

# Results of the 1997 CQ World-Wide DX CW Contest

BY BOB COX\*, K3EST

The day finally arrived for the running of the CQ WW CW. Tens of thousands of amateurs from all over the planet were tuned into the annual CW fun festival. What DXpeditions would show up? Would the sun cooperate? Would the new rig and antenna work okay? It was going to be an exciting, fun time for all. The sun cooperated with a vengeance. The SFI was 116 (A and K = 0) until 15Z on the 29th, and after 15Z it only dropped to 112 with the K rising to 2 by the end of the contest. The bands were hopping. Ten meters presented a long-path gift at dawn from the USA east coast into zones 24 and 25.

This year's results were a high-water mark for CW logs. Over 3,250 logs were received from entrants—a big increase over 1996. It is very gratifying to see that CW is easily holding its own against SSB.

## Single Operator High Power

José, CT1BOH, had traveled to P4 before. Sometimes he had bad luck by catching the flu just before the contest, but this time at P40E he did everything right. His rival at EA8EA operated by OH2MM was no newcomer. OH2MM had won more All Band world CW titles in the last ten years than anyone else. When the contest ended they had made 12,969 QSOs between them with only a difference of 23 QSOs to the QSO leader (OH2MM)! José's multiplier strategy was right on the money, and he took his 59 mult advantage to the bank to collect the world title. Congratulations, José!

Being at the western tip of Europe doesn't hurt, but you also need an expert behind the key. That expert is Andrew, GI0NWG, who pushed GI0KOW to top honors in Europe and very nearly a new European record. Second-place Europe was more of a struggle. The difference between second and sixth place was only 100K. Dave, G4BUO, pulled out all the stops in taking second place over DL6FBL.

Here in the US, it was an awed contest community after the contest ended. John, K1AR, had keyed himself to about a 3 million point lead over the second-place station! "Wow!" is all anybody could say. Operating from the ideal station and QTH of K1EA, John did more than everything right on his way to shattering the old US record by almost 2 million points. And conditions aren't even good yet. John also broke into the world top ten box (rare for the US) as number 7. Last year's number two reprised his role. Greg, W1KM, put his fabulous low band QTH to real advantage.

## Single Operator Low Power

Traveling back to 3V8BB, Hrane, YT1AD, had



YC6PUP is an enthusiastic contestester.

one thing in mind: to try to set a new Low Power All Band record. The record had been set the previous year at the same station by Uli, DL2HBX. When the dust settled, Hrane had the new world record in hand. Not so far behind was Joe, AA3B, who took VP2EEB to new heights to claim a new North American Low Power record. In Europe, Tine, S50A, put aside

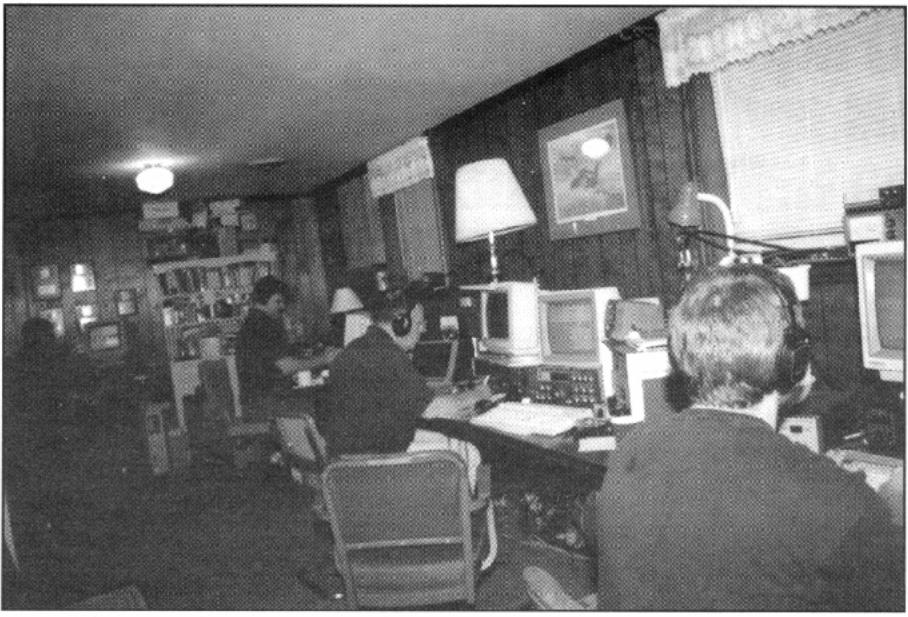
his amp and from his countryside shack keyed his way to top honors. He was followed closely by his good friend Franc, S59AA. You can read more about their scores in *CQ Contest* magazine.

Stateside a new USA record was set by Brooke, N2BA. Not far behind was KN4T. This category continues to grow. It is very popular



E22AAA made a lot of people happy. Shown here are E20HHK (left) and E20ACU.

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The shack of Multi-Multi NQ4I. Left to right are NQ4I, KS4Q, W1RR, and N4CM. K2UFT and K4OGG were also part of the team.

because it allows city dwellers as well as those living in restricted areas to participate.

## QRP

The QRP category continues to provide a challenge for the dedicated. Running less than 5 watts can bring forth skills you did not know that you had. What is surprising is given the right conditions, 5 watts can be quite okay to attract an answer. The world top slot went to perennial QRPer Henry, AA2U. His score reflects a

careful strategy of maximizing his chances. The YU presence on QRP is well known, and YT7TY took second place and number one in Europe.

## Assisted

The secret to having a big Assisted score is to not be hypnotized by the packet screen. The second secret is to go somewhere where you can make lots of QSOs. Ranko, YT6A, left Europe and traveled to the sunny Caribbean,

## TEAM CONTESTING

1. Neiger's Tigers Team #1: 43,205,232. By HC8N (N5KO), FS5PL (W2GD), P40E (CT1BOH), 9Y4H (K6NA), ZD8Z (N6TJ).
2. Contest Club Finland Team #1: 25,790,930. By 8R1K (OH0XX), CT3BX (OH1EH), DX1A (OH2PM), EA8EA (OH2MM), OH6WZ.
3. Team Nippon: 15,562,742. By 3DA5A (JM1CAX), 9M6NA (JE1JKL), JH5FXP, V8EA (JO1RUR), YN6WW (JA6WFM).
4. Yugoslavian Contest Team #1: 15,020,393. By YU7AV, 3V8BB (YT1AD), YT1AD, 4N9BW, YT7A.
5. Neiger's Tigers Team #2: 14,516,099. By YB1AQS, RK0FWL (N6AA), VK6BAT (N6ZZ), 5X1Z (SM7PKK), CT1ELP.
6. Desert Warriors Team: 13,993,941. By 9K9K, HZ1AB (SM0CXU), 7Z5OO (K3UOC), A45ZN, A45XR.
7. Contest Club Finland Team #1: 7,440,216. By OF1HS, OH6NIO, OH6RX, ZB2X (OH2KI).
8. Neiger's Tigers Team #3: 6,847,918. By N6BV/1, W2VJN/7, W7WHY, K6AW.
9. Tennessee Contest Gladiators #1: 6,315,247. By K4RO, WW4RR (N4ZZ), W4PA, W9WI, WO4O.
10. Lithuanian Team—Not High Power: 2,470,531. By LY2BM, LY2CX, LY2FE, LY2FN, LY3BA.
11. Russian Woodpeckers: 1,978,703. By UA1OMS, UA1OZ, UA1OMZ, UA1OMX, RW1ON.
12. Yugoslavian Contest Low Band Team: 1,390,994. By YU7AU, YT1BB, YU7NU, YU7CB, YU1KR.
13. Team Northern Lights: 1,328,187. By OH6MRA, OH8BQT, OF8LAE.
14. Great White North DX eh?: 1,296,599. By VE6JY (VE6WQ), VE1JF, VE6BMX, XM7A (VE7SV).
15. Yugoslavian Single Band Team: 1,067,455. By YT0T (4N1DXX), YU1AR, YZ1AU, YU1EA.
16. Tennessee Contest Gladiators #2: 41,836. By N4KN, NT4L, W4OGG.

where he guest operated at FM5DN. He set a new North American record along the way to the top world Assisted score. In the USA another guest operator, Malcolm, K11G, traveled over to Rhode Island and keyed K1NG to a new USA Assisted record. Meanwhile, over in Europe, Georgio, I2VXJ, activated his special call, IR2W, and outdistanced his German competitors led by DL2MEH.

## Multi-Single

North America was well represented among the top six world multi-singles with four representatives. The leader of the pack was ZF1A. With four ops—including WRTC 1996 Champion K1TO, W5ASP, K0MK, and K9LA—they used their shortened callsign to advantage. Second place went to NW Cyprus, where a Russian team set up shop as P3A. Once again the men from Bologna put on quite a show. IQ4A, operating from their cave QTH, finished just ahead of OT7T. Each year the rivalry in Europe for Multi-Single is fierce. Obeying the distance rule and having no off-site personalized help and still winning must be quite satisfying to the top scorers. In the US, the crew of N2NU far outdistanced the competition to take top USA honors and to fall just short of the USA Multi-Single record. Second place went to the crew of K1ZZ. Dave's gang always does very well. It is interesting to note that two blackholers, W9JA and



Wes, SP4EEZ (SP4Z), up the tower with his brother placing the homebrew 6-element Yagi on the mast.

## CW TROPHY WINNERS AND DONORS

Single Operator All Band World P40E	World—3.5 MHz R. G. D. Stone, <b>GW3YDX</b> Donor: Fred Capossela, K6SSS	Africa 5A2A (Oprs. DJ7IK, DL1GGT, DL2EBX, DL3KDV, DL8OBC) Donor: CQ Magazine
(Opr. Jose Carlos Cardoso Nunes, CT1BOH) Donor: Albert Kahn, K4FW W9IOP Memorial	World—1.8 MHz Yuri Blanarovich, <b>VE3BMV/1</b> Donor: Kenneth Byers, Jr., K4TEA	Asia P3A (Oprs. RA9JX, RA9JR, RV0AR, UN7FZ, UA9MA, UN7FK, UA9YAB, RU3AA, UA9NN, UA9LAC) Donor: Steve Merchant, K6AW
World Low Power 3V8BB (Opr. Hranišlav Milošević, YT1AD) Donor: Slovenia Contest Club	USA—28 MHz Melvin Brafford, <b>W4YV</b> Donor: CQ Magazine	Europe IQ4A (Oprs. I4VEQ, I4IND, I4EAT, I4IKW, I4TJE, I4LCK, IK4EWK, IK4CFZ, IK4XQH, IK4DCT, IK4MGP, IK4QJH, IK2NCJ, IK2JUB, IK2MRZ, IW4ANU) Donor: Friends of K3AO—K3AO Memorial
World Single Operator Assisted FM5DN (Opr. Ranko Boca, YT6A) Donor: Snake River Contest Club	USA—21 MHz Charles Thompson, <b>N4CT</b> Donor: Wayne Carroll, W4MPY	Oceania AH2R (Oprs. JF1SQC, JK3GAD, JR7OMD) Donor: Junichi Tanaka, JH4RHF
World QRPP Henry Rand Jr, AA2U Donor: Gene Walsh, N2AA	USA—14 MHz WØUN (Opr. George Schultz Jr, WØUA) Donor: Northern Illinois DX Association	South America ZP9B (Oprs. PY2TI, PY5BI) Donor: Tyler Stewart, K3MM
U.S.A. John Dorr, K1AR Donor: Frankford Radio Club	USA—7 MHz Larry Pace, <b>N7DD</b> Donor: Jan Perkins, N6AW—W6AM Memorial	Multi-Operator, Multi-Transmitter World 5V7A (Oprs. G3SXW, G3ZEM, G4FAM, GM3YTS, K5V7, K7PN, KC7V, N7BG, N7MB, W6RGG) Donor: Doug Zwiebel, KR2Q—K2GL Memorial
U.S.A. Low Power Brooke Allen, N2BA Donor: North Coast Contesters	USA—3.5 MHz Robye L. Lahlium, <b>W1MK</b> Donor: Bill Feidt, NG3K	World—SSB/CW Combined KH7R: 30,186,719 Donor: Alpha/Power, Inc.
U.S.A.—Zone 3 W6AX (Opr. James Pratt, N6IG) Donor: Bill Fisher, W4AN	USA—1.8 MHz Wallace Eckles, <b>W8LRL</b> Donor: Peter Hutter, WW2Y	U.S.A. KC1XX (Oprs. KC1XX, AD1C, K1ZM, K1DG, K1EA, K1GQ, K1CF, N2IC, KM3T, DL7ALM, Christine) Donor: Bob Ferrero, W6RJ—N6RJ Memorial
U.S.A.—Zone 4 Mike Wetzel, W9RE Donor: Dennis O'Connor, K8DO	Canada (14 MHz) VE6JY (Opr. Joel Weiner, VE6WQ) Donor: Radio Amateurs of Canada	Europe OH2HE (Oprs. OH2HE, OH1JT, OH2BTI, OH2BVI, OH2BZY, OH2IW, OH2JA, OH2JTE, OH2XX, OH6CT, OH6DD, OH6EE, OH7BX, OH7JR, OH8KXK) Donor: Finnish Amateur Radio League
Canada Augustus Thomas Samuelson, VO1MP Donor: Canadian DX Association	Carib./C.A. (21 MHz) FM5DP (Opr. Durica Maletin, YU7DR) Donor: Snake River Contest Club	Japan JH7PKU (Oprs. JH7PKU, JA9SSY, JH7DXZ, JH7FQK, JO1BMV) Donor: Ryozo Goto, JH3JYS
Caribbean/C.A. 8P9Z (Opr. John Laney III, K4BAI) Donor: Chuck Shinn, W7MAP	Europe—28 MHz ZB2X (Opr. Jorma Saloranta, OH2KI) Donor: John Pryor, K4OGG	Contest Expeditions World Single Operator V8EA (Opr. Hajime Kato, JO1RUR) Donor: Yankee Clipper Contest Club
Europe GI0KOW (Opr. Andrew Williamson, GI0NWG) Donor: Edward Bissell, W3AU	Europe—21 MHz US1E (Opr. UT7EZ) Donor: Robert Naumann, N5NJ	World Multi-Single 5A2A (Oprs. DJ7IK, DL1GGT, DL2EBX, DL3KDV, DL8OBC) Donor: CQ Magazine
Europe—Low Power Tine Brajniki, S50A Donor: Scott Jones, N3RA & Tim Duffy, K3LR	Europe—14 MHz IR4T (Opr. Stefano Brioschi, IK2QEI) Donor: Maud Slater—G3FXB Memorial	World Multi-Multi 6Y4A (Oprs. K2KW, N6BT, N6TV, KE7X, AG9A, W9QA, W4SO, JE3MAS, JI3ERV) Donor: Bill Schneider, K2TT
Africa EA8EA (Opr. Ville Hillesmaa, OH2MM) Donor: Gordon Marshall, W6RR	Europe—7 MHz 9A5Y (Opr. Sasa Pokorni, 9A3HM) Donor: Ivo Pezer, T93A	Special-Single Operator Award World SSB/CW Combined P40W/FS5PL (Opr. John Crovelli, W2GD) Donor: Hrane Milošević, YT1AD
Asia Chris Dabrowski, A45XR Donor: Chuck Shinn, W7MAP	Europe—3.5 MHz SN3A (Opr. Czelaw Dubicki, SP3HLM) Donor: Frankford Radio Club—K3VW Memorial	World All Band: Under 21 years old Marcus Ilvonen, OF3KCB Donor: Chuck Shin, W7MAP
Japan Masaki Okano, JH4UYB Donor: Japan Crazy Contesters Club	Europe—1.8 MHz Patrick Bittiger, TK5NN Donor: Pat Barkay, N9RV & Terry Zivney, N4TZ	Club World SSB/CW Frankford Radio Club: 366,666,652 Donor: CQ Magazine—W1WY Memorial
Oceania VK6BAT (Opr. Phil Goetz, N6ZZ) Donor: Peahi Contest Club	Japan—21 MHz Akito Nagi, JA5DQH Donor: DX Family Foundation	Non-USA SSB/CW Rhein-Ruhr DX Association: 117,415,172 Donor: No. California Contest Club N6AUV Memorial
South America HC8N (Opr. Trey Garlough, N5KO) Donor: Venezuela DX Club	Japan—14 MHz Ted Sakabe, JA7XBG Donor: Mitsuhiro Nishimura, JA7WME	
Single Operator, Single Band World—28 MHz CX5X (Opr. Jorge Diez Furest, CX6VM) Donor: Joel Chalmers, KG6DX	Multi-Operator, Single Transmitter World ZF1A (Oprs. K1TO, W5ASP, K9LA, K9MK) Donor: Anthony Suseen, W3AOH	
World—21 MHz ZD8Z (Opr. James Neiger, N6TJ) Donor: Don Busick, K5AAD—N5JJ Memorial	U.S.A. N2NU (Oprs. N2NU, K2WI, WW2Y, W2REH, N2NC, N2NL) Donor: Douglas Zwiebel, KR2Q	
World—14 MHz P40J (Opr. Robert Brockman, WX4G) Donor: North Jersey DX Association W2JT Memorial	Canada VE3EJ (Oprs. VE3EJ, HA8FW, VE2ZP, VA3RU, VE3FU, VE3IY, VE3KZ, VE7CC, VE7NTT) Donor: Eastern Canadian DX Assn.	
World—7 MHz C4A (Opr. Ivo Pezer, 9A3A) Donor: Alex M. Kasevich, VP2MM/4	Carib./C.A. KP3Z (Oprs. NP4Z, KP4BZ, NP3A, KP3L, WP3A, NP3J, KP4RF, KP3P, NP3HM) Donor: North Nevada DX Contest Club	

N0NI, made the top Multi-Single US box. Congratulations to them for their excellent efforts.

### Multi-Multi

The work and planning necessary to produce a chance to finish in the top scores in this category are staggering. The dedication of hundreds of contestants to build bigger and better stations is good evidence that the art of station design is alive and well. On the pages of *CQ Contest* magazine you have read about 5V7A and 6Y4A. It is no coincidence that their results are outstanding. 5V7A, the Voodoo guys, put together another winning effort from their hotel setup in Togo. Second place went to 6Y4A. Their operation was extremely well thought out. Using verticals for the most part, their signals were really outstanding. Third place went to EA8ZS with a crew from mainland Spain.

It is rare for a US Multi-Multi to break into the world top six box. But that is exactly what KC1XX pulled off. Matt assembled a stellar crew to drain all the bands dry. Not that far behind was Tim, K3LR, with an international team. Third place went to Frank, W3LPL.

In Europe, the crown traveled to the north and landed on the head of OH2HE. Their efforts to build up a championship station have really

paid off. Just over 100K behind was DF0HQ, the famous quad station. Their antennas sure do work!

