

Results of the 1991 CQ World-Wide DX SSB Contest

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

The sun was shining brightly on that fine Friday in late October. "Yep, those are sunspots up there, no doubt about it," remarks Horace as he shades his eyes from the sun. Another good sign for this year's CQ WW! With the propagation numbers all going out of sight, Horace feels this is the year for the all-out effort on 10 meters. No more sleepless nights and all band efforts. Our hero has the right idea—break the all-time record on 28 MHz at the peak of the cycle.

That was the way Horace entered the competition. And what a beginning it was, too—all those JA's and YB's, and even four or five BY's and BZ's. What a start! The band conked out about 06Z, rather late for the East Coast, but just one more sign of the good time to be had in the thick of the European opening in the morning.

After a refreshing 4 hour nap, Horace is up and about at 10Z for the crest of the mind-boggling opening to the east. Indeed, there are already some ZS boys in there and a few Europeans, too. Wow! As the morning unfolds, so does Horace. He melts into that microphone as he racks up 2 or 3 hours of incredible rates. Why, Horace has peaked over 250 an hour, and it's not even 3 hours into the opening.

And then it happened. That slow, sure, low-pitched hiss began to make its way into Horace's senses through his receiver. All of a sudden the guys have stopped calling him. Could it be? Horace peeks at his packet screen. Horace knows how to play that game, too; just turn the packet on, but don't type the connect command! What's this, a talk message from John. "Gotcha, Horace. Listening on packet, eh." Why that dirty rat. But there are more important concerns now—the WWV report. A solar flare at 1503! Oh no, not now. But for sure, there's a solar flare. In just a few short minutes the band is DEAD—really DEAD. The band stayed dead, too, right up into Sunday afternoon. What a pity.

In 1991 the above "Nightmare on Elm Street" did not occur. The propagation held up throughout the weekend. Alas, just the day after the contest ended, there was a flare. We have all been fortunate that our contest has been spared such a horrible fate. This year, 1992, has been marked with frequent flares. We'd like to urge you all to plan ahead. Think carefully about your choice of category this year; maybe a bit more low-band activity would be wise.

The All Band Results

While conditions were down from last year, Old Sol nevertheless provided the basis for another

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Ville, OH2MM, is shown here at the operating position of this year's all band Single Operator winning station, CR3A, with the cool 12.9 million!



The second-place Multi-Multi crew at KH0AM participated in K1EA CT primer classes all day Friday, just before the contest.

outstanding series of all band entries in the World competition. Ville, OH2MM, came out on top with a fantastic 12.9M, not enough to break Martti Laine's 1990 record, but within fighting distance of it. John Crovelli, W2GD, came in second with a fine 10.8M from P40W, followed by HC5R, operated by Jim, W7EJ; Dave, 9L1US, at 9.2M; V29W at 9.2M, operated by Bruce, KD6WW; and P40V at 8.9M, operated by Carl, A16V. Ville had 200 contacts more than John, but the real secret to his success was the 90 extra multipliers. Jorma, ZB2X, managed another European high effort, good enough to eke out a new Continental record, besting YT90A's 1990 mark by just a few thousand points. GW4BLE finished second at 4.4M, pointing out that the 10 meter conditions were quite a bit down from last year in the Northern Latitudes. Stateside honors went to John Dorr, K1AR. There must be a secret somewhere in all that analysis on the CQ contest that John reports about in his column! KM1H, manned by Bob, KQ2M, was second with 4.5M; followed closely by Bill, K4XS, at 4.4M, and WM5G with 4.2M, operated by Jeff, KR0Y. Finally, some balance across the land with the northeast, south, and Texas represented in the top 10.

In the fledgling Low Power Category, ZC4BS topped the field with 5.2M worldwide, with K7RI taking the top honors in the USA at 1.2M, and LY3BX besting the European entries with 2 + M. Note that an asterisk (*) is used in the results to designate Low Power (defined from now on as 100 watts output or less). All of the High Power entries in a country or call area are grouped together, followed by all of the Low Power entries. This new category was very popular considering the notice we were able to give. We noticed an increase in participation in Japan, India, and several other places where licensees are limited to low power or low power privileges predominate. Please be sure to label your logs "LP" if you plan to enter this category next year. It makes it a lot easier for CQ to make sure your log gets entered in the right category.

The Single Operator Assisted category likewise grew this year, particularly with all the packet generated pileups. Note that there are no power categories for Single Operator Assisted, nor are there power categories for the two Multi-Op categories. This year's Assisted winner for both the World and the U.S. is Hugh Valentine, N4RJ, with a fine 4.0M. IR8A led the growing Assisted contingent in Europe with 2.7M. A special word of thanks to the Assisted entrants for their honesty.

High-Band Results

Ten meters continued to dominate the Single Band categories this year, with Oms, PY5EG, taking the top spot worldwide from ZV5A with 2.9M, besting ZP0Y's 1990 World and South American record by a few thousand points. Jim Neiger, visiting his ZD8Z location, finished second after beginning as an All Band entrant. Jim's fine 2.3M captured a new African record. The World High Low Power Single Band effort was done by Z21HQ, with an amazing 1.2M points and just 100 watts! USA honors went to NR5M (478K) for the second straight year; European accolades go to CQ4A, operated by Joao, CT1BOP, with 1.2M.

Fifteen meters was also hot this year, with another Brazilian taking the top spot. Peter, PY5CC, used the special ZX9A prefix to advantage, as he edged out arch rival ZP0Y with a fine 2.5M. Gil, FM6A, finished third with a new North American record at 1.8M, wiping out V22A's old 1986 mark. An Asian record was set on 15 by 7L1GVE, whose 1.2M just nudged out 7L1GVV/8's '90 mark. K3RV/4 piled up a comfortable lead on 21 MHz in the States and posted a fine 850K. European honors went to OK1RI with 805K. LU1ICX's 461K bested the low power boys on 15. These great scores on 10 and 15 come at a time when many stations in the midwestern and western portions of the USA, and the north-

ern and eastern parts of Europe, complained of terrible conditions (see the QRM section for the specifics).

Twenty meters, always the most reliable band for propagation, provided its share of fun this year. Italo, YW1A, snagged the prize with a great 1.3M score, followed closely by another Brazilian, ZY5EG. LZ5W's 169 countries helped him to finish third, tops in Europe. KS1L demolished the competition in the States with 515K. One of the benefits of the addition of the Low Power category was the heightened interest on the sub-continent, as VU2PTT racked up a fine 272K on 20 meters for worldwide top dog. Boy, 100 watts is tough on 20!

Low-Band Results

This was a tough year on the Low Bands, as 160 and 80 meters dramatically illustrate. In fact, no records of any kind were set on those two bands. On 40 meters Jim Rafferty, ZF2JR, fought hard to best his '90 winning performance. Although Jim managed a first place slot worldwide with 632K, he fell shy of his record. KC7EM topped the US field with a fantastic 263K, good enough for 6th place worldwide. His was one of only two USA entrants to make the worldwide top scores in any of the Single Op unassisted categories this year. It was also the only new US record set this year. G3NLY took the European top slot with over 400K. We would be remiss if we didn't mention HA9BVK's fine Low Power 139K winning score on 40 meters. What a signal on 40 SSB here in the States for 100 watts!

By the way, 40 SSB provides a lot more promise than most of you guys give it credit for. Lots of stations were heard here in the States who never "listen up." We heard UM8, UI8, and other deep Asian calls very well at sunset here in the States, but few seemed to listen in the US band. In fact, 40 provides much better propagation to most places than 80. Yet some of the top all band and multi-op entry contact totals seem to be way down on 40. As we start swinging down the sun-spot cycle, why not give 40 more attention in 1992?

We couldn't help but be struck by enthusiastic comments from the participants about "firsts" on 80. P29DX, who led All Band Oceania contestants, remarked that he worked his first European ever on 80 during the contest (see the QRM). Indeed, the band provided GW4OFQ 183K worth of propagation, for a fine pacesetter World High. The Europeans took the top four slots on 80, with Y21CW, DL3LAB, and ES5RY rounding out the field. K1UO was fifth in the World and tops in the USA. Low Power aficionados LZ1DM and YO3RU battled it out for tops in the World at 47K and 41K, respectively.

The Top Band conditions were enough to drain anyone's patience. IV3PRK managed an unbelievable 28.8K for worldwide lead; but OZ3SK's 19.2K for the top Low Power entry was a mind-boggling accomplishment. Uncle Sam participants were held under 5K, with AB4RU leading a field of southerners. (Special note to second place finisher, AA4MM: We didn't lose your log this year, Leo!!)

Multi-Op Categories

The only category sporting a World record effort this year was Multi-Single. In a hot competition from the southern Caribbean, the predominantly FRC team at PJ1B took high honors with a fantastic 21.2M, edging the Southeast DX Club



Peter Sprengel, PY5CC, took World High 21 MHz honors as ZX9A.

team at P40T with their 19M. Both teams beat the old World and South American 18.5M standard set by P40V in 1989. The 40 meter contact and multiplier edge made the difference! By the way, we saw some slides of the P40T setup, which went up at the last minute on the rooftop of the hotel. These guys in the Multi-Op Expedition categories do a tremendous job setting up in short order. We also saw the slides of the beach and pool! Great off-work duty in anybody's book.

Other Continental records were set by 8P9Z and KH2S. Third place went to the 8P9Z team, who set a new North American mark of 15.9M, besting 8P9X's '89 effort. Sixth place finisher KH2S just murdered the old AH0B '88 record of 8M for Oceania with a fantastic 11.1M. The European top entry was the team at IQ4A, with 12.4M. The interesting thing about the IQ4A entry was the apparent strategy they followed—multipliers at the expense of contacts. The IQ4 boys had 931 multipliers, higher than the highest Multi-Multi, yet they were almost 4000 contacts below the PJ1B contact total! The Stateside top MS entry was Tim Duffy's K3LR crew, with 5.5M.

The Multi-Multi entrants were down quite a bit this year. VP9AD's crew led the pack with a substantial 28.0M, followed by KH0AM (25.0M). The first ever contest winner from Albania, the Hungarian crew at ZA0RS, finished first in Europe with 18.9M, and led all Multi-Multi entrants in the multiplier count with 916. They were also the only station in the contest this year to hit the 40 zone jackpot (on 15 meters). The ZA0RS drew more commentary in the QRM section than any entrant we can ever remember in the history of the contest. Congratulations on a job well done. The FRC guys at N2RM pulled ahead of the USA competition for the second



The KH2S "All Stars," shown here, demolished the old Oceania Multi-Single record. Left to right are JA8RUZ, JA8RWU, JG8IGL, JR4DUW, JH4RHF, JH0USD, JH8PNE, and JR0BQD.

year in a row, with a fine 12.9M, beating the archival PVRC contingent at W3LPL with their 12.4M.

QRP Results

Smarting from last year's loss to Doug, KR2Q, 4M1G stuck it out again in the QRP category, and managed the World High with a fine 1.98M. He was hard pressed by ZX5A's second place 1.87M. These two top scores were almost a million points higher than Doug's winning effort in 1990, but considerably under the PJ2FR record. The rest of the competitors were over one million down from the top in points, with WA2UJK leading the USA contingent with 316K. G4BUE gave a super trial of his new Ten-Tec Argonaut, but finished third in Europe behind UA3DQH and TO1W.

Hurrahs

A giant hurrah to the FRC Team for the great 27M team contest effort. Come on, guys, let's give them some competition next year.

A special thanks to the guys who put some of the toughest zones on the air this year. We were particularly blessed with fine efforts from HS0E and HS1ZEB from zone 26; FR5DX in zone 39; CE3FIP in zone 12; AP2SQ in zone 21; the team at JT1J in zone 23; and the teams at VE2UMS and WD4KXB/VE2 in zone 2. Do it again, guys!

Comments

When you scan the rules for this year, pay particular attention to the following changes:

1. The requirement for a station to sign portable if he is in a different zone from the one indicated by his call has been deleted.
2. The rule that allows an extension in the log submittal date has been tightened (see section XIII, number 2).
3. The committee can require a disk for possible top scores on request, provided that the paper log or dupe checking material as originally submitted was a computer printout.
4. Format requirements for the data supplied on disks are clarified (see section XI, number 5).
5. The special consideration given on penalties for those submitting computer disks has been deleted due to the change in rule XI, number 5.

Although not part of the rules, K1AR has a request. If at all possible, he would like each of you to staple a self-addressed mailing label to your summary sheets when you send in your logs. This would greatly facilitate certificate processing.

A few years ago we received many questions after the contest about whether East Germany was a multiplier or not in the twilight of Unification of the two Germanies. We have anticipated this same kind of question for 1992 on the split up of Yugoslavia and Czechoslovakia. As we write these words, we were apprised of the ARRL DX Advisory Committee scheduled vote on the Yugoslavian issue in August 1992. Thus, be advised that the ARRL will speak on Yugoslavia *et al* before the contest is held! This will occur after these words go to print. However, our rules also state that for European countries, the WAE country list applies. Note that the DARC has already announced the addition of Croatia (old YU2/YT2/4N2 and now 9A1-9A0), Slovenia (YU3/YT3/4N3 and soon to be S5), and Bosnia/Herzegovina (YU4/YT4/4N4) to the WAE list.

These three countries are therefore separate from Yugoslavia for the CQ contest. The ARRL may also rule on Macedonia, which will be admitted to the United Nations when a dispute over the name of the country is settled. To my knowledge, other possible splits from Yugoslavia and the split up of Czechoslovakia into Bohemia/Moravia and Slovakia are not scheduled for consideration by either organization before the WW Contest. However, CQ will abide by a decision by either of these two organizations made effective before the contest.

You will also note the retention of the term "USSR" in the results of the 1991 contest. As always, the results reflect the political status in the world as it was at the time of the contest. The results of the upcoming 1992 contest will reflect the political changes that have occurred in the time since last year's contest.

This year we ran some extensive computer analysis of our Multi-Multi and Single Operator winners. Some of you avail yourselves of services where you submit your log to another source asking for data on how you stack up in

terms of accuracy as measured by uniques, etc. To give you an "official" reading from CQ, we will cite a couple of examples from our checking. The top USA entrants in the All Band category had an average unique rate of just 3.7% on 80 and 40 meters, and an average of 5.4% on 20, 15, and 10 meters. Amazingly, the 40 and 80 meter averages were the same, and so were the 20, 15, and 10 results. If you fall significantly above these unique rates, you may have an accuracy problem.

For the stateside Multi-Multi's, the unique

TROPHY WINNERS AND DONORS

SINGLE OPERATOR, ALL BAND World

CR3A (Opr. Vilho Hillesmaa, OH2MM)
Donor: David Rosen, K2GM
WA2RAU Memorial

World—Single Operator Assisted
N4RJ (Opr. Bill Fisher, KM9P)
Donor: Richard Newell, AK1A

World, QRPp
4M1G (Opr. George A. Padron Vera, YV1CLM)
Donor: CQ Magazine

U. S. A.
John Dorr, K1AR
Donor: Potomac Valley Radio Club
KC8C Memorial

Caribbean/Central America
V29W (Opr. Bruce D. Lee, KD6WW)
Donor: Alex M. Kasevich, VP2MM

Europe
Jorma Saloranta, ZB2X
Donor: Potomac Valley Radio Club
W4BVV Memorial

Africa
9L1US (Opr. David E. Heil, K8MN)
Donor: Gordon Marshall, W6RR

Asia
RL20 (Opr. L. D. Welikinov)
Donor: Japan CQ Publishing Co. Ltd.

Japan
Fumishige Takeyama, JE4VVM
Donor: Japan Crazy Contesters

Oceania
Steve Lowe, P29DX
Donor: Northern California DX Club

South America
P4BW (Opr. John Crovelli, W2GD)
Donor: David Novoa, KP4AM/W4

SINGLE OPERATOR, SINGLE BAND
World—28 MHz
ZV5A (Opr. Atilano De Oms Sobrinho, PY5EG)
Donor: Joel Chalmers, KG6DX

World—21 MHz
ZX9A (Opr. Peter Sprengel, PY5CC)
Donor: CQ Magazine

World—14 MHz
YW1A (Opr. Italo Stradiotto, YV1AVO)
Donor: North Jersey DX Association
K2HLB Memorial

World—7 MHz
ZF2JR (Opr. Jim Rafferty, N6RJ)
Donor: Fred Laun, K3ZO
K7ZZ Memorial

World—3.8 MHz
Roger Hunt, GW40FQ
Donor: Fred Capossela, K6SSS

World—1.8 MHz
Pierluigi Mansutti, IV3PRK
Donor: CQ Magazine

U. S. A.—28 MHz
George De Montrond III, NR5M
Donor: Donald Thomas, N6DT

U. S. A.—21 MHz
Carl Kratzer, K3RV/4
Donor: Bill Gioia, K2EK

U. S. A.—14 MHz
Lou Maglione, KS1L
Donor: Southern California DX Club

U. S. A.—7 MHz
Steve Kelley, KC7EM
Donor: Stanley Cohen, WD8QDQ

U. S. A.—3.8 MHz
Larry Emery, K1UO
Donor: Arnold Tamchin, W2HCW

Caribbean/Central America (21 MHz)
FM6A (Opr. Gildas Le Cloitre, F6HMQ)
Donor: Pedro Piza, Jr., NP4A
KP4ES Memorial

Europe—28 MHz
CQ4A (Opr. Joao Almeida, CT1BOP)
Donor: Chod Harris, VP2ML

Europe—21 MHz
Jiri Sanda, OK1RI
Donor: Robert Starling, N4GVF

Europe—14 MHz
LZ5W (Opr. Aleko Iglev, LZ3ZZ)
Donor: A. G. Anderson, GM3BCL

Europe—7 MHz
Roger Smethers, G3NLY
Donor: Roger Burt, N4ZC

Japan—28 MHz
Tsutomu Saiki, JA5EXW
Donor: Take Yokoyama, JL1BLW

Japan—21 MHz
Hiro Shiozawa, 7L1GVE
Donor: DX Family Foundation

MULTI-OPERATOR, SINGLE TRANSMITTER
World
PJ1B (Oprs. N3ED, W3UM, KB2XZ, K2SS, N7ZZ, K2SB, PJ9EE, WA3LRO)
Donor: Southern California DX Club
W6AM Memorial

U. S. A.
K3LR (Oprs. K3LR, N3BJ, WR3G, K5ZD)
Donor: Carolina DX Association

Europe
IQ4A (Oprs. I4VEQ, I4LCK, I4TJE, I4EAT, I4LEC, I4IKW, I4IND, I4AVG, I4EWH, I4FGG, I4JEE, I4YRW, I4EWC, I4DCT, I4JJSI, I4DKO, I4KAUY, I4KCF, I4NPD, I4QJH, I4ANU)
Donor: Bob Cox, K3EST

Caribbean/Central America
8P9Z (Oprs. K3KG, K3ZR, K4FJ)
Donor: K3NA and KN3T

MULTI-OPERATOR, MULTI-TRANSMITTER
World
VP9AD (Oprs. VP9AD, W3MA, G4CNY, N3AD, N3RD, N8ET)
Donor: W6QHS and KK6QM

U. S. A.
N2RM (Oprs. N2RM, WM2H, N2NT, K3UA, KR2J, KZ2S, N4HY, N2AA, K2TW, W2RQ, KA2AEV)
Donor: K4VX and Operators

Europe
ZA0RS (Oprs. HA1TJ, HA5NG, HA5OV, HA5PP, HA7JAO, HA8VK, HA0DU, HA0MK, HA0MM, HA0NAR, HA0NNN)
Donor: Finnish Amateur Radio League

Japan
JE2YRD (Oprs. JH0GHR, JA9SSY, JA9-10148, JK3GAD, JI2KVV, JA2KVD, JF2EOC)
Donor: Nippon Television Network Corp.

