listings, though. We therefore will spend a few moments up front pointing them out.

The first area of achievement of note is multiplier mastery. Five-band DXCC has finally been achieved from the USA in a single weekend! John Dorr, K1AR, accompanied by K1EA, K1GQ, K1MM, K1MEM, and W1RM, logged 107, 141, 156, 154, and 136 countries on 80 through 10, respectively, for the first 5 Band DXCC ever in a weekend from the USA. This matches the first-time effort by 1991 Multi-Single entrant RZ1A, a feat almost matched this year by the Multi-Single team at IQ4A, which missed the fifth band, 80 meters, by just two countries. We quickly researched our records, and we believe that 5 Band DXCC has never been achieved before by a single operator entry either. Well, this year it was done by N6AR. Of course, 8 of the 10 top Assisted entrants also did it this year as well.

The second set of notable achievements is in the "clean log" category. For the last three years the CQ Contest Committee has done some extensive checking with our computerized data base. This year there were 333 participants whose logs were entered into the data base—most of the top logs in all of the categories plus a number of others. This represents over 658,000 contacts with 51,000 different calls, of which 20,000 were common to more than one entrant. From this data base we discovered that the mean rate of unique contacts in the top Single Operator, All Band logs was just 3.4% (with 1.9% standard deviation) for the non-US contingent. For the top US All Band logs, the mean unique rate was just 2.8% (with a 2.1% standard deviation). The unique rate for World and US top entrants where the unique calls were just one character from a matching call in the data base was 2.7% (1.61% SD) and 2.2% (1.5% SD), respectively. These mean rates show that uniques are down significantly from the last several years. Could be we've been getting everyone's attention!

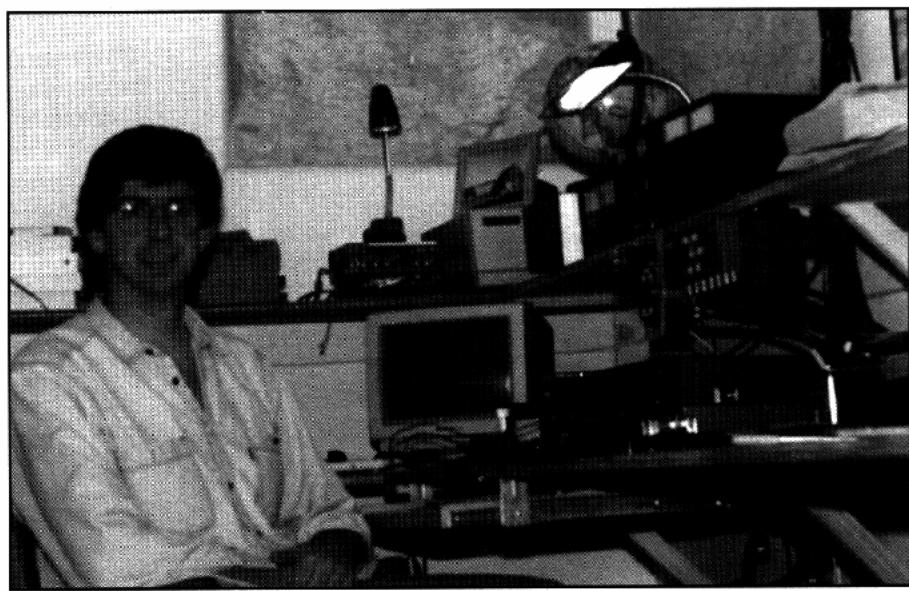
Much has been said at Dayton and in the



Here's the KH0AM team on top of the Saipan Diamond Hotel, complete with their two YL operators and antennas. Congratulations on a new Oceania Multi-Multi record!

National Contest Journal about the relevance of uniques and one off matching calls as a measure of logging accuracy in the last couple of years. However, the committee has been spot cross-checking uniques found in our logs, and the data shows that well over half of the uniques are, indeed, bad calls! So if you have a low unique rate, you probably have a very clean log. If not, well . . .

This year we would like to honor the "cleanest logs" submitted in the contest using the unique criteria. For the US entrants, the most outstanding competitive submittal was by Dave Sumner, K1ZZ. Dave had an incredible .2% unique rate, yet finished in the top 10 in the USA. With over 2300 contacts logged, Dave's uniques boiled down to just 5 calls! This compares to others in the top 10 who had 200



VD2ZP, sported this fine station to finish in the top 10 worldwide in the Low Power category.

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TROPHY WINNERS AND DONORS

SINGLE OPERATOR, ALL BAND

World

EA8EA (Opr. Ville Hillesmaa, OH2MM)
Donor: Albert Kahn, K4FW
 W9IOP Memorial

World Single Operator Assisted

Thomas J. Lee, K8AZ

Donor: Richard Newell, AK1A

World QRPs

Henry T. Rand, Jr., AA2U
Donor: Gene Walsh, N2AA

U.S.A.

N4RJ (Opr. Bill Fisher, KM9P)
Donor: Frankford Radio Club

Canada

John Sluymer, VE3EJ

Donor: Canadian DX Association

Caribbean/Central America

SP9Z (Opr. John T. Laney III, K4BAI)
Donor: Larry Brockman, N6AR

Europe

Tine Brajnik, S52AA

Donor: Edward Bissell, W3AU

Africa

EA9LZ (Opr. Phil Goetz, N6ZZ)
Donor: Gordon Marshall, W6RR

Asia

JY8VJ (Opr. Bernd Laenger, DL1VJ)
Donor: Japan CQ Publishing Company Ltd.