### Team Contesting

It was another year of continued growth with more teams than ever participating. This year 15 teams sent in lists before the contest. Averaging over 8.5 million points each, Neiger's Tigers Team #1 took top honors. The new Contest Club Finland gathered operators from all over the world to take second place, with Team Nippon third. Of the 15 members of the three top teams, 13 were DXpeditions for the contest! We all appreciate the dedication of these contestants.

As was mentioned in the SSB results, if this category gets much bigger, there could be various categories of teams: All Band, Single Band, Low Power, or Assisted. To form a team, just check out the rules in the September *CQ*. Congratulations to all the teams!

### Clubs

Just how many points can a club make in a contest? Stay tuned. With the conditions improving, one-half billion is possible! This year the top three USA and top two DX clubs totaled

1.01 billion points! This represents months of planning, DXpeditions, getting everyone on the air, and finally making sure that logs are submitted on time. It's a big job. As the James Bond theme song says, "Nobody does it better," and once again the Frankford Radio Club took top club world honors with a staggering 360 million points. Getting closer and closer each year is the Yankee Clipper Contest Club, who came in second in the world.

Over in Europe the friendly rivalry between the two German goliaths ended up with the Rhein-Ruhr DX Association edging out the Bavarian Contest Club. The new kids on the block, Contest Club Finland, finished a very close third.

### New Records, Special Mention

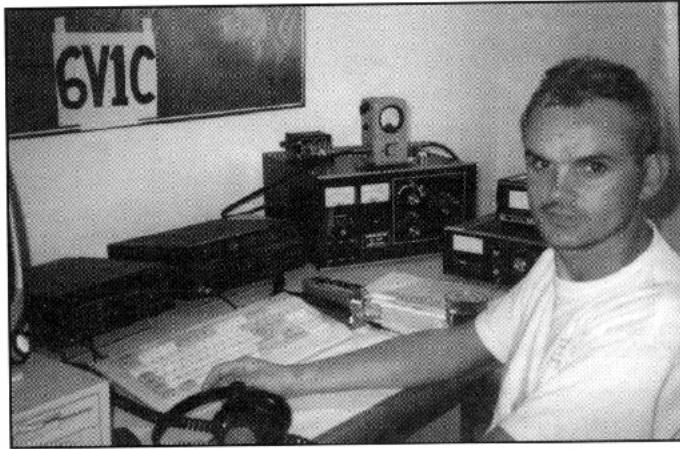
**WORLD:** 21 MHz ZD8Z (N6TJ), LA 3V8BB (YT1AD), L21 VP5EA (WD5N), Q21 HK3/SM5CCT, A14 DL4NAC.

**AFRICA:** 21 MHz ZD8Z (N6TJ), 14 MHz CT3BX (OH1EH), 1.8 MHz CT3/OH1MA, LA 3V8BB (YT1AD), L21 7X2RO (OM3CGN).

**ASIA:** 14 MHz 9K2GS (T97M), L14 RA9AA, Q3.5 UA0QQQ, A3.5 JH1BBT.

**EUROPE:** L21 UA4LL, A21 DF9ZP, A14 DL4NAC.

**NORTH AMERICA:** LA VP2EEB, L21



6V1C operated by 6W1RE.

### ZONE LEADERS SINGLE OPERATOR

Zone	Call	Score	Zone	Call	Score
1	KL7AC	940,470	21	A45XR	6,440,715
2	No Entry		22	VU2NGB	133,172
3	W6AX	3,024,213	23	JT1BH	620,928
4	W9RE	3,491,945	24	BY4SZ	457,974
5	K1AR	7,681,280	25	JH4UYB	3,787,542
6	XE2DV	393,432	26	3W5FM	180,432
7	YN6WW	1,041,084	27	DX1S	4,292,160
8	8P9Z	9,097,132	28	V8EA	4,886,280
9	P40E	12,668,701	29	VK6BAT	5,034,769
10	HC8N	10,475,365	30	VK2AYD	1,311,771
11	ZP0Z	2,433,340	31	KH6TO	1,399,828
12	CE3IDY	54,810	32	FK8HC	764,218
13	AY1I	1,838,852	33	EA8EA	11,794,880
14	GI0KOW	6,089,722	34	No Entry	
15	4N9BW	3,892,152	35	6V1C	1,905,360
16	UT6Q	3,229,591	36	ZD8Z	2,357,967
17	UA9CDC	1,648,512	37	5X1Z	3,425,360
18	RZ9UA	2,303,818	38	3DA5A	4,946,766
19	RK0FWL	2,018,632	39	3B8/F6HMJ	173,664
20	JY9QJ	3,201,878	40	OX/OZ8AE	399,555

### TOP SCORES IN VERY ACTIVE ZONES

ZONE 3	
W6AX	3,024,213
K6LA	1,908,393
W2VJN/7	1,466,328
K6ZM	1,442,928
*XO7X	1,112,756
N6TU	1,050,226
N7TT	1,032,300
N6RV	.987,374
W7SE	.769,652
*W6JTI	.763,889

ZONE 15	
4N9BW	3,892,152
S51BO	3,660,589
SP4Z	3,212,452
YU7AV	2,250,885
OH6RX	2,087,940
*S50A	2,037,464
OH6WZ	1,998,308
LY3AV	1,983,780
*S59AA	1,924,320
*HA1CW	1,896,450

ZONE 4	
W9RE	3,491,945
K5GN	3,180,156
K5YA	2,704,156
W4PA	2,596,374
K0EU	2,421,384
K5NA	2,157,300
K4AB	2,011,386
WB0O	1,871,540
K9MA	1,739,814
K9WIE	1,588,090

ZONE 16	
RN6BY	3,410,337
UT6Q	3,229,591
UT4UZ	2,821,250
US1U	1,839,816
UA6LT	1,539,522
UX1UA	1,062,480
UX4CW	919,125
UY1HY	904,791
UA1OMS	872,088
EM8I	867,588

ZONE 5	
K1AR	7,681,280
W1KM	5,416,800
K3ZO	5,212,498
KQ2M/1	4,940,795
W4AN	4,818,683
N6BV/1	4,733,088
W3BGN	3,897,680
K1RU	3,548,171
W1WEF	3,245,946
WC4E	2,962,872

ZONE 25	
JH4UYB	3,787,542
JH5FXP	3,647,600
JH7WKQ	2,429,616
JA8RWU	2,307,312
JH7XGN	2,127,034
JH0FUW	2,052,501
JS3CTQ	1,754,976
JF3CCN	1,125,237
JA9CWJ	1,089,842
JH8SLS	776,340

ZONE 14	
GI0KOW	6,089,722
G4BUO	4,136,175
DL6FBL	4,088,526
G0IVZ	3,270,960
OZ1LO	2,565,871

## TOP SCORES

<b>WORLD</b>		<b>TOP SCORES</b>	
Single Operator	21 MHz	USA	21 MHz
All Band	VP5EA ..... 802,560	All Band	WB4TDH ..... 237,020
P40E.....12,668,701	PU2MHB ..... 508,896	K1AR ..... 7,681,280	WA1FCN ..... 193,294
EA8EA.....11,794,880	7X2RO ..... 382,044	W1KM ..... 5,416,800	K2MFY ..... 125,608
HC8N.....10,475,365	LW9ETY ..... 335,219	K3ZO ..... 5,212,498	K2ACW/4 ..... 121,240
8P9Z.....9,097,132	UA4LL ..... 309,907	N2NT ..... 5,207,938	K5MU ..... 117,602
9Y4H.....9,063,469	UA4POL ..... 294,460	N2LT ..... 5,054,070	K9RN/M ..... 94,637
FS5PL.....8,639,730	14 MHz	KQ2M/1 ..... 4,940,795	
K1AR ..... 7,681,280	VK2APK ..... 521,254	W4AN ..... 4,818,683	
A45XR.....6,440,715	RA9AA ..... 340,950	N6BV/1 ..... 4,733,088	
8R1K.....6,244,185	LU4FM ..... 338,883	W3BGN ..... 3,897,680	
GI0KOW.....6,089,722	HA8RH ..... 309,694	K1RU ..... 3,548,171	
28 MHz	S58A ..... 297,024	28 MHz	
CX5X.....863,418	JA7XBG ..... 295,659	W4YY ..... 152,750	
CX5BW.....733,720	7 MHz	W4XJ ..... 98,672	
CX9BAG ..... 527,975	5B4/EU1AA ..... 434,248	KZ5MM ..... 80,569	
KH8/N5OLS.....399,872	PA3AAV ..... 328,017	NT6TT ..... 54,400	
PY2XB ..... 397,026	T95A ..... 234,496	W3NO ..... 48,384	
9X0A.....367,875	OM5AW ..... 192,194	K0KE ..... 47,380	
21 MHz	VP5EA ..... 188,595	21 MHz	
ZD8Z ..... 2,357,967	CO2JD ..... 143,699	N4CT ..... 471,520	
ZP5XF ..... 1,926,056	3.5 MHz	K9IG ..... 441,524	
AY1I.....1,838,852	IK4WMG ..... 156,840	K4ZA ..... 435,587	
FM5DP.....1,045,050	YU7CB ..... 129,375	WW4RR ..... 393,000	
9Y4VU.....763,224	4L5O ..... 122,375	W6YA ..... 366,324	
JA5DQH ..... 575,952	YU1KR ..... 112,765	W6NL ..... 335,064	
14 MHz	HA8EU ..... 107,278	14 MHz	
P40J ..... 1,548,792	YP2R ..... 95,510	W8UN ..... 722,520	
P40R ..... 1,545,248	1.8 MHz	K8DX ..... 556,160	
CT3BX ..... 1,461,397	HA8BE ..... 60,553	W9IW ..... 550,605	
5X1T ..... 1,243,315	OM3OM ..... 44,557	K9BG ..... 414,024	
9K2GS ..... 1,242,439	UU4JMG ..... 37,347	N4PN ..... 370,662	
5B4AGC ..... 1,139,160	HA0EQ ..... 29,898	N7BZ ..... 343,305	
7 MHz	YU1RA ..... 34,488	7 MHz	
C4A ..... 1,289,310	OK1JOC ..... 26,260	N7DD ..... 488,160	
9M6NA ..... 1,041,012	QRP	W5UN ..... 424,855	
9A5Y ..... 890,841	All Band	NX7K ..... 375,914	
OK1RF ..... 850,402	AA2U ..... 839,272	K9DX ..... 330,750	
OH0MAM ..... 763,506	YT7TY ..... 769,923	N2PP ..... 326,808	
JA5THU ..... 726,033	DL6RDR ..... 726,396	W7GG ..... 326,120	
3.5 MHz	LY3BA ..... 617,100	3.5 MHz	
GW3YDX ..... 508,388	WA2HZR ..... 612,968	W1MK ..... 297,476	
SN3A ..... 489,402	K3PH ..... 507,540	WB9Z ..... 99,232	
TK5EP ..... 364,650	K1RC ..... 476,640	K5NU ..... 89,568	
SM4HCM ..... 362,098	LY2FE ..... 393,499	W8RT ..... 81,918	
LY6K ..... 314,557	N7IR ..... 386,450	W1UK ..... 78,176	
W1MK ..... 297,476	DL3KVR ..... 348,150	K0RF ..... 65,439	
1.8 MHz	Assisted	7 MHz	
VE3BMV/1 ..... 170,400	All Band	AA2U ..... 839,272	
T11C ..... 158,842	FM5DN ..... 7,215,779	W5UN ..... 424,855	
TK5NN ..... 149,940	K1NG ..... 6,168,504	NX7K ..... 375,914	
CT3/OH1MA ..... 144,760	K3WW ..... 5,585,568	K9DX ..... 330,750	
UA2FJ ..... 134,128	K3MM ..... 4,521,866	N2PP ..... 326,808	
GW7J ..... 122,364	K2TW ..... 3,951,313	W7GG ..... 326,120	
Low Power	K2NG ..... 3,895,115	3.5 MHz	
All Band	N3AD ..... 3,340,500	W1MK ..... 297,476	
3V8BB ..... 6,615,489	K1AM ..... 3,141,040	WB9Z ..... 99,232	
VP2EEB ..... 5,444,340	K3NZ ..... 2,929,379	K5NU ..... 89,568	
WP2Z ..... 3,678,426	W2XX ..... 2,867,193	W8RT ..... 81,918	
UA0JQ ..... 2,479,092	N2BA ..... 2,169,720	W1UK ..... 78,176	
N2BA ..... 2,169,720	KN4T ..... 2,059,051	K0RF ..... 65,439	
KN4T ..... 2,059,051	K1VUT ..... 1,656,348	1.8 MHz	
S50A ..... 2,037,464	WA1LNP ..... 1,639,602	K2XA ..... 14,559	
S59AA ..... 1,924,320	P3A ..... 11,755,121	K8MK ..... 12,408	
FG5EY ..... 1,750,012	KP3Z ..... 10,135,725	K2NG ..... 3,895,115	
K1VUT ..... 1,656,348	5A2A ..... 9,614,220	W2VO ..... 11,868	
28 MHz	N2NU ..... 9,139,372	N6SS/7 ..... 10,058	
AZ9W ..... 685,170	6D2X ..... 8,881,075	K1VW ..... 9,570	
LU9AUY ..... 631,359	Multi-Operator	Low Power	
LW4DYI ..... 552,288	Multi-Transmitter	All Band	
LU2DPW ..... 335,875	Single Transmitter	N2BA ..... 2,169,720	
PU2RUX ..... 316,479	ZF1A ..... 11,971,520	KN4T ..... 2,059,051	
LU3WEU ..... 311,745	P3A ..... 11,755,121	K1VUT ..... 1,656,348	
21 MHz	KP3Z ..... 10,135,725	WA1LNP ..... 1,639,602	
VP5EA ..... 802,560	5A2A ..... 9,614,220	P3A ..... 11,755,121	
PU2MHB ..... 508,896	N2NU ..... 9,139,372	KP3Z ..... 10,135,725	
7X2RO ..... 382,044	6D2X ..... 8,881,075	5A2A ..... 9,614,220	
LW9ETY ..... 335,219	Multi-Operator	28 MHz	
EA4ZS ..... 21,915,001	Multi-Transmitter	K4WA ..... 37,149	
J39A ..... 19,336,338	AI2C/4 ..... 36,576	AI2C/4 ..... 36,576	
VE3EJ ..... 18,437,120	W3EP/1 ..... 31,824	W3EP/1 ..... 31,824	
KC1XX ..... 16,680,192	W5ZQ ..... 23,489	W5ZQ ..... 23,489	
21 MHz	N6EE ..... 9,733	K9OM ..... 14,012	
All Band		N3RS ..... 11,837,336	
		W1MD ..... 9,982,868	
		28 MHz	
		CU2/ ..... 32,805	
		G3WVG ..... 172,161	
		SP9W ..... 56,931	
		CT1AOZ ..... 47,073	
		S52OT ..... 43,296	
		S51W ..... 34,335	
		S50Q ..... 32,805	
		Multi-Operator	
		Multi-Transmitter	
		OH2HE ..... 12,140,675	
		DF0HQ ..... 12,036,354	
		EA6IB ..... 10,580,839	
		SL3ZV ..... 10,498,326	
		TF3IRA ..... 10,358,889	
		HG6N ..... 10,295,646	



*KG7XC during the contest. (Photo by W7IVB)*

VP5EA (WD5N), L3.5 XM7A (VE7SV); Q14 K3OO, AA FM5DN (YT6A).

**USA:** ALL K1AR, LA N2BA, Q14 K3OO, AA K1NG (K1G).

**OCEANIA:** 7 MHz 9M6NA (JE1JKL), 1.8 MHz KH6CC, L14 VK2APK, Q21 KH6/W1VT, Q3.5 YC2OK.

**SOUTH AMERICA:** 21 ZP5XF (LU2BRG), L28 AZ9W (LU5UL), Q21 HK3/SM5CCT, A21 LU7EAR.

Several battles that bear special mention took place during the contest. Out in the western USA, it took a real effort to nail down first on 21 MHz in W6. Jim, W6YA, just edged out Dave, W6NL (ex-W6QHS), with K6AW (at N6RO) and N6MU not far behind. On 7 MHz in W7 four stations finished with over 1000 QSOs, with Larry, N7DD, leading the way. Over in Yugoslavia a similar rivalry occurred. YU7NU took first place over YT1BB and YT7AA.

If you really want to check out where heat was generated look at second place in the All Band High Power of W4. Seven stations led by Jeff, WC4E, broke the 2 million point barrier. They turned off their amps and went low power with a vengeance. In the first call area USA the battle was terrific for third place. Take a look at their scores. K1VUT was ahead at the bell over WA1LNP, WA1S, and KM1X.

The friendly 14 MHz rivalry between Bob, WX4G (P40J) and Bob, K4UEE (P40R) was a virtual dead heat. Congratulations to both fine operators. For top Multi-Multi honors above 60 degrees latitude the competition was tough, and when the aurora cleared up KL7Y had just edged out the fine Finnish station OH2HE. The new NA Low Power record belongs to VP2EEB (AA3B). Joe's log was very accurate. What a good job.

A real special mention must be made of KH7R, who had the highest combined SSB/CW Multi-Multi total in the contest. We all know that their effort was remarkable. They stuck with it and the trophy is theirs.

The long-anticipated DXpedition of a German team to activate 5A2A came off right on schedule. I imagine they were a new country and zone for thousands of the deserving. It took a lot of planning to bring about their effort. On SSB 5A1A submitted a log, and now there was the Multi-Single effort of 5A2A. Let's hope more chances occur for 5A activity.

Two Russian Multi-Op groups headed to warmer parts of Asia. The P3A group was mentioned earlier. The Multi-Single effort of 8Q7DV sure handed out a lot of the elusive zone 22 multipliers.