CONTEST EXPEDITIONS
World—Single Operator
J82A (Opr. Richard M. Neuman, K3IPK)
Donor: Stuart Meyer, W2GHK

World—Multi-Operator
KH0AM (Oprs. AH0K, JH1EAQ, JK1GXU, JM1CAX, JA2VUP, JE2JCV, JF2NKS, JG2BVO, JI3ERV, JR7OMD, JE8XRF, JA9VDA, JA0QNJ, N2BA)
Donor: The German CDXG and SDXG
(DJ3NG and DJ4EI Memorial)

BAND-BY-BAND BREAKDOWN—TOP ALL BAND SCORES

Number groups indicate: QSO's/Zones/Countries on each band.

WORLD TOP SINGLE OPERATOR, ALL BAND

Station	160	80	40	20	15	10
CR3A	48/8/32	412/18/65	720/26/92	1787/33/102	1856/34/110	1748/33/110
P40W	49/7/13	114/11/36	564/19/66	1254/30/104	1572/33/115	2836/31/106
HC5R	53/8/14	171/14/40	527/28/80	1002/32/108	1218/35/122	2285/32/113
9L1US	10/6/9	45/12/26	357/24/50	1090/28/88	2185/32/114	2125/31/114
V29W	6/2/6	261/15/44	555/23/82	1378/29/97	2215/31/111	2289/30/98
P40V	94/7/18	246/14/41	489/22/53	836/27/73	1175/31/81	3302/30/89
DH1RY/EA8	16/4/12	250/15/55	491/23/68	1609/31/93	1519/30/94	1539/32/106
KP2A	88/9/23	425/15/56	696/19/78	1468/28/93	1089/32/77	2146/32/92
ZB2X	92/9/36	329/15/61	621/23/87	1610/33/112	1208/29/108	1196/28/106
J82A	35/8/15	252/13/38	627/19/62	1592/28/103	1165/30/97	2262/28/83

WORLD TOP MULTI-OPERATOR, SINGLE TRANSMITTER

PJ1B	20/8/18	144/15/50	740/27/92	2020/27/150	2796/37/147	3698/36/139
P40T	17/8/16	150/12/32	485/25/77	2387/35/133	2863/36/141	3570/33/127
8P9Z	15/4/14	144/13/52	675/22/96	2440/37/129	2552/37/147	2886/36/144
PJ7A	15/4/14	232/12/41	143/12/48	3118/37/126	2964/38/148	2239/32/123
IQ4A	57/10/57	271/22/86	825/33/128	1837/38/166	1947/39/166	751/36/150
KH2S	3/2/3	43/9/16	312/25/50	1555/37/108	2632/37/111	2515/35/102

WORLD TOP MULTI-OPERATOR MULTI-TRANSMITTER

VP9AD	559/12/31	972/17/63	1732/28/97	4067/38/154	3734/38/157	3981/33/149
KH0AM	7/4/5	534/24/39	1705/32/77	3203/38/133	2754/36/116	3602/37/126
ZA0RS	157/11/51	1069/26/92	2206/28/125	4110/38/161	3463/40/165	1255/36/133
LU4FM	24/6/9	187/19/34	232/28/75	2303/37/126	2574/36/235	4090/36/137
IZ3A	371/9/55	1226/23/90	1816/32/124	2391/38/158	2253/37/149	1292/36/147
H673DX	425/11/55	1270/24/96	2290/33/115	3017/39/157	1714/38/139	775/32/127

USA TOP SINGLE OPERATOR, ALL BAND

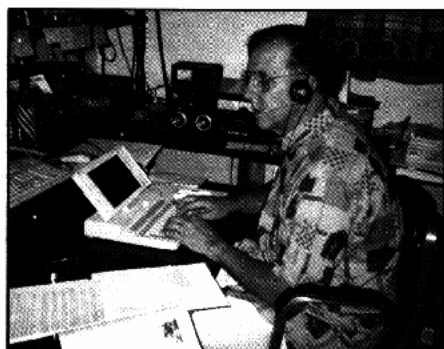
Station	160	80	40	20	15	10
K1AR	17/6/13	134/18/59	86/22/60	1011/38/142	950/37/135	542/32/116
KM1H	17/8/14	151/15/56	125/23/64	613/39/126	1081/36/136	509/29/113
K4XS	13/7/12	81/14/46	127/19/68	914/36/121	743/34/121	549/33/125
WM5G	14/7/12	52/14/38	190/26/69	508/37/128	743/36/121	802/35/126
K300	33/6/16	136/15/57	103/20/58	797/38/131	700/36/127	365/30/110
K3Z0	18/6/13	188/19/54	129/17/53	588/33/95	837/29/105	474/30/98
N6BV/1	17/6/8	100/14/48	89/21/54	825/35/116	646/30/112	341/30/92
W3BGN	28/10/20	110/18/53	85/17/44	531/32/106	609/34/108	365/28/102
W9RE	21/7/14	61/16/42	94/23/60	534/35/126	489/31/118	448/32/104
W1PH	14/5/11	49/14/38	102/22/58	531/37/123	413/33/116	373/30/109

USA TOP MULTI-OPERATOR, SINGLE TRANSMITTER

K3LR	18/7/17	106/20/64	131/30/89	1060/39/153	955/37/152	318/33/126
K1YR	14/5/12	64/17/61	105/25/79	981/37/156	871/37/147	371/32/139
NF2L	33/9/20	198/20/77	191/24/82	699/38/147	711/34/135	450/32/138
N3RS	29/10/23	89/21/73	148/25/81	690/39/151	864/35/143	327/32/134
W6QHS	8/7/7	58/15/33	394/30/74	514/38/128	1077/35/121	510/30/84
AA6TT	14/9/11	103/20/38	319/27/59	218/34/108	1325/38/123	614/32/93

USA TOP MULTI-OPERATOR, MULTI-TRANSMITTER

N2RM	58/10/21	530/25/86	375/26/93	1489/39/161	1889/39/169	1124/34/162
W3LPL	74/14/29	320/24/81	485/31/107	1415/39/165	1822/39/164	838/34/157
K1ST	52/11/19	343/20/70	354/25/80	1836/39/166	1363/39/149	897/35/147
W7XR	147/12/14	365/28/58	695/34/95	1020/36/146	1618/38/136	1090/33/103
K2TR	103/18/36	406/23/76	260/28/85	1523/39/171	1176/39/161	497/33/142
N5AU	20/7/12	1056/18/51	221/30/80	932/39/141	1754/38/153	1152/34/140



This gentleman, Bill Nesbitt, provided us all those very welcome zone 37 multipliers from 5Z4BI. Bill says his spirits were undaunted by that blackout on Sunday morning.

rates were somewhat higher, with the averages ranging from 8% to 13% depending on the band, and averaging 9% over all bands. The World High Multi-Multi's had average unique rates from 10% to 15%, averaging 12% over all bands. Again, if unique rates are substantially higher than this, there may be a problem. Our experience with cross-checking shows that about half of the uniques are busted calls. This data is general, and of course, every station's particular situation will affect the results. For example, we had one particular low band single band entrant who worked a great deal of Caribbean uniques by virtue of his diligence in checking into daytime nets. Such tactics will skew the statistics!

The Master Data Base generated for the SSB

contest this year was used to do the above analysis and gave us some very interesting insight into other workings of the contest. About 50 logs, most of them top logs in all the categories, were compiled together to form the data base. A total of 230,000 contacts were included, representing over 43,000 unique calls. Since we received under 3000 logs this year, that means that there are over ten participants in the contest for every person who submits a log! Last year we remarked that such a massive simultaneous participation might be some kind of record. That is, the CQ WW DX contest might represent a unique event that gathered more simultaneous participants together worldwide than any other competition of any kind.

Bill, W9VA, wrote us a nice note spoiling our fun. It seems that there is a Bridge Tournament that boasts 60,000 simultaneous participants from all over the world! We are confident that the amateur radio world will rise to the occasion and challenge the bridge players. Certainly, the collective hundreds of thousands of hams could muster an effort with over 60,000 contributors so we could legitimately submit an application to the *Guinness Book of World Records!*

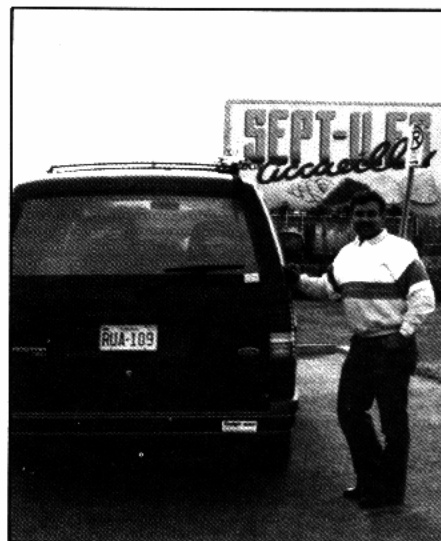
Credits

Once again we would like to thank KB3MM for revising some of our software as required to read files from version 7 of K1EA's CT program. (One of your Directors had a mild heart attack this year, possibly from the shock of finding out the old software didn't work.) Then, of course, there are the hardworking committee members who poured over many logs, dupe sheets, com-

puter listings, and disk files to police the expanding contest populace. This time the committee included Mike, W9RE; Pat, W8YVR; Glenn, K6NA; Doug, KR2Q; Randy, K5ZD; Jim, W7EJ; Jeff, KR0Y; Bill, K4XS; Doug, K1DG; Jan, N6AW; Bill, W2RQ; and Ed, N3ED. Again, a round of applause to John Dorr, K1AR, for doing the trophies and certificates.

See you all in this year's test. Remember, work lots of YUs!

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



WD4KXB/E2: that was the zone 2 call that gave so many of us this rare North American zone.

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CIRCLE 60 ON READER SERVICE CARD

DX QRM

It's nice to be a rare multiplier... 5B4BCC. J3 should count as South America. It's farther south than P4 and PJ, and we can watch YV-land TV with rabbit ears in the hotel room—our score would have been 34% higher... J37H. No "run station"; we had only one transceiver. That makes it impossible to compete, but we had a great time... C6AFQ. Kept being told how loud I was in Europe, but they still did not call me... WR6R/KH6. This is my first QRP experience and I found it quite thrilling... JA1MYW. I got a zone 40!... JP1RMK. My rare stations were KH2, KL7, etc... IK8COG. It was my first DXpedition and the contest enabled me to enjoy it... JP1AVZ/JD1. Saturday was fine; Sunday was horrible... DA2UI. Contesting from Europe is just no fun anymore; just too much QRM... DF2RG. More QRM every year... DL7MAE. Rain the whole contest, thunder crashes, 30-40 dB most of the time. Had great fun though... VE3CXX. I had a niece visiting and she slept all morning in the nearby room; TVI all over; had friends for dinner; went to music hall!... IK2AIT.

It is a big problem to find the results for our country... YO3AIL. I've never seen such traffic and competition... CT0BWN. So many prefixes, just like the WPX contest... YB0TR. I am new to Amateur Radio and have never operated a contest before; also, I can't speak English very well... JM6DYM. I flew from Yuma, Arizona to Wrangel Island, Alaska just to work the contest... NL7QT. First time in the contest; good experience, but not much of a score... NH6ZW. Extremely poor conditions on the second day blocked a new OE record; just worked 20 stations on 10 meters on Sunday... OE2VEL. Things are getting bad when you have to get on a list to work a station... VE3EJ. Thanks, CQ magazine, for giving us a chance to compete with ourselves. It's great, great fun working the existing contest... XE2BEU. Poor propagation up here on 10 meters most of the contest plus local power-line noise... NL7TB. I worked my first South American on 160 meters—PP0FI... OZ3SK. Happy to give so many stations zone 29. Look forward to next year... VK6OD.

Had big problem with the SB200 on 40 meters. It just wouldn't work properly... LA9DFA. Never thought I would hear a ZA calling CQ contest and getting no answer... VE3ITA. Without a special call sign, it's impossible to compete... DL8PC. Murphy was here the last 6 hours on Saturday—rebuilding one prop pitch rotor. Sure isn't any fun working on the tower in 20 degrees F temperature... JLG1PK. The conditions were bad on 15... HA8CQ. Many thanks to my XYL for her understanding... TK5MH. Contacting Albania is the highlight of the contest for me... ZS6HO. PJ9W again had the biggest signal on the bands... YU4XA. It was my best score in the CQ WW so far in spite of very little activity from Africa and Oceania... CE6EZ. My only duplicate was ZA. My, how times change... G3JKY. Very tired, but too much fun. Thanks to everybody... UT2L. Spent so much time with company (relatives) taking them shopping, didn't get too many stations... YB2HTD. We need more luck next year... GW0JR. Sunday evening, good signals, no QRM, but all dupes... IN3QBR.

Too many technical problems in the MM category... 4N3IA. Propagation to Europe on 10 was terrible; still lots of fun... VK2ARJ. And the aurora—what a thrill... PA3DWD. I couldn't believe my good luck when ZA0RS called me; thanks to RB5AA for alerting me... VK2KS. Worked BY1PK on 80!... GW4OFQ. This is my first entry from Niger; I caught many pileups, very exciting... SU7M/JH4NMT. Very poor conditions on 28 MHz. I did not have any QSOs from the Indian Hemisphere... OH5PA. Conditions on 28 MHz were very poor; glad I did not go to Shetland Islands this year... GM4CHX. The WW DX and WPX SSB and CW—these are the nicest weekends of amateur radio... IK2BLA. Rig blew out second day, but had a great time... VE3WSM. Conditions could have been much better... ON7UN. In spite of the Ironman volunteer party, Halloween party, and a bad cold, I still had 19.5 hours to operate the contest... AH6JR. On Sunday, ZA0RS answered my CQ, but it was a dupe... I1POR. It was wonderful—my first participation in a contest... CT1EDJ.

My first serious attempt for #1 QRP Canada. Even worked a few "new ones"... VE6GK. Compared to last year, this was purgatory. GW4BLE's 1000+ QSOs on 10 meters made my 100 QSOs look sick. What a difference 400 miles will make when solar flares are about... GM0ECO. Contacted laryngitis 8 hours before the contest. Better luck next year... VE3LRL. Conditions could only have been worse if I had returned to zone 2... VE2ZP. Heard V31DX and T14CF the last hour of the contest, but was too exhausted to break through the radio wall... BV2AR. It was difficult to work stations over the Pacific ocean with only 50 watts... J7XAY. Finally worked BV, but in the craziest conditions... AL7EN. Band conditions not too hot here in the north; very few Europeans heard until Sunday noon... VE3CWE. Enjoyed contest immensely... 3D2DD. The CQ WW DX Contest is the MECCA of contests... VE7EY. Conditions were good, but getting too old to cut the mustard... VE4RP. I slept more than 10 hours during bad conditions... JA8GYQ. Climbing the tower to turn the antenna made me tired—no rotor here... PY2NY.

It's a very good change to add the low power category to the contest, as I have no license for high power... JA0UHI. Worked the whole contest without a rotor; my beam was fixed on Europe and parts of Asia only... DU1CHD/G. Special thanks to our group president, PY2NY, who notified everybody... PY2EX. Worked Albania, and the operator said he had been trying for a half hour! Revenge is sweet... NP2N. Conditions were down from last year, but still had a good time... ZF2JR/IN6RJ. My first CQ WW was great; will make sure I am in the contest next year... PY1CAS. Weak propagation, strong U.S. operators... CQ4A. Super conditions helped make me feel like a big gun... VU2PTT. My best DX was OH6RM on 28 MHz—my first and only European on 3.8 MHz from P29... P29DX. Worked USSR long path!... IT9HBT. Lost time the first day listening to a discussion on the future of packet radio... ZS6BRZ. The government shut the power off twice with load shedding; the sun shut the band off twice with sunspots... KG6DX. Solar flares and power failures—we lost 10 M points... KH2S.