Japan

Shigeyuki Hasegawa, JH0KHR
Donor: Japan Crazy CQ Contesters

Oceania

9M6NA (Opr. Saty Nakamura, JE1JKL)
Donor: Maui Amateur Radio Club

South America

HC8N (Opr. Trey Garlough, WN4KKN)
Donor: Venezuela DX Club

SINGLE OPERATOR, SINGLE BAND

World—28 MHz

D68GA (Opr. Don Jones, N6ZV)
Donor: Joel Chalmers, KG6DX

World—21 MHz

CR3W (Opr. Manfred Loos, DF5UL)
Donor: Don Busick, K5AAD
 N5JJ Memorial

World—14 MHz

FY5YE (Opr. Arno Martin, OH7XM)
Donor: North Jersey DX Association
 W2JT Memorial

World—7 MHz

PJ9U (Opr. Seppo Sisalto, OH1VR)
Donor: Alex M. Kasevich, VP2MM/W4

World—3.5 MHz

Jeff Briggs, K1ZM
Donor: Fred Capossela, K6SSS

World—1.8 MHz

Riki Kline, 4X4NJ
Donor: Kenneth Byers, Jr., K4TEA

USA—28 MHz

Joel Rubenstein, KA5W
Donor: Robert Clark, K6JYO

USA—21 MHz

Dave Donnelly, K2SS/1
Donor: Wayne Caroll, W4MPY

USA—14 MHz

John Yodis, K2VV
Donor: Northern Illinois DX Association

USA—7 MHz

Paul Obert, K8PO/1
Donor: Jan Perkins, N6AW
 W6AM Memorial

USA—3.5 MHz

Jeff Bouvier, K1IU
Donor: N7BG and AA7FM

USA—1.8 MHz

William Gioia, K2EK
Donor: Peter Hutter, WW2Y

Canada

VE6JY (Opr. Joel Weiner, VE6WQ)
Donor: Canadian Amateur Radio Federation

Caribbean/Central America

ZF2TG (Opr. George Benoit, WQ5W)
Donor: Thomas Wall, K2TW

Europe—28 MHz

Jeff D. Morris, 9H1EL

Donor: Southern New England DX Assn.

Europe—21 MHz

OH2BH (Opr. Pasi Luomo Aho, OH6UM)
Donor: Robert Naumann, KR2J

Europe—14 MHz

Erkki Korhonen, OH4NRC
Donor: Maud Slater

Europe—1.8 MHz

John Devoldere, ON4UN
Donor: John Crovelli, W2GD

Japan—21 MHz

Tadao Katsuta, JH7DNO
Donor: DX Family Foundation

MULTI-OPERATOR SINGLE TRANSMITTER

World

ZC4Z (Ops. G3SXW, GM3YTS, K5VT, K7GE,
 KC7V, N7BG)

Donor: Anthony Susem, W3AOH

USA

N3RS (Ops. N3RS, N3RD, N3ED, WA3LRO,
 NW3B)

Donor: Douglas Zwiebel, KR2Q

Canada

VD7SV (Ops. VE7AGC, VE7AHA, VE7CT,
 VE7VR, VE7CC, VE7SV, VE7XR)

Donor: Eastern Canadian DX Association

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Caribbean/Central America

K3TEJ/KP4 (Ops. K3TEJ, WA3WSJ, W8HNI)

Donor: Ralph Bellas, Jr., K9ZO

Europe

IQ4A (Ops. I4EAT, I4ICT, I4IKW, I4IND,
 I4LCK, I4TJE, IK4DCT, IK4EWK)

Donor: Friends of K3AO

K3AO Memorial

Oceania

KH2S (Ops. JA8RUZ, JF3EIG, JH4RHF,
 JH0USD, JI3ERV, JI3OPA, JJ1JMC,
 JR4DUW, JR4ISF, JR4PMX, JR7MZC,
 JR0BQD, KH2D)

Donor: Junichi Tanaka, JH4RHF

MULTI-OPERATOR MULTI-TRANSMITTER

World

EA9EA (Ops. EA1AK, EA4BB, EA4KA,
 EA4KR, EA5RS, EA7PN, EA7TL, EA7CEZ,
 EA7GZJ, EA9EO, EA9GK, EA9TY)

Donor: Hazard Reeves, K2GL Memorial

World—SSB/CW Combined

9A1A (41,416,918)

Donor: Ehrhorn Technological Operations

USA

K1AR (Ops. K1AR, K1EA, K1GQ, K1MM,
 K1MEM, W1RM)

Donor: Bob Ferrero, W6RJ

N6RJ Memorial

Europe

9A1A (Ops. 9A2SD, 9A2PA, 9A2MP, 9A2RA,
 9A3FI, 9A2YW, 9A2NO, 9A2CT, 9A2QS,
 9A2EU, 9A2HO, 9A2NJ, 9A2AW, 9A2OS,
 9A2MY, 9A2NJ, 9A2DQ, 9A2MM, 9A2OH,
 9A6ABX, 9A3GW)

Donor: Finnish Amateur Radio League

Japan

JA3ZOH (Ops. JE3MAS, JF3DRI, JG3KIV,
 JG3ODG, JH4IFF)

Donor: CQ Magazine

CONTEST EXPEDITIONS

World, Single Operator

P40W (Opr. John Crovelli, W2GD)

Donor: Yankee Clipper Contest Club

World—Multi-Operator

KH0AM (Ops. JE1CKA, JI1QPU, JK1GRI,
 JP1OGL, 7K1PTT, AH0K, JE2JCV, JK2PNY,
 JL2TZC, JA7RHZ, JE7BIZ, JR7OMD,
 JA9SSY, JA9VDA)

Donor: Bill Schneider, K2TT

SPECIAL SINGLE OPERATOR AWARDS

World—All Band Most QSOs

HC8N (Opr. Trey Garlough, WN4KKN)

6028 QSOs

Donor: 14270 kHz Group

KV4AA Memorial

CLUB

World, Combined SSB/CW

Frankford Radio Club (389,564,535)