Special mention must be made of three new



# CABLE X-PERTS, INC.

## COAX (500HM "LOW LOSS" GROUP)

	100FT/UP	500FT	1000FT
"FLEXIBLE" 9913 STRD BC CNTR FOIL + 95% BRAID 2.7dB @ 400MHz NC/DB/UV JKT...	.58/FT	.56/FT	.54/FT
LMR 400 SOLID CCA CNTR FOIL + BRAID 2.7dB @ 450MHz WP/UV JKT.....	.59/FT	.57/FT	.55/FT
LMR 40C "ULTRA-FLEX" STRD BC CNTR FOIL + BRAID 3.1dB @ 450 MHz TPE JKT.....	.79/FT	.78/FT	.77/FT
LMR 600 (OD.590') SOLID CCA CNTR FOIL + BRAID 1.72dB @ 450 MHz WP/UV JKT.....	1.25/FT	1.22/FT	1.20/FT
LDF4-50A 1/2" ANDREW HELIAX® 1.51dB @ 450MHz.....	2.55/FT/UP	2.10/FT	

## COAX (50 OHM "HF" GROUP)

	100FT/UP	500FT	1000FT
RG213/U STRD BC MIL-SPEC NC/DB/UV JACKET 1.2 dB/2500WATTS @ 30MHz.....	.36/FT	.34/FT	.32/FT
RG8/U STRD BC FOAM 95% BRAID UV RESISTANT JKT 0.9dB/1350WATTS @ 30MHz.....	.32/FT	.30/FT	.28/FT
RG8 MINI(X)95% BRAID UV RESISTANT JACKET 2.0dB/875 WATTS @ 30MHz.....	.15/FT	.13/FT	.12/FT
RG58/U 95% BRAID UV RESISTANT JACKET 2.5dB/400 WATTS @ 30MHz.....	.15/FT	.13/FT	.11/FT
HG58/U STRD CENTER 95% TC BHD UV RESISTANT JKT 2.6dB/350 WATTS @ 30MHz.....	.17/FT	.15/FT	.13/FT
RG217/U SOLID BC 2 95% BC BRD NC/DB/UV JKT .70dB/4000WATTS @ 30MHz.....	1.00/FT	.85/FT	.80/FT

## COAX (50 OHM Teflon® GROUP)

	100FT/UP	500FT	1000FT
RG142/U SOLID SCCS 2-95% SILVER BRAIDS Teflon® JKT 8.2cB/1100WATTS @ 400MHz.....	25FT/UP	1.25/FT	
RG303/U SOLID SCCS 1-95% SILVER BRAID Teflon® JKT 8.6cB/1100WATTS @ 400MHz.....	25FT/UP	1.00/FT	

## COAX (75 OHM GROUP)

	100FT/UP	500FT	1000FT
RG11/U SOLID BC (VP-78%) 95% BRAID NC/DB/UV JKT 1.1cB/800WATTS.....	40/100FT/UP	.38/500FT	.36/1000FT
RG11A/U STRD BC (VP-66%) 95% BRAID NC/DB/UV JKT 1.3cB/1000WATTS.....	42/100FT/UP	.40/500FT	.38/1000FT
RG6/U CATV FOAM 18GA CCB FOIL + 60% ALUM BRAID.....	14/100FT/UP	.12/500FT	.10/1000FT

## LADDER LINE GROUP

	100FT/UP	500FT	1000FT
450 OHM 18GA SOLID CCS (POWER: FULL LEGAL LIMIT).....	.12/FT	.10/FT	.09/FT
"FLEXIBLE" 450 OHM 16GA COMPRESSED STRD CCS (PWR-FULL LEGAL LIMIT+.....	.20/FT	.18/FT	.16/FT
"FLEXIBLE" 450 OHM 14GA COMPRESSED STRD CCS (PWR-FULL LEGAL LIMIT+.....	.25/FT	.24/FT	.23/FT
300 OHM 20GA STRD (POWER: FULL LEGAL LIMIT).....	.15/FT	.13/FT	.12/FT

## ROTOR & CONTROL CABLES

	100FT/UP	500FT	1000FT
5971 B/COND (2/18 6/22) BLK UV RES JKT. Recommended up to 125ft.....	.20/FT	.18/FT	.16/FT
5571CPS125. 125ft (cable same as above) w/Jones plug to socket assembly.....	\$39.95/ea		
1618 B/COND (2/16 6/18) BLK UV RES JKT. Recommended up to 200ft.....	.35/FT	.34/FT	.32/FT
1418 B/COND (2/14 6/18) BLK UV RES JKT. Recommended up to 300ft.....	.47/FT	.45/FT	.43/FT
1216 B/COND (2/12 6/16) BLK UV RES JKT. Recommended up to 500ft.....	.78/FT	.74/FT	.70/FT
2206 22GA STRD 6/COND PVC JACKET.....	.18/FT	.16/FT	.14/FT
1806 18GA STRD 6/COND PVC JACKET.....	.23/FT	.21/FT	.19/FT

## ANTENNA WIRE (UNINSULATED BARE COPPER)

	100FT/UP	500FT	1000FT
14GA 168 STRD "SUPERFLEX" (great for Quads & Portable set-ups etc.).....	.12/FT	.10/FT	.08/FT
14GA 7 STRD "HARD DRAWN" (perfect for permanent Dipoles etc.).....	.08/FT	.07/FT	.06/FT
14GA SOLID "COPPERWELD" (for long spans etc.).....	.08/FT	.07/FT	.06/FT
14GA SOLID "SOFT DRAWN" (for ground radials etc.).....	.08/FT	.07/FT	.06/FT
ROPE: 3/16" DOUBLE BRAID "DACRON" 770# TEST WEATHERPROOF.....	.12/FT	.09/FT	.08/FT

**CABLE & WIRE CUT TO YOUR SPECIFIC LENGTH • WE STOCK AND INSTALL CONNECTORS TOO.**

## TINNED COPPER "FLAT" GROUNDING BRAID

	1 INCH WIDE (equivalent to 7ga).....	25FT \$22.00.....	50FT \$43.00.....	100FT \$85.00.....
1/2 INCH WIDE (equivalent to 10ga).....	25FT \$12.50.....	50FT \$24.00.....	100FT \$48.00.....	
<b>CONNECTORS</b> Both connectors fit 9913 types and LMR400.....				MADE IN USA
PL 259 SILVER/Teflon/GOLD TIP.....	10PC \$11.00.....	25PC \$25.00.....	50PC \$47.50.....	100PC \$90.00.....
"N" (2PC) SILVER Teflon/GOLD TIP.....	10PC \$32.50.....	25PC \$75.00.....	50PC \$143.75.....	100PC \$275.00.....

## COAX W/SILVER Teflon® PL259's EA END (soldered & tested)

	100FT "FLEXIBLE" 9913 FOIL+95% BRAID 2.7dB @ 400MHz.....	69.95/EA
75FT "FLEXIBLE" 9913 FOIL+95% BRAID 2.7dB @ 400MHz.....	54.95/EA	
50FT "FLEXIBLE" 9913 FOIL+95% BRAID 2.7dB @ 400MHz.....	39.95/EA	
25FT "FLEXIBLE" 9913 FOIL+95% BRAID 2.7dB @ 400MHz.....	24.95/EA	

	6FT "FLEXIBLE" 9913 FOIL+95% BRAID 2.7dB @ 400 MHz.....	12.95/EA
3FT "FLEXIBLE" 9913 FOIL+95% BRAID 2.7dB @ 400 MHz.....	11.95/EA	
100FT RG213/U MIL-SPEC BURIAL JKT 1.5dB @ 50MHz.....	49.95/EA	
75FT RG213/U MIL-SPEC DIRECT BURIAL JKT 1.5dB @ 50MHz.....	39.95/EA	
50FT RG8MINI(X) 95% BHD UV RES JKT 2.5dB @ 50MHz.....	24.95/EA	
25FT RG213/U MIL-SPEC DIRECT BURIAL JKT 1.5dB @ 50MHz.....	19.95/EA	

	6FT RG213/U MIL-SPEC DIRECT BURIAL JKT 1.5 dB @ 50MHz.....	11.95/EA
3FT RG213/U MIL-SPEC DIRECT BURIAL JKT 1.5 dB @ 50MHz.....	9.95/EA	
100FT RG8MINI(X) 95% BHD UV RES JKT 2.5dB @ 50MHz.....	24.95/EA	
50FT RG8MINI(X) 95% BHD UV RES JKT 2.5dB @ 50MHz.....	15.95/EA	

## FLEXIBLE 2/COND RED/BLK DC POWER "ZIP" CORD

	8GA (rated:10 amps).....	25FT \$16.00.....	50FT \$31.00.....	100FT \$60.00.....
10GA (rated:30 amps).....	25FT \$10.50.....	50FT \$19.00.....	100FT \$36.00.....	
12GA (rated:20 amps).....	25FT \$8.00.....	50FT \$14.00.....	100FT \$26.00.....	
14GA (rated:15 amps).....	25FT \$6.00.....	50FT \$10.00.....	100FT \$18.00.....	

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**TECH INFO: 847-520-3003**

**FAX: 847-520-3444**

**TECH INFO HOURS: M-F 9-11AM**

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**416 Diens Drive, Wheeling, IL 60090**

## CLUB SCORES

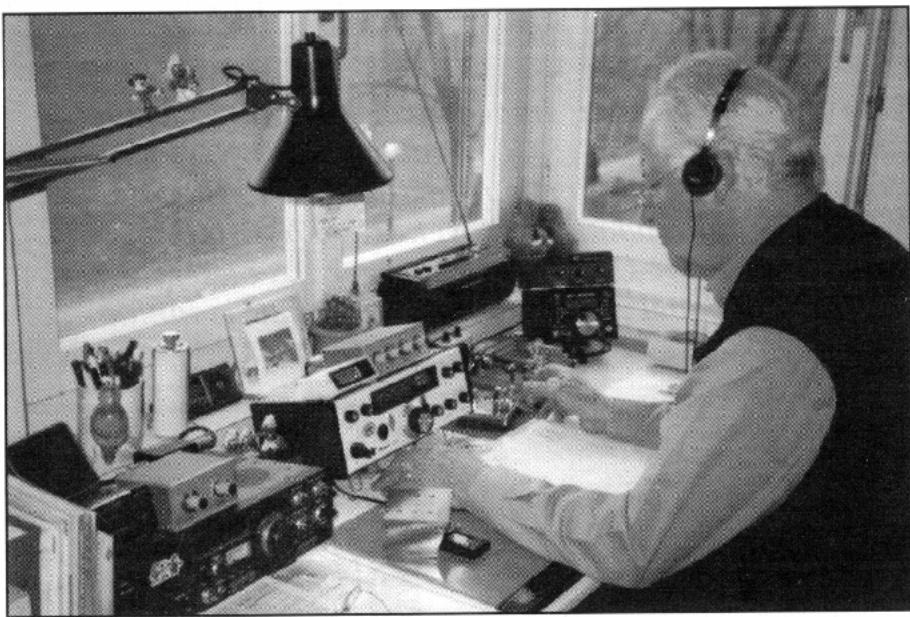
### USA

Frankford Radio Club .....	360,666,652
Yankee Clipper Contest Club .....	296,323,389
Potomac Valley Radio Club .....	135,331,448
North Coast Contesters .....	71,646,476
Southern California Contest Club .....	63,201,476
Northern California Contest Club .....	38,745,146
Southeast Contest Club .....	35,595,321
Society of Midwest Contesters .....	34,906,592
Central Arizona DX Association .....	28,732,781
Mad River Radio Club .....	27,739,830
North Texas Contest Club .....	21,731,953
Florida Contest Group .....	15,245,003
Southern California DX Club .....	14,802,986
Minnesota Wireless .....	14,691,580
North Florida DX Association .....	14,600,358
Tennessee Contest Group .....	12,890,801
Willamette Valley (W7) .....	12,212,833
Western Washington DXC .....	11,280,915
Texas DX Society .....	9,552,727
Rochester DX Association .....	9,267,057
Central Texas DX & Contest Club .....	8,989,189
Order Of Boiled Owls NY .....	8,347,756
Carolina DX Association .....	6,701,107
Kentucky Contest Group .....	6,439,882
Southwest Ohio DXA .....	6,340,185
Oklahoma Dx Association .....	5,404,169
Grand Mesa DX Club .....	5,381,721
River City Contesters .....	4,564,742
Mile High DX Association (W0) .....	3,832,300
Southeast DX Club .....	3,493,434
Hoosier Contesters .....	3,100,356
Carolina DX Association .....	2,962,680
Western New York DXA .....	2,952,399
Eastern Iowa DX Association .....	2,927,536
Kansas City DX Club .....	2,729,716
Central Florida DX Association .....	2,048,640
Salt City DX Club (W2) .....	1,943,399
Northern Ohio DX Association .....	1,926,956
Mother Lode Contest & DXC (W6) .....	1,847,687
Northern Minnesota DX Association .....	1,799,927
American Red Cross EC .....	1,268,504
CT & RI Contest Group .....	1,089,088
No Dot Dxers (W9) .....	877,008
Metro DX Club (W9) .....	845,357
Northern California DX Club .....	817,081
Mississippi Valley DXCC .....	713,484
Northern Arizona DXA .....	648,551
Sterling Park ARC (W4) .....	589,524
CA Central Coast DX Club .....	589,156
San Diego DX Club .....	567,877
Bay Area DXers (W8) .....	566,764
West Park Radio Ops (W8) .....	511,604
Valley RC of Oregon .....	448,890
Northern Shenandoah DXA .....	411,040
Great Falls ARC (W7) .....	403,118
Ozaukee Radio Club (W9) .....	378,491
Franklin Co ARC (W4) .....	245,661
Northrop-Grumman RC .....	172,084
Yegua Valley Contest Club (W5) .....	147,966
Roanoke Valley ARC .....	112,084
Downey ARC .....	104,823
Weekend Warriors Contest Club (W3) .....	66,121
South Jersey Radio Association (W2) .....	45,257

### DX

Rhein-Ruhr DX Association .....	117,415,172
Bavarian Contest Club .....	100,424,862
Contest Club Finland .....	98,856,233
Russian Contest Club .....	64,250,564
French Contest Club .....	50,189,267

Marconi Contest Club (I) .....	49,525,800
Slovenian Contest Club .....	47,938,084
Araucaria DX Group .....	35,175,089
LYNX DX Group (EA) .....	35,081,467
Croatian Contest Club .....	28,300,977
Chiltern DX Association (G) .....	26,397,844
SP DX Club .....	23,883,031
YU Contest Club .....	22,747,850
Low Land Crazy Contesters (PA) .....	22,259,544
GPDX (CT) .....	21,638,374
Rosario RC (LU) .....	20,272,951
Kaunas University Technical College .....	19,015,762
Japan Crazy Contesters .....	17,380,502
Mt. RF (JA3) .....	17,263,731
HA DX Club .....	16,905,411
LNDX (F) .....	15,776,397
Sky Sat Contest Club (YU) .....	12,783,115
Vojvodina Contest Club (YU) .....	12,727,213
UA2 Contest Club .....	12,494,706
Lithuanian DX Group .....	12,481,569
Top of Europe Contesters .....	12,197,178
Ukrainian Contest Club .....	11,159,628
YU DX Club .....	9,946,743
Crimean Contest Club .....	8,443,562
Ural Contest Group (UA9) .....	7,673,454
Czech Contest Club .....	7,309,752
Lyon DX Gang (F) .....	7,093,526
Pretoria Contest Club .....	5,631,697
Taganrog Contest Club .....	5,617,137
TUPY (PY2) .....	5,545,415
OZ9EDR Club .....	4,649,135
Kharkov Region ARS (Ukraine) .....	3,973,675
Sao Paolo Contest Group .....	3,965,891
Far East Island DX Club .....	3,629,577
Bavarian DX Group .....	2,993,861
Danish DX Group .....	2,977,438
Koryazhma DX Company .....	2,792,782
LU4AA Club .....	2,450,380
Sarajevo DX Group (T9) .....	2,387,624
SP Contest Club .....	2,358,821
GADX (LU) .....	2,339,346
GACW (LU) .....	2,331,803
Z30M Contest Team .....	2,194,274
Radio Club Uruguay .....	2,137,678
SV2TSL Club .....	1,895,068
Fox Contest Club (YU) .....	1,554,303
West Island ARC (VE2) .....	1,487,082
Shizuoka DX Association (JA2) .....	1,466,799
NOL (ON) .....	1,223,032
Saipan ARC .....	1,196,429
Perugia Radio Club (I) .....	1,180,860
BC DX Club (VE7) .....	1,030,736
Southern Germany DX Group .....	1,019,636
Osona (EA3) .....	1,019,213
SN6O Club .....	1,007,591
CW Philippines .....	979,735
Susa Valley Team (I1) .....	913,208
Warsaw DX Club .....	844,906
Tallinn Radio Club .....	643,503
Granada (EA) .....	617,488
OH3NE Club .....	584,408
Nr. 13 (EA1) .....	533,059
Northern Lithuania DX Group .....	442,629
Globus (Ukraine) .....	422,030
Macedonia DX Club .....	323,684
Beenster Contest Club .....	256,277
Geo DX Group (DL) .....	235,193
French CQ Contest Gang .....	193,927
Tokyo International ARA .....	173,597
LY CW Contest Club .....	148,273
Ivanovo DX Club .....	124,988
EA DX Club .....	69,801



*QRPer HB9XY puts another QSO in the log.*

QSO records set in the contest. Jim, ZD8Z (N6TJ), made 4589 QSO on 21 MHz only! This is a new all-time single QSO total for any single band in the CQ WW CW. The Multi-Multi station 5V7A had a 20 meter QSO total of 4506 for a new 14 MHz QSO record, and the Multi-Multi 6Y4A had a 7 MHz QSO total of 3724 for a new Single Band record.

### Comments

With all the modern tools available to validate the scores and allow the winners to really cel-

ebreate their win, there might be a tendency to lose focus about what contesting is about. You enter a contest to have fun! The buzz of the bands coming to life is a siren's song that can't be resisted. The new ones you might work, finding that your signal *can* work a lot of people, and your personal motivation to do well are just the tip of the iceberg. Each contest is a learning experience about propagation, your own skills, and the skills of others. The UBN's that the CQ WW Contest Committee released about last year's contest were received with enthusi-

asm. Each entrant can privately review his log and other data in his/her directory on the CQ WW web site. What a great opportunity to have fun and increase your operating skills at the same time.

Please send us your log in electronic format. The easiest way to do this is to send your CW log to <cw@cqww.com> and your SSB log to <ssb@cqww.com>. Your log will help validate the winners, and you get something back, too. You can check the CQ WW home page at <http://www.cqww.com>. There you will find the latest rules and other interesting information, including directions on how to submit an e-mail log entry.

### The Distance Rule

One of the unsettling parts of this job is the rumors each year we receive about some Multi-Op station that is operating in violation of the distance rule (Rule III). The rule states, "All transmitters and receivers must be located within a 500 meter diameter circle or within the property limits of the station licensee's address, whichever is greater." Some teams decide that they cannot win if they must be confined to only 500 meters. We have heard many reasons to justify this type of thinking: "We cannot afford it." We are in a city and can't find 500 meters." We find it easier to reduce interference if we locate stations 30 km apart; after all isn't everyone doing it?"