Biggest thrill was working the contest in the middle of Hurricane Grace...

VP9AD. I had a great time and got 8 new countries... P29KH. Bad conditions to the USA on 10 meters both days—what a pity... HE7H. Absolutely nothing went wrong on this trip to KG4... KG4QQ. The conditions to the east coast were very bad... JATAUD. Next year I hope to work this excellent contest MM... CT1CLR. Wonderful! This is the first time I had more than 1000 Qs... EA4COT. CQ WW is always very interesting... UA2EC. We did not work the full 48 hours due to lack of operators... 5B4ES. Thanks for the fine unforgettable test... YL2TW. If a British Knighthood is good enough for Stormin' Norman, I propose K1EA for king!... G4PKP. Very strange conditions. First day, a few JAs and no Ws; second day no JAs and a few Ws... OZ5EV. Many problems with TVI and traffic noise on 10 meters with only 80 watts... F6DZD. And longing for a 75 meter Yagi at 110 feet to dig out the calls... XE3EB. I proved that a good location is more important than an antenna... G3XSV/P.

Fatal aurora killed my effort... SP5DDJ. Aloha and mahalo to all... KH6FKG. Great to work DXCC in one weekend, but very frustrating using state of the art receiver with only 100 watts and having to leave 5U7, KC6, HS0, FR7, etc... G4XKR. How come everybody gave me 59, but some had to ask me for my call 2 or 3 times... VE2NAM. (So that's your call!—ed). Because I'm tired of contesting alone around here, I've been preaching to all the locals about the joys of the contest. I hope some of them beat me... VE3ZD. Despite the bad conditions, it was a good opportunity to try out my new Ten-Tec Argonaut II which I had purchased just 2 weeks before the contest... G4BUE. Ole Sol was sure playing up; this part of Europe was in a black hole for most of the contest weekend... GW4BLE. The first MS organized by Luxembourg amateurs... LX6A. Power department truck arrived to make pole to house hook up just a few hours before the contest started!... J80D. Our ham radio life is DX contests. I think the CQ WW is the best... JA1DCO. Absolutely the best contest!... IT9NTT.

I have lived long enough to be called by ZA!... VK2DXI/9M2. Very hard to get multipliers with no propagation to Europe... VO1SF. I got my brand new 3-element 40 meter Yagi ready only a few hours before the test and it was really worth it since the upper bands were really bad... OH3OJ. This is the last time GU3HFN will be activated from the present shack; new one under construction (look out!)... GU3HFN. The pileup of JAs to the Caribbean was too heavy... JR5HCU. Too many crocodiles on the air with jaws bigger than their ears... YL2DX. My wife grumbled about me getting to bed at 0100 local hours for 2 days in a row!... ZL1IM. My fourth contest—I just love contests... TG9AJR. Heard Dave, 9L1US, working stations that I couldn't hear at all... 9L1SL. Interesting and many rare DX stations, but tough with 100 watts... DJ2HH. Unfortunately we don't yet have power for all 24 hours in Beirut; that is the reason I couldn't operate my station longer... OD5PL. Too much QRN... G3XWZ.

A lot of QRM, QRN, rain, and lightning... EA3ALD. Worst low band conditions experienced in any WW... KL7Y. Only got in 10 hours operating time before I came down with terminal TVI... DA1DG/K3WOW. Wanted! Contest operators... JA3YBF. Europe is closer, stronger, and worth more points!... AP/WA2WYR.

USA QRM

Thunderstorms and heavy precipitation static all night both nights and less than stellar propagation caused my 100 watt score to be less than my QRP 1.1 Meg score from last year... K5RX. Working ZA (Albania) for the first time!... K9YNF. Big pileups, lots of fun. Had to work Saturday and it cut my score down... K9IKP. This is the greatest contest; don't change it... K3OO. Great to see all the activity under so-so conditions... WA8DXB. Where were all the Europeans? Last year it seemed that all I worked was zones 14 and 15; this year everybody but zones 14 and 15... WJ3N. Working HS0E QRP is always a thrill!... AK5E. We will be better next time... W9HOQ. I do hope that the U.S. station that spent most of the contest squarely on 14.150 will be disqualified... W9LYN. I've only been a ham for 3 months and I already have 35 countries!... KC6ZWB. My first contest and I learned a lot. I will be back next year... N0OST. Forty meter phone could be a good DX band, but too much QRM from foreign broadcast... W2OAE. My biggest thrill was working South America again... N2JZK.

Strange conditions; few runs... K3ND. Never imagined being called consecutively by two ZAs. Wow!... N2MM. When W3LPL told a neophyte ZD7 to go by call areas, the ZD7 confused that with zones! Guys in one-land would answer him and he said he wouldn't work them because they were giving zone 5!... NK3U. Had to work this weekend; 18 hour shift Saturday... N2MR. Conditions poor; too many people bugging me for less important chores... K7ABV. The flu!... N7LOX. Working 9J2BO on the LP with just 5 watts on Sunday AM only seconds before the "Big Boys" found him... WB5ASP. Getting harder to stay up two nights but still enjoy it... W8UVZ. It was a pleasure to work BT7JS from Hainan Island, China, on 20 meters without a pileup... KU6T. Very few European stations heard/worked this year... KC5AC. G5RV got out lousy. Could hear OK but no one heard me. Spent most of the contest trying to install GAP vertical... K8LA. Thrill in working KH0AM on 40 SSB; conditions on 40 meters were baaaad!... K15GF. Beat my last year score even though conditions were difficult... N9IHW.

First contest. Tough to compete with a small station... K4BWQL. This is the first time I ever tried to do any contesting. What fun I had... N8HTT. A case of laryngitis 7 days before the contest kept my score from being high... WJBE. Score improvement—used hunt and pounce method only. Still couldn't get through some pileups... K1JBS. Worked my 100 stations and was able to have lots of sleep... W6BIP. Was only having fun this time—hunted and pounced... N7KA. Three new countries, including XT2, when 10 meters should have been dead to Africa... WA5SOG. Tried new equipment. Worked great!... W8ILC. I am 15 years old and this is my first WW. Looking forward to many more in the future... KB9BIB. Frustrating when DX stations won't listen in our portion of the band... N4HOH. I only hollered CQ about 10 times during the entire contest and had a ZD9 answer!

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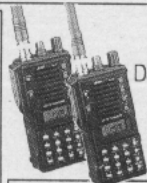
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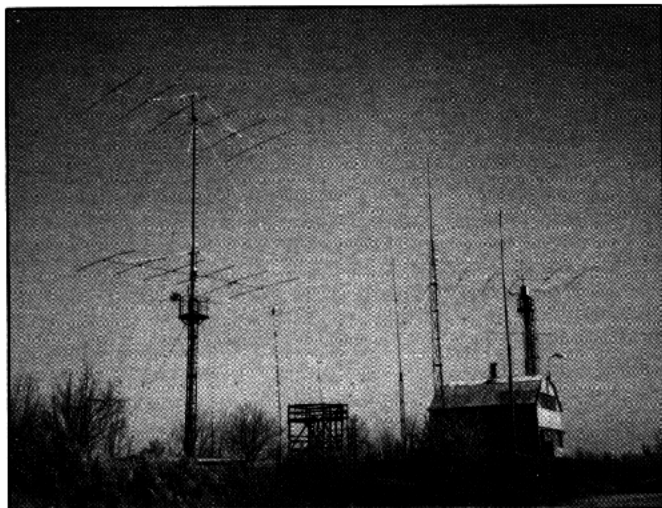
... KB3TS. Wish conditions could have been better—especially 10 meters ... N8FU. Found out how to get rid of TVI—bribe your neighbors ... WA2UZI. A real pleasure to work HS, ZA, and ZC4 on one weekend ... W9LT4.

Had a ball; really helped me on the way back to DXCC ... WA2LMC. Worked 10 new countries. Sure hope they QSL ... AA5HI. Thanks for the new 100 watt class ... N1XZ. Worked all continents in less than 10 hours this year ... W9CNF. Almost exclusively an America's contest, so different from 10-12 years ago ... KA4EMR/9. Had to go QRP during the football game due to TVI ... WU9D. I got Kenya—first time ... KA8MWL. Having QSOs with my old friends and lots of new ones ... NN2G. My first DX contest and the biggest thrill of 1991 ... N7OYB. Operators more courteous this year; keep it up, guys ... W7KKR. Did the best we could with 100 watts and inexperienced operators; but most important, everybody had fun ... K5QBM. I was surprised by the apparent lack of European and Japanese stations to be heard on the East Coast ... N2LDU. Some DXers still don't give their call often enough ... N4CT. Twelve hours is a long time, especially when it is spread out over a weekend ... WA6NLJ.

Worked 5 new countries and appreciated the complementary comments I received on signal and quality of sound ... N2DEM/4. Moved into my new QTH, so worked test with quarter wave and barefoot (100 w)—as bad as my usual 5 w QRP and big beam ... W6CN. I wish that the second half of the contest was as good as the first ... KV4P. Was a "Super Murphy Year"; lost 2 amps and one rig. That should do it for 10 years ... N8EXS. Enjoyed a break working 10 meters while in the neighborhood. My 20 watts actually snagged a few DX stations ... W3FTG. Tremendous pileups drawn by packet/computer ... W3OV. Too much amber beverage, not enough O's ... N4YKD. Seventy-five band good to JA and UA9/0 second morning out of the Southwest ... K3ZO. Almost quit the contest Saturday—had to work for every contact ... KC7UP. I lost a lot of time waiting for stations to ID ... AA1M. Ten meter interference was severe at times due to XYL N2DEM/4 working single band at the other end of the house ... KA2CDJ/A. Working Z21BL and then listening to him call CQ for 5 minutes without any calls ... KC6SKQ.

Phone DX contests are a killer for those with a hearing impairment ... W3AZ. Could have doubled my score on 40 meters if DX stations had listened up the band ... WW7Q. Working FO4 long path on QRP—great conditions ... WB0IWG. Logging program went down three times ... W6MFC. Interruptions for work, leaf raking, church, family—still a fun experience ... WU1X. A light bulb blew up in my face, but I'm okay ... KA6ING. Where did the Europeans go? ... KK9A. Too far from anywhere for club competition. Thanks to N1ATO for climbing the tower the day before the contest to hang the dipole ... K1UO. Had to QRT for the Bear game ... KB9CRY. First time effort for the contest ... WA6NKO. Now I know where the black hole is located—the Midwest ... WV9Q/0. Heard very little Europe ... W6MWW. Never heard any Europeans here in the Midwest all weekend ... N0H8H. Terrible propagation to Europe ... WM5G. Lot of big gusts and QRM in the DX window; tried to get in between ... KR9G. The A index went to 98 the day after the contest; that's too close for comfort ... WA2UUK.

Rough conditions all weekend. Can definitely tell the solar cycle is on the way down ... N9AW. Casualties: Video Board; 386SX; Henry 2K (4-400s); homebrew dual 813 on 160; homebrew 4-1000; Kenwood 940. Other than that it was a great contest ... W1BK. Most frustrating to have UA0 call on CW with no phone capability; never did get zone 19 ... N4CC. Wish all participants contested as well as the JAs ... N7AVK. One old man and some teenagers—lotsafun ... K8UCN. Enjoyed myself; new amp really helped ... KK6TX. Good multiplier count but terrible conditions ... WB4FOT. Had to shut down due to RFI ... NB7N. Could hear the Caribbean stations working Europe, but not a sound from Europe here; conditions very poor on 7 MHz ... K5NU. Band conditions were very noisy and the solar flare made it even worse ... AB4RU. The pox upon packet ... K2OLG. QRM from irate neighbors not loud enough to spoil early AM/PM runs to Europe ... AA2DV. Whatever happened to 10 meters? Worst I've ever done ... KB9AB1. W8TN's Alpha 87A let one station instantly QSY to any of five dead bands ... K0CS.



Here are the OK5W antennas. Always a great signal from Czechoslovakia, and good enough for first place Multi-Single in OK-land.

It really gets lonely up here in the Northwest absorption zone during solar flares; called for Europe on 10 and hardly any ... KS7T. Only three contacts with Europe ... N6SRT. Forty meters is tuff!! Called several stations for over an hour—zero, zip ... WA6WPG. Crummy conditions on 10 ... WB6MBF. Biggest thrill was logging Israel, Sierra Leone, and South Africa ... KA3PCX. Glad to work 9L1US on Sunday. Dave left the next day and I needed him for an all-time new country ... KA9HDN. So much easier using a laptop computer for logging ... AA4S. I passed my Extra class at OZ, but the paperwork wasn't done until 0330Z, then drove two and one half hours to get back to the shack ... KA1UTU. Used CT for the first time; makes me feel like I spent the last 13 years of ham radio in the middle ages ... WA1N. It felt good to work ZA and know it was legit ... W3QIR. Horses may be able to sleep standing up, but I can't. Fell asleep Sunday morning while running Europe; started to fall and caught myself headed down ... K4XS. Where were the JAs? ... KC1SJ.

Thanks to VS6WO for digging me out of the pileup for a new one ... K15GX. HZ1AB finally heard me and very politely said, "The YL go ahead." I was speechless ... AA7KE. I attribute most of my success to the delta loop antenna and operating techniques ... WB4HFL. Great DX activity, even with very poor propagation ... KC7DB. Another learning experience for KA4RRU; see you next year ... KA4RRU. Biggest thrill was working Z8BZ on the first call ... K60HM. Hearing some station say 59924, and then working BY1PK on the first call ... K13AG. First CQ WW; first contest ever (10 years old); looking forward to next year ... KO4LO. Competing against the KW stations at times tested my patience ... KD4RH. My horses ran away ... WT2J. Was all ready for super JA runs with big antenna; however, propagation stunk and the 3-el antenna on 20 at 60 feet didn't cut it! What happened to last year's conditions? ... KM1H (KQ2M).

STATION OPERATORS Multi-Operator Single Transmitter

4A2MX: ZE2MX, AA4V, N4SF. **4M3U:** YV1ACQ, YV2AHN, YV3E0D, YV3ZB, YV3DZC, YV3E1Z. **4N4U:** Milan, Elvis, Boris. **4Z7M:** 4X4YM, 4X10M, 4Z4KM, 4X6UO, 4X6UT, 4X6Z1, 5B4BCC: DK5WL, DL3MZF, DL4MFC, DL4MDD, DL4MEH. **5B4ES:** 5B4ACY, 5B4YN, Marius, Julio, Chris. **5K6CO:** Club. **6D2X:** ZE2YU, ZE2XD, ZE2XSO, K05GY, K1560, N5KEV, N5NYK, N5WIX, N4SC, W5VX, KC5FP. **6I2A:** KE2DR, N0ZVY, ZE2LV, ZE2ABN, ZE2AFI, ZE2AHN, ZE2ARM, ZE2ALC, ZE2BK, 8P9Z: K3KG, K3ZR, K4FJ. **AABA & X0KFE, K90KK, AA4LH & WA4NAT, N4NDU. AA5ZX & WB5EUC. AG6D:** Club. **AK1L & KA1X, KA1FBY. B1PK:** BZ1AA, BZ1AL, BZ1HAM, BZ1AB, Wang Tao.

B74AA: BZ4AA, BZ4AYL, BZ4CPU, BZ4DDL, BZ4DFH, BZ4DFJ, BY4A0H. **C6AFQ:** K1TN, KR1S, VP2ML. **CE2AA:** CE2MH, CE2WO, CE2LZN, CE2HXX, CE2NJ. **CK7C:** VE7SZ, VE7ON, VE7CC, VE7IN. **CR3M:** CT3BD, CT3BM, CT3CD, CT3DL, CT3DF, CU22A, CU2CE, CU2AF, CU2AP, CU2B, CU2B, CU2XD, CU2ZD, CU2EN. **D73DX:** HL2KAT, HL1KEW, HL1KII, HL1KPS, HL1CG, HL1IE, HL1XP, HL1ZTO, HL1AHS, HL1AIW, HL1EIZ, HL1UJ, HL1IXP. **DA2FDX & DA2CU. DF0AT:** DF0GQ, DL5NC. **DF8RR:** DL7AEN, DL7SI, DL7ALM, DL7AKC, Y44NO. **DK8PP:** Club. **DL8ER:** DL8EAD, DF2EY, DL5EAE, DL8DAY. **DL8JN & DF3LW. DL8SSB:** Club. **DL8WH:** DF2IC, DK2GZ, DF4ZK, DL3NS, DF7IT, DL2IAK.

DL8OH & DL2NBU, DK3GI. DX1DBT: DU1GCV, Howard, Erwin, Jojo, Melvin M., Nicky, Dennis, Jerome, Mike, Kellin, Melvin C., Bien, Cesar. **DX3H:** 4F3AAL, 4F3BAA, DU3CWF, DU3CWM, DU3FBB, DU3FSK. **E2R3FC:** EA2BSJ, EA2CPZ, EA2CEA, EA2OER. **E33GCT & EA3GCV, EA3GFV, EA3LZ & EA9TY, OH8XX. ED1WWE:** EC10BJ, EC1DDL, EA1EZY, EC1CFD, EC1DDK, EC1CJJ, EA1EPB. **ED3MM:** EA3CAC, EA3DFW, EA3GBW, EA3GEG, EA3GEJ, EA3GEM, EA3GEP, EA3GFA, EA3GG0, EC3CVD, EC3CZR. **ED4UPM:** EA4DAA, EA4BE, EA4CFE, EA4DYN, LU1BSN, Julio, Pedro, Jesus, Genia, Patricia, Javier, Alfonso, Julian, Luis, Luis S., Luis M., Manolo. **E17M:** EI8GS, EI7DNE, EI4DD, EI3DP, EI48Z, EI6BT.