Donor: CQ Magazine

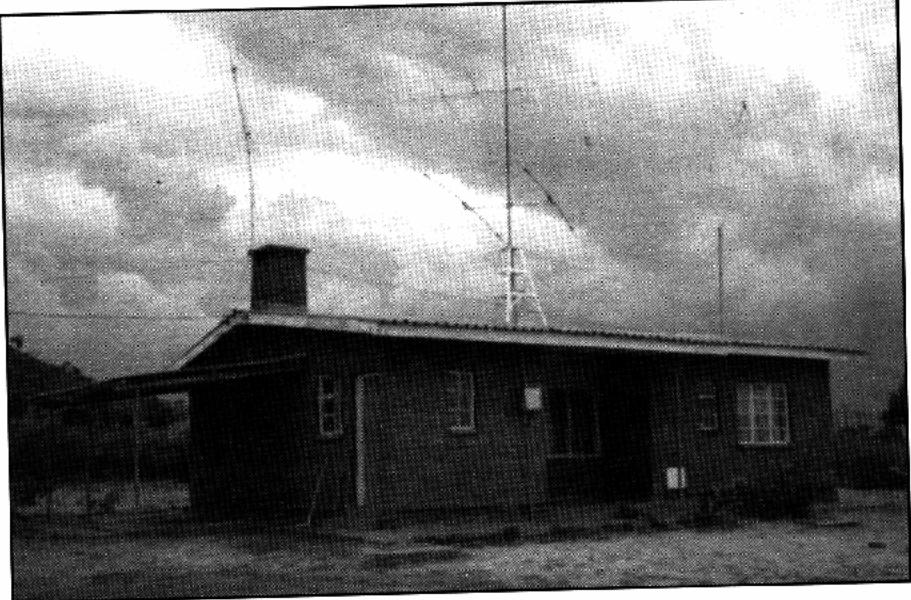
W1WY Memorial

Non-USA—Combined SSB/CW

Rhein-Ruhr DX Association (99,148,797)

Donor: Northern California Contest Club

N6AUV Memorial



7Q7XX's QTH, good enough for top worldwide in the Low Power category.

uniques out of 3000 contacts, most of which were calls that closely matched other calls in our data base. Honorable mention goes to W1KM and K8GL, who were in the vicinity of .9% uniques. Great performances, guys.

For the DX entrants, the "cleanest log" honors go jointly to Ville, EA8EA, and John, 8P9Z, both of whom were in the region of a .9% unique rate. These statistics are just mind-boggling when you consider that both EA8EA and 8P9Z were in the top four in contact totals in their categories, with over 5000 contacts each.

Now, let's get to the results proper.

Single Operator, All Band

Ville, OH2MM, operating at EA8EA, led the pack this year with 11.97 million, shy of his 1991 World record, but well ahead of second-place challenger Trey (WN4KKN) at HC8N,

and John (W2GD) at P40W. It was the US competition that was particularly heated this year, as three stations smashed the old 1989 mark set by Randy (K5ZD) at K3TUP. Bill Fisher (KM9P), guest operating at Val, N4RJ's station, made 5.85 million and squeaked by Andy, N2NT (5.7M) and Bob (KQ2M) at KM1H (5.67M). It was the multipliers that made the difference for Bill, with Andy concentrating on the contact total. In fact, Bill had almost 100 more multipliers this year than the previous record holder, K3TUP.

This year we have included a new table with the results summarizing the top 5 performances in the Single Operator, All Band categories for all six continents by score, multiplier total, and contact total. Note how the continental leaders EA8EA (Africa), JY8VJ (Asia), S52AA (Europe), 9M6NA (Oceania), and HC8N (South America) show balance between multipliers

and contacts, the mark of the true expert.

Our compliments to Trey, HC8N, on toppling John, P40W's 1991 South American record, with John fighting valiantly to retain the prize. Also, we can't help but comment on the fine improvement by Bernd, JY8VJ (operated by DL1VJ), who improved his score by a couple of million on his way to a new Asian record. Hats off to Tine, S52AA, who won both in SSB and CW for Europe. Last, Shig, JH0KHR, is the proud owner of a new Japanese record in the All Band category; JA is a tough location for the CQ WW.

For the popular Low Power category, 7Q7XX amassed 3.25 million to lead the pack worldwide, while N8II (2.0M) stole the show in the USA. Henry, AA2U, ended up as QRP kingpin for the US and the World with a fine 1.19 million, besting his own US record of 1990. That's a lot of hunting and pecking!

Speaking of power categories, we kept track this year, and for what it is worth, 55% of all US single operator entries were high power, 41% were low power, and 4% were QRP. For the DX, the trend is just the reverse—30% were high power, 64% were low power, and 6% were QRP. From the letters and comments we got with the logs, we know how the Low Power category is growing in popularity. The VKs, VUs, JAs, and others have commented on how they appreciate the opportunity to compete with others on an equal footing when they are limited to low power by their license. To alleviate problems with your power entry being misinterpreted, please mark your entries clearly as to low power, with no more than 100 watts output power. Note that there are no power categories in the Assisted or Multi-Op categories. Your directors do their best to pick up the right category on the logs, but with thousands of logs to process, we sometimes have a problem finding the call on the logs much less the power category. We actually had to do a couple of crosschecks on one log this year to find out what the entrants call was!

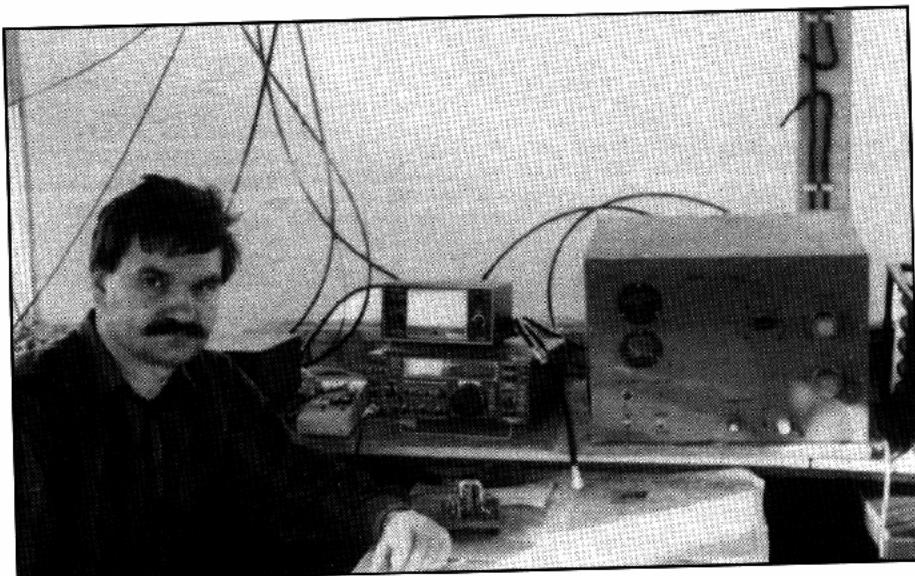
Single Band Categories

As we mentioned earlier, good propagation was observed on all bands this year, making the Single Band categories ripe for record-level performances from the high bands to the very low bands.