It sure makes life easier and the score bigger if 20 meters is in one city and 40 meters is in another! The multi can then even run two signals on each band. Many of these Multi-Op teams are driven by wrong information or past bad habits. The truth is that most Multi-Op entries obey the distance rule. Through their skill they have overcome station interference

## BAND-BY BAND BREAKDOWN—TOP ALL BAND SCORES

**Number groups indicate: QSOs/Zones/Countries on each band**

### WORLD TOP SINGLE OPERATOR, ALL BAND

Station	160	80	40	20	15	10	Station	160	80	40	20	15	10
P40E	352/16/32	778/23/79	1476/30/98	1085/30/98	1706/34/107	1076/28/76	K1AR	50/12/38	400/20/79	1238/32/105	1053/38/118	982/32/106	314/24/76
EABEA	112/14/44	751/22/67	1237/35/92	1473/35/92	1736/34/93	1187/27/94	W1KM	65/16/50	529/23/79	726/26/89	910/32/98	748/30/90	195/19/58
HC8N	398/16/38	480/16/60	1122/28/84	878/30/84	2002/32/101	1312/26/71	K3ZO	34/11/23	303/18/68	808/32/100	875/34/105	786/29/94	314/21/64
9Y4H	239/13/35	396/21/66	1598/31/94	704/30/83	1355/31/87	999/30/78	N2NT	49/14/29	201/17/62	1105/32/101	742/33/92	947/27/98	212/22/62
FS5PL	283/11/29	726/18/71	1072/26/83	1111/33/91	1639/33/92	1341/28/78	N2LT	28/11/20	238/14/62	669/34/107	804/36/107	904/29/94	335/24/77
K1AR	50/12/38	400/20/79	1238/32/105	1063/38/118	982/32/106	314/24/76	KO2M/1	47/13/37	246/19/69	1052/32/109	757/32/98	646/26/102	248/23/69
A45XR	174/7/37	354/19/60	718/27/74	779/33/97	1254/32/97	810/28/78	W4AN	32/10/20	76/19/53	839/30/95	763/35/109	1110/27/95	186/24/70
8R1K	97/9/17	304/13/50	1074/22/73	1031/32/89	1145/26/84	755/29/77	N6BW/1	44/13/33	204/13/59	815/23/86	835/34/102	863/24/91	252/21/65
GI0KOW	350/14/62	824/18/75	1267/31/104	1056/30/90	942/29/94	470/19/53	W3BGN	54/13/39	150/17/58	596/30/95	704/32/91	642/24/91	281/24/73

### WORLD MULTI-OPERATOR SINGLE TRANSMITTER

ZF1A	121/16/44	568/20/76	2332/30/103	1397/38/130	2139/32/109	489/28/78	N2NU	51/17/58	198/23/91	1202/35/126	1072/38/132	1015/34/129	304/31/105
P3A	367/11/56	1223/21/89	1600/33/108	1152/35/116	1815/36/123	311/28/77	K1ZZ	59/15/49	162/22/81	898/34/119	935/37/130	730/30/122	261/29/105
KP3Z	158/17/59	618/23/93	1730/28/102	945/37/126	1666/32/106	1015/31/91	K8AZ	33/18/38	117/24/81	926/35/125	826/37/138	773/35/121	257/29/93
5A2A	294/13/53	769/17/78	1530/29/95	760/33/103	1726/38/109	381/28/64	W4WA	22/14/29	107/21/69	656/34/114	512/38/121	902/33/119	134/28/82
N2NU	51/17/58	198/23/91	1202/35/128	1072/38/132	1015/34/129	304/31/105	W9JA	32/17/36	94/24/83	589/36/114	561/38/126	687/33/118	211/23/90
6D2X	255/14/30	517/22/70	2000/33/108	1136/37/108	1786/33/111	435/28/72	N0NI	59/15/30	92/21/75	777/36/109	708/38/122	632/33/117	87/26/80

### WORLD MULTI-OPERATOR MULTI-TRANSMITTER

5V7A	326/19/56	683/26/74	2805/38/120	4506/39/145	3725/38/136	1556/30/115	KC1XX	175/20/75	672/26/100	1937/37/136	2011/39/141	1643/35/135	708/30/114
6Y4A	886/22/66	1908/28/95	3724/33/125	3719/40/148	3032/35/127	1501/29/88	K3LR	141/22/64	520/30/102	1778/38/136	1768/40/149	1654/36/135	643/33/111
EA8ZS	320/13/61	1066/22/81	2122/33/115	2738/37/138	2834/39/138	1068/31/101	W3LPL	175/20/64	625/29/97	1550/36/134	2028/40/144	1526/33/129	641/31/109
J39A	395/14/49	1274/24/93	2381/31/109	3570/36/131	2371/33/113	1512/31/74	K1KI	137/19/61	491/24/85	1555/38/129	2151/40/152	1531/34/129	415/30/105
VE3EJ	671/17/55	1074/27/98	2826/36/132	2335/40/146	1894/34/124	820/30/93	N3RS	76/16/48	357/21/84	1484/36/128	1692/39/140	1458/34/133	495/39/102
KC1XX	175/20/75	672/26/100	1937/37/136	2011/39/141	1643/35/135	708/30/114	W1MD	90/18/50	424/23/88	805/34/20	1734/38/139	1398/34/124	353/29/101

### USA MULTI-OPERATOR SINGLE TRANSMITTER

N2NU	51/17/58	198/23/91	1202/35/126	1072/38/132	1015/34/129	304/31/105
K1ZZ	59/15/49	162/22/81	898/34/119	935/37/130	730/30/122	261/29/105
K8AZ	33/18/38	117/24/81	926/35/125	826/37/138	773/35/121	257/29/93
W4WA	22/14/29	107/21/69	656/34/114	512/38/121	902/33/119	134/28/82
W9JA	32/17/36	94/24/83	589/36/114	561/38/126	687/33/118	211/23/90
N0NI	59/15/30	92/21/75	777/36/109	708/38/122	632/33/117	87/26/80

### USA MULTI-OPERATOR MULTI-TRANSMITTER

KC1XX	175/20/75	672/26/100	1937/37/136	2011/39/141	1643/35/135	708/30/114
K3LR	141/22/64	520/30/102	1778/38/136	1768/40/149	1654/36/135	643/33/111
W3LPL	175/20/64	625/29/97	1550/36/134	2028/40/144	1526/33/129	641/31/109
K1KI	137/19/61	491/24/85	1555/38/129	2151/40/152	1531/34/129	415/30/105
N3RS	76/16/48	357/21/84	1484/36/128	1692/39/140	1458/34/133	495/39/102
W1MD	90/18/50	424/23/88	805/34/20	1734/38/139	1398/34/124	353/29/101



HZ1AB operated by Thomas, SM0CXU.

and other problems inherent in placing up to six stations in a confined area. Most Multi-Op entries are from well-populated areas of Europe and the US. If violations of the distance rule occur, others can see it or hear it. Competition is tough especially for the top positions. It makes it mean more if you place well and have obeyed the rules.

### Thanks

Thanks to the CQ WW log checkers who validated the winners and provided insight into many contesting topics. The 1998 crew includes: K1DG, K3UA, K3ZO, K6NA, KR2Q, N2AA, N2NC, N3ED, N5TJ, N3RA, N6ZZ, N8BQJ, N9RV, W3ZZ, and W7EJ. Our DX advisors were very helpful in offering advice, providing information, and sorting out potential problems. They are CT1BOH, DL6RAI, EA3DU, F6BEE, G3SXW, HS0/G4UAV, I2UIY, JE1CKA, OH2KI, OH2MM, OK2FD, ON6TT, PY5EG, S50A, SM3SGP, UA9BA, and VE3EJ.

A special thanks to Dick, N6AA, who again spent countless hours to make the CQ WW database the best in contesting. The CQ WW uses the software developed by Tree, N6TR, to create the database. John, K2MM, created the entire WWW log entry information. His robot worked smoothly in acknowledging receipt of a log. He also created the search engines utilized by committee members to aid in log checking. Tack, JE1CKA, has created the appearance and non-log data on <ccqww.com>. Translations of the rules into Spanish, Japanese, German, and French were done by EA3DU, JE1CKA, DL6RAI, and F6BEE, respectively. Larry, N6TW, was invaluable in retrieving and processing data from e-mail submissions. Thanks to John, K1AR, for his advice and hard work to make the CQ WW so successful.

Congratulations to all the winners! Try to get a fellow competitor on for a local, friendly competition. To participate and have fun is what contesting is all about!

73 and CU in '98!

Bob, K3EST

### DX QRM

Goose bumps to listen to KH8 on 28 MHz! ... JV3TQE. Because of TVI, I used 20W on 20m during the evening and I made a QSO with KL7RA with only 20W! We can only do this during the CQ WW Contest ... F5PHW. At 2130Z, the bands 7-28 MHz were very open for DX ... LU3DSI. A big thanks to WA7UVJ and W7KJL for tcvr. It is my second life. I have no left foot and with this tcvr I worked many stations ... UA4PA. Throughly enjoyed the contest! The improved sunspot condx helped. However, I had to shut down twice due to lightning and thunderstorms overhead! Bloody amazing! We have not seen rain for months ... VK8AV. I could work 6 continents on 3 bands with a simple dipole. Better condx are coming ... JL7PVR/1. My operation is devoted to my beloved son, Zvonimir, who passed away Nov. 17, 1997 ... YU1BO. Got the tower and beam up 48 hrs before the test. One hr before the test the Galah's decided it was the best perch in VK ... VK2AYD.

My antenna is a fishing rod whip only up 3 meters ... JA1MXY. This was the best contest I have ever taken part in! I have never heard 15 meters so open to the USA ... GØVQR. Thanks agian to KH7R and KL7Y for precious multipliers ... CT1FJK. I used this contest for hunting DX and meeting old friends ... OH2KQ. Finding marvelous conditions on 15 ... G3ESF. A great contest, lots of fun, and my code speed went up. Was sorry to see the contest end ... VE2SKA. Many operators are very professional in automatic sending (very high speed from computer) but have difficulty receiving! ... SP3FIM. My proficiency in CW is somewhat limited so I cannot be absolutely sure that all contacts are 100% correct. When answering me the speed of my counterpart was sometimes so high that I could have misheard their message ... SM5PEY.

My first time in CW mode ... EA7FR. Enjoyable though tiring. Next year must make a more serious effort to work more zone and country multipliers ... GØWHO. First time QRV in a CW contest, but not the last one ... PAØIJM. This is my second attempt at a major international contest, and I must say I gained a lot from the experience. I'll

(Continued on page 94)

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## Results (from page 29)

manage a tribander of some sort in the new year and look forward to improving over this year's efforts . . . *GI4SNC*. Wanted to try to see if DXCC could be worked on 80 CW during a single contest weekend with my decidedly modest setup. With skill, persistence, patience, luck, and great condx, it can be done! Even missed 8 countries that I heard . . . *OH2EA*. In Japan "Loran type A" on 1850 kHz has stopped. But low edge (1800 to 1810 kHz) is clearer than world-wide DX windows (1820–1850 kHz)! Please transmit on these clear frequencies. There are many beacons on 1810–1820 kHz, so it is difficult to receive in this frequency range . . . *JE1SPY*. I learned something. Don't try QRP on 10m during the sunspot minimum . . . *2M0AOK*.

I learn how to make the best use of time each year . . . **G3RSD**. My operating time was less than 14 hours because my XYL decided to make my daughter's wedding party on Nov 29th. Some people don't want to understand ham radio! . . . **XE1VV**. The CQ WW DX Contest was, as expected, a very fine contest with lots of rare DX stations to hear and work. I decided to work only top band, as I would like to test my newly designed antenna . . . **LA7AK**. Ten meters suddenly exploded on Sunday afternoon. Just one country short of DXCC . . . **PA0LOU**. I am QRS operator. I am glad to answer entrants, especially to the usual contest friends . . . **IDKHP**. I am glad to get all seven continents on 10m during the contest . . . **OH5PA**. Fabulous pile-ups on 10m . . . **ZS6KR**. After working KC1XX on 40m at 0858Z, I thought boy, he must have some dipole. Condx on 40 were fabulous. You could hear ZL3CW at noon! . . . **NA2OOC**. CQ WW is a tradition I cannot miss . . . **IK5RLS**. Nice contest. My first CQ CW. Hope to do better next year . . . **YB4JIM**.

Nice multipliers from the Pacific area on 10m, but no NA or SA. Propagation is part of our hobby . . . YO9HP. I'm 15 years old. It's my first WW DX Contest . . . UK8ICO. I love CW and CQ WW DX CW. Age here is 71 . . . OL4M. When I will be president of Russia, all broadcasting television will be prohibited on the whole territory of the Russian Federation . . . UA1OMS. This is my first CQ WW DX CW. I am 17 years old . . . SQ3DWR. My socks rolled down and up when I put 5V7A in my 160 log . . . RA0FA. Conditions on 40m better than on 20m . . . UX5VK. My wife had a baby boy two days before the contest. The planned MS with VK6LW and VK6HD got turned into a 160m single band. The highlight was my last QSO with 5V7A . . . VK6VZ. My first WW contest on 40m. Very interesting! Thanks for the best contest in the world! . . . UN7LG.

Great contest. Looking forward to next year . . .  
**YC6PUP**. This is my first try in CQ WW on QRP. QRP is marvelous . . . **JJ1JGI**. I made more QSOs on 160m than on 80m. Incredible! . . . **LU1EWL**. My hand shook because it was my first time in a CW contest . . . **DU3RCM**. I could make 100 more QSOs than last year, but the same mult. I need better antennas . . . **JH2NWP**. It was difficult with 3 letters in the prefix. Next time I will use FK8 . . . **TXK8FU**. It was my first contest with a big score. I am very happy. I used my new call. It is easier to send than SP4EEZ . . . **SP4Z**. The best contest of the year without a doubt . . . **M7C (G3KKQ)**. Not as much fun as running the contest from Greenland, but I did my best . . . **OZ1AV**. Nice contest with my 4W QRP. Very difficult but funny . . . **EA7AAW**. It was my first time to take part in an international DX contest. I don't have a computer and it was an interesting experience . . . **LW3HQ/QD**. QRM from hurricane Pam wiped out 80 and 160. Pam hit Raratonga a few days later. Evacuated the beach wing at the resort; packed the gear during the worst wx. We were finally picked up by Air New Zealand and flown to ZL . . . **ZK1TB (W7TB)**. 6D2X made my day. For the first time in my life a Mexican station called me on 7 MHz . . . **OF3WS**.

I like this contest very much. But it is hard to do QRM because the QRP technique is a handicap when you can "answer" only! . . . HB9XY. I am 15 years old and this was my first CQ WWDX . . . YC2LLG. YP2R is a special call of YO2KJI, the Children's Radio Club . . . YP2R. All the MS stations with a few exceptions did QSY upon request. The big frustration was being so close to the world record at the end . . . P40E (CT1BOH). Still one of the most exciting contests . . . HB9AYZ. A great pleasure to compete in the QRP category . . . ON6TJ. Good opening to the east coast of the USA. Condx are getting great . . . JA7COI. Very thanks to Rick, DJ0IP, who gave me the chance to operate from his QTH . . . DL6RDR. Who said that semiconductor's life is based on the flow of electrons and holes? Wrong! It is based on smoke. How? Simply, if smoke goes out of it, it is dead . . . ES2RJ. This was an old-fashioned operation. Handwritten logs and hand keying. But the critical problem was an island-wide shortage of Carib beer . . . VP2EST (KT8Y). Nobody got my call the first time. Suggest a new category: ABBC = All Bands Bad Callsign. Hi . . . Z37FC4A. Big contest. My low power was not sufficient to work Asia and Pacific . . . 11XPQ.

It was great fun. I enjoyed it every bit. The log is a result of my right hand and my human memory (taxed for the weekend . . . *VU2BGS*). This is my first CQ WW CW . . . *CX9BAG*. I was too weak for *CT3/OH1MA*, *EX8W*, *HC8N*, *TI1C*, *6Y4A*, *P40E*, and *KC1XX* (all on 160m) . . . *HADEQ*. A DXCC single band and QRPp in one day is too high a goal. However, it's very possible in a weekend . . . *DL9YX*. Where were the PY's, ZS's, and Zone 2? Good contest nevertheless . . . *GM3CF5*. My antenna is only 7 meters up. So I am very glad for 300 QSOs . . . *RV4LC*. First QRV with CW for the CQ WW. FB! . . . *7M3RSK*. I lost my power supply with 256 QSOs. It was terrible for me because I have been working this test since 1986 . . . *CE3IDY*. 40m never closed for DX through the entire 48 hrs. It was a humbling experience trying to work among so many good CW ops . . . *GM4YX1*. 5V7A had a very big pile-up on 160m! He was 59 in JA . . . *JE2LPC*. I was very surprised at the strength of 6Y4A on 80m. My first zone 8 . . . *JS1UMQ*. My compliments to all the DX operators who managed to get my weak signal on 40m . . . *ES1CW*. Pleased to make 1 meg points for first time . . . *GW7K* (*GW4BVJ*). Conditions on 80m quite good . . . *VE6BF*. Great to work 5V7A on 160! My first African on top band! . . . *JA8RWU*. I sent my results and would like to devote them to my little son: Vasilij (3 months) . . . *UA1PAC*.

USA QRM

When the neighbor boy came to my door and told me that the vertical was arcing badly, it was! . . . **KW2J**. A lot of stations on the air . . . **WA4JUK**. 40 wpm ops miss many ops who can't copy above 30 wpm . . . **K8AB**. Friday night lightning severed the power lines coming to my house. Sat. I had S9 rain static, but Sun. morning made up for the whole mess! Worked VR2 and YB for my first 10m LP experience . . . **K4YD**. I made a goal of working KH6 on 160m to finish WAS. Then I did it twice in 7 QSOs. Thanks to KH6CC and KH6AT . . . **KJ5WX**. Lost my beam! Wish I had a directional antenna. Sunspots are fine! . . . **N7JXS**. Great time! I just wish these so-called big guns had big ears. They need to calm down and listen, listen. They would work even more . . . **WA2ASQ**. Great contest. Band condx great. Some ops should send call signs more often . . . **NA4GJ**. Tried for 15 min to work KH2/K9AW through the immense pile-up on 15m without success and then worked AH4R 25 kHz away on the first call . . . **KU6T**. Great to snag E21CJN . . . **W4YE**.

Quite an enough about band conditions! Nothing like

Can't say enough about band conditions! Nothing like 59 signals on 10 and 15 to rekindle the ham radio spirit. Had a super time . . . K9WA. Hello sunspots! Hello QRP contesting again! . . . WA2HZR. Sure could use more JA activity on 10 and 15 to the west coast, but I doubled last year's score! . . . N6NG. Why is it after failing to break a pile-up, I worked another station with a single call and broke the pile-up first try? . . . N6JM. I found that most of the DX spots on packet were provided by ops who used 100 ft. plus towers. Although the packet was connected for the duration of the contest, I mostly relied on a zone map for beam headings and my timing and listening experience to find stations . . . KG7XC. Sixty-three countries using 5 watts and a low tribander—the spots are back! . . . W8QZAV.

QRN was non-existent most of the time, which sure helps if your antenna is a vertical . . . *WD6DX*. First year with a tower and a beam. I'll spend more time in the contest next year. Bring on the sunspots! . . . *WB0B*. Great to 10 and 15 hot! Great fun . . . *K2NV*. Ten meters came alive to Europe the second day. The first time in several years. Reached my 80th birthday just before the test. Hoping to enjoy at least one more sunspot cycle! . . . *W3VT/4*. What a contest! Great operators and conditions. Next year more hours, less family, and better score! . . . *K9JWV/4*. New country, 5V7A. Lucky I found him calling CQ and got him first call . . . *K8IP*. Ditch the RST. It is meaningless. Replace it with QSO# + zone or operating class + zone . . . *WD9IAB*. Op is 80 years old living a retirement home . . . *N61BP*. Despite antenna restrictions, neighbors with TVs susceptible to front-end overload, and limited working sked, this is still the best contest of the year! . . . *KA6SGT*.