F1B: F01NBP, F1HAS, F6CQU. **F1MAA & F1JPA, F1LDL. F6GYT & F6GLH, F6GLI, F11LTF. F6IUI:** Club. **F1PBT:** F01PXT, F01PFT, F01PDP, F01PYL, F01RHT, F01SAA. **F7A:** F6ARC, F6BEE, F6CCT, F6PEY, F6H5V, G0CCH & G0CDO, G3MXX, G0MLE, G1VIV. **G4FJE/P:** G4L00, G1JKF, G6RHL, G6BYW, G3TVG, G4VXT, G40XD, G3EUS, G4YRF, G0LGV, G4ME0. **G4PKP & G4CVZ. G6M3WQJ & GM4YX1. GU/DL8NBE:** DL8NBE, DL3NBL, DL2MDZ. **GW8GT:** GW3NWS, G4VXE, GW4TU, GW0MAW, GW5FN, GW4LX0, G4BK1, G4IFB, GW3KYA, G30AY, GW4BQ, G3SOX, GW6ZUQ. **H2AKMR:** Inczedi, Kiss, Gincin, Adam. **H3AKNA:** HA3NS, HA3NU, HA3OV, HA3OU, HA3FTA, HA3FO.

HA5KTT: HA5AGP, HG5BHV, HA5JAI. **HA8KCK:** HA8FW, HA8FT, HA8FM, HA8DZ, HA8EK, HA8KH. **HB9IA:** HB9CWA, HB9LX, HB9XY. **HE7H:** HB9CIP, HB9DDO, HB9BLQ, HB9CAT, HB9CZT, HB9FAF, HB9SFD, HB9SALM, HB9STL. **HG1S:** HA1TJ, HA1AH, HA1DAE, HA1SV, HA1TD, HA1TW, HA1DAC, HL9NH & HL9AA, HL9FY, HL9JK, HL9OB. **HZ1AB:** K1VBW, SM0CXU, N4KT, AA60B, KC5PF, N0EA, N7CBX. **IL9LY & IK0IX1, IK0JMU. IJ3RF/IL3:** IJ3RF, IK3JP, IK2MZS, IK3NAB. **IA4UM & I4GAD, I4GAS, I4VOS. I6WH & I6LPT, IK6BSN, IK6CLX, IK6FAW, IK6GZM, IK6OFF. IC80GS:** IC8BGS, IC8SD, IC8BWK, IC8W1B, IC8YSD, I5FWT, I5WVR, IK2DI & IK2IKW. **IK20FR & IK2KT, IK2FEO, IK2MMF, IK20DB, IK2RJK, IK20HG, IK25GC, IK2ILH, IK2GAU.**

IK30BK & IK30AR. IQ4A: I4VEQ, I4LCK, I4TJE, I4EAT, I4LEC, I4IKW, I4IND, I4AVG, I4EWH, I4FGG, I4JEE, I4YRW, I4EAKW, I4K4DCT, I4K4JSI, I4K4DKO, I4K4UJ, I4K4ZFP, I4K4NDP, I4K4QH, I4W4NU. **IK6NH & IK6QON. IV3VFP & IV3NZN, IV30EP. IW3FGG:** IW3AML, IW3ABW, IW3ADA. **IY8X:** IK8HEO, IK8MVH, IK8JSV, I8XVP, IW8CXY, J37H: K4J4VH, KU4J, W4BXI, N4WBS. **JABYAK:** JR00VM, JR0HYT, JE0VMT, JR0FOM, JG7JMO, JF0TJU, JF0KZ, JE0DUA, JK2PVL, JH9PUO, JF0FFR, JH2NIZ, JG70FK. **JABZRY:** JN1JVA, JY1DGO, JS3JSB, JH5XDD, JR0BOD. **JA1YBH:** JF7RGM, JR8VTO, JH9EIT. **JA1YFB:** J01BRW, J030LZ, A. Yamaya, N. Yajima. **JA1YKX:** JA1RPK, J01VVT, JH9JFH, JH7AJD, JA1LAS, JK10HK, JG1EGG, J01DNM, JL11ST. **JA3YKC:** JF3VXV, JG3MRT, JL3HEY, JL3MCM, JM3CMG, JM3FVL, J03UGI, JP3AIK, JE3PMN, JF5DTS, Ken.

JA3ZK: JM3ILK, JG3SXR, JH4PUI. **JA7YAA:** JF1CKX, JE7HLZ, JE7JZC, JG7PSJ, JE6AWL. **JE6JH:** JR6GKT, JI6BRB, JF6DEA, JG6GMR. **JF6YPU:** JQ3DGG, JQ3PHB, J44LER. **JH5ZCP:** JA5AOC, JA5AUC, JH5PHC, JR5JAO. **JH8YCT:** JR8XWU, JE8URM, JE8JZ, JF7LGH, JG80MN, JM3GZO, JG1UHA, JP3IAT, T. Mohri, K. Itoh, T. Ishizuki. **JT1J:** JT1CO, JT1BU, JT1BY, JE7RJZ, JI2HVK. **JT1T:** JT1BR, JT1BX, JT1CS, JT1CF. **K0BJ:** Club. **K1VR & NZ1W, WA1G, N1R, KA1UTE. K1YR & K1RU, K81YW, WJ1U, K81XM, N1DVT. K2DWE & W2GSN, W2KQ. K2SE & N2EA. KH2S:** JA8RUZ, JR4DUW, JG8IGL, JH9PNE, JH8YSD, JR0BOD. **K3ANS & NU3L, KU3K, N3KAO, K3YD. K3DI & W3ICM. K3IVD:** WB6VGI, N3CBJ, K03YU, JH3UW, W63R, K3YDX, N3KJ, NZGAR, W3IP, Q7NTF, K3H0I, N3DCI, WA3KZR, W3TID.

K3LR & N3BJ, WR3G, K5ZD. K3YL & KA3PIT, AB2E, KD3UC, N3ADL, WE3E, K4MF & WA1TA, KA8ANQ. K50BM: AA5IB, N5DZS, N5UZ, N5VOC, K15LM, N5SEU. **K8UCN & K8BKSU, K8LFA, Mark. K9LA & WB9CWC. KA1GG & W1KM, K1KJT. KA3PLX & W3BCJU. KA5W & K5IG, W77D, N50AO. KC5DX & W05V, AA5UK, AA5WY, KM5L, K85KTY. KD3TB & KC2TA, KA3CVB, KD3RF. KE2WE & K2O1Y. KE6WL & KD6NT. KE0PT & N9IX, N9KEP. KF4FL & WA4VIV, W4DMQ, N4IYQ, N4TG. KH2S:** JA8RUZ, JR4DUW, JG8IGL, JH9PNE, JH0USD, JR0BOD. **KH6GMP & KH6DD, W64Q. KH6GMP & KH6DD, W64P. K15PA:** Club.

K16X & N4EA/6, KF6VV, KC6POB, KC6SWE. KN0Z & WX8T, H8HT, KC8WR, WU8A, KR0B & N0BK1, N9BDM, K0II, K0T, KJ0B, WJ0M, K0JL, AF9T, K8JZV. K99K & N9AU, N9BC, N9I, N9X, WY1M, W9V, K9CJ. K99K & N9AU, N9BC, N9I, N9X, WY1M, W9V, K9CJ. K26X & KF6BL, W9BVL, K06VE, N6UWU. L4D: LU1EYW, LU2DPW, LU3DW, LU5EEK, LU7DPR, LU7DU, LU8EW, L6XA: L1E1H, L1X1G, L1X1C, L1X1Q, L1X1N, L1X1W, L1X1R, L1X1SP, L1X1RN, SP5SS, Y320D, Y48GN, DF3IAC, DF61G, LY1BZB: LY2BK, LY2BD, LY2BS. **L21KBB:** LZ1-C-187, LZ2EF, LZ2TZ. **LZ1KNP:** Club. **LZ9A:** LZ2CC, LZ2PO, LZ2DF, LZ2HE, LZ2JU, LZ2BE, LZ2WF, LZ2XA, LZ2TT, LZ2WM, LZ2L, LZ2UA, LZ2E-41, Krasi. **LZ9A:** Club.

TOP SCORES

WORLD

<p>SINGLE OPERATOR HIGH POWER All Band</p> <p>CR3A 12,974,910 P40W 10,779,338 HC5R 9,630,000 9L1US 9,263,688 V29W 9,196,488 P40V 8,852,976 OH1RY/EA8 8,726,500 KP2A 7,609,190 ZB2X 7,128,646 J82A 7,037,844</p>	<p>FM6A 1,934,659 KG6DX 1,861,358 CT3M 1,855,722 9Y4VU 1,493,220</p> <p>14 MHz</p> <p>YW1A 1,326,318 ZY5EG 1,232,769 LZ5W 994,240 SM2EKM 948,117 TF3CW 822,300 YW5N 743,808</p> <p>7 MHz</p> <p>ZF2JR 630,498 FG8Y 531,375 LU1JV 399,600 G3NLY 393,908 JA8IXM 264,960 KC7EM 263,048</p> <p>3.8 MHz</p> <p>GW4OFQ 183,590 Y21CW 162,450 DL3LAB 122,194</p>	<p>ESSRY 116,958 K1UO 105,609 VE3VN 102,305</p> <p>1.8 MHz</p> <p>IV3PRK 28,864 EA3ALD 18,961 RY7D 17,500 OK1JDX 13,230 VE1ZZ 12,948 UC2IEF 10,948</p> <p>LOW POWER All Band</p> <p>ZC4BS 5,244,877 9M6RO 2,924,380 ZK1XC 2,215,343 LY3BX 2,107,140 JF1SEK 1,966,968 NH6T 1,934,998 PX1Z 1,810,710 P29KH 1,345,986 K7RI 1,286,946 EA8BVH 1,230,876</p>	<p>28 MHz</p> <p>ZV5A 2,984,166 ZD8Z 2,341,866 HC1OT 2,067,629 ZY5EJ 2,050,187 CE6EZ 1,819,048 FR5DX 1,782,066</p> <p>21 MHz</p> <p>ZX9A 2,548,650 ZP0Y 2,133,068</p> <p>28 MHz</p> <p>Z21HQ 1,118,611 V47TV 857,934 Z21BL 844,074 J43A 444,288 LU2NI 435,666 ZY5IO 420,243</p> <p>21 MHz</p> <p>LU1ICX 461,590 IT9RYJ 448,392 VU2BIX 424,074 KC1SJ 398,025 I5NSR 390,136 JQ1QET/JD1 373,255</p> <p>14 MHz</p> <p>VU2PTT 272,251 EA6AAX 267,910 EA3GFT 195,534 JH0BD 140,239 5N0RJM 127,335 JE2UFF 121,155</p>	<p>7 MHz</p> <p>HA9BVK 139,664 N1XZ 27,455 JA0UMV 23,680 JA1LZR 21,488 OK1PFJ 13,780 JJ6DGP 7,889</p> <p>3.8 MHz</p> <p>LZ1DM 47,872 YO3RU 41,160 OK3YCL 24,300 HJ6RXI 22,600 F6BVB 16,618 OK2HI 11,750</p> <p>1.8 MHz</p> <p>OZ3SK 19,198 OK3IQ 15,660 CT1AOZ 10,816 Y21XC 5,600 RV9WG 4,784 PA0ZH 3,626</p>	<p>ASSISTED</p> <p>N4RJ 4,005,762 K1ZM 3,978,942 IR8A 2,738,757 K3WW 2,610,960 KC1XX 2,555,944 N4WW 2,507,618 W1RR 2,432,073</p> <p>MULTI-OPERATOR SINGLE TRANSMITTER</p> <p>PJ1B 21,214,809 P40T 18,997,200 8P9Z 15,929,221 PJ7A 13,368,655 IQ4A 12,424,195 KH2S 11,095,392</p> <p>MULTI-OPERATOR MULTI-TRANSMITTER</p> <p>VP9AD 28,086,030 KH0AM 25,084,536 ZA0RS 18,877,416 Y21XF 18,747,378 IZ3A 17,660,068 HG73DX 15,959,514</p>
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USA

<p>SINGLE OPERATOR HIGH POWER All Band</p> <p>K1AR 5,345,352 KM1H 4,371,147 K4XS 4,319,712 WM5G 4,138,726 K3CO 3,760,306 K3ZO 3,271,950 N6BV/1 3,091,624 W3BGN 2,785,068 W9RE 2,758,161 W1PH 2,481,744</p> <p>28 MHz</p> <p>NR5M 473,796 W0UN 450,282 K1NG 415,472 KT4W 378,840 KE5FI 356,372 K5MR 332,210</p>	<p>21 MHz</p> <p>K3RV/4 844,482 KW8N 548,973 WB9Z 541,818 WC6H 499,212 NX1P 457,864 KK9A 443,220</p> <p>14 MHz</p> <p>KS1L 515,406 KV4P 371,169 KC2X/4 314,560 W8TWA 185,440 W5FO 181,712 K9CAN 175,380</p> <p>7 MHz</p> <p>KC7EM 263,048 KV0Q 194,327 NAZC 108,250</p>	<p>KZ2I 40,326 KD9Q/0 36,864 K5NU 34,356</p> <p>3.8 MHz</p> <p>K1UO 105,609 K8PO/1 90,944 K7EG 80,800 W0CD/8 37,037 KQ3V 29,200 K4JEX 18,407</p> <p>1.8 MHz</p> <p>AB4RU 4,725 AA4MM 2,700 W2FCR 1,600 KC4YM 432 K4TEA 420 KM5R 182</p> <p>LOW POWER All Band</p> <p>K7RI 1,286,946</p>	<p>K5RX 993,806 KX5Z 842,898 KG1D 769,880 W3UJ 603,630 K6XV 591,426 W3KXR 504,839 KD5GD 487,602 KB3TS 432,398 WM2D 422,712</p> <p>28 MHz</p> <p>W0LSD 161,868 K2MFY 139,997 WB5CRG 111,875 KC4TIR 88,288 WB6MBF 83,754 W6EUF 81,290</p> <p>21 MHz</p> <p>KC1SJ 398,025 N15M 132,928 N7PO 119,952 KE2JO/4 105,564</p>	<p>WA4APM 104,520 KA1GTR 101,598</p> <p>14 MHz</p> <p>N4IJ 71,424 WB8ORV 28,428 N3FTI 7,301</p> <p>7 MHz</p> <p>N1XZ 27,455 WA6WPG 5,220 W6YVK 2,392</p> <p>3.8 MHz</p> <p>N7RM 1,265 WB0YWO 160</p> <p>1.8 MHz</p> <p>KR9G 390</p> <p>ASSISTED</p> <p>N4RJ 4,005,762 K1ZM 3,978,942</p>	<p>K3WW 2,610,960 KC1XX 2,555,944 N4WW 2,507,618 W1RR 2,432,073</p> <p>MULTI-OPERATOR SINGLE TRANSMITTER</p> <p>K3LR 5,512,429 K1YR 4,792,752 N3RS 4,572,087 W6QHS 4,239,284 AA6TT/0 4,111,440 K5NA/2 4,062,062</p> <p>MULTI-OPERATOR MULTI-TRANSMITTER</p> <p>N2RM 12,888,500 W3LPL 12,409,592 K1ST 10,204,000 W7XR 9,818,865 K2TR 8,606,163 N5AU 8,042,232</p>
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EUROPE

<p>SINGLE OPERATOR HIGH POWER All Band</p> <p>ZB2X 7,128,646 GW4BLE 4,446,585 IR6L 3,167,322 YT1BB 3,436,884 EA7BA 2,419,533 DJ4PT 2,281,644 F6HLC 2,114,820 OH8LQ 1,814,540 GM0ECO 1,775,520 UT4UX 1,760,150</p> <p>28 MHz</p> <p>CQ4A 1,203,924 IT9A 801,220 Y29A 493,812 IT9S 457,424 UB5IJG 426,387 RB5VK 408,946</p>	<p>TM1K 663,217 OH5TS 636,976 EA6FO 599,454 YU7AV 586,710</p> <p>14 MHz</p> <p>LZ5W 994,240 SM2EKM 948,117 TF3CW 822,300 HA4XX 713,241 YT3E 658,068 UA6LQ 542,325</p> <p>7 MHz</p> <p>G3NLY 393,908 OH2AQ 219,312 IN3ZNR 192,076 4N4A 153,640 RB5ISP 131,098 OZ1FTE 125,424</p> <p>3.8 MHz</p> <p>GW4OFQ 183,590 Y21CW 162,450 DL3LAB 122,194</p>	<p>ES5RY 116,958 YU3XU 97,020 OH6RM 86,390</p> <p>1.8 MHz</p> <p>IV3PRK 28,864 EA3ALD 18,961 RY7D 17,500 OK1JDX 13,230 UC2IEF 10,948 F6AML 10,350</p> <p>LOW POWER All Band</p> <p>LY3BX 2,107,140 EA3BK1 1,121,324 EA3CWK 990,318 EA7FTR 745,032 Y48PJ 712,194 EA3GBU 605,440 EA3GCJ 586,845 HA3RD 574,560 SM3SGP 570,372 G4XKR 516,975</p>	<p>J43A 440,700 EA7ARK 204,074 IT9HBT 196,647 UA3ZIU 137,888 SL5AB 131,313 UA6BPM 120,879</p> <p>21 MHz</p> <p>IT9RYJ 448,392 I5NSR 390,136 YT3SW 316,233 EA4DX 205,280 EA1EVQ 90,200 UA3DJY 68,700</p> <p>14 MHz</p> <p>EA6AAX 267,910 EA3GFT 195,534 EA3AAY 110,288 EA3GCT 95,920 LX1SG 83,646 RB5EG 83,210</p>	<p>HA9BVK 139,664 OK1PFJ 13,780 Y67RL 3,440 UA3D/UB3LB 2,856</p> <p>3.8 MHz</p> <p>LZ1DM 47,872 OK3YCL 24,300 F6BVB 16,610 YO3RU 13,008 OK2HI 11,750 EA3EGB 8,160</p> <p>1.8 MHz</p> <p>OZ3SK 19,198 OK3IQ 15,660 CT1AOZ 10,816 UW3AT 2,489 G3BDQ 2,128 SP3GUG 1,392</p> <p>ASSISTED</p> <p>IR8A 2,719,656</p>	<p>UT2L 1,768,947 ON4UN 1,512,252 DJ2YA 1,478,556 F6AOJ 1,320,170 DF3CB 1,254,396</p> <p>MULTI-OPERATOR SINGLE TRANSMITTER</p> <p>IQ4A 12,424,195 RY1U 9,987,465 LZ9A 8,864,650 FV7A 7,564,217 TO7C 7,076,538 GW8GT 6,564,178</p> <p>MULTI-OPERATOR MULTI-TRANSMITTER</p> <p>ZA0RS 18,877,416 IZ3A 17,660,068 HG73DX 15,959,514 UR5M 12,567,996 G0KPW 12,139,792 R6L 10,660,857</p>
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**WORLD TOP 10 QRPP
All Band**

1. 4M1G	1,887,968	6. WA2UUK	316,608
2. ZX5A	1,870,748	7. WM4ZZ/5	270,663
3. UA3DQH	450,822	8. JA6VZB	267,729
4. TO1W	439,872	9. N4VYZ	248,005
5. G4BUE	341,130	10. IK1GKE	236,062

TEAM CONTESTING

1. Frankford Radio Club, **27,428,170**. By J82A (K3IPK), V47KP, P40W (W2GD), K3OO, and N2LT.

Number groups after call letters denote following: Band (A = all), Final Score, Number of QSOs, Zones, and Countries. An asterisk before a call indicates low power. Certificate winners are listed in boldface. (Also note that the use of the term "USSR" in these results reflects the DXCC list at the time of the 1991 contest. The 1992 contest and results will reflect the political changes since that time.)