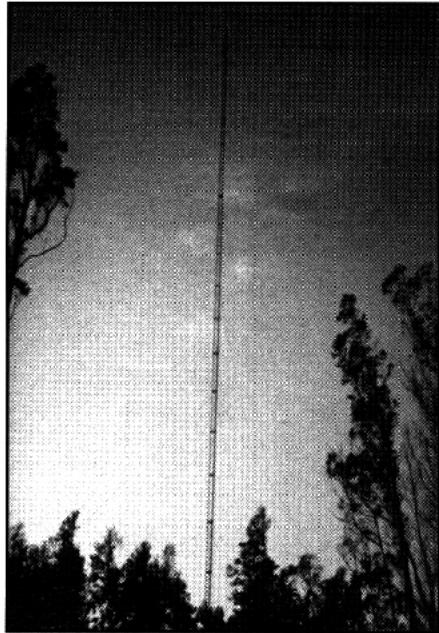
On 28 MHz the World high slot went to CX0CW (CX8BBH operating) with 1.8 million, just shy of his own 1990 record. USA top honors went to Joel, KA5W, who led a close pack of W's with 464K. 9H1EL topped the Europeans with 794K, a new European record. Congratulations to Don Jones, N6ZV, whose fine 1.28 million set an African record on that band and was second worldwide this year. Don sent in a blockbuster SSB log from D68GA last year, but it arrived just a few days before our publication deadline, too late for us to include it in the results. We're glad Don got things in early this year. Our hats are off to 5N0ZKJ, WB4TDH, and ON4RU for great Low Power performances on 10 meters.

Manfred, DF5UL, took top World honors on 15 meters and set a new African record with 1.65 million at CR3W. Dave Donnelly's K2SS/1 entry won it for the Stateside boys with 691K. The Low Power winners were 8P9DF (523K) and N4MO (345K). Congratulations for super efforts with just 100 watts!

Meanwhile, as John Yodis commented in the



YU7AV sent along this photo of his station complete with homebrew 2000 watt PEP linear!



CT3FN was strong here on 80, a credit to the 57 meter high tower shown here.

QRM section, 20 meters sustained fantastic openings day and night this year, making it a fun band to operate. This motivated John to post a new USA record with 943K, toppling K2EK's 1989 mark. John logged 50 more multipliers on 20, but had 200 less contacts. My, how rich the field of multipliers was on 20 meters this year. FY5YE took the worldwide high with 1.33 million. 4M5X captured the top Low Power score, and 4th in the World as well. K2AW's 118K Low Power US entry was tough going, but USA high.

This year 40 meters sounded like 20 meters usually does. As we examined the logs, it was strange to see so many good DX contacts as late as 11 AM in the morning and as early as 2 PM in the afternoon from entries all over the World. Such great propagation enabled PJ9U to set new World and South American records with a fine 1.17 million. He was followed by WQ5W's ZF2TG score of 1.09 million, also a new record for North America. Elsewhere, S59UN's 971K was third worldwide, and a enough for a new European mark. VK6LW managed a fantastic 534K in the Low Power category for World high, with W9CH leading the States in the 100 watt category on 40.

On 80 meters Jeff Briggs, K1ZM, worked all day and all night to log extra VE and European stations, and managed a fabulous 416K total for World and US high, setting a US record along the way. Low Power honors go to UV3WU with 91K worldwide, but strangely, there were absolutely no US entrants on 80 in the Low Power category.

On the bottom band, Riki Kline, 4X4NJ, posted a fine 151K for the top score. Riki complained to us about the low level of US activity. Wow, Riki, you should have heard all the W's calling you that you couldn't hear! John Delvodere, ON4UN, fell just 4 points below his 1990 European record, but finished second worldwide at 118.7K. Bill Gioia, K2EK, managed 34.5K from the States, edging out Rick, K5UR. Low Power mention goes to SP5ZIM with 37K.

As with the SSB section, we have included a new table this year showing the top 5 performers by band independent of the category entered. This data shows that the Single Band entries are largely the top single band scores, besting the Multi-Multi efforts on the single bands most of the time.

Assisted Category

As was the case last year, the Assisted category grew to almost 250 logs, but was dominated by the Stateside faithful. Tom Lee, K8AZ, led the field with 4.7 million, followed closely by K3WW, K5NA, and KC1XX in that order. All four top entrants posted over 100 countries on 40 through 10 meters, with total multipliers of 708, 726, 794, and 736, respectively. The top entrant from outside of the States was 4U1ITU with 4.1 million, who finished 5th worldwide. We noted some real interest in Germany developing in this category, perhaps fueled by the packet networks really beginning to catch on there.

Multi-Operator Categories

The multi-national team at ZC4Z won the Multi-Single category this year worldwide with 11.1 million, while the team at N3RS topped the US field with 8.5 million in a closely contested race with K1KI's gang. Our congratulations to the operators at KH2S who set a new Oceania record in Multi-Single with 7.25 million. The IQ4A team amassed 871 multipliers on their way to 9.25 million for first place in Europe.

In the Multi-Multi competition, the team at EA9EA led all comers with 30 million. Our best regards to second-place finisher K0AM, a 23 million effort that set a new Oceania record; and to the team at VS6WO, which logged 18 million to set an all-time Asian record. My, how excited the 160 meter operator Lew, K4VX, got as he described the experience of working 160 meters from Hong Kong at Dayton this year! We already commented on the K1AR Multi-Multi 5 Band DXCC accomplishment. Suffice it to say that the 945 multipliers they logged in one weekend, an average of 158 per band, led them to top US honors with 19.47 million, a new US record. Second-place finishers at N2RM (18.4M) also broke their own 1990 US record of 17.3 million.