This was the first contest that I entered. It was a blast! Next year I'll have some real antennas . . . N4HA. Great condx on 15m, but rain and cold limited my sitting in the car . . . K9HN/m. Happy days are here again . . . WA1FCN. Why do I love this stuff? Let me count the ways: (1) low power, (2) low antenna, (3) thrill of the chase, (4) Morse code . . . K4LDR. My dad died of cancer on Saturday at 1215 PM. He was 82. I had to make 82 QSOs for my dad . . . K9UQ, VK9LX, first call in massive pile-up . . . W8EQV/A. Worked 2 new countries on 10 meters . . . K2HT/Ø. Ten meters Sunday morning was wonderful . . . KMØL. I have been licensed since 1953 and this is my first

contest. A blast! . . . WC7N. Getting 3DA5A on 40 was a real coup for me . . . W6UDX. BA4TB called me during the last half hour! . . . N4CT. Thanks to all who dug my signal out of the QRM, especially, the op at 5V7A. I just turned 17 before the contest. Talk about celebrating in style. Thanks for the great contest . . . AA8UP. Great to hear the bands improving . . . W6TKF.

Experienced great conditions on 10m Sunday morning. But when the band closed the NE was still running them . . . N4BP. Ten meters was in unexpectedly good shape. Greatest surprise was an opening an hour or so long path to Asia Saturday and Sunday mornings . . . W3EP/1. Glad to hear 10m finally start to open . . . KG0DS. My best score after 65 years of operating! . . . K2AW. This is the greatest DX contest, bar none. Thank you for sponsoring it . . . NN4T. First ever CW contest . . . KD4HXT77. Had a great time. Heard lots of Eur and Asia calling CQ but not hearing us. Heard JA's on Sat AM but no luck . . . W2VO(1.8MHz). I really put a lot of effort into this contest. It was very rewarding to work so many stations . . . KCGLDO. VR2 and JA on 10m Long path—Wow! . . . W1ZK. Forty meter conditions were great, but 80 and 160 poor. Ten was a welcome surprise . . . KQ2M. At age 72 can still hang in there for the entire test, but tough . . . W6EUF. More Far East this year than in a few years . . . WB8YJF. Great LP conditions to SE Asia on Sat morning . . . A1C/4.

The climb up the solar cycle sure is a slow one. But we are getting there . . . KS7T. Thanks to all the fine DX ops! Goal was to break 100K. Beat last year's score by 100K! Great contest! . . . AA0TY. Nice to work zone 1 again! First ever QSO with C2 and TF! Go sunspots! . . . N3KCJ. Best high band conditions in years. Already looking forward to next year . . . WI9WI. Thanks to all the DX who struggled to get my QRP call . . . N7RO. Call at 50 WPM helped me pass my Extra exam the next week! . . . W2SSB. We had big Murphy problems! With one new operator, AA2VG, and 13-year-old KG2HV operating for the second year, it was a good learning experience for all . . . N2FF. It was a refreshing change of pace to work the contest using low power. It is a new kind of rush to hear the DX station come back to my call . . . W5CWQ.

## **Station Operators Multi-Op Single Transmitter**

**3E1DX**: DL5XK, S57WV **4G1A**: 4F1BYN, 4F1Z, 4F1RC, DLTURC  
4F3CV, 4F3GDX **4NBS**: Lacy, Sam, Norby, Gabi, Rexy, Andre, Lor  
UY7CM **4U1TTU**: K3IPK, K5RS **5A2A**: DJ7IK, DL1GTT, DL2EXB  
DL3KDB, DL80B **6D2X**: K5TR, KTS5Q, NSJ5A, NSR5Z, N5YK, W5V  
XE2DXD, XE2YN **807DV**: Loginov, Usov, Osvinikian **9A5D**: 9A2FP  
9A3GA, 9A3ID, 9A3VM, 9A4AO, 9A4KS, 9A4NC, 9A4CS, 9A4VM  
9A5DU, 9A5LU, 9A6DX, 9A6AOO, 9AGK6B **9A9D**: 9A4KC, 9A4UU  
9A4DD, 9A4DO, 9A5YA, 9A2QU, 9A7GIH **9G5WJ**: G3VMW, G4RWI  
G4ZVJ, **9UC5WC**: EAT1H, PA3DZN **A10A** & W1FH, AA2FB & K20M  
**AE4RO** & **AE4SW**, **AH2R**: JT1SOK, J3K3AD, JR7OMD, **DFBF**  
DL1EKC, DL3NCW **DF0HTE**: K3DQ, DK/TL, DL3SB1, DL5NA  
**DFBRI**: DK3DM, DL3LAR, DL6LAU, DL80BQ, **DJ7T0** & **DJ6T**  
DL1KWK, DL6LST, DL7AKC, DL7URH **DK0FFO**: DL7UGN, DL2BWV  
**DK0TZ**: Club, **DF3CB** & **DK4WA**, DK6WL, DK7YY, DL1MPL, **DK1H**  
DJ7MG, DL5EBE, **DK1RP** & **DT3F**, DJ5RE, DK5NJ, **DLBDX**: DL1Q  
DL5KUT, DK2OY, **DL3SKF** & **DL4SKF**, **DL4SKF** & **DL3SKF**, **DLRAIB**  
DL2HBX, DL2NBU, DR4RDJ, **DL6YZ** & **DL2MDU**, **DL7BY** & **DL7TA**  
DL7UTM, DL7UBA, **DX1HB**: JA1KJ, JE81VFM, JK1CWR  
**DX1JL**: JA1KJ, JE81VFM, JK1CWR, **DX1K90**, **DX1K91**, **DX1K92**, **DX1K93**, **DX1K94**, **DX1K95**, **DX1K96**, **DX1K97**, **DX1K98**, **DX1K99**, **DX1K9A**, **DX1K9B**, **DX1K9C**, **DX1K9D**, **DX1K9E**, **DX1K9F**, **DX1K9G**, **DX1K9H**, **DX1K9I**, **DX1K9J**, **DX1K9K**, **DX1K9L**, **DX1K9M**, **DX1K9N**, **DX1K9P**, **DX1K9Q**, **DX1K9R**, **DX1K9S**, **DX1K9T**, **DX1K9U**, **DX1K9V**, **DX1K9W**, **DX1K9X**, **DX1K9Y**, **DX1K9Z**, **DX1K9A0**, **DX1K9A1**, **DX1K9A2**, **DX1K9A3**, **DX1K9A4**, **DX1K9A5**, **DX1K9A6**, **DX1K9A7**, **DX1K9A8**, **DX1K9A9**, **DX1K9A00**, **DX1K9A01**, **DX1K9A02**, **DX1K9A03**, **DX1K9A04**, **DX1K9A05**, **DX1K9A06**, **DX1K9A07**, **DX1K9A08**, **DX1K9A09**, **DX1K9A10**, **DX1K9A11**, **DX1K9A12**, **DX1K9A13**, **DX1K9A14**, **DX1K9A15**, **DX1K9A16**, **DX1K9A17**, **DX1K9A18**, **DX1K9A19**, **DX1K9A20**, **DX1K9A21**, **DX1K9A22**, **DX1K9A23**, **DX1K9A24**, **DX1K9A25**, **DX1K9A26**, **DX1K9A27**, **DX1K9A28**, 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**E23AA:** EY8MM, HS1CHB, JR3XCK, HS1CKC, **EUF:** EU6JX,  
**EW6EW:** EW6AF, EV5M, EV6Z, **EW8T:** Club, **EW1TN:** EW1TM,  
**EW1MA:** **EW35WB:** EU1AZ, EU1DX, EU1TU, **EX9A:** EX0M, EX2M,  
**EX7MM:** **F5KAC:** F6J3Z, FB1PH, **F8KCF:** F6IYF, F6FLN, F6BNH, F5LJY,  
**F5UAM:** FA1TF, FB1CMF, F6BGC, F5QIA, F5SDT, F5DJL, **GM7R:**  
**GM3YOR:** GM0NAl, GM0WDF, GM0CJF, **HA1KSQ:** HATASY HA1SQ,  
**HA1DUD:** HA1SF, HA1TG, HA5KF, **HA3KNA:** HA3NU, HA3NS, HA3OV,  
**HB0/HB9L:** Club, **HB6FG:** HB9RDJ, HB9RCB, HB9CYQ, HB9DQL,  
**HB9FJ:** HB9QKJ, HB9PQD, **HB9A0A:** HB9A0E, HB9IAF, HB9DCM, HB9AMO

**JATELY & JAY1D1Y: JA1YPA**: JA1TZO, JA1MKT, JA1PPE, JA2ZED,  
JA2CM1, JA1LCO, JM2NFO, JA2MBN, JA1ZUNR, JE2PCY, JA1K2G1,  
JF2WEQ, JH2ZSON, **JA3YDH**: JN3ACR, JA3BCT, **JA6ZL1**: JJ4WEH,  
JJ6P0J, JJ6WYS, **JAY7AYA**: JG7PSJ, TM1JAS, JH0NZN, **JAY7AI**: JA7-  
30825, Maruyama, **JE2YHS**: JA2OLJ, JR2JVR, JG2NUD, JE2WWB,  
JJ2CEE, JI2XUT, JR2JPU, **JH7TPKU** & **JAS95Y**: JH7DXZ, JH7FQJ,  
JR01BMV, **JR1ZTT**: KJ2FGD, JR80FE, JE0UXR, JH0XKR, JR0UWJ,  
JR0XHL, T. Awaki, **JT1T**: JT1CD, JT1BL, **KIEU** & **W1DEO**, K1JB, **K1GW**  
& **W6PH**, K1VA, **K1ZR** & **KB1SC**, **K1ZK** & **K1R0**, N1RL, **K2WE** &  
**WK2KG**, **K3SX** & others, **K4NR** & **KK4TK**, **K4NR** & **KK4TK**, **K4QJ** &  
**W1CW**, W1YL, NA4CW, WD4AHZ, AE4MH, KF4RZI, Jay, **K6ANP** &  
K6LRN, NGAD, **K6IIH** & others, **KBАЗ** & **K8NZ**, K8MR, K8PP, K8RM,  
W4QD, N0T2L, MGCA, K8IC, K8K0C, K8MD, K8RD, **C6A** & **AC8W**, K8KLX,  
K8LXJ, K8LXK, K8LXN, K8LXO, K8LXQ, K8LXR, K8LXZ, K8LXU, K8LXV,

W2UP, NTR, W8GN, W8K1C, KQ8M. **K8DU/6A** & ACWV, N8RN, K8EA & N8EA, WA8ZDT, **KABWH** & Don, **K8U52** & N02R, **KN6DV** & KITA, **K07X** & NY4I, **KP3Z**: NP4Z, KP4BZ, NP3A, KP3L, WP3A, NP3J, KP4RF, KP3P, NP3HM. **LA1K**: LA1BFA, LA5NJA. **LA6YEA** & LA9VDA, LA5UF.



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. (All country terminology reflects the DXCC list at the time of the contest.)

## CW RESULTS SINGLE OPERATOR NORTH AMERICA

### UNITED STATES

K1AR	A 7,681,280 4947 158 522
W1KM	" 5,416,800 3173 146 464
K02M/1	" 4,940,795 2996 145 484
N6BV/1	" 4,733,088 3013 128 436
K1RU	<b>A 3,548,171 2591 133 394</b>
W1WEF	3,245,946 2296 126 400
W1ECT	1,753,440 1553 93 297
K5ZD/1	1,552,500 1235 112 338
W1ZK	914,163 782 117 344
W1TE	890,102 776 108 359
K1YI	853,622 680 124 358
K5MV/1	734,349 782 99 258
W1AX	600,561 626 93 284
W3SOH/1	324,618 456 58 204
K1BV	282,680 527 53 132
AK1N	247,442 338 93 214
K1DC	217,170 321 73 181
N1RJF	164,154 325 58 60
W1ZS	155,904 320 59 165
W1FV	16,650 79 20 54
K1MEM	6,656 36 30 34
K1DX	6,380 114 36 74
W1/KL7DN	100 40 18 32
K1MV	1,643 24 14 17
N1HRA	21 7,592 61 13 39
<b>K1DKX</b>	<b>14 287,280 876 30 96</b>
WA1RR	20,405 118 21 56
W1BR	7 98,770 294 28 91
W1MK	<b>3.5 297,476 892 29 95</b>
W1UK	78,176 289 23 89
K1VW	1.8 9,570 98 16 42
<b>K1VUT</b>	<b>A 1,656,348 1244 111 380</b>
WA1LNP	" 1,639,602 1253 126 396
WA1S	" 1,622,464 1210 115 387
KM1X	" 1,468,138 1259 103 320
K1HT	816,102 814 87 270
WF1L	631,952 762 79 232
W1E0	399,464 496 78 221
NY1S	276,100 421 67 208
KD1YN	162,970 304 57 158
N3KCJ/1	119,048 238 51 133
W1Z2	57,275 150 48 97
K1VSJ	42,300 152 32 68
AB1BX	9,600 100 14 18
K1EP	6,200 50 21 41
K2MN/1	5,324 41 13 31
W3EP/1	31,824 163 27 77
WA1FCN	21 193,294 634 26 94
K1NO	<b>14 200,610 568 31 104</b>
AB1U	7,623 46 19 44
N2NT	<b>A 5,207,938 3256 145 444</b>
N2LT	<b>" 5,054,070 2978 148 467</b>
NJ2L	<b>" 3,269,035 2239 139 400</b>
K2TE	1,854,702 1384 116 365
K2CB	686,490 660 116 351
KW2J	592,280 621 98 242
N2WK	558,108 567 117 320
K2AW	534,742 617 76 238
K2DM	508,870 592 85 252
WB2YQH	436,560 460 85 254
KE2WY	402,582 499 83 210
K2MP	353,430 426 87 219
N2MR	313,317 451 73 206
K2AV	262,990 401 80 209
W2HCA	217,532 365 70 168
K2DD	183,708 276 70 173
W2YK	152,400 291 67 173
W2YE	157,960 281 63 158
KG2BI	59,420 206 47 109
W2EZ	89,083 200 45 94
W2GDJ	55,614 196 47 91
N2GU	55,485 154 45 92
KE2VB	47,978 143 44 105
NC1A/2	47,112 177 52 104
W2OP	40,460 144 44 96
K2FR	14,500 100 38 78
NN2Y	7,735 49 29 36
NA2X	<b>21 153,439 381 30 113</b>
KD2HE	54,782 222 21 70
N2PP	<b>7 326,888 951 33 103</b>
W2FU	<b>" 313,908 616 32 116</b>
KR2O	72,261 259 23 88
N7UN/2	11,151 93 15 48
N2GC	<b>3.5 31,760 147 16 64</b>
W2FR	8,848 60 14 42
K2XA	1.8 14,559 92 17 52
W2VO	11,868 89 18 51
KN2T	2,201 44 11 20
N2BA	<b>A 2,169,720 1651 120 372</b>
NA2U	<b>" 1,341,649 1310 96 287</b>
W2ZT	<b>" 1,145,388 1235 100 272</b>
N2ED	770,245 748 102 271
K2JL	480,810 548 93 237
K2UF	443,540 494 89 242
NA2Q	354,016 531 85 214
KM2L	324,162 456 68 193
N2KJM	257,466 363 77 205
KA2CDJ	254,334 383 75 216
K2CS	211,344 331 71 167
WA2YSJ	210,154 328 67 176
N2DBD	155,925 309 54 121
WA2FZJ	151,755 345 44 107
KC2TA	110,047 207 60 139
WB2HMF	105,774 240 48 135
WB2DVU	80,106 178 51 118
W2SSB	59,032 141 47 110
W2UD	37,506 138 36 78
W2LB	30,960 137 40 80
W3EH/2	27,216 97 35 73
WA2OOG	24,150 119 25 45
K2GWL	23,422 239 32 66
WA2VQV	1,145 26 17 22
K2MFY	<b>21 125,608 349 29 112</b>
K2AA	24,450 126 18 57
WA2ASQ	34,679 144 22 74
KD2P	5,805 50 14 31
N2TN	<b>7 84,924 250 29 97</b>
K3ZO	<b>A 5,212,498 3120 145 454</b>
W3BGN	<b>" 3,897,680 2427 140 447</b>
K4TEA	1.8 6,076 58 16 33
AD47	3,071 45 11 26
K4NAT	<b>A 2,059,051 1475 130 393</b>
W040	<b>" 1,057,920 976 114 321</b>
N4R	295,416 799 30 102
KN4Y	29,070 254 19 66
N4PN	449,688 305 74 115
WW4RR	339,000 1082 29 102
K4PI	<b>3.5 45,864 191 24 74</b>
K4AQ	8,427 74 11 42
K4TE	6,076 58 16 33
N4PSE	4,045 45 11 26
K4NAT	<b>A 2,059,051 1475 130 393</b>
W4SD	123,826 230 59 143
K4PS	64,255 164 63 118
W4KYW	48,852 155 35 83
K4UK	44,933 133 45 86
W4WM	43,758 139 48 95
K4ORD	42,127 149 35 114
K4NK	27,258 29 30 160
W4BDN	25,942 90 45 74
N4TD	20,933 122 44 77
K4PHE	12,000 97 31 69
AA4KD	11,360 57 34 46
K4IKH	10,400 58 22 43
AE4QG	9,842 79 33 73
A4ALR	504 20 13 15
K4WA	<b>28 37,149 158 26 65</b>
AI2C4	<b>" 36,576 158 26 70</b>
WB4TDH	<b>21 237,020 667 30 112</b>
K2ACW/4	121,240 334 29 111
N6NM	109,968 302 93 144
N6L6I	109,089 305 81 126
WD6DX	86,350 210 65 92
N6IPB	61,664 131 81 107
W6JTA	60,888 177 52 77
K6DC	49,350 128 56 85
W6EJ	38,151 148 69 88
W6VM	31,714 106 38 63
W6KY	26,643 105 46 61
N6PM	22,660 107 42 48
W6XV	16,766 66 43 58
K6HRT	5,712 50 25 26
W6ZL	5,123 44 19 28
N6AUP	104,907 244 56 132
N8YYS	75,075 195 51 114
WB8YJF	836,074 801 108 271
K8MD	22,896 116 16 56
W8LRL	<b>1.8 20,999 127 22 61</b>
K8MK	<b>" 12,408 123 18 48</b>
K8IP	4,905 52 15 30
N8AA	<b>A 949,172 817 111 325</b>
WB8YJF	<b>" 836,074 801 108 271</b>
K8MD	22,896 116 16 56
W8LRL	<b>1.8 20,999 127 22 61</b>
K8MK	<b>" 12,408 123 18 48</b>
(Op. K8LR)	
K6EE	169,454 340 74 122
N6JMU	146,580 289 76 134
N6NM	111,864 262 66 111
N6L6I	109,968 302 93 144
WD6DX	86,350 210 65 92
N6IPB	61,664 131 81 107
W6JTA	60,888 177 52 77
K8G	331,098 438 75 203
WB8YJF	43,771 357 80 187
K8MD	172,104 301 56 157
W8JY	16,552 268 71 153
K8NE	106,624 251 53 143
W8DM	32,226 161 21 60
W8CAT/M	31,266 161 21 60
(Op. K1KY)	
N4MO	<b>14 241,251 658 34 107</b>
K4DGJ	15,762 84 22 49
K9JWWV	12,871 77 16 45
N4OT	32,969 151 22 68
K4LDR	30,030 140 20 67
W4DC	8,151 51 15 42
W4HM	6,120 52 15 36
W4WS	1.8 828 37 8 15
N4P	31,266 161 21 60
N4MO	<b>14 241,251 658 34 107</b>
K4DGJ	15,762 84 22 49
K9JWWV	12,871 77 16 45
N4OT	32,969 151 22 68
K4LDR	30,030 140 20 67
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N4MO	<b>14 241,251 658 34 107</b>
K4DGJ	15,762 84 22 49
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W4WS	1.8 828 37 8 15
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N4MO	<b>14 241,251 658 34 107</b>
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W4WS	1.8 828 37 8 15
N4P	31,266 161 21 60
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N4OT	32,969 151 22 68
K4LDR	30,030 140 20 67
W4DC	8,151 51 15 42
W4HM	6,120 52 15 36
W4WS	1.8 828 37 8 15
N4P	31,266 161 21 60
N4MO	<b>14 241,251 658 34 107</b>
K4DGJ	15,762 84 22 49
K9JWWV	12,871 77 16 45
N4OT	32,969 151 22 68
K4LDR	30,030 140 20 67
W4DC	8,151 51 15 42
W4HM	6,120 52 15 36
W4WS	1.8 828 37 8 15
N4P	31,266 161 21 60
N4MO	<b>14 241,251 658 34 107</b>
K4DGJ	15,762 84 22 49
K9JWWV	12,871 77 16 45
N4OT	32,969 151 22 68
K4LDR	30,030 140 20 67
W4DC	8,151 51 15 42
W4HM	6,120 52 15 36
W4WS	1.8 828 37 8 15
N4P	31,266 161 21 60
N4MO	<b>14 241,251 658 34 107</b>
K4DGJ	15,762 84 22 49
K9JWWV	12,871 77 16 45
N4OT	32,969 151 22 68
K4LDR	30,030 140 20 67
W4DC	8,151 51