**SSB RESULTS
SINGLE OPERATOR
NORTH AMERICA**

UNITED STATES

K1AR	A	5,345,352	2740	153	525
KM1H		4,371,147	2560	150	509
(Opr. KD2M)					
N6BV/1		3,091,624	2018	136	432
W1PH		2,481,744	1482	141	455
K5MA/1		1,376,646	1057	120	359
W1NG		1,145,564	856	124	378
W1BR		1,054,235	853	115	340
W100		1,034,520	832	113	311
WS1Y		841,960	953	96	292
W1KRS		647,021	544	97	270
N1HO0		547,150	558	78	232
K1JB		546,174	803	87	255
W1WEF		503,248	542	96	255
AA2Z/1		501,552	558	88	236
WB1AEL		490,224	555	90	246
NR1R		479,899	495	105	278
W1OP		455,213	548	101	218
(Opr. K1PLX)					
K2TE		448,245	527	83	232
KA1DWX		419,442	511	86	232
W1MK		243,648	336	76	206
AB1U		209,620	355	64	159
W01F		199,920	325	75	165
K1K1		174,324	322	71	148
N4XR		87,989	167	68	141
K1JBS		75,752	176	50	106
K01F		70,392	163	55	113
N1HRA		55,168	232	40	88
NF1J		45,217	148	34	79
NF1V		45,024	138	44	90
W1FV		14,904	78	20	49
K1NG	28	415,472	824	33	151
(Opr. K1G1)					
K1KVO		159,286	407	31	115
NY1L		158,286	424	30	108
WS1M		124,388	416	29	92
K51J		107,573	307	30	99
KA1CB		97,896	252	34	108
K1VWL		82,540	274	29	87
N1FUS		28,008	154	20	54
KA1SZP		7,599	71	16	35
W1XS	21	186,956	459	34	120
AA1M		13,199	77	19	48
K1V5J		7,840	63	16	33
K51L	14	515,406	998	38	148
K100	3.8	106,609	406	26	81
KBP0/1		90,944	387	21	77
*KG1D		769,880	746	104	276
*NG1J		275,528	418	68	180
*W1FM		256,522	394	66	185
*K1CLN					
/1		197,169	323	60	169
*KA1WIF		115,244	240	52	136
*W1TSJ		43,125	136	41	84
*K1DE		41,760	138	30	86
*W01T		40,825	140	34	81
*W01N		32,832	113	42	72
*KAGS1G					
/1		27,246	93	36	78
*KA1UKR		22,356	83	33	75
*AIKZ		12,551	61	22	55
*K2MA		7,257	46	23	56
*KA1SP0	28	54,366	226	27	75

*KA1RLI		48,886	191	24	73
*WU1X		25,842	141	20	55
*N1HKV		25,478	144	22	56
*KA1RRX		17,688	104	17	50
*N1IBQ		16,256	97	19	45
*N1JFO		10,382	70	16	42
*KA1SVV		9,900	64	17	36
*KA1PRD		6,885	55	15	36
*KJAK3		800	15	12	13
*KC1SJ	21	398,025	796	37	146
*KA1GTR		101,598	311	24	94
*KC1SS		67,218	248	22	85
*WA4RNN		26,064	137	18	54
*N1XZ	7	27,455	108	27	68

WJ3GN		2,785,068	1728	139	433
K3TEJ		782,261	820	92	267
K311		749,547	713	101	290
K3ZNV		636,341	626	102	277
W30V		558,963	578	38	251
K4LLD		528,865	545	137	254
K3NZ		452,640	490	94	251
W3GRF		310,168	419	91	202
W3FM		309,948	424	79	197
N3RW		290,532	290	102	239
N3RW		288,312	377	84	209
W3BCKW		266,700	386	55	189
WA3MKB		258,156	379	77	191
K3CP		219,750	340	38	182
W3GNO		210,150	348	51	164
W3KW		204,363	328	74	169
W3NTD		158,046	301	52	151
W3COW		134,316	289	53	129
W3KW		101,520	178	50	120
N3IXR		79,218	201	50	13
A13E		50,400	130	45	99
KA3AVB		44,496	164	51	93
NM3K		15,054	78	29	49

AB4RU	1.8	4,725	221	11	24
AA4MM		2,700	103	10	20
KC4YM		432	15	5	11
K4TEA		420	13	5	9
*N4YKD	A	298,826	395	80	209
*AA4LR		239,344	424	77	178
*AB410		275,000	404	82	193
*WB4UDD		272,195	399	71	174
*K4BFME		245,618	374	72	182
*K4XG		240,240	326	86	194
*W3BLA		215,025	359	71	164
*K4FRV		180,831	297	62	168
*K4WFD		169,947	353	62	145
*W3GU		139,936	268	61	130
*KA2CDJ					
/4		119,064	186	89	157
*K4CLH		87,101	218	49	112
*W4WJ		72,270	175	57	108
*AC4HF		65,052	168	39	117
*K8LUX/4		55,744	154	50	84

*W4GTS		47,730	110	46	83
*W4LMJ		37,416	113	44	79
*N4V0		36,733	127	39	70
*NK51/4		32,058	120	42	75
*K4C4EO		17,424	91	34	54
*K4C4FR		14,839	96	30	41
*K0410		11,189	65	28	33
*K04G		10,309	62	24	37
*W4UYC		7,083	52	29	30
*K4KUZ		2,666	23	20	23
*W43DTI					
/4		1,870	24	15	19
*K4T1R	28	88,288	251	30	94
*WB4HFL		45,504	210	25	71
*K84YJG		42,532	168	28	70
*K4C4BY		27,839	120	28	69
*N2DEM/4		26,040	130	27	66
*W4DCNZ		19,327	120	23	54
*W9CNF					
/M4		11,773	76	22	39
*K4URW		9,384	77	18	33
*K2J0/4	21	105,564	339	24	90
*K4FFF		35,328	139	23	73
*AA4NP		31,570	140	23	59
*N4J	14	71,424	232	37	91

W3E3C	28	222,159	619	31	118
KA3JHJ		25,440	142	24	56
W3GN		448	10	7	9
N3A0E	21	144,170	403	29	101
W9XR/3		88,330	271	27	94
W3EAN	14	13,130	83	16	49
K03V	3.8	29,290	187	16	55
K07V		7,650	62	13	38
*W3UJ	A	603,630	633	93	260
*W3KXR		504,839	635	71	222
*W3BTS		432,398	529	83	215
*W3GK		229,500	349	71	179
*K03CN		117,540	235	47	133
*K0JX		112,763	245	60	121
*W3GM		111,936	237	56	120
*W301R		89,640	210	47	119
*W3EE		62,752	167	46	102
*W3JN		40,320	120	47	79
*KA3YRG		20,274	91	33	60
*NK3CJ		19,665	89	34	61
*K3CAG		19,594	165	52	94
*N3GPU	28	56,661	218	27	74
*W3CPB		12,935	86	18	47
*W3B1M		10,974	85	19	40
*K3AB		3,854	39	14	27
*W3KWH		3,484	56	13	25

W5CG		844,076	1015	99	257
K5FVU		841,448	758	116	312
AA5W0		495,066	676	79	207
K9MK		460,018	515	106	232
W5ASP		342,866	908	79	172
K6SSV		340,860	455	82	178
NJ1V/5		316,680	520	75	157
K5UA		306,391	418	80	189
AA5BC		183,992	325	69	149
W5D1K		138,180	272	70	126
K15G		113,928	237	62	126
N5TCD		24,252	120	38	56
K5NV		20,175	74	41	63
KCSWA		17,496	101	21	51
AA5HI		4,148	65	27	44
N5RM</					