Team and Club Competitions

This year the club competition heated up with six entries from five diverse groups (The Southern California Contest Club fielded two teams). The five-man SCCC team #1 (D44BC, EA9LZ, PT0F, 4M2BYT, and 9Y4H) had 37.5 million, narrowly edging the four-man Global Team (8R1K, EA8EA, JY8VJ, and P40I) with 33.9M. (The global team was actually three Fins plus one). A special word of welcome to the New England WW Team, Team Japonica, and the Russian Baby Bears for fine entries this year as well.

Perennial winner Frankford Radio Club again captured the coveted Club Trophy this year with an incredible 389 million. They were pressed some by the Yankee Clipper Contest Club, which kept it interesting with 302 million. In the non-USA Club category, the Rhein-Ruhr DX Club posted nearly 100 million to top the

field, with rival Bavarian Contest Club at the 94-million mark.

Comments

Last month we published the rules for the 1993 contest and commented in the SSB write-up on a few key points. We will emphasize some of these points again this month. It seems that many of you comment to us, with your replies to our special requests, that you did not know about this or that provision of the rule, so it doesn't hurt to repeat some of the changes.

Please note that the CQ WW requires submission of paper copies of your log, even when you send us a diskette with your log on it. We must have paper copies to process the results as explained in last month's issue. The paper copies should be arranged so that there is a separate log for each band. For all contestants who have competitive entries in their category, we can require the submission of the log data on diskette as well. K1EA.BIN, N6TR.DAT, and DBASE.DBF file formats are preferred. To emphasize this point, the preferred K1EA file is the .BIN file, not the .RES file, not the .10 through .160 files.

Please try to understand that the contest results require countless hours of time from the committee, most of which are volunteers. Our goal is to assure that all competitive entrants are checked for validity and accuracy. To do that, the paper logs must be in hand for us to scan; a computer file is not very easy to scan, and it is too expensive for us to print them all out. In addition, all of the top logs must be checked with our computerized data base using the same uniform process. Most of the top entrants submitted diskettes with their logs. However, about 80 stations had to be notified that a diskette was required for the CW mode. Of these, 75% complied with our request, which is very much to their credit. The remaining 25% leaves the committee with a real dilemma. We are currently reviewing a number of options to deal with this problem.

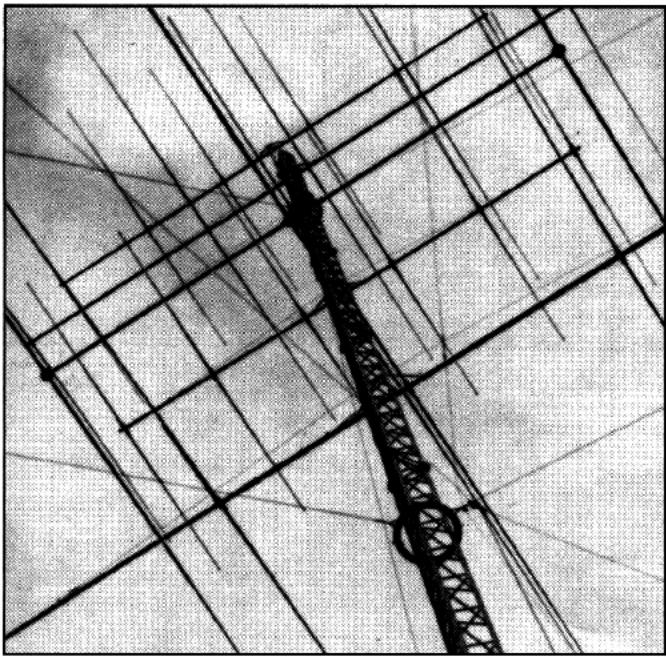
This past year our checking made some significant differences in the order of the finishers in a number of categories. As with any "Olympic" quality competition, the margin of victory can be very small. We are committed to certifying that the right entrants win. It's the least we can do when you put so much time, effort, and assets into the contest.

Credit

The hardworking members of the committee this year deserve a special word of thanks from all of us. First, thanks to the crew at CQ magazine for accelerating the delivery of the logs to K3EST and N6AR. Then, when the logs are sorted and categorized, KR0Y, W9RE, WA8YVR, N3ED, K1DG, W2RQ, W7EJ, K6NA, N6AW, KR2Q, N6AR, and K3EST do the checking. Oh yes, we almost forgot the work that N6AA did using N6TR's software support to put the data base together from the hundreds of diskettes we get. Our thanks, also, to special advisors K1AR, N2AA, and K3ZO; and to the overseas consultants, S52AA, OH2BH, OH2MM, OH2KI, CT1BOH, OK2FD, and PY5EG.

That about wraps it up for this year. See you in the '93 contest.

73, Larry, N6AR/4 and Bob, K3EST/6



The 5 over 5 at 46 meters explains OH4NRC's booming signal on 20 meters—good enough for tops in Europe on that band.

the beach again—tough contest . . . VP2EST. My 25-year-old SB200 gave up recently, and a replacement FT2100Z broke down the day before the contest started. Had to go low power with the FT barefoot . . . PA0LOU. As usual, the solid wall of big guns sending CQ with too short a pause could not be contacted by low-power stations . . . C6A/N4RP.

Thirteen hour power breakdown during 48 hour contest—impressive . . . KH2S. First time as a Multi-Single on CW—a lot of problems but big fun . . . LU7DP. Thanks to all who copied my weak signal and bad callsign on CW . . . HA8LKE. Cut my tendon to my left thumb on Thursday, so I was "single handed." Awkward, but okay . . . G3LHU. Thanks for organizing the contest. Enjoyed it very much . . . GM4HQF. Another battle against the big guns has finished . . . OK1DKR. Excellent conditions on the top band. Could work almost everything I heard with 5 watts . . . OK1CZ. A difficult job between a lot of big QRM cannons . . . YO5BQ. My thanks to all the DX stations who responded to me in the middle of a pileup . . . VE3RHJ. QRPP is very fun . . . JH2WIC. With 4 watts output, nobody heard my CQ . . . DL1EFW. First South America from this QTH . . . JA4XHF/3. CQWW is different. Due to the large number of powerful signals from all continents, a low-power station must search for the QSOs . . . G3DYY. Second day, good conditions on 40 meters . . . PA0TA. I think I should try more contests in QRP on 20 meters . . . DL4OBJ. Very QSB and QRM in test . . . ZZ4W. I have to use a lot of willpower to copy these high-speed CW signals . . . PA3FSC. Seven hour power outage didn't help . . . D44BC (Opr. N6TJ). Jane was born 3 days before WW and operating time had to be reduced to 18 hours only . . . H21A (Opr. 4N4OO). This was my first WW contest from my new country and new call . . . 9A2AJ. Never had so equally good conditions on all bands in the 30 years of my participation in the CQWW DX Contest . . . DJ5JH.