W9PNE	1.8	1,475	29	8	17	*VE3NTW	A	270,732	496	61	170	
*W9AU	A	569,088	634	94	248	*VE3TDG	*	105,505	700	54	88	
*K9JC	A	415,996	490	87	245	(Opn. VA3SYL)						
*N9CK		284,000	373	85	199	*VA3IX		75,904	235	43	85	
*WT9U		227,592	363	65	167	*VE3ZT		63,404	238	44	87	
*K9MMS		219,098	333	84	169	*VE3OTL		5,994	89	34	40	
*W9ILY		178,563	303	73	158	*VA3MG	21	133,176	969	25	68	
*W9WUU		73,292	179	46	100							
*K9YAX		64,628	167	46	105	VE4JB	A	311,014	640	66	145	
*N9NW		18,640	85	26	54	*VE4MF	21	14,536	93	22	57	
*WB9AYW		8,233	88	21	59							
*N9WKW		4,891	52	31	42	VE5AAD	A	146,558	513	46	81	
*K90M	28	14,012	102	18	44	*VE5MX		48,776	218	49	85	
*K9RN/M	21	94,637	313	27	91	*VE5SF	A	496,503	1176	78	135	
*N9GBB	14	4,859	42	11	32							
*K7CK/9	7	19,028	102	20	51	VE6BF	A	553,992	1032	81	165	
*N9ENA		1,258	31	12	25	VE6JY	14	957,654	2444	38	128	
K0EU	-	A	2,421,384	1839	135	362						
WB0B	"	1,871,540	1379	133	384	VE6LB	1.8	4,020	109	10	10	
KM0L		738,395	808	106	259	*VE6EX	A	292,168	1358	48	70	
W0HW		396,140	493	85	205	*VE6HPT		18,360	165	18	33	
WK0F		224,316	386	80	199	*VE6BMX	28	68,748	698	21	30	
WT0T		176,874	281	82	164	*VE6HPT	21	12,144	155	18	28	
K0JPL		145,376	261	71	153	VE7AV	14	268,450	1071	31	87	
KG0UA		128,310	276	73	111	VE7IN		173,054	782	29	65	
WC0UY		102,212	228	66	136	*X07X	A	1,112,756	1980	100	183	
NS0B		89,938	188	64	129							
KS0M		69,713	158	53	108	*VE7FJE	21	81,525	419	26	49	
N0XW		65,987	320	48	103	*XM7A	3.5	86,645	587	24	41	
N0IN		12,834	65	24	45	*VE7SV	1.8	7,644	185	10	11	
K0DI		5,828	51	25	22							
K0KE	28	47,360	213	27	65	YI1JA	A	843,999	1990	72	129	
K0UK	"	10,720	141	20	47							
KJ0G	21	90,288	306	30	84	TI1C	1.8	158,842	988	20	66	
W0ID		58,302	270	27	52							
K0RI		38,130	197	24	69							
W0UN	14	722,520	1655	38	124							
K0RWL		103,362	235	34	104							
K0OD	7	156,768	445	34	108							
K0AV		114,294	346	34	95	CUBA						
N0IG		54,320	174	30	82	CO2JA	A	346,275	958	77	148	
W0SF		22,384	217	27	89	*CO8LY	A	508,525	974	67	160	
K0RF	3.5	65,439	281	23	76	*CO2JD	7	143,699	939	20	62	
AC0S		10,149	78	17	34							
K0CS	1.8	3,900	50	13	26							
W0ETC		1,938	36	12	22							
W0RXL		1,113	27	9	12							
K0GDS	A	252,080	399	68	162							
NN7V/A		186,367	300	67	160							
AA0TY		86,984	302	50	116							
K0RY		44,700	153	50	100							
KK0DX		8,856	53	27	45							
K2HTD/0		697	28	17	24							
*W0ETT	14	57,339	227	25	77							
*WB0B		4,600	36	18	28							
*W0AH	7	75,537	304	29	80							
KJ0B		40,923	187	23	64							
ALASKA												
KL7AC	A	940,470	1683	77	158							
KL7RA	14	640,320	2118	34	104							
WL7DB		48,025	210	28	57							
NL7Z	1.8	14,014	246	13	13							
*KL1R	A	230,126	931	43	63							
ANGUILLA												
*VP2EEB	A	5,444,340	4948	115	337							
*VP2EST		635,559	1750	58	125							
BAHAMAS												
8P9Z	A	9,097,132	6244	149	434							
BARBADOS												
CANADA												
V01MP	A	1,813,136	2006	94	285							
VE1ZJ	"	907,180	1077	90	245							
VE9HF		39,710	200	34	61							
VE1FJ	3.5	183,552	889	20	76							
VE3B8MV/1.8		170,400	828	21	75							
*V01GO	A	315,270	468	67	212							
*VE1GPL		83,076	200	59	113							
*VE1LV		2,200	61	14	30							
VE2AYU	A	1,572,528	1869	94	268							
VE2ATL		66,885	200	50	97							
VE2ZDR		70	22	6	4							
*VE2AWR	A	508,125	807	76	195							
*VE2WAT		132,600	403	49	121							
*VE2OWL		7,378	126	17	14							
*VE2SG	28	46,308	365	20	48							
*VE2SKA	7	1,190	40	7	7							
AFRICA												
ALGERIA												
*7X2RO	21	382,044	1094	32	92							
U.S. VIRGIN ISLANDS												
*WP2Z	A	3,678,426	3455	116	343							
ANTARCTICA												
R1ANL	A	660,992	897	90	166							
AFRICA												
ALGERIA												
*7X2RO	21	382,044	1094	32	92							
CANARY ISLANDS												
ASCENSION ISLAND												
ZD8Z	21	2,357,967	4589	39	140							
ANTARCTICA												
R0KFWL	A	2,018,632	2137	135	271							
AFRICA												
ALGERIA												
*7X2RO	21	382,044	1094	32	92							
AFRICA												
ALGERIA												
*7X2RO	21	382,044	1094	32	92							
AFRICA												
ALGERIA												
*7X2RO	21	382,044	1094	32	92							
AFRICA												
ALGERIA												
*7X2RO	21	382,044	1094	32	92							
AFRICA												
ALGERIA												
*7X2RO	21	382,044	1094	32	92							
AFRICA												
ALGERIA												
*7X2RO	21	382,044	1094	32	92							
AFRICA												
ALGERIA												
*7X2RO	21	382,044	1094	32	92							
AFRICA												
ALGERIA												
*7X2RO	21	382,044	1094	32	92							
AFRICA												
ALGERIA												
*7X2RO	21	382,044	1094	32	92							
AFRICA												
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*7X2RO	21	382,044	1094	32	92							
AFRICA												
ALGERIA												
*7X2RO	21	382,044	1094	32	92							
AFRICA												
ALGERIA												
*7X2RO	21	382,044	1094	32	92							
AFRICA												
ALGERIA												
*7X2RO	21	382,044	1094	32	92							
AFRICA												
ALGERIA												
*7X2RO	21	382,044	1094	32	92			</td				

JM4XRN	42,624	206	26	46	
JH4JUK	567	20	11	10	
JH4HKA	3.5	1,519	23	15	
JH5FXP	A 3,647,600	3158	137	303	
JA5AIQ	27,000	100	37	63	
JAS5DH	21 575,952	1370	37	119	
JAS5JV	2,345	26	15	20	
JAS5PU	14 104,058	448	26	56	
JAS5THU	7 727,797	1773	35	112	
JAS5IP	31,392	154	24	48	
JAS5WTL	3.5	26,082	33	14	
JAS5DM	A 163,938	350	65	113	
JAS5PO	28 7,875	67	17	28	
JF5FGY	21 1,932	25	15	13	
JAS5XA	14 60,802	273	28	58	
JE6IBJ	A 113,848	218	88	126	
JAE6VY	50,616	172	44	67	
JH6TNH	6,900	45	25	35	
JR6CF	612	12	7	10	
JG6WJL	28 18,090	109	27	40	
JJ6TYG	14 27,576	153	24	48	
JG6TO	7 41,022	178	27	59	
JG6DGP	26,732	118	27	55	
JG6UBK	A 719,832	801	113	224	
JH6TYD	328,636	508	88	154	
JG6SRB	299,754	427	97	176	
JG6CM	76,380	205	52	82	
JG6AKV	65,258	196	50	76	
JG6SK	55,880	185	45	69	
JG6HJP	38,440	120	49	75	
JG6EIV	22,656	106	41	55	
JG6EOD	12,024	71	35	37	
JG6ODU	9,152	64	25	27	
JF1VXB/6	414	20	9	12	
JG6M0I	7 104,676	292	32	100	
JG6NAW	20,882	145	20	33	
JH7WKO	A 2,429,616	2291	119	273	
JH7XGN	" 2,127,034	1978	127	279	
JH7RHJ	" 477,126	733	83	151	
JAC7COI	14 39,312	198	27	45	
JAT7JI	7 55,958	200	30	68	
JAT7NI	3.8 30,420	168	22	43	
JAT7KM	A 174,345	369	70	107	
JR7HAN	158,004	317	74	115	
JT7VUR	81,224	212	62	81	
JN7DJA	31,213	131	35	56	
JH7CJM	21,432	74	48	66	
JG7AXP	21,208	87	38	50	
JH7FUJ	20,930	101	32	48	
JAT7ASD	16,616	184	36	65	
JAT7AMK	21 83,754	351	32	62	
JAT7NVE	54,144	271	25	47	
JM7EZZ	21,546	128	22	41	
JH7NPF	1,320	40	6	5	
JR7XGL	592	16	8	8	
JAT7ADV	513	13	8	11	
JAT7XBG	14 295,659	827	36	97	
JAT7VEI	" 13,621	101	19	34	
JAT7QOK	7 22,050	113	27	48	
JA0RYN/73.5	6,318	52	20	34	
JAT7GAX	" 2,706	36	14	19	
JABRWU	A 2,307,312	1963	142	290	
JH3SLS	" 77,340	872	119	222	
JH3UOJ	28 14,230	122	19	23	
JABDIM	A 489,104	619	111	197	
JABJCR	394,834	568	102	172	
JABAJIE	210,938	431	72	110	
JABJDD	70,356	196	67	89	
JABXOD	28,980	111	45	70	
JABTEZ	" 1,608	27	12	12	
JABLN	7 57,504	215	30	66	
JA9CWJ	A 1,089,842	1241	115	219	
JH9KVF	21 258,544	809	32	81	
JAG9JF	165,148	551	32	74	
JAT9TSI	" 99,728	459	31	61	
JE9VOI	A 68,400	184	65	85	
JN2DCV/9	14 167,768	520	37	97	
JM2FCJ/9	7 91,982	347	32	81	
JR9NVB	" 58,330	227	29	66	
JAT9KLU	630	18	7	8	
JAT9DGF	3.5 3,200	38	13	19	
JH0FUW	A 2,052,501	1913	128	279	
JABQWQ	" 733,838	999	107	194	
JH0GHZ	508,388	624	100	198	
JR0WZR	278,529	443	85	142	
JAT0AXA	80,080	215	58	74	
JH0FWVW	21 16,776	86	28	44	
JAT0HC	" 150	10	3	2	
JAT0NCE	A 147,609	304	74	115	
JH0NEC	87,711	197	67	102	
JAT0GZ	10,412	57	36	42	
JAT0GEY	7,612	63	22	22	
JAT0BPFY	4,606	36	24	25	
JH0EPI	21 226,996	658	36	85	
JF0SGW	" 120,330	491	29	61	
JF0FOH	14 792	22	10	12	
JAT0AQO	3.5 30,807	202	21	42	
JAT0AQO	3.5 30,807	202	21	42	
KAZAKHSTAN					
UN9LW	21 358,430	1181	35	111	
UN7LG	7 61,618	1763	38	107	
UN7TX	207,524	730	32	84	
*UN6P	A 1,314,223	1361	123	326	
*UN7RBD	21 62,712	296	22	56	
*UN5J	1.8 27,690	198	18	47	
KOREA					
*HL1CG	A 395,595	504	101	194	
*HL5AP	" 117,264	561	72	96	
BELGIUM					
ON4XG	A 345,144	678	68	224	
OT7L	21 297,640	983	33	107	
ON5LL	3.5 176,400	1326	23	82	
ON4AEK	1.8 31,752	620	16	65	
ON7SS	A 43,332	213	43	95	
ON7WF	21 27,606	166	31	55	
*ON6CW	14 110,583	571	26	63	
*ON4PX	" 15,486	154	15	43	
*ON4AEB	7 116,166	698	23	91	
BOSNIA-HERZEGOVINA					
T99DX	A 1,813,263	2140	118	373	
9K9K	A 1,607,960	2162	69	236	
(Opn. DL3NCI)					
9K2GS	14 1,242,439	2718	39	140	
(Opn. T97M)					
KUWAIT					
LEBANON					
OD5PL	A 113,328	313	39	105	
*OD5NJ	A 14,661	96	26	55	
MONGOLIA					
JT1BH	A 620,928	1529	85	167	
OMAN					
A45XR	A 6,440,715	4089	144	443	
AO4ZN	" 1,173,666	1441	103	264	
SAUDI ARABIA					
Z7500	A 4,389,372	3463	124	344	
(Opn. KSUOC)					
HZ1HZ	" 859,866	1189	95	259	
HZ1AB	14 382,228	993	37	109	
(Opn. SM0CXU)					
SINGAPORE					
*9V1ZB	A 977,738	1963	106	192	
THAILAND					
*HS0/VK3DXI	A 162,558	463	68	130	
*HS0/GBI	" 60,144	223	69	110	
*HS2PF	21 23,744	246	16	40	
TAIWAN					
BV7FF	21 193,024	974	30	74	
BV7	" JH3GCN	28	2,376	72	
JAT7KMF	A 126,820	300	52	117	
VIETNAM					
3W5FM	A 180,432	554	67	101	
(Opn. UA0FM)					
WESTERN MALAYSIA	*9M2TO	A 1,168,077	2012	116	
JM2FCV/9	14 237,000	237	13	237	
(Opn. JA0DMV)					
EUROPE					
ALAND ISLANDS					
OE2BZL	A 853,468	1453	90	284	
OE9SLH	" 169,950	420	53	153	
OE3GSA	3.5 111,588	1128	29	82	
OE5OHO	1.8 5,100	182	4	30	
*DE2EN	A 176,064	432	66	158	
*OE1BK	" 3,570	52	14	37	
*OE3VIA	7 1,290	65	5	25	
AZORES					
*CU2/G3WVG	28 172,161	990	25	74	
BALEARIC ISLANDS					
*E64GP	A 120,510	465	50	145	
EU4AA	A 657,800	867	105	334	
EW2AA	" 519,840	903	100	261	
EW3LN	146,264	403	64	124	
EWB1A	30,492	90	50	76	
EWB2A	" 11,998	105	21	53	
EW5R	7 345,144	1662	34	112	
(Opn. EU1FC)					
EW6AL	" 97,536	427	31	97	
EW3CW	26,132	135	21	73	
EW6TU	3.5 80,812	729	29	69	
EU1AI	" 52,744	587	16	61	
EWD2D	49,284	583	13	61	
EUD1M	31,980	424	10	55	
EUC1CL	A 323,760	712	73	211	
EWB6I	21 8,850	69	18	32	
EUE6U	7 620	11	10	10	
*EU6AA	3.5 32,160	430	12	55	
*EU5AC	" 18,130	349	6	43	
*EU1JST	" 21,442	202	13	57	
OK1DWJ	1.8 17,287	243	10	49	
KAZAKHSTAN					
UN9LW	21 358,430	1181	35	111	
UN7LG	7 61,618	1763	38	107	
UN7TX	207,524	730	32	84	
*UN6P	A 1,314,223	1361	123	326	
*UN5J	1.8 27,690	198	18	47	
KOREA					
9K9K	A 1,607,960	2162	69	236	
(Opn. DL3NCI)					
9K2GS	14 1,242,439	2718	39	140	
(Opn. T97M)					
KUWAIT					
LEBANON					
OD4XG	A 345,144	678	68	224	
OT7L	21 297,640	983	33	107	
ON5LL	3.5 176,400	1326	23	82	
ON4AEK	1.8 31,752	620	16	65	
ON7SS	A 43,332	213	43	95	
ON7WF	21 27,606	166	31	55	
*ON6CW	14 110,583	571	26	63	
*ON4PX	" 15,486	154	15	43	
*ON4AEB	7 116,166	698	23	91	
BOSNIA-HERZEGOVINA					
T99DX	A 1,813,263	2140	118	373	
9K9K	A 1,607,960	2162	69	236	
(Opn. DL3NCI)					
9K2GS	14 1,242,439	2718	39	140	
(Opn. T97M)					
KUWAIT					
LEBANON					
OD4XG	A 345,144	678	68	224	
OT7L	21 297,640	983	33	107	
ON5LL	3.5 176,400	1326	23	82	
ON4AEK	1.8 31,752	620	16	65	
ON7SS	A 43,332	213	43	95	
ON7WF	21 27,606	166	31	55	
*ON6CW	14 110,583	571	26	63	
*ON4PX	" 15,486	154	15	43	
*ON4AEB	7 116,166	698	23	91	
BOSNIA-HERZEGOVINA					