<table border="1"> <tr><td>J1AVH</td><td>63,632</td><td>251</td><td>29</td><td>68</td><td>*J2NNF</td><td>89,948</td><td>303</td><td>32</td><td>81</td></tr> <tr><td>7L16V</td><td>21</td><td>1,210,140</td><td>2365</td><td>39</td><td>141</td><td>JGKIV</td><td>A</td><td>85,100</td><td>208</td><td>56</td><td>100</td></tr> <tr><td>J1KVT</td><td>212,979</td><td>605</td><td>33</td><td>94</td><td>J3JFD</td><td>28</td><td>17,420</td><td>98</td><td>23</td><td>42</td></tr> <tr><td>J1KFN</td><td>288</td><td>18</td><td>8</td><td>8</td><td>J3RIR</td><td>21</td><td>90,783</td><td>327</td><td>32</td><td>67</td></tr> <tr><td>J10X</td><td>14</td><td>512,139</td><td>1144</td><td>37</td><td>122</td><td>J3UWZ</td><td>21</td><td>67,050</td><td>282</td><td>28</td><td>62</td></tr> <tr><td>J1GZB</td><td>14,465</td><td>99</td><td>21</td><td>34</td><td>J3FZJ</td><td>21</td><td>11,880</td><td>100</td><td>19</td><td>25</td></tr> <tr><td>J1K1FI</td><td>7</td><td>10,196</td><td>83</td><td>10</td><td>33</td><td>J3BNU</td><td>7</td><td>6,862</td><td>71</td><td>14</td><td>33</td></tr> <tr><td>*J1SEK</td><td>A</td><td>1,966,968</td><td>1707</td><td>124</td><td>284</td><td>J3SSW</td><td>7</td><td>25,949</td><td>142</td><td>25</td><td>53</td></tr> <tr><td>*J1BWM</td><td></td><td></td><td></td><td></td><td></td><td>*J3HPO</td><td>A</td><td>80,784</td><td>212</td><td>59</td><td>85</td></tr> <tr><td>/J</td><td></td><td></td><td></td><td></td><td></td><td>*J3JOT</td><td></td><td>48,412</td><td>190</td><td>38</td><td>63</td></tr> <tr><td>*J1TAR</td><td></td><td>678,680</td><td>1020</td><td>77</td><td>158</td><td>*J3HAK</td><td></td><td>14,475</td><td>93</td><td>26</td><td>42</td></tr> <tr><td>*J1VCY</td><td></td><td>295,728</td><td>548</td><td>74</td><td>128</td><td>*J3ACI</td><td></td><td>8,840</td><td>62</td><td>22</td><td>30</td></tr> <tr><td>*J1MVI</td><td></td><td>245,686</td><td>460</td><td>89</td><td>129</td><td>*J33VU</td><td></td><td>8,190</td><td>46</td><td>28</td><td>35</td></tr> <tr><td>*J1BMS</td><td></td><td>235,500</td><td>550</td><td>53</td><td>104</td><td>*J3XOG</td><td>28</td><td>230,822</td><td>633</td><td>34</td><td>97</td></tr> <tr><td>/1</td><td></td><td></td><td></td><td></td><td></td><td>*J3ALD</td><td></td><td>79,243</td><td>298</td><td>26</td><td>71</td></tr> <tr><td>*J1WYD</td><td></td><td>186,470</td><td>453</td><td>54</td><td>91</td><td>*J3ACE</td><td></td><td>20,453</td><td>71</td><td>35</td><td>71</td></tr> <tr><td>*J1BLI</td><td></td><td>181,861</td><td>317</td><td>87</td><td>134</td><td>*J3K3U</td><td></td><td>984</td><td>31</td><td>11</td><td>13</td></tr> <tr><td>*J1SRG</td><td></td><td>172,956</td><td>379</td><td>63</td><td>111</td><td>*J3WYD</td><td>21</td><td>78,764</td><td>310</td><td>28</td><td>69</td></tr> <tr><td>*J1OYN</td><td></td><td>157,569</td><td>3650</td><td>57</td><td>102</td><td>*J3C3A</td><td></td><td>16,492</td><td>110</td><td>22</td><td>35</td></tr> <tr><td>*J1KLS</td><td></td><td>138,400</td><td>342</td><td>65</td><td>95</td><td>*J3TBT</td><td></td><td>5,421</td><td>97</td><td>24</td><td>45</td></tr> <tr><td>*J1HJC</td><td></td><td>102,512</td><td>244</td><td>64</td><td>108</td><td>*J3RKA</td><td></td><td>1,740</td><td>28</td><td>11</td><td>18</td></tr> <tr><td>*J1HJC</td><td></td><td>87,348</td><td>198</td><td>73</td><td>101</td><td>*J3MXP</td><td></td><td>1,073</td><td>21</td><td>10</td><td>12</td></tr> <tr><td>*J1AEG</td><td></td><td>64,134</td><td>197</td><td>54</td><td>72</td><td>J4VVM</td><td>A</td><td>2,495,983</td><td>2181</td><td>124</td><td>295</td></tr> <tr><td>*J1RMG</td><td></td><td>64,042</td><td>199</td><td>60</td><td>82</td><td>J4AQR</td><td>28</td><td>38,612</td><td>146</td><td>38</td><td>60</td></tr> <tr><td>*J1PJL</td><td></td><td>63,662</td><td>206</td><td>53</td><td>86</td><td>J4JJI</td><td>21</td><td>1,760</td><td>30</td><td>9</td><td>13</td></tr> <tr><td>*J1QNT</td><td></td><td>57,946</td><td>395</td><td>60</td><td>81</td><td>J4GAK</td><td>14</td><td>497,670</td><td>1084</td><td>38</td><td>121</td></tr> <tr><td>*J1WYQ</td><td></td><td>50,193</td><td>131</td><td>57</td><td>86</td><td>J44PA</td><td></td><td>153,860</td><td>77</td><td>24</td><td>36</td></tr> <tr><td>*J1ZFY</td><td></td><td></td><td></td><td></td><td></td><td>*J44AA</td><td>A</td><td>44,340</td><td>149</td><td>47</td><td>83</td></tr> <tr><td>/1</td><td></td><td></td><td></td><td></td><td></td><td>*J44QA</td><td></td><td>19,872</td><td>80</td><td>56</td><td>56</td></tr> <tr><td>*J1BND</td><td></td><td>45,313</td><td>164</td><td>44</td><td>69</td><td>*J4DHN</td><td></td><td>10,389</td><td>68</td><td>24</td><td>35</td></tr> <tr><td>/1</td><td></td><td></td><td></td><td></td><td></td><td>*J4XJQ</td><td>28</td><td>162,206</td><td>58</td><td>30</td><td>71</td></tr> <tr><td>*J1M2P</td><td></td><td>32,032</td><td>113</td><td>48</td><td>64</td><td>*J4ETH</td><td></td><td>44,334</td><td>202</td><td>26</td><td>56</td></tr> <tr><td>*J1XCO</td><td></td><td>13,512</td><td>80</td><td>28</td><td>46</td><td>*J4OPW</td><td>21</td><td>63,954</td><td>236</td><td>30</td><td>72</td></tr> <tr><td>/1</td><td></td><td></td><td></td><td></td><td></td><td>*J4RIS</td><td></td><td>228</td><td>7</td><td>6</td><td>6</td></tr> <tr><td>*J1APOS</td><td></td><td>11,448</td><td>65</td><td>35</td><td>37</td><td>*J4C5U</td><td>14</td><td>2,736</td><td>52</td><td>16</td><td>22</td></tr> <tr><td>*J1RHM</td><td></td><td>3,840</td><td>56</td><td>32</td><td>33</td><td>J5FXP</td><td>A</td><td>1,830,630</td><td>1454</td><td>135</td><td>304</td></tr> <tr><td>*J1RDM</td><td></td><td>3,240</td><td>64</td><td>22</td><td>30</td><td>*J5CMV</td><td></td><td>1,186,380</td><td>1268</td><td>105</td><td>233</td></tr> <tr><td>*J1RDL</td><td></td><td>6,688</td><td>80</td><td>34</td><td>46</td><td>J5SIP</td><td>28</td><td>641,235</td><td>1466</td><td>36</td><td>119</td></tr> <tr><td>*J1NLI</td><td></td><td>3,045</td><td>33</td><td>17</td><td>18</td><td>J5DVO</td><td>21</td><td>3,910</td><td>47</td><td>15</td><td>19</td></tr> <tr><td>*J1KBI</td><td>28</td><td>95,200</td><td>353</td><td>30</td><td>70</td><td>J5APU</td><td>14</td><td>64,860</td><td>260</td><td>29</td><td>63</td></tr> <tr><td>*J1JHN</td><td></td><td>82,344</td><td>313</td><td>29</td><td>65</td><td>J5AAF</td><td></td><td>1,248</td><td>11</td><td>11</td><td>15</td></tr> <tr><td>*J1EMQ</td><td></td><td>51,350</td><td>239</td><td>27</td><td>52</td><td>*J5CZY</td><td>A</td><td>45,760</td><td>182</td><td>45</td><td>65</td></tr> <tr><td>*J1AUD</td><td></td><td>39,818</td><td>169</td><td>30</td><td>56</td><td>*J5FAH</td><td>28</td><td>1,254</td><td>26</td><td>9</td><td>10</td></tr> <tr><td>*J1AAT</td><td></td><td>19,440</td><td>93</td><td>26</td><td>55</td><td>*J5HCU</td><td>21</td><td>118,320</td><td>383</td><td>35</td><td>81</td></tr> <tr><td>*J1AFC</td><td></td><td>15,240</td><td>98</td><td>19</td><td>41</td><td>*J5JEU</td><td></td><td>2,700</td><td>32</td><td>13</td><td>17</td></tr> <tr><td>*J1CML</td><td></td><td>11,700</td><td>267</td><td>32</td><td>60</td><td>J6GWW</td><td>A</td><td>9,570</td><td>53</td><td>22</td><td>36</td></tr> <tr><td>*J1EJW</td><td></td><td>9,900</td><td>73</td><td>25</td><td>30</td><td>J6JTH</td><td>21</td><td>16,874</td><td>114</td><td>21</td><td>38</td></tr> <tr><td>*J1GTT</td><td></td><td>9,576</td><td>63</td><td>25</td><td>33</td><td>*J6SEB</td><td></td><td>2,937</td><td>37</td><td>12</td><td>21</td></tr> <tr><td>*J1HBS</td><td></td><td>5,699</td><td>52</td><td>16</td><td>23</td><td>*J6MCM</td><td>A</td><td>123,975</td><td>278</td><td>56</td><td>115</td></tr> <tr><td>*J1HNU</td><td></td><td>1,554</td><td>28</td><td>10</td><td>11</td><td>*J6ARK</td><td></td><td>40,112</td><td>140</td><td>41</td><td>68</td></tr> <tr><td>*J1IWW</td><td></td><td>1,196</td><td>18</td><td>11</td><td>15</td><td>*J6UVY</td><td></td><td>36,771</td><td>136</td><td>51</td><td>52</td></tr> <tr><td>*J1ICV</td><td></td><td>350</td><td>11</td><td>7</td><td>7</td><td>*J6GCV</td><td></td><td>17,290</td><td>97</td><td>26</td><td>44</td></tr> <tr><td>*J1SVO</td><td></td><td>242</td><td>8</td><td>5</td><td>6</td><td>*J6GDU</td><td>28</td><td>22,685</td><td>127</td><td>23</td><td>42</td></tr> <tr><td>*J1VOC</td><td>21</td><td>174,342</td><td>641</td><td>30</td><td>68</td><td>*J6GFX</td><td>21</td><td>1,104</td><td>21</td><td>7</td><td>17</td></tr> <tr><td>*J1DOD</td><td></td><td>114,684</td><td>353</td><td>34</td><td>80</td><td>*J6MGO</td><td></td><td>656</td><td>5</td><td>7</td><td>9</td></tr> <tr><td>*J1EBC</td><td></td><td>76,712</td><td>319</td><td>29</td><td>57</td><td>*J6VGB</td><td></td><td>6</td><td>1</td><td>1</td><td>1</td></tr> <tr><td>*J1TWZ</td><td></td><td>76,277</td><td>350</td><td>27</td><td>56</td><td>*J6GPK</td><td>7</td><td>7,889</td><td>65</td><td>20</td><td>29</td></tr> <tr><td>*J1JCD</td><td></td><td>39,887</td><td>198</td><td>25</td><td>52</td><td>*J6DNO</td><td>28</td><td>348,601</td><td>1087</td><td>34</td><td>87</td></tr> <tr><td>*J1OXJ</td><td></td><td>25,194</td><td>119</td><td>29</td><td>49</td><td>J7BNE</td><td>21</td><td>312,064</td><td>883</td><td>34</td><td>94</td></tr> <tr><td>*J1MFM</td><td></td><td>14,688</td><td>113</td><td>21</td><td>33</td><td>*J7K1I</td><td></td><td>45,135</td><td>196</td><td>28</td><td>57</td></tr> <tr><td>*J1RUL</td><td></td><td>6,296</td><td>68</td><td>12</td><td>29</td><td>*J7XN</td><td>14</td><td>325,431</td><td>745</td><td>38</td><td>115</td></tr> <tr><td>*J1RLL</td><td></td><td>2,805</td><td>43</td><td>12</td><td>23</td><td>*J7QXJ</td><td></td><td>168,363</td><td>520</td><td>31</td><td>85</td></tr> <tr><td>*J1LIR</td><td></td><td>2,805</td><td>43</td><td>13</td><td>20</td><td>*J7ZAO</td><td>A</td><td>578,200</td><td>770</td><td>99</td><td>196</td></tr> <tr><td>*J1ACZ</td><td></td><td>1,474</td><td>27</td><td>7</td><td>15</td><td>*J7L0L</td><td></td><td>133,041</td><td>285</td><td>71</td><td>112</td></tr> <tr><td>*J1TLE</td><td></td><td>1,472</td><td>32</td><td>10</td><td>13</td><td>*J7ASO</td><td></td><td>25,608</td><td>99</td><td>55</td><td>53</td></tr> <tr><td>*J1PFA</td><td></td><td>1,440</td><td>24</td><td>9</td><td>11</td><td>*J7ATM</td><td></td><td>17,940</td><td>109</td><td>30</td><td>64</td></tr> <tr><td>*J1RWE</td><td></td><td>135</td><td>11</td><td>4</td><td>5</td><td>*J7A5K</td><td>28</td><td>87,169</td><td>330</td><td>32</td><td>60</td></tr> <tr><td>*J1MCT</td><td>14</td><td>24,928</td><td>121</td><td>30</td><td>52</td><td>*J7CPW</td><td></td><td>27,919</td><td>165</td><td>23</td><td>43</td></tr> <tr><td>*J1RMC</td><td></td><td>7,540</td><td>59</td><td>19</td><td>33</td><td>*J7R7L</td><td></td><td>17,342</td><td>117</td><td>23</td><td>55</td></tr> <tr><td>*J1AIT</td><td></td><td>5,886</td><td>50</td><td>15</td><td>28</td><td>*J7NVN</td><td></td><td>9,504</td><td>87</td><td>18</td><td>26</td></tr> <tr><td>*J1D1N</td><td></td><td>566</td><td>24</td><td>10</td><td>11</td><td>*J7AXP</td><td></td><td>3,570</td><td>38</td><td>15</td><td>20</td></tr> <tr><td>*J1ALZ</td><td>7</td><td>21,488</td><td>148</td><td>27</td><td>55</td><td>*J7ARW</td><td></td><td>2,613</td><td>26</td><td>14</td><td>19</td></tr> <tr><td>*J2N00</td><td>A</td><td>59,898</td><td>153</td><td>60</td><td>89</td><td>*J7LJG</td><td>21</td><td>245,369</td><td>719</td><td>32</td><td>91</td></tr> <tr><td>J2CREJ</td><td></td><td>5,593</td><td>51</td><td>20</td><td>27</td><td>*J7S5D</td><td></td><td>175,835</td><td>580</td><td>33</td><td>82</td></tr> <tr><td>J2DYK</td><td></td><td>4,592</td><td>51</td><td>16</td><td>30</td><td>*J7ZOT</td><td></td><td>99,085</td><td>368</td><td>30</td><td>71</td></tr> <tr><td>J2AYJ</td><td></td><td>640</td><td>19</td><td>10</td><td>10</td><td>*J7JH</td><td>14</td><td>67,536</td><td>183</td><td>37</td><td>97</td></tr> <tr><td>J2MYN</td><td>28</td><td>185,334</td><td>632</td><td>32</td><td>70</td><td>*J7JED</td><td></td><td>12,160</td><td>73</td><td>24</td><td>40</td></tr> <tr><td>J2BNN</td><td>21</td><td>266,340</td><td>833</td><td>35</td><td>80</td><td>*J7XAY</td><td>3.8</td><td>234</td><td>11</td><td>6</td><td>7</td></tr> <tr><td>J2BVI</td><td>14</td><td>104,832</td><td>329</td><td>32</td><td>80</td><td>J8B80</td><td>A</td><td>40,341</td><td>149</td><td>50</td><td>69</td></tr> <tr><td>J2KCN</td><td></td><td>68,670</td><td>248</td><td>31</td><td>74</td><td>J8G9Y</td><td>21</td><td>909,880</td><td>1829</td><td>38</td><td>134</td></tr> <tr><td>J23DC</td><td></td><td>6,650</td><td>52</td><td>21</td><td>29</td><td>J8IXM</td><td>7</td><td>264,960</td><td>747</td><td>37</td><td>101</td></tr> <tr><td>J2A8Y</td><td>7</td><td>210,276</td><td>628</td><td>32</td><td>86</td><td>J8NFV</td><td>3.8</td><td>17,187</td><td>142</td><td>20</td><td>31</td></tr> <tr><td>J2URF</td><td></td><td>2,604</td><td>28</td><td>17</td><td>25</td><td>*J8CLU</td><td>28</td><td>298,186</td><td>839</td><td>35</td><td>98</td></tr> <tr><td>J2VJK</td><td>3.8</td><td>10,176</td><td>100</td><td>18</td><td>30</td><td>*J01DF</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>J2HFD</td><td></td><td>7,636</td><td>76</td><td>17</td><td>29</td><td>*J02G</td><td>/8</td><td>142,974</td><td>456</td><td>32</td><td>85</td></tr> <tr><td>*J2AXB</td><td>A</td><td>551,232</td><td>748</td><td>91</td><td>173</td><td>J8BRJ</td><td></td><td>99,322</td><td>355</td><td>32</td><td>74</td></tr> <tr><td>*J2AZO</td><td></td><td>123,084</td><td>291</td><td>51</td><td>105</td><td>*J8R0J</td><td></td><td>33,200</td><td>154</td><td>25</td><td>55</td></tr> <tr><td>*J2ESR</td><td></td><td>102,277</td><td>274</td><td>50</td><td>83</td><td>*J8H0V</td><td>14</td><td>37,372</td><td>337</td><td>27</td><td>56</td></tr> <tr><td>*J2WHS</td><td></td><td>84,109</td><td>261</td><td>48</td><td>79</td><td>*J8L8X</td><td>21</td><td>38,984</td><td>156</td><td>30</td><td>58</td></tr> <tr><td>*J2ZDN</td><td></td><td>68,600</td><td>190</td><td>47</td><td>93</td><td>J8K0K</td><td>A</td><td>216,256</td><td>383</td><td>77</td><td>141</td></tr> <tr><td>*J2BEY</td><td></td><td>46,719</td><td>143</td><td>55</td><td>66</td><td>J8CCG</td><td>21</td><td>106,536</td><td>402</td><td>29</td><td>63</td></tr> <tr><td>*J2MWH</td><td></td><td>12,320</td><td>80</td><td>3</td><td>39</td><td>*J8YAV</td><td>A</td><td>551,244</td><td>630</td><td>101</td><td>183</td></tr> <tr><td>*J2AMD</td><td></td><td>3,360</td><td>36</td><td>15</td><td>25</td><td>(Opr. J89-3817)</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>*J2LTH</td><td></td><td>368</td><td>12</td><td>9</td><td>7</td><td>*J8GHC</td><td></td><td>30,797</td><td>113</td><td>42</td><td>61</td></tr> <tr><td>*J2GHP</td><td></td><td>357</td><td>9</td><td>6</td><td>7</td><td>*J8XAT</td><td>28</td><td>560</td><td>15</td><td>8</td><td>8</td></tr> <tr><td>*J2IFM</td><td>28</td><td>123,200</td><td>408</td><td>33</td><td>79</td><td>*J8KVF</td><td>21</td><td>114,450</td><td>387</td><td>31</td><td>78</td></tr> <tr><td>*J2JNU</td><td></td><td>11,408</td><td>95</td><td>17</td><td>30</td><td>*J8IKL</td><td></td><td>2,496</td><td>40</td><td>4</td><td>18</td></tr> <tr><td>*J2HFK</td><td></td><td></td><td></td><td></td><td></td><td>*J8JCA</td><td>7</td><td>1,428</td><td>41</td><td>1</td><td>13</td></tr> <tr><td>/2</td><td></td><td></td><td></td><td></td><td></td><td>J8DMV</td><td>A</td><td>94,430</td><td>196</td><td>75</td><td>115</td></tr> <tr><td>*J2KUU</td><td></td><td>10,366</td><td>53</td><td>26</td><td>47</td><td>*J8Z7A</td><td></td><td>135</td><td>7</td><td>3</td><td>6</td></tr> <tr><td>*J2XTV</td><td></td><td>6,765</td><td>25</td><td>16</td><td>17</td><td>J8JHA</td><td>21</td><td>1,109,867</td><td>2348</td><td>38</td><td>125</td></tr> <tr><td>*J2QCC</td><td>21</td><td>83,712</td><td>313</td><td>30</td><td>66</td><td>J8ZHO</td><td></td><td>230,265</td><td>785</td><td>32</td><td>73</td></tr> <tr><td>*J2IGV</td><td></td><td>30,464</td><td>184</td><td>24</td><td>44</td><td>(Opr. J115BE)</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>*J2QNH</td><td></td><td>14,064</td><td>102</td><td>21</td><td>27</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>*J2PXB</td><td></td><td>8,820</td><td>78</td><td>2</td><td>28</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>*J2DWR</td><td></td><td>2,790</td><td>38</td><td>14</td><td>17</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>*J2I7A</td><td></td><td>2,760</td><td>30</td><td>14</td><td>16</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>*J2BHI</td><td></td><td>1,127</td><td>21</td><td>10</td><td>13</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>*J2QNG</td><td></td><td>768</td><td>32</td><td>4</td><td>4</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>*J2UFF</td><td>14</td><td>121,155</td><td>364</td><td>34</td><td>89</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>										J1AVH	63,632	251	29	68	*J2NNF	89,948	303	32	81	7L16V	21	1,210,140	2365	39	141	JGKIV	A	85,100	208	56	100	J1KVT	212,979	605	33	94	J3JFD	28	17,420	98	23	42	J1KFN	288	18	8	8	J3RIR	21	90,783	327	32	67	J10X	14	512,139	1144	37	122	J3UWZ	21	67,050	282	28	62	J1GZB	14,465	99	21	34	J3FZJ	21	11,880	100	19	25	J1K1FI	7	10,196	83	10	33	J3BNU	7	6,862	71	14	33	*J1SEK	A	1,966,968	1707	124	284	J3SSW	7	25,949	142	25	53	*J1BWM						*J3HPO	A	80,784	212	59	85	/J						*J3JOT		48,412	190	38	63	*J1TAR		678,680	1020	77	158	*J3HAK		14,475	93	26	42	*J1VCY		295,728	548	74	128	*J3ACI		8,840	62	22	30	*J1MVI		245,686	460	89	129	*J33VU		8,190	46	28	35	*J1BMS		235,500	550	53	104	*J3XOG	28	230,822	633	34	97	/1						*J3ALD		79,243	298	26	71	*J1WYD		186,470	453	54	91	*J3ACE		20,453	71	35	71	*J1BLI		181,861	317	87	134	*J3K3U		984	31	11	13	*J1SRG		172,956	379	63	111	*J3WYD	21	78,764	310	28	69	*J1OYN		157,569	3650	57	102	*J3C3A		16,492	110	22	35	*J1KLS		138,400	342	65	95	*J3TBT		5,421	97	24	45	*J1HJC		102,512	244	64	108	*J3RKA		1,740	28	11	18	*J1HJC		87,348	198	73	101	*J3MXP		1,073	21	10	12	*J1AEG		64,134	197	54	72	J4VVM	A	2,495,983	2181	124	295	*J1RMG		64,042	199	60	82	J4AQR	28	38,612	146	38	60	*J1PJL		63,662	206	53	86	J4JJI	21	1,760	30	9	13	*J1QNT		57,946	395	60	81	J4GAK	14	497,670	1084	38	121	*J1WYQ		50,193	131	57	86	J44PA		153,860	77	24	36	*J1ZFY						*J44AA	A	44,340	149	47	83	/1						*J44QA		19,872	80	56	56	*J1BND		45,313	164	44	69	*J4DHN		10,389	68	24	35	/1						*J4XJQ	28	162,206	58	30	71	*J1M2P		32,032	113	48	64	*J4ETH		44,334	202	26	56	*J1XCO		13,512	80	28	46	*J4OPW	21	63,954	236	30	72	/1						*J4RIS		228	7	6	6	*J1APOS		11,448	65	35	37	*J4C5U	14	2,736	52	16	22	*J1RHM		3,840	56	32	33	J5FXP	A	1,830,630	1454	135	304	*J1RDM		3,240	64	22	30	*J5CMV		1,186,380	1268	105	233	*J1RDL		6,688	80	34	46	J5SIP	28	641,235	1466	36	119	*J1NLI		3,045	33	17	18	J5DVO	21	3,910	47	15	19	*J1KBI	28	95,200	353	30	70	J5APU	14	64,860	260	29	63	*J1JHN		82,344	313	29	65	J5AAF		1,248	11	11	15	*J1EMQ		51,350	239	27	52	*J5CZY	A	45,760	182	45	65	*J1AUD		39,818	169	30	56	*J5FAH	28	1,254	26	9	10	*J1AAT		19,440	93	26	55	*J5HCU	21	118,320	383	35	81	*J1AFC		15,240	98	19	41	*J5JEU		2,700	32	13	17	*J1CML		11,700	267	32	60	J6GWW	A	9,570	53	22	36	*J1EJW		9,900	73	25	30	J6JTH	21	16,874	114	21	38	*J1GTT		9,576	63	25	33	*J6SEB		2,937	37	12	21	*J1HBS		5,699	52	16	23	*J6MCM	A	123,975	278	56	115	*J1HNU		1,554	28	10	11	*J6ARK		40,112	140	41	68	*J1IWW		1,196	18	11	15	*J6UVY		36,771	136	51	52	*J1ICV		350	11	7	7	*J6GCV		17,290	97	26	44	*J1SVO		242	8	5	6	*J6GDU	28	22,685	127	23	42	*J1VOC	21	174,342	641	30	68	*J6GFX	21	1,104	21	7	17	*J1DOD		114,684	353	34	80	*J6MGO		656	5	7	9	*J1EBC		76,712	319	29	57	*J6VGB		6	1	1	1	*J1TWZ		76,277	350	27	56	*J6GPK	7	7,889	65	20	29	*J1JCD		39,887	198	25	52	*J6DNO	28	348,601	1087	34	87	*J1OXJ		25,194	119	29	49	J7BNE	21	312,064	883	34	94	*J1MFM		14,688	113	21	33	*J7K1I		45,135	196	28	57	*J1RUL		6,296	68	12	29	*J7XN	14	325,431	745	38	115	*J1RLL		2,805	43	12	23	*J7QXJ		168,363	520	31	85	*J1LIR		2,805	43	13	20	*J7ZAO	A	578,200	770	99	196	*J1ACZ		1,474	27	7	15	*J7L0L		133,041	285	71	112	*J1TLE		1,472	32	10	13	*J7ASO		25,608	99	55	53	*J1PFA		1,440	24	9	11	*J7ATM		17,940	109	30	64	*J1RWE		135	11	4	5	*J7A5K	28	87,169	330	32	60	*J1MCT	14	24,928	121	30	52	*J7CPW		27,919	165	23	43	*J1RMC		7,540	59	19	33	*J7R7L		17,342	117	23	55	*J1AIT		5,886	50	15	28	*J7NVN		9,504	87	18	26	*J1D1N		566	24	10	11	*J7AXP		3,570	38	15	20	*J1ALZ	7	21,488	148	27	55	*J7ARW		2,613	26	14	19	*J2N00	A	59,898	153	60	89	*J7LJG	21	245,369	719	32	91	J2CREJ		5,593	51	20	27	*J7S5D		175,835	580	33	82	J2DYK		4,592	51	16	30	*J7ZOT		99,085	368	30	71	J2AYJ		640	19	10	10	*J7JH	14	67,536	183	37	97	J2MYN	28	185,334	632	32	70	*J7JED		12,160	73	24	40	J2BNN	21	266,340	833	35	80	*J7XAY	3.8	234	11	6	7	J2BVI	14	104,832	329	32	80	J8B80	A	40,341	149	50	69	J2KCN		68,670	248	31	74	J8G9Y	21	909,880	1829	38	134	J23DC		6,650	52	21	29	J8IXM	7	264,960	747	37	101	J2A8Y	7	210,276	628	32	86	J8NFV	3.8	17,187	142	20	31	J2URF		2,604	28	17	25	*J8CLU	28	298,186	839	35	98	J2VJK	3.8	10,176	100	18	30	*J01DF						J2HFD		7,636	76	17	29	*J02G	/8	142,974	456	32	85	*J2AXB	A	551,232	748	91	173	J8BRJ		99,322	355	32	74	*J2AZO		123,084	291	51	105	*J8R0J		33,200	154	25	55	*J2ESR		102,277	274	50	83	*J8H0V	14	37,372	337	27	56	*J2WHS		84,109	261	48	79	*J8L8X	21	38,984	156	30	58	*J2ZDN		68,600	190	47	93	J8K0K	A	216,256	383	77	141	*J2BEY		46,719	143	55	66	J8CCG	21	106,536	402	29	63	*J2MWH		12,320	80	3	39	*J8YAV	A	551,244	630	101	183	*J2AMD		3,360	36	15	25	(Opr. J89-3817)						*J2LTH		368	12	9	7	*J8GHC		30,797	113	42	61	*J2GHP		357	9	6	7	*J8XAT	28	560	15	8	8	*J2IFM	28	123,200	408	33	79	*J8KVF	21	114,450	387	31	78	*J2JNU		11,408	95	17	30	*J8IKL		2,496	40	4	18	*J2HFK						*J8JCA	7	1,428	41	1	13	/2						J8DMV	A	94,430	196	75	115	*J2KUU		10,366	53	26	47	*J8Z7A		135	7	3	6	*J2XTV		6,765	25	16	17	J8JHA	21	1,109,867	2348	38	125	*J2QCC	21	83,712	313	30	66	J8ZHO		230,265	785	32	73	*J2IGV		30,464	184	24	44	(Opr. J115BE)						*J2QNH		14,064	102	21	27							*J2PXB		8,820	78	2	28							*J2DWR		2,790	38	14	17							*J2I7A		2,760	30	14	16							*J2BHI		1,127	21	10	13							*J2QNG		768	32	4	4							*J2UFF	14	121,155	364	34	89							<table border="1"> <tr><td>J8HYU</td><td>15,562</td><td>105</td><td>24</td><td>38</td><td>J8HAD</td><td>14</td><td>24,308</td><td>165</td><td>17</td><td>42</td></tr> <tr><td>*J8HDX</td><td>A</td><td>297,450</td><td>494</td><td>86</td><td>139</td><td>*J8ROV</td><td>A</td><td>226,820</td><td>405</td><td>83</td><td>137</td></tr> <tr><td>*J8ROV</td><td></td><td>195,162</td><td>419</td><td>64</td><td>113</td><td>*J8VHI</td><td></td><td>15,048</td><td>82</td><td>29</td><td>37</td></tr> <tr><td>*J8YEV</td><td></td><td>70,500</td><td>206</td><td>59</td><td>31</td><td>*J8HFO</td><td></td><td>1,846</td><td>27</td><td>13</td><td>13</td></tr> <tr><td>*J8EHE</td><td></td><td>15,048</td><td>82</td><td>29</td><td>37</td><td>*J8VSW</td><td></td><td>1,624</td><td>22</td><td>13</td><td>15</td></tr> <tr><td>*J8HFO</td><td></td><td>1,846</td><td>27</td><td>13</td><td>13</td><td>*J8HJZ</td><td>28</td><td>287,640</td><td>848</td><td>34</td><td>86</td></tr> <tr><td>*J8VSW</td><td></td><td>1,624</td><td>22</td><td>13</td><td>15</td><td>*J8UXX</td><td></td><td>162,936</td><td>488</td><td>33</td><td>91</td></tr> <tr><td>*J8HJZ</td><td></td><td>287,640</td><td>848</td><td>34</td><td>86</td><td>*J8BOT</td><td></td><td>70,035</td><td>300</td><td>28</td><td>59</td></tr> <tr><td>*J8UXX</td><td></td><td>162,936</td><td>488</td><td>33</td><td>91</td><td>*J8BTL</td><td></td><td>16,677</td><td>124</td><td>21</td><td>30</td></tr> <tr><td>*J8BOT</td><td></td><td>70,035</td><td>300</td><td>28</td><td>59</td><td>*J8HBL</td><td></td><td>9,333</td><td>71</td><td>19</td><td>32</td></tr> <tr><td>*J8BTL</td><td></td><td>16,677</td><td>124</td><td>21</td><td>30</td><td>*J17DU</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>*J8HBL</td><td></td><td>9,333</td><td>71</td><td>19</td><td>32</td><td>/J</td><td>21</td><td>153,510</td><td>449</td><td>34</td><td>95</td></tr> <tr><td>*J17DU</td><td></td><td></td><td></td><td></td><td></td><td>*J18AK</td><td></td><td>27,403</td><td>58</td><td>24</td><td>43</td></tr> <tr><td>/J</td><td></td><td></td><td></td><td></td><td></td><td>*J18CJ</td><td></td><td>4,556</td><td>62</td><td>15</td><td>19</td></tr> <tr><td>*J18AK</td><td></td><td>27,403</td><td>58</td><td>24</td><td>43</td><td>*J18BD</td><td>14</td><td>140,239</td><td>427</td><td>35</td><td>86</td></tr> <tr><td>*J18CJ</td><td></td><td>4,556</td><td>62</td><td>15</td><td>19</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>*J18BD</td><td>14</td><td>140,239</td><td>427</td><td>35</td><td>86</td><td></td><td></td><td></td><td></td><td></td><td></td></tr> </table>										J8HYU	15,562	105	24	38	J8HAD	14	24,308	165	17	42	*J8HDX	A	297,450	494	86	139	*J8ROV	A	226,820	405	83	137	*J8ROV		195,162	419	64	113	*J8VHI		15,048	82	29	37	*J8YEV		70,500	206	59	31	*J8HFO		1,846	27	13	13	*J8EHE		15,048	82	29	37	*J8VSW		1,624	22	13	15	*J8HFO		1,846	27	13	13	*J8HJZ	28	287,640	848	34	86	*J8VSW		1,624	22	13	15	*J8UXX		162,936	488	33	91	*J8HJZ		287,640	848	34	86	*J8BOT		70,035	300	28	59	*J8UXX		162,936	488	33	91	*J8BTL		16,677	124	21	30	*J8BOT		70,035	300	28	59	*J8HBL		9,333	71	19	32	*J8BTL		16,677	124	21	30	*J17DU						*J8HBL		9,333	71	19	32	/J	21	153,510	449	34	95	*J17DU						*J18AK		27,403	58	24	43	/J						*J18CJ		4,556	62	15	19	*J18AK		27,403	58	24	43	*J18BD	14	140,239	427	35	86	*J18CJ		4,556	62	15	19							*J18BD	14	140,239	427	35	86							<table border="1"> <tr><td colspan="10">EUROPE</td></tr> <tr><td colspan="10">AALAND ISLANDS</td></tr> <tr><td>OH1MT</td><td>28</td><td>17,794</td><td>144</td><td>19</td><td>43</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>/OH0</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>OH8NJ</td><td>21</td><td>175,700</td><td>505</td><td>36</td><td>104</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td colspan="10">AUSTRIA</td></tr> <tr><td>DE8AMJ</td><td>A</td><td>524,808</td><td>821</td><td>69</td><td>227</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>DE8WPD</td><td></td><td>57,348</td><td>184</td><td>48</td><td>114</td><td></td><td></td><td></td><td></td><td></td></tr> <tr><td>DE8DSA</td></tr></table>										EUROPE										AALAND ISLANDS										OH1MT	28	17,794	144	19	43						/OH0											OH8NJ	21	175,700	505	36	104						AUSTRIA										DE8AMJ	A	524,808	821	69	227						DE8WPD		57,348	184	48	114						DE8DSA
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*F680A	2,310	54	9	16
*F1LFT	28	56,547	244	27 76
*F01COJ	31,156	224	25	73
*F6FLN	15,447	99	22	35
*F01SDA	4,750	69	10	28
*F1MMF	21	56,475	307	20 55
*F6AXD	1,416	26	11	13
*F68VB	3.8	16,610	243	7 48