Strategy to QSY to get new multipliers. It was very important and interesting to me . . . SU7M. Very good conditions on the low bands . . . YU7AV. First time using



John, WB8YJF, finished second in W8 land in the All Band, Low Power category.

a computer for the contest. It is very useful, hi . . . YU7BW. I enjoyed competing with a new high tower for low bands, but I didn't stay up two nights after a business trip . . . JA8RWU. I am very pleased that someone remembered my name on CW . . . JF1SEK. I was on DXpedition to Moldavia from my home callsign RB5FF . . . RO0F. It's good to be needed—KH0 and TU asked me to band hop . . . XE1/A46RX. It might be a help to list the multiplier prefixes when announcing the contest . . . HZ1HZ. Twenty-six thousand kilometers by train for 20 days . . . JT1/UA3DK. Pleased to make new JA all-time record . . . JH0KHR. P40I will come again! . . . P40I (Opr. OH3JR). Great conditions and great competition in a great contest . . . P40W (Opr. W2GD). What a fun event! Conditions this year, especially on 40 and 80 meters, were probably the best I can ever remember . . . G3UFY. Thanks a lot to Klaus (JY9VC) and Heidi (5B4TE) for their great hospitality . . . JY8VJ (Opr. DL1VJ). Conditions were better than last year . . . JR1IJV. God probably had a celebration—new prefix, new country, perfect conditions in Slovenia . . . S52AA. Coup d'état in Venezuela. Friday morning prevented me from sleeping, which caused me to fall asleep several times on Sunday morning . . . 4M2BYT. Mr. Murphy suddenly visited me on Saturday afternoon after about 4 years' absence when my 4-element Yagi for 10 meters was destroyed . . . UT4UZ. What a thrill making contest QSOs on 80 and 160 meters for the first time for BV on CW especially . . . BV/K1RX. The contest was overshadowed by the death of Al Slater, G3FXB, a couple of weeks earlier. Had a half hour conversation with him on the evening before he died, and there was much talk of plans for this contest: . . . G4BUO. The biggest thrill was to finish scoring by hand in time (CT logging not available in time) . . . JA1NUT. Never thought a trap vertical could be so much fun . . . FS/A17B. What are we going to do for an encore in 1993? . . . VE3EJ. Too much DX on all the bands. Hard to decide where to go . . . DL7MAE. Superb conditions on all the bands . . . EA6ZY (Opr. N6RA). Worse than the pileups were the flea invasions I had to fight during the afternoons . . . ZV5A. A 48 hour CW paradise . . . ZS6NW. The DX signals of LU8DQ and G3FXB will always be missed . . . KG6DX. This is my record on 7 MHz . . . JA0KAZ. I think the CQWW is the best contest . . . UL8GO. Didn't figure on S-5 power-line noise in paradise . . . J33A (Opr. KJ4VH). I think I worked a pileup for the entire first night (16+ hours) . . . V79C. This is my second DXpedition and I hope to make many more . . . ZF2TG (Opr. WQ5W). My first ever DX contest expedition, and I broke the old World record by 190,000 points! . . . PJ9U (Opr. OH1VR). I always enjoy the contest . . . LY1DS. Before the test started, I bet a dinner with EA7TH, but his neighbor made him change his mind (lots of TV) . . . EA7KW. I really wanted to go on 40 meters, but the fear of missing a new country on 160 meters kept me on that band . . . ON4UN. Too bad that many stations were not active on the top band . . . 4X4NJ.

No conditions on Sunday morning . . . OH2BA (Opr. OH6UM). Conditions were excellent the first night . . . VE6JY. CQWW still the very best . . . OZ7HT. Many thanks for this fine contest with rare DX and new friends who are contest men . . . UA9AT. The vertical and beverages are really working well . . . ON7TK. Conditions were great, but I didn't find a recipe for how to get through the USA and JA pileups to the Pacific . . . S59U. First CW contest I have entered for some 20 years . . . G3KMA. It's a pity I broke my linear Sunday morning. I finished barefoot . . . FM2GO (Opr. FB1MUX). Unbelievable—40 meters was like 20 meters . . . DF3CB. Big multipliers always a big pleasure, and I felt it . . . UT2L.

STATION OPERATORS Multi-Operator Single Transmitter

A1A1K & K3WJVM WN3K, BY4S2, BZ4SAB, BZ4SBD, BZ4SBE, BZ4SBB, BZ4SBN, BZ4SBP, **DA1WA**: DA1C, DL1AC, CJ1MU, DJ0HB, **DA2UK**: Club, **DE1XTU**: 0E1TRW YU4JJ/DE, **DF0RR**: DL7EN, DL7USA, DL7ON, DL7SL, DL7AKC, DL7PV, Y4MNO, Y2A0Q, **DJ4AX** & DF7YE, DJ4PT, DK4TP, **DK0MM**: DJ7JK, DJ8WL, DJ9CB, DL8BC, 4N4MX, **DL0BCMA**: DL4EBN, DL80BD, DL2EBX, DL1ED, SWLS, **DL0SSB**: DL1EFO, CK7FP, DL9XY, **DL0TUD**: DL6DV, DL6MUG, DL6UEG, DL8UWG, **DL0UM**: DL2AE, DL6HCO, **DL0WH**: DF4IK, DF6H, DF2IAC, DF2IC, **DL0WW**: DK3GL, DK9IP, DL1AO, DL6NCY, **DL1MF1** & DJ10L, DL5MF, **DL2GGA** & DL4GBX, **DL2HT0** & DL6US, **E43KU** & E43LB, EA3FER, EA3DU, EA3AVV, EA3A9R, **E17M**: E16BT, E14BZ, E13DP, E5HB, E19HC, **FO/SM5NZY**: SM5NZY, SM0OK, SM8LKB, **GOF03**: G0LJU, G0CLY, G4KIV.