RA4LH	55,625	360	22	67	*F6DCH	22,920	154	26	94	*DL5SVB	162,494	384	73	153	*HA6NW	34,444	202	22	57	LY2FAQ	723,492	972	97	309				
RA1QX	22,308	156	17	49	*F5RPB	16,955	107	27	60	*DL0SA	160,230	465	51	159	*HA2QW	25,012	190	24	57	LY5W	610,566	997	97	263				
RV6APJ	9,185	143	15	40	*F8IN	11,232	121	16	23	(Opn. DL3KWF)					*HA8EU	3.5	107,278	1118	18	LY3W	554,778	987	99	258				
RV1ZZ	7	127,489	550	35	103	*F5NSO	10,117	67	26	41	*DL6UKL	152,358	578	47	160	*HA4FV	55,664	900	13	59	LY3CW	484,962	800	66	196			
RW3WY	101,520	594	29	96	*F5ICX	7,986	78	24	42	*DL2YBF	148,599	549	52	157	*HA8BE	1.8	60,553	683	19	LY3BU	418,547	886	68	209				
USA3EG	102,942	504	31	95	*F5EGE	2,584	34	15	23	*DL5JRA	139,842	372	48	105	*HA0EQ	"	29,898	433	13	63	LY2KM	254,208	420	81	250			
UA3VLQ	27,300	207	17	67	*F8BDU	2,480	39	18	22	*DF9ILB	133,254	306	78	120	IRELAND					LY2CX	95,025	393	41	134				
RK3BX	22,680	197	23	67	*F5ORE	37,500	155	50	75	*DL4XU	114,736	405	40	102	*E14DW	A	706,552	1327	60	199	LY2CTA	27,265	975	69	218			
RA3UAG 3.5	39,234	405	13	65	*F6DYX	28	18,001	139	12	*DL2RYL	110,732	377	40	148	*E16FR	3.5	56,161	742	12	59	LY2CU	28	40,400	290	17	63		
UA3TU	17,304	128	18	66	*F5TVG	3,339	53	9	12	*DL8UO	106,272	365	44	120	LY2BNZ	21	11,076	86	20	32	LY2BNZ	21	150,257	596	32	99		
UA3LEO	1,350	200	9	51	*F9DK	14	41,001	299	20	*DL5ZX	103,190	333	47	123	LY2LW					LY1CM	138,866	765	23	68				
RV1CC 1.8	23,325	283	14	61	*F0K1EE	105,056	614	22	90	*DL5DS	102,084	278	61	127	LY1CM	92,400	457	28	82	LY2OX	28	82,532	419	24	70			
FAROE ISLANDS					*F5SHQ	47,855	411	15	70	*DL6KVA	94,860	173	72	132	LY1M	28	150,400	1770	83	310	LY6M	7	472,716	1669	37	125		
0Y1G	A	71,669	529	27	122	*F5NOD	58,080	750	15	73	*DL4VAD	92,496	276	48	140	(Opn. LY10DS)					LY3BX	226,431	1155	32	107			
0Y1CT	7	440,815	2342	31	100	*F3AT	1.8	4,830	103	8	*DL6UAM	89,972	354	40	126	LY1DZ	55,700	408	24	76	LY1DZ	55	10,700	408	24	76		
GERMANY					DL6FLB	A	4,088,526	3256	140	458	*DJ7RI	75,213	239	46	91	LY6K	3.5	314,557	1504	31	108	LY2GV	66,728	748	15	68		
OH6RX	A	2,087,940	2287	117	328	DF4SA	"	1,430,208	1564	114	354	*CJ9DZ	69,762	224	46	82	LY3ID	121,056	325	56	152	LY3ID	61,290	477	18	72		
OH6WZ	"	1,998,308	2095	116	347	DK5PD	"	1,215,812	1385	102	352	*CJ4OO	67,257	272	49	110	LY2BR	1.8	69,570	746	13	61	LY2HN	36,708	359	18	66	
OF1HS	"	1,779,904	1909	18	346	DL4MCF	"	1,204,347	1372	111	360	*DJ5CL	63,175	351	37	96	LY2BM	A	858,284	1372	123	304	LY2BM	57,096	1117	80	278	
OF3KCB	"	1,054,144	1387	109	307	DL2DX	"	1,194,930	1277	116	310	*DL1FDV	62,456	163	54	94	LY1QN	"	57,000	1117	80	278	LY2PN	57,000	1117	80	278	
OH2BR	"	1,003,384	1196	105	315	DF4PD	"	849,600	1198	100	300	*DL3YEI	55,380	265	33	109	LY1QN	"	57,000	1117	80	278	LY2PN	57,000	1117	80	278	
OH8BT	"	977,262	1182	101	301	DL3WS	"	849,537	821	108	369	*DF5WN	56,000	237	37	75	LY1QN	"	57,000	1117	80	278	LY2PN	57,000	1117	80	278	
OF3WS	"	397,936	662	96	278	DK5IM	"	782,920	1250	92	278	*DL5ST	54,776	227	43	124	LY1QN	"	57,000	1117	80	278	LY2PN	57,000	1117	80	278	
OH6RE	"	370,750	854	56	180	DK3KD	"	776,832	1133	101	307	*DL5AQJ	54,450	236	50	100	LY1QN	"	57,000	1117	80	278	LY2PN	57,000	1117	80	278	
OH7MA	"	218,504	582	60	131	DL5YM	"	727,200	1052	110	290	*DL3HSC	45,612	240	30	96	LY1QN	"	57,000	1117	80	278	LY2PN	57,000	1117	80	278	
OF2LNH	"	106,020	360	48	138	DK3YD	"	626,052	987	89	259	*DL2TG	45,384	150	50	72	LY1QN	"	57,000	1117	80	278	LY2PN	57,000	1117	80	278	
OH3JR	"	100,230	249	62	188	CL1JF	"	161,691	823	96	230	*DL0FMC	38,390	170	35	75	LY1QN	"	57,000	1117	80	278	LY2PN	57,000	1117	80	278	
OF1BV	"	33,475	200	28	75	DL2ZI	"	527,289	1477	86	271	(Opn. LY12Q)					LY1QN	"	57,000	1117	80	278	LY2PN	57,000	1117	80	278	
OH2KQ	"	19,760	69	41	63	DL2NWK	"	458,240	742	83	275	*DH2UL	29,232	239	22	62	LY1QN	"	57,000	1117	80	278	LY2PN	57,000	1117	80	278	
OH3MMH	28	17,080	102	25	45	DL5JAB	"	440,325	928	82	227	*DK7ZH	26,814	99	45	64	LY1QN	"	57,000	1117	80	278	LY2PN	57,000	1117	80	278	
OH6MRA	21	251,451	952	35	104	DL780	"	434,467	768	72	239	*DL7UXG	23,940	178	28	77	LY1QN	"	57,000	1117	80	278	LY2PN	57,000	1117	80	278	
OH2BCD	14	63,325	414	25	60	DL8BUT	"	426,420	837	80	229	*D3JGE	20,925	114	36	57	LY1QN	"	57,000	1117	80	278	LY2PN	57,000	1117	80	278	
OF1JD	7	517,852	1877	34	114	DF1DV	"	424,305	805	79	236	*DL6KHW	14,628	121	18	28	LY1QN	"	57,000	1117	80	278	LY2PN	57,000	1117	80	278	
OF5BM	"	397,936	1517	34	118	DL6UNF	"	407,450	791	70	220	*D8JEF	13,048	143	16	40	LY1QN	"	57,000	1117	80	278	LY2PN	57,000	1117	80	278	
(Opn. OH5BM)					DJ6V	"	369,792	1152	69	232	*D4KBS	7,000	73	15	25	LY1QN	"	57,000	1117	80	278	LY2PN	57,000	1117	80	278		
OH6ZH	"	5,400	55	13	23	DL6CR	"	349,253	749	77	234	*DL6JCF	5,842	63	17	29	LY1QN	"	57,000	1117	80	278	LY2PN	57,000	1117	80	278	
OH2AQ	3.5	149,175	988	30	105	(Opn. OH2NRV)	"	333,213	229	82	245	*DL1AQB	5,800	58	18	22	LY1QN	"	57,000	1117	80	278	LY2PN	57,000	1117	80	278	
OF9BVM	"	132,080	811	27	100	DL8YR	"	330,460	605	69	241	*DL6UBF	5,046	62	21	37	LY1QN	"	57,000	1117	80	278	LY2PN	57,000	1117	80	278	
OH1TN	"	131,440	709	27	97	DL3BQD	"	329,394	686	73	236	*DL3HWM	3,081	27	16	23	LY1QN	"	57,000	1117	80	278	LY2PN	57,000	1117	80	278	
OF8LAE	"	99,474	649	25	93	DL1VCL	"	298,934	600	70	204	*DL5C	1,863	25	11	16	LY1QN	"	57,000	1117	80	278	LY2PN	57,000	1117	80	278	
OH1SH	"	73,416	435	27	87	DL6AG	"	293,670	569	66	168	*DL1FD	7,532	385	25	90	LY1QN	"	57,000	1117	80	278	LY2PN	57,000	1117	80	278	
OH3RF	"	36,520	338	17	66	DL3OL	"	226,244	522	86	240	*DL3HRT	5,675	242	22	86	LY1QN	"	57,000	1117	80	278	LY2PN	57,000	1117	80	278	
OH5VT	1.8	67,611	582	20	73	DL1TH	"	191,744	596	16	164	*DL0TKW	5,434	23	84	84	LY1QN	"	57,000	1117	80	278	LY2PN	57,000	1117	80	278	
OH2BCI	"	43,440	499	17	63	DK3AX	"	151,552	484	65	191	*DL4AK	115,566	313	51	133	LY1QN	"	57,000	1117	80	278	LY2PN	57,000	1117	80	278	
OH2UBF	A	160,524	371	71	202	DL1TH	"	191,744	596	16	164	*DL5KQ	184,945	510	60	175	LY1QN	"	57,000	1117	80	278	LY2PN	57,000	1117	80	278	
FRANCE	F6HWU	A	520,948	792	88	238	F6IRA	"	502,680	971	86	269	DL4AE	11,342	196	39	63	LY1QN	"	57,000	1117	80	278	LY2PN	57,000	1117	80	278
F6NKA	"	327,474	656	54	153	DL6CA	"	6,687	85	18	45	DL6EMT	16,744	120	17	39	LY1QN	"	57,000	1117	80	278	LY2PN	57,000	1117	80	278	
F6NCU	"	126,763	436	45	154	DL3DCY	"	6,432	93	25	42	DL3Y	15,107	136	17	39	LY1QN	"	57,000	1117	80	278	LY2PN	57,000	1117	80	278	
F5PFP	14	493,334	1627	36	110	DK5MV	"	5,246	66	20	41	DL1MEH	15,107	136	17	39	LY1QN	"	57,000	1117	80	278	LY2PN	57,000	1117	80	278	
F5DQO	"	125,243	94	5	4	DK5ON	28	100,993	441	29	74	DL4YAC	26,524	319	13	63	LY1QN	"	57,000	1117	80	278	LY2PN	57,000	1117	80	278	
F5NBX	3.5	172,155	1086	21	94	DK0SR	"	45,600	239	25	70	DL2OFB	23,628	40	21	26	LY1QN	"	57,000	1117	80	278	LY2PN	57,000	1117	80	278	
F6CWA	1.8	20,461	240	17	62	DJ4KW	"	6,688	42	20	42	DL4XB	6,688	42	20	42	LY1QN	"	57,000	1117	80	278	LY2PN	57,000	1117	80	278	
F6IIIE	A	608,1																										

SP6AYP	576	17	16	16	*Y03FWC	A	431,154	1056	80	226	S53AJK	"	345,306	652	68	179	SM6CPY	1.8	71,392	776	19	73	*UR4MRT	"	5,940	106	7	37	
SP5DIR	28	39,933	181	28	59	*Y03FRI	"	424,080	916	77	227	S52FB	"	295,604	775	66	202	SM6BDS	A	65,070	665	21	69	*U8UJK	"	99	5	4	5
SP5DDJ	19,459	127	22	39	*Y03CT	"	325,500	659	78	222	S521W	"	252,069	877	48	171	SM2KAL	"	153,888	339	61	168	<b>WALES</b>						
SP3SLA	21	282,946	76	36	110	*YR8A	"	237,360	752	85	130	S521M	"	228,228	382	81	185	SM4SX	"	122,159	417	46	105	GW7K	A	1,050,180	1695	81	264
SP9DTH	"	85,680	302	33	79	(Opn. Y08AXP)	"	237,360	752	85	130	S51ND	"	159,800	460	60	140	SM0NJO	"	33,408	90	47	69	(Opn. GW4BVJ)					
SP2AEK	"	23,694	133	25	41	*Y05BRZ	"	103,452	241	75	147	S51NM	"	39,928	262	34	90	SM6IVR	"	26,790	235	31	83	GW3SYC	"	14,210	126	21	49
SP2EBG	14	426,597	1304	37	122	*Y04GDP	"	89,535	420	39	88	S5710	"	8,054	120	13	50	SM5VZY	"	26,058	165	28	73	GW3YDX	3.5	508,388	2186	30	119
SP6XZR	"	402,002	1365	33	109	*Y02BZ	"	55,692	227	38	88	S520T	28	43,296	247	32	56	SM0UHF	"	24,806	108	35	44	GW7J	1.8	122,364	1191	21	82
SP3CCT	"	127,968	496	30	99	*Y02ARV	"	54,812	193	50	92	S51W	"	34,335	250	19	44	SM2DVT	"	20,148	114	31	32	(Opn. GW4VEQ)					
SP9EMV	"	15,498	108	23	40	*Y05ALI	"	36,582	163	42	59	S52SK	"	30,475	164	26	57	SM7BHM	"	22,200	139	24	50	*GW3KDB	A	388,740	670	74	236
SP6BBE	"	216	6	6	6	*Y02QY	"	12,844	59	35	41	S51VC	21	40,290	222	28	57	SM7BZV	"	18,532	149	21	61	<b>YUGOSLAVIA</b>					
SP9KAO	7	23,088	166	19	55	*Y04CBT	"	2,035	56	9	28	S51AY	"	39,204	194	28	61	SM2DB	21	8,415	140	15	40	4N9BW	A	3,892,152	3299	151	490
SP4GAP	"	(Opn. SP5LJU)	"	6,811	104	10	39	*Y02BP	21	91,700	310	20	80	S51TE	"	29,024	194	28	61	YU7AV	"	2,250,885	2233	157	438				
SN3A	3.5	489,402	2037	36	123	*Y04ZF	"	30,825	156	29	46	S58AL	14	297,024	1095	38	118	Y1AD	"	1,589,543	2263	112	321	(Opn. SP3HLM)					
SP7GIO	"	284,445	1533	30	99	*Y04ATW	14	64,100	316	25	75	S53BM	"	219,726	955	29	88	Y9CIP	7	75,488	491	33	104	GW3YD	3.5	508,388	2186	30	119
SP9NLK	"	71,101	723	22	75	*Y04BBH	"	63,457	440	23	66	S53F	7	88,928	445	42	80	YU1OL	"	1,413,378	1653	111	355	GW7J	1.8	122,364	1191	21	82
SP3GTS	"	67,124	640	18	79	*Y04DCF	"	36,340	236	24	68	S58MU	"	70,498	426	21	80	YU1AR	"	537,950	1231	100	250	(Opn. Y02FAF)					
SP8WJT	"	20,405	353	9	44	*Y06MK	"	32,208	192	26	62	S59KW	3.5	86,668	811	17	77	YU1CV	28	29,667	148	23	70	(Opn. Y02FAF)					
SP5GMR	1.8	104,562	811	22	89	*Y02LDC	7	30,900	132	23	77	S51O1	"	64,315	664	19	76	YU1AU	21	25,984	882	38	114	(Opn. Y02FAF)					
*SP2QCH	A	1,026,800	1450	103	297	*YPR2	3.5	95,510	1007	21	75	S52G0	"	29,380	399	11	54	YU1A	14	672,324	2082	39	140	(Opn. Y02FAF)					
*SP6NIC	"	949,540	1277	92	302	*Y06CYX	"	2,928	171	41	31	S51AY	"	19,712	306	10	54	YU1AST	"	3,496	89	5	33	(Opn. Y02FAF)					
*SP6CYX	"	664,794	1127	82	269	*Y02LIN	"	4,318	119	6	28	EA1JO	A	526,848	771	85	258	UT6Q	A	3,126,126	3160	141	462	(Opn. UR6QA)					
*SP6CDP	"	436,305	770	71	224	*Y02AQB	1.8	2,686	80	4	30	EA3AR	"	416,556	694	82	170	UT4UZ	"	2,821,250	2518	149	461	(Opn. UR6QA)					
*SP2AVE	"	327,402	524	78	204	*Y02AQB	"	16,870	101	4	24	EA7TG	"	275,560	432	83	249	UT4EWG	"	140,270	400	44	125	(Opn. UR6QA)					
*SP6PCF	"	252,960	581	61	187	*Y02OMH	A	182,691	669	43	116	EA1EWG	"	140,270	400	44	125	UT1U	"	1,839,816	2073	126	380	(Opn. UR6QA)					
*SP1AEN	"	199,563	454	61	160	*Y02OMH	A	165,060	471	56	134	EA1FJB	"	43,680	278	38	118	UX1UA	"	1,062,480	1370	114	352	(Opn. UR6QA)					
*SP6AU1	"	187,332	410	62	171	*Y02OMH	A	165,060	471	56	134	EA1OJ	"	31,992	117	49	80	UX4CW	"	919,125	1370	101	274	(Opn. UR6QA)					
*SN3P	"	162,080	472	51	155	*Y02OMH	"	148,149	445	49	128	EA4AQT	"	20,532	148	26	61	UY1HY	"	904,791	1159	109	362	(Opn. UR6QA)					
*SP6CXH	"	140,007	404	49	128	*Y02OMH	"	23,387	161	28	63	EA5DCL	"	14,110	92	31	52	EM8I	"	86,758	1400	97	297	(Opn. UR6QA)					
*SQ9EZK	"	114,996	410	40	108	*Y02OMH	"	2,928	171	41	31	EA5CAL	"	6,420	46	28	32	UT3UZ	"	725,418	1409	91	331	(Opn. UR6QA)					
*SQ3DWR	"	112,905	327	52	147	*Y02OMH	"	4,318	119	6	28	EA4EIS	"	2,016	48	17	39	UX3ZW	"	555,758	787	96	275	(Opn. UR6QA)					
*SP5ASY	"	112,406	284	68	149	*Y02OMH	"	2,686	80	4	30	EA7FR	"	1,421	17	12	17	UT5UDX	"	466,000	1000	77	213	(Opn. UR6QA)					
*SP9GKM	"	100,128	413	49	100	*GM7X	21	206,283	854	33	100	EA2BNU	"	442,289	1022	65	213	UT1K	"	42,120	195	37	125	(Opn. UR6QA)					
*SP1MHV	"	84,561	177	74	139	*GM4YX1	7	224,532	1161	29	97	EA2BNU	"	328,856	872	74	222	UT4KMF	"	10,296	307	27	60	(Opn. UR6QA)					
*SP1AFU	"	69,552	297	47	121	*GM4SID	A	62,091	1134	74	263	EA2BNU	"	327,540	709	65	198	UR7VA	28	40,085	200	28	70	(Opn. UR6QA)					
*SP5PNLZ	"	66,600	304	41	107	*GM3CFS	14	106,596	528	24	84	EA2BNU	"	290,924	637	60	197	UR8IX	"	35,090	150	29	81	(Opn. UR6QA)					
*SP1RK8	"	66,584	328	58	145	*GM3CFS	21	354,354	922	38	116	EA2BNU	"	171,597	909	66	151	UY1HA	14	164,124	678	34	107	(Opn. UR6QA)					
*SP9AGS	"	63,990	322	31	103	*GM3CFS	21	354,354	922	38	116	EA2BNU	"	151,132	238	66	148	UY1EL	"	85,632	430	32	96	(Opn. UR6QA)					
*SP3DBD	"	51,646	213	23	84	*GM3CFS	21	354,354	922	38	116	EA2BNU	"	122,904	365	66	151	UY1TKW	"	105,391	436	31	90	(Opn. UR6QA)					
*SP4BOS	"	43,470	227	35	103	*GM3CFS	21	354,354	922	38	116	EA2BNU	"	115,132	238	60	150	UY1TKW	"	28,363	131	40	73	(Opn. UR6QA)					
*SP9ZD	"	37,250	67	24	34	*GM3CFS	21	354,354	922	38	116	EA2BNU	"	105,506	209	59	148	UY1TKW	"	20,506	608	33	114	(Opn. UR6QA)					
*SP3XAR	"	18,865	132	20	47	*GM3CFS	21	354,354	922	38	116	EA2BNU	"	95,149	280	60	133	UY1TKW	"	20,506	608	33	114	(Opn. UR6QA)					
*SP4EDW	"	14,056	99	22	34	*GM3CFS	21	354,354	922	38	116	EA2BNU	"	78,209	213	54	143	UY1TKW	"	21,465	172	23	58	(Opn. UR6QA)					
*SP4HHI	"	10,797	108	14	44	*GM3CFS	21	354,354	922	38	116	EA2BNU	"	62,205	294	38	105	UR4XSX	"	858	14	8	14	(Opn. UR6QA)					
*SP6CRU	"	4,266	67	24	34	*GM3CFS	21	354,354	922	38	116	EA2BNU	"	47,376	159	48	78	UR3SG	"	8,148	132	30	55	(Opn. UR6QA)					
*SQ2DMR	"	3,066	34	18	24	*GM3CFS	21	354,354	922	38	116	EA2BNU	"	46,200	147	54	111	UT1WY	"	10,708	210	31	108	(Opn. UR6QA)					
*SP4DZT	"	1,480	19	11	19	*GM3CFS	21	354,354	922	38	116	EA2BNU	"	37,958	254	34	71	UT1WY	"	19,500	101	37	73	(Opn. UR6QA)					
*SP9WV	28	56,931	356	29	74	*GM3CFS	21	354,354	922	38	116	EA2BNU	"	31,056	239	28	51	UT1WY	"	18,000	120	2							