*Y240N	1,677	39	12	27
*DK0MH	209,737	538	64	189
*DJ9MT	28	43,800	185	26 74
*DI 7YS	11,456	78	9	45
*DH2RAL	11,375	78	9	46
*DL3ME	5,590	52	20	23
*DH3DN	2,625	41	11	24
*Y67RL	7	3,440	70	6 34
*Y21XC	1.8	5,600	137	6 34

GIBRALTAR				
ZBZX	A	7,128,646	5056	137 510

GREECE				
SV0A8	28	69,960	209	32 100
*J43A	28	440,700	1411	31 125
				(Opr. SV3AQR)

GUERNSEY ISLAND				
GU3HFN	A	212,764	573	45 127
				(Opr. GU6JCJ)

HUNGARY				
HA0HW	A	996,839	1250	110 353
HABXX		657,372	1094	92 256
HASAGS		488,004	832	90 242
HASAGS		484,456	832	89 239
HABCO		50,050	180	45 109
H28X	28	227,520	658	32 112
HA7TM		114,855	405	32 67
HA4XX	14	713,241	2085	38 133
HA3RD	A	574,560	934	86 256
HA3RD		571,554	934	86 253
HA0IR		30,956	115	47 62
HG8FH	28	80,789	306	29 80
HGR0B		40,626	178	265 64
HATRC	21	57,700	272	25 75
HABCO		10,136	83	15 41
HABVK	7	139,664	715	23 89

ICELAND				
TF3UA	A	11,814	119	20 46
TF3CW	14	822,300	2205	35 115

IRELAND				
EI9FN	21	111,940	106	26 90
EISA	3.8	14,812	289	7 39
				(Opr. EI5HF)

ITALY				
IR6L	A	3,167,322	2936	119 382
IK5ACQ		222,975	463	71 154
IT9PLN		170,269	392	52 191
IK0QCZ		93,930	323	50 105
IK3CHL		78,489	208	48 123
IT9JCF		76,384	174	54 100
IK30YY		70,350	208	59 116
IK2BLA		67,760	142	51 115
I02UT		67,232	170	57 134
IK2AII		53,720	206	44 1 4
IK1JIM		44,280	138	49 86
IK7JUP		21,663	99	33 54
IP0R	28	252,486	622	34 132
IK5ROB		228,942	587	33 128
IN30BR		197,974	523	33 125
IA4FO		107,325	334	33 102
IK3BVM		86,143	327	28 79
IA4HTC		65,296	245	26 86
IK6FUX		22,074	117	23 55
IK5NKH		21,586	101	27 59
IK5RNU	14	275,548	907	33 113
IN3XUG		118,040	450	33 97
IK3ZCS		103,389	311	34 109
IK2DFT		22,826	100	24 77
IS4ZR	7	192,076	954	27 97
IS3JHW		76,921	401	24 87
IK5EKB	3.8	34,425	357	12 53
IK5JAN		31,537	389	11 50
IV3PRK	1.8	28,464	418	8 56
IS0YJ		9,264	96	7 4
IK8LWA	A	232,518	350	74 197
IK3REL		208,278	366	79 182
IK1PFW		169,212	410	61 178
IK7PTX		81,443	247	53 126
IK3HHY		79,756	276	46 111
IK4CSP		72,384	210	55 137
IK2QIN		65,352	199	52 116
IK8LTX		58,443	211	48 113
IK8FW		45,212	210	38 89
IK00DD		35,687	131	44 33
IK8FX		33,180	201	27 78
IK2QPO		22,018	102	36 73
IK0JJD		18,315	106	31 58
IK2IAR		13,871	83	33 54
IK3JGL		7,742	122	19 30
IK2SAR		3,352	42	15 26
IK3SCB		2,714	27	19 27
IK0TIC		1,870	15	16 18
IK8IOM	28	52,200	215	29 71
IK7IQR		2,812	39	14 23
IK5NSR	21	390,136	986	38 130
IKPZP		66,780	261	26 79
IK2AEQ		15,900	108	19 56

TOP TEN SINGLE OP ASSISTED				
All Band				
1. N4RJ	4,005,762	6. N4WW	2,507,618	
2. K1ZM	3,978,942	7. W1RR	2,432,073	
3. IR8A	2,719,659	8. AK1A	2,302,488	
4. K3WW	2,610,960	9. N2MM	1,915,544	
5. KC1XX	2,555,944	10. AA2DU	1,775,500	