G3LZQ & G4BYG, G4DRS, **G50ZF** & G4DCW, GH0HSD, G0LMLX, **G3SS0**: G3LVP, G3ZRJ, **G3XBM** & G3YBT, **G5BX0**: G3JKS, G3NOH, G3U0F, G3RTF, G3UV, G4DU, G4JKS, JA1ST, **GU3HFN**: GU3MS, GU4WRP, GU4SX, GU8JCL, GU4EDN, GU4YOH, GU4WMTN, GU8GJU, GU7LSX, GU8RWD, GU6TLQ, GU7DH, GU3NHL, **G3XPRC**: G8IVZ, G4HTC, G0JNZ, G40FR, **H43KNA**: HA3DU, HA3OV, HA3NU, HA3NS, **H43KCK**: H48FK, H48FW, H48HK, HARD7, H48FT, H48DT, **HG1S**: H4TJ, H4DAC, H4TW, H41DA, H41AH, H4TD, **HG6Y**: H46KNV, H46OB, H46OA, H46OB, H46NG, H46OY, H46OO, H46OI, **HZ1AB**: SM8CXU, KM4ME, W8UB, **I12A** & I2VXJ, IK2EGL, IK2GSN, IK2GXK, IK2MMF, L21NS, IK2FYH, **IK3QAR** & IK3D9H, IK3HUK, **IQ4A**: HEAT, I4ICT, I4IKW, I4ND, I4LCK, I4TJE, I4KDT, I4KEWK, **J41ZL0**: J01LWF, J17MED, JN2MRJ, JF3TBL, JG4DDN, JRSKDF.

J43ZKK: JH4PUL, JF4VOW, JG3SXK, JM3ILK, **J43ZNJ**: J43MOY, JA3OMA, JH3KCW, JF3OLL, JN3ANO, **J46YCL**: JF4C7I, JF6UWK, JF4KPD, JF6MW, JI6UON, JI6WED, **J47YAA**: JF1CKX, JF1POT, J03GKN, JF7JC, JF7PSJ, JF8AWL, **JF2YHS**: JA2OJL, JF2WNB, JF2JR, JF2NUD, **JF62IH**: JF6GKT, JF6DEA, JF6RR, JF4KEZ, JF6QJG, **JH5ZJS**: JA5BJC, JA5CJZ, JA5FQJ, JA5JCC, JA5JXP, JT1TP, JT1CD, JT1BL, JT1BX, JT1JC, **K1DG** & K1XX, K1TR, K1ETT, W2IN, N1TC, **K1KI** & K1CC, W1OD, K5FUV, **K2QMF** & A2AFB, **K2SP** & others, **4U1VIC**: DL6DR, UJ0JF, DL2MEH, DL1G5T, **K2TE** & N1IV, **K3CP** & K3YL, K3DI & WD4IE-I, **K3TEJ/KP4** & WA3WSJ, WBHNI, **K4FW** & W8WW, **K4LTA** & N8UM, N1TCWR, W4TYU, K6SV, WM4U, **K6XT** & N6ND, **K8LX** & N8EA, WA8ZDT, **K9GR** & N90FD, **K4NAL** & WK6V, K6HII, N6NW, **K7FAY** & W7VB, KG7X.

KH2S: JABRUZ, JF3EIG, JH4RHF, JH2USD, J33ERV, JI3OPA, JU1JMC, JF4DUW, JF4ISF, JF4PMX, JF7MZC, JF8BQD, KH2C, **KH2M** & W42MBM, WB2ABD, KB2NMV, **KD4WE** & others, **N1AU** & WM1K, WC1D, WA1ITV, **K53F** & NE3F, NK3Z, **K59B** & N8AJ, K8LJN, KS9G, KB9BIB, WE8B, **LA8DSA** & LA4DCA, **LU7DP**: LU2DPW, LU6EF, LU7JW, LU7EE, LW2UFM, **LX/DF0BK**: DL8SCG, DL4SUX, DL4SDW, **LY4W**: LY2B8J, LY2BKW, LY2BMW, LY2PK, **LZ6G**: LZ2HM, LZ2YF, LZ2PF, L2ZFU, Emir Dilyan, **LZ9A**: LZ2HE, LZ2DF, LZ2CC, LZ2PO, LZ2WF, LZ2BE, LZ2KA, LZ2II, LZ2FS, LZ3B, LZ2UU, Stefan, **N3BNA** & K03CN, **N3RS** & N3RD, N3ED, WA3LRO, NW3B, **N4AR** & N4TY, N4OBW, K4FJ, NJ9C, **N4WW** & K0Luz, WA6OGX, K1ZX4, WC4E, **N8DPH**: Club, **NC0P** & NU0Q, AJ0I, WB0G, N0SM, WA8FLS, WD0GYY, **NK7U** & N17T, AA7NX, N7BZ.

NH3Q & K3ATD, **OH2BSI** & OH2BSS, OH2MBB, **OH2HE**: Club, **OK2KDS**: Club, **OK2KOD**: OK2BDI, OK2BGR, OK2BNX, OK2BDQ, **OK3KAG**: OK3CIR, OK3OX, OK3TR, OK3TRW, OK3TIZ, OK3TMF, **OK3KCM**: OK3NA, OK3CB, OK3CKX, OK3CBA, CK3TDP, OK3TC, CK2PZ, **OK3KP**: OK3TN, OK3TGT, OK3IO, **OK3KUN** & OK3CTX, OK3TME, OK3CND, OK3TMI, **OK3KXR**: Club, **LA1K**: LA4OFA, LA7HA, LA8UGA, **OK5W**: OK1EAZ, OK1CF, OK1TA, OK1WT, CK1JB, OK1JKT, **OL3A**: OK1AYP, OK1ICM, OK1MR, OK1VKX, OK1DE, **ON6AH** & ONSPV, ON6MH, ON6QR,