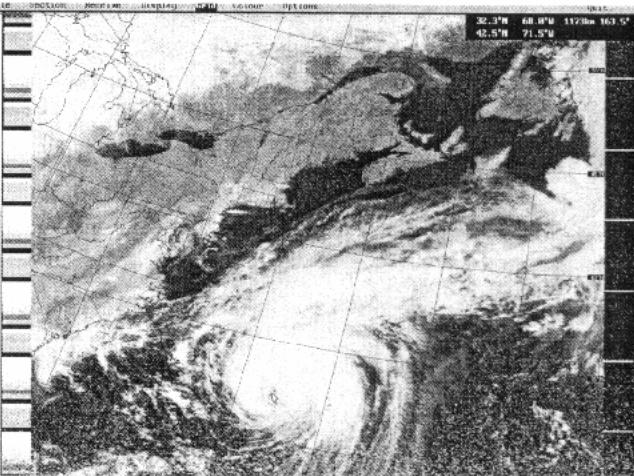
*YB4JIM	145,350	232	59	112	*PY4ZF	68,875	250	40	55	RA6ABK	133,570	404	53	137	4N1A	3.5	35,014	408	14	68	KQ3F	213,368	412	55	124														
*YB2PBX	17,228	77	44	74	*PU2RUX	316,479	1016	32	91	IK0CMA	131,535	409	52	133	(Opn. YU1YY)		W2UP/3	135,121	262	62	137																		
*YB9BNB	28	15,695	81	25	48	*PY2DUN	6,716	65	17	29	GOVOR	129,150	526	34	141			N3QO	132,978	245	62	160																	
*YB0ECT	21	283,671	758	36	93	*PU2KNU	442	23	8	9	RUGUN	114,072	239	62	132	SP4TBM	9,741	170	8	43	WT3W	121,495	187	64	171														
*YC1RPN		1,512	30	13	15	*PU3LSP	16	5	2	2	N1NSB	104,308	222	53	125	YC2OK	4,130	43	11	24	K3AR	109,510	203	67	166														
<b>NEW CALEDONIA</b>																																							
*FK8HC	A	764,218	1193	98	168	*PY2RUX	28	316,479	1016	32	91	IK0CMA	131,535	409	52	133	SP4GFG	32,925	473	12	56	N3QO	135,121	262	62	137													
*TXK8FU	14	64,080	278	25	55	(Opn. FK8FU)					GOVOR	129,150	526	34	141	RW3AI	12,992	185	9	49	N3FDL	132,978	245	62	160														
<b>NEW ZEALAND</b>																																							
ZL3CW	7	703,664	2108	33	103	(Opn. F2CW)					*PU2MHB	21	508,896	1284	36	108	YCA2K	4,130	43	11	24	K3AR	109,510	203	67	166													
<b>NORTHERN MARIANAS</b>																																							
WH0AAV	21	50,569	355	25	36	*PY1AJK	56,170	200	21	61	RA6ABK	133,570	404	53	137	UA0QGQ	3,465	68	14	21	N3NZ	105,138	236	51	126														
*AH0D	A	9,779	153	31	46	*PY1APQ	45,978	205	22	57	IK0CMA	131,535	409	52	133	NC6M	1,104	22	11	12	KB3TS	76,728	179	46	138														
<b>PHILIPPINES</b>																																							
DX1S	A	4,292,160	3180	145	335	(Opn. OH2PM)					*PY3JRG	56,170	200	21	61	AA1CA	76,540	223	56	122	(Opn. W6REC)																		
DU3NXE		760,554	1549	73	113	*PY3JUB	20,500	152	17	33	JJ1JGI	72,576	206	46	80	HA9RA	760	42	4	15	AA3JU	73,710	173	59	151														
DU1C00	21	113,387	599	28	43	*PY8CVU	11,400	118	15	23	ON7CC	69,048	357	31	95	R9CTK	1,8	10,491	95	7	32	N3UN	64,064	154	57	125													
*DU7/NZET	A	186,048	400	71	100	*PY2NZR	10,263	160	22	55	W9UR	67,200	170	49	101	UA4YKA	1,469	68	5	13	W3AG	60,102	138	62	100														
*DU3RCM	21	258,633	848	32	71	*PY3UEB	900	23	8	7	RW3VM	64,752	288	33	119	YT1T	624	24	5	21	K3ATO	47,560	131	56	89														
*DU9HDK		9,176	125	14	17	*ZY2RNJ	14	34,029	225	20	37	DF1QF	62,270	302	30	100	(Opn. PY2RNJ)					W3AP	45,453	129	39	100													
<b>SOUTH COOK ISLANDS</b>																																							
ZK1TB	A	584,004	743	101	146	*PR2W	28,812	218	19	30	(Opn. PT2AW)					(Opn. PY2RNJ)					(Opn. YU1UA)																		
ZK1DI	3.5	9,196	166	9	10	(Opn. DF4DI)					CHILE	54,810	313	24	39																								
<b>SOUTH AMERICA</b>																																							
<b>ARGENTINA</b>																																							
LU3FSP	A	1,296,420	2091	78	168	*CE3IDY	14	54,810	313	24	39	HK6KK	A	2,345,541	2386	90	249	CHILE	54,810	313	24	39	4N1A	3.5	35,014	408	14	68	NN4T	A	2,549,442	1752	149	457					
LU8EHW		495,558	1167	68	103	*CE8GLQ		17,820	140	16	29	HK5QGX		27,482	106	44	47	COLOMBIA	56,743	249	39	140	W4AU	"	514,491	619	87	230											
LU5GPL		36,134	143	39	50													COLombIA	55,902	475	21	45	W4UD	"	329,184	390	87	237											
LU3HIP	28	152,736	729	25	61													ECUADOR	34,335	217	25	84	K1AM	"	3,141,040	2074	130	430											
AY1	21	1,838,852	4137	39	133													ECUADOR	31,600	166	28	67	N4XR/1	"	1,743,694	1150	137	440											
<b>GALAPAGOS ISLANDS</b>																																							
HC8N	A	10,475,365	6192	151	438													GALAPAGOS ISLANDS	40,000	315	168	576	K1CD	"	6,168,504	3015	168	576											
						(Opn. N5KO)																																	
<b>GUYANA</b>																																							
8R1K	A	6,244,185	4406	131	390													GUYANA	14,148	135	27	27	PARAGUAY	"	39,060	161	54	70	K1AM	"	3,141,040	2074	130	430					
<b>PARAGUAY</b>																																							
ZP0Z	A	2,433,340	2552	114	268													PARAGUAY	13,740	93	15	44	NA4XR/1	"	1,743,694	1150	137	440											
ZP5R		422,625	921	63	112																																		
ZP5XF	21	1,926,056	4009	38	134													PARAGUAY	34,335	21	34	27	NA4XR/1	"	1,291,213	1191	103	348											
						(Opn. ZP5KO)																																	
ZP6GW		5,400	45	17	23													PARAGUAY	34,335	21	34	27	NA4XR/1	"	1,291,213	1191	103	348											
<b>TRINIDAD &amp; TOBAGO</b>																																							
9Y4H	A	9,063,469	5291	156	443													TRINIDAD & TOBAGO	9,063	181	20	74	YR0AZU	"	9,063	181	20	74	K1CD	"	9,063	181	20	74					
9Y4NW		621,731	781	92	227														TRINIDAD & TOBAGO	10,494	22	34	27	YR0AZU	"	10,494	22	34	27	K1CD	"	10,494	22	34	27				
9Y4VU	21	763,224	2005	32	100														TRINIDAD & TOBAGO	11,740	93	15	44	YR0AZU	"	11,740	93	15	44	K1CD	"	11,740	93	15	44				
CX5X	28	863,418	2011	36	115														TRINIDAD & TOBAGO	12,740	93	15	44	YR0AZU	"	12,740	93	15	44	K1CD	"	12,740	93	15	44				
CX5BW		733,720	2040	32	104														TRINIDAD & TOBAGO	13,740	93	15	44	YR0AZU	"	13,740	93	15	44	K1CD	"	13,740	93	15	44				
CX9BAG		527,975	1576	35	96														TRINIDAD & TOBAGO	14,740	93	15	44	YR0AZU	"	14,740	93	15	44	K1CD	"	14,740	93	15	44				
CV1A	21	510,598	1361	35	113														TRINIDAD & TOBAGO	15,740	93	15	44	YR0AZU	"	15,740	93	15	44	K1CD	"	15,740	93	15	44				
CW5W	14	54,050	1535	38	116														TRINIDAD & TOBAGO	16,740	93	15	44																

CANADA												CYPRUS												GERMANY													
VA3NR A 443,308 648 88 219												P3A	11,755,121 6478 164 569												DL6RAI	6,275,512 3598 177 599											
JAMAICA												DLF3C	4,370,702 2900 170 551												DJ7TO	2,188,296 2256 141 473											
6Y5/J JJ3TMW A 42 7 7 7												DL7BY	2,140,333 1946 149 462												DL0DX	2,125,032 2055 123 433											
MARTINIQUE												DK1II	1,332,730 1417 131 422												DF0RI	928,550 1166 121 369											
FM5DN A 7,215,779 5687 141 442 (Op. YT6A)												DK1RP	849,106 1164 113 344												DK0TZ	727,790 1056 92 278											
PUERTO RICO												DF0HTE	718,404 999 94 299												DF0FS	539,349 1357 79 260											
WP4LNY A 19,608 156 25 32												DK0FFO	467,480 912 73 237												DL6VZ	398,310 689 81 249											
WP4KOE 2,139 40 10 13												DL4SKF	3,111 64 20 31												DL3SKF	2,200 49 17 23											
ASIA												HG1S	7,642,128 5386 179 605												HG5C	1,043,748 1957 91 276											
ASIATIC RUSSIA												HA3KNA	1,100,190 1681 100 303												HA1KSQ	156,456 439 68 144											
HONG KONG												HG1	7,642,128 5386 179 605												HG5C	1,043,748 1957 91 276											
VR97BG A 2,074,888 2398 129 290												HA3KNA	1,100,190 1681 100 303												HA1KSQ	156,456 439 68 144											
JAPAN												HA1KSQ	156,456 439 68 144												HA1KSQ	156,456 439 68 144											
JF1SEK A 930,020 912 118 246												HA1KSQ	156,456 439 68 144												HA1KSQ	156,456 439 68 144											
JA9XBW 801,528 843 131 236												HA1KSQ	156,456 439 68 144												HA1KSQ	156,456 439 68 144											
JK2VOC 567,325 905 98 177												HA1KSQ	156,456 439 68 144												HA1KSQ	156,456 439 68 144											
JH5OXF 303,000 482 90 160												HA1KSQ	156,456 439 68 144												HA1KSQ	156,456 439 68 144											
JA0BMS/1 210,040 477 62 116												HA1KSQ	156,456 439 68 144												HA1KSQ	156,456 439 68 144											
JA0BJY 32,732 123 35 63												HA1KSQ	156,456 439 68 144												HA1KSQ	156,456 439 68 144											
JC2AXB 8,370 66 28 34												HA1KSQ	156,456 439 68 144												HA1KSQ	156,456 439 68 144											
JJ2TKX 8,260 70 28 31												HA1KSQ	156,456 439 68 144												HA1KSQ	156,456 439 68 144											
JH1F5F 5,805 55 17 26												HA1KSQ	156,456 439 68 144												HA1KSQ	156,456 439 68 144											
JE9LLO 57,534 252 26 60												HA1KSQ	156,456 439 68 144												HA1KSQ	156,456 439 68 144											
JK10XU 14 25,604 127 25 49												HA1KSQ	156,456 439 68 144												HA1KSQ	156,456 439 68 144											
JE9PFD 7 22,242 128 24 42												HA1KSQ	156,456 439 68 144												HA1KSQ	156,456 439 68 144											
JJ3VPY 3,109 68 20 31												HA1KSQ	156,456 439 68 144												HA1KSQ	156,456 439 68 144											
JHOTYE 1,584 20 13 20												HA1KSQ	156,456 439 68 144												HA1KSQ	156,456 439 68 144											
JHBBT 3.5 57,510 258 24 57												HA1KSQ	156,456 439 68 144												HA1KSQ	156,456 439 68 144											
JK1KGK 23,892 148 21 45																																					

ZM2K	NEW ZEALAND	4,212,468	3551	135	333
DX1HB	PHILIPPINES	2,583,031	3032	110	213
4G1A		555,9795	1165	77	130
SOUTH AMERICA					
TP9B	PARAGUAY	1,395,300	1794	94	206
MULTI-OPERATOR MULTI-TRANSMITTER					
NORTH AMERICA					
KC1XX	UNITED STATES	16,680,192	7145	187	701
K3LR		15,430,912	6504	199	697
W3LPL		14,566,038	6545	189	677
K1KI		14,480,136	6280	185	661
N3RS		11,837,336	5562	177	635
W1MD		9,982,868	4804	176	622
K8CC		8,976,852	4566	174	600
K2LE/1		8,648,220	4735	157	551
K1WD		8,630,136	4545	181	623
N2RM		8,147,220	4275	159	531
K4VX/0		7,920,933	4382	165	526
W3EA		7,162,430	3785	170	575
W0AIH/9		6,902,082	3851	173	553
NO4I		6,631,020	3726	170	578
K1RX		6,414,510	3831	160	570
W3MM		6,155,360	3215	164	566
WB8AV		5,541,184	3146	169	535
WGBA		5,460,852	3304	170	472
W4MYA		5,411,916	3276	156	510
W3PP		5,493,653	2773	165	536
W7RM		4,293,622	3152	162	424
KB1H		3,708,787	2400	144	473
K2WS		3,252,080	1920	156	533
K5RT		2,695,625	1597	158	467
N3DL		2,670,392	1944	144	487
K1GW		2,436,885	1804	134	413
W2YC		1,337,525	1171	135	423
W4ZR		1,208,151	1247	117	336
K6SG		1,201,830	986	140	345
K3KNH		720,564	814	106	341
K3ANS		659,694	759	104	313
N1MD		564,185	549	92	307
K1CN		215,710	311	78	187
ALASKA					
KL7Y		12,699,080	9391	167	417
ANTIGUA					
V26KW		9,902,857	7525	138	451
CANADA					
VE3EJ		18,437,120	9176	184	648
VE5RI		560,443	1129	91	156
CUBA					
T49C		7,352,694	7627	128	358
GRENADE					
J39A		19,336,338	11503	169	569
J4Y4	JAMAICA	29,752,404	14770	187	649
AFRICA					
CANARY ISLANDS					
EA8ZS		21,915,001	10148	175	634
IVORY COAST					
TU3F		1,640,412	2250	92	240
TOGO					
5V7A		31,971,148	13601	190	646
ASIA					
UNITED ARAB EMIRATES					
A61AJ		9,108,396	6793	142	452
JAPAN					
JH5ZS		10,120,230	5545	186	504
JA3ZOH		9,416,844	4976	182	487
JA1YFG		3,954,720	3216	163	365
JA3YKC		3,221,240	3262	136	304
EUROPE					
BALEARIC ISLANDS					
EA6IB		10,580,839	8339	172	579
CZECH REPUBLIC					
OK10KE		545,072	1219	69	235
OK1KR		429,307	684	87	244

Disqualified: Unverifiable contacts G4KIV.

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