GERMANY				
DJ4PT	A	2,281,644	1844	128 421
DJ4AX		1,683,885	1643	128 417
DL8PC		1,613,520	1395	126 414
DK2XX		1,312,965	1271	119 370
DJ3HL		1,013,855	1244	100 258
DK1RV		857,217	859	113 376
DF1K/P		677,880	824	104 316
Y23WF		551,678	653	97 261
DL4YBP		410,209	624	82 229
DF2UQ		318,696	613	73 198
DK5WQ		314,545	568	71 230
DK1IT		301,476	558	74 217
DF7QJ		274,200	502	75 225
DL9DR		274,060	491	74 210
DF2UJ		268,589	425	79 258
DL3NB		260,004	478	73 209
DJ3WE		257,278	369	65 244
DJ4ZR		253,176	353	64 224
DJ8UW/P		216,460	495	67 207
DL3SN		210,888	395	68 164
DL3DR/P		201,058	445	63 184
DL0MET		158,696	420	65 174
				(Opr. DL8UJ)
DL2JO		157,832	386	57 161
DL2BAY		150,822	268	60 179
DL30BL		119,956	350	55 110
Y25FG		115,993	237	51 142
Y25WL		106,496	275	60 148
DF2KD		99,110	583	49 121
DJ2UJ		96,455	279	51 152
DL2DN		97,020	245	52 113
DK4HW		43,239	120	49 94
DK5JK		41,184	286	42 102
Y55TJ		38,480	108	56 92
NI8UTC		35,520	122	43 77
DL3IV		25,536	127	68 92
DL6KVB		23,870	107	41 69
DF2PTA		23,388	161	49 73
DL7MAE		23,124	82	48 75
DL4DCC		9,333	100	20 41
Y31WF		6,666	68	20 46
DL3YOY		4,235	39	15 40
DF0DX	28	126,907	413	31 108
				(Opr. DF0AE)
Y22EK		43,857	197	25 76
DJ9ZB		17,325	100	21 56
DJ8X/P		8,944	36	16 36
Y25GH		4,690	69	9 26
DF5WN		1,173	31	8 15
Y37ZE	21	63,600	260	28 78
DL1NCT	14	118,668	483	33 99
DL1YAW		118,237	390	32 96
DL3KCA		39,160	274	23 66
DL1KZA		32,477	227	23 63
Y42VN		3,034	52	12 29
Y21CW	3.8	162,450	1011	23 91
DL3LAB		122,194	823	23 83
DL0WXP		34,176	527	8 56
*Y48PJ	A	712,194	891	182 332
*DJ2HM		394,356	486	85 269
*DL10J		254,505	453	85 200
*DL1A0		239,948	511	65 204
*DF4TD		227,532	567	56 227
*DK8FS		207,612	379	74 218
*DL8SDC		183,340	439	80 146
*CU0MW		180,804	349	64 164
*DL4RU		149,375	323	64 175
*DK7LI		130,625	405	51 158
*DK5DS		128,024	367	52 112
*DL4FJ		111,723	315	49 118
*DJ5AV/A		99,858	247	55 132
*DL3ZB		74,261	197	47 110
*DL6EH		72,027	265	41 110
*Y31NH		61,272	221	41 107
*Y21HB		52,114	205	42 100
*DL1RNE		44,950	193	40 105
*Y38YE		34,560	194	36 108
*DA0HS		34,160	146	43 97
*DL6RDE		27,075	139	31 64
*DL2SBY		25,620	135	25 80
*Y23SD		19,890	109	28 74
*DL3SDO		18,297	105	34 73
*DL3D0Y		11,175	109	23 52
*DL6SMA		10,132	116	18 50
*Y24SG		6,248	65	19 34
*DJ6SH		3,348	81	10 26

HUNGARY				
HA0HW	A	996,839	1250	110 353
HABXX		657,372	1094	92 256
HASAGS		488,004	832	90 242
HASAGS		484,456	832	89 239
HABCO		50,050	180	45 109
H28X	28	227,520	658	32 112
HA7TM		114,855	405	32 67
HA4XX	14	713,241	2085	38 133
HA3RD	A	574,560	934	86 256
HA3RD		571,554	934	86 253
HA0IR		30,956	115	47 62
HG8FH	28	80,789	306	29 80
HGR0B		40,626	178	265 64
HATRC	21	57,700	272	25 75
HABCO		10,136	83	15 41
HABVK	7	139,664	715	23 89

*IK8DU		10,481	107	10 37
*IK6HW		1,525	23	11 14
*IK8COG	14	48,700	251	24 76
*IK7LMX		41,417	415	20 63
*IK1JUL		26,094	225	15 57
*IK5ORT		23,322	196	19 59
*IK2NNI		4,314	56	14 28
*IK2MJD		2,117	73	9 20
*IK3ITX	3.8	2,432	57	4 28
YL2DX	A	202,266	417	66 250
Y-2GD		103,944	257	61 152
YL2SM	28	29,880	167	23 49
YL2GN	21	155,575	680	31 96
YL2IP	14	27,664	155	25 66
YL2GUP	1.8	2,204	74	5 24
YL2TW	A	181,170	490	64 206
*YL2SW		85,550	402	42 103
*YL2KO		19,776	114	31 65

LATVIA				
LY2BU	A	379,312	753	73 241
LY2BNC		372,939	800	70 231
LY1DI		217,218	467	65 181
LY3BA		194,936	618	53 183
LY2BGB		11,992	212	26 84
LY2FCJ	28	248,538	874	29 109
LY3BH		185,456	643	31 103
LY2WW	21	518,760	1259	37 128

IRAQ				FRANCE				UZ4WWA				GERMANY							
Y11RJ	60,480	382	10 44	FV7A	7,564,217	4690	145 568	R26AXO	1,369,257	1453	96 317	NF2L	4,665,276	2282	157 599	GERMANY			
ISRAEL				TO7C	7,076,538	5068	131 451	UZ6LW8	1,589,992	1928	124 342	K2TD	2,298,715	861	126 435	DF30G	1,071,138	1134	115 386
4Z7M	7,167,192	4670	119 404	F1B	4,029,340	3489	119 357	KALININGRAD DISTRICT				W3LPL	12,409,592	4954	181 703	ITALY			
JAPAN				FF1PBT	1,266,473	1485	115 366	UW2F	5,097,111	3729	145 524	W3ANAN	386,971	536	76 213	U3A	17,660,068	9349	175 723
JA1YKX	656,058	720	116 222	F8IUI	357,102	566	83 223	KARELIA				N04I	5,492,631	3089	158 565	ITU VIENNA			
JA1YBH	385,133	583	92 167	F1MAA	169,418	396	67 187	UZ1NWP	10,184	113	19 57	N5AU	8,042,232	5135	166 577	4U1VIC	7,204,290	6453	141 549
JA1YFG	258,800	471	75 125	GERMANY				MOLDAVIA				N6ND	6,697,080	3601	172 517	LICHTENSTEIN			
JA3YKC	2,022,436	1679	132 305	Y34K	5,896,550	3458	162 593	U0WZ	4,340,364	4348	141 511	W7XR	9,818,865	4925	183 552	H8B/H89A0N	4,078,735	3700	112 453
JA3ZKK	1,329,988	1437	103 231	DL8DH	5,375,030	3267	148 546	U04XU	251,594	630	68 176	K8CC	5,603,837	3295	166 573	LY2ZO	4,777,871	3944	145 533
JH5ZCP	2,247,840	1925	134 286	DL8WH	1,761,744	1704	131 447	UKRAINE				KL7Y	7,482,840	6237	141 350	LITHUANIA			
J6ZJH	2,809,896	2314	130 296	DF8AT	1,756,864	1560	130 436	RY1U	9,987,465	6088	177 645	KL7RA	7,173,120	6467	134 333	LX9CE	38,800	316	28 72
JF6YPU	143,520	345	57 99	DF8RR	1,437,712	1536	117 355	U33HWA	3,544,635	2696	150 531	BERMUDA				LUXEMBOURG			
JA7YAA	3,548,665	2507	144 359	DA2FCX	1,252,904	1799	97 301	RY80	3,016,080	3052	132 457	VP9AD	28,086,030	15,029	166 652	NORWAY			
JH8YCT	1,432,786	1620	117 229	Y24YH	1,038,872	1237	106 357	U34WZA	2,152,590	1771	136 469	VC1DX	15,458,874	10,486	155 532	LA1W	2,604	26	17 25
JH8YAK	1,349,052	1280	122 267	DL8SSB	619,272	907	91 285	WALES				VC1ZZZ	5,541,855	5515	129 324	POLAND			
JA8ZRY	120,246	317	52 95	DK9PP	390,216	709	78 206	GW8GT	6,564,178	4736	138 484	XE2M00	1,561,148	3195	84 155	SN6F	1,826,721	2247	118 389
KOREA				DL8AJN	303,312	615	71 213	YUGOSLAVIA				ST. VINCENT				SPAIN			
D73DX	2,471,760	3654	110 250	DL8ER	258,375	555	75 190	Y24Z	4,198,305	3067	141 604	J88D	14,689,532	11,063	129 443	EA1WA	577,608	769	85 243
HL9HH	2,295,549	2598	112 256	GUERNSEY ISLAND				4N4U	857,631	1249	94 287	ASIA				UKRAINE			
MONGOLIA				GU	1,077,138	2056	82 284	AUSTRALIA				JAPAN				YUGOSLAVIA			
JT1J	1,035,000	3023	67 158	/DL8NBE	1,077,138	2056	82 284	VK10X	2,434,244	2879	91 202	JA1YXP	4,025,550	3084	139 331	MARIANAS ISLANDS			
JT1T	397,710	1423	54 108	HUNGARY				VK60D	862,068	1479	70 129	JE2YRD	7,232,400	4397	157 431	NEW ZEALAND			
SAUDI ARABIA				HG1S	3,450,492	3188	124 392	BRUNEI				JA7YRR	4,414,896	3173	145 351	PHILIPPINES			
HZ1AB	2,282,725	3542	105 320	H8KCK	2,029,580	2031	111 379	V85HG	8,420,088	5875	144 348	TA3KC	11,512,452	6863	131 457	NETHERLAND ANTILLES			
TURKEY				H8KNA	1,085,279	2445	96 307	GUAM				TURKMAN				ARGENTINA			
TA4/K6KH	154,935	537	28 71	H8KMR	352,377	814	78 201	KH2S	11,093,392	7086	145 387	RH2E	15,223,780	8184	158 557	EUROPE			
USSR				H8KTT	117,183	369	53 148	HAWAII				ALBANIA				NETHERLAND ANTILLES			
ASIATIC RUSSIA				IRELAND				INDONESIA				BELGIUM				NETHERLAND ANTILLES			
UZ9CZD	650,292	848	73 209	E17M	5,539,824	4559	113 414	KH6GMP	2,314,026	2786	100 186	Z80RS	18,877,416	12,260	179 727	NETHERLAND ANTILLES			
LZ9YXJ	402,776	894	56 128	ITALY				PHILIPPINES				ENGLAND				NETHERLAND ANTILLES			
LZ9XWV	14,415	63	39 54	IQ4A	12,424,195	5688	178 753	DX10BT	2,106,312	2330	100 212	ON7LR	4,695,789	3649	148 571	NETHERLAND ANTILLES			
UZ8CXD	813,054	1756	85 169	I4AUM	3,336,718	2947	118 399	DX31	1,155,168	1786	86 136	GBKPW	12,139,792	7033	169 687	NETHERLAND ANTILLES			
KAZAKHISTAN				IY8X	2,278,164	2434	116 402	WAKE ISLAND				EUROPEAN RUSSIA				NETHERLAND ANTILLES			
RL8DWW	786,065	1342	82 177	IC8DGS	1,833,858	2320	103 339	WESI/KH9	4,134,936	4629	109 217	R6L	10,660,857	6448	172 655	NETHERLAND ANTILLES			
EUROPE				IK2DFR	1,406,347	1347	122 401	SOUTH AMERICA				EUROPEAN RUSSIA				NETHERLAND ANTILLES			
ALBANIA				I0LYO	699,705	956	94 277	ARGENTINA				EUROPEAN RUSSIA				NETHERLAND ANTILLES			
ZA1ZJ	2,608,400	3176	102 298	I6DCH	563,625	789	85 290	L6D	6,250,984	4061	134 392	EUROPEAN RUSSIA				NETHERLAND ANTILLES			
AUSTRIA				IKENHT	474,513	983	61 218	ARUBA				EUROPEAN RUSSIA				NETHERLAND ANTILLES			
OE2XEL	3,421,696	2519	140 516	IK30GK	176,596	400	61 151	P40T	18,997,200	9472	149 526	EUROPEAN RUSSIA				NETHERLAND ANTILLES			
OE1XTU	1,858,729	1805	123 404	IK3JRF/IL3	165,200	397	66 170	BRAZIL				EUROPEAN RUSSIA				NETHERLAND ANTILLES			
OE3XCV	955,686	1055	104 343	IK200I	72,556	220	49 138	PT7F	5,452,188	3298	134 430	EUROPEAN RUSSIA				NETHERLAND ANTILLES			
OE5XVL	607,320	856	85 271	IV3VFP	71,020	277	29 77	PS43	3,397,229	2891	105 302	EUROPEAN RUSSIA				NETHERLAND ANTILLES			
AZORES ISLANDS				LITHUANIA				CHILE				EUROPEAN RUSSIA				NETHERLAND ANTILLES			
CU20T	5,341,548	4372	123 375	LY1BZB	192,258	460	69 187	CE2AA	2,739,529	2627	113 246	EUROPEAN RUSSIA				NETHERLAND ANTILLES			
BELGIUM				LUXEMBOURG				COLOMBIA				EUROPEAN RUSSIA				NETHERLAND ANTILLES			
ON6NL	3,284,820	2624	137 457	LX6A	2,472,225	2691	130 465	5K6CO	4,783,347	4610	87 282	EUROPEAN RUSSIA				NETHERLAND ANTILLES			
ON7UN	2,183,888	2074	116 380	THE NETHERLANDS				NETHERLAND ANTILLES				EUROPEAN RUSSIA				NETHERLAND ANTILLES			
ON6AH	1,854,640	1946	116 374	PIACOM	2,508,649	2308	131 452	NETHERLAND ANTILLES				EUROPEAN RUSSIA				NETHERLAND ANTILLES			
OR5EEC	790,272	1170	99 293	PI4TUE	1,190,400	1217	114 351	NETHERLAND ANTILLES				EUROPEAN RUSSIA				NETHERLAND ANTILLES			
BULGARIA				NETHERLANDS				NETHERLAND ANTILLES				EUROPEAN RUSSIA				NETHERLAND ANTILLES			
LZ9A	8,864,650	4981	185 665	NETHERLANDS				NETHERLAND ANTILLES				EUROPEAN RUSSIA				NETHERLAND ANTILLES			
LZ1KNP	570,130	900	92 263	NETHERLANDS				NETHERLAND ANTILLES				EUROPEAN RUSSIA				NETHERLAND ANTILLES			
LZ1K8B	115,984	321	65 176	NETHERLANDS				NETHERLAND ANTILLES				EUROPEAN RUSSIA				NETHERLAND ANTILLES			
CZECHOSLOVAKIA				NETHERLANDS				NETHERLAND ANTILLES				EUROPEAN RUSSIA				NETHERLAND ANTILLES			
OKSW	5,498,986	3133	160 501	NETHERLANDS				NETHERLAND ANTILLES				EUROPEAN RUSSIA				NETHERLAND ANTILLES			
OK3KAP	1,755,964	1664	125 402	NETHERLANDS				NETHERLAND ANTILLES				EUROPEAN RUSSIA				NETHERLAND ANTILLES			
OK3KAG	1,106,430	1343	97 293	NETHERLANDS				NETHERLAND ANTILLES				EUROPEAN RUSSIA				NETHERLAND ANTILLES			
OK2KDS	480,128	790	80 261	NETHERLANDS				NETHERLAND ANTILLES				EUROPEAN RUSSIA				NETHERLAND ANTILLES			
OK2KET	250,480	773	57 191	NETHERLANDS				NETHERLAND ANTILLES				EUROPEAN RUSSIA				NETHERLAND ANTILLES			
OK1KDJ	189,189	502	53 178	NETHERLANDS				NETHERLAND ANTILLES				EUROPEAN RUSSIA				NETHERLAND ANTILLES			
OK2KMR	115,630	460	40 115	NETHERLANDS				NETHERLAND ANTILLES				EUROPEAN RUSSIA				NETHERLAND ANTILLES			
OK3KUN	65,140	395	39 126	NETHERLANDS				NETHERLAND ANTILLES				EUROPEAN RUSSIA				NETHERLAND ANTILLES			
OK3KXR	61,600	202	47 128	NETHERLANDS				NETHERLAND ANTILLES				EUROPEAN RUSSIA				NETHERLAND ANTILLES			
OK2KOD	56,872	148	58 96	NETHERLANDS				NETHERLAND ANTILLES				EUROPEAN RUSSIA				NETHERLAND ANTILLES			
OK10FM	45,066	156	52 117	NETHERLANDS				NETHERLAND ANTILLES				EUROPEAN RUSSIA				NETHERLAND ANTILLES			
DENMARK				NETHERLANDS				NETHERLAND ANTILLES				EUROPEAN RUSSIA				NETHERLAND ANTILLES			
OZ1ADL	1,386,081	1560	109 348	NETHERLANDS				NETHERLAND ANTILLES				EUROPEAN RUSSIA				NETHERLAND ANTILLES			
OZ6ARC	188,567	506	47 114	NETHERLANDS				NETHERLAND ANTILLES				EUROPEAN RUSSIA				NETHERLAND ANTILLES			
OZ1TRO	90,862	351	36 145	NETHERLANDS				NETHERLAND ANTILLES				EUROPEAN RUSSIA				NETHERLAND ANTILLES			
OZ4HAM	61,880	282	44 126	NETHERLANDS				NETHERLAND ANTILLES				EUROPEAN RUSSIA				NETHERLAND ANTILLES			
ENGLAND				NETHERLANDS				NETHERLAND ANTILLES				EUROPEAN RUSSIA				NETHERLAND ANTILLES			
G4PKP	1,320,894	1648	87 314	NETHERLANDS				NETHERLAND ANTILLES				EUROPEAN RUSSIA				NETHERLAND ANTILLES			
G8CCH	735,345	1119	82 269	NETHERLANDS				NETHERLAND ANTILLES				EUROPEAN RUSSIA				NETHERLAND ANTILLES			
G4FEJ/P	585,795	1037	73 172	NETHERLANDS				NETHERLAND ANTILLES				EUROPEAN RUSSIA				NETHERLAND ANTILLES			
FINLAND				NETHERLANDS				NETHERLAND ANTILLES				EUROPEAN RUSSIA				NETHERLAND ANTILLES			
OH5NQ	5,265,939	3522	152 499	NETHERLANDS				NETHERLAND ANTILLES				EUROPEAN RUSSIA				NETHERLAND ANTILLES			
OH4JK	2,241,258	2217	114 333	NETHERLANDS				NETHERLAND ANTILLES				EUROPEAN RUSSIA				NETHERLAND ANTILLES			
OH7AAC	886,025	1182	103 312	NETHERLANDS				NETHERLAND ANTILLES				EUROPEAN RUSSIA				NETHERLAND ANTILLES			

†These logs were received after the deadline and a reasonable extension grace period. They are included in the results for completeness, but are not eligible for awards.

Disqualifications: Unverifiable OSOs and duplicates—4Z4DX.