USA CLUB SCORES

Frankford Radio Club.....	389,564,535
Yankee Clipper Contest Club	302,642,053
Southern California Contest Club	145,701,738
Potomac Valley Radio Club	91,155,332
Northern California Contest Club.....	67,979,557
North Coast Contesters	57,168,231
Society of Midwest Contesters	52,819,234
Southeast DX Club.....	51,076,362
North Texas Contest Club.....	46,947,215
Mile Hi DX Association.....	45,352,905
Mad River Radio Club.....	32,237,860
Texas DX Society.....	25,713,788
Dixie DXers	22,165,966
Minnesota Wireless Association	18,017,458
Kentucky Contest Group	16,587,388
Central Virginia Contest Club	15,120,314
North Florida DX Association.....	13,479,466
Central Florida DX Association.....	13,046,403
Western Washington DX Club	11,826,857
River City Contesters	10,985,262
San Diego DX Club	10,900,021
Boiled Owls of New York	10,786,094
Left Coast Contest Club.....	10,737,450
Hicks	10,619,490
Rochester DX Association	10,196,357
Southwest Ohio DX Association	9,926,377
Grand Mesa Contesters.....	9,329,994
Snake River Contest Club	9,274,826
Western New York DX Association	9,047,569
Group DX Panamericanos	8,542,139
Mississippi Valley DX & Contest Club	8,498,642
Cascade Contest Club	7,872,124
Willamette Valley DX Club	7,522,328
Southern California DX Club	7,460,138
Eastern Iowa DX Association	7,304,725
Tri County DX Association	7,099,190
Albany Amateur Radio Association	6,228,802
Hoosier Contesters	6,128,768
Salt City DX Association	5,516,767
Northern Ohio DX Association	5,461,226
Kansas City DX & C Club	5,360,131
Blackhawk DX & Contest Club	4,493,246
Long Island DX Association	4,140,295
Falmouth Amateur Radio Association	4,128,353
Northern Illinois DX Association	4,026,490
Lone Star DX Association	3,952,733
South Florida DX Association	3,808,888
Central Arizona DX Association	3,636,451
Sturdy Memorial Hospital	3,242,135
Carolina DX Association	2,967,796
Western Carolina A R Society	2,943,836
Northern California DX Club	2,735,301
Madison DX Club	2,225,545
Splitrock Amateur Radio Club	2,053,923
Shasta DX & Contest Club	1,698,072
New Jersey DX Association	1,565,343
Arrowhead Radio Amateur Club	1,530,455
WACO	1,357,843
Saginaw DX Group	1,253,081
Four Lakes Amateur Radio Club	1,231,856
Metro DX Club	1,056,323
Oklahoma DX Club	1,015,479
Murphy's Marauders	865,003
Wichita ARC	783,623
Amarillo DX Society	771,452
Woodbridge Wireless Asscc ation	707,556
Sterling Park Radio Club	634,062
Northern Alabama DX Club	623,252
West Coast DX Ring	514,385
No Dot DXers	495,835
Redwood Empire DX Association	420,147
Middle Tennessee DX Club	408,080
Ocean Monmouth Amateur Radio Club	394,729
Southern Oregon DX Association	383,665
Great Dismal Swamp DX Association	383,308

DX CLUB SCORES

Dauberville DX Association	355,765
West Park Radioops	291,911
Utica Amateur Radio Club	290,196
Schenectady ARA	214,098
Hamfesters Radio Club	159,764
Santa Barbara Amateur Radio Club	66,317
Code Fignuelon Contest Club	63,341
Rhein Ruhr DX Association	99,148,797
Bavarian Contest Club	94,274,019
OH DX Ring	32,934,148
Slovenian Contest Club	30,010,266
Kaunas Technical University	24,702,929
Alaska DX Association	21,553,600
Kaliningrad Radio Club	19,777,310
HA DX Club	19,317,945
Lynx DX Association	17,691,521
British Colombia DX Club	17,227,800
Japan Crazy Contesters Club	14,604,126
Chiltern DX Club	13,312,239
Araucaria DX Group	11,148,431
Vojvodina DX Club	10,536,333
Amateur Radio Association of Sept Iles	9,858,795
Kiel Channel Activity Group	8,020,317
Kiev Radio Club	7,654,563
Prie Neries	6,626,186
Moscow DX Club	6,090,679
Kvarnberget	5,811,315
Diego Garcia Amateur Radio Club	5,371,948
Top of Europe Contesters	5,272,064
SP DX Club	4,493,762
YU7BCF	4,193,952
Winnipeg DX Club	3,852,246
Ukrainian Contest Club	3,321,039
French DX Foundation	3,315,939
TUPY DX Group	3,034,962
Bavarian DX Group	2,881,285
Contest Groupe of Oude Maas	2,867,525
Uruguay DX Club	2,861,072
Radio Amateur Soc Thailand	2,753,334
Eastern Canada DX Association	2,670,910
Association of Peruvian DXers	2,550,679
Cuernavaca Amateur Radio Club	2,283,296
Radio Club Varadzin	2,003,983
Radio Club Venezuela	1,874,616
Koryazhma DX Company	1,763,902
Marianas Radio Club	1,717,272
Equator Club	1,559,925
Radio Club Chile	1,441,560
Tartu Radio Club	1,394,899
Veron	1,345,629
Lithuanian Contes: Group	1,309,778
Danish DX Group	1,257,892
East Highlands Amateur Radio Club	1,136,921
Santa Barbara Contesters	1,086,126
Northern Lithuania Contest Group	878,956
Mid Bedfords Contest Group	837,417
Perugia DX Club	814,289
Radioamateurs of Luxemburg	802,225
Radio Club Tallinn	725,990
U. of Radioamatateurs of Barcelona	609,707
OH3NE	508,821
SK0MK	434,989
OEVSV	374,992
Taganrog Contest Club	351,336
Fox Radic Club	315,238
Noviomagnum Club	269,352
I Ham Society of the Philippines	221,528
SP8KEA	173,074
Satsuki Ham Club	162,041
Virgin Islands Amateur Radio Club	133,895
Radio Club Subotica	98,261
YV DXperts	85,050
Tokyo International ARA	81,654
MONS	12,